

## Proofs of Evidence Vol 0 - Index & Core Document Schedule

Produced by Rule 6 Party

Peel Hall - APP/ M0655/W/17/3178530

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# Proof of Evidence Vol 1 - Transport

Produced by Jon Parr Rule 6 Party Peel Hall - APP/ M0655/W/17/3178530

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## **Section 1 – Introduction**

#### Rule 6 Member

My name is Jon Parr, I am a local resident that has lived in Orford, Cinnamon Brow & Fearnhead for the majority of my forty-three years. What I lack in technical knowledge, I more than make up for with local knowledge and awareness of the issues we as residents face on a daily basis.

Existing residents of North Warrington are rightly concerned that the provision of up to 1200 new dwellings, commercial premises, supermarket, school and care home will add thousands more daily journeys to our already overburdened roads.

Within this proof of evidence, it is my intention to set out our concerns with respect to the appellants traffic assessment, access strategy and substantial and far reaching traffic mitigation measures.

#### Proof of Evidence Scope

Our main areas of concern with regards to the traffic assessment, access strategy and associated documents of which there are many. These shall be referenced throughout this document. Absence of comment against each item of evidence should not be taken as agreement from the Rule 6 party, instead, we have focused on the main areas of concern to keep this document as concise as possible.

We expect that all concerns of a technical nature will be addressed by Warrington Borough Council officers. We as Rule 6 party however, reserve the right to challenge said evidence should it be contrary to our understanding and local knowledge.

## Section 2 – Site Location and Proposed Development

#### Site Location

2.1 The appeal site is located to the North of Warrington and runs alongside the busy M62 corridor. The site is landlocked between the wards of Poulton North, Winwick & Burtonwood as well as Poplars and Hulme as shown in Appendix 1.

The site has been subject to failed planning applications for decades. The issue surrounding infrastructure and risks to traffic and congestion have been known for over 30 years – as Appendix 28 testifies.

#### Congestion

2.2 At the previous inquiry the inspector noted;

IR13.8 In addition to the evidence given by the Council and local residents, it was abundantly clear from my many car journeys in and around Warrington that the appeal site is situated in an area that suffers from high levels of traffic congestion, chiefly at peak periods in the morning and evening, on a daily basis. The M62 and A49 appeared to be particularly badly affected. I have no reason to doubt that congestion is more acute still when there are accidents on the M62, resulting in drivers diverting onto local roads. In addition, I observed vehicles queuing back on Sandy Lane West from the A49 junction, giving rise to particular problems for vehicles seeking to exit the Fordton Retail Park.

*IR13.9 In short, the concerns of the Council, Highways England, Cheshire Constabulary and of local residents in relation to highway safety and efficiency are readily understandable.* 

2.3 The issues referred to above have not changed. The failure to accept the issues and propose a real workable solution (having been seeking planning approval for over 30 years) suggests that such a solution is not forthcoming. Local residents will hardly be surprised at this as they are all too aware of the challenges that this site poses.

#### Strategic Access Points

- 2.4 The strategic road access points to the proposed development are all via residential streets with the exception of Mill Lane which is intended to serve the east of the site.
- 2.5 1901/TN/03 Transport and Highways Scoping Note for Use of WMMTM16 (updated 10<sup>th</sup> July 2019) states;

"The main access strategy for the Peel Hall site is the creation of a non-through route with the development served off five separate access points including a new roundabout from Mill Lane in the east".

This rather overstates the case as each main section of development only benefits from a single access point – this is contrary to Warrington Borough Councils Design Guide Residential and Industrial Estate Roads that states major access roads (50 to 300 dwellings) states;

4.8.....It should preferably have two points of access or take the form of a loop road with a short connection to a single point of access and a secondary emergency access link. Any through route must be designed so as it discourages non-essential through traffic. Cul-de-sac may be permitted on sites, which are too small to accommodate a loop road, or on sites where existing allocated or consented

land is involved. Any such roads should however serve no more than 150 dwellings.

The design speed for this access road is 20mph.

- 2.6 The five main access points referred to are as follows;
  - i. Newly formed access off Poplars Avenue (opposite Cotswold Road)
  - ii. Newly formed access off Poplars Avenue (opposite Brathay Close)

- iii. Extension of Birch Avenue
- iv. Newly formed access off Mill Lane (North)
- v. Newly formed roundabout access off Mill Lane (East)
- 2.7 The five proposed access points are described below.

#### Newly formed access off Poplars Avenue (opposite Cotswold Road)

2.8 The proposed junction to access this section of the site is located on a tight bend at the western extremity of Poplars Avenue where it meets Cotswold Road. This creates a large volume of traffic exiting and entering Poplars Avenue at a location that creates an unacceptably high level of risk. A new development of this complexity should work to mitigate such risks, not create them.

#### Newly formed access off Poplars Avenue (opposite Brathay Close)

2.9 The proposed junction to access this section of the site is located midway along Poplars Avenue along from Newhaven Road and opposite Brathay Close. This proposed junction will provide access to part of the housing development as well as the local centre, care home facility and public house.

#### **Extension off Birch Avenue**

2.10 The proposed junction to access this section of the site is located directly off the A49. The junction itself is extremely close to the main M62 J9 / A49 roundabout and potentially dangerous with cars that exit the M62 on to the A49 at speed. Birch Avenue itself is extremely narrow and has historically suffered with passage of cars and emergency services vehicles.

#### Newly formed access off Mill Lane (North)

2.11 The proposed junction to access this section of the site within Houghton Green Village is at the head end of a small residential village road. The road itself is relatively narrow and typically accommodates cars parked on road, especially adjacent the local public house and houses beyond up to the proposed junction.

#### Newly formed roundabout access off Mill Lane (East)

2.12 The proposed junction to access the largest section of the site is via a new roundabout off of Mill Lane between the Millhouse pub and Mill Lane (residential road). The proposed junction will place three busy junctions within a space of 150 metres.

## Section 3 – Inadequate Traffic Surveys

- 3.1 Highgate Transportation document Transport Assessment Addendum (HTp/1901/TA/Addendum) dated March 2020 makes the following reference;
- 1.23 Following the original appeal decision, the appellant commissioned the use of WMMTM16 (in agreement with the Council) to assess the impact of the appeal scheme. This process has taken around 12 months as Peel Hall is the first developer-led instruction for using the Council's model. A significant amount of transport analysis has been carried out and the follow-on work is contained in this Transport Assessment Addendum.
- 3.2 We acknowledge that a number of automatic traffic counts (ATC's) have been undertaken, with the most recent survey information being used to feed into the WMMTM16 model as well as traffic quality and noise pollution assessments.

However, we would argue that one week of surveys in the run up to the school Easter holidays (30<sup>th</sup> March to 5<sup>th</sup> April 2019) is <u>not</u> significant. This does not give a fair representation of traffic issues experienced during different times of the year and especially the increase in vehicular traffic movements during winter months as more people switch to cars for daily commuting, school runs etc..

3.3 Furthermore, the impact of traffic from the proposed development will be far reaching and impact a significant part of North Warrington. The surveys undertaken, we feel are limited and do not cover key routes (most of them residential in nature), most of which have the potential to severely overwhelm our already overburdened roads – this is unhealthy and unsafe.

- 3.4 Highgate Transportation document Transport Assessment Addendum (HTp/1901/TA/Addendum) dated March 2020 also goes on to state;
- 1.26 This was discussed at a progress meeting with the Council on 14 January 2020, and from this a list of junctions were agreed to be taken forward for further modelling. An agreed note of the meeting is contained at Appendix 6 and from this it should be noted that the highway officer's approach to mitigation would not be solely based on accommodating development traffic, but would be based on safety and local measures elsewhere that would support and enhance sustainable travel and capacity.
- 1.27 The list of junctions agreed with the Council to be taken forward for more detailed modelling following a review of the Peel Hall WMMTM16 data, aside from the site access junctions, are:
  - i. Golborne Road/Myddleton Lane
  - ii. Delph Lane/Myddleton Lane
  - iii. A49 M62 Junction 9 roundabout\*
  - iv. A50/Hilden Road roundabout and A50/Poplars Avenue
  - v. A50/Hallfields Road vi. A49/A50/Hawleys Lane crossroads\*
  - vii. A49/JunctionNINE Retail Park\*
  - viii. Blackbrook Avenue roundabout with Enfield Park Road and Ballater Drive

ix. Blackbrook Avenue roundabout with Enfield Park Road and Capesthorne Road

*x.* Poplars Avenue roundabout with Capesthorne Road

xi. Cromwell Avenue/Calver Road linked with Sandy Lane West/A49 roundabout\*

3.5 These surveys carried out as part of 1.26 & 1.27 above were undertaken during a single day (3<sup>rd</sup> April) in the run up to the Easter school holidays. This does not give a fair representation of traffic issues experienced during different times of the year and especially the increase in vehicular traffic movements during winter months as more people switch to cars for daily commuting, school runs etc..

- 3.6 Likewise, a single survey was carried out along A49 opposite J9 retail park. This was undertaken on a quiet Saturday with no Warrington Wolves home fixture that day. We would have expected a couple of weekends to be surveyed with at least one of these days taking in a home fixture to provide a degree of balance against your assessments. The rugby league calendar is quite extensive running from February through to October (three quarters of the year), weekend games are typically three o'clock and therefore traffic builds up during the weekend peak traffic.
- 3.7 We would respectfully point out to the traffic consultants 'Highgate Transportation', that they have incorrectly designated the A49 in both J9 manual traffic counts as follows;

A49 North – Heading South A49 South - Heading North

Respectfully, we wish to question the accuracy of follow on data reliant upon these results – see Appendix 23.

- 3.8 We wish to comment regarding the appellants 'Proposed Updated MCC and ATC Traffic Surveys' (Appendix 2) on the seeming absence of ATC's to a number of key routes (previous note 3.3).
- 3.9 The plan (Appendix B) is annotated with circles to define areas which were surveyed manually for a single day. The black lines define those routes provided with a single week ATC survey.
- 3.10 The following table lists key routes that have not had an up to date survey, be it manually or via ATC's;

The plan has been appended by the Rule 6 party with nodes (red circle / white text) for ease of reference.

Ref	Location	Road Name/Number	r Description of Traffic Issues				
A	Winwick	A49 Newton Road	This section of the A49 is very busy for the infrastructure in place. Traffic regularly backs up during peak hours beyond Green Lane and subsequently effects traffic turning on to and off of Hollins Lane. Traffic frequently seeks to obviate these queues by 'rat running' through Green Lane and joining A573 Golborne Road. Green Lane is very narrow and the junction at which it joins the A573 is problematical.				
В	Winwick	A573 Golborne Road (North of Myddleton Lane)	During peak hours, traffic regularly backs up on t section of road between the A49/Link Road RA a back up the A573 beyond Spires Gardens. This				
С	Winwick	A573 Golborne Road (Opposite Swan Pub)	driven the particularly significant planning				
D	Winwick	A49 Newton Road (up to Winwick Link Rd RA)	application for Parkside, we are surprised no traffic monitoring has been undertaken in this location, as it is more than fair to expect a significant number of additional journeys (both domestic and commercial) to be created from both Parkside and Peel Hall.				
E	Winwick	Myddleton Lane (adjacent Winwick CE Primary)	This road is already incredibly busy and suffers at peak times that coincide with school drop offs and pick ups. The road is regularly obstructed with service vehicles (refuse collections and deliveries to the local convenience store) or vehicles parked on the roadside – the effects of which can back up to where Myddleton Lane passes over the Winwick Link Road.				

Ref	Location	ocation Road Name/Number Description of Traffic Issue		
F	Winwick	Winwick Link Road	Given the particularly significant planning application for Parkside, we are surprised no traffic monitoring has been undertaken in this location.	
			It is not unreasonable to expect	
G	Orford	Northway (Southbound)	Given Meadowside Primary has been identified in the SOCG for providing overspill capacity for the proposed development – we would expect to see	
Н	Orford	Fisher Avenue	traffic surveys along this road. Northway in particular is a narrow one way system and should not be blind to impacts from increased journeys.	
J	Orford	Statham Avenue	Likewise, it is a reasonable assumption that Beamont Collegiate Academy and Warrington & Vale Roval College will be an obvious choice for	
к	Orford	Sandy Lane	Secondary and Further education – this reinforces the requirement for adequate assessment along these heavily used streets.	
L	Orford	Sandy Lane West	The majority of North Warrington is all too familiar with this junction and the problems trying to gain access from Orford to the A49 and beyond. A single days assessment of this section of highway in wholly inadequate.	
М	Orford	Chiltern Avenue	Chiltern Avenue has historical issues with cars 'rat running' to circumvent queues on Sandy Lane West. It's not unreasonable to expect hundreds more journeys will only worsen this issue.	
N	Orford	Clifton Road	Clifton Road is a busy residential road that provides an essential link between Poplars Avenue and the A49 via Sandy Lane West. The additional throughput of traffic will be significant and should be properly assessed.	
0	Orford	Howson Road	Howson Road is a busy residential road that provides an essential link between Poplars Avenue and surrounding estates. Howson Road also feeds into the Northway Roundabout that services Sandy Lane and Statham Avenue. As previously discussed with respect to Meadowside and further education establishments, this road can expect to see journey numbers significantly increase as a result of the proposed development.	
Ρ	Orford	Capesthorne Road	A notoriously busy road that will be one of the favoured routes for residents of the proposed development to the east of the site for gaining access to the Town Centre. This road suffers greatly with on street parking and delays caused by contraflow of traffic maneuvering between cars parked on both sides of the road. The influx of additional cars along this route poses a serious risk to road users, cyclists and pedestrians alike.	

Ref	Location Road Name/Number		Description of Traffic Issues		
Q	Cinnamon Brow	Crab Lane	During morning peak periods, this section of road can often back up from the junction of Crab Lane Roundabout/Birchwood expressway back onto and around Enfield Park Road. We note traffic mitigation measures propose a traffic signalised junction at Enfield Park Road/Crab Lane – this will achieve very little if not exacerbate the already awful traffic issues. Surely a thorough ATC conducted here would have demonstrated the quantity of cars and average speed during peak hours – this would demonstrate just how overwhelmed this road is and how adding significant numbers of additional journeys is not sustainable. The only reason we can see for not undertaking such a thorough survey in this location is that it would undermine the appellants traffic impact, noise and air quality assessments by proving the impact to be severe in nature.		
			As a side note, this is also the route for the planned No.25 bus linking the east of the proposed site with Birchwood as part of the appellants sustainable mitigation measures.		
R	Fearnhead	Fearnhead Lane	Fearnhead Lane suffers much the same as that of Crab Lane. The one major difference being that cars use Fearnhead Lane as a means to circumvent Enfield Park Road or the Birchwood Express Way have to negotiate a tricky T junction to gain access on to Crab Lane and then onwards from the College roundabout.		
			almost 500m away. This causes local residents great difficulty and frustration sometime even getting on or off their own driveways.		
			Again, a thorough ATC survey would have demonstrated these issues, all of which were raised at the last appeal. We would have hoped that the appellant would have listened and took note.		

## Section 4 – Promotion of Sustainable Transport

4.1 Item 2.11 in Highgate Transports Addendum 2 states;

In terms of the Peel Hall development, it has been important to enhance connectivity and reduce development impact and provide pedestrian, cycle and public transport measures to encourage sustainable travel.

- 4.2 The following excerpts from the NPPF and subsequent Rule 6 commentary set out that sustainable travel measures are not feasible from this landlocked location and have not been sufficiently demonstrated by the appellant, with particular journeys being neglected from consideration altogether.
- 4.3 The following section sets out guidance from the National Planning Policy Framework - February 2019 NPPF) and where we believe the appellants current proposal falls short. We look forward to the appellants rebuttal and proofs of evidence that address each point in turn;
- 4.4 NPPF 102. Transport issues should be considered from the earliest stages of planmaking and development proposals, so that;
  - a) the potential impacts of development on transport networks can be addressed;
    As previously discussed in Section 3 we do not believe adequate road traffic assessments have been undertaken for a site of this size and complexity.
  - d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains;
    The appellants lack of adequate and detailed surveys does not provide sufficient reasoning to prove the effects of a development this size will not be severe. The proofs of evidence within, comprehensively detail the current state of the overburdened infrastructure, especially in and around residential roads that will

be used to gain access to the proposed site, all of which struggle to meet todays current demand.

In addition, we fail to see how the reduction in green space and trees to accommodate proposed access roads and verges etc will result in achieving net environmental gains.

4.5 103. The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.

- Cycle routes that end at the site boundaries and place cyclists back on to very busy roads with increased levels of traffic. This provision will do very little to encourage residents to commute by bicycle when the state of our roads provide both physical and psychological barriers.

- 30 minute walk to access Padgate Train Station and it's limited hourly service (sometimes 2 hourly).

- Long bus journeys to gain access to Birchwood or Warrington Central train stations with arrival times often affected by traffic – this does not promote consumer confidence when trying to catch a train to their place of work.

- 3 Year opt out agreement for Warrington's Own Busses – that could see the bus service pulled long before the development is even completed.

- A large majority of the 1200 homes will be purchased by people from outside of Warrington, this will encourage journeys either to or from the site as residents look to maintain their social networks in neighboring towns and further afield.

- Likewise, those moving from outside of the area will have places of employment or conversely be tradesmen with commercial vehicles, both of which scenarios will not seek to use what little alternative travel arrangements are made available.

None of the above constitutes sustainable transport solutions and therefore does not meet the requirements of the NPPF.

#### 4.6 104. Planning policies should

 a) provide for high quality walking and cycling networks and supporting facilities such as cycle parking (drawing on Local Cycling and Walking Infrastructure Plans).

As previously discussed, the extent of the cycle lane provision merely assists with cycling from one end of the site to the other. At such point, cyclists are left with the option of riding back on our extremely busy roads with even more traffic than before.

With respect to high quality walking networks, it would be interesting to hear the appellants definition of high quality. We have polled local residents on this very issue, their view of high quality walking routes being;

- Peaceful
- Free from traffic, noise and pollution
- Interesting
- Appealing
- Scenic

Not only does the appellants master plan fall woefully short of providing a safe and healthy environment for residents, it worsens the amenity that residents from three different areas of Warrington currently enjoy communally. Instead of bringing people together in a safe, pleasant and healthy environment, the proposed development acts to do quite the opposite.

The only offering to provide green walks are along the M62 corridor where noise and air pollution is at its worst, thus taking away a valuable community amenity.

On that basis, the requirements set out in Section 104 of the NPPF are not met.

## Section 5 – Public Transport

- 5.1 Section 4 previously touched on issues surrounding the provision of sustainable transport. This chiefly applies to the provision of bus services as cycling falls short of providing suitable and safe access to anywhere from the proposed development.
- 5.2 Given concerns regarding traffic congestion, air quality, noise and sustainability it is clearly necessary to establish the role which public transport would play if the Peel Hall site was developed.
- 5.3 The appellant claims that "This (new services) will provide modal choice from early occupation and is considered to be beneficial in reducing car travel from the outset." The Rule 6 party will demonstrate that this is highly unlikely.
- 5.4 This evidence will show the following:
  - a) The bus provision referenced in the appellant's documentation is out of date and therefore overstated.
  - b) This is because of a long-term trend in reduced bus viability in Warrington
  - c) Bus journeys from Peel Hall would be unappealingly long, when compared with car journeys.
  - d) Any extension to existing services to incorporate Peel Hall would be likely to displace bus passengers from other locations, resulting in no net gain in public transport take-up for Warrington, and a possible reduction in overall take-up.
  - e) The commitment to bus services in Peel Hall is only for three years and could be removed long before the site has been fully developed.

#### Trends in bus usage and viability in Warrington

5.5 Quoting from Volume 5, page 62:

9.4.6 The existing bus services that currently operate close to each of the proposed site accesses are as follows:

i. Mill Lane and Blackbrook Avenue Roundabout Services 23 and <mark>23A</mark>; <mark>25A</mark>; <mark>26 and 26E</mark>; <mark>27 and 27E</mark>

ii. Poplars Avenue Central Access Services 20 and 20A; 21, 21A and 21E; 25 and 25A;
 26 and 26E; 27 iii. Poplars Avenue West Services 19; 20 and 20A; 21, 21A and 21E; 22;
 329 and 360

iv. Birch Avenue Services 19; 20 and 20A; 21, 21A and 21E; 22; 329 and 360

v. Grasmere Avenue Services 20 and 20A; 21, 21A and 21E; 25 and 25A; 26; 27

Please note that the highlighted routes are those which no longer feature in Warrington's Own Buses' timetable.

- 5.6 At the time of compiling this report, the Rule 6 Party made every attempt to gain basic information from service operator Warrington's Own Buses. Questions included: how far each service would penetrate either end of the site, where would the main bus stops be and what is the timescale envisaged by Warrington's Own Busses for the introduction of the new bus service to site. None of our questions were answered.
  - 5.7 The Warrington LTP4 Evidence Base Review provides some context:
    - a) Bus services in Warrington are centred on Warrington Bus Interchange. This often requires passengers to change services in the centre for cross town journeys.
    - b) Between 2010/11 to 2015/16, there has been a decline in bus patronage from 11.5 million to 6.6 million per year. This has declined at a greater rate than the North West average.

- c) The majority of bus services finish at 23.00 and have limited services on most routes on Sundays.
- d) Bus fares have also increased in recent years. As a result, taxis are becoming increasingly more competitive to local bus services – especially when more than one family member is making the journey.
- e) There has been a significant reduction in local bus spend in Warrington, with a reduction of -48% between 2009/10 and 2014/15.
- 5.8 On passenger satisfaction with bus services, the LTP4 Evidence Base Review states:
  - a) Bus passenger satisfaction levels in Warrington are below the national average. The routing of services and congestion in the town was identified to reduce the quality of bus services.
  - b) Stakeholders at the local transport summit suggested that implementing bus priority measures, better routing and improved journey reliability could raise quality of service.
  - c) Price was identified as a key issue on both local bus and rail services and was a key factor in low public transport patronage and high car use. Stakeholders also voiced preference for implementing smart ticketing to help improve the attractiveness of services.

#### Length of journeys

5.9 The proposal is to extend existing bus routes by incorporating the Peel Hall site. As these are already long journeys, this will further reduce the appeal of travelling by bus.

- 5.10 The proposed bus service serving the Peel Hall site will primarily be an extension of two existing routes, The number 20 and the 25. The current 20 service covers the Poplars Avenue and Orford areas and flows into the town centre. No.20 will use the Poplars entrance and the No.25 the Mill Lane entrance.
- 5.11 We assume that both buses will use the bus gate to allow them to service the whole site. This appears to be a reasonable assumption otherwise the bus gate would simply be acting as a barrier to through traffic. However, please see the points below. Assuming this to be correct, the No.25 would take at least 75 minutes to complete its route. Anyone who presently takes the No.20 from a location prior to Peel Hall will see their journey time increase significantly. These additional journey times will make both services less desirable for existing and new users.
- 5.12 Local knowledge is the key here The No.25 is notoriously long, serving the Birchwood area, Cinnamon Brow and Orford before reaching the town centre. Residents from Gorse Covert currently face a journey of up to 58 minutes to reach the town centre a distance of 6.1 miles. By car this would take 15 minutes. Residents in Cinnamon Brow alighting at Enfield Park bus stops face a journey time of up to 30 minutes 4.1 miles. By car this journey would take 10/12 minutes. To extend this service by say, 15 minutes to serve Peel Hall, some service 25 users face a one-way journey into town of more than an hour even longer when waiting time is added on. A return journey into town could take up to 2 and a half hours.

#### 5.13 The main 25 route (and return) is:

Warrington Interchange: O'Leary Street – Ryfields Village – Statham Ave/Kirkstone Ave – Greenwood Crescent/Merrick Close – Orange Grove/Avery Close – Cinnamon Lane North – Cinnamon Brow/Mill House rdbt – Enfield Park Rd/Tweedsmuir Close – Crab Lane/Uni of Chester – Locking Stumps/Copperfield Close – Glover Rd/Turf and Feather – Heathfield House – Birchwood Centre – Birchwood Railway Station – Oakwood/Keyes Close – Gorse Covert Spar Store – Gorse Covert/Ashdown Lane. (Ryfields Village is an intermittent service).

- 5.14 The nearest point that this service gets to Peel Hall is either at the top end of Statham Ave at the junction with Poplars Avenue or the far end of Cinnamon Lane North at the junction with Enfield Park Road. So, travelling from town to Peel Hall on the new 25 route would involve the bus turning left at Statham into Poplars and then right into the Peel Hall site. The bus would then have to turn around and go back down Poplars Ave in order to resume its original route up Greenwood Crescent and int Cinnamon Lane North. It would then need to go back into the Peel Hall site from the end of Cinnamon Lane North and then back out again along Enfield Park Rd in order to resume its route towards Crab Lane.
- 5.15 If this services uses the bus gate in order to travel through the Peel Hall site then the residents on Greenwood Crescent and Cinnamon Lane North would be bypassed and lose their only bus service. The absence of clarity in the appeal documentation leaves this vital question unanswered.
- 5.16 There is a reduced bus service on Saturdays Saturday service ends at approximately 11pm. Sunday has a vastly reduced service which ends at approximately 6pm. For example, the last bus that takes passengers to Gorse Covert on Saturdays leaves Warrington at 18.48, arriving at Gorse Covert at

approximately 19.31. On Sundays this service runs every two hours. The last bus to Gorse Covert leaves Warrington at 16.40 arriving at Gorse Covert approximately 17.25. This is the last bus to Warrington, arriving at 18.11.

- 5.17 Neither of these bus services has connectivity to the nearest railway station which is Padgate which serves the Manchester to Liverpool line. Residents could use part of the 25 service (the closest stop being at Orange Gove) but would have to walk 1.1 miles to reach the station. To walk from Peel Hall to Padgate Station is over 1.5 miles and would take an estimated 30/40 minutes. For residents choosing to use service 20 it would mean disembarking at Smith Drive and then walking 1.8 miles to Padgate Station. To be accurate this would be a much longer walk as the straightest route (Birchwood Way) has no pavement either side of the carriageway. Residents would have to detour along Hilden Road.
- 5.18 Birchwood Train Station is approximately 3.5 miles away from Houghton Green and further from the Peel Hall Site. The No.25 would serve this end of the site. Peel Hall residents would have to walk to the bus stop and a journey to the station would take more than 25 minutes, ten minutes by car and just short of an hour to walk. Some buses do arrive on time for trains but the remainder leaves passengers with long waiting times. For instance, the first train to Manchester to Birchwood is 06.06, the first no.25 bus arrives at the station at 06.18 over ten minutes too late. Passengers intending to get to work on the first train would have to drive, use a taxi, cycle, or walk. There is also the concern that the add-on time operating from Peel Hall may mean passengers either miss their desired train or face long waiting times.
- 5.19 There is no direct bus connectivity to Warrington Bank Quay Station which provides the main north/south line. Passengers would have to disembark at Warrington Bus Interchange and walk just short of a mile (0.8mi) to reach Bank Quay.

5.20 The No. 20 service is commonly known as 'The Pops'. It links Poplars Avenue and flows through Orford to the bus interchange. The journey time currently is approximately 30mins each way from Brathay Close. If the proposed junction is to be sited further down Poplars that would take 18 minutes into town. We are assuming that each route would be extended to the far side of the Peel Hall site and back again to Poplars via the proposed bus gate which would increase time journeys by at least another ten minutes to the round trip whichever bus you take.

#### 5.21 The main route for the No:20 is:

Warrington Bus Interchange – Longford opp Ireland Street - Orford Park Hub – Longford opp Winwick College – Hulme nr Chiltern Road – Hulme opp Cleveland Rd - O'Leary St and into the town centre. The No 21 is the same route anti-clockwise.

- 5.22 These estimations do not include waiting time. Both services would need to negotiate a turning circle on site, presumably along the spine road but there is no precise location provided.
- 5.23 The proposed diversion on both services would become circuitous and have lengthy journey times making this mode of public transport increasingly unattractive. Both routes would be uncompetitive with cars or taxis for journey time, convenience and comfort. Both services would be unlikely to be used by new residents. Journeys to Warrington town centre would overwhelmingly be by car which is already true for the urban area surrounding the Peel Hall site. There is no reason to believe that the new development would be any different.
- 5.24 It should be noted that the journey times stated at this stage are somewhat utopian and make no allowance for traffic congestion. Factoring in additional journey time as a result will more than likely result in missing follow on transport or enduring length waiting times this does not constitute sustainable travel.

- 5.25 During the lockdown through Covid, one undeniable benefit has been the ability to work from home this has improved family life in so many ways, not least the additional time spent with family as a result of not having to leave the house to travel to their place of work.
- 5.26 Once life begins to return to normal, people will not accept in excess of 1 hour bus travel when a car drive or taxi can reduce the journey to under 15 minutes.
- 5.27 It is expected that journeys to other destinations (such as the Trafford Centre) would also be made by car.

## Long-Term Commitment

- 5.28 Please see Appendix 22, which is the Memorandum of Understanding (MOU) between Satnam and Warrington's Own Buses. This is for a 5 year term and provides Warrington's Own Buses with a break point at 3 years. This could mean cessation of bus services well before the completion of the development, leaving residents wholly dependent on cars.
- 5.29 The Rule 6 Party do not see these proposals as a sustainable provision of a public transport service. Specifically:
  - a) New residents would not choose the bus over the car, given the long journey times. This is reflected in low – and declining - bus usage among the population surrounding Peel Hall
  - b) The extension of bus journey times for existing routes would contribute to the unappealing nature of the bus service for passengers beyond Peel Hall. A service with low utilisation would be further stretched. Whilst the appellant's contribution to Warrington's Own Buses might help to offset some of the costs of the extended service, it would do nothing to tempt passengers back onto buses.
  - c) There is minimal commitment from either party, Warrington's Own Buses or Satnam - to the sustained provision of a bus service to this site

- 5.30 The Rule 6 Party have reviewed the current bus timetable and have undertaken a desktop study to determine journey times and the likelihood of residents receiving a sustainable and quality service.
- 5.31 Journeys reviewed include those made from both Bus Service 20 & 25 to the following locations;
  - i. Warrington Hospital 8am and 8pm
  - ii. Culcheth 8am and 8pm
  - iii. Winwick Leisure Centre 8am and 8pm
  - iv. Ikea 8am and 8pm
- 5.32 Results for Route 20 are taken from Howson Road and are as follows;

Journey To	Bus Time	Walk Time	Total Time	Changes	Distance (miles)	Travel Time by Car
Warrington Hospital 8am	14mins	23mins	37mins	0	2.5	8mins
Warrington Hospital 8pm	13mins	28mins	42mins	0	2.5	8mins
Culcheth 8am	19mins	6mins	31mins	0	5.2	12mins
Culcheth 8pm	48mins	10mins	1hr18mins	1	5.2	12mins
Winwick Leisure Centre 8am	4mins	27mins	32mins	0	2.0	6mins
Winwick Leisure Centre 8am	3mins	27mins	31mins	0	2.0	6mins
lkea 8am	36mins	22mins	59mins	0	2.2	7mins
lkea 8pm	31mins	1mins	1hr25mins	1	2.2	7mins

5.33 Results for Route 25 are taken from Shetland Close/Enfield Park Road and are as follows;

Journey To	Bus Time	Walk Time	Total Time	Changes	Distance (miles)	Travel Time by Car
Warrington Hospital 8am	21mins	22mins	43mins	0	4.0	11mins
Warrington Hospital 8pm	18mins	22mins	40mins	0	4.0	11mins
Culcheth 8am	26mins	26mins	53mins	0	4.2	9mins
Culcheth 8pm	26mins	25mins	52mins	0	4.2	9mins
Winwick Leisure Centre 8am	2mins	46mins	49mins	0	2.0	5mins
Winwick Leisure Centre 8am	2mins	46mins	49mins	0	2.0	5mins
lkea 8am	38mins	18mins	57mins	0	3.7	12mins
lkea 8pm	14mins*	32mins	1hr45mins	1	3.7	12mins

\*Journey requires 30 min walk to Padgate Station

- 5.35 The above tables perfectly highlight the issues with the bus service and the logistics associated with the land locked nature of the site. Journeys are often convoluted or in most instances require significant amounts of walking to make the journey.
- 5.36 The likelihood of people persevering with these journey times and restrictions is extremely unlikely. The most obvious mode of transport will be car, failing this, a taxi is a more appealing prospect than a 30 minute walk.
- 5.37 At the previous inquiry, Mr Tighe confirmed that they (bus services) were a "key plank" of the proposals, also making clear that they were needed as mitigation, insofar as the accessibility of the site is concerned (IR13.74)

- 5.38 The desktop study and tables above prove that a bus service just isn't viable and certainly is not an alternative and sustainable mode of transport. Increase in journey times will likely push existing patrons to find alternative means of transport – the service will therefore not benefit from a net gain in uptake and therefore cannot be deemed sustainable.
- 5.39 The appellant's traffic survey shows very low bicycle usage in the area 0.266% of surveyed journeys were undertaken by bicycle.
- 5.40 The quality and quantity of cycle lanes in Warrington is incredibly poor. There is no continuity between routes, instead, just a smattering of disjointed cycle lanes that do not provide any realistic, safe or enjoyable means by which to cycle.
- 5.41 The appellants belief that a cycleway from one side of the proposed development to the other will be enough to encourage people to cycle is extremely misplaced.
- 5.42 The confidence of residents to cycle on Warrington's roads would appear to be incredibly low see appendix 25

## Section 6 – Traffic Mitigation Measures

6.1 Guidance on Transport Assessment as produced by the Ministry of Housing, Communities and Local Government states;

**Mitigation Measures** – ensure as much as possible that the proposed mitigation measures avoid unnecessary physical improvements to highways and promote innovative and sustainable transport solutions.

- 6.2 As previously stated, the provision of cycle lanes across the proposed development will not encourage commuting to work via this method, the number of hardened cyclists that do adopt this approach will be very few and make very little impact on reducing journeys to and from the site. We note from manual traffic counts undertaken by the appellant show a total cycle uptake in the area of 0.266%
- 6.3 As far as innovative transport solutions go, that leaves the extension of existing bus services. Namely Route 20 that will service the Poplars Avenue side of the development and Route 25 that will service the east of the site.
- 6.4 Both routes will extend their service to call at additional stops within the proposed development and result in longer journey times for existing patrons. The additional journey time for Route 25 is significant and unfairly impacts existing patrons hardly innovative.
- 6.5 The current agreement in place between the appellant and Warrington's Own Busses is for an agreed period of 5 years with a 3 year opt out clause. This provides

the very real threat that the services could be scaled back or axed long before the site has been fully developed due to lack of viability.

- 6.5 Warrington's Own Busses has axed similar services in the past for this very reason, so it would come of little surprise should we be faced with the same predicament in future.
- 6.6 As recommended by the Ministry of Housing, Communities and Local Government, after the innovative and sustainable mitigation measures, the residual improvements would typically comprise of physical mitigation measures, namely improvements to highways and junctions.
- 6.7 In the case of Peel Hall however, we find ourselves faced with a sea of physical mitigation measures, some of which are in excess of 3km away from the site this should give you some indication of the knock on effects to the roads and local residents across a significant section of North Warrington.
- 6.8 The following mitigation measures (in red text) are proposed by the appellant. We have supplemented our argument beneath each point.
  - i. A full and comprehensive Travel Plan supported by extensive travel plan measures, to enhance and support sustainable travel of future residents

As previously concluded, the extension of existing bus services and increasing journey times well in excess of driving, catching a taxi and in some instances, walking, is not sustainable. This somewhat questions the merit of providing a travel plan in the first place. ii. An effective bus mitigation strategy based on extending two existing bus services into the site, in the east and south

Refer to Section 5 of this document.

iii. A50 Orford Green/Poplars Avenue – development impact at this junction was previously addressed through proposed engineering measures to increase the circulatory to two lanes (as built). However, this capacity restriction was part of a highway safety scheme and as such, instead of mitigation measures at the junction it is proposed to provide a contribution towards traffic calming measures within the area to the immediate south of the development site (see point iv)

Traffic calming measures do not act to reduce peak hour congestion which is the main issue that appears to go unanswered. If anything, traffic calming measures are likely to have the direct opposite impact and create further queues and delays. The knock on effect of this will be vehicles rat running to circumvent said queues.

iv. Provision of funding for traffic calming measures on the area to the immediate south of the Peel Hall development such as Poplars Avenue, Cleveland Road, Statham Avenue, Howson Road and Capesthorne Road. This is likely to involve, for example, replacement of measures along Capesthorne Road with more appropriate traffic calming and additional traffic calming and traffic management measures in the wider area.

All these streets already benefit from traffic calming measures. Cheshire Police have recently undertaken a series of road safety surveys in the areas mentioned and speeding was not deemed an issue. The concern here is volume of traffic during peak hours and during school drop offs and pick ups.

## v. Provide funding for an extended 20mph speed limit through Poplars Avenue and Capesthorne Road

Traffic seldom reaches speeds in excess of 20mph down this road. The concern shared by residents is not speed – it is volume of traffic. Placing money within WBC's purse does not resolve the very likely and significant increase in traffic, ambient noise and air pollution along this road. In addition, the reduction in speed limit will only encourage cars to utilise Greenwood Crescent as a cut through – whilst this road is also restricted to 20mph, the carriageway is generally wider and suffers less with parked vehicles on the highway. As a result, this road does suffer with vehicles travelling in excess of the speed limit far more often.

Ultimately, this will create risk above and beyond that already – any increase in risk is symptomatic of poor design and should not be accepted, to do so, trades off public safety over profit and sets a very dangerous precedent.

Furthermore, we would respectfully draw your attention to item vii. below which seeks to provide safe cycling along this route via provision of road signs and markings. The combination of these mitigation measures in conjunction with laybys utilising the existing grass verges (item viii.), makes these roads extremely confusing and a poses a severe risk to pedestrians and cyclists welfare.

Please also refer to Appendix 6.

vi. Provision of uncontrolled dropped kerb pedestrian crossing points with tactile paving across arms of all roads intersecting with Poplars Avenue and upgrade existing locations for pedestrians to cross Poplars Avenue to promote attractive pedestrian routes, enhance highway safety and assist pedestrians with crossing movements.

The plan proposed by the appellant indicates the removal of a zebra crossing to be replaced by a pedestrian refuge island. The majority of crossings will undoubtedly be school runs, this means parents with young children and possibly toddlers – stranded in the centre of a carriageway negotiating traffic (one family at a time). The addition of a new major junction poses the very real issue of parents amongst other residents having to try and negotiate their way across this junction whilst observing cars from both directions on Poplars Avenue and from the proposed development in the opposite direction.

This is a wholly unacceptable solution, the removal of a zebra crossing in place of a new major road access point is very poor design. Traffic levels will be unprecedented should this development go ahead, and the risk to passenger and vehicular safety along this section of road as a result will be severe.

vii. Provision of cycle-friendly measures on Poplars Avenue such as painting cycle markings on carriageway near junctions to warn motorists of cycles. Also, the provision of cycle warning signing where suitable poles for doing so at key areas such as the approaches to the Poplars Avenue/Capesthorne Road roundabout

These are not 'cycle friendly measures' and the sporadic provision of such measures around junctions is far from a safe and sustainable cycling provision. The combination of measures (as raised below item vi), makes these already busy roads, all the more dangerous. These measures will not promote confidence in cyclists, they will create busy and confusing highway interfaces that will place cyclists at risk.
# viii. Provision of funding for parking spaces to be created within the highway verges at locations along Poplars Avenue and Capesthorne Road

The provision of removing grass verges to provide parking only serves to place vehicles closer to pedestrians and places cyclists in a precarious position. These grass verges act as a very important barrier between the houses, pedestrians and traffic. This proposal only serves to remove what very little greenery there is along these routes.

Appendix 16\_1901 TN10 Parking and Measures to South undertaken by Highgate Transportation is worryingly vague and lacking in detail. The traffic counts for parked vehicles for varying scenarios were undertaken on;

- a) Thursday 31<sup>st</sup> October 2019 at 11pm
- b) Saturday 2<sup>nd</sup> November 2019 at 1pm

These days and times serve to avoid both school drop offs and pick ups when on street parking is often at its highest and most dangerous. Given these schools to the south of the site will likely accommodate a number of children from the proposed development, then provision of parking to accommodate additional vehicles is not an unreasonable request.

Table 5&6 within the appellants TN10 contradicts itself with respect to the potential creation of verge parking spaces.

Table 6 also indicates a deficit of available parking spaces to zones 3 & 4 (Poplars Avenue) of 17 and 28 vehicles respectively. This however, is based on a desktop survey utilising an OS Plan which is totally flawed.

The rule 6 party have taken time to survey on foot the entire length of all the roads indicated in the appellants Appendix 22b 1901 06 Potential Verge Parking Bays – see Appendix 5.

It is apparent that a significant number verge parking spaces are not at all feasible.

Appendix 22b does not take into account WBC's Design Guide Note DGN01 - Item 4.9. It clearly states that each vehicle space shall be afforded 6 metres clear length, factoring this in with existing/proposed bus stops, crossing points, existing driveway access and clearance at junctions etc, it is highly unlikely that the stated number of vehicles can ever be safely accommodated along these routes.

Refer to Appendix 5.

### ix. A49/A50/Hawleys Lane signal junction – provide a contribution to upgrade the signal junction to MOVA operation (to cover controller, additional loops and testing

The upgrade of signal controls and fittings to MOVA operation makes no reference to being dual control i.e MOVA + existing SCOOT.

SCOOT controls are in place to manage smooth operation of the entire section of the A49 – the likely knock on effect of this system will be that even more priority will afforded to A49 movements whilst Long Lane and Hawleys Lane waiting times and queues grow even further. Of course, the knock on effect of reducing queues to both Hawleys Lane and Long will be further wait times and build up of traffic on the A49.

To that end, it is highly unlikely that alterations to existing signalised junctions will improve journey times, especially once hundreds of additional vehicle movements from the proposed development are factored in. The appellants Proposed Updated MCC and ATC Traffic Surveys also currently shows this junction as a roundabout – this document has been updated long after this junction was converted from a roundabout. Given a manual count was undertaken in this location, it's worrying that such a simple oversight has not been seen and resolved. It somewhat calls into question the accuracy of the rest of the information provided by Highgate Transport.

 x. A50/Hallfields Road signal junction – provide a contribution to upgrade the signal junction to MOVA operation (to cover controller, additional loops and testing)

As point ix above, a peak manual count survey was undertaken over the period of a single day. I don't believe this will be representational of how the junction typically performs, nor do I believe that this type of control is necessary for this junction.

By provision of MOVA operated signals, is this recognition from the appellant that the increase in traffic from the proposed development moving towards the town centre via Hallfields Road is likely to cause sufficient traffic to merit this upgrade?

If so, perhaps it could be explained as to the justification for not providing traffic calming measures and verge parking along this section of road.

# xi. A49 Newton Road/Golbourne Road – provide a scheme of widening and a ghost right turn lane if not provided by other committed schemes

The main concern here is sheer volume of traffic. This would have been abundantly clear had the appellant undertaken a detailed survey in this location (referred to as points C & D in Appendix 2).

We note that the current width for the section of Golborne Road (A573) approaching the A49 is less than 4m, yet the appellants plan ref 1901/08 appears to split the two lanes at 2.4m each. Given the close proximity of the narrow footway leading to a retaining wall forming part of the grounds to St Oswald's Church, the only feasible way to achieve this would be to reduce the carriageway on the other side by circa 0.8m thus reducing its narrow width even further – this is a significant reduction in road width and one that will further impede flow of traffic, especially larger commercial vehicles given the junction is formed via a sweeping bend. (Please also refer to Appendix 3 & 15)

xii. Golbourne Road/Myddleton Lane - proposed provision of Keep Clear markings on the southbound A49 arm across the Golbourne Road arm to improve junction performance by removing obstructions to the A46 rightturning movement

There is very little issue with this junction and cars heading away from the **A49** on Golborne Road to carry along this section of highway or turn right on to Myddleton Lane. The issue here is simply the volume of traffic that backs up beyond this junction heading towards the A49. This section of work will achieve very little.

Please also refer to Appendix 7 & 15

#### xiii. Myddleton Lane/Delph Lane – proposed signal junction

Myddleton Lane is a severely overused carriageway that provides an essential link to the M6 and M62 for a significant number of vehicles from Cinnamon Brow, Fearnhead, Orford, Croft and Culcheth. Generally, at this junction, traffic is staggered and filters through Myddleton Lane reasonably well with the exception of peak periods when traffic backs up both ways. The provision of a signalized junction will not alleviate this issue, it will make it worse. It will release cars in tranches through narrow highways in all three directions and increase the risk of vehicular accidents.

More of a concern is that the appellant nor council in their discussions and scoping agreement have sought to resolve the issue with the incredibly narrow and dangerous section further along Delph Lane adjacent Houghton Pool. (See Appendix 14). This section of road is extremely narrow with dangerously insufficient pedestrian footpaths that in places simply disappear. There are no safe or sustainable cycling measures proposed by the appellant for future residents as part of the proposed development and therefore we fail to see how cherry picking which measures are provided is a holistic and sustainable approach to a development of this size.

The danger to cyclists along this route is perfectly demonstrated within the appellants own manual traffic counts ref Warrington MCC Warrington J1 by the sheer absence of cycle journeys made. The provision of the Automatic Traffic Count demonstrates how heavily Delph Lane is already utilised, the potential addition of 1200 new houses will significantly increase the traffic flow along this lane.

Therefore, in the absence of public transport along this route, the only feasible safe method of travel through Delph Lane and beyond, is by motor vehicle only. This does not provide a "genuine choice of transport modes" as is the requirement of NPPF Item 103 and therefore fails to meet this important criteria.

## xiv. Birch Ave/A49 – proposed provision of Keep Clear markings on the A49 nearside southbound lane across the Birch Avenue junction

Birch Avenue is very close to the exit arm of the A49 roundabout taking in the westerly exit slip road of the M62 J9, it is a narrow street of 4.5m in width and has historically struggled with traffic movements even prior to the addition of the NHS Facility 'The Alders' which has regular journeys from both domestic and commercial vehicles.

Newton Road is a junction off of Birch Avenue some 11 metres from the A49/Birch Avenue junction – this does not comply with any road design good practices and with increased levels of traffic along this route poses real safety concerns.

For all the safety issues and concerns posed by this junction, the best mitigation measures proposed is a few road markings.

Please also refer to Appendix 4

#### xv. Signalised junction of Enfield Park Road and Crab Lane

The very fact that a signalised junction is provided in this location should tell you all you need to know. The impact of traffic from the proposed development making its way towards Birchwood, M62 J11 heading East or M6 J21 heading south will be severe.

We base this statement of fact (not prediction) on first hand experience of this section of highway where traffic regularly backs up on to and around Enfield

Park Road in both directions, queuing towards the junction of College Roundabout and Birchwood Way (A574).

With increasing frequency, traffic has started to use Stirrup Close and Aviemore Drive in both directions as a rat run to circumvent traffic. These roads are narrow and quiet residential streets (often with an abundance of on street parking) that cannot and should not be burdened with cars traversing at speed.

Typically the traffic, albeit extremely heavy, manages itself quite well with most vehicles giving way to allow another to flow in to the traffic backing up on to Enfield Park Road from Crab Lane.

The addition of a signalised junction will not relieve the burden of additional traffic, it will clearly add more journeys to an already over stretched network, it will cause cars to squeeze through light operations to prevent waiting for their next turn. The existing situation will worsen and cars will seek to use Stirrup Close and Aviemore Drive as noted above.

Please also refer to Appendix 16 & 24.

### **Section 7 – New Site Access Arrangements**

- 7.1 New site access arrangements have been proposed at a series of locations.
- 7.2 Each access point has been provided an Appendix with details of the appellants proposal c/w a series of comments.
  - i. Appendix 8 Proposed Access Arrangements Birch Avenue
  - ii. Appendix 9 Proposed Access Arrangements Poplars Avenue (West)
  - iii. Appendix 10 Proposed Access Arrangements Mill Lane (Leading to Delph Lane)
  - iv. Appendix 11 Proposed Access Arrangements Mill Lane (Residential)
  - v. Appendix 12 Proposed Access Arrangements Poplars Avenue (Central)
  - vi. Appendix 13 Proposed Access Arrangements Grasmere Avenue

#### **Section 8 – Existing Road Conditions**

- 8.1 The following information has been compiled over a number of months and is provided to give some 'real world' perspective of the issues faced by local residents on a regular basis.
- 8.2 Each of the following areas of concern have been provided a separate appendices with location map and images;
  - i. Appendix 14 Delph Lane
  - ii. Appendix 15 Myddleton Lane & Golborne Rd
  - iii. Appendix 16 Enfield Park Road & Crab Lane
  - iv. Appendix 17 A49 Winwick Road
  - v. Appendix 18 A49/Winiwick Link Road
  - vi. Appendix 19 Blackbrook Lane & Capesthorne Road
  - vii. Appendix 20 Poplars Avenue & Sandy Lane West

viii. Appendix 21 – Sandy Lane West

#### **Section 9 – Conclusion**

9.1 At the previous inquiry, the inspector concluded that;

....overall, the appeal proposal has failed to demonstrate that it would not create an adverse impact upon the safety and efficiency of the local and strategic highway network. It would conflict with Core Strategy policy MP7 and relevant paragraphs of the Framework, the requirements of which are set out above (IR 13.42)

The Rule 6 party and local residents still believe this to be the case. The appellant has tried to appease the very obvious traffic congestion issues with a series of ill thought out mitigation measures, very few of which are sustainable modes of alternative transport.

The majority of the mitigation measures are physical and seek to impose 20mph restrictions and traffic calming measures across a significant part of north Warrington which further demonstrates the appellants lack of understanding of just how severe the traffic often is.

The appellants desire to radically alter a significant number of roads and junctions through the local area, only serves to impact a significant number of residents lives over a wide area with very little in return. In fact, I believe the Rule 6 party has adequately demonstrated that existing residents will be worse off as journey times increase, traffic and congestion worsens and noise and air pollution from standing traffic further reduces our air quality.

The appeal site has been blighted by traffic for years and has significantly worsened year on year. The Rule 6 party has real concern over the traffic assessments undertaken and do not believe that quality and quantity of survey's have been commensurate with a site of this size and complexity. We believe had they been, the figures would have undermined the appellants own case.

We are facing a climate emergency and with that, a proposed development of 1200 dwellings, shopping centre, school and offices will be offset by a non existent bus service and extremely limited cycling provision.

The local residents have argued for almost 30 years that the proposal to develop this site was unsustainable. Factor in three decades of growth and exponential rate of dependence on private vehicles and it must surely now be apparent that the local residents are right.

The appellant throughout the entire process has failed to engage with residents to determine what we – the people who live here – would like to see, what services are actually needed. This whole charade has been simply about minimum expenditure and maximum profit, regardless of the severe impact on the town and

its residents that will be blighted with traffic, noise and poor air quality for years to come.

### **Appendices**

- Appendix 1 Site Location Plan Appendix 2 - Proposed Updated MCC and ATC Traffic Surveys (Warrington Map) Appendix 3 – Golborne Road/A49 proposed works Appendix 4 – Birch Road Mitigation/Improvements Appendix 5 - Potential Verge Parking Bays (Poplars Rd & Capesthorne Road) Appendix 6 – Extend 20mph restriction to Poplars Rd & Capesthorne Road Appendix 7 – Potential A49 Golborne Road Junction Improvements Appendix 8 – Proposed Access Arrangements – Birch Avenue Appendix 9 – Proposed Access Arrangements - Poplars Avenue (West) Appendix 10 – Proposed Access Arrangements - Mill Lane (Leading to Delph Lane) Appendix 11 – Proposed Access Arrangements - Mill Lane (Residential) Appendix 12 – Proposed Access Arrangements - Poplars Avenue (Central) Appendix 13 - Proposed Access Arrangements - Grasmere Avenue Appendix 14 – Delph Lane Appendix 15 – Myddleton Lane & Golborne Rd Appendix 16 – Enfield Park Rd & Crab Lane Appendix 17 – A49 Winwick Road Appendix 18 – A49 Winwick Rd & Winwick Link Rd Appendix 19 – Blackbrook Ave & Capesthorne Rd Appendix 20 – Poplars Avenue & Sandy Lane West Appendix 21 – Bus Journey Desktop Study Appendix 22 - MOU Satnam & WOB Appendix 23 - A49 Incorrect Road Designations Appendix 24 – Aviemore Drive & Stirrup Close Rat Runs Appendix 25 – Residents testimonies – Cycling Appendix 26 - Cheshire Police - Acknowledgement of Traffic Concerns Appendix 27 – Residents testimonies – Busses
- Appendix 28 Cheshire County Council Letter

### Appendix 1 – Site Location Plan



Appendix 2 - Proposed Updated MCC and ATC Traffic Surveys (Warrington Map)



Appendix 3 – Golborne Road/A49 proposed works





PROJECT: PEEL HALL WARRINGTON							
CLIENT: SATNAM MILLENNIUM LTD							
project reference:	DRAWING NUMBER:	scale: 1:500 @ A3					



Appendix 4 – Birch Road Mitigation/Improvements



Appendix 5 - Potential Verge Parking Bays (Poplars Rd & Capesthorne Road)



Appendix 6 – Extend 20mph restriction to Poplars Rd & Capesthorne Road



Proposed 20mph restrictions

Roads omitted from consideration. Far greater potential for speeding due to no on street parking.



Appendix 7 – Potential A49 Golborne Road Junction Improvements



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Appendix 8 – Proposed Access Arrangements – Birch Avenue



Appendix 9 – Proposed Access Arrangements - Poplars Avenue (West)



Appendix 10 – Proposed Access Arrangements - Mill Lane (Leading to Delph Lane)



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Z	The appellants proposal serves to add 150 additional houses to be serviced by this minor road and junction. Assuming the same number of cars per household as existing - that would equate to an increase in utilisation of almost 300%								
	That's 300% increase in vehicles utilising a junction that;								
	<ul> <li>a) Is of poor design</li> <li>b) Has had visibility reduced further by the roundabout design.</li> <li>c) Has increased vehicular movement along the main road as a result of the proposed development.</li> </ul>								
	Everything about this proposal is wrong - it puts profit before people and risks the lives & safety of pedestrians and road users								
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Appendix 11 – Proposed Access Arrangements - Mill Lane (Residential)



Drawing based on Powers & Tiltman topographical survey 6297_01 dated 25/07/11.								
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Appendix 12 – Proposed Access Arrangements - Poplars Avenue (Central)

山 Poplars Avenue is a local distributor road on the basis that; 1. It serves over 300 dwellings. 2. Provides access to major residential roads, minor access roads and shared surface roads. 3. Major residential access roads serve between 50 and 300 dwellings - Poplars Ave is far in excess of this. On this basis the proposed junction does not meet the minimum junction spacing requirements for junctions opposite (45m) and adjacent (90m). 64 WBC Design Guide for Residential and Industrial Estate Roads also states; 3.5m SHARED FOOTWAY-CYCLEWAY 1.5m VERGE  $\sim$ 1. Frontage access to dwellings is permitted but; 2. Direct access will not be permitted within 20m of its 85,345.60 2.0m FOOT junction with a classified road - existing premises are clearly well within this restriction. 3. The new junction therefore fails to meet a number of items of criteria in WBC's Design Guide and PROPOSED NEW PEDESTRIAN REFUGE ISLAND should not be considered a safe and sustainable means of access. R 13,920, RELOCATED BUS STOP LAYBY EXISTING BUS STOP TO BE RELOCATED PROPOSED DOUBLE YELLOW LINES EXISTING ZEBRA CROSSING TO BE REMOVED NEW PEDESTRIAN CROSSING FACILITY PROPOSED NEW BUS STOP LAYBY PROPOSED

	NOTES: Drawing based on Appletons plan 140367-B-001G dated January 2016.							
	©Crown copyright an	d databa	use rights 201	17 OS Licer	nce 1000	56454.		
VIII .	KEY:							
	Parking Areas (numbe	er of cars	that can be	accommoc	lated)	6		
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	WARRINGTON							
	CLIENT:							
	SATN	AN	I MIL	LEN	NIU	JM		
			LTD					
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			© High	gate Tran	sportat	ion Limited		
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Appendix 13 - Proposed Access Arrangements - Grasmere Avenue


Appendix 14 – Delph Lane





Cars mounting pavement to allow HGV to pass



Cars at standstill as coach Negotiates its way past



Narrow and poorly lit road



Combination of narrow road, lack of pavements and proximity to walls is dangerous for motorists, pedestrians and cyclists.



HGV stuck on bend of Delph Lane



HGV straddles across both lanes



Appendix 14

Delph Lane

# Appendix 15 – Myddleton Lane & Golborne Rd







Location Map



Vehicles backing up to Hermitage Green travelling towards A49



Typical example of HGV creating chaos turning out of Myddleton Lane





Vehicles backing up Myddleton Lane travelling toward Golborne Rd





Appendix 15

Myddleton Lane & Golborne Rd

# Appendix 16 – Enfield Park Rd & Crab Lane





Traffic backing up from Crab Lane Roundabout to Isherwood Close

Location Map



Cars backing up along Crab Lane from Birchwood Way Roundabout



Aerial photo of cars backing up along Crab Lane from Birchwood Way Roundabout

Lane from Birchwood Way Roundabout



Traffic backing up from Crab Lane Roundabout to Stirrup Close/Isherwood Close



Cars backing up along Crab



Appendix 16

**Enfield Park** Road

Appendix 17 – A49 Winwick Road



## Location Map

22 February at 08:56

A49 Completely Blocked Again ! It's Not In School Time & It's Took 25 Minutes To Get 2 Miles....Warrington Is Becoming A Bottleneck. Can't Be Doing The Pollution Levels Much Good Either!

# 28 February at 18:57

2.30 today trying to get of alban retail park by Iceland as traffic at pizza hut was 20 cats waiting to get on hawleys lane



Traffic on J9 Retail trying to join A49



Crawling along from j9 to get to aldi 13.57 on a Sunday 😒



Traffic backing up from Sandy Lane West/A49 roundabout back to M62 J9.



More traffic on J9 Retail trying to join A49



Cars backing up towards town centre due to heavy A49 traffic



...

Traffic on A49 (taken from Birch Ave)



Appendix 17

A49 Winwick Rd

# Appendix 18 – A49 Winwick Rd & Winwick Link Rd





Location Map

Traffic on A49 queuing to M62 J9 roundabout. Delph Lane (junction to RHS of image) will now also accommodate new 20 house development



Aerial image of traffic backing up on Winwick Link Road & A49 from A49/M62 J9 roundabout



Appendix 18

A49 Winwick Rd/ Winwick Link Road

# Appendix 19 – Blackbrook Ave & Capesthorne Rd



Location Map



Traffic on Blackbrook Avenue rat running to avoid traffic on Myddleton Lane



occurrence)



Traffic on Blackbrook Avenue and Capesthorne Road op St Bridgets CPS



Traffic on Blackbrook Avenue between both Enfield Park Road junctions

Traffic on Blackbrook Avenue / Mill Lane Avoiding motorway accident (regular



Appendix 19

Blackbrook Ave/ Capesthorne Rd

Appendix 20 – Poplars Avenue & Sandy Lane West





Congestion on Poplars Avenue approaching A50



More congestion on Poplars Avenue

Location Map





On street parking

Drone footage of traffic queuing from Cromwell Avenue/A49 and South/Sandy Lane West





Appendix 20

Poplars Avenue & Sandy Lane West

Appendix 21 – Bus Journey Desktop Study

# Appendix 21 – Bus Journey Desktop Study

The following information has been taken from the Warrington Busses journey planner website.

Journeys were planned for 8am and 8pm – we have chiefly focussed on weekdays, although the final sections of this document will demonstrate the lack of service coverage of a weekend and especially Sunday.

### BUS ROUTE 20 (STOP AT CORNER OF HOWSON RD USED)

	Journey To	Bus Time	Walk Time	Total Time	Changes					
V	/arrington Hospital 8am	14mins	23mins	37mins	0					
		Summ	nary Results							
Dep	art/Arrive	Changes Legs			Duration					
^	∧ 08:09 → 08:46 0									
	<ul> <li>From Poplars Avenue Opp Howson Road, Hulme, take 20 bus to Bus Interchange (Stand 3), Winwick Street, Warrington</li> <li>14 minutes. Depart 08:09, Arrive 08:23</li> <li>Warrington's Own Buses (WarringtonBuses)</li> </ul>									
	Today's Live Departures / Service Timetable									
Ŕ	Walk to Warrington Hos 23 minutes. Depart 08:2	pital, Lovely Land 3, Arrive 08:46	e, Warrington, Che	shire						

	Journey To			Bus	Time	Walk Tin	ne	Total Time	Changes	
V	/arringto	n Hos	spital 8pm	13	mins	28mins	42mins	0		
					Summa	ry Results				
Dep	art/Arrive	2	C	hanges	Legs				Duration	
^	20:45	→	21:27	0	*	× 5			0:42	
Ķ	Walk to Statham Avenue Cnr Poplars Avenue, Orford 6 minutes. Depart 20:45, Arrive 20:51									
	<ul> <li>Take 25 bus to Bus Interchange (Stand 14), Winwick Street, Warrington</li> <li>13 minutes. Depart 20:52, Arrive 21:05</li> <li>Warrington's Own Buses @ @WarringtonBuses</li> </ul>									
	Today's Live Departures / Service Timetable									
六	Walk to	Warri	ington Hosp	ital, Love	ly Lane,	Warrington,	Ches	shire		

22 minutes. Depart 21:05, Arrive 21:27

	Journey To	Bus Time	Walk Time	Total Time	Changes						
C	Culcheth 8am	19mins	6mins	31mins	0						
			Summary Results								
Dep	art/Arrive	Changes	Legs		Duration						
^	08:59 →	09:30 1			0:31						
Ķ	Walk to Poplars Avenue Opp Statham Avenue, Orford 6 minutes. Depart 08:59, Arrive 09:05										
	<ul> <li>Take 25 bus to Glover Road Opp Copperfield Close, Birchwood</li> <li>12 minutes. Depart 09:06, Arrive 09:18</li> <li>Warrington's Own Buses @ @WarringtonBuses</li> </ul>										
	📅 💙 Today's Live Departures / Service Timetable										
	Take <b>28</b> bus to <b>7</b> minutes. Dep	Warrington Road O art 09:23, Arrive 09	/S Library, Culcheth 9:30 @ Warr	ington's Own Buses 👽	@WarringtonBuses						

	Journey	, <b>То</b>	В	us Tim	e	Wa	alk 1	Гime	•	То	tal Ti	me		Chan	ges
C	Culcheth	8pm		48mins	;		10m	ins		1ŀ	nr18m	ins		1	
						Summ	nary F	Result	5						
Dep	art/Arrive	2		Chan	ges	Legs								D	)uration
^	20:45	$\rightarrow$	22:03	1		Ŕ		*							1:18
×	Walk to 6 minut	Statha <b>es.</b> De	am Aver part 20:	nue Cnr 45, Arri	P <mark>opla</mark> ve 20	ars Ave :51	enue,	, Orfc	ord						
D	Take 25 9 minut	bus to <b>es.</b> De	Fennel part 20:	Street 52, Arri	Opp C ve 21	ockhe: 01	dge	Lane	, How Varring	ley ton's C	)wn Bus	ses (	🤊 @W	arringtor	nBuses
	📰 💙 Today's Live Departures / Service Timetable														
×	<ul> <li>Walk to Church Street Cnr Orchard Street, Howley</li> <li>4 minutes. Depart 21:01, Arrive 21:05</li> </ul>														
DX	<ul> <li>Take 28E bus to Warrington Road O/S Library, Culcheth</li> <li>39 minutes. Depart 21:24, Arrive 22:03</li> <li>Warrington's Own Buses @ @WarringtonBuses</li> </ul>														
10	/inwiek l		Contro	. 9 cm		4 mino			7 min		24			Cina	)
VV		eisure	Centre	oam		+mins		2	/ /////:	5	34	21111115	•	L	)
Den	art/Arrive	2		Chan	σρς	Summ	iary H	lesult	5					D	Juration
<b>^</b>	08:26	<b>→</b>	08:58	0	<u> </u>	*		Ķ							0:32
×	Walk to 21 minu	Newto I <b>tes.</b> D	on Road epart 08	<b>Cnr Mil</b> 3:26, Ari	l Lane rive 0	e, Huln 8:47	ne								
	<ul> <li>Take 22 bus to Newton Road Opp St Oswald Church, Winwick</li> <li>4 minutes. Depart 08:48, Arrive 08:52</li> <li>Warrington's Own Buses (@WarringtonBuses)</li> </ul>														
	➤ Today	y's Live	Departu	ires / Sei	rvice T	imetat	ole								
Ķ	Walk to 6 minut	Winwi <b>es.</b> De	ck Leisu part 08:	i <mark>re Cent</mark> 52, Arriv	re, M ve 08	y <mark>ddlet</mark> :58	on L	ane, I	Winw	ick, V	Varring	gton,	Chesl	nire	

	Journ	еу То	Bus Time	Walk Time	Total Time	Changes		
Wi	nwick Leisur	e Centre 8am	3mins	27mins	31mins	0		
Dep	art/Arrive	Chan	ges Legs			Duration		
^	20:19 →	20:50 0	× 🗖	<b>*</b>		0:31		
Ķ	<ul> <li>Walk to Newton Road Cnr Mill Lane, Hulme</li> <li>21 minutes. Depart 20:19, Arrive 20:40</li> </ul>							
	<ul> <li>Take 22A bus to Newton Road Opp St Oswald Church, Winwick</li> <li>3 minutes. Depart 20:41, Arrive 20:44</li> <li>Warrington's Own Buses @@WarringtonBuses</li> </ul>							
	Ƴ Today's Li	ve Departures / Se	rvice Timetable					
Ŕ	Walk to Win	wick Leisure Cent	re, Myddleton I	Lane, Winwick, V	Varrington, Ches	hire		

6 minutes. Depart 20:44, Arrive 20:50

Journey To	Bu	Bus Time		alk Time	Total Tim	ıe	Changes	
lkea 8am	3	36mins		22mins	59mins		0	
			Sumr	nary Results				
Depart/Arrive		Changes	Leg	5			Duration	
∧ 08:04 →	09:03	0	Ŕ				0:59	
<ul> <li>Walk to Hilden Road Cnr Hilden Place, Orford</li> <li>22 minutes. Depart 08:04, Arrive 08:26</li> </ul>								

Take 17 bus to Europa Boulevard O/S Ikea, Callands 36 minutes. Depart 08:27, Arrive 09:03

🚯 Warrington's Own Buses 🕑 @WarringtonBuses

Jo	ourney To	Bus Time	Walk Time	Total Time	Changes					
	Ikea 8pm	31mins	1mins	1hr25mins	1					
			Summary Results							
Depa	rt/Arrive	Changes	Legs		Duration					
^	21:10 →		1:25							
	<ul> <li>From Poplars Avenue Cnr Howson Road, Hulme, take 21 bus to Bus Interchange (Stand 4), Winwick Street, Warrington</li> <li>17 minutes. Depart 21:10, Arrive 21:27</li> <li>Warrington's Own Buses (WarringtonBuses)</li> </ul>									
	✓ Today's Live	Departures / Service	Timetable							
¢	<ul> <li>Walk to Bus Interchange (Stand 18), Winwick Street, Warrington</li> <li>1 minute. Depart 21:27, Arrive 21:28</li> </ul>									
	Take <b>17</b> bus to <b>14 minutes.</b> De	Europa Boulevard ( epart 22:21, Arrive 2	0/S Ikea, Callands 22:35 () Warr	ington's Own Buses y	@WarringtonBuses					

### BUS ROUTE 25 (STOP ADJ SHETLAND CLOSE/ENFIELD PARK RD)

	Journey To		Bus Time	Walk Time	Total Time	Changes					
Warrington Hospital 8am		21mins	22mins	43mins	0						
	Summary Results										
Dep	art/Arrive	Cł	nanges Legs			Duration					
^	08:13 →	08:56	0	<b>ጵ</b>		0:43					
	<ul> <li>From Enfield Park Road Cnr Shetland Close, Houghton Green, take 25 bus to Bus Interchange (Stand 14), Winwick Street, Warrington</li> <li>21 minutes. Depart 08:13, Arrive 08:34</li> <li>Warrington's Own Buses @@WarringtonBuses</li> </ul>										
	Today's Live Departures / Service Timetable										
Ķ	Walk to Warr	ington Hospi	tal, Lovely Lane	, Warrington, Che	shire						

22 minutes. Depart 08:34, Arrive 08:56

	Journey	/ То	Bus Time	Walk Time	Total Time	Changes				
V	/arrington Ho	spital 8pm	18mins	22mins	40mins	0				
			Summa	ary Results						
Dep	art/Arrive	Cl	nanges Legs			Duration				
▲ 20:47     →     21:27     0     □     ★     0:4										
	<ul> <li>From Enfield Park Road Cnr Shetland Close, Houghton Green, take 25 bus to Bus Interchange (Stand 14), Winwick Street, Warrington</li> <li>18 minutes. Depart 20:47, Arrive 21:05</li> <li>Warrington's Own Buses @@WarringtonBuses</li> </ul>									
	Today's Live Departures / Service Timetable									
Ŕ	Walk to Warr	rington Hospi	tal, Lovely Lane,	Warrington, Che	shire					

22 minutes. Depart 21:05, Arrive 21:27

Journey To	Bus Time	Walk Time	Total Time	Changes							
Culcheth 8am	26mins	26mins	53mins	0							
		Summary Results									
Depart/Arrive	Changes	Legs		Duration							
∧ 08:36 → 0	∧ 08:36 → 09:29 0 ★ □										
☆ Walk to Harpers 26 minutes. Dep	<ul> <li>Walk to Harpers Road O/S Conservative Club, Padgate</li> <li>26 minutes. Depart 08:36, Arrive 09:02</li> </ul>										
Take 28 bus to V 26 minutes. Dep	<ul> <li>Take 28 bus to Warrington Road Opp Chatburn Court, Birchwood</li> <li>26 minutes. Depart 09:03, Arrive 09:29</li> <li>Warrington's Own Buses   @WarringtonBuses</li> </ul>										
Journey To	Bus Time	Walk Time	Total Time	Changes							
Culcheth 8pm	26mins	25mins	52mins	0							
		Summary Results									
Depart/Arrive	Changes	Legs		Duration							
<b>∧</b> 21:10 →	22:02 0	× 🗖		0:52							
☆ Walk to Crab La 25 minutes. De	ane Opp Locking Stu epart 21:10, Arrive 2	umps Lane, Fearnhe 21:35	ad								

Take **28E** bus to Warrington Road Opp Chatburn Court, Birchwood **26 minutes.** Depart 21:36, Arrive 22:02

🚯 Warrington's Own Buses 😏 @WarringtonBuses

	Journe	уТо	Bus Time	Walk Time	Total Time	Changes			
W	/inwick Leisure	e Centre 8am	2mins	46mins	49mins	0			
			Summary	Results					
Dep	art/Arrive	Chan	ges Legs			Duration			
^	08:03 →	08:52 0	* 🗖	¢		0:49			
Ķ	Walk to Poplars Avenue Cnr Howson Road, Hulme 21 minutes. Depart 08:03, Arrive 08:24								
	<ul> <li>Take 21 bus to Poplars Avenue Opp Newhaven Road, Hulme</li> <li>2 minutes. Depart 08:25, Arrive 08:27</li> <li>Warrington's Own Buses (@WarringtonBuses)</li> </ul>								
	✤ Today's Live	e Departures / Sei	rvice Timetable						
Ŕ	Walk to Winw	ick Leisure Cent	re, Myddleton I	Lane, Winwick, V	Varrington, Ches	hire			

```
25 minutes. Depart 08:27, Arrive 08:52
```

	Journ	еу То	В	us Tim	е	Walk Time	Total Time	Changes	
Wi	nwick Leisu	re Centre 8an	n	2mins		46mins	49mins	0	
Dep	art/Arrive	C	hanges	Legs				Duration	
^	20:48 <b>→</b>	21:37	0	× (		<b>*</b>		0:49	
Ķ	Walk to Poplars Avenue Cnr Howson Road, Hulme <b>21 minutes.</b> Depart 20:48, Arrive 21:09								
	Take 21 bus to Poplars Avenue Opp Newhaven Road, Hulme 2 minutes. Depart 21:10, Arrive 21:12 Warrington's Own Buses & @WarringtonBuses								
	Ƴ Today's L	ive Departures ,	/ Service	Timetab	le				

Walk to Winwick Leisure Centre, Myddleton Lane, Winwick, Warrington, Cheshire
 25 minutes. Depart 21:12, Arrive 21:37

J	ourney	То	Bus	Time	W	alk Time	Total Ti	me	Changes
	lkea 8a	m	38	mins		18mins	57mins	5	0
					Sumn	nary Results			
Dep	art/Arrive	2		Changes	Legs	5			Duration
^	08:06	→	09:03	0	Ķ				0:57
Ķ	Walk to <b>18 minu</b>	Hilden I <b>tes.</b> De	Road Op epart 08:0	p Blenheir 06, Arrive (	n <b>Clo</b> se )8:24	e, Blackbrook			
	Take 17 38 minu	bus to I <b>tes.</b> De	Europa E epart 08:2	Soulevard ( 25, Arrive (	0/S lke )9:03	ea, Callands (1) Warrin	ngton's Own Buse	25 7	@WarringtonBuses

J	ourney To	Bus Time	Walk Ti	me	Total Time	Changes
	lkea 8pm	14mins	32mins	6	1hr45mins	1
			Summary Re	sults		
Dep	art/Arrive	Changes	Legs			Duration
^	20:50 →	22:35 1	* 🛒 🤅			1:45
Ķ	Walk to Padgat 28 minutes. De	e Station Part 20:50, Arrive 2	21:18			
Ŗ	Train to Warrin 3 minutes. Dep	<b>gton Central</b> part 21:19, Arrive 21	1:22		i Northern	€ @northernassist
Ķ	Walk to Bus Int 4 minutes. Dep	erchange (Stand 18 part 21:22, Arrive 21	<b>3)</b> , Winwick S 1:26	treet, W	/arrington	
	Take <b>17</b> bus to <b>14 minutes.</b> De	Europa Boulevard ( epart 22:21, Arrive 2	D/S Ikea, Call 22:35	ands i Warrir	ngton's Own Buses y	@WarringtonBuses

### BUS ROUTE 20 (STOP AT CORNER OF HOWSON RD USED) SATURDAY

Journey To	Bus Time	Walk Time	Total Time	Changes
Town Centre 8am	14mins	23mins	37mins	0

Journey To	Bus Time	Walk Time	Total Time	Changes
Town Centre 8pm	14mins	23mins	37mins	0

### BUS ROUTE 20 (STOP AT CORNER OF HOWSON RD USED) SUNDAY

	Journ	ey To	2	Bus Tim	е	Walk Time	е	Total Time	Changes
Т	own Ce	ntre 8	am	6mins		21mins		28mins	0
					Sum	mary Results			
Dep	art/Arrive	2		Changes	Leg	<u>ş</u> s			Duration
^	08:28	<b>→</b>	08:56	5 0	Ŕ				0:28
Ŕ	Walk to 21 minu	Winw utes. [	vick Roa Depart (	ad O/S Winwi 08:28, Arrive	ck Ro 08:49	ad College, Lo	ongfo	ord	
	Take 32 6 minut	<b>9</b> bus : <b>es.</b> De	to Bus epart 08	Interchange 3:50, Arrive O	(Stand 8:56	d 6), Winwick	Stre	et, Warrington ırriva North West	∂

Journey To	Bus Time	Walk Time	Total Time	Changes
Town Centre 8pm	-	-	-	-

NO SERVICE

### BUS ROUTE 25 (STOP ADJ SHETLAND CLOSE/ENFIELD PARK RD) SUNDAY

Journey To	Bus Time	Walk Time	Total Time	Changes
Town Centre 8am	19mins	21mins	41mins	0
	Su	mmary Results		
Depart/Arrive	Changes Le	egs		Duration
∧ 08:50 → 09:31	1 O 🦻			0:41
<ul> <li>☆ Walk to Poplars Aver</li> <li>21 minutes. Depart 0</li> </ul>	nue Cnr Howson F 08:50, Arrive 09:1	Road, Hulme 1		
Take 21 bus to Bus Ir 19 minutes. Depart 0	nterchange (Stand 09:12, Arrive 09:3	d 4), Winwick Stree 1 Warringt	et, Warrington on's Own Buses 👽 @	DWarringtonBuses

### BUS ROUTE 25 (STOP ADJ SHETLAND CLOSE/ENFIELD PARK RD) SUNDAY

Journey To	Bus Time	Walk Time	Total Time	Changes
Town Centre 8pm	-	-	-	-

NO SERVICE

Appendix 22 - MOU Satnam & WOB





#### Memorandum of Understanding

### Between Warrington's Own Buses and Satnam Millennium Ltd

### In relation to the strategic development of the Peel Hall site

This is a Memorandum of Understanding between Warrington's Own Buses and Satnam Millennium Ltd in relation to the strategy development of the Peel Hall site, Warrington.

An illustrative parameters plan for the proposed Peel Hall site is contained in **Appendix 1**. The development includes up to 1,200 residential dwellings and a local centre, with access from Mill Lane/Blackbrook Avenue in the east and Poplars Avenue in the south.

From discussion between the parties the following is agreed within this Memorandum of Understanding:

- Warrington's Own Buses intend to divert their existing 25 and 20 routes into the proposed Peel Hall development, subject to funding agreement between the parties. Draft timetables are contained in **Appendix 2** for reference and summarised below.
- It is assumed that the development will be carried out in phases, with service 25 first (i.e. the easterly part of the site from Blackbrook Avenue), followed by service 20 from the south (i.e. the southern and western areas of the site from Poplars Avenue.
- Service 25 is assumed to operate Monday to Saturday every 30 minutes.
- Service 20 is assumed to operate up to every 10 minutes Monday to Friday and every 12-13 minutes on Saturday, with a reduced service on Sundays.
- If for some reason the routes listed above are not operational at the time of the development, Warrington's Own Buses are willing to provide costs for the funding of an entirely new service.
- It is agreed that frequencies of the services set out in **Appendix 2** will be subject to review.

It is agreed that these services will offer Peel Hall residents regular bus connections for Warrington Town Centre, Warrington Central Railway Station and Bus Interchange/Shopping Centre, Birchwood Rail Station and Business Park/Shopping, Warrington Vale Royal & Priestley Colleges as well as the Orford Jubilee Hub and Winwick Road retail parks.

#### <u>Costings</u>

On the basis of the above, the costs will be £106,000 per annum for service 25 and £117,000 per annum for service 20.





On the basis of developer funding, it is agreed that these services would run for a period of 5 years (with a 3 year break clause for Warrington's Own Buses).

The above costings are based on 2019 prices and will be index linked.

#### Service 21

It is agreed that there is the potential to operate service 21 into the site, which would offer additional services. This will be subject to additional cost, but for the purpose of this Memorandum of Understanding it is expected to be broadly similar to that associated with service 20.

#### Other Matters

The above is subject to:

- final agreement on mileages, once the site is built and these are known.
- sufficient infrastructure and road widths (suitable to accommodate full size buses).

Warrington's Own Buses enter this Memorandum of Understanding on the basis that it (or its successor) will still be trading at the time the development phases are complete, and that these services remain operational.

#### Signed:

On behalf of Warrington's Own Buses:

Date: 7-6-19-

DWDANG (DAVID WOODS) (ON BEURF OF BEN WAKERLEY)

Mal (BEN WARENEY)

On behalf of Satnam Millennium Ltd:

Date: 25.6.19

11.6.19

# Memorandum of Understanding Appendix 1

Illustrative Parameters Plan





# Memorandum of Understanding Appendix 2

Draft Timetables

Warrington - Longf	ord/Orfor	d (Circ)	via O	rford P	ark Ce	entre														2	20																																
Warrington - Longf	ord/Orfor	d (Circ)	via W	arringt	on Ho	spital -	- Dalla	m												20	A																																
Monday to Friday															B	ef PEE	L Fror	n 17/06	19 To	31/12/2	29																																
:	Service No: 2	0A 20A	20	20 20	20	20 2	0 20	20	20	20 2	20 20	20	20	20	20 2	0 20	20	20	20 2	20 20	0 20	20	20	20 2	0 20	20	20	20 2	0 20	20	20	20 2	20 20	20	20 2	20	20	20	20 20	20	20	20	20 20	J 20	20	20	20 2	0 20	20	20 7	20 2/	20 20	20
Warrington, Interchange [4]	0	617 0645	0705 (	0715 0725	0735	0745 07	55 0805	0815	0825 (	0835 08	845 085	5 0905	0915	0925 0	935 09	45 095	5 1005	1015	025 10	035 104	45 1055	1105	1115 1	125 11	35 1145	5 1155	1205	1215 12	25 1235	5 1245	1255 1	1305 13	15 1325	1335	1345 13	55 1405	5 1415	1425 14	435 144	5 1455	1503	1513 1	528 15	43 1553	1608	1623 7	633 16	48 1703	1713 .	1728 17	743 17!	53 1808	8 1840
Winwick Road, McDonalds			0708 (	0718 0728	0738	0748 07	58 0808	0818	0828 (	0838 08	848 085	8 0908	0918 ز	0928 0	938 09	48 095	8 1008	1018	028 10	038 104	48 1058	1108	1118 1	128 11	38 1148	8 1158	1208	1218 12	28 1238	8 1248	1258 1	1308 13	1328	1338 1	1348 13	58 1408	1418	1428 14	438 144	8 1458	1506	1516 1	531 154	46 1556	1611	1626 1	636 16	51 1706	1716	1731 17	746 17!	56 1811	1 1843
Orford Park Centre			0713 (	0723 0733	0743	0753 08	03 0813	0823	0833 (	0843 08	853 090	3 0913	J 0923	0933 0	943 09	53 100	3 1013	1023	033 10	043 10	53 1103	1113	1123 1	133 11	43 1153	3 1203	1213	1223 12	33 1243	3 1253	1303 1	1313 13	23 1333	1343 1	1353 14	03 1413	1423	1433 14	443 145	3 1503	1512	1522 1	537 15	1602 ز	1617	1632 1	642 16	57 1712	1722	1737 17	752 18/	02 1814	4 1846
Winwick Road, Collegiate Inst			0715 (	0725 0735	0745	0755 08	05 0815	0825	0835 (	0845 08	855 090	5 0915	0925	0935 0	945 09	55 100	5 1015	1025	035 10	045 10	55 1105	1115	1125 1	135 11	45 1155	5 1205	1215	1225 12	35 1245	5 1255	1305 1	1315 13	25 1335	1345 1	1355 14	05 1415	1425	1435 14	445 145	5 1505	1514	1524 1	539 15	1604 6	1619	1634 1	644 16	59 1714	1724	1739 17	754 18/	i04 1816	6 1848
General Hospital	0	622 0650																																											- T		1			<b>—</b>			
Folly Lane, Tyrol House	0	624 0652																																													1 1						
Dallam, Harrison Square	0	627 0655																																													1 1						
Longford, Cotswold Road	0	633 0701	0721 (	0731 0741	0751	0801 08	11 0821	0831	0841 (	0851 09	901 091	1 0921	0931	0941 0	951 10	01 101	1 1021	1031	041 10	051 110	01 1111	1121	1131 1	141 11	51 1201	1 1211	1221	1231 12	41 125	1 1301	1311 1	1321 13	31 1341	1351 1	1401 14	11 1421	1431	1441 14	451 150	1 1511	1520	1530 1	545 16	JO 1610	1625	1640 1	650 17	05 1720	1730	1745 18	800 18'	10 1821	1 1853
Poplars Avenue, Cleveland Roa	ad 0	635 0703	0723 (	0733 0743	0753	0803 08	13 0823	0833	0843 (	0853 09	903 091	3 0923	J 0933	0943 0	953 10	03 101	3 1023	1033	043 10	053 110	03 1113	1123	1133 1	143 11	53 1203	3 1213	1223	1233 12	43 1253	3 1303	1313 1	1323 13	33 1343	1353 1	1403 14	13 1423	1433	1443 14	453 150	3 1513	1522	1532 1	547 16	JZ 1612	1627	1642 1	652 17	07 1722	1732	1747 18	802 18'	12 1823	3 1855
Peel Hall Bus Turning Circle			0733 (	0743 0753	0803	0813 08	23 0833	0843	0853 (	0903 09	913 092	.3 0933	0943	0953 1	003 10	13 102	3 1033	1043	053 11	103 11	13 1123	1133	1143 1	153 12	03 1213	3 1223	1233	1243 12	53 1303	3 1313	1323 1	1333 13	43 1353	1403 1	1413 14	23 1433	3 1443	1453 1	503 151	3 1523	1532	1542 1	557 16	2 1622	1637	1652 1	702 17	17 1732	1742 .	1757 18	812 18/	22 1833	3 1905
Orford Avenue	0	641 0709	0740 (	0750 0800	0810	0820 08	30 0840	0850	0900 0	0910 09	920 093	0 0940	J 0950	1000 1	010 10	20 103	0 1040	1050	1100 11	110 113	20 1130	1140	1150 1	200 12	10 1220	0 1230	1240	1250 13	00 1310	0 1320	1330 1	1340 13	50 1400	1410 1	1420 14	30 1440	) 1450	1500 1	510 152	0 <b>1530</b>	1539	1549 1	604 16	9 1629	1644	1659 1	709 17	24 1739	1749	1804 18	819 18'	29 1839	9 1911
Warrington, Interchange	0	651 0719	0751 (	0801 0811	0821	0831 08	41 0851	0901	0911 (	0921 09	931 093	9 0948	0958	1008 1	018 10	28 103	8 1048	1058	108 11	118 112	28 1138	1148	1158 1	208 12	18 1228	8 1238	1248	1258 13	08 1318	8 1328	1338 1	1348 13	58 1408	1418 1	1428 14	38 1448	1458	1508 1	518 153	0 1540	1549	1559 1	614 16	29 1639	1654	1709 1	719 17	34 1749	1759	1814 18	829 187	38 1845	5 1917

Warrington - Longford/Orford (Circ) via Orford Park Centre	20
Warrington - Longford/Orford (Circ) via Warrington Hospital - Dallam	20A
Saturday	Ref PEEL From 22/06/19 To 31/12/29

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	Service No: 20	A 20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Warrington, Interchange [4]	06-	15 073	080	0824	0848	0906	0919	0931	0944	0956	1008	1021	1033	1045	1058	1110	1122	1135	1147	1159	1212	1224	1236	1249	1301	1313	3 1326	5 1338	1350	1403	1415	1427	1440	1452	1504	1517	1529	1541	1554	1606	1618	1631	1643	1655	1708	1720	1732	1745 1	1800 1	1815 1	1845
Winwick Road, McDonalds		073	3 080	3 0827	0851	0909	0922	0934	0947	0959	1011	1024	1036	1048	1101	1113	1125	1138	1150	1202	1215	1227	1239	1252	1304	1316	5 1329	9 1341	1353	1406	1418	1430	1443	1455	1507	1520	1532	1544	1557	1609	1621	1634	1646	1658	1711	1723	1735	1748 1	803 1	1818 1	1848
Orford Park Centre		073	6 080	8 0832	2 0856	0914	0927	0939	0952	2 1004	1016	1029	1041	1053	1106	1118	1130	1143	1155	1207	1220	1232	1244	1257	1309	1321	1334	4 1346	1358	1411	1423	1435	1448	1500	1512	1525	1537	1549	1602	1614	1626	1639	1651	1703	1716	1728	1740	1753	1808 1	1821 1	1851
Winwick Road, Collegiate Inst		073	8 0810	0 0834	0858	0916	0929	0941	0954	1006	1018	1031	1043	1055	1108	1120	1132	1145	1157	1209	1222	1234	1246	1259	1311	1323	3 1336	5 1348	1400	1413	1425	1437	1450	1502	1514	1527	1539	1551	1604	1616	1628	1641	1653	1705	1718	1730	1742	1755 1	1810 1	1823 1	1853
General Hospital	06	52																														-												Τ				Τ	Τ	Τ	
Folly Lane, Tyrol House	06	54																														-												Τ				Τ	Τ	Τ	
Dallam, Harrison Square	06	57									-					-		-					-		-										-								1	1	1	-		Т	Τ	1	Τ
Longford, Cotswold Road	07	03 074	3 0810	6 0840	0904	0922	0935	0947	7 1000	1012	1024	1037	1049	1101	1114	1126	1138	1151	1203	1215	1228	1240	1252	1305	1317	1329	9 1342	2 1354	1406	5 1419	1431	1443	1456	1508	1520	1533	1545	1557	1610	1622	1634	1647	1659	1711	1724	1736	1748	1801 1	1816 1	1828 1	1858
Poplars Avenue, Cleveland Ro	oad 07	05 074	5 081	8 0842	2 0906	0924	0937	0949	9 1002	2 1014	1026	1039	1051	1103	1116	1128	1140	1153	1205	1217	1230	1242	1254	1307	1319	1331	1344	1356	1408	1421	1433	1445	1458	1510	1522	1535	1547	1559	1612	1624	1636	1649	1701	1713	1726	1738	1750	1803 1	1818 1	1830 1	1900
Peel Hall Bus Turning Circle		075	5 082	8 0852	2 0916	0934	0947	0959	9 1012	2 1024	1036	1049	1101	1113	1126	1138	1150	1203	1215	1227	1240	1252	1304	1317	1329	1341	1354	4 1406	1418	1431	1443	1455	1508	1520	1532	1545	1557	1609	1622	1634	1646	1659	1711	1723	1736	1748	1800	1813 1	1828 1	1840 1	1910
Orford Avenue	07	1 080	083	5 0859	0923	0941	0954	1006	5 1019	1031	1043	1056	1108	1120	1133	1145	1157	1210	1222	1234	1247	1259	1311	1324	1336	1348	3 1401	1 1413	1425	i 1438	1450	1502	1515	1527	1539	1552	1604	1616	1629	1641	1653	1706	1718	1730	1743	1755	1807	1820	1835 1	1846 1	1916
Warrington, Interchange	07	7 080	07 0843	3 0907	0931	0949	1002	2 1014	1027	1039	1051	1104	1116	1128	1141	1153	1205	1218	1230	1242	1255	1307	1319	1332	1344	1356	5 1409	9 1421	1433	1446	1458	1510	1523	1535	1547	1600	1612	1624	1637	1649	1701	1714	1726	1738	1751	1803	1815	1828	1843 1	1852 1	1922

### Warrington - Longford/Orford (Circ) via Orford Park Centre Warrington - Longford/Orford (Circ) via Warrington Hospital - Dallam

#### **SUNDAY & PUBLIC HOLIDAYS**

	Service No:	20A	20	20A														
Warrington, Interchange [4]		0915	0939	1015	1039	1115	1139	1215	1239	1315	1339	1415	1439	1515	1539	1615	1639	1715
Winwick Road, McDonalds			0942		1042		1142		1242		1342		1442		1542		1642	
Orford Park Centre			0946		1046		1146		1246		1346		1446		1546		1646	
Winwick Road, Collegiate Inst			0948		1048		1148		1248		1348		1448		1548		1648	
General Hospital		0922		1022		1122		1222		1322		1422		1522		1622		1722
Folly Lane, Tyrol House		0924		1024		1124		1224		1324		1424		1524		1624		1724
Dallam, Harrison Square		0927		1027		1127		1227		1327		1427		1527		1627		1727
Longford, Cotswold Road		0933	0954	1033	1054	1133	1154	1233	1254	1333	1354	1433	1454	1533	1554	1633	1654	1733
Poplars Avenue, Cleveland Ro	ad	0935	0956	1035	1056	1135	1156	1235	1256	1335	1356	1435	1456	1535	1556	1635	1656	1735
Peel Hall Bus Turning Circle			0959		1059		1159		1259		1359		1459		1559		1659	
Orford Avenue		0942	1009	1042	1109	1142	1209	1242	1309	1342	1409	1442	1509	1542	1609	1642	1709	1742
Warrington, Interchange		0949	1016	1049	1116	1149	1216	1249	1316	1349	1416	1449	1516	1549	1616	1649	1716	1749

Ref PEEL From 23/06/19 To 31/12/29

20

20A

Gorse Covert - Warrington via Birchwood - Locking Stumps - Orford 25																																	
innamon Brow - Warrington via Winwick Road 26E																																	
Culcheth - Cinnamon Brow - Warrington via Croft - Orford 27E																																	
Monday to Friday															Ref PEEL From 17/06/19 To 31/12/29																		
Service Number:	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25			
Gorse Covert, Spar Store	-	-	0637	0651	0717	0743	0815	0847	0920	0950	1020	1050	1120	1150	1220	1250	1320	-	-	-	-	-	-	-	-	-	-	-	-	-			
Gorse Covert, Ashdown Lane	-	-	0639	0653	0719	0745	0817	0849	0922	0952	1022	1052	1122	1152	1222	1252	1322	1352	1422	1452	1530	1558	1628	1657	1732	1757	1824	1849	1914	1944			
Oakwood, Keyes Close	-	-	0643	0657	0723	0749	0822	0854	0926	0956	1026	1056	1126	1156	1226	1256	1326	1356	1426	1456	1535	1602	1632	1701	1736	1801	1827	1852	1917	1947			
Birchwood, Railway Station	-	-	0647	0701	0727	0754	0828	0859	0930	1000	1030	1100	1130	1200	1230	1300	1330	1400	1430	1500	1540	1607	1637	1706	1741	1806	1831	1855	1920	1950			
Birchwood Centre	-	-	0648	0702	0728	0755	0829	0900	0931	1001	1031	1101	1131	1201	1231	1301	1331	1401	1431	1501	1541	1608	1638	1707	1742	1807	1832	1856	1921	1951			
Heathfield House	-	-	0654	0708	0735	0802	0836	0907	0938	1008	1038	1108	1138	1208	1238	1308	1338	1408	1438	1508	1550	1616	1645	1714	1749	1814	1838	1902	1927	1957			
Glover Road, Turf & Feather	-	-	0655	0709	0736	0803	0837	0908	0939	1009	1039	1109	1139	1209	1239	1309	1339	1409	1439	1509	1551	1617	1646	1715	1750	1815	1839	1903	1928	1958			
Locking Stumps, Copperfield Cl	-	-	0658	0712	0739	0807	0841	0911	0942	1012	1042	1112	1142	1212	1242	1312	1342	1412	1442	1512	1555	1621	1649	1718	1753	1818	1842	1906	1931	2001			
Crab Lane, Uni of Chester	-	-	0701	0715	0742	0811	0845	0915	0945	1015	1045	1115	1145	1215	1245	1315	1345	1415	1446	1516	1559	1625	1653	1722	1757	1821	1845	1909	1934	2004			
Enfield Park Rd, Tweedsmuir Close	0522	0622	0702	0717	0744	0813	0847	0917	0947	1017	1047	1117	1147	1217	1247	1317	1347	1417	1448	1518	1601	1627	1655	1724	1759	1823	1847	1911	1935	2005			
Cinnamon Brow, Millhouse Rdbt	0524	0624	0704	0719	0746	0815	0849	0919	0949	1019	1049	1119	1149	1219	1249	1319	1349	1419	1449	1519	1602	1628	1656	1725	1800	1824	1848	1912	1936	2006			
Peel Hall Bus Turning Circle	0534	0634	0714	0729	0756	0825	0859	0929	0959	1029	1059	1129	1159	1229	1259	1329	1359	1429	1459	1529	1612	1638	1706	1735	1810	1834	1858	1922	1946	2016			
Cinnamon Lane North	0536	0636	0716	0731	0758	0827	0901	0931	1000	1030	1100	1130	1200	1230	1300	1330	1400	1430	1501	1531	1614	1640	1708	1737	1812	1836	1900	1924	1948	2018			
Orange Grove, Avery Close									1002		1102		1202		1302		1402		1502														
Greenwood Crescent, Merrick Cl	0538	0638	0718	0733	0801	0830	0904	0933	1004	1032	1104	1132	1204	1232	1304	1332	1404	1432	1505	1534	1617	1643	1710	1739	1814	1838	1902	1926	1950	2020			
Statham Avenue, Kirkstone Av	0540	0640	0722	0737	0805	0835	0909	0937	1008	1036	1108	1136	1208	1236	1308	1336	1408	1436	1509	1538	1622	1647	1714	1743	1818	1842	1905	1929	1953	2023			
Ryfields Village										1042		1142		1242		1342		1442															
O'Leary Street	0545	0645	0727	0743	0813	0843	0917	0943	1014	1044	1114	1144	1214	1244	1314	1344	1414	1444	1515	1544	1630	1654	1721	1751	1826	1849	1910	1934	1958	2028			
Warrington, Interchange	0551	0651	0736	0753	0823	0853	0927	0952	1022	1052	1122	1152	1222	1252	1322	1352	1422	1452	1523	1553	1640	1704	1731	1801	1835	1858	1917	1941	2005	2035			
Warrington - Gorse Covert	via (	Orfor	d - L	ockii	ng Si	tump	s - B	irch	vood																25								
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Warrington - Cinnamon Bro	ow vi	ia Wi	nwic	k Ro	bad																				26E								
Warrington - Cinnamon Bro	ow -	Culc	heth	via (	Orfor	d - C	roft																		27E								
Monday to Friday																			Ref	PEEL	From	17/06	6/19 T	<b>o 31</b> /1	12/29								
Service Number:	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Wilderspool, Causeway Avenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1532	-	-	1608	-	-	-	-	-	-	-
Wilderspool, St James Church	0456	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-		-	-	-	-	-	-	-
Warrington, Interchange (arr)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1540	-	-	1616	-	-	-	-	-	-	-
Warrington, Interchange [14] (dep)		0542	0555	0621	0645	0707	0738	0811	0847	0915	0945	1015	1045	1115	1145	1215	1245	1315	1345	1415	1445	1515	1545	1545	1545	1620	1620	1620	1645	1715	1745	1815	1845
O'Leary Street	0501	0550	0603	0629	0653	0717	0748	0821	0857	0925	0955	1025	1055	1125	1155	1225	1255	1325	1355	1425	1455	1526	1556	1556	1556	1631	1631	1631	1656	1727	1756	1824	1854
Ryfields Village											0957		1057		1157		1257		1357														
Statham Avenue, Kirkstone Av	0506	0555	0608	0634	0658	0723	0755	0828	0903	0931	1003	1031	1103	1131	1203	1231	1303	1331	1403	1431	1501	1532	1602	1602	1602	1637	1637	1637	1702	1733	1802	1830	1900
Greenwood Crescent, Merrick Cl	0509	0559	0612	0638	0702	0728	0800	0833	0907	0935	1007	1035	1107	1135	1207	1235	1307	1335	1407	1436	1506	1537	1607	1607	1607	1642	1642	1642	1707	1738	1806	1833	1903
Orange Grove, Avery Close										0937		1037		1137		1237		1337		1438		1539											
Cinnamon Lane North		0600	0613	0640	0704	0730	0802	0835	0909	0939	1009	1039	1109	1139	1209	1239	1309	1339	1409	1440	1508	1541	1609	1609	1609	1644	1644	1644	1709	1740	1808	1835	1905
Cinnamon Brow, Millhouse Rdbt		0601	0614	0641	0705	0731	0803	0836	0910	0940	1010	1040	1110	1140	1210	1240	1310	1340	1410	1441	1509	1542	1610	1610	1610	1645	1645	1645	1710	1740	1809	1836	1906
Peel Hall Bus Turning Circle	0520	0611	0624	0651	0715	0741	0813	0846	0920	0950	1020	1050	1120	1150	1220	1250	1320	1350	1420	1451	1519	1552	1620	1620	1620	1655	1655	1655	1720	1750	1819	1846	1916
Enfield Park Rd, Tweedsmuir Close	0522	0613	0626	0653	0717	0743	0815	0848	0922	0952	1022	1052	1122	1152	1222	1252	1322	1352	1422	1453	1521	1554	1622	1622	1622	1657	1657	1657	1722	1753	1821	1848	1918
Crab Lane, Uni of Chester	-	0615	0628	0655	0719	0746	0818	0851	0924	0954	1024	1054	1124	1154	1224	1254	1324	1354	1424	1456	1524	1557	1625	1625	1625	1700	1700	1700	1725	1755	1823	1850	1920
Locking Stumps, Copperfield Cl	-	0619	0632	0659	0723	0751	0823	0856	0928	0958	1028	1058	1128	1158	1228	1258	1328	1358	1428	1500	1528	1601	1630	1630	1630	1705	1705	1705	1730	1759	1827	1854	1924
Glover Road, Turf & Feather	-	0621	0634	0701	0725	0753	0825	0858	0930	1000	1030	1100	1130	1200	1230	1300	1330	1400	1430	1502	1530	1603	1632	1632	1632	1707	1707	1707	1732	1801	1829	1856	1926
Heathfield House	-	0622	0635	0702	0726	0754	0826	0859	0931	1001	1031	1101	1131	1201	1231	1301	1331	1401	1431	1503	1531	1604	1633	1633	1633	1708	1708	1708	1733	1802	1830	1857	1927
Birchwood Centre	-	0627	0640	0708	0732	0801	0833	0906	0937	1007	1037	1107	1137	1207	1237	1307	1337	1407	1437	1513	1541	1611	1640	1640	1640	1715	1715	1715	1740	1809	1836	1903	1933
Birchwood, Railway Station	-	0628	0641	0709	0733	0803	0835	0908	0939	1009	1039	1109	1139	1209	1239	1309	1339	1409	1439	1515	1543	1614	1643	1643	1643	1718	1718	1718	1743	1811	1837	1904	1934
Oakwood, Keyes Close	-	0631	0644	0712	0736	0807	0839	0912	0942	1012	1042	1112	1142	1212	1242	1312	1342	1412	1442	1519	1547	1618	1647	1647	1647	1722	1722	1722	1747	1815	1840	1907	1937
Gorse Covert, Spar Store	-	0635	0648	0716	0740	0811	0843	0916	0946	1016	1046	1116	1146	1216	1246	1316	1346	1416	1446	1524	1552	1622	1651	1651	1651	1726	1726	1726	1751	1819	1844	1911	1941
Gorse Covert, Ashdown Lane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1348	1418	1448	1526	1554	1624	1653	1653	1653	1728	1728	1728	1753	1821	1846	1913	1943

#### Gorse Covert - Warrington via Birchwood - Locking Stumps - Orford

#### Cinnamon Brow - Warrington via Winwick Road

Bus Warrington via Orf

Cinnamon Brow - w	rarringto	on v	a Or	iora																						21 E									
Saturday																				Ref	PEEI	L Fron	n 18/0	5/19 7	o 31/	12/29									
S	Service No:	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	27E	25	27E	26E	27E	26E	27E	26E	27E	26E
Gorse Covert, Spar Store		0727	0757	0825	0855	0925	0955	1025	1055	1125	1155	1225	1255	1325	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gorse Covert, Ashdown Lane		0729	0759	0827	0857	0927	0957	1027	1057	1127	1157	1227	1257	1327	1357	1427	1457	1527	1557	1627	1655	1725	1755	1825	1850	-	1920	-	-	-	-	-	-	-	-
Oakwood, Keyes Close		0732	0802	0831	0901	0931	1001	1031	1101	1131	1201	1231	1301	1331	1401	1431	1501	1531	1601	1631	1659	1729	1758	1828	1853	-	1923	-	-	-	-	-	-	-	-
Birchwood, Railway Station		0736	0806	0835	0905	0935	1005	1035	1105	1135	1205	1235	1305	1335	1405	1435	1505	1535	1605	1635	1703	1733	1802	1832	1856	-	1926	-	-	-	-	-	-	-	-
Birchwood Centre		0737	0807	0836	0906	0936	1006	1036	1106	1136	1206	1236	1306	1336	1406	1436	1506	1536	1606	1636	1704	1734	1803	1833	1857	-	1927	-	-	-	-	-	-	-	-
Heathfield House		0743	0813	0843	0913	0943	1013	1043	1113	1143	1213	1243	1313	1343	1413	1443	1513	1543	1613	1643	1711	1741	1809	1839	1903	-	1933	-	-	-	-	-	-	-	-
Glover Road, Turf & Feather		0744	0814	0844	0914	0944	1014	1044	1114	1144	1214	1244	1314	1344	1414	1444	1514	1544	1614	1644	1712	1742	1810	1840	1904	-	1934	-	-	-	-	-	-	-	-
Locking Stumps, Copperfield Cl		0747	0817	0847	0917	0947	1017	1047	1117	1147	1217	1247	1317	1347	1417	1447	1517	1547	1617	1647	1715	1745	1813	1843	1907	-	1937	-	-	-	-	-	-	-	-
Crab Lane, Uni of Chester		0750	0820	0850	0920	0950	1020	1050	1120	1150	1220	1250	1320	1350	1420	1450	1520	1550	1620	1650	1718	1748	1816	1846	1910	-	1940	-	-	-	-	-	-	-	-
Cinnamon Brow, Millhouse Rdbt	t																									1911		1941	2010	2041	2110	2143	2213	2243	2307
Enfield Park Rd, Stirrup Cl																										1913		1943	2012	2043	2112	2145	2215	2245	2309
Insall Road, Valiant Close																										1915		1945		2045		2147		2247	
Enfield Park Rd, Tweedsmuir Cl	ose	0752	0822	0852	0922	0952	1022	1052	1122	1152	1222	1252	1322	1352	1422	1452	1522	1552	1622	1652	1720	1750	1818	1848	1912		1942								
Cinnamon Brow, Millhouse Rdbt	t	0754	0824	0854	0924	0954	1024	1054	1124	1154	1224	1254	1324	1354	1424	1454	1524	1554	1624	1654	1722	1752	1820	1850	1914		1944								
Peel Hall Bus Turning Circle		0804	0834	0904	0934	1004	1034	1104	1134	1204	1234	1304	1334	1404	1434	1504	1534	1604	1634	1704	1732	1802	1830	1900	1924		1954								
Cinnamon Lane North		0805	0835	0905	0935	1005	1035	1105	1135	1205	1235	1305	1335	1405	1435	1505	1535	1605	1635	1705	1733	1803	1831	1901	1925		1955								
Orange Grove, Avery Close						1007		1107		1207		1307		1407		1507		1607																	
Greenwood Crescent, Merrick C	;	0807	0837	0907	0937	1009	1037	1109	1137	1209	1237	1309	1337	1409	1437	1509	1537	1609	1637	1707	1735	1805	1833	1903	1927		1957		2013		2113		2216		2310
Statham Avenue, Kirkstone Av		0810	0840	0911	0941	1013	1041	1113	1141	1213	1241	1313	1341	1413	1441	1513	1541	1613	1641	1711	1739	1809	1836	1906	1930		2000		2016		2116		2219		2313
Ryfields Village							1047		1147		1247		1347		1447		1547																		
O'Leary Street		0815	0845	0917	0947	1019	1049	1119	1149	1219	1249	1319	1349	1419	1449	1519	1549	1619	1647	1717	1745	1815	1841	1911	1935	1919	2005	1949		2049		2151		2251	
Winwick Road, Collegiate Inst																													2018		2118		2221		2315
Orford Park Centre																										-			2019	-					
Warrington, Interchange		0822	0852	0925	0955	1027	1057	1127	1157	1227	1257	1327	1357	1427	1457	1527	1557	1627	1655	1725	1753	1823	1848	1918	1942	1926	2012	1956	2027	2056	2126	2156	2227	2256	2321

25 26E

.....

Warrington - Gorse Covert	via (	Orfor	d - Lo	ockir k Bo	ng Si	ump	s - B	irchv	vood																25 26E									
			f	K HO	au																													
warrington - Cinnamon Br	ow v	ia Or	tora																						2/E									
Saturday																			Ref	PEEL	_ Fron	n 18/0	5/19 1	<b>o 31</b> /	12/29									
Service No	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	27E	26E	27E	26E	27E	26E	27E	26E	27E
Warrington, Interchange [14]	0632	0701	0720	0750	0820	0850	0920	0950	1020	1050	1120	1150	1220	1250	1320	1350	1420	1450	1520	1550	1620	1650	1720	1750	1820	1854	1923	1954	2023	2054	2129	2159	2229	2253
Orford Park Centre																		1									1929		2029					
Winwick Road, Collegiate Inst																											1930		2030		2134		2234	
O'Leary Street	0640	0709	0730	0800	0830	0900	0930	1000	1030	1100	1130	1200	1230	1300	1330	1400	1430	1500	1530	1600	1630	1700	1730	1758	1828	1901		2001		2101		2206		2300
Ryfields Village								1002		1102		1202		1302		1402		1502																
Statham Avenue, Kirkstone Av	0646	0715	0736	0806	0836	0906	0936	1008	1036	1108	1136	1208	1236	1308	1336	1408	1436	1508	1536	1606	1636	1706	1736	1804	1834		1933		2033		2136		2236	
Greenwood Crescent, Merrick Cl	0649	0718	0740	0810	0840	0910	0940	1012	1040	1112	1140	1212	1240	1312	1340	1412	1440	1512	1540	1610	1640	1710	1740	1807	1837		1937		2037		2140		2240	
Orange Grove, Avery Close							0942		1042		1142		1242		1342		1442		1542															
Insall Rd, Valiant Cl																										1906		2006		2106		2210		2304
Cinnamon Lane North	0650	0720	0742	0812	0842	0912	0944	1014	1044	1114	1144	1214	1244	1314	1344	1414	1444	1514	1544	1612	1642	1712	1742	1809	1839									
Cinnamon Brow, Millhouse Rdbt	0651	0721	0743	0813	0843	0913	0945	1015	1045	1115	1145	1215	1245	1315	1345	1415	1445	1515	1545	1613	1643	1713	1743	1810	1840	1911	1941	2010	2041	2110	2143	2213	2243	2307
Peel Hall Bus Turning Circle	0701	0731	0753	0823	0853	0923	0955	1025	1055	1125	1155	1225	1255	1325	1355	1425	1455	1525	1555	1623	1653	1723	1753	1820	1850	-	-	-	-	-	-	-	-	-
Enfield Park Rd, Tweedsmuir Close	0703	0733	0755	0825	0855	0925	0957	1027	1057	1127	1157	1227	1257	1327	1357	1427	1457	1527	1557	1625	1655	1725	1755	1822	1852	-	-	-	-	-	-	-	-	-
Crab Lane, Uni of Chester	0705	0735	0757	0827	0857	0927	0959	1029	1059	1129	1159	1229	1259	1329	1359	1429	1459	1529	1559	1627	1657	1727	1757	1824	1854	-	-	-	-	-	-	-	-	-
Locking Stumps, Copperfield Cl	0709	0739	0801	0831	0901	0931	1003	1033	1103	1133	1203	1233	1303	1333	1403	1433	1503	1533	1603	1631	1701	1731	1801	1828	1858	-	-	-	-	-	-	-	-	-
Glover Road, Turf & Feather	0711	0741	0803	0833	0903	0933	1005	1035	1105	1135	1205	1235	1305	1335	1405	1435	1505	1535	1605	1633	1703	1733	1803	1830	1900	-	-	-	-	-	-	-	-	-
Heathfield House	0712	0742	0804	0834	0904	0934	1006	1036	1106	1136	1206	1236	1306	1336	1406	1436	1506	1536	1606	1634	1704	1734	1804	1831	1901	-	-	-	-	-	-	-	-	-
Birchwood Centre	0717	0747	0810	0840	0910	0940	1012	1042	1112	1142	1212	1242	1312	1342	1412	1442	1512	1542	1612	1640	1710	1740	1810	1837	1907	-	-	-	-	-	-	-	-	-
Birchwood, Railway Station	0718	0748	0812	0842	0912	0942	1014	1044	1114	1144	1214	1244	1314	1344	1414	1444	1514	1544	1614	1642	1712	1742	1812	1838	1908	-	-	-	-	-	-	-	-	-
Oakwood, Keyes Close	0721	0751	0815	0845	0915	0945	1017	1047	1117	1147	1217	1247	1317	1347	1417	1447	1517	1547	1617	1645	1715	1745	1815	1841	1911	-	-	-	-	-	-	-	-	-
Gorse Covert, Spar Store	0725	0755	0819	0849	0919	0949	1021	1051	1121	1151	1221	1251	1321	1351	1421	1451	1521	1551	1621	1649	1719	1749	1819	1845	1915	-	-	-	-	-	-	-	-	-
Gorse Covert, Ashdown Lane	-	-	-	-	-	-	-	-	-	-	-	-	-	1353	1423	1453	1523	1553	1623	1651	1721	1751	1819	1847	1917	-	-	-	-	-	-	-	-	-

# Appendix 23 - A49 Incorrect Road Designations

#### Appendix 23 – A49 INCORRECT ROAD DESIGNATIONS



Warrington - M	anual Tra	ffic Surv	vey, We	dnesday 3r	d April 2019	
Produced by Road	d Data Ser	vices Ltd				
Junction: (9) A49 / Ju	unction Nine	e Retail Parl	ĸ			
Vehicle Class:	ALL CLAS	SES 🔻				
Start Time:	1) 0700	•				
End Time:	1) 1000	•				
	🗖 Peak Ho	ur				
	•	P			NORTH	
204 —		19 (Nor	282	5524	<b>↑</b>	
Junction Ni	ne Retail	t <del>)</del>		Ļ		
Park	· <sup>i</sup> _			1		
68 —						
		A49 (3	93	3495		

# Appendix 24 – Aviemore Drive & Stirrup Close Rat Runs





Entrance to Stirrup Close – a small residential street



Entrance to Aviemore Drive – a small residential street



Tight bends, parked cars and children playing – just a few of the potential risks



Appendix 24

Aviemore Drive & Stirrup Close Rat Runs

Scale - NTS

# Appendix 25 – Residents testimonies – Cycling

# Appendix 25 – Residents testimonies - Cycling

Local residents were asked the following question;

Calling all cyclists! How safe are our local roads for you and your family?

The answers were as follows;



Alison Hazell I did a lot of short bike rides, a couple of miles, during lockdown. I felt safe and enjoyed a hour or so in the fresh air. Then people returned to work .....the roads then became a nightmare. The worst ones are poplars ave and capesthorne rd. People don't have any respect for cyclists, not just car and van drivers but I find people walking out in front of me !!! so most of the time I use my car, 😳 😳

Like · Reply · 1d



Wendy Weedon Not a cyclist but use a mobility scooter to get around. Find it's very difficult with no lowered crossing areas on the pavements and have to venture into the road which I hate. Pavements are very poorly maintained, slope dangerously in places, very uneven and pot holes everywhere. If we had more cycle lanes it's feel safer using them. My scooter is only a boot scooter so it doesn't have any suspension and it takes me a couple of days to recover from venturing out as with arthritis in my hands I have a lot of pain due to the vibration.

Like · Reply · 2d · Edited



**Nikki Edwards** Crab lane and Enfield park road, cars go too fast on both. It's great once you can reach the cycle paths around birchwood. The cinnamon Brow / fearnhead area would definitely benefit from safer paths and cycle paths.

1

Like · Reply · 2d · Edited



Kate Grimoldby And for Runners to! I end up in the hedge as the speed limit is constantly not adhered too

1

1

1

1

1

Like · Reply · 2d



**Deborah Litherland Dorr** I used to cycle in Lymm where i lived, now im in Orford I wouldnt go near a bicycle... far to much traffic

Like · Reply · 2d



Janet Peak I would love to cycle but some roads, especially Delph Lane area far too dangerous.

Like · Reply · 2d



**Rae Elizabeth** Northway in Orford can be very dangerous because it's so narrow and cars get so impatient wanting to over take before there is much room.

Like · Reply · 2d



Karen Langford Not wishing to put a downer on the subject but All roads in Warrington are bad particularly Cromwell ave. the cycle paths are all over grown forcing cyclists onto the roads. Sadly for me the town has become too built up now one positive of lockdown the roads were much safer for all users and the air was much fresher. Keep safe everyone

Like · Reply · 1d



Indra Berry Manchester Road is dangerous for cyclists

Like · Reply · 1d

# Appendix 26 - Cheshire Police - Acknowledgement of Traffic Concerns

## police response

## Wendy Johnson-Taylor <wendyjohnson@btinternet.com>

Thu 23/07/2020 17:20

To: jim.sullivan@hotmail.co.uk <jim.sullivan@hotmail.co.uk>
Cc: 'Jon Parr' <jonparr@live.co.uk>; Margaret@peelhallkennels.co.uk <Margaret@peelhallkennels.co.uk>; d.r.sawyer@btinternet.com <d.r.sawyer@btinternet.com>; Geoff Settle <settlegfs@gmail.com>; ste181166@gmail.com>

From: Keith Armstrong <keith.armstrong@cheshire.pnn.police.uk> On Behalf Of Traffic Management
Sent: 23 July 2020 08:28
To: savepeelhall@btconnect.com
Subject: FW: [EXTERNAL] Road safety issues around Peel Hall ~[OFFICIAL]~

#### To whom it may concern,

I have received numerous residential complaints regarding the proposed development by Satnam for the land at Peel Hall. I would like to add that I am in complete agreement with Warrington Borough Council and residents to oppose the proposed development and that substantial consideration is required. From the point of view that the increased amount of traffic the development is going to create requires a major rethink and acknowledgment to the stress it will cause on the road network strategy. It is not only unreasonable to expect current residents to have their roads turned into through access points which raises a road safety aspect. The road was not designed for such volume of traffic, from a traffic management point of view the stress and strain on the surrounding road, network is already at a premium. Photos have been issued regarding normal queueing traffic conditions and adding to this would be irresponsible something needs to be done to ease traffic flow not hinder.

As with my previous statement from the other side of the proposed development, I feel without a dedicated entry and egress, traffic network strategy rethink, then an already strained network will breakdown resulting in major issues for the future.

#### Thank you for your time,

**Kind Regards** 

#### Keith Armstrong – Traffic Management Officer

Cheshire Constabulary HQ | Clemonds Hey| Winsford| Cheshire| CW7 2UA Phone: 01606 36 4811 | Mailbox: <u>Traffic.Management@cheshire.pnn.police.uk</u> Visit <u>www.cheshire.police.uk</u> | Follow <u>@cheshirepolice on Twitter</u> | Like <u>Cheshire Police on Facebook</u>



Hi Helen,

Please find attached the original notes of concern from my predecessor Mr Stewardson ref the planned development, I realise some of these concerns may longer be required, but they can be added for the file if not already on there.

We wouldn't normally get involved however community concerns have been raised to myself and Warrington council have instructed me to contact you.

I have received concerns from residents of Birch Avenue explaining their issue of potential 'ratrunning' from A49 through Birch Avenue to Poplar and increased traffic due to the scale of the development.

The residents have provided me their measurements of roads etc in a further attached document. This indicates the road be originally designed as an avenue not through road. From Cheshire Polices prospective the road safety issue is that echoed of the residents – most of us are aware of the potential dangers of 'rat running' to avoid the traffic, drop of driver awareness to beat the rush, speeding, hidden pedestrians crossing in the built up area.

The other concern I have is controlling that speed issue which will most likely occur. Engineering could be required to slow vehicles down and if then when enforcement is required due to lack of speed compliance this is going to fall to the police. Resources as with everywhere are stretched and as much as we would endeavour to act upon this we can commit to being on that road all the time to 'manage' the traffic speed.

I would therefore put forward that serious consideration of this proposal is given to the road scheme and not allowing potential rat-running to take place.

Many thanks for your time. Kind Regards. **Keith Armstrong – Traffic Management Officer** Cheshire Constabulary HQ | Clemonds Hey| Winsford| Cheshire| CW7 2UA Phone: 01606 36 4811 | Email: <u>Keith.Armstrong@cheshire.pnn.police.uk</u> | Mailbox: <u>Traffic.Management@cheshire.pnn.police.uk</u> Visit <u>www.cheshire.police.uk</u> | Follow <u>@cheshirepolice on Twitter</u> | Like <u>Cheshire Police on Facebook</u>



This communication is intended for the addressee(s) only. Please notify the sender if received in error. Internet email is not to be treated as a secure means of communication. The Constabulary monitors all Internet and email activity and requires it is used for official communications only. Thank you for your co-operation.

As far as I am aware Cheshire Police were never consulted in relation to this proposed development and it only came to our notice when we were contacted by two members of the 'Save Peel Hall Campaign' asking for our support in objecting to the scheme.

Unfortunately this contact was after the closing date for any comments or objections to be lodged but we would like to make our observations known to the Planning Inspectorate.

Having studied the submitted plans and supporting documentation Cheshire Police have serious concerns in relation to the impact of such a large development on the strategic roads network to the north of Warrington. In particular the A49 Winwick Road and the M62 Motorway at junction 9 and the increased road safety issues on Winwick Road and within the development itself will rise to an unacceptable level.

Winwick Road is a major route into and out of Warrington and is regularly gridlocked at peak times and often throughout the day particularly if there is an incident on the Motorway system. The construction of around 1200 homes of various design, a local centre, care home, school, light industrial units and community support facilities will introduce a significant number of privately owned vehicles, possibly between 1200 and 1500 depending on how many vehicles are owned by residents, this number will be increased by delivery vehicles, public transport, visitors and 'rat running' by drivers trying to avoid the congestion on Winwick Road and the Motorway can only have a major impact and detrimental effect on the existing road network.

The close proximity of the junction of Birch Avenue to the Motorway roundabout at junction 9 is a concern as is the proposed signalised junction at Poplars Avenue.

It is inevitable that drivers will utilize Birch Avenue and Poplars Avenue as a 'Rat Run' to avoid the congestion on Winwick Road thereby increasing the traffic within the development area and the signalized junction with Poplars Avenue will only delay the movement of traffic on Winwick Road despite the introduction of the third lane southbound. This lane is a token gesture to try and avoid tailbacks from the traffic lights onto the Motorway and will be totally ineffectual as it will increase the potential for rear end shunts on the approach and nearside to offside coming together collisions on the exit where drivers vi to return to two lanes. This will also increase the potential for so called 'Road Rage' incidents. We are not convinced that the traffic light timing at this junction can be configured to accommodate existing queues on Winwick Road coupled with the increased vehicle movement created by the development and will undoubtedly have a detrimental impact on the Motorway and traffic movement in general.

I have had sight of the independent safety audit on this junction proposal compiled by Alan Consultancy Ltd and do not believe that the mere introduction of high friction surfacing on both approaches will be sufficient to combat rear end shunts and no mention is made of the possible nearside to offs ide collisions on the exit. There is also the recommendation of a 'Keep Clear' at the junction of Birch Avenue which will have no effect whatsoever on traffic on Winwick Road. Satnam have indicated that they will promote public transport within the development and educate buyers by giving them a travel pack and vouchers in an attempt to minimize car ownership. This will be a futile exercise and will never achieve the objective to minimize car usage.

In short Cheshire Police object to this proposal on Road Safety grounds pertaining to the impact on existing vehicle movement and the potential to create major issues on the Motorway network.

# Appendix 27 – Residents Testimonies – Busses

## Appendix 27 – Residents testimonies – Busses

Local residents were asked how they felt about bus journey times and service being affected by the extension of already lengthy services.

## Residents' comments on the proposed bus extensions to Peel Hall (verbatim)

**Carole Smith** -- "Save Peel Hall. There's enough pressure on the drivers as it is .... And would take well over an hour from Birchwood into town especially for those that use it from Gorse Covert. It's a magical mystery tour as it is without putting another place to the tour'

**Elaine Hazeltine** – 'That would be ridiculous amount of time to get from Birchwood to town.'

**Lisa Wong**. 'Save Peel. Not a chance I'd get the 25 to town if it takes an hour. It already goes 'around the world in Orford and Cinnamon Brow, drives me mad!'

Janice Ennis – 'I have to get the 25 to work every day. It takes around 40-50 mins as it is without making it even longer. I do 12hour shifts, last thing I want is extra travelling time added, the journey takes far too long as it is. Not acceptable at all'

Jean Hughes – 'Seems like this is the catch all service and any addition should be resisted. Perhaps the much more frequent Pops or other can do it. I see places on the 25 I never knew existed. If there is any complaint the 25 is underused this is a reason. Jane Hewertson – 'I no longer drive so have to use the bus. An hour to get to town on the 25 is ridiculous. It will just force those who do drive to go back in their cars, clogging up the roads even more. Save Peel Hall.'

Phil Birch - 'Jane Hewertson you can walk to town in that time'

Jane Hewertson – 'Phil Birch If I could I would. I no longer drive to vision problems'

**Robert Best** – 'Yes the 25 takes much too long for a 5 mile journey now and certainly doesn't need any more scenic trips round extra housing estates.'

**Elaine Hazeltine** – 'Admittedly I caught the 25 bus for the first time in ages as my car was in for its MOT and at the time I had no idea the route had been changes – I wondered where the hell I was going to end up lol'

Jean Hughes – 'Why does Peel Hall need two services? Gorse Covert only has one.'

**Phil Birch** – 'Not acceptable to me one hour on Warrington's rattily, nausea inducing buses is out of order. Do another route. A new bus service. We are about to move to Oakwood, nearer the train. If it's going to take an hour on the 25, we'll get the train'.

Jean Hughes – '25 must be the longest, time and distance bus route within Warrington. 20 and 21 probably half that and more frequent.'

James R Addis - '1hr to travel 5/6 miles at the most is pretty poor.'

**Angela Johnson** – '30 years ago it took 1 hour to Birchwood, in this day and age we are not moving forwards, we are obviously going backwards, which is not acceptable for 2020. You can get to Trafford Centre in Manchester quicker. Shame on you Satnam'.

**Carol Halligan** - 'There is no hope for the town centre if this happens a backward step. Shame on Satnam and Warrington transport.'

**Pearl Haskew-Jones** – 'Would increase times to an unacceptable journey time. It would mean having to get up earlier in order to get to work on time – already takes an hour, add on another half hour.'

**Debbie Peppert** – 'Bus route from Cinnamon Brow is already an unacceptably long service – luckily I can drive of take taxis as life to too short for that. – not everyone is that lucky, and it's going making great for the environment. Making the journey longer is not going to help encourage people like me back onto public transport.'

**Susan Richards** – 'It would take far too long to get to the town centre so people would start to use their cars meaning more traffic. Bad for everyone.'

**Barbara Meager** – 'Appalling, always the people who depend on the bus service means more cars on the road.'

Jean Hall - 'Silly'.

Janine Forster – 'I work in Birchwood and use the 25 service. It can be unreliable at times and goes all around the houses as it is .... So not impressed and it could be a longer journey .. tut!'.

**Christine Riley** – 'I don't drive. The thought of travelling an hour to get to the town centre just appals me.'

**Ann Young** – 'Ridiculous. Buses take long enough now without diverting. Anymore stupid, idiotic ideas please?'.

**Val Hardy** – 'Absolutely ridiculous then merging onto Winwick Road I presume, be quicker in Shanks Pony??'.

Bill Roberts – 'You really couldn't write this....'

Kath Robinson – 'Speechless ...... How much more do 'they' want us to give up?????'.

Jeanette Hunter – 'I always get the train into town from Birchwood it's much quicker.'

Jon Parr – 'Train works if you are lucky enough to be at a well serviced train station. The nearest to Peel Hall is Padgate and those are hourly, sometimes 2 hourly?'

Jennine Dadley – 'It will increase the journey time not just for Birchwood but for Cinnamon Brow as well. I would only travel on the bus if I had no alternative.' Appendix 28 - Cheshire County Council Letter



DC(B)/DKA/DFL 3/8/77 

Dear Mr Jones

NEW TOWNS ACT 1965 - SECTION 6(1) WARRINGTON DEVELOPMENT CORPORATION PEEL HALL - PA51

I refer to your letter of 8 July regarding the above. The County Council does not wish to raise objection to the present proposals, since the additional development does not in itself require the provision of any new County facilities. However, the Secretary of State's attention is drawn to the following points:-

- 1. The continuing developments of the Peel Hall, Cinnamon Brow and Padgate areas within the Warrington New Town is putting pressure on the existing highway network. Problems are already being experienced in the Winwick area and these will be exacerbated by the intensification of New Town developments to the south. Discussions have recently taken place between the County Council and the Development Corporation regarding an assessment of the impact of their developments in this area on the existing road network in Winwick.
- 2. Bus service in Cinnamon Brow and Houghton Green is under review as part of the Warrington Area Study. It is suggested that the demand for public transport from the Peel Hall development will be met by the level of service proposed by the Area Study.
- 3. The existing reversing movement at Houghton Green is unsatisfactory and the possibility of providing turning facilities in Peel Hall should be considered. If this is not possible, then the roundabout at the junction of Delph Lane/Enfield Park Road could be used with the provision of a lay-by on Enfield Park Road.

Yours sincerel nty Planner

Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party)



# Proof of Evidence Vol 2 - Noise

Produced by Margaret Steen Rule 6 Party Peel Hall - APP/ M0655/W/17/3178530

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**Proof of Evidence** 

## Margaret Steen Peel Hall Campaign Group

## **1** Personal Details

My name is Margaret Steen; I appear on behalf of the Rule 6 Party - Peel Hall Campaign Group and Peel Hall Boarding Kennels. I live at

I have lived at Peel Hall for 28 years and have extensive knowledge of the area.

My evidence is based on the parameters plan and noise assessment submitted by the appellant.

## 2 Noise

- 2.1 Noise is a material planning consideration that should be taken into account when deciding a planning application or on an appeal against a planning decision.
- 2.2 Planning Inspector, Richard Schofield in his report to the Secretary of State for Housing and Local Government in 2018, said at: 2.3 "The site is situated directly to the south of the M62 motorway. There is **constant noise** from passing traffic on the motorway, which is audible on and well beyond the site."
- 2.3 Noise can cause annoyance and fatigue, interfere with communication and sleep, reduce efficiency and damage hearing. The World Health Organisation recommends a guideline level of 30 dB LAeq for undisturbed sleep, and a daytime level for outdoor sound levels of 50dB. (Appendix 1: Environmental Protection UK)
- 2.4 "Excessive noise seriously harms human health and interferes with people's daily activities at school, at work, at home and during leisure time. It can disturb sleep, cause cardiovascular and psychophysiological effects, reduce performance and provoke annoyance responses and changes in social behavior." (Appendix 2: World

Health Organisation)

## **3** ACOUSTIC MONITORING

- 3.1 On behalf of the appellant, Miller Goodalls monitoring of noise from the M62 was done in May 2019, their acoustic report, dated March 2020 was not available to the Rule 6 Party until April 2020. Currently the consequences of the Covid pandemic, the lock down, furloughing of 9 million people and 49% of the country's remaining work force working from home, has changed the use of the M62. This currently prevents further relevant noise monitoring until the country returns to normal operations.
- 3.2 Defra has published strategic noise map data that gives a snapshot of the estimated noise from major road and rail sources across England in 2017. The data was developed as part of implementing the Environmental Noise Directive. (Appendix 3 : Defra Road Mapping)
- 3.2.1 The publication explains which noise sources were included in 2017 strategic noise mapping process. It provides summary maps for major road and rail sources and provides links to the detailed Geographic Information Systems (GIS) noise datasets.
- 3.2.2 The data will help transport authorities to better identify and prioritise relevant local action on noise. It will also be useful for planners, academics and others working to assess noise and its impacts.
- 3.2.3 The strategic noise map data published by Defra highlights the extent of noise acrossPeel Hall shows the extent

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Peel Hall Noise Mapping - Daytime



Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party)

Peel Hall Noise Mapping – Night



Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party)

Average noise level (dB) 70.0 and over 65.0 - 69.9 60.0 - 64.9 55.0 - 59.9 50.0 - 54.9

**Design Manual for Roads and Bridges** 

Annex 3 Noise and Indices

Heavily trafficked Lighter trafficked Road Road (about 50,000 vehicles per day) (about 150,000 vehicles per day) 90 10m 85 80 50m 10m 100m 75 200m 50m 70 100m 400m 200m 65 400m 60

Figure A3.1 – Example of Typical Traffic Noise Levels, LA10,18h

Example of Typical Traffic Noise Levels, LA10,18 hr

The LA10, 18h noise level is arithmetic mean of all the levels of LA10 during the period from 06:00 to 24:00. From research it has been found that subjective response to road traffic noise is closely linked to higher noise levels experienced and is correlated well with the LA10,18h index **(Appendix 4 Design Manual for Roads and Bridges, Annex 3)** 

- 3.3 Noise levels over the site are dominated day and night by road traffic noise from theM62, which runs for the entire length of the northern site boundary. (11.3.6 ESA 2 Vol 8)
- 3.4 There is no evidence of the true location for a noise barrier.
- 3.5 There is no evidence of the distance between the motorway kerb side and location of the barrier.
- 3.6 The measurements used for these conclusions assume a continuous noise barrier adjacent to the M62. There is no evidence that a continuous barrier could be achieved.

Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party)

			Dayt	ime		Night-time									
Floor	Height	Façade L <sub>Aeq,16h</sub>	BS8233 criteria	Internal L <sub>Aeq,16h</sub>	Impact	Façade L <sub>Aeq,8h</sub>	BS8233 criteria	Internal L <sub>Aeq,8h</sub>	Impact						
Ground	1.5 m	67	35	52	Major	62	30	47	Major						
1 <sup>st</sup>	4.0 m	69	35	54	Major	65	30	50	Major						
2 <sup>nd</sup>	6.5 m	70	35	55	Major	66	30	51	Major						
3 <sup>rd</sup>	9.0m	72	35	57	Major	67	30	52	Major						

Table 11.13: Predicted worst case façade levels

- 3.8 The predicted worst-case facade levels show the magnitude of impact would be **Major**.
- 3.9 We are told the existing noise levels at the most exposed residential receptors will have significant adverse effect. (11.6.15 ESA2 Vol.8)
- 3.10 The **"significant adverse effect"** is with the inclusion **of** a modelled noise barrier; there still remains 22 dB of reduction to be achieved to reach suitable internal levels.
- 3.11 Table 11.13 does not include the relevant information in regard to:
  - the location of the modelled residential receptor
  - the distance between the highway and the noise barrier
  - the distance between the noise barrier and the receptor
  - the modelled barrier construction and its attenuation ability
  - the assumed height of the barrier
- 3.12 There are no location details of the indicative 4 storey residential block, identified as the residential faced to the noise source and used to produce table 11.13. (11.7.2. ESA2 VOL 8)

Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party) noise barrier, this has not been considered in the noise facade forecast.

- 3.14 There is no evidence that these **are** the worst-case facade levels. There is a complete lack of information on how these measurements were arrived at; this renders the suggestion that BS8233 criteria could be achieved as questionable/doubtful.
- 3.15 Without knowing the exact location of the noise barrier, its height and attenuation properties and also confirmation of the ability to construct a barrier without gaps it is impossible to accurately determine the noise impact at the nearest receptors. Mitigation cannot be considered without this detailed information.
- 3.16 The acoustic report refers to: PPG, NPPF, NPSE DEFRA Pro PG and several BS standards There is no evidence the recommendations from these documents have been used to assess the site noise. The report is inaccurate and incomplete, it fails to include or assess all the circumstances relevant to producing an accurate acoustic assessment for this complex site. The site constraints have not been included or adequately assessed.
- 3.17 According to ProPG Stage 1 Initial Noise Assessment the risk assessment should include the acoustic effect of any existing site features that will remain (e.g. retained buildings, changes in ground level and exclude the acoustic effect of any site features that will not remain. (Appendix 5 ProPG 2.8)
- 3.18 ProPg Stage 2, Element 4 is the consideration of "Other Relevant Issues)." (Appendix 5ProPG 2.16)
- 3.19 We know that the remaining site features or "other relevant issues" have not been included in the noise risk assessment, because noise from Peel Hall Kennels was excluded from the entire acoustic assessment, the impact of changes in ground level has

not been considered. The gas mains, the watercourses, the public footpath, have all been excluded as relevant to the noise assessment mitigation proposals.

- 3.20 All noise sources that would have an impact on any future development have to be included as part of the noise assessment, without doing so the acoustic assessment is unsound.
- 3.21 The boundary between the site and the M62 is close to 1 mile in length. The assessment of motorway noise consisted of only **3** monitoring points:

	. Monitoring information			
Position	Туре	Start	End	SLM
MP01	Attended	22/05/19 11:12	22/05/19 14:12	1406017
MP02	Attended	22/05/19 11:25	22/05/19 14:14*	1406815
MP04**	Attended and Unattended	23/05/19 12:00	24/05/19 08:00	1406815

#### Table 11.7: Monitoring Information

\* Monitoring just short of target 3 hours to avoid confrontation

\*\* Attended 12:00 - 15:00, Unattended 16:00 - 08:00

(11.3.8 ESA2 Vol.8)

- 3.22 The topography of the site along the north boundary varies in height by 10 metres, the impact this would have on noise monitoring has not been considered.
- 3.23 No monitoring was done between 8.00 a.m. and 12.00 noon at any of the locations, or on busy days.
- 3.24 No monitoring took place on the body of the site. The noise from the M62 penetrates through the site, as can be seen by the Defra noise mapping, page 6 and 7 of this report.
- 3.25 Long Term monitoring at MP01 and MP02 was **not** undertaken because the surveyors were advised that there was an enhanced risk of vandalism to monitoring equipment on site. No further evidence of this risk was included in the report. (11.3.9 & 11.3.10 ESA2 Vol 8)
- 3.26 MP02 monitoring was short of the target 3 hours to "avoid confrontation." Once again,

Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party) no evidence provided to substantiate this claim.

- 3.27 Professional Practice Guidance on Planning and Noise New Residential Development advises that noise risk assessments should aim to describe noise levels over a typical worst-case 24 hours day. This was not been done, the monitoring fell far short of the recommended time scales, and was not done on the busiest day of the week. (Appendix 5 ProPG -2.9)
- 3.28 The extremely limited monitoring periods and locations do not adequately reflect the noise environment of the locality.
- 3.29 MP03 at Mill Lane playing fields was terminated due to being disturbed by pedestrians and eventually terminated due to grass cutting activities on the playing fields. One attempt at capturing real time noise at the location of a proposed development of 1200 homes is typical of this lacklustre noise assessment.
- 3.30 It is hard to believe that real time monitoring was abandoned with such a flimsy excuses. There are means of securing or overseeing noise monitoring equipment if necessary, particularly on private land. Why was only one attempt made? There is no justification for the failure to monitor the already extremely limited number of monitoring points alongside the M62 sufficiently to record accurate real time noise measurements. There is no rationale as to why 8 locations were used for modelling the proposed 225-metre noise barrier requirement at Mill Lane/Blackbrook Avenue, but only 3 monitoring locations along the 1mile north boundary with the M62 Motorway. Overnight monitoring at only one location, on one occasion, is grossly inadequate as evidence of acceptability of homes in this location. (ESA2 VOL 9 N9 & N5)
- 3.31 Warrington is well known for its road connectivity. Junction 8 of the M62 is home to Omega, a 233-hectare site, currently the largest mixed-used development site in the

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- Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party)
  North West. Royal Mail, Hermes Parcelnet, Travis Perkins, Asda, and the HUT Group are just some of the large **24-hour** nationwide, distribution companies operating from the site. Omega is the perfect location for these large distributors, with direct access to the M62, at junction 8, and at junction 10 access to the M6 for both North and South onward travel. Omega is a 24-hour/ 7-day operation. Omega continues to expand with the consequence of increased traffic on this stretch of the M62 motorway.
- 3.32 EXIT 10 of the M62 motorway is opposite monitoring position MP04. Traffic leaving the M62 to join the M6 would be slowing down at this point. Royal Mail trailers are 13.6 metres long and 4.44 metres high they would not be at maximum speed (and maximum noise) when approaching the road bending at Junction 10.



Monitoring position MP04 was 16 metres from motorway and 4.5 metres above -

opposite the exit road to M62 Junction 10 exit to M6 motorway.

(N5 - ESA2 Vol.9- Monitoring Positions)

3.33 MP04 was the only location to have night-time monitoring, this location is not typical of the noise across the length of the M62/site boundary, there is no justification

Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party)
provided for using this one location as a basis for night noise assessment/modelling.
The site boundary is almost one mile in length, more monitoring points/data are
required to capture the noise across the boundary length.



Monitoring position MP02 - 10 metres from motorway and 1 metre below motorway height

3.34 MP02 was monitored between 11:25 and 14.49 for a period of just 2 hours 49 minutes. No measurements are recorded during the busy periods and **no night -time** monitoring took place. At the centre of the north boundary, with no adjacent exits, MP02 must be the nosiest part of the north boundary but was monitored for the least amount of time.

3.35 MP01 monitoring position was almost at the start of the slip road at junction 9 of the
 M62, once again, traffic would be slowing down at this position. No observed
 measurements are recorded during the busy periods; no night-time monitoring took
place at this location.



Monitoring position MP01 – 7.5 metres from motorway and 2 metres higher than motorway.

- 3.36 The acoustic report fails to record any information regarding the type of traffic using the M62 at different times of day or night. Night traffic is more likely to be the large noisier distribution vehicles, with less smaller vehicles. Daytime traffic would be a mixture of both.
- 3.37 The information submitted from the limited monitoring of M62 noise is unreliable; it does not capture sufficient data to assess the impact of the noise on a housing development in this location.

- 3.38 The acoustic report also fails to record the relevant site conditions. As previously mentioned the land level of the site varies from 20 metres AOD in the North to 10 metres in the South at Spa Brook, rising again at the M62 Junction 9 slip road. The topography of the land surrounding a sound source can have a significant influence on noise propagation. The noise report excludes any topographical data.
- 3.39 The positioning of noise monitoring at the Mill Lane end of the site 4.5 metres **above** the highway, compared with a monitor in the centre of the site 2.5 metres **below the** height of the highway would give significantly different readings.
- 3.40 The embankment of the M62 belonging to Highways England varies in both width and height from the highway to the site boundary fence from 2 metres wide to 25 metres wide. The positioning of a noise monitor on the boundary fence that has only 2 metres of embankment to the highway, compared to a noise monitor positioned at 25 metres from the highway would give significantly different readings.
- 3.41 A noise barrier is most effective the closer to the noise source, but any benefits of such a barrier cannot be accepted unless it's location and all the other relevant circumstances in the vicinity are included, which has clearly not been done. (Appendix 6 ProPG Supplementary Document 2 Good Acoustic Design 3.7)
- 3.42 All these factors impact an acoustic assessment, but are excluded from this generic report. The data collection and assessment is flawed, not fit for purpose, and the mitigation proposed, inadequate. The report is not sound.
- 3.43 Miller Goodall report says at 11.4.2 " There are a number of limitations and uncertainties associated with modelling of noise, and where applicable, realistic worst-case scenarios have been assumed (based on professional judgment): (ESA2: Vol 8)

- 3.44 Can we accept 'professional judgment' to determine where it is safe for people to live? It has **not** been proven where a noise barrier would be located, how much a barrier could attenuate the noise or exactly how high the barrier needs to be. This information is paramount to any noise measurement being used to assess if the noise level from the M62 can be reduced significantly enough to enable residential dwellings to be built.
- 3.45 It is unacceptable to rely on "noise modelling" for this site, using partial data. Real world measurements should be used when a noise sensitive site demands accurate acoustic reports, rather than reliance on theoretical solutions, modelled without the critical accurate information needed.

## 4 Noise Barrier

- 4.1 11.6.7 of the noise report (ESA2 Vol 8) gives details of barrier construction in general terms, but does not specify exactly which barrier would be used at Peel Hall. The suggestion is for imperforate material with a minimum mass of 12 kg/m2, close-boarded or overlapped timber paneling. A further suggestion was for a proprietary acoustic fence with a weighted sound reduction of 25 dB Rw would be appropriate.
- 4.2 We are not informed which type of barrier the acoustic modeling was based on. Acoustic fencing needs to be tightly fitted to the ground, timber panelling in contact with the ground would a) allow animals to burrow under and b) rot away under the damp conditions.
- 4.3 New residents need to be protected in the long term from excessive noise, the build for this site is a minimum of 10 years, new residential dwellings would be built to last 100 years, and all residents during this time need protection. A "short term fix" for noise reduction is not a sustainable solution for excessive noise.
- 4.4 It is fanciful to suggest 25 dB reduction could be achieved from fencing in any location across the north boundary. The maximum benefit of any acoustic fencing depends entirely on the location of the barrier in relation to the noise source. The north boundary to the site varies in distance from the noise source, (M62) motorway, from 2 metres to 25 metres.
- 4.5 The further a barrier is set back from the road edge the higher it must be to provide the same level of protection

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## 4.6 **Noise barriers can reduce noise levels by up to 10 dB** (A).

(Appendix 7: Defra's Noise Action Plan: Roads, Environmental Noise (England) Regulations 2006.

- 4.7 The Appellant's calculations assume the noise barrier is infinitely long such that it provides a complete barrier to all noise from the M62, this is not proven.
- 4.8 It is proposed that a noise barrier of at least 4.0m in height would be located along the northern boundary of the site, which will be designed to avoid conflict with the existing National Grid infrastructure. (ESA2 VOL 8 11.6.6) however evidence shows:
  - The proposed location of the noise barrier is not possible
  - A continuous barrier is not possible
  - The massing of 4 storey apartments adjacent to the M62 cannot be built as indicated on the parameters plan
  - The ecology park is wrongly located for its purpose
  - The plan fails to identify the existing Boarding Kennels business, a noise source that would still exists on the proposed development even if a barrier was built

### **Highways England**

4.9 It is impossible to build a noise barrier in the location shown on the site parameters plan. The north boundary fence is owned by Highways England, who has confirmed (Appendix 8) the existing boundary fence belongs to them; any development on the land

would have to comply with Department for Transport Circular 02/2013. (Appendix 9)

• Annex A: Special Types of Development

Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party) "For reasons of safety, liability and maintenance, with the sole exception of fences owned and provided by the Highways Agency at its own cost, all noise fences, screening and other structures must be erected on the developers land, and far enough within the developers land to enable maintenance to take place without encroachment onto highway land."

- 4.10 Highways England has many fixed assets at the Peel Hall site boundary, including:
  - 45 lighting columns
  - 3 gantry stations
  - overhead pedestrian bridge

These all prevent the building of a noise barrier north of the site boundary.

### **National Grid**

- 4.11 There is inadequate space to erect a barrier on the appellants land between Highways England boundary and the National Grid HP Gas Main. (Appendix 10 Map Extract)
- 4.12 National Grid requires the HP gas main easement is not compromised and an easement of twelve metres is required. (Appendix 11 Easement)
- 4.13 The 12-metre easement requires access at all times, and prevents building of any kind, above it. The noise barrier would therefore have to be constructed within the site, south of the HP Gas Main.
- 4.14 A full gas easement location survey and agreement with National Grid is required to confirm if, or where, it would be possible for a noise barrier to be erected. The location of such a barrier dictates the location of the proposed apartments, proposed as the second line of noise attenuation.

## **United Utilities**

- 4.15 United Utilities responded to the application as follows: -
  - Any proposed layout should also reflect United Utilities' Right of Way to Elm Road wastewater pumping station.
  - It is the appellant's responsibility to investigate the possibility of any United Utilities' assets potentially impacted by their proposals and to demonstrate the exact relationship between any United Utilities' assets and the proposed development.
  - A water main crosses the site. As we need unrestricted access for operating and maintaining it, we will not permit development over or in close proximity to the main. We require an access strip as detailed in our 'Standard Conditions for Works Adjacent to Pipelines', a copy of which was provided with our previous consultation responses."
  - The Pumping Station and right of way is also located within the site boundary. The appellant should note that we will need access to these assets including a vehicular access to the pumping station. The existence of the pumping station and access to it will need to be considered in the site layout. We recommend that this access is discussed with our Property Services team if this appeal is allowed so appropriate access can be agreed in the site layout.
     (Appendix 12 - United Utilities)

Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party) confirm that the proposed noise barrier **must** be located on the appellants land, complying with all relevant easement conditions.

- 4.17 The proposal for a continuous noise barrier on the north boundary is not possible. There are several locations that prevent a continuous fence.
- 4.18 Ditch 1 and Spa Brook, both have a minimum of 20 metres where neither, a noise barrier or dwellings could be built above.



4.19 Public Footpath No.2



Access at all times – unsuitable for noise barrier or dwellings.

4.20 National Grid High Power Gas Main (identified as Warburton Tunnel) – 12-metre

easement prevents any development above the mains.





4.22 Given the proposed barrier only runs along the length of the northern boundary of the site, and not beyond the appeal site, noise would also propagate around the edges of a barrier. This would impact on the amenity of residents of Mill Lane and Elm Road; noise barriers should usually extend well beyond the site boundary to ensure adequate protection is offered. (Warrington Borough Council Environmental Protection Supplementary Planning Document 6.4.2 Appendix 13)

4.23 The site is not flat; it falls from the north (circa 20.5m AOD) to south (circa 10m AOD).The M62 embankment varies in width from 2 meters to 25 meters, and height from

- Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party) below the motorway (2.5.metres) to 7.5. meters above the motorway.(Appendix 21)
- 4.23.1 The relevant position of the motorway road surface, its relation to the site level and the positioning of any noise barrier is critical to accurate noise assessment, these factors have been excluded in the noise report. Vehicles are transitory and the noise generated by them is not confined to a static point or location. Vehicles using the motorway travel along its full length and its curvature relative to the appeal site. Therefore, measuring on the basis of a static source does not allow for noise from any other part of the motorway other that that identified in the noise report.
- 4.24 A 4 metre barrier is proposed, but a barrier of at **least 6.5metres in height** would be needed for over 300 metres where the land drops a minimum of 2.5 metres below the height of the motorway.



Public Right of Way - 2.5 metres below M62 motorway



Site Level 2.5 metres below M62 motorway

- 4.26 A 6.5 metre barrier would be at the same height as the 2<sup>nd</sup> floor of the proposed 4 storey apartments.
- 4.27 A 6.5 metre barrier would have a harmful and overbearing presence in the outlook of existing residents and future residents of these apartments, the overall effect would be significantly harmful to their living conditions and amenity space.
- 4.28 A 6.5 metre high barrier requires a specialist engineering report to determine its possibility and location in relation to existing un-removable assets.
- 4.29 The Framework includes as a core planning principle that planning should always seek to secure a high quality design and a good standard of amenity for all existing and future occupants of land and buildings.

- Gaps
- Material Density
- Barrier Construction
- Barrier Height
- Distance between noise source and receiver
- Relative height of source and receiver with respect to barrier
- 4.31 Holes, slits or gaps through or beneath a noise barrier, can seriously reduce the barrier performance, as the sound will "leak" through. The gap can be considered to transmit 100% of the noise. There is no evidence within the noise report that a noise barrier could be constructed without gaps. The predicted worst-case facade levels (Table 11.13 ESA2 VOL 8) must be considered inaccurate until it is proven where a continuous barrier, without leaks , at what height and distance from the motorway could be constructed.
- 4.32 Material density and barrier construction relate to sound transmission, in practical terms the greater the mass of the barrier the less the sound. However, the structural **integrity of the barrier is critical** to its performance as gaps will allow sound to find a direct path through the barrier therefore it is vital that acoustic fencing should be constructed with no gaps and sealed to the **ground** to prevent sound leaking through. Acoustic barriers should be placed as close as is conveniently possible to the source of the noise to obtain optimum performance.

- 4.33 The assumption that the barrier is indefinitely long is unreasonable and substantially overestimates the potential mitigation provided by the proposed screen. This undermines the Appellants conclusions and methodology.
- 4.34 To include a noise barrier as evidence that noise from the M62 could be reduced requires evidence that it is possible to build such a barrier. This application does not contain any evidence to support the proposal; on the contrary there is a distinct lack of critical evidence. The proposal for a noise barrier is unsound.

## 5 MASSING

5.1 The noise report informs the reader *"Existing noise levels at the most exposed residential receptors will have a significant adverse effect.* (11.6.15 - ESA2: Vol 8)

- 5.2 The proposed noise barrier alone cannot reduce the excessive M62 noise sufficient for development, secondary noise attenuation is proposed. The Parameters Plan (APP6) indicates this is to be in the form of a continuous barrier formed by the four storey apartments the complete length of the northern boundary.
- 5.3 The report goes on to say, building massing should be used at the design stage of each individual parcels of the development to ensure that the private outdoor amenity space for individual plots should be below 50 dB LAeq, 16h. **(11.6.17** ESA2: Vol 8)
- 5.4 Building massing over 10 years or more, as proposed, means most residents would have to live with noise substantially above the recommended levels with the subsequent health issues this would bring. This would have a significant adverse effect on the living conditions and amenities of those properties built in the first 9 years of the development, without guarantee that sufficient noise attenuation could be finally achieved.
- 5.5 The opportunity for a continuous frontage, parallel to the noise source (M62) is not possible at Peel Hall. The development of the site would be over 10 to 15 years, with different plots and different developer's. The noise assessment fails to mention any attenuation measures for the gaps, where **no** massing can take place e.g.
  - 230 metres at the rear of Peel Hall Kennels & attenuation pond
  - Between separate apartment blocks
  - Between separate building plots
  - Above brooks and watercourses
  - Location of historic hedge
  - At the rear of Elm Road houses
  - At the site entrance in Mill Lane
  - 12 metre Gas Main easement

5.6 All of these locations will produce gaps that would allow 100% of the noise levels to penetrate through the site; this renders the proposal of apartments reducing the noise to the amenity space and rest of the site as being ineffectual.

# 5.6.1 This is an example of noise penetration levels at nearby Cinnamon Brow, which has a



145 metre stand off.

Average noise level (dB) 75.0 and over 70.0 - 74.9 65.0 - 69.9 60.0 - 64.9 55.0 - 59.9

5.6.2 Cinnamon Brow has 145 metres stand off from the motorway and continues to allow excessive noise to penetrate through the site between massing. As can be see above, noise levels of 65.0 to 69.9 permeate a further 225 metres through the site .

- 5.6.3 With a bare minimum stand off proposed at Peel Hall, noise levels penetrating through the identified gaps will be much higher than those at Cinnamon Brow. The 230 metre gap at the rear of Peel Hall Kennels allows noise to penetrate through
- 5.7 Peel Hall currently has no buildings higher than 2 storeys on any of its boundaries. Peel Hall is on the edge of the town. Most of the properties in the area are family homes, with very few apartments.
- 5.8 One and two bedroom apartments alongside a busy motorway are not homes for young families. These types of apartments are for students/single people, who want to live near the town or city centre with easy access to education, employment, amenities and bus/rail terminals. Adjacent to the M62, with limited public transport is not a sustainable plan for this type of development.
- 5.9 Neighbouring communities Cinnamon Brow and Locking Stumps, built by the New Town Development Corporation, are situated alongside M62/M6 Croft Interchange. The layout of both areas incorporated a significant set back from the motorway noise of 140 metres minimum at Cinnamon Brow and 150 metres minimum at Locking Stumps. A similar set back distance should be part of any development at Peel Hall, in tandem with an accurate noise assessment.

Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party)



- 5.11 Defra Noise mapping comparison between the neighbouring communities highlight the significant noise generated both day and night in all three neighbourhoods, however the set back area at Cinnamon Brow and Locking Stumps assists in the reduction of noise to the nearest dwellings. A bare minimum set back is proposed at Peel Hall.
- 5.11.1 The 140 -150 metre stand off distances at Cinnamon Brow and Locking Stumps still allow 100 percent of the motorway traffic noise to permeate through the gaps between existing massing.

## 5.12

Noise mapping comparison of Peel Hall, Cinnamon Brow and Locking Stumps -LAeq, 16hr





**5.13** LAeq,16h (UK Government Environmental Noise Definition), is the equivalent continuous sound level in dB(A) that, over the period 07:00-23:00 hours, contains the same sound energy as the actual fluctuating sound that occurred in that period



# Noise mapping comparison of Peel Hall, Cinnamon Brow and Locking Stumps – Lnight

**5.14** Lnight : night noise level, the A-weighted, Leq (equivalent noise level) over the 8 hour night period of 23:00 to 07:00 hours, also known as the night noise indicator.



### 5.15 Noise mapping comparison of Peel Hall, Cinnamon Brow and Locking Stumps – LDEN Average Sound over 24 hours



5.16 The Lden (Day Evening Night Sound Level) or CNEL (Community Noise Equivalent Level) is the average sound level over a 24 hour period, with a penalty of 5 dB added for the evening hours or 19:00 to 22:00, and a penalty of 10 dB added for the nighttime hours of 22:00 to 07:00.





# 5.17 Cinnamon Brow 140 Metre set back from motorway.

# 5.18 Locking Stumps 150 Metre set back from the motorway



5.19

# PEEL HALL PROPOSED 30 - 50 METRE SET BACK



6 ProPG

- 6.1 Good acoustic design is not just compliance with recommended internal and external noise exposure standards. Good acoustic design should provide an integrated solution whereby the optimum acoustic outcome is achieved, without design comprises that will adversely affect living conditions and the quality of life of the inhabitants or other sustainable design objectives and requirements. (Appendix 5 Pro PG 2.21)
- 6.2 Using fixed unopenable glazing for sound insulation purposes is generally unsatisfactory and should be avoided; occupants generally prefer the ability to have control over the internal environment using openable windows, even if the acoustic conditions would be considered unsatisfactory when open. Solely relying on sound insulation of the building envelope to achieve acceptable acoustic conditions in the new residential development when other methods could reduce the need for this approach is not regarded as good acoustic design. Any reliance upon building envelope insulation with closed windows should be justified in supporting documents. (Appendix 5 ProPG 2.22) The Planning Practice Guidance also identifies that if proposed noise mitigation relies on windows being kept closed this may have an effect on living conditions.
- 6.3 Façade insulation and special glazing may help to reduce internal noise, however, there are no secondary beneficiaries and outdoor areas remain unaffected by this measure.
- 6.4 Paragraph 30-005 of Planning Practice Guidance (PPG) sets out a noise exposure hierarchy. Where the boundary to a significant observed effect level would be crossed, the planning process should be used to avoid such an effect occurring. In similar vein, PRO PG advises that an Acoustic Design Statement should clearly demonstrate that a significant adverse effect would be avoided in the finished development.

## Noise Hierarchy Table

Response Examples of outcomes		Increasing effect level	Action			
	No Observed Effect Level					
Not present	No Effect	No Observed Effect	No specific measures required			
	No Observed Adverse E	ffect Level	-			
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No Observed Adverse Effect	No specific measures required			
	Lowest Observed Adverse	Effect Level				
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a small actual or perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum			
	Significant Observed Advers	e Effect Level				
Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid			
Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent			

- 6.5.1 SOAEL –Significant Observed Adverse Effect Level
   This is the level above which significant adverse effects on health and quality of life
   occur. (Appendix 14 2.21 NPSE)
- 6.5.2 It is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times. It is acknowledged that further research is required to increase our understanding of what may constitute a significant adverse impact on health and quality of life from noise. However, not having specific SOAEL values in the NPSE provides the necessary policy flexibility until further evidence and suitable guidance is available. (Appendix 14 2.22 NPSE)
- 6.5.3 The first aim of the Noise Policy Statement for England Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.2.23The first aim of the NPSE states that significant adverse effects on health and quality of life should be avoided while also taking into account the guiding principles of sustainable development (Appendix 14 - 2.22 NPSE)
- 6.5.4 The second aim of the Noise Policy Statement for England
- 6.5.5 Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.

- 6.5.6 The second aim of the NPSE refers to the situation where the impact lies somewhere between LOAEL and SOAEL. It requires that all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development (paragraph 1.8). This does not mean that such adverse effects cannot occur. (Appendix 14 - 2.24 NPSE)
- 6.5.7 The third aim of the Noise Policy Statement for England
- 6.5.8 Where possible, contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.
- 6.5.9 This aim seeks, where possible, positively to improve health and quality of life through the pro-active management of noise while also taking into account the guiding principles of sustainable development (paragraph 1.8), recognising that there will be opportunities for such measures to be taken and that they will deliver potential benefits to society. The protection of quiet places and quiet times as well as the enhancement of the acoustic environment will assist with delivering this aim. (Appendix 14 - 2.25 NPSE)
- 6.6 The Acoustic Design Statement submitted by the Appellant does not demonstrate that a Significant Observed Adverse Effect Level would be avoided at Peel Hall.
- 6.7 There is no evidence that the proposed noise attenuation would achieve the necessary noise reduction, at those "front line apartments," to ensure there would be no unacceptable risk of future occupiers experiencing intrusive and disruptive noise and disturbance to an extent that significant adverse effects on health and quality of life could occur.

Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party) any potential acoustic opportunities should be considered at the concept planning stage. At this stage there is more opportunity to address acoustic matters, for example through set backs, building orientation, layout, building height controls or noise barrier.
(Appendix 6 - 3.2 ProPG:Planning & Noise, New Residential Development – Supplementary Document 2 Good Acoustic Design)

- 6.9 The Appellants Acoustic Design Statement has included, set back, building massing, building height and a noise barrier, however, it is not sufficient merely to mention them in a report. The report needs to evidence and clearly demonstrate that the proposals are sound. The Acoustic Design Statement submitted by the appellant clearly demonstrate, that a significant adverse noise impact has not been avoided in the finished development.
- 6.10 There are no supporting documents justifying the need to compromise on living conditions or quality of life of future residents. Warrington is not so desperate for apartments in this location that we have to approve unacceptable living conditions in order to achieve a poorly designed, maximum size, development with absolute minimum standards.

### 7 PPG24 & WBC Noise Categories

7.1 Assessment of the noise exposure categories for dwellings has not been included in the noise report. As with many other Local Authorities, Warrington Borough Council continues to use PPG24 Recommended Noise Exposure Categories for New Dwellings Near Existing Noise Sources. Planning Policy Guidance 24: Planning & Noise–Annex 1 (Appendix 15)

Significantly more monitoring points and monitoring periods along the whole length of the site's north boundary with the M62 motorway is needed to establish the relevant noise category for the site.

### 7.2

#### **Noise Exposure Categories For Dwellings**

**1.** When assessing a proposal for residential development near a source of noise, local planning authorities should determine into which of the four noise exposure categories (NECs) the proposed site falls, taking account of both day and night-time noise levels. Local planning authorities should then have regard to the advice in the appropriate NEC, as below:

NEC	
A	Noise need not be considered as a determining factor in granting planning permission, although the noise level at the high end of the category should not be regarded as a desirable level.
В	Noise should be taken into account when determining planning applications and, where appropriate, conditions imposed to ensure an adequate level of protection against noise.
С	Planning permission should not normally be granted. Where it is considered that permission should be given, for example because there are no alternative quieter sites available, conditions should be imposed to ensure a commensurate level of protection against noise.
D	Planning permission should normally be refused.
<b>^</b> ^	

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Noise Levels <sup>0</sup> Corresponding To The Noise Exposure					
Categories For New Dwellings LAeg,T dB					
	Noise Exposure Category				
Noise Source	Α	В	С	D	
road traffic					
07.00 - 23.00	<55	55 - 63	63 - 72	>72	
23.00 - 07.00 <sup>1</sup>	<45	45 - 57	57 - 66	>66	
rail traffic					
07.00 - 23.00	<55	55 - 66	66 - 74	>74	
23.00 - 07.00 <sup>1</sup>	<45	45 - 59	59 - 66	>66	
air traffic <sup>2</sup>					
07.00 - 23.00	<57	57 - 66	66 - 72	>72	
23.00 - 07.00 <sup>1</sup>	<48	48 - 57	57 - 66	>66	
mixed sources <sup>3</sup>					
07.00 - 23.00	<55	55 - 63	63 - 72	>72	
23.00 - 07.00 <sup>1</sup>	<45	45 - 57	57 - 66	>66	

The noise levels reported by Miller Goodall (ESA2 Vol.9 -N3 Monitoring Data) clearly indicate Peel Hall site to be in Category D.

## 8. ROAD CLOSURES

The information contained in this proof of evidence, was based on the acoustic report by Miller Goodall (ESA2 Vol 8 & 9), however, further investigation has revealed there were road closures and road works, along the entire length of the site's north boundary adjacent to the M62 motorway at time of Miller Goodall night-time noise monitoring.

- 8.1 Traffic conditions, motorway road closures, lane closures and speed reductions are not difficult to check, prior to sensitive noise monitoring.
- 8.2 Monitoring at MP04 from 7.00am to 8.00 a.m. is the only noise data captured once traffic resumed. As previously stated MP04 is 4.5 meters above the motorway and 16 meters from the motorway edge. Volumes recorded, whilst not at the noisiest part of the site, still confirm the extensive noise levels at the site.
- 8.3 The noise volume recorded during this short period reached 97 dB. At this level of noise, it needs to be considered whether adequate noise attenuation is likely to be achievable given the size of the site and the limitations due to the surrounding noise sources and various other restrictions that apply to the site.



## 8.4 <u>23/05/2019 20:00 to 24/05/19 06:00 - 00082550-02</u>

M62 East & Westbound Junction 9 hard shoulder and lane one closures for electrical works. Speed limit reduced to 50 m.p.h.

## 8.5 **<u>23/05/2019 22:00 to 24/05/19 06:00 - 0089057-003</u></u>**

M62 East & Westbound Junction 9 to 10 lane and total closures for electrical works. . Speed limit reduced to 50 m.p.h.

#### 8.6 **<u>23/05/2019 21:00 to 24/05/19 06:00 - 00104623-009</u></u>**

Eastbound from Junction 10 to Junction 12 **total road closure** due to improvements. i.e. **No** eastbound traffic from junction 10 to junction 12 for 9 hours, during monitoring period.

- 8.7 Miller Goodall's computer noise modelling used calibrated on-site measured noise data to reach the conclusion that the site is suitable for residential development. The on-site measured noise data cannot be an accurate record of the true noise level of the nighttime noise on the M62 motorway, the data capture was done during road and lane closures. This evidence is flawed and does not reflect the true noise measurement of the M62 motorway.
- 8.8 MP04 overnight noise monitoring evidence is therefore inadmissible.(ESA2 Volume 9: 5Noise 11.3 Monitoring Data)
- 8.9 Table 11.11 Summary of Monitoring Data is inaccurate and therefore inadmissible evidence. (ESA2 Volume 8)
- 8.10 Table 11.13 Predicated worst-case facade levels is totally inaccurate and therefore inadmissible evidence. (ESA2 Volume 8)
- 8.11 Highways England confirmed the following lane closures and speed reductions in place between Junction 9 & 12 of the M62 motorway on 22<sup>nd</sup>/23<sup>rd</sup>/24<sup>th</sup> May 2019. (Appendix 16)

	SCHEDULE_PLA					
EVENT NUMBER1	NNED_STARTDA	SCHEDULE_PLA	ROAD	DESCRIPTION	NOTES	SCHEDULED EVENT
00082550-002	23/05/2019 20:00	24/05/2019 06:00	M62 (East Bound)	M62 East and Westbound Junction 9 exit slips Hardshoulder and lane one closures for electrical works		Hardshoulder, lane 1 Eastbound Jct 9 exit slip
00089057-003	23/05/2019 22:00	24/05/2019 06:00	M62 (East Bound)	M62 East and Westbound junction 9 to 10 lane and total closures for electrical works		M62 Junction 9 exit westbound Diversion Route
00104623-009	22/05/2019 21:00	23/05/2019 06:00	M62 (East Bound)	M62 Eastbound Junction 10 to 12 Total closure due to Improvements	M60 MP 26/6 - MP 43/7 M6 - MP 308/1 - MP 307/4 M6 - MP 306/6 - MP 307/3 M62 J9 Entry slip M62 J11 Exit & Entry slip	M62 Junction 10 to 12 Eastbound - Total Closure
00104623-009	23/05/2019 21:00	24/05/2019 06:00	M62 (East Bound)	M62 Eastbound Junction 10 to 12 Total closure due to Improvements	M60 MP 26/6 - MP 43/7 M6 - MP 308/1 - MP 307/4 M6 - MP 306/6 - MP 307/3 M62 J9 Entry slip M62 J11 Exit & Entry slip	M62 Junction 10 to 12 Eastbound - Total Closure

- 8.12 Total road (Junction 10-12 Eastbound) and lane closures (East & West bound) with speed reductions to 50 m.p.h. would have a **significant impact** on the noise data collected and used by Miller Goodall in the preparation of the Appellants Noise Assessment.
- 8.13 The night-time Indicative Facade Assessment (ESA2 Volume 9 Appendix 11.4) is based on **incorrect** information and is not a true assessment of the actual noise.
- 8.14 Given the nature of the appeal site and the obvious significant constraints on residential development upon it, the noise assessment undertaken by the appellant is not sufficiently robust to establish with any certainty what the true noise environment for the site is now or what it would be in the future.

## 9 PEEL HALL KENNELS & CATTERY



- 9.1 The acoustic report omits to follow NPPF 182 "Planning policies and decisions should ensure that new development could be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or **'agent of change'**) should be required to provide suitable mitigation before the development has been completed."
- 9.2 The acoustic report fails to include or assess the existing noise from Peel Hall Kennels.

Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party) An accurate acoustic report cannot be complete unless all noise sources are included in the assessment.

- 9.3 Peel Hall Kennels & Cattery is a purpose built Commercial Boarding Kennel. Licenced by Warrington Borough Council for 56 dogs and 20 cats. The business has been in operation since 1999. Both kennel and cattery buildings were built to the Government Model Licence Conditions and Guidance.
- 9.4 The Appellant's documents red ring Peel Hall Farm as excluded from the proposed planning appeal. The Commercial operation of the Boarding Kennels is not identified. The addition of a red ring on a map, around land not owned by the Appellant, does **not** absolve its responsibility of identifying and mitigating any impact the 'red ringed' operation may have on the proposed new development and visa versa. A red ring does **not** permit the Appellant to ignore those parts of legislation; NPPF Para: 170 Para: 180 Para: 182 or to comply with the Agent of Change principle and WBC policy QE6, that apply to the "red ringed" area as a consequence of the proposed development.
- 9.5 It is notoriously difficult to obtain planning permission for Boarding Kennels close to residential property. Noise and its impact on nearby properties both residential and commercial are the number one reason for refusal. Boarding Kennels are classed for planning purposes as Sui Generis and as such demand careful consideration with regard to location.
- 9.6 A recent application in Warrington for a Dog Day Care Centre near commercial premises was refused on noise grounds at a planning appeal. (Appendix 17 APP/M06551/W/173181021)
- 9.7 In his report to the Secretary of State for Housing Communities and LocalGovernment, dated October 2018, the Inspector at paragraph 13.93.
Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party)

"I have no reason to doubt that Peel Hall Farm is run as a successful boarding kennels. Nor do I doubt that when the kennels are full the boarded dogs can be noisy. Again, if planning permission were to be granted very careful consideration would need to be given at the relevant reserved matters stage(s) to the relationship between any new dwellings and Peel Hall Farm. One would need to be fully assured that the living conditions of any future occupiers would not be adversely affected and that, equally importantly, the business would not suffer as a result of complaints in relation to noise. The Framework is explicit that: Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development ...\_in its vicinity, the applicant (or agent of change') should be required to provide suitable mitigation before the development has been completed."

- 9.8 Existing noise and its mitigation are a crucial part of this planning appeal. Effective noise mitigation cannot be applied unless all site noise sources are correctly assessed and proposed mitigation methods identified.
- 9.9 National Planning Practice Guidance notes that the potential effect of a new residential development being located close to an existing business, giving rise to noise should be carefully considered; existing noise levels from the business may be regarded as unacceptable by the new residents and subject to enforcement action.
- 9.10 Recent case law highlights the importance of addressing the "agent of change" principle in planning decision-making.
  - Ornua Ingredients Ltd) v. Herefordshire Council Case No: CO/454/2018 (Appendix 18)
  - Cemex (UK Operations) Ltd v Richmondshire District -Case No: CO/1639/2018 (Appendix 19)

These cases highlight the need to have regard to National Planning Policy and Planning Practice Guidance when making planning decisions. It emphasises the importance of preventing situations arising, as a result of introducing noise-sensitive developments and of prohibitive restrictions being placed on existing noise-generating premises. It highlights the Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party) importance of designing new developments in a way that minimises noise complaints that could lead to prohibitive restrictions being place on existing operations.

#### 10 Human Rights

- 10.1 Article 8 of the Human Rights Act, states that a person has the substantive right to respect for their private and family life. A public authority needs to take positive steps to protect homes from serious noise pollution.
- 10.2 Development of new homes on this site with unacceptable noise levels and adjacent to an AQMA area would deny new residents their rights. (Appendix 20 Human Rights)

#### 11 NPPF

- 11.1 Planning policies and decisions should contribute to and enhance the natural and local environment by:
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. NPPF 170 (e)
- 11.3 Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including the cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development in doing so they should:
- a) mitigate and reduce to a minimum potential adverse impacts resulting from noise
  from new development and avoid noise giving rise to significant adverse impacts on health
  and the quality of life. NPPF 180(a)

#### **12 CONCLUSION**

- Careful consideration should be given to whether noise reduction is likely to be achievable, given the size of the site and the limitations due to the surrounding noise sources and various other restrictions of the site.
- 2 Overnight noise modelling of the north boundary during motorway road closures invalidates the data captured.
- 3 The number of monitoring locations and monitoring periods was totally inadequate to capture the true noise level from the sites extensive north boundary with the M62 motorway.
- 4 The north boundary of the site and its relationship to the kerbside of the M62 motorway varies from 2 meters in width to 25 meters. This important detail was omitted from the noise report.
- 5 The existing constraints on the north boundary, high-pressure gas main, utility pumping station, watercourses, pedestrian bridge, public right of way, all impact the location of a barrier, but this information is excluded from the noise report.

- 6 The actual location of the barrier and its relationship to either the kerbside of the motorway, the site boundary or the first noise receptor was not included in the noise report. Without this information it is impossible to assess the actual noise level that would reach the dwellings closest to the north boundary, or to assess if mitigation is actually possible.
- 7 The topography of the site plays a major part in noise mitigation, the land varies in height by10 metres, and this has not been included in the noise assessment.
- 8 Building massing is described as a tight configuration to provide a further noise barrier. The noise assessment has failed to consider the numerous gaps where no massing is possible.
- 9 It has not been clearly demonstrated that the proposed noise mitigation would avoid a significant noise impact remaining on the site.
- 10 The build out of the site could take up to 15 years, with 2 or 3 different development companies involved. The indicative highways build out plan shows development adjacent to the M62 motorway with 7 different plots and indicative build out in years 1, 3, 4, 5, 8 and a 10. There is a risk that only parts of the site would be developed, this would risk the sustainability of the whole site, and impact new and existing residents.
- There is no evidence that the proposed noise attenuation measures could be implemented.Without suitable noise attenuation this site is unsuitable for development as proposed.

55

- 12 The submitted proposals do not justify development where the consequence would be to produce unacceptable living conditions and amenity.
- 13 The noise report submitted by the appellant lacks sufficient detail and robustness in the base line surveys, with key omissions and as such the noise report does not stand scrutiny and is inadequate to demonstrate that the proposed development would not give rise to significant adverse noise impacts.
- 14 The noise report is not fit for purpose, there is no confidence the site is suitable for a development of the size proposed. 1200 dwellings is unrealistic in this location when all of the site constraints are considered. A significant reduction in the overall proposal for entire site; with an adequate stand off from the M62 motorway could be considered.
- 15 A much more accurate and detailed assessment of the entire site is required to ascertain the site suitability for development.
- 16 The noise report fails to recognise all noise sources that would impact development. The assumption that the barrier is indefinitely long is unreasonable and substantially overestimates the potential mitigation provided by the proposed screen. This undermines the Appellants conclusions and methodology.
- 17 This matter is too critical to fall back on condition and needs to be assessed and designed for this purpose prior to permission being granted to ensure the noise mitigation can be met.

#### Appendix

1	Environmental Protection UK
2	World Health Organisation
3	Defra Road Mapping
4	Design for Roads & Bridges
5	Pro Pg
6	Pro Pg Supplementary Document 2
7	Defra Noise Action Plan: Roads
8	Highways England
9	Department for Transport DfT Circular
10	National Grid Map
11	National Grid Easement
12	United Utilities
13	W.B.C. Environmental Protection SPD
14	Noise Planning for England
15	PPG24
16	Highways England – Road Works
17	Planning Appeal APP/M06551/W/173181021
18	Case No: CO/454/2018 Ornua Ingredients v Herefordshire Homes
19	Case No: CO/1639/2018 Cemex (UK) Operations Ltd v Richmondshire
20	Human Rights
21	Embankment Heights - Images

### Environmental Protection UK



#### NOISE & HEALTH

HOME » POLICY AREAS » NOISE COMMITTEE » NOISE & HEALTH

Noise can cause annoyance and fatigue, interfere with communication and sleep, reduce efficiency and damage hearing. The World Health Organisation recommends a guideline level of 30 dB LAeq for undisturbed sleep, and a daytime level for outdoor sound levels of 50dB to prevent people from becoming "moderately annoyed".

Physiological effects of exposure to noise include constriction of blood vessels, tightening of muscles, increased heart rate and blood pressure and changes in stomach and abdomen movement. The effects of exposure to noise are personal as hearing sensitivity varies. Exposure to constant or very loud noise – either occupational or leisure – can cause temporary or permanent damage to hearing.

There is an increasing body of research linking prolonged exposure to transport noise to health impacts. A major impact of noise is sleep disturbance – and disrupted sleep has been linked to effects on cardiac health. A number of reports have made direct links between transport noise and cardiac health. Most work carried out has looked at impacts of aviation noise. There are links between children's concentration too. Much of this work has been carried out in Europe.

#### IN THIS SECTION

Noise Action Week Summary	
Noise & Health	
Our Work	
Committee Activities	

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# 2 World Health Organisation



# 3 Defra Road Mapping



# Strategic noise mapping Explaining which noise sources were included in 2017 noise maps

July 2019

# **Major roads**

Major Roads are defined under the END as regional or national sections of road which have a bi-directional flow of 3 million vehicle passages or more per year. The Major Roads for Noise Mapping 2017 were identified using the Department for Transport's <u>Transport</u> <u>Statistics Major Roads</u> data (see Figure 3 below).

National level scoping indicated that changes to noise exposure on the road network were likely to have occurred fairly widely. Mapping for the road network in England was therefore updated using 2015/16 traffic flow data where available. Population exposure data has also been updated using 2015 mid-census estimates.

The Geographic Information Systems (GIS) data on noise from roads in England can be found at:

Road Noise Indicator	Weblink
Lden	https://environment.data.gov.uk/dataset/fd1c6327-ad77-42ae- a761-7c6a0866523d
LAeq, 16hr	https://environment.data.gov.uk/dataset/b9c6bf30-a02d-4378- 94a0-2982de1bef86
LNight	https://environment.data.gov.uk/dataset/cc48e728-602a-4e8a- 9221-49f661ab58f8

# 4 Design for Roads & Bridges

#### VOLUME 11 ENVIRONMENTAL ASSESSMENT SECTION 3 ENVIRONMENTAL ASSESSMENT TECHNIQUES

#### PART 7

#### HD 213/11 – REVISION 1

#### NOISE AND VIBRATION

#### SUMMARY

This revised Standard provides guidance on the assessment of the impacts that road projects may have on levels of noise and vibration. This revision replaces the previous Standard, and includes updated advice on calculating night time noise levels, determining the extent of the study area and selecting appropriate traffic speed data. Where appropriate, this standard may be applied to existing roads.

#### **INSTRUCTIONS FOR USE**

- 1. Remove existing contents pages for Volume 11 and insert new contents pages for Volume 11 dated November 2011.
- 2. Remove HA 213/11 dated February 2011 from Volume 11, Section 3 and archive as necessary.
- 3. Insert HD 213/11 into Volume 11, Section 3, Part 7.
- 4. Please archive this sheet as appropriate.

Note: A quarterly index with a full set of Volume Contents Pages is available separately from The Stationery Office Ltd. Annex 3 Noise and Indices



Figure A3.1 – Example of Typical Traffic Noise Levels, LA10,18h

A3.8 A further advantage in adopting a logarithmic scale is that the response of the human hearing system to changes in noise level is logarithmic rather than linear in behaviour. Over most of the audible range, a subjective impression of a doubling in loudness corresponds to a 10 fold increase in sound energy which conveniently equates with an increase in sound pressure level of 10 dB. Doubling the energy level (for example the volume of traffic) increases the noise level by 3 dB.

A3.9 The frequency of sound is the rate at which a sound wave oscillates, measured in number of cycles per second, or Hertz (Hz). The human ear is more sensitive to frequencies important for voice communication and hearing sensitivity decreases markedly at frequencies below about 250 Hz. Frequencies below 20 Hz are usually perceived as vibration. The upper frequency limit of audibility is around 20 kHz, but decreases with age.

A3.10 Several different weightings have been proposed to convert measured sound pressure to a measure that correlates with perceived loudness in different circumstances. The 'A' weighting is by far the most commonly used and correlates well with the perceived noisiness of road vehicles. Logically the characteristics of the weighting should be slightly different for higher level sounds. A3.11 The noise from a traffic stream is not constant but varies from moment to moment and it is necessary to use an index to arrive at a single-figure estimate of the overall noise level for assessment purposes. The index adopted by the Government to assess traffic noise is  $L_{A10,18h}$  which is the arithmetic mean of the noise levels exceeded for 10% of the time in each of the 18 one hour periods between 6am and midnight. (Note: 'A' in the subscript denotes that the sound levels have been 'A' weighted). A reasonably good correlation has been demonstrated between this index and residents' expressed dissatisfaction with traffic noise over a wide range of exposures. In addition, the prediction and measurement techniques using this index are well developed in the UK.

A3.12 A commonly used alternative index is the equivalent continuous sound level,  $L_{Aeq}$ , which is the level of a notional continuous constant noise that would deliver the same sound energy over the period of measurement as the actual intermittent or time varying noise. Using this measure, a fluctuating noise can be described in terms of a single noise level. This index is easily adapted to describing sources that consist of occasional short periods – for example intermittent noise from industry, construction or demolition activity, and from railways and aircraft. However, it does not

#### November 2011

A3/2

# 5 Pro Pg



# ProPG: Planning & Noise Professional Practice Guidance on Planning & Noise

### New Residential Development

May 2017



Negligible	Low
Risk	Risk
MISK	MIDK

#### Stage 1: Initial Site Noise Risk Assessment

- An initial noise risk assessment of the 27 proposed development site should be conducted by a competent noise practitioner at the earliest opportunity, before any planning application is submitted. The noise risk assessment should provide an indication of the likely risk of adverse effects from noise were no subsequent mitigation to be included as part of the development proposal. It should indicate whether the proposed site is considered to pose a negligible, low, medium or high risk from a noise perspective.
- 2.8 The risk assessment should not include the impact of any new or additional mitigation measures that may subsequently be included in development proposals for the site and proposed as part of a subsequent planning application. In other words, the risk assessment should include the acoustic effect of any existing site features that will remain (e.g. retained buildings, changes in ground level) and exclude the acoustic effect of any site features that will not remain (e.g. buildings to be demolished, fences and barriers to be removed) if development proceeds.
- 2.9 The noise risk assessment may be based on measurement or prediction (or a combination) as appropriate, and should aim to describe noise levels over a "typical worst case" 24 hour day either now or in the foreseeable future. It may often be useful to liaise with the LPA regarding the most appropriate typical worst case scenario for the particular site. Care should be taken so that the risk assessment

includes the combined free-field noise level from all relevant sources of transport noise that affect the site. The assessment may also include industrial/commercial noise where this is present but is "not dominant" (see below).

High

Risk

Medium

Risk

- 2.10 Figure 1 summarises the Stage 1 Initial Site Noise Risk Assessment. The figure illustrates how an initial noise risk assessment is linked with an increasing risk of adverse effect from noise and how this in turn is broadly associated with indicative noise levels derived from current guidance and experience. The indicative noise levels are intended to provide a sense of the noise challenge at a potential residential development site and should be interpreted flexibly having regard to the locality, the project and the wider context. In the final column, the initial noise risk assessment is aligned with pre-planning application guidance that highlights the increasing importance of good acoustic design as the noise risk increases.
- 2.11 The overall Stage 1 approach is considered to support wider Government planning and noise policy and guidance at the date of publication of this document, including the NPPF, NPSE and PPG-Noise (see Supplementary Document 1).

ProPG Planning & Noise: New Residential Development • May 2017 08



#### Stage 2: Full Assessment – the four key elements

2.16 Stage 2 of the recommended approach contains four key elements to be undertaken in parallel and each is considered in turn below in the following sub-sections.

#### STAGE 2: FULL ASSESSMENT – THE FOUR KEY ELEMENTS

- Stage 2: Element 1 Good Acoustic Design Process
- Stage 2: Element 2 Internal Noise Level Guidelines
- Stage 2: Element 3 External Amenity Area Noise Assessment
- Stage 2: Element 4 Assessment of Other Relevant Issues

#### Stage 2: Element 1 – Good Acoustic Design Process

- 2.17 Following a good acoustic design process is an implicit part of achieving good design as required by Government planning and noise policy, set out in the NPSE and NPPF, and as outlined in Supplementary Document 1.
- 2.18 It is imperative that acoustic design is considered at an early stage of the development control process.
- 2.19 A good acoustic design process takes a multi-faceted and integrated approach to achieve optimal acoustic conditions, both internally (inside noise-sensitive parts of the building(s)) and externally (in spaces to be used for amenity purposes).

- 2.20 Good acoustic design should avoid "unreasonable" acoustic conditions and prevent "unacceptable" acoustic conditions (these terms are defined in Element 2). Good acoustic design does not mean overdesign or gold plating of all new development but seeking to deliver the optimum acoustic outcome for a particular site.
- 2.21 Good acoustic design is not just compliance with recommended internal and external noise exposure standards. Good acoustic design should provide an integrated solution whereby the optimum acoustic outcome is achieved, without design compromises that will adversely affect living conditions and the quality of life of the inhabitants or other sustainable design objectives and requirements.
- 2.22 Using fixed unopenable glazing for sound insulation purposes is generally unsatisfactory and should be avoided; occupants generally prefer the ability to have control over the internal environment using openable windows, even if the acoustic conditions would be considered unsatisfactory when open. Solely relying on sound insulation of the building envelope to achieve acceptable acoustic conditions in new residential development, when other methods could reduce the need for this approach, is not regarded as good acoustic design. Any reliance upon building envelope insulation with closed windows should be justified in supporting documents.
- 2.23 Planning applications for new residential development should include evidence that the following aspects of good acoustic design have been properly considered:

2.32 The recommended internal noise level guidelines are supported by advice contained in the WHO Community Noise Guidelines (2000). More recent advice from the WHO (e.g. Table 1 in the WHO Night Noise Guidelines for Europe), indicates that more stringent control of maximum event noise levels inside buildings can avoid all risk of any detectable physiological effect (NOEL – no observed effect level). However, controlling to these values is not currently required by planning or noise policy and there is

substantial uncertainty regarding any resulting significant long term pathological effects of being exposed to these lower levels.

# 6 Pro Pg Supplementary Document 2



# ProPG: Planning & Noise Professional Practice Guidance on Planning & Noise

**New Residential Development** 

# SUPPLEMENTARY DOCUMENT 2 **GOOD ACOUSTIC DESIGN**

May 2017

retrospectively applied to the development, or that may even mean that a particular development cannot proceed.

In requiring good acoustic design, there is a hierarchy of noise management measures that LPAs should encourage, including the following, in descending order of preference:

- i. Maximising the spatial separation of noise source(s) and receptor(s).
- ii. Investigating the necessity and feasibility of reducing existing noise levels and relocating existing noise sources.
- iii. Using existing topography and existing structures (that are likely to last the expected life of the noise-sensitive scheme) to screen the proposed development site from significant sources of noise.

Whilst the general principles of good acoustic design are broadly applicable to most types of noise and many types of noise-sensitive development, the additional advice provided below relates primarily to new residential development and to noise from road and rail, specialist advice may be required for other types of noise source.

#### 3.2 New land release

When considering redevelopment of larger greenfield or brownfield sites, or the subdivision of land located near busy roads or rail corridors, any potential acoustic opportunities and constraints should be considered at the concept planning stage. At this stage there is more opportunity to address acoustic matters for example through setbacks, building orientation, layout, building height controls or noise barriers.

#### SD2 Good Acoustic Design



In some cases, particularly for larger sites, it might be appropriate to try to design open spaces adjacent to the busy road/railway corridor to setback residential uses to reduce noise exposure. These open space areas could also include appropriate bunding to reduce adverse noise impacts across the wider site. In other cases it may be more appropriate to locate carefully designed buildings closer to the busy road/railway corridor and use the buildings themselves to provide an acoustic shadow for the remainder of the site, the objective here would be to achieve good acoustic conditions for both internal and external spaces.

The use of modern noise modelling software, in the hands of a capable specialist, will allow a developer to predict the acoustic conditions in a number of different development scenarios, thus allowing different approaches to be explored.

3.3 Building location, design, orientation and room layout

#### 3.4 Buildings as noise shields

On larger developments, a "barrier block" can be used to protect the residential development from noisy roads or railways. A barrier block is a building which itself forms a noise barrier. A continuous frontage (using a solid wall to extend to the boundary if necessary) is one way to lower noise levels in the rest of the property. Site planning and internal layout of buildings should also be considered. This is likely to be more easily achieved where a number of properties are being developed concurrently.

Main considerations when designing a "barrier block":

- The block should run along the edge of the site closest to and parallel to the noise source and wrap around the sides of the property to protect the sides.
- The block should preferably be used for non noise-sensitive purposes, such as for parking cars or refuse storage

# 3.7 Noise barriers, mounds, bunds, screens and fences

A noise barrier is often an effective way to reduce traffic or railway noise. Where space allows, raised mounds of earth can be effective noise barriers and can be enhanced by placing a low wall or fence on top. Fencing built on top of mounds can save the space a larger mound might take and reduce the amount of fencing material required.

Screening structures may include:

- An existing feature, such as a natural slope or an elevated road.
- A purpose designed feature such as a solid boundary fence.
- A purpose designed feature of the building, such as a garage or a partially enclosed carport.
- A purpose designed building which acts as a barrier block.

Topography can play a major role in determining the potential noise impact. A low rise building which is sited below the level of a noise source will be impacted less than a building which is sited above the noise source, especially if a noise barrier (e.g. a mound or wall) is provided near the source / at the top of the slope.

Careful consideration of site design can mitigate the effects for sites above a noise source by, e.g. positioning a garage in the noise affected areas and using noise walls to buffer noise. Additional care is needed when noise sources are elevated.

Solid walls and solid fences with no openings can reduce noise. Noise barriers are most effective at protecting outdoor areas and ground floor levels of buildings. Single-storey dwellings are therefore easier to shield from noise than the upper floors of two-storey dwellings. Where a gate is required in a barrier ensure it is carefully designed to minimise noise transmission. In some areas, measures to avoid graffiti should be considered when designing noise barriers. Main considerations when designing a noise barrier (all other things being equal):

- The closer the noise barrier is to the noise source, the more effective the barrier.
- The lower the height of the development, the more effective the barrier.
- The taller the barrier, the greater the noise reduction.
- Barriers are more effective when the site slopes away from the source.
- Wider barriers tend to be more effective barriers should ideally extend far beyond the ends of the development.
- Any holes or discontinuities in a barrier wall will significantly reduce its noise reduction ability.
- Material used should have a suitable surface density, eg a high performance barrier must have a surface density of at least 20kg/m<sup>2</sup>.

## 7 Defra Noise Action Plan: Roads



www.gov.uk/defra

# **Noise Action Plan: Roads**

## Environmental Noise (England) Regulations 2006

2 July 2019

#### Noise barriers or other similar methods

6.9 There is widespread use of barriers to limit the noise from roads. These include barriers alongside the roads themselves, landscaping and the built environment (with buildings being positioned to protect others from the source of noise). Noise barriers can reduce noise levels by up to 10 dB(A).

# 8 Highways England

### Area10CCC

Highways England Response - Fencing at M62 Warringt... Details

To: Margaret Steen

Dear Ms Steen,

Thank you for your email on 9 May asking about our policy on fencing.

The existing post and rail fence alongside the M62 in Warrington is the property of Highways England. It is owned and maintained by ourselves.

Without our prior agreement, no developer is permitted to erect new fencing within the boundary of the Strategic Road Network (SRN). Neither can they remove existing Highways England fencing, to do so is an offence. We may remove any fencing erected within the SRN without permission.

Any fence a developer wishes to erect would need to be positioned within the land they own. This would not replace the post and rail fence along the M62.

I hope this information answers your questions Ms Steen. Thank you for contacting us and please get in touch if you have any other queries on this issue.

Kind regards,

Dianne

A

# 9 Department for Transport DfT Circular

#### **DEPARTMENT FOR TRANSPORT**

DfT Circular 02/2013 Department for Transport

10 September 2013

# THE STRATEGIC ROAD NETWORK AND THE DELIVERY OF SUSTAINABLE DEVELOPMENT

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## ANNEX A: SPECIAL TYPES OF DEVELOPMENT

#### NOISE FENCES, SCREEN FENCES, ETC

A1. For reasons of safety, liability and maintenance, with the sole exception of fences owned and provided by the Highways Agency at its own cost, all noise fences, screening and other structures must be erected on the developers land, and far enough within the developers land to enable maintenance to take place without encroachment onto highway land.

#### **ADVERTISEMENTS**

A2. The Highways Agency will not object to proposals for advertising consent for displays outside of the highway boundary of the strategic road network unless it has specific reason to consider that a hazard to road safety would be a direct consequence of the development. This would include advertisements that are located where particular attention should be given to the driving task, or where they unlawfully incorporate elements of traffic sign design, such as directional arrows. Advertisements within the highway boundary are not permitted. The Highways Agency will remove any unauthorised adverts placed within the highway boundary.

#### GATEWAY STRUCTURES AND PUBLIC ART

- A3. The siting of gateway structures and public art within the highway boundary of the strategic road network will not be permitted for legal, safety and operational reasons. However, the siting of such features near the strategic road network may be seen as desirable to local authorities and developers. The Highways Agency is keen to support delivery of such proposals where no additional risk to road users is presented.
- A4. Due to the wide variety of design and form that such structures may take, and therefore the scope for the potential impact on safety and operation of the strategic road network, it is not practical to address all possible considerations in this policy. The Highways Agency encourages any promoter of such a proposal that may be near to or impact on the road network to discuss design and delivery proposals at the earliest opportunity.

#### **TELECOMMUNICATIONS EQUIPMENT**

- A5. Mobile Network Operators have the right under the Telecommunications Act 1984 to install equipment within the boundary of a highway that is not a protected street (as defined by section 61 of the New Roads and Street Works Act 1991) once they have obtained planning permission where required.
- A6. Such installations must not cause a safety or environmental hazard to any road users, workers, or any third party and it must not interfere in our ability to carry out either routine or structural maintenance. Neither should any harm be caused to the long-term integrity of the highway including pavement, earthworks, structures, drainage works and ancillary equipment. Traffic signs must not be obscured. These factors should be discussed with the relevant Highways Agency's Area Manager prior to any works being undertaken.

# 10 National Grid Map



HIGH PRESSURE GAS MAIN – Identified by yellow line – site boundary brown line






# 11 National Grid Easement



Good Morning Margaret,

We have received your enquiries regarding a potential development on the Land near to Peel Hall Farm. In this area we have a the High Pressure Warburton – Winwick Pipeline. In terms of this pipeline looking at the records we seem to have a legal easement of a 12 metre span over the pipeline, we would not want anything built in this area so that we can have access to excavate on our Pipeline at all times. Outside of this distance we really have no say in what gets built as it is not our land.

Regards,

## **Rob Doran**



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# 12 United Utilities





Planning Inspectorate



Dear Sir/Madam,

### Location: Land at Peel Hall Warrington WA2 9LH

Proposal: Major Development: Outline planning application for a new mixed use neighbourhood comprising residential institution (residential care home - Use Class C2); up to 1200 dwelling houses and apartments (Use Class C3); local centre including food store up to 2000 square metres (Use Class A1); financial & professional services; restaurants and cafes; drinking establishments; hot food takeaways (Use Classes A2-A5 inclusive); units within Use Class D1 (non-residential institution) of up to 600 sq m total with no single unit of more than 200 sq m; and family restaurant/ pub of up to 800 sq m (Use Classes A3/A4); primary school; open space including sports pitches with ancillary facilities; means of access (including the demolition of 344; 346; 348; 458 and 460 Poplars Avenue) and supporting infrastructure. (All detailed matters other than access reserved for subsequent approval.) (Application is accompanied by an Environmental Impact Assessment)

With regard to the above development proposal, United Utilities Water Limited ('United Utilities') welcomes the opportunity to provide comments upon the Environmental Statement Addendum, ES Documents and Figures and ES Non-Technical Summary. United Utilities would like to draw your attention to comments previously submitted in respect of the outline planning application (ref: 2016/28492) dated 14 December 2016 and a subsequent pre-application request dated 19 February 2019 and specifically our suggested draft conditions which we enclose again for ease of reference. These conditions are reflective of recommended conditions 16, 17, 18 and 19 set out within Appendix C of the Planning Inspectorate's report to the Secretary of State dated 1 October 2018. In addition to our suggested conditions we also support draft condition 20 regarding ground water protection and draft condition 31 regarding a Construction Environmental Management Plan, including the protection of existing utility assets and infrastructure.

The ES Addendum, and specifically Part 1, Chapter 7 'Hydrology, Drainage and Flood Risk Assessment' remains unchanged from the previous version of the ES to which we provided comments upon as part of planning application ref: 2016/28492. United Utilities wishes to re-iterate comments previously made to these consultations which are set out below:

United Utilities advises the following key points should be adhered to:

• Foul and surface water drain on separate systems.

- A holistic strategy for foul and surface water for the entire site. This should identify how the phases will interact within each other and reflect the surface water hierarchy which is outlined in the National Planning Practice Guidance. The approach to surface water should also be in accordance with the requirements of the non-statutory technical standards for sustainable drainage produced by Defra.
- Given the nature of the site we would expect there to be no reliance on the public sewer for the drainage of surface water.
- The strategy for wastewater infrastructure should seek to avoid the need for pumped solutions.
- The strategy should outline how different phases of the development will interact and ensure that infrastructure in the earlier phases, and that interconnects between phases, is appropriately sized.
- The site will require multiple connection points. A future strategy should identify possible connection points to the public sewerage network and clean water network.
- Given the size of the site, upgrades to infrastructure may be required. Until more detail is known about the development, it is difficult to comment on this further.
- For larger premises or developments of more than one property, including multiple connections, where additional infrastructure is required, a water network behaviour/demand modelling exercise would be required to determine the network reinforcements required to support the proposed development.
- If the appellant intends to obtain a water supply from United Utilities for the proposed development, we strongly recommend they engage with us at the earliest opportunity. If reinforcement of the water network is required to meet the demand, this could be a significant project and the design and construction period should be accounted for.
- If infrastructure upgrades are necessary, it may be necessary to co-ordinate the delivery of development with upgrades to infrastructure.
- The appellant should give consideration to the approach to management and maintenance of any on-site sustainable drainage system.
- United Utilities is not responsible for advising on rates of discharge to the local watercourse system and therefore we recommend the appellant engages with the Lead Local Flood Authority regarding these proposals.
- The proposed development site is situated within Groundwater Source Protection Zone (SPZ) 3, close to United Utilities water abstraction boreholes and within a Drinking Water Safeguard Zone for Groundwater. Drinking Water Safeguard Zones, designated by the Environment Agency under the Water Framework Directive, are used for areas around

abstractions where water quality is poor and are where additional measures are needed to improve water quality. Action is targeted at these zones to address water contamination. Land drainage and new development has the potential to impact on the quality of groundwater supplies, and given the scale of this development the potential effects of poorly designed SuDS need to be managed. We feel it is particularly important that the proposed SuDS are designed in accordance with the Ciria SuDS manual. In addition, the requirements from the Environment Agency's "Approach to Groundwater Protection" should also be applied to ensure that the development does not impact on groundwater quality in the area. Details of the approach of the EA is available at https://www.gov.uk/government/collections/groundwater-protection. We believe any future development/construction activity should be supported by a risk assessment and construction management plan.

- Further to the assessment of assets and infrastructure crossing the proposed site we strongly recommend a construction management plan is provided with any future planning submission to afford appropriate protection for United Utilities assets both during and post construction.
- Any proposed layout should also reflect United Utilities' Right of Way to Elm Road wastewater pumping station.
- The appellant should consult Sewers for Adoption 8<sup>th</sup> Edition and United Utilities Pumping Station Addendum document (available on United Utilities website) when considering potential layout in relation to pumping stations; in line with sewers for adoption 8th Edition, the minimum distance between the edge of the wet well and the wall of a habitable dwelling is 15m.
- Should the Planning Inspectorate be minded to allow this appeal or the Local Planning Authority approve a future planning application at this location; and the appellant intends to offer wastewater assets forward for adoption by United Utilities, the proposed detailed design will be subject to a technical appraisal. Therefore the proposal should meet the requirements of Sewers for Adoption and United Utilities' Asset Standards. The detailed layout should be prepared with consideration of what is necessary to secure a development to an adoptable standard.

In addition to the above, United Utilities would like to understand potential build out rates and the phasing of the development to best inform the drainage strategy.

Furthermore it is important to reiterate some other matters which need to be taken into consideration by the appellant

### United Utilities Property, Assets and Infrastructure

### Water main

A water main crosses the site. As we need <u>unrestricted</u> access for operating and maintaining it, we will not permit development over or in close proximity to the main. We require an access strip as

# detailed in our 'Standard Conditions for Works Adjacent to Pipelines', a copy of which was provided with our previous consultation responses.

The appellant must comply with our 'Standard Conditions' document. This should be taken into account in the final site layout, or a diversion may be necessary. Unless there is specific provision within the title of the property or an associated easement, any necessary disconnection or diversion required as a result of any development will be at the appellant's expense. If considering a water mains diversion, the appellant should contact United Utilities at their earliest opportunity as they may find that the cost of mains diversion is prohibitive in the context of their development scheme.

The Water Industry Act 1991 affords United Utilities specific rights in relation to the maintenance, repair, access and protection of our water infrastructure;

- Sections 158 & 159, outlines the right to inspect, maintain, adjust, repair or alter our mains. This includes carrying out any works incidental to any of those purposes. Service pipes are not our property and we have no record of them.
- Under Section 174 of the Act it is an offence to intentionally or negligently interfere with any resource main or water main that causes damage to or has an effect on its use or operation.

It is in accordance with this statutory provision that we provide standard conditions to assist developers when working in close proximity to our water mains.

Both during and post construction, there should be no additional load bearing capacity on the main without prior agreement from United Utilities. This would include earth movement and the transport and position of construction equipment and vehicles.

### Public sewer

**Public sewers, including a rising main cross this site and we will not permit building over them.** We will require an access strip width in accordance with the minimum distances specified in "Sewers for Adoption", for maintenance or replacement. This should be incorporated into any future site layout. Therefore a modification of the site layout, or a diversion of the affected public sewer may be necessary. All costs associated with sewer diversions must be borne by the appellant.

Deep rooted shrubs and trees should not be planted in the vicinity of the public sewer and overflow systems.

Where United Utilities' assets exist, the level of cover to the water mains and public sewers must not be compromised either during or after construction.

		_		
		-		

#### **Pumping Station**

As set out above, a Pumping Station and right of way is also located within the site boundary. The appellant should note that we will need access to these assets including a vehicular access to the pumping station. The existence of the pumping station and access to it will need to be considered in the site layout. We recommend that this access is discussed with our Property Services team if this appeal is allowed so appropriate access can be agreed in the site layout.

It is the appellant's responsibility to investigate the possibility of any United Utilities' assets potentially impacted by their proposals and to demonstrate the exact relationship between any United Utilities' assets and the proposed development.

A number of providers offer a paid for mapping service including United Utilities. To find out how to purchase a sewer and water plan from United Utilities, please visit the Property Searches website; <a href="https://www.unitedutilities.com/property-searches/">https://www.unitedutilities.com/property-searches/</a>

transfer in 2011, not all sewers are currently shown on the statutory sewer records and we do not always show private pipes on our plans. If a sewer is discovered during construction; please contact a Building Control Body to discuss the matter further.

Should this planning appeal be allowed the appellant should contact United Utilities regarding a potential water supply or connection to public sewers. Additional information is available on our website <a href="http://www.unitedutilities.com/builders-developers.aspx">http://www.unitedutilities.com/builders-developers.aspx</a>

#### Drainage

In accordance with the National Planning Policy Framework (NPPF) and the National Planning Practice Guidance (NPPG), the site should be drained on a separate system with foul water draining to the public sewer and surface water draining in the most sustainable way. Our suggested drainage conditions are as per the suggested conditions submitted in relation to planning application ref: 2016/28492. For ease of reference we enclose a copy of the draft conditions submitted as part of our consultation response in relation to planning application reference: ref: 2016/28492.



Please note, United Utilities is not responsible for advising on rates of discharge to the local watercourse system. This is a matter for discussion with the Lead Local Flood Authority and / or the Environment Agency (if the watercourse is classified as main river).

If the appellant intends to offer wastewater assets forward for adoption by United Utilities, the proposed detailed design will be subject to a technical appraisal by an Adoptions Engineer as we need to be sure that the proposal meets the requirements of Sewers for Adoption and United Utilities' Asset Standards. The detailed layout should be prepared with consideration of what is necessary to secure a development to an adoptable standard. This is important as drainage design can be a key determining factor of site levels and layout. The proposed design should give consideration to long term operability and give United Utilities a cost effective proposal for the life of the assets. Therefore, should this appeal be allowed and the appellant wishes to progress a Section 104 agreement, we strongly recommend that no construction commences until the detailed drainage design, submitted as part of the Section 104 agreement, has been assessed and accepted in writing by United Utilities. Any works carried out prior to the technical assessment being approved is done entirely at the developers own risk and could be subject to change.

### Management and Maintenance of Sustainable Drainage Systems

Without effective management and maintenance, sustainable drainage systems can fail or become ineffective. As a provider of wastewater services, we believe we have a duty to advise the Local Planning Authority/Planning Inspectorate of this potential risk to ensure the longevity of the surface water drainage system and the service it provides to people. We also wish to minimise the risk of a sustainable drainage system having a detrimental impact on the public sewer network should the two systems interact.

We support draft condition 17 regarding a management and maintenance regime for any sustainable drainage system, albeit our suggested draft condition 4, submitted in response to the outline planning application and enclosed for ease of reference, provides further details required in the preparation of a management and maintenance plan.

Please note United Utilities cannot provide comment on the management and maintenance of an asset that is owned by a third party management and maintenance company. We would not be involved in the discharge of the management and maintenance condition in these circumstances.

### Water Supply

If the appellant intends to obtain a water supply from United Utilities for the proposed development, we strongly recommend they engage with us at the earliest opportunity. If reinforcement of the water network is required to meet the demand, this could be a significant project and the design and construction period should be accounted for.

To discuss a potential water supply or any of the water comments detailed above, the appellant can contact the team at **DeveloperServicesWater@uuplc.co.uk**.

Please note, all internal pipework must comply with current Water Supply (water fittings) Regulations 1999.

Yours faithfully

Jill Walker



# 13 W.B.C. Environmental Protection SPD



# Environmental Protection Supplementary Planning Document May 2013





# **1** Introduction

1	Introduction					
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# 1

# **1** Introduction

This Supplementary Planning Document sets out in detail, the Council's approach to dealing with Environmental Protection including;

- Contaminated Land
- Air Quality
- Light Pollution
- Noise and Vibration

and identifies associated impacts that could affect public health and wellbeing.

The planning system is very complex. It can also be very emotive and can affect individuals and communities in very different ways. The objective of this Environmental Protection Supplementary Planning Document is to help applicants and developers through the planning process and to ensure that the most important aspects of Environmental Protection are addressed at the most appropriate stage of the planning process.

The Supplementary Planning Document includes:

- A "Toolkit" which sets out when additional information may be needed to support a planning application.
- Guidance as to what such additional information should contain this can be quite technical and will probably be used by specialists preparing such information.
- Guidance as to how the Council will assess such information and an indication as to conditions that may be attached to any planning permission to ensure sustainable development.

This document is written to serve as an informative and a helpful source of advice. Readers must note that legislation, guidance and practical methods may be subject to change. The Council has taken all reasonable precautions to ensure the information is correct. However, the Council, its officers, servants, or agents, will not accept any liability for loss or damage caused by any person relying on this information, or for any errors or omissions in the information provided.

## 1.1 Status of the Document

This Supplementary Planning Document forms part of Warrington's Local Planning Framework. The Local Planning Framework comprises a series of plans and documents, as opposed to a single plan, as documents can be produced more easily and are more easily kept up to date.

Warrington's Local Planning Framework consists of a suite of documents as illustrated below:



Local Plans are part of the Statutory Development Plan and are subject to independent examination. The policies against which planning applications will be assessed are contained within Local Plans.

Supplementary Planning Documents (SPDs) such as this are documents that expand upon existing policy or provide further detail to policies in contained in the Development Plan. These documents are not subject to independent examination and do not have Development Plan status, but are a material consideration in decision-making.

This document should be read in conjunction with national planning policy set out in the National Planning Policy Framework (NPPF). This SPD specifically supplements Environmental Protection policies contained within the adopted UDP and the emerging Local Plan Core Strategy.

Environmental Protection policies in the Unitary Development Plan include:

LUT1 – Land Use / Transportation Strategy	GRN2 – Environmental Protection and Enhancement
HOU7 – The Residential Environment	REP1 – The Prudent Use of Resources
REP6 - Surface Water Quality	REP7 - Groundwater Quality
REP8 – Land Contamination	REP9 – Air Quality
REP10 – Noise	REP11 – Odours
REP12 – Development Near Existing Sources of Pollution	REP13 – Hazardous Uses / Installations
REP14 – Hazardous Uses / Installations	REP15 – Hazardous Uses / Installations

In addition, Policy QE6 within the emerging Local Plan Core Strategy covers Environment & Amenity Protection and sets out the following:

### Policy QE 6

**Environment and Amenity Protection** 

The Council, in consultation with other Agencies, will only support development which would not lead to an adverse impact on the environment or amenity of future occupiers or those currently occupying adjoining or nearby properties, or does not have an unacceptable impact on the surrounding area. The Council will take into consideration the following:

- The integrity and continuity of tidal and fluvial flood defences;
- The quality of water bodies, including canals, rivers, ponds and lakes;
- Groundwater resources in terms of their quantity, quality and the ecological features they support;
- Air quality;
- Noise and vibration levels and times when such disturbances are likely to occur;
- Levels of light pollution and impacts on the night sky;
- Levels of odours, fumes, dust, litter accumulation and refuse collection / storage.
- Overlooking and loss of privacy;
- Sunlight, daylight and overshadowing;
- The effect and timing of traffic movement to, from and within the site and car parking including impacts on highway safety;
- The ability and the effect of using permitted development rights to change use within the same Use Class (as set out in the in the Town and Country Planning (General Permitted Development Order) without the need to obtain planning consent.

The ability and the effect of using permitted development rights to change use within the same Use Class (as set out in the in the Town and Country Planning (General Permitted Development Order) without the need to obtain planning consent.

Proposals may be required to submit detailed assessments in relation to any of the above criteria to the Council for approval. Where development is permitted which may have an impact on such considerations, the Council will consider the use of conditions or planning obligations to ensure any appropriate mitigation or compensatory measures are secured.

Development proposals on land that is (or is suspected to be) affected by contamination or ground instability must include an assessment of the extent of the issues and any possible risks. Development will only be permitted where the land is, or is made, suitable for the proposed use.

Additional guidance to support the implementation of this policy is provided in the Design and Construction and Environmental Protection Supplementary Planning Documents.

## **1.2 Pre-Application Discussions**

Whilst each section aims to provide clarity with regards to various aspects of Environmental Protection, it should be recognised that applicants are strongly encouraged to undertake pre-application discussions with Council officers and external consultees prior to the submission of a planning application.

The objective of pre-application discussion should be to confirm whether the principle of development is acceptable, establish key issues which the application should address, and to agree the submission of material needed to enable the application to be assessed.

Where applicable, joint pre planning discussions may be necessary with other organisations that have fundamental interrelated issues to establish at an early stage whether a development would be acceptable.

It is expected that each application, where pre-application involvement is appropriate, will be submitted with a statement outlining the extent of consultation completed and how the feedback from the consultation process has influenced the submitted scheme.

## **1.3 Environmental Impact Assessment**

Certain planning applications may fall within the scope of the Environmental Impact Assessment Regulations 1999. Where this is the case an Environmental Statement will be required to support the planning application, as stipulated by these regulations. It is likely however, that additional information concerning each aspect of Environmental Protection will be required to fully assess an application, in addition to the consideration contained in a typical Environmental Impact Assessment.

# 2 Toolkit

## 2 Toolkit

#### **Purpose of the Toolkit**

For a planning application to stand the greatest chance of success it is important to work through all of the issues which the Council will be interested in, and attempt to address what is needed by providing good, relevant information. This Toolkit is designed to help you do this and aims to identify when further information, relating to Environmental Protection, is required in support of a planning application or proposal. It should be read in conjunction with the following chapters where necessary which are essentially guidance documents referring to technical issues for consultants / specialists.

### Using the Toolkit

This Toolkit is split into four sections, relating to Environmental Protection:



As you work through each section it should become clear when further information or supporting documents may be required by the Council, when submitting a planning application.

#### Who We Are

The Public Protection Service is responsible for addressing Environmental Protection issues via the planning system and provides advice to the Local Planning Authority (LPA) with regards to any risks to human health or amenity impacts within the wider environment. Our contact details can be found at the end of this toolkit.

## Do I need to consider...

# AIR QUALITY?

...If a new development is located in a sensitive area Within or next to an existing Air Quality Management Area (AQMA) or that could significantly impact upon air quality in areas where objectives are currently not exceeded

> ... If a new development includes car parking >50 spaces inside AQMA or >100 spaces outside AQMA

...If a new development will introduce new exposure To an area close to or within existing sources of air pollutants

...If a new development will impact upon traffic Significant changes in traffic volumes, increase in congestion or significantly change composition

...If a new development is located near railway lines Introduce new exposure within 30m of a diesel railway line

...If a new development includes biomass boilers or Combined Heat & Power Plants

...If a new development is likely to have significant impacts during construction

...If a new development is likely to significantly affect nitrogen deposition to sensitive habitats

... If a new development has any other potential impact on air quality or odour not listed above

## Do I need to consider...

# CONTAMINATED LAND?

## ...If a new development is on or adjacent to 'Potentially Contaminated Land'

Proposals for any new developments located on land that is affected by contamination due to its previous use. A wide range of industrial uses may have historically caused land contamination such as cotton mills, metal works, chemical works, breweries, tanneries and gas works. At the same time, less obvious land uses such as domestic garages, electricity sub-stations and in-filled ponds or quarries can also lead to potential contamination.

## ... If a new development is within 250m of

### a Landfill site

Proposals for any new developments that are to be built within 250m or less of a landfill site or known ground gas source. Decomposing waste or organic material (eg: Peat) can produce gas, which can travel through the ground and affect developments. The main types of land use that can produce ground gas are landfill sites, marshes, peat bogs, coal mines and in-filled land, such as ponds, canals or quarries.

## ...If a new development is classed as a 'Sensitive End-Use'

Proposals that include residential developments (houses, flats, nursing homes etc.); Allotments; schools; nurseries and crèches; children's play areas and playing fields.

## Do I need to consider...

# **LIGHT POLLUTION?**

# ...If a new development is to include illuminated signage

Proposals for any developments, which include signs or advertisements that are illuminated internally or externally and could cause light pollution. There are many types of illuminated signs, but common examples include shop/retail fascias or billboard advertising.

# ...If a new development is to include a lighting scheme

Proposals for any developments, which include external lighting installations, such as flood-lighting or security lighting. Typical examples would include car parks, warehousing or sports pitches and courts.

# ...If a new development is adjacent to a significant light source

Proposals for any developments considered to be a sensitive end use. Such developments include residential dwellings, hospitals or any development where occupants stay overnight

2

## Do I need to consider...

# NOISE POLLUTION?

# ...If a new development is classed as a noise-sensitive land use

Proposals for any development that involves residential dwellings, hospitals, schools and nurseries are considered to be the most sensitive to the effects of noise, particularly from road, rail, industry or entertainment venues.

# ...If a new development is to include a noise or vibration-generating land use

Proposals for any development that is likely to emit noise or vibration during their construction or operation, this may include off site traffic impacts from the development. Examples of noise or vibration-generating developments include pubs and bars, warehousing, leisure centres, night clubs and general industry, particularly those involving noisy plant or machinery.



# Toolkit

Warrington Borough Council New Town House	Air Quality	Tel: 01925 4432581 Email: environmental.health@warrington.gov.uk
Buttermarket Street	Contaminated Land	Tel: 01925 442557
Warrington		Tel: 01925 442652
WA1 2NH		Tel: 01925 442653
		Email: contaminatedland@warrington.gov.uk
	Light Pollution	Tel: 01925 4432581
		Email: environmental.health@warrington.gov.uk
	Noise and Vibration	Tel: 01925 4432581
		Email: environmental.health@warrington.gov.uk
	Development Management	Tel: 01925 442819
	Management	Email: devcontrol@warrington.gov.uk
	Building Control	Tel: 01925 442554
		Email: building.control@warrington.gov.uk
Environment Agency	National Enquiries	Tel: 08708 506 506
		Email: enquiries@environment-agency.co.uk
		Web: www.environment-agency.gov.uk
Department of	National Enquiries	Tel: 0207 944 5287
and Rural Affairs (DEFRA)		Web: www.defra.gov.uk
The National	Buildmark House	Tel: 01494 735363
Council (NHBC)	Bucks	Web: www.nhbc.org.uk
	HP6 5AP	

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# **3 Air Quality**

## **3.1 Introduction**

Air quality is a measure of how good our air is in terms of the type and quantity of pollution contained within it. A good level of air quality is an important factor in protecting human health.

The planning system is important to help us to manage our local air quality. Used positively, spatial planning has a pivotal and significant role in helping to improve local air quality and meet national emissions targets. The planning system for land use and transport are an important part of an integrated approach to air quality improvements. The importance of considering air quality at an early stage is essential in the application process.

Action plans for the current Air Quality Management Areas (AQMAs) have been developed and are included within Annex 1 of the current Local Transport Plan (LTP). The LTP has a specific policy relating to air quality so that the transport network aims to reduce the impact of traffic on air quality in Warrington. Any planning application that has a potential impact upon traffic levels or composition should take into account policies within the LTP and how they relate to air quality.

## 3.2 Air Quality Objectives

The Government has set out National Air Quality Objectives under the Environment Act 1995 and empowered local authorities to establish areas, known as AQMAs, where pollution levels are likely to exceed the national objectives for certain pollutants. Unacceptable levels of certain pollutants are assessed against the objectives set out in the National Air Quality Strategy 2007, and any amendment to that strategy. The Council is required to determine whether these health-based air quality objectives for seven pollutants will be achieved in the Borough.

Pollutant	Air Quality Objective	Air Quality Objective	Date to be
	Concentration	Measured As	Achieved by
Benzene			
All Authorities	16.25 μg/m³	Running Annual Mean	31/12/2003
England and Wales only	5.00 μg/m³	Annual Mean	31/12/2010
Scotland and N. Ireland	3.25 μg/m³	Running Annual Mean	31/12/2010
1,3-Butadiene	2.25 µg/m³	Running Annual Mean	31/12/2003
Carbon Monoxide			
England/Wales/N. Ireland	10.0 µg/m³	Maximum daily running 8 hour mean	31/12/2003
Scotland only	10.0 µg/m³	Running 8 hour mean	31/12/2003

## Air Quality

Pollutant	Air Quality Objective Concentration	Air Quality Objective Measured As	Date to be Achieved by
Lead	0.5 μg/m³ 0.25 μg/m³	Annual Mean Annual Mean	31/12/2004 31/12/2008
Nitrogen Dioxide	200 μg/m3 not to be exceeded more than 18 times a year 40 μg/m <sup>3</sup>	1 Hour Mean Annual Mean	31/12/2005 31/12/2005
Particles (PM <sub>10</sub> ) (Gravimetric)			
All authorities	50 μg/m3 not to be exceeded more than 35 times a year 40 μg/m³	24 Hour Mean Annual Mean	31/12/2004 31/12/2004
Scotland only	50 μg/m3 not to be exceeded more than 7 times a year 18 μg/m <sup>3</sup>	24 Hour Mean Annual Mean	31/12/2010 31/12/2010
Sulphur Dioxide	<ul> <li>350 μg/m3 not to be exceeded more than 24 times a year</li> <li>125 μg/m3 not to be exceeded more than 3 times a year</li> <li>266 μg/m3 not to be exceeded more than 35 times a year</li> </ul>	1 Hour Mean 24 Hour Mean 15 Minute Mean	31/12/2004 31/12/2004 31/12/2005

#### Table 3.1 The Current National Air Quality Objectives

These objectives are subject to change, therefore the Public Protection Service should be contacted for the most up to date information.

Planning considerations are key in assisting the AQMA action plan and to prevent new areas of exceedance either by the emissions linked to the development or by locating new receptors in areas where air quality might then breach the objective levels.

The Council has declared AQMA's for exceedences in the annual nitrogen dioxide limit. Information on the current AQMAs is available on the Council website, or can be provided by the Public Protection service on request.

Source apportionment work has shown that poor air quality in Warrington is predominantly the result of traffic emissions. Because air quality is kept under annual review, the AQMA boundaries may change and, therefore, applicants are advised to check if these boundaries have changed with the Public Protection Service. These areas have been designated due to exceedences in the annual nitrogen dioxide  $(NO_2)$  objective levels linked to transport emissions, primarily HGVs and cars.

Further areas within Warrington are close to, but below the national objectives. The Developer / Applicant must consider air quality within current AQMAs, but also areas adjacent to these, and areas that are close to the objectives.

The fact that an AQMA has been declared does not mean that there will be an absolute restriction of new development in the area. However, it does mean that greater weight and consideration will be given to air quality issues and measures to reduce pollution. In determining a planning application, weight will be attached to air quality impacts, but will also need to be balanced against other planning considerations. The Council will also look closely at applications for new developments that are not within an AQMA if it is likely that the new development will increase pollution to unacceptable levels or introduce new exposure where people were not previously exposed. The Council shall ensure development has a beneficial impact on the environment, for example by exploring the possibility of securing mitigation measures that would allow the proposal to proceed. It may be appropriate in some circumstances for the developer to fund mitigation measures elsewhere inside the AQMA and assist the action taken by the Council in planning and air quality assessment work to offset any increase in local pollutant emissions as a consequence of the proposed development. These measures may be secured through Section 106 Agreements or unilateral undertakings.

Whilst the primary concern is exceedances of the annual NO<sub>2</sub> objective, there is also growing concern of particulate levels and their impact on health. Whilst larger particulates, known as PM10, have objective levels set within the national standards there is no objective level for the finer particles (PM2.5) as there is considered to be no trigger level before there is a health impact i.e. any exposure will have some health concerns. Therefore, whilst PM2.5 is not one of the pollutants within the national objectives for local air quality management, the Council may still require this pollutant to be assessed for comparison against background data if relevant for the development. Any increase in PM2.5 levels above background may require mitigation measures.

## 3.3 Technical Guidance for Consultants/Specialists

## 3.3.1 When is an Air Quality Assessment Required?

It is possible that air quality will still need to be considered outside areas of poor air quality if the scheme is likely to result in significant emissions. Professional judgement is required to determine whether an assessment is required and the applicant is strongly advised to contact the Council to check at pre-application stage. However, guidelines produced by the Environmental Protection UK publication *Development Control: Planning for Air Quality (2010)* provides a useful initial screen and are set out in Table 3.2.

### New developments within or adjacent to AQMAs

Proposals for any new developments that would impact upon air quality in areas where air quality objectives are exceeded, within current or potential AQMAs, where people would be exposed for significant periods of the day.

### New developments outside AQMAs

Proposals for any new developments that could impact upon air quality in areas where currently air quality objectives are not exceeded, but where there would be a significant impact from the development on the pre-development levels, where there are relevant receptors.

#### Car Parking

Proposals that include significant new car parking. To be taken to be more than 100 spaces outside an AQMA, or 50 spaces inside or adjacent to an AQMA. Account shall also be taken of car park turnover, i.e. the difference between short-term and long-term parking, which will affect the traffic flows into and out of the car park. This should also include proposals for new coach or lorry parks. These criteria are designed to trigger the requirement for the assessment of traffic on the local roads. It may also be appropriate to assess the emissions from within the car park itself.

#### **New Exposure**

4 When the development will introduce new exposure close to or within existing sources of air pollutants, including road traffic, industrial operations, agricultural operations etc.

#### **Change in Traffic Volumes**

Proposals that will give rise to a significant change in either traffic volumes:

5 Typically a change in annual average daily traffic (AADT) or peak traffic flows of greater than  $\pm 5\%$  or  $\pm 10\%$ , depending on local circumstances (a change of  $\pm 5\%$  will be appropriate for traffic flows within an AQMA): or in vehicle speed (typically of more than  $\pm 10$  kph), or both, usually on a road with more than 10,000 AADT (5,000 if 'narrow and congested')

#### **Traffic Congestion**

6 Proposals that will generate or increase traffic congestion, where 'congestion' manifests itself as an increase in periods with stop start driving.

#### Change in Traffic Composition

Proposals that would significantly alter the traffic composition on local roads, for example, increase the number of HGVs by 200 movements or more per day, due to the development of a bus station or an HGV park. (Professional judgement will be required, taking account of the total vehicle flow as well as the change).

#### Railway Lines

<sup>8</sup> Introduction of new exposure within 30m of a diesel railway line.

#### **Biomass Boilers**

9 Proposals that include biomass boilers or biomass-fuelled Combined Heat and Power (CHP) plant (there is no established criterion for the size of plant that might require assessment.)

#### **CHP** and boilers

10 Consideration should be given to the impacts of centralised boilers or CHP plant burning other non-biomass fuels (e.g. gas or oil) within or close to an AQMA.

### 11 Construction Impacts
Proposals that could give rise to potentially significant impacts during construction for nearby sensitive locations e.g. residential areas, areas with parked cars and commercial operations that may be sensitive to dust.

Large, long-term construction sites that would generate large HGV flows (>200 movements per day) over a period of a year or more

#### Nitrogen deposition

<sup>12</sup> Developments which may significantly affect nitrogen deposition to sensitive habitats

Other

13 Any other development proposal within or adjacent to an AQMA and not listed in this table which may, in the professional opinion of the Council, be significant in terms of air quality impact and/or may impact on the working of measures detailed in the Air Quality Action Plan.

Table 3.2: Criteria for determining whether an application/development will require an air quality assessment.

#### 3.3.2 Receptors

Any assessment should consider air quality levels at relative sensitive receptors. These are defined within the Environment Act 1995 as "All locations where members of the public might be regularly exposed, e.g. building facades of residential properties, schools, hospitals, libraries etc." For the 1 hour objectives it also includes kerbside sites (e.g. pavements of busy shopping streets) and outdoor locations to which the public might reasonably expect to spend 1 hour or longer, including car parks, bus stations and railways stations which are not fully enclosed.

#### 3.3.3 Contents of an Air Quality Assessment

This Chapter does not set out a prescribed methodology for developments where an assessment is required. It is therefore important that appropriate methodology and data requirements are agreed with the Council before any assessment work is undertaken. It is considered that to prescribe methods does not allow for continuous improvements being made in methodology. Current detailed guidance is available in the *Defra Technical Guidance LAQM.TG(09)* and the Environmental Protection UK publication.

In principle, the intention of an air quality assessment is to demonstrate the likely changes in air quality or exposure to air pollutants, as a result of a proposed development. Some quantitative assessment will therefore be required. The basis of assessments will be to compare the existing situation with that following completion of the development and three basic steps are required:

- 1. Assess the existing air quality (baseline)
- 2. Predict future air quality without the development (future baseline)
- 3. Predict future air quality with the development (with development)

The Council can usually assist with the first two steps and information may be available from one of the Council's own annual air quality Review and Assessment reports. These reports are available on request or can be downloaded from the Council website.

Any air quality assessment report will normally be required to detail a minimum of information. Information on this is set out in Table 3.3:

# Air Quality

#### 1 Details of proposed development

An overview of the development proposal

Identification of on-site sources of pollutants

An overview of expected traffic changes or changes in emissions from the site for a specified year

Identification of local receptors including residential properties, other sensitive properties, ecologically sensitive areas and any specific locations where people are likely to be exposed for the appropriate averaging time (dependant on the air quality objective being assessed against)

Evidence of a site visit and assessment of local issues (as discussed above)

Set out the relevant air quality standards and objectives

An overview of the development proposal in the context of any local air quality issues (e.g. within an AQMA or area undergoing a Detailed Assessment), a review of the most recent Updating and Screening or Progress Reports or other Review and Assessment reports published by the Council is therefore essential

A justification of which pollutants requiring an assessment

Set out the assessment methodology, including the local input data and assumptions

Traffic data used in the assessment

Emission data (point source and road traffic)

Meteorological data

Baseline pollutant concentrations

Choice of baseline year and whether it is a low, typical or high pollution year (including an examination of any available long-term local air quality monitoring data for trend)

NOx:NO2 relationship used; and

Any other relevant input parameters used

2 Set out the results and provide a summary

Details of the model verification including a comparison of predicted versus measured concentrations used to derive adjustment factors to account of systematic errors

Impacts of the construction phase of the development at local receptor locations

Impacts that changes in emissions will have on ambient air quality at local receptor locations

Any exceedances of the air quality objectives brought about by the development, or any worsening of a current breach (including their geographical extent)

Whether any measures or actions specified in an Air Quality Action Plan will be directly compromised or rendered inoperative by the development proposal

3 In some cases the following additional information may be required

Source apportionment (the contribution of specific sources and vehicle classes to the overall contribution). Longer-term air quality predictions (e.g. an assessment for 2010 air quality objectives and against EU Limit Values)

#### 1 Details of proposed development

A wider/more detailed assessment scope which takes into account other permitted major development proposal(s) in the same area

Consideration of potential impact upon neighbouring local authorities

4 Set out and assess the significance of the results

Advice on assessing significance is given within this SPD and must be followed unless an alternative assessment criteria is agreed with the Council

5 Consider the options for, and effectiveness of, pollution reducing, mitigation or compensating measures

Advice is given within this Chapter on mitigation measures. This is not an exhaustive list of measures and alternative more appropriate ones for the development type may be submitted for approval.

Table 3.3: Requirements of an air quality assessment

#### 3.3.4 Agreement of Data and Assessment Methodology

Prior to undertaking an air quality assessment, it is important that whoever undertakes the assessment obtains an agreement with the Council regarding the scope and methodology. This will include an agreement on appropriate datasets including appropriate local air quality data, meteorological data, background concentrations, traffic flows/trip generation data, model type and verification procedures.

#### 3.3.5 Selection of Modelling Methodology

Air quality assessment is a scientific exercise and as such there are continuous improvements and scientific developments within the discipline. Consequently, as previously stated, this Chapter does not set out a detailed prescribed method or choice of modelling methodology to be followed. However, advice is given in Table 3.4 on selecting which of the three main types of assessment methods should be used:

#### Screening Methods

These are quick to apply, generic approaches based upon a limited set of variables. They are intended to determine if an air quality problem exists and if a more detailed dispersion modelling assessment is required. Since they are based upon a simplification of detailed modelling

1 approaches they will not be suitable for local development proposals which contain features that are not included in the screening method. A local screening study may be applicable for simple proposals involving, flat free-flowing/open roads (i.e. non-congested, non-street canyons without inclines) or for simple industrial point sources, especially where the changes in emissions is likely to be very small. Screening methods should only be used in areas where air quality is not approaching or exceeding the air quality objectives.

#### Local Scale Dispersion Models

These are detailed, specialist methodologies with a broad range of local input variables. The models focus on the local road network or industrial source and background concentrations are added to the calculated values to predict the total pollutant concentration. As such, these models are typically the most suitable for the assessment of local development proposals. In

2 models are typically the most suitable for the assessment of local development proposals. In any situation where a screening method cannot model specific features of the development proposal or the local topography then a local scale dispersion model should be used unless then assessment area is very large, where regional scale models are more appropriate. These models are suitable for use in areas where air quality is approaching or exceeding the air quality objectives.

#### **Regional Scale Dispersion Models**

3 These are similar to local scale dispersion models but can be designed to model pollution sources over a very wide area (several square kilometres). Such modelling will rarely be required for local development proposals and should only be used where the study area is large.

#### Table 3.4: Assessment methods

# 3.3.6 Assessing Significance

Assessing the significance of air quality in the context of a planning application is an important part of the overall process. The aim is to remove as much ambiguity as is possible about how air quality should be considered in the planning process. Currently, there is no definitive, specific Government guidance for assessing the significance, although guidance provided by Environmental Protection UK offers a consistent approach and is recommended.

Significance is typically assessed at two stages in the overall process of examining air quality as a material planning consideration:

- 1. The requirement to set out the change in magnitude and significance of any air quality impacts within the air quality assessment, using the professional judgement of the assessment authors;
- An evaluation by the local planning authority (LPA) of the assessment of the significance of any air quality impacts using the professional judgement of its officers, to help reach a decision on the planning application.

#### 3.3.7 Significance within the Air Quality Assessment

The main requirement and outcome of an air quality assessment will be to describe significance in terms of the change in concentration of a specific pollutant and the absolute concentration after the change, in relation to air quality guidelines. An important aspect of considering significance will therefore be a comparison against the UK air quality objectives and the EU limit values. However, the assessment process also requires the magnitude of the changes to be set out and taken into account and a consistent descriptive terminology employed.

The use of assessment descriptors often has limitations, for example they may not include a judgement of the number of people affected or fail to account for the impacts of the construction phase of a development. Nonetheless, assessment descriptors are an important part of overall assessment. An example of possible descriptors for nitrogen dioxide and PM10 is given in Table 3.5. Further examples are given within the Environmental Protection UK guidance.

Magnitude of change	Annual Mean NO <sub>2</sub> / PM10	Days PM10 > 50µg/m³
Very Large	Increase/decrease >15%	Increase/decrease > 15 days
Large	Increase/decrease 10-15%	Increase/decrease 10-15 days
Medium	Increase/decrease 5-10%	Increase/decrease 5-10 days
Small	Increase/decrease 1-5%	Increase/decrease 1-5 days
Very Small	Increase/decrease < 1%	Increase/decrease < 1 days

Table 3.5: Descriptors for changes in ambient concentrations of nitrogen dioxide (NO,) and particulates (PM10)

These magnitudes of changes therefore need to be put into context when compared to actual air quality concentrations at relevant receptors to assess significance.

Absolute Concentration in Relation	Change in Concentration (Increase with Scheme)			
	Small	Medium	Large	
Above Objective/Limit Value <i>With</i> Scheme (>40 µg/m <sup>3</sup> )	Slight Adverse	Moderate Adverse	Substantial Adverse	
Just Below Objective/Limit Value <i>With</i> Scheme (36-40 µg/m <sup>3</sup> )	Slight Adverse	Moderate Adverse	Moderate Adverse	
Below Objective/Limit Value <i>With</i> Scheme (30-36 µg/m <sup>3</sup> )	Negligible	Slight Adverse	Slight Adverse	
Well Below Objective/Limit Value <i>With</i> Scheme (<30 µg/m <sup>3</sup> )	Negligible	Negligible	Slight Adverse	
Decrease with Scheme Above Objective/Limit Value <i>Without</i> Scheme (>40 µg/m <sup>3</sup> )	Slight Beneficial	Moderate Beneficial	Substantial Beneficial	
Just Below Objective/Limit Value <i>Without</i> Scheme (36-40 µg/m³)	Slight Beneficial	Moderate Beneficial	Moderate Beneficial	
Below Objective/Limit Value <i>Without</i> Scheme (30-36 µg/m <sup>3</sup> )	Negligible	Slight Beneficial	Slight Beneficial	
Well Below Objective/Limit Value Without Scheme (<30 µg/m <sup>3</sup> )	Negligible	Negligible	Slight Beneficial	

Table 3.6: Air quality impact descriptors for changes in the annual NO2 concentrations at a receptor

# 3.3.8 Assessment of Significance by the LPA

The flow chart in Figure 3.1, taken from the Environmental Protection UK guidance, has been adopted by the Council as an approach to help evaluate the significance of air quality impacts from any proposed development. When using the flow chart the LPA will also consider the following points:

- Air quality has the potential to be a material consideration in all planning applications this is a site-specific, application-specific judgement in terms of the development location and the nature of the proposed development;
- The significance of impacts will also depend on the context of the development;
- The flow chart can be used to consider increases in emissions (a deterioration in air quality) as well as increases in exposure;
- The respective weight given to EU limit values and UK air quality objectives;
- Increases in concentrations of pollutants for which no health-based threshold is apparent may be treated as significant at lower levels of concentration change than for threshold pollutants. Non-threshold pollutants commonly assessed are benzene and particulate. Threshold substances include oxides of nitrogen;
- Differences of significance of changes in concentration above an air quality objective than when it is substantially below an objective;
- Allowances should be made for uncertainty. For example, a concentration of 36 µg/m<sup>3</sup> nitrogen dioxide may be considered to be significantly close to the air quality objective of 40 µg/m<sup>3</sup> owing to uncertainties and therefore may be adopted as a conservative figure when evaluating potential exceedances of the objective.

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Figure 3.1 Steps for local authority to assess the significance of air quality impacts of a development proposal

This Chapter has adopted the Environmental Protection UK guidance recommendations following an assessment of significance. The Public Protection Service will then make planning recommendations on the proposed development to the LPA.

Impact significance from flow chart	Recommendation
Over-riding consideration	Require mitigation measures to remove 'over-riding' impacts.
	If the impact is still 'over-riding', there should be a strong presumption for a recommendation for refusal on air quality grounds.

Impact significance from flow chart	Recommendation
High priority consideration	Ensure that measures to minimise 'high priority' impacts are appropriate in the proposal. Recommend strengthening the measures if appropriate. Consideration may also be given to compensation/offsetting. Depending on the scale of the impacts, taking into account the number of people affected, the absolute levels and the magnitude of the changes, and the suitability of the measures to minimise impacts, it may be appropriate to recommend refusal.
Medium priority consideration	Seek mitigation measures to reduce 'medium priority' impacts. Offsetting and compensation measures may also be considered. It is unlikely that refusal would be recommended.
Low priority consideration	It is unlikely that refusal would be recommended, but mitigation measures should be incorporated into the scheme design to ensure that the development conforms to best practice standards, and is 'air quality neutral' as far as is reasonably practicable.

 Table 3.7: Recommendations after assessment of significance

# **3.4 Cumulative Impacts and Mitigation**

The impacts from a number of smaller developments that individually have relatively low polluting potential, but cumulatively result in a significant worsening of air quality, are of importance. This Chapter seeks to address this at a strategic level to ensure that all developments mitigate their cumulative effects and avoid 'background creep'.

A significant number of smaller developments may all add traffic to an urban location that already has an air quality problem. A process could be implemented where each development provides a financial contribution to implementing elements of the action plan relative to the nature, size and traffic generation of the proposal.

An air quality assessment may therefore need to take into account cumulative impacts from a number of developments.

# **3.5 Planning Conditions and Obligations**

The Council will encourage design solutions, and use conditions, S106 Agreements and unilateral undertakings to mitigate impacts from any developments that are detrimental to air quality. The following should be considered although this is not an exhaustive list:

- Design of development proposals to mitigate against exposure on the development from existing air quality issues; for example the location of building inlet ventilation, or set back residential buildings away from roadside to reduce receptor exposure;
- Measures during the construction of new development including dust control, site monitoring and plant emissions;
- Contributions for the introduction of new or improved low emission public transport;
- The provision of on and off site facilities for cycling and walking;
- The provision of electric car charging points;
- Preferential permission and parking charges for low emission vehicles and car share;
- The management of car parking;
- Traffic management;
- Road infrastructure;
- Green Travel Plans;

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- Monitoring of air pollution;
- Financial contribution towards local air quality review and assessment.

#### 3.5.1 Developer Contribution

New developments in, or adjoining existing AQMAs, or other areas close to the objective levels that would lead to an increase in traffic and/or have a worsening effect on air quality, or that will add new receptors to areas where air quality levels are already breached, will be requested to provide for mitigation through contributions to aid towards implementation of the Council AQAP, and the Council local review and assessment work. The level of contribution will be guided by the 'Greenwich Formula' with the type of use set out in Table 3.8. The example of the expected financial level of developer contribution is reviewed annually but will be considered on a case by case basis based on the development impacts and merits. The developer contribution document is available from the Council website for download or available on request from the Public Protection Service. There maybe other developments that, depending upon their air quality impact or from the number of receptors affected, which may also be required to contribute.

Location of development, or where development generated traffic, or site emissions will impact upon	Minimum change in pollutant concentration	Type of development	£ Contribution
Above Objective/Limit Value <i>With</i> Scheme; or greater than 10% increase above background for PM2.5	Slight Adverse	Residential	per dwelling
		Employment	per m <sup>2</sup> gross floor area
		Retail Food	per m <sup>2</sup> gross floor area
		Retail Non-Food	per 100 m <sup>2</sup> gross floor area
		Car Parks	per car park space
Just Below (90% or above) Objective/Limit Value <i>With</i> Scheme	Moderate Adverse	Residential	per dwelling
		Employment	per m <sup>2</sup> gross floor area
		Retail Food	per m <sup>2</sup> gross floor area
		Retail Non-Food	per 100 m <sup>2</sup> gross floor area
		Car Parks	per car park space

Table 3.8: Developer contribution

## 3.6 Biomass

The whole of the Borough, except for Hatton and Stretton, is designated as a Smoke Control Area. Therefore the Council will require a detailed air quality assessment for any proposals for biomass-fuelled (including biofuels) individual or Combined Heat & Power (CHP) systems. This is due to health concerns relating to increasing of emissions of particulate (PM10 and PM2.5) and NO<sub>2</sub> in urban areas. All planning applicants proposing the use of biofuel and biomass-fuelled systems should submit a detailed air quality assessment to the Council, and should demonstrate that the heat generated from biomass is an effective alternative to conventional fuels and is not in conflict with the AQAP adopted by the Council and the Clean Air Act.

Air quality assessments should be conducted referencing LAQM TG(09) and Technical Guidance: *Screening Assessment for Biomass Boilers (08)* and any subsequent revisions.

# 3.7 Air Quality During Construction

The impact of the construction phase of a development on air quality should be considered as part of any air quality assessment. In the majority of instances the primary concerns relate to emissions of dust and particulate matter arising from the movement and storage of materials and from the various construction activities. In addition emissions from vehicles and plant used on the site including HGV vehicles bringing material to and from the site should also be considered for the local area.

Dust from a development site can be a major problem. It is important to minimise the generation of dust wherever possible. Development sites should have a means for damping down temporary haul roads and storage compounds should be located away from housing. The local authority can take action under its statutory nuisance provisions if dust or emissions are adversely affecting the health or the amenity of local residents or relevant receptors. The BRE guide 'Control of dust from construction and demolition activities' or subsequent revisions, provides further information.

For **all** developments, best practicable means should be adopted to control and reduce emissions and therefore any assessment should also detail measures that will be used to mitigate the various sources.

It should also be noted that mobile crushing plant used on site should be permitted under the requirements of the Pollution Prevention and Control Act 1999 and the Environmental Permitting 2010 Regulations.

Burning is not an appropriate method of disposing of waste and therefore no burning should take place during construction works. Fires on demolition sites are likely to be expressly forbidden by either the Environment Agency (EA) or under the Building Control approval. The Council can also take action under its statutory nuisance provisions.

## **3.8 Industrial Pollution Prevention and Control**

Certain industrial operations due to their potential environmental impact require a permit under the Environmental Permitting (England and Wales) Regulations 2010, as amended. New installations may require an air quality assessment to be provided to assess the impact from their operation. Whilst the Pollution Prevention and Control (PPC) regime is separate from the planning system both should be considered complementary and not in isolation. Therefore the Council should be contacted prior to any planning application or permit application being submitted for an agreement on the type and scale of any assessment that maybe required.#

Where a development requiring planning permission will also require a permit, it is recommended that the operator makes both applications in parallel, whenever possible, to allow a consistent approach. This will allow the local authority to begin its formal considerations early on, thus allowing it to co-ordinate both the planning process and permit application process.

For proposals that will require an Environment Agency regulated permit, joint pre planning discussions with the Environment Agency, the planning authority and the developer are recommended in order that all interrelated issues can be considered at an early stage. This is particularly important where fundamental issues exist which may affect whether the development is acceptable. Guidance on developments requiring planning permission and environmental permits is available on the Environment Agency website.

#### **3.9 Odour and Planning**

An odour assessment will be required for any development with a potential for emitting odour, or that will add receptors to an area that may be subject to odour.

Unlike Local Air Quality Management, there are no prescribed limits for odour. The subjectivity of the human response to odour means that it is often not easy to set objective odour exposure standards. However, these difficulties must not preclude the use of objective measurements, in assessing potential nuisance and in identifying control measures, where these can be justified and are considered to be appropriate.

In all cases where the generation of odours from the development can be readily anticipated, the Council shall expect to be provided with objective evidence that demonstrates that odour emissions will be adequately controlled to prevent any significant loss of amenity to neighbouring sensitive land uses. This is important not least because possible odour mitigation measures could in themselves have land use and amenity implications.

Careful consideration should be given to the location of new odour sensitive developments such as residential developments, schools and hospitals near to existing odour sources. Encroachment of odour sensitive development around such odour sources may lead to problems with the site becoming the subject of complaint, essentially creating a problem where there was not one before.

Ideally a robust screening process at the application submission stage should help to identify new developments where adverse odour impacts may arise. Screening should aim to identify applications where odours are a potential issue, whether the application site is the source, or the application site is close to potential odour sources. If such new developments are identified early on, this allows early consultation with the Council.

## 3.9.1 Odour Impact Assessments

At the pre-application stage, sources of odour from or near to proposed developments need to be identified and assessed for potential impact. Odour Impact Assessment (OIA) is a useful tool in support of applications where the potential for odour problems has been clearly identified and where such studies are considered to be necessary and proportionate to the extent of odour problems. A properly structured OIA should seek to identify:

- All potential sources of odour and their estimated rates of emission from the new development;
- The potential for fugitive emissions of odour together with the means to control these emissions;
- The location of sensitive receptors;
- A wind rose for the site in question;
- Potential pathways to sensitive receptors;
- A description of the potential impacts including evidence provided by dispersion models taking cognisance of topographical features;
- Details of any necessary odour abatement systems or other mitigation measures with justifications for the measures being proposed; and
- Details of an Odour Management Plan (OMP) with contingency arrangements for responding to any unforeseen or unusual odour emission episodes.

## 3.9.2 Odour Modelling

Planning applications for developments which have the potential to cause off-site odour impact should be supported by an evaluation of the expected odour impact and proposals for mitigation measures, where necessary. The degree of detail provided in such assessments should be proportionate to the risk of odour impact, taking account of factors including the proximity of receptors, the scale of the proposed activity and the nature of the proposed development.

At one extreme, for small scale developments such as a new hot food takeaway, a relatively simple risk assessment based approach is likely to be appropriate, providing it is carried out in a thorough manner. An example of an Odour Risk Assessment Protocol for commercial kitchens is provided in the Defra Guidance on the 'Control of Odour and Noise from Commercial Kitchen Exhaust Systems'. The Council has a published guidance note on Commercial Kitchen Extraction Systems titled 'Planning Guidance Note for Developers: Ventilation/Extraction Systems for Catering Establishments' providing more detailed advice on this area, available upon request from Development Management.

In higher risk examples, such as a new sewage treatment works, a more rigorous approach to evaluating odour impact may be appropriate. Odour Impact Assessments are typically based on computer models which predict odour dispersion from the proposed development based on local weather records and estimated or predicted odour emissions from the proposed development. The outputs from dispersion modelling are usually presented as odour contours or "isopleths" on a base map of the area, and this allows potential odour impact to be predicted at odour sensitive receptor locations, such as residential developments, in the area and for this impact to be compared with 98th percentile impact benchmarks. Dispersion models can also be used to determine the level of odour mitigation required to control odour impact, or to determine the maximum permissible odour emissions from a site to avoid off-site impact or loss of amenity. These predictions, and the mitigation measures which can be prescribed as a result of objective measurement, can play a key role in preventing long term impact of odours downwind of the site.

Larger scale industrial developments with odour potential are likely to fall under the Pollution Prevention and Control Regime. Odour assessment should be considered jointly for any permit and planning application.

Any odour assessment for higher risk sites should relate to the most appropriate and current guidance for example to the Environment Agency H4 Odour Management Guidance and the Odour Guidance for Local Authorities published by Defra. An example of the tools available to estimate odour impact is given in Table 3.9.

The Public Protection Service should be contacted prior to any odour assessment for agreement on the most suitable method.

ΤοοΙ	Comments
Source emission characterisation combined with computer dispersion modelling	Usually used as a predictive tool to assess the impact of proposed plant but also successfully used to identify causes of off-site odour impact, establish long-term odour exposure levels and to rank relative efficacies of odour abatement strategies. Requires the input of source emission data (in odour units) that may require specialist input. Allows comparison with numerical odour standards, for advantages and disadvantages of this. Source emissions can be characterised using measurement at source EN 13725:2003 (or latest current method)
Field odour assessment using "sniff test"	For existing that may impact upon the development. Usually suitable for sites with less odour impact. Surveys must be designed in agreement with the local authority. 'FIDOL' factors from the Defra guidance or similar should be used to assess significance.

Table 3.9: Main Tools Available to Estimate the Significance of Odour Impact

# 3.9.3 Odour Control Mitigation

The option of preventing and controlling odours relies on an ability to intervene effectively at one or more stages of the 'Source–Pathway–Receptor' process, as follows:

- Preventing the release of odorous air to the atmosphere by containment and odour control
- Preventing the formation of odorants in solid and liquid material within a process;
- Preventing the transfer of odorants from a mixture to gas phase [air];
- Preventing the transportation of odorants from the source reaching receptors;
- Influencing the quality of the odour to reduce the perception of odours as a nuisance by receptors; and
- Ensuring effective communication

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Odour Source	Proactive / Planned Measures
Sewage treatment	Closed-containment process over high emission areas; Odour control systems / filters
Hot food takeaways, food processing and commercial kitchens	Ventilation design; Extraction & filtration system; Vents located away from residents
Paints & solvents	Ventilation design; Solvent extraction & recovery system; Vents located away from residents
Animals, livestock & poultry	Site assessment and building design for odour control; Stocking density planned and agreed
Industrial / chemical processes	Ventilation design; Extraction & filtration system; Vents located away from residents
Storage & spills	Design of containment and covered areas for moving liquid

#### Table 3.10: Examples of odour control measure

#### 3.10 What Information is Available?

The Council holds an inventory of emissions and routinely monitors air quality across the Borough. Annual air quality review and assessment reports are written which should be referenced for any air quality assessment. This information can be made available upon request or be downloaded from the Council website. Other information and guidance is available from the air quality section of the Defra website.

# 3.11 How the Council will decide whether the development is appropriate

The Council will consider the relative merit of the application with regard to national and local planning policy. The relative weight given to air quality will depend on the significance of any impact. The Council is committed to reducing air quality levels in places where people live, work and relax and it accepts that the National Air Quality Objectives provide the basis for assessing significance as detailed in this document. Any development that would interfere with an Air Quality Management Plan, result in a breach of a relevant objective or create a potential new AQMA will be treated as significant.

# 3.12 References

- 1. Technical Guidance LAQM. TG(09), Defra (2009)
- 2. Development Control: Planning for Air Quality, Environmental Protection UK (2010)
- 3. Air Quality Strategy for England, Scotland, Wales and Northern Ireland, Defra (2007)
- 4. House of Commons Environmental Audit Committee Report on Air Quality, 2010
- 5. Technical Guidance: Screening Assessment for Biomass Boilers, AEA (2008)
- 6. House of Commons Environmental Audit Committee Report on Air Quality (2010)
- 7. BRE guide 'Control of dust from construction and demolition activities'
- 8. Odour Guidance for Local Authorities, Defra (2010)
- 9. H4 Odour Management Guidance, Environment Agency (2009)
- 10. Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems, DEFRA, 2005
- 11. Specification for Kitchen Ventilation Systems DW/172 Heating and Ventilation Contractors Association 2005
- 12. Planning Guidance Note for Developers: Ventilation/Extraction Systems for Catering Establishments, Warrington Borough Council (2007)
- 13. Guidance for Developments Requiring Planning Permission and Environmental Permits, Environment Agency (2012)

## 3.13 Glossary

AADT: Annual average daily traffic.

**AQAP**: Air quality action plan: required by a local authority to identify and implement actions to reduce air quality concentrations below the objectives.

**AQMA**: Air quality management area: a local authority is required by the Environment Act 1995 to declare an AQMA where it believes UK air quality objectives prescribed in Regulations are being exceeded.

**AQO**: Air quality objective: targets set by the Government and Devolved Administrations as minimum acceptable standards of air quality.

CO: Carbon monoxide.

CO,: Carbon dioxide.

**Defra**: Department for Environment, Food and Rural Affairs: responsible for environment policy, including the production of the Air Quality Strategy for England, Scotland, Wales and Northern Ireland, and the supervision of the LAQM and LAAPC regimes.

**EA**: Environment Agency (England and Wales). Regulatory body with responsibility for PPC Part A1 Permit control.

EIA: Environmental impact assessment.

**EPR**: Environmental Permitting Regulations: regulatory system of permits controlling certain emission from specified industry sectors.

EU: European Union.

**HIA**: Health impact assessment. Assessment of the health impact from emissions associated with a development

**LAQM**: Local air quality management: system introduced by the Environment Act 1995 to address local air quality "hot spots". It includes the Review and Assessment process, the designation of AQMAs and the development of action plans.

**LTP**: Local Transport Plans in England provide mechanism by which local highways authorities set out strategies for improving public transport, roads and other transport within their authority.

NO2: Nitrogen dioxide.

**NOx**: Oxides of nitrogen: NOx is the sum of NO and NO<sub>2</sub> (plus other minor oxides) and is often used to express the emitted pollutant quantity. NO<sub>2</sub> is largely a secondary pollutant, being formed by the oxidation of nitric oxide (NO) after emission, although some NO<sub>2</sub> is directly emitted, the proportion of which is related to the exhaust treatment technology.

**PAH**: Polycyclic Aromatic Hydrocarbon: a complex group of pollutants some of which are powerful carcinogens. Usually represented in concentration terms by the marker compound Benzo[a]pyrene (B[a]P).

**PM10 and PM2.5**: Particulate matter with an aerodynamic diameter of less than 10 microns ( $\mu$ m) (PM10) or less than 2.5  $\mu$ m (PM2.5), expressed in units of  $\mu$ g/m<sup>3</sup>.

**PPC**: Pollution prevention and control: Europe wide system which replaced the earlier UK based integrated pollution control (IPC) system. Legislations delivered through the Environmental Permitting Regulations (2010), as amended.

SO2: Sulphur dioxide.

TA: Transport Assessments consider the potential impact from new development on a transport network.

VPH: Vehicles per hour.

# Air Quality

3

# 4 Contaminated Land

## 4.1 Introduction

Certain types of contamination are known to be hazardous to human health, property and the wider environment. Typical causes of land contamination include previous industrial or commercial usage, mining, and the land-filling of wastes. Land may also become contaminated due to its close proximity to contaminated areas. Contaminating substances include metals, organic substances, ground gases and high/low pH. Contamination may not occur solely as a result of human activities; land can become contaminated as a result of natural processes or its natural state.

## 4.1.1 What is Contaminated Land?

The definition of contaminated land (from Section 78A(2) of the EPA 1990) is:

" ...any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that:

(a) Significant harm is being caused or there is the significant possibility of such harm being caused; or

(b) Pollution of controlled waters is being, or is likely to be, caused..."

With respect to controlled waters, the Water Act 2003 (Chapter 37, Section 86) has amended the second part of the definition so that it applies only where:

"Significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused"

Part 2A of the EPA 1990 (known as 'Part 2A'), as inserted by Section 57 of the Environment Act 1995, was brought into force on 1st April 2000. In most cases, Councils are the enforcing authorities for the contaminated land regime under Part 2A. They have a duty to identify contaminated land within their area and, except for certain categories, decide what remediation is required and ensure that it takes place.

A key element of the Part 2A regime is the Source-Pathway-Receptor pollutant linkage model. Each element is defined as follows:

- The source is the contamination in, on or under the land;
- The pathway is the route by which the contamination reaches the receptor; and
- The receptor is defined as living organisms, ecological systems or property which may be harmed.

Without the clear identification of all three elements of the pollutant linkage, land cannot be identified as contaminated land under the regime (Table 4.1).

To fall within the statutory definition of Part 2A, the land, when assessed in the context of its current use must be capable of causing significant harm to human health or other specified receptors and/or pollution of controlled waters. Part 2A addresses "unacceptable risk". These and other key terms are defined within Part 2A and also in the statutory guidance.

#### **HUMAN HEALTH**

1) Uptake of contaminants by food plants grown in contaminated soil – heavy metals (e.g. cadmium, lead) and persistent organic pollutants including certain pesticides and veterinary products may result in an accumulation in food plants to concentrations where they exceed legal limits and/or may pose a hazard to human health. Uptake will depend on concentration in soil, its chemical form, soil pH, plant species and prominence in diet.

2) *Ingestion and inhalation* – substances may be ingested directly by young children playing on contaminated soil, by eating plants which have absorbed metals or are contaminated with soil or dust. Ingestion may also occur via contaminated water supplies. Metals, some organic materials and radioactive substances may be inhaled from dusts and soils.

3) *Skin contact* – soil containing tars, oils and corrosive substances may cause irritation to the skin through direct contact. Some substances (e.g. phenols) may be absorbed into the body through the skin or through cuts and abrasions.

4) *Irradiation* – As well as being inhaled and absorbed through the skin, radioactive materials emitting gamma rays can cause a radiation response at a distance from the material itself.

5) *Fire and explosion* – materials such as coal, coke particles, oil, tar, pitch, rubber, plastic and domestic waste are all combustible. If heated by contact with buried power cables or careless disposal of hot ashes they may ignite and burn underground. Both underground fires and biodegradation of organic materials may produce toxic or flammable gases. Methane and other gases may explode if allowed to accumulate in confined spaces.

#### BUILDINGS

1) *Fire and explosion* – underground fires may cause ground subsidence and cause structural damage to buildings. Accumulations of flammable gases in confined space leads to a risk of explosion. Underground fires may damage building services.

2) Chemical attack on building materials and services – sulphates may attack concrete structures. Acids, oils and tarry substances may accelerate corrosion of metals or attack plastics, rubber and other polymeric materials used in pipe work and service conduits or as jointing seals and protective coatings to concrete and metals.

3) *Physical* – blast-furnace and steel-making slag (and some natural materials) may expand if ground conditions are changed by development. Degradation of fills may cause settlement and voids in buried tanks and drums may collapse as corrosion occurs or under loading from construction traffic.

#### NATURAL ENVIRONMENT

1) *Phytotoxicity (prevention/inhibition of plant growth)* – some metals essential for plant growth at low levels are phytotoxic at higher concentrations. Methane and other gases may give rise to phytotoxic effects by depleting the oxygen content in the root zone.

2) Contamination of water resources – soil has a limited capacity to absorb, degrade or attenuate the effects of pollutants. When this is exceeded, polluting substances may enter into surface and groundwater.

3) *Ecotoxicological effects* – contaminants in soil may affect microbial, animal and plant populations. Ecosystems or individual species on the site, in surface waters or areas affected by migration from the site may be affected.

#### Table 4.1: Examples of Pathways and Effects from Land Contamination

The planning system uses a slightly different definition for contaminated land, which is not based solely on the legal definition set out in Part 2A. A wider range of contamination and receptors is relevant to planning but the degree of harm or pollution and the approach to remediation are essentially the same.

However, to avoid confusion with the term 'contaminated land' the planning regime uses the wider term "land affected by contamination". This is intended to cover all cases where:

# "The actual or suspected presence of substances in, on or under the land may cause risks to people, human activities or the environment, regardless of whether or not the land meets the statutory definition in Part 2A".

Part 2A was introduced specifically to address the historical legacy of land contamination, whereas the planning system aims to control development and land use in the future. Therefore assessing risks in relation to the future use of any land is primarily a task for the planning system. Applicants/Developers should always to take into account Part 2A because a change in use may cause the land to fall within the statutory definition of contaminated land by creating a pollutant linkage.

# As stated above, the NPPF states that "As a minimum, the land should not be capable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990".

Part 2A was designed and intended to encourage voluntary remediation and should only be used where no appropriate alternative solution exists. The Contaminated Land Strategy published by the Council provides details of the planning system to ensure that land is made suitable for use when it is redeveloped and/or encouraging polluters and owners of land to deal with problems without the need for Part 2A to be used directly.

## 4.2 Roles and Responsibilities

## 4.2.1 Role of the Owner/Developer

The Applicant/Developer of any land is responsible for ensuring that the proposed development is safe and suitable for use or can be made so by remedial action. In order to demonstrate this, the Applicant/Developer should determine:

(i) Whether the land in question is already affected by contamination through Source-Pathway-Receptor pollutant linkages;

(ii) Whether the proposed development will create new linkages, e.g. new pathways by which existing contaminants might reach existing or proposed receptors; and

(iii) What action is needed to break those linkages and avoid new ones, deal with any unacceptable risks and enable safe development and future occupancy of the site and neighbouring land.

The Applicant/Developer should satisfy the LPA that unacceptable risk from contamination will be successfully addressed through remediation without undue environmental impact during and following the development. It is the responsibility of the Applicant/Developer to ensure that the investigation and remediation of land contamination is carried out by a suitably qualified person with experience in contaminated land i.e. an environmental consultant. Carrying out unacceptable/insufficient work or submitting unsuitable reports to the LPA may lead to delays, as work may need to be redone.

Applicants/Developers must be aware of their responsibility to deal with pollution issues that may present risk, and also the liability they may be exposed to under environmental legislation e.g. the Environmental Damage Regulations (2009). Where an agreed remediation scheme includes future monitoring and maintenance schemes, arrangements should be made to ensure that any subsequent owner of the site is fully aware of these requirements and assumes on-going responsibilities associated with the land.

The Applicant/Developer should be aware that actions or omissions on their part could lead to future liability being incurred under Part 2A, e.g. where development fails to address an existing unacceptable risk or creates such a risk by introducing a new receptor or pathway. Additionally the developer has a responsibility to protect the welfare of construction workers operating on potentially contaminated sites and to manage other potential environmental impacts arising from the site and/or the proposed development works on the site.

## 4.2.2 Role of the LPA

The LPA has a duty to take account of all material planning considerations including land contamination during the preparation of Local Plans and when considering an application for planning permission. Usually where there is reason to believe land may be contaminated, or the proposed development is of particular sensitivity e.g. housing a full assessment may be required in advance of planning approval being issued, a planning condition requiring assessment of possible contamination may be recommended by the LPA and applied to the decision notice.

When considering development on land affected by contamination, the principal objective of the LPA is to ensure that any unacceptable risks to human health, property and/or the wider environment are identified so that appropriate action can be considered and then taken to address those risks. In achieving this objective, the LPA should assist in providing the necessary confidence to owners and occupiers of the land after development, regarding the condition and the ranking of the land in relation to relevant environmental protection regimes, such as Part 2A.

#### 4.2.3 Role of the Public Protection Service

Contaminated Land Officers within the Public Protection Service are responsible for addressing contaminated land issues using Part 2A and the planning system. The Public Protection Service and also the EA act as consultees to the LPA regarding risks to human health and controlled waters. The Public Protection Service may consult with the Health Protection Agency (HPA) and/or Primary Care Trust (PCT) where necessary on matters relating to human health, including radiation, in respect of planning applications.

## 4.2.4 Role of other organisations

The EA are a consultee for any planning applications, where development is proposed on potentially contaminated land. Where the EA are consulted and land contamination is an issue they will seek to implement the objective of the water framework directive to prevent and limit the entry of pollutants into groundwater.

Within the LPA, Building Control will also need to be satisfied that any risks to the development from potential contamination have been adequately addressed. The Building Regulations 2000 require developers to demonstrate that hazards from potential contamination have been properly assessed and appropriate measures put in place to address any risk.

# 4.3 Contaminated Land & Planning

The following flowchart below shows the typical contaminated land and planning procedure:



Figure 4.1 Flowchart showing idealised Planning & Contaminated Land Procedure

Figure 4.1 Flowchart showing idealised Planning & Contaminated Land Procedure

A precautionary approach should be assumed when considering planning applications in relation to any land affected by contamination. This includes land subject to or adjacent to previous industrial use (Table 4.2) and also where uses are being considered that are particularly sensitive to contamination, as follows:

- All residential developments (houses, flats, nursing homes etc.);
- Allotments;
- Schools;
- Nurseries and crèches;
- Children's play areas and playing fields;
- Mixed use developments including vulnerable proposals.

Where development is proposed on land that is or may be affected by contamination, an assessment of risk should be carried out by the Applicant/Developer for consideration by the LPA before an application is determined. Any existing or new unacceptable risks should be identified and proposals made to deal with them effectively as part of the development process.

When a planning application is submitted to the LPA, the Public Protection Service will be consulted and the application (with supporting information) assessed to determine whether there is the potential for contamination to influence the land or 'site', whether suitable measures have been proposed to address any risks and whether the proposed development is acceptable.

If there is the potential for contamination to affect the site, or the end-use is particularly sensitive, recommendations will be made that certain conditions be imposed upon the development. These are intended to ensure that the site is made suitable for its proposed end-use and ensure the safety of site workers, future site users, and the protection of property and the wider environment and are discussed in more detail in Section 4.3.7.

It is essential that the developer provides as much information to the LPA at every stage of the planning process. However trivial, withholding information may cause a delay to the application process. The onus is on the Applicant/Developer to keep the LPA well informed about the development at all times so that decisions can be made swiftly and the application process completed as quickly as possible. If a response from the LPA is not immediately forthcoming, this should not be taken as confirmation that document submissions have been approved or that work on site can proceed. Again, the onus is on the Applicant/Developer to obtain written approval from the LPA for any documents/information submitted in support of a planning application.

A wide range of industries may historically have contaminated, or have the potential to contaminate the land they are sited upon (and neighbouring land) — The DOE Industry Profiles give further details:

- Smelters, foundries, steel works, metal processing & finishing works;
- Coal & mineral mining & processing, both deep mines and opencast;
- Heavy engineering & engineering works, e.g. car manufacture, shipbuilding;
- Military/defence related activities;
- Electrical & electronic equipment manufacture & repair;
- Gasworks, coal carbonisation plants, power stations;
- Oil refineries, petroleum storage & distribution sites;
- Manufacture & use of asbestos, cement, lime & gypsum;
- Manufacture of organic & inorganic chemicals, including pesticides, acids/alkalis, pharmaceuticals, solvents, paints, detergents and cosmetics;
- Rubber industry, including tyre manufacture;
- Munitions & explosives production, testing & storage sites;
- Glass making & ceramics manufacture;
- Textile industry, including tanning & dyestuffs;
- Paper & pulp manufacture, printing works & photographic processing;
- Timber treatment;
- Food processing industry & catering establishments;
- Railway depots, dockyards (including filled dock basins), garages, road haulage depots, airports;
- Landfill, storage & incineration of waste;
- Sewage works, farms, stables & kennels;
- Abattoirs, animal waste processing & burial of diseased livestock;
- Scrap yards;
- Dry cleaning premises;
- All types of laboratories.

#### Other uses & types of land that might be contaminated include:

- Radioactive substances used in industrial activities not mentioned above e.g. gas mantle production, luminising works;
- Burial sites & graveyards;
- Agriculture excessive use or spills of pesticides, herbicides, fungicides, sewage sludge & farm waste disposal;
- Naturally-occurring radioactivity, including radon;
- Naturally-occurring elevated concentrations of metals and other substances;
- Methane & carbon dioxide production & emissions in coal mining areas, wetlands, peat moors or former wetlands.

 Table 4.2: Examples of Potentially Contaminating Uses of Land and Situations Where Land may be affected by

 Contamination

# 4.3.1 Pre-Application Discussions

Where a large scheme or development is proposed on land that is or may be affected by contamination, it is strongly recommended that an assessment of risk should be carried out by the Applicant/Developer for consideration by the LPA in advance of submitting an application. Any existing or new unacceptable risks should be identified and proposals made to deal with them effectively as part of the development process. Where practicable, Applicants/Developers should arrange pre-application discussions with the LPA and other regulators. Such discussions will also help to identify the likelihood and possible extent and nature of contamination and its implications for the development being considered. They will also assist in scoping any necessary Environmental Impact Assessment and identify the information

that will be required by the LPA to reach a decision on the application when it is submitted. The LPA will advise intending Applicant/Developers to undertake these steps where they appear necessary but have not yet been addressed.

# 4.3.2 Completing the 'Existing Use' Section of the Planning Application Form

Some of the national planning application forms (1APP) include a section on land contamination. The 'Existing Use' section is either Question 15, 16, or 19, depending on the relevant 1APP form used. The Applicant/Developer should identify if there is a potential for land contamination at the site or if a sensitive/vulnerable use is being introduced as outlined above. Applicants must address the questions in the 'Existing Use' section (shown below) when preparing a planning application.



Source: Yorkshire and Humberside Pollution Advisory Council, March 2011

If the answer to any of the questions in the 'Existing Use' section is 'Yes', then an appropriate contamination assessment must be submitted with the planning application; for further details/information refer to Section 4.4.

If the application is for an individual residential property (i.e. one dwelling with a garden), a Screening Assessment Form, may be used as a basic contamination assessment. This proforma is available for download on the Council website or by contacting the Public Protection Service. This form guides the applicant through the development proposal and previous uses of the site to aid in the decision as to whether land contamination is an issue. If no potential sources of contamination are identified, then no further work is required however this is dependent on review and agreement by the Public Protection Service. If potential sources of contamination are identified, then further investigation may be required and the Public Protection Service should be contacted for advice. Please note that this form is for individual residential property developments only and will not be accepted for multiple dwellings.

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# 4.3.3 Determining Planning Applications

When considering any applications, the LPA will need to be satisfied that the development does not create or allow the continuation of unacceptable risk arising from land contamination. Therefore any significant pollutant linkages should be broken by removing the source, blocking the pathway or removing receptors. The Applicant/Developer should also ensure that the development will not create new pollutant linkages by changing or creating exposure pathways e.g. creating new pathways to groundwater by site investigation drilling or piling.

The Applicant/Developer and LPA should recognise that contamination may pose problems on and other than the originating site. For example, contaminants may migrate or be transported by wind or water onto land that has no specific association with its former use. Contaminants may also be present on land where there is no specific record of former contaminative use. This is often the case where Made Ground or other unsuitable fill materials have been historically deposited on land, leading to the introduction of potential contaminants to surface geology.

While the most severe examples of contamination are often found in developed or former industrial areas, rural and urban fringe areas can also be affected. In addition, some areas may be affected by the natural occurrence of potentially hazardous substances, such as arsenic, lead or copper, which are the product of the underlying geology and bear little relation to previous or current land use.

The LPA will pay particular attention to the condition of a site and of neighbouring land where the proposed use would be particularly vulnerable to contamination, where the current circumstances or past use suggest that contamination may be present or where it has other relevant information. Full account should be taken of whether the proposed use or development is likely to be adversely affected by contamination. For example, the addition of a new storey to an existing building is unlikely to be significantly affected by contamination whereas lateral expansion onto former industrial land potentially carries a higher risk and building extensions or undertaking landscaping that disturbs the ground may breach protecting layers.

The standard of remediation to be achieved through the grant of planning permission for new development (including permission for land remediation activities) is the removal of unacceptable risk and making the site suitable for its new use, including the removal of existing pollutant linkages. All receptors relevant to the site should be protected to an appropriate standard.

For any development or change in use requiring remediation, the LPA should consider the impact of remediation activities on neighbouring land uses and the environment, including any offsite works such as those needed to control methane migration beyond the site boundaries. While some aspects may also be covered under separate pollution control regimes, the LPA should consider issues such as dust, noise and traffic movements arising from the remediation activities and the possible need for measures to control or mitigate them.

A balance should be struck between the overall social and economic benefits from the development, including the remediation proposals, and the temporary impacts of the remediation process. Applicants/Developers are recommended to carefully consider the waste management implications when deciding the best approach to remediation and the handling and treatment of contaminated soils and other material.

The LPA will need to be satisfied that the development can be carried out safely without unacceptable risks to workers, neighbours or other offsite receptors. It is important that risk to workers is managed using standard hierarchy of control measures under the Control of Substances Hazardous to Health (COSHH) Regulations 2002, the Construction (Design and Management) Regulations 2011 and other relevant legislation.

# 4.3.4 Outline Planning Applications

When considering outline planning applications, the LPA will need to be satisfied that it has sufficient information from the applicant about the condition of the land and its remediation and the full range of environmental impacts arising from the proposals to be able to grant permission in full at a later stage. The LPA should be satisfied, therefore, that the risks have been properly assessed and, if there is an unacceptable risk, the options appraised sufficiently to identify a viable remediation scheme that will reduce the risks to acceptable level, just as it would with a full application.

## 4.3.5 Consultation

In many cases, inspections carried out under Part 2A will have identified appropriate consultation areas. Where land has been or is being formally determined as contaminated land under Part 2A, the Public Protection Service will need to be satisfied that the Remediation Statement provided by the Applicant/Developer meets requirements in order to avoid a Remediation Notice being served.

The LPA should also consult the EA where they are carrying out a Part 2A inspection on behalf of the Council or where there appears to be risk to controlled waters that may need to be addressed as part of the development process. Other statutory bodies also have relevant responsibilities, including English Nature and English Heritage in relation to particular receptors. They should be consulted by the LPA where appropriate. LPAs should also consult other relevant Council departments, such as Building Control, Conservation & Archaeology, Engineering & Reclamation as necessary. Other bodies, such as water companies and local community and conservation or amenity groups may be able to advise on issues related to specific receptors.

## 4.3.6 Granting Planning Permission

The LPA may grant planning permission where it is satisfied that the proposed development will be appropriate, having regard to the information currently available about any land contamination at the site and the proposed remediation measures/standards. This will be subject to conditions where necessary, as discussed in Section 4.3.7.

The LPA may refuse permission if it is not satisfied on the basis of the information provided by the Applicant/Developer and that available from other sources, including the responses of those consulted, that the development would be appropriate. This could include cases where:

- Circumstances, including information available to the LPA, clearly suggest the possibility of contamination or of unacceptable risk and no information has been provided or obtained that excludes the reasonable possibility of such contamination or risk;
- The LPA considers that unacceptable risk exists and cannot be dealt with adequately to deliver a development that is suitable for its intended use and which results in the removal of such risks; or
- The steps needed to deliver an appropriate development and deal with unacceptable risk are not already in place and cannot be secured by suitable planning conditions, e.g. because these are not within the powers of the applicant/developer since action is needed on other land outside the applicant's/developer's control or influence.

# 4.3.7 Planning Conditions

In some cases, the information available when a planning application is being considered will be sufficient to resolve the main issues regarding land contamination from a planning perspective but insufficient to resolve all the details. Therefore, it may be appropriate to grant permission subject to conditions relating to the condition of the land, as stated above. General guidance on the use of planning conditions is provided in DOE Circular 11/95; and includes the following advice:

The LPA should consider the use of three-stage conditions that aim to:

- Provide for further investigation and characterisation of the site to confirm the nature and extent
  of contamination and validate the conceptual model and allow more refined risk assessment and
  appraisal of remedial options;
- To propose and receive approval for a remediation scheme that ensures the removal of unacceptable risks to make the site suitable for use; and
- To submit and receive approval for a validation report that demonstrates the effectiveness of the remediation carried out, preferably before building begins and certainly before the site is occupied by future users.

The Public Protection Service, in consultation with Development Management, has devised six conditions relating to land contamination; these are available to view on the Council website, along with a flow chart summarising the protocols for attaching a condition.

There are two main classifications of planning conditions that are attached to applications with respect to contaminated land:

- Pre-commencement Conditions: These are conditions or parts of conditions that are required to be satisfied prior to site works commencing;
- Completion Conditions: These are conditions or parts of conditions that are required to be, or can only be satisfied once site works have completed.

Pre-commencement conditions include the requirement to investigate and risk-assess the development site as well as (if applicable) the submission of an approved remediation scheme or strategy. Completion conditions include the requirement to report unexpected contamination; provide verification of remedial action taken; and the results or outcome of any on-going monitoring works required to be completed when site works have ceased.

During the development of any site there is the possibility of discovering previously unidentified contamination or risks. As such, each condition includes a section on the reporting of 'unexpected' contamination as well as submitting for approval an assessment of the risks and proposed remediation scheme, or alternatively confirming on completion of development the absence of any unacceptable risk from contamination.

In some cases, it may be necessary to require subsequent monitoring for the purposes of providing information on any changes that may occur in the status of a pollutant, pathway or receptor identified as part of a pollutant linkage when permission was originally granted. This will enable the LPA to consider the continuing integrity of any remediation scheme and any changes in circumstances affecting the pollutant linkages in question. The inclusion of post-development monitoring or maintenance programmes is a provision within each version of the Condition.

## 4.3.8 Permitted Development Rights

Where a site has been investigated and risk-assessed in terms of land contamination and remediation or remedial measures have been deemed necessary, the inclusion or reflection of the existing remedial measures is required where any new development takes place at that site. This is of particular relevance to extensions or works covered under the auspices of Permitted Development Rights (PDRs). Where sites or buildings have received remedial measures or remediation, the LPA may rescind the PDRs associated with the original planning consent to ensure that any alterations or redevelopment on the site will require planning permission and as such, take existing remediation or remedial measures into account when granting consent.

## 4.3.9 Discharge of Conditions

Once the appropriate information has been submitted to the LPA, and subsequently approved, the Public Protection Service will make recommendation to the LPA that conditions, or parts of conditions, relevant to the submitted information can be discharged. The LPA will then act upon these recommendations and formalise the discharge of conditions or parts of conditions.

Regardless of the type of condition to be discharged or the nature of recommendation made by the Public Protection Service, any discharge of condition must be the subject of a formal discharge application, made to Development Management at the following address: *devcontrol@warrington.gov.uk* 

Development Management will charge a fee to process and administer the discharge application.

## 4.4 What Information Is Required?

It is essential that redevelopment of land affected by contamination is undertaken with a sufficient degree of transparency and openness. This will maintain public confidence in the development and minimise any potential for blight. Maintaining a comprehensive set of records will assist the LPA, and other regulators, and ensure that any future enquiries about the development can be answered effectively.

All assessments of land affected by contamination should be carried out by or under the direction of a suitably qualified competent person i.e. a consultant and in accordance with BS10175 (2011) Code of Practice for the Investigation of Potentially Contaminated Sites. Considerable effort and expense can be saved if an applicant and LPA agree to place reliance on the expertise of a single impartial expert of this kind with regard to technical matters. All aspects of investigation and risk assessment relating to land contamination should also follow the guidelines laid out within *CLR11 'Model Procedures for the Management of Land Contamination*'.

The Applicant/Developer is responsible for ensuring the safe development and secure occupancy of a site and that appropriate competent professional advice is available to:

- Carry out any necessary investigations;
- Assess risk; and
- Design and execute any necessary remediation works, including verification of their effectiveness and appropriate monitoring and maintenance where these may be needed.

The LPA will need to consider the presence of contamination and any risks posed in the public interest. In doing so, it should consult appropriately. However, it is entitled to require the Applicant/Developer to provide at application stage, suitable information and expert advice on its implications. It is entitled to rely on that advice in considering the application and the circumstances of the land or to challenge it on the basis of similarly-qualified expert advice accessible to it in-house or externally. Those providing expert advice to Applicants/Developers should be aware of the future reliance that may be placed on it.

#### 4.4.1 Submission Format

It is strongly encouraged that draft copies of any reports are issued to the Public Protection Service as part of any on-going discussions. This is often useful for the purposes of seeking an informal view on findings or proposals before proceeding to formal submission.

Formal submission of reports, for the purposes of discharging planning conditions, should be sent directly to Development Management.

## 4.4.2 Assessing the Adequacy of Submissions

Information submitted in support of planning applications must be of an acceptable minimum standard in order to satisfy the LPA. The guidance contained within this section aims to inform Applicants/Developers of the procedural requirements of a risk-based approach to land contamination, as defined in current UK legislation and guidance. A detailed technical framework for investigating and dealing with land affected by contamination is contained within the EA and Defra guidance document *CLR 11, 'Model Procedures for the Management of Land Contamination*'. The process involves identifying, making decisions on, and taking appropriate action to deal with, land contamination in a

way that is consistent with government policies and legislation. The approach outlined below is consistent with the CLR 11 technical framework and is based on a staged or tiered approach to risk assessment, which includes the following four key elements:

- Risk Screening;
- Generic Quantitative Risk Assessment (GQRA);
- Detailed Quantitative Risk Assessment (DQRA);
- Verification / Validation.

Risk screening generally involves developing a Conceptual Site Model (CSM), which identifies whether there could be any potentially unacceptable risks at the site. The CSM may then be used to determine if any further assessment is required. If this preliminary assessment clearly demonstrates that contamination at the site poses no unacceptable risks (i.e. no source-pathway-receptor linkages) then quantitative assessments may not be required.

The procedure for investigating a potentially contaminated site would be expected to meet the criteria outlined in British Standard *BS10175:2011 'Investigation of Potentially Contaminated Sites – Code of Practice'*. Typical components of a report submitted in support of a planning application would generally include the following stages (A-D):

- STAGE A: Preliminary Risk Assessment (PRA) (often referred to as a Phase 1 Investigation or Desk Study);
- STAGE B: Site Investigation & Risk Assessment (GQRA/DQRA);
- **STAGE C**: Remediation Scheme;
- STAGE D: Verification Report (often referred to as a Validation or Completion Report).

A more detailed step by step guide of the site assessment can be found on the Council's website. The guide gives an overview of the stages and reporting required at each stage. A helpful checklist of requirements in relation to each of the stages (A-D) outlined above can be also found on the website.

#### STAGE A: Preliminary Risk Assessment (PRA)

A PRA (sometimes referred to as a 'Phase 1 Investigation' or 'Desk Study') should provide a preliminary assessment of risk by interpreting information on a site's history, considering the likelihood of contamination being present and making an initial hazard assessment. A PRA typically consists of a desk study, site reconnaissance, development of a Preliminary CSM and a basic hazard assessment.

A PRA comprises a search of available information and historical maps, which can be used to identify the likelihood of contamination being present. The two main indicators for the likely presence of contamination at a site are past industrial uses and/or close proximity to a landfill. A detailed appraisal of documentary research can be found in the Department of Environment (DoE) guidance document, *CLR3 'Documentary Research on Industrial Sites'*.

Industry profiling is another key component of a PRA. Where a site has comprised a former land-use, it is possible to derive potential contaminants that may be present according to the type of former land use at the site. These potential contaminants or 'Contaminants of Concern' can then be used to inform site investigation proposals, which are also often included in PRA recommendations. The DoE *'Industry Profile'* series of guidance documents provide potential contaminants for a range of industrial land uses and are available on th EA website.

A simple Site Reconnaissance or Walkover survey is conducted to identify if there are any obvious signs of contamination at the surface. Further information regarding site inspections can be found in *CLR2 'Guidance on Preliminary Site Inspection of Contaminated Land'*. A CSM is a representation (text and/or graphics) of the relationship(s) between contamination source(s), pathway(s) and receptor(s) developed on the basis of hazard identification. Developing a CSM should be viewed as an iterative process that should be refined during subsequent phases of assessment. Using the information gathered, the CSM is constructed and a basic hazard assessment is carried out.

The minimum requirement that should be provided by an Applicant/Developer is the reporting of a PRA and Site Reconnaissance. While they may provide a useful indication of the possible presence of contamination, commercial environmental searches will not be sufficient to establish the presence or absence of contamination and will not fully meet the requirements that should accompany a planning application, since these searches only provide factual information. Interpretation is necessary to develop a CSM, which identifies plausible pollutant linkages as a basis for assessing the risks and appraising the options for remediation.

A PRA and site reconnaissance will assist in determining the need for and scope of further investigation, the problems that may require remediation and whether remediation can be secured by means of planning conditions. It may provide sufficient evidence that the planning decision can be made based on an appropriate CSM and the LPA being satisfied that there is a viable remedial solution. Where the PRA and Site Reconnaissance do not provide sufficient information to assess the risks and appraise remedial options, further investigations will need to be carried out before the application is determined.

If the PRA findings indicate that no contamination concerns exist at the site then further action may not be necessary, although it is a requirement to submit the report and confirm this with the Public Protection Service before proceeding.

#### STAGE B: Site Investigation & Risk Assessment (GQRA/DQRA)

A GQRA (often referred to Phase 2 site investigation) aims to reduce the uncertainties identified in the initial CSM by quantifying potential contamination at the site. The data obtained will be used to inform a decision as to whether the site is potentially harmful. A GQRA report generally consists of an intrusive site investigation and a subsequent generic risk assessment. The investigation process should seek to clearly identify and characterise plausible source-pathway-receptor linkages at the site and provide information for the refinement of the initial CSM.

A DQRA may be required where levels of contaminants are identified above the GQRA criteria or where large amounts of contamination are encountered to determine whether there are actual risks to identified receptors. DQRA can also be used to derive clean-up concentrations for levels of contamination which will remain on site following any proposed remedial works.

If the GQRA/DQRA findings indicate that no contamination concerns exist at the site, then further action may not be necessary, although it is a requirement to submit the report and confirm this with the Public Protection Service before proceeding further.

#### **STAGE C: Remediation Scheme**

Often known as a 'Remediation Strategy', this is a document detailing what action is to be carried out so that contamination no longer presents a risk to site users, property or ecological systems. The document is produced after an 'Options Appraisal', where various remedial options are considered and may include measures such as the removal of contamination, encapsulation of contaminants, treatment of contaminants or measures to break pollution linkages. Please note that Government policy encourages sustainable methods of remediation.

A Remediation Scheme should be submitted where a site investigation identifies levels of contamination that will require remediation prior to the site being suitable for its intended use. This strategy should include full details of how contamination at the site will be addressed and demonstrate that the standard of remediation work complies with current best practice and guidance.

The Remediation Scheme should be submitted to the Public Protection Service and the EA for approval before site works commence.

#### STAGE D: Verification / Validation / Completion Report

Where contamination has been found and/or remediated, the Applicant/Developer should submit a verification report to confirm remedial works, fill imports/exports and whether unexpected contamination was encountered. In certain circumstances it may be necessary for the Applicant/Developer to conduct

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post-completion monitoring. This should be undertaken to the approval of the LPA and results of the monitoring should be submitted for review. For limited remediation works or protective works a verification statement alone may be acceptable, but prior confirmation of this should be obtained from the LPA.

The Verification Report should provide confirmation that all measures outlined in the approved Remediation Scheme/Strategy have been successfully completed, including where appropriate, validation testing. Recommendations to discharge contaminated land conditions will only be made once the Public Protection Service has received and approved a satisfactory verification report.

## 4.4.3 Timescales and Programming

Applicants/Developers should note that an intrusive investigation and subsequent risk assessment can take up to three months to complete. This excludes sites where ground gas is an issue, as monitoring may need to be carried out for longer periods (e.g. 6-12months) to ensure adequate characterisation of the site. Therefore, sufficient time should be set aside in the development programme to enable the necessary reports and drawings to be prepared and allow a period of time for consultation with the Public Protection Service and for the Public Protection Service to consult with other organisations, such as the EA or HPA. For this reason, Applicants/Developers should allow a minimum period of 21 days from the date of document submission for completion of the consultation or approval. It should also be noted that remediation works may need to commence/complete in advance of the development and allowances should be made for this when determining timescales.

Where Applicants/Developers proceed from one stage to the next without first obtaining the approval of the LPA for submitted documentation, they do so at their own risk. If the information submitted proves to be inadequate, the Applicant/Developer will be responsible for re-submitting adequate documentation and undertaking any additional site investigation or remediation works subsequently shown to be necessary. This could have a major cost implication, especially if construction work has already commenced and has to be aborted to facilitate the additional investigative work. If the LPA, or Public Protection Service become aware that the Applicant/Developer has not submitted the necessary documentation to comply with the condition, enforcement action may be taken, potentially resulting a Stop Notice being served on the Applicant/Developer.

#### **4.5 Access to Environmental Information**

Information held by the Council is governed by the requirements of the Environmental Information Regulations (2004), Freedom of Information Act (2000) and Data Protection Act (1998) and can be accessed in one of two ways:

- Environmental Search Service: The Public Protection Service offers an Environmental Search Service, which can provide additional information to companies or individuals wishing to determine if a particular site or parcel of land is affected by contamination. There are several different types of search available. Details of search types and associated charges can be obtained by emailing contaminatedland@warrington.gov.uk and requesting information about the Environmental Search Service, or by contacting an officer directly;
- Viewing of Planning Documents by Appointment: The Public Protection Service holds a large amount of historic and current information about contaminated land within the Borough. In addition, the Council also holds copies of all contaminated land investigation and risk assessment reports submitted under the planning system. Companies or individuals can view information or reports at Council Offices by prior appointment. Intellectual property rights are required to be respected and duplicate copies of material subject to copyright laws will not be made or allowed. For further details or to make an appointment, contact contaminatedland@warrington.gov.uk.

The Town and Country Planning Act also requires that all information submitted in support of a planning application be placed on the Planning Register and be publicly available, unless certain restrictive circumstances apply. It should therefore be routinely assumed that all information submitted to the LPA will be available for public inspection via the website.

## 4.6 Technical Guidance for Consultants/Specialists

The complexity of contaminated land technical guidance, coupled with individual site variability, makes it difficult to produce comprehensive guidance applicable to every situation. However, when assessing the adequacy of a site investigation, a number of common problems frequently arise. These generally relate to areas where technical guidance may be complex or incomplete. In an attempt to minimise the occurrence of these problems, the Public Protection Service apply consistent criteria for certain technical aspects of a site investigation. This section is intended to highlight recurring problem areas and key points that are of particular importance.

## 4.6.1 Generic Assessment Criteria/Screening Vales

The Department for Environment, Food and Rural Affairs (Defra) formally withdrew the 1987 ICRCL trigger and action values in December 2002, following the implementation of the Contaminated Land Exposure Assessment Model (CLEA) and associated publication of the Soil Guideline Values (SGVs). In 2008, the CLEA UK model and the SGVs were withdrawn by Defra and a revised CLEA model known as CLEA 1.04 was launched. Several versions of the CLEA model subsequent to 1.04 have been introduced since 2008, with the current version being 1.06. This is available for download on the EA website. The Public Protection Service would expect all future site investigations and assessments to make no reference to the withdrawn standards.

GQRA and DQRA should now be carried out using assessment criteria derived via the new CLEA model (1.06). Where site-specific target levels are used they should be calculated based on suitable and reasonable assumptions as well as current best practice and associated briefing notes and guidance. Reference should also be made to statistical analysis of the resulting data from the intrusive investigation.

The CLR7 report 'Assessment of Risks to Human Health from Land Contamination: An Overview of the Development of Soil Guideline Values and Related Research' was withdrawn in 2008. Consultants, or suitably qualified persons appointed by the Developer / Applicant should adopt a suitable statistical approach (when assessing site investigation data). The CIEH and CL:AIRE set out in the guidance document 'Guidance on Comparing Soil Contamination Data with a Critical Concentration' an approach that is a useful starting point for statistically assessing data.

It is usually inappropriate to apply quantitative criteria developed outside the UK, to UK sites, as assumptions underlying the models used to derive these criteria often reflect different behaviour patterns, local soil types or other technical factors. Where other contaminated land quantitative criteria are used e.g. Dutch or USEPA, the reasoning behind not using current UK guidance should be given and their use should be fully justified and referenced within the report. This would be expected to include a discussion of the CSM and assumptions used to derive the generic criteria together with an assessment of the underpinning toxicological data.

Given the uncertainty regarding GACs, new generic screening values were published in 2009 by the CIEH and Land Quality Management Limited (LQM). These GACs were developed for a selection of end uses and when combined with the remaining Soil Guideline Values (SGVs), cover a wide range of potential contaminants. To this end, the CIEH/LQM GACs are now widely used in contaminated land risk assessments and are accepted by many local authority regulators. Further details regarding these GAC can be found in the CIEH/LQM guidance document 'Generic Assessment Criteria for Human Health Risk Assessment (Second Edition)'.

## 4.6.2 Ground Gas Risk Assessment

If the development is situated within 250m of a ground gas generation source, or is suspected of having the potential to generate ground gas, potential risk should be assessed and, if required, appropriate gas protection measures should be incorporated into the development design.

Guidance for assessment of the risks associated with the presence of hazardous ground gases on or in the vicinity of development sites can be found in:

- CIRIA guidance C665 'Assessing Risks Posed by Hazardous Gas Ground Gases to Buildings';
- BRE guidance Report 414 'Protective Measures for Housing on Gas Contaminated Land';
- National House Building Council (NHBC) guidance on 'Evaluation of Development Proposals on Sites Where Methane and Carbon Dioxide Are Present;
- British Standard guidance BS8485 'Code of Practice for the Characterisation and Remediation of Ground Gas in Affected Developments';
- Chartered Institute of Environmental Health (CIEH) guidance 'Local Authority Guide to Ground Gas'.

The guidance in CIRIA C665 sets out a phased, risk-based approach to ground gas assessment.

If the PRA identifies a potential source of ground gas that may affect the site, gas monitoring is required. Measurements should be taken from suitably installed and equipped monitoring boreholes and the details and locations of the boreholes should be supplied. The spacing and number of the monitoring wells required at a site depends on the generating potential of the gas source and the sensitivity of the end-use (housing being the most sensitive). The response zone of a monitoring installation should be designed to intersect the suspected sources of gas. Spike testing and data obtained from trial pit installations are not acceptable for gas risk assessment.

The number of monitoring visits required and the length of time for which monitoring should be carried out, depends on the gas generation potential of the gas source and sensitivity of the proposed end-use. For example, a site which is to be developed for residential properties with gardens, but is situated over a very low gas generation source (e.g. Made Ground greater than 1 metre thick) may require a minimum of 6 visits over 3 months, while residential with housing over a very high gas generation source (e.g. a modern landfill) may require 24 visits over 24 months. In order to obtain any worthwhile data to use in a risk assessment, at least two readings over the monitoring period should cover the 'worst case' scenario (i.e. low and falling atmospheric pressure, ideally below 1000 millibars) and different weather conditions, such as rainfall, frost and dry.

Monitoring should be undertaken in accordance with the CIRIA C665 guidance and where deeper Made Ground (greater than 1 metre deep), organic material or hydrocarbon spills are unexpectedly encountered, additional monitoring should be considered.

Once sufficient gas monitoring data has been obtained, a ground gas risk assessment should be carried out to determine if gas protection measures are required. C665 sets out two risk assessment methodologies:

- Modified Wilson and Card methodology (for use on all development types except low rise houses with gardens). The gas regime characteristic situation determines the number and type of protection measures required;
- NHBC Traffic Light System, proposed by Boyle and Witherington (for use on developments with conventional low-rise housing with gardens with block and beam floor and ventilated under floor void only). Gas results are initially compared to Typical Maximum Concentrations and then to Gas Screening Values if the Typical Maximum Concentrations are exceeded. The worst-case protection measures are adopted.

# 4.6.3 Cover Systems

The main function of an engineered cover system should be to provide a safe and permanent barrier between any 'significant' levels of buried contamination and residents/site users.

Any sub-soil or top-soil imported on to a proposed development site should be from a Greenfield source or certified remediated source. Soil of unknown origin or from a Brownfield site may still be accepted, but its use is actively discouraged by the Public Protection Service. Any proposed importation of material from a Brownfield source should be accompanied by substantial justification and will be subject to more stringent validation and screening prior to import.

Documentary evidence should always be sought when importing fill materials. Evidence verifying the source will assist in validation of the suitability of the material for use on-site. This information may inform the type of chemical testing carried out on the material and will, in-part, determine the frequency of testing to be implemented to ensure that it is suitable for use.

If the source of the material proposed for import is unknown, the Public Protection Service may refuse import, with the onus of responsibility being with the Applicant/Developer to prove suitability for use. Where site-won materials are to be re-used, the source/origin will be that of the subject, i.e. Greenfield, Brownfield or Remediated.

#### **Chemical Analysis**

Where possible, the geographical source/origin of material considered for importation should be known and confirmed by formal certification and/or reliable anecdotal evidence. Specific reference should be made to source origin, i.e. Greenfield, Brownfield or Remediated.

Chemical analysis should be provided for top-soils and sub-soils considered for importation, regardless of the proposed end-use, (i.e. soft-landscaping, garden areas) Chemical testing of proposed imported and site-won materials proposed for re-use should comprise a standard suite of contaminants including metals; metalloids; speciated TPHs; speciated PAHs; and an Asbestos screen.

Regarding Chromium analysis specifically, data should be provided for Total Chromium concentrations. This is due to the inherent difficulties encountered when analysing for the hexavalent form only and that current analytical methodologies favour a guideline value for Total Chromium rather than speciated results.

#### **Chemical Standards**

Top-soil and/or sub-soil imported onto site may be subject to chemical testing prior to import to ensure the material is chemically suitable for use. This is not mandatory and is recommended entirely for the benefit of the applicant to ensure the quality of the material purchased. However, chemical testing to prove suitability for use should then be carried out once the material has been imported to site, ie: in-situ.

When screening imported (or site-won) fill materials for chemical suitability, GAC used to determine threshold concentrations preferred by the Public Protection Service include:

- Existing Soil Guideline Values (SGVs);
- Atkins AtRisk<sup>SOIL</sup> 2009 Values;
- CIEH/LQM 2009 Values;

Other generic screening values will be accepted by the Public Protection Service, providing the values are fully justified. In the absence of suitable GACs, Site Specific Assessment Criteria (SSACs) may need to be generated.

Top-soil or sub-soil imported to site should adhere to the appropriate organic content, pH value, nutrient content and Carbon: Nitrogen ratio as described in the British Standard Institution (2007) guidance document BS3882 *Specification for Top-soil and Requirements for Use guidance document*.

#### Physical Composition

The term 'imported fill material' refers to any soil, sand or aggregate-based material brought to site for use within the proposed development. This can include both top-soils and sub-soils and any intended end use, with special consideration given to materials destined for proposed garden areas and/or soft-landscaping. In terms of composition, the imported material should be suitable for the intended end use. Materials imported to site will fall into four broad categories:

1. **Natural top-soil**: Upper layer of an in-situ soil profile, usually darker in colour and more fertile than the layer below (sub-soil), and which is a product of natural chemical, physical, biological and environmental processes;

- 2. **Manufactured top-soil**: Also known as 'recycled top-soil'. This is material produced by combining mineral matter and organic matter (and, where appropriate, fertiliser and lime), and which provides the same function as top-soil;
- Sub-soils: Soil layer extending between the top-soil and the little-weathered material below, or material that functions as sub-soil in a constructed soil in a landscaping project on to which top-soil can be spread. Sub-soil usually has a lower concentration of organic matter and available plant nutrients than top-soil;
- 4. **Other**: All other fill material types imported to site other than those listed above.

Top-soil or sub-soil imported to site should adhere to the appropriate texture, structure and electrical conductivity as described in the British Standard BS3882.

Regarding manufactured top-soil, the Public Protection Service strongly discourages the use of such material and will only accept material of this type being imported to site if extenuating circumstances can be justified. This is due to the fact that information pertaining to the origin and/or composition of the material is often unknown, unavailable or unreliable. Frequently the organic content of this fill type is formed from sewage sludge or other high-organic-content wastes and as such, the Council deems its use within sensitive end uses (such as garden areas and/or soft-landscaping) to be an unnecessary potential risk.

#### Sampling Ratios & Statistics

As stated previously/above, all fill materials intended for import to site, as well as some site-won materials proposed for re-use, are required to be subject to validation testing to ensure their chemical suitability for use. This is usually in the form of a series of chemical tests performed on a number of soil samples taken from the imported material intended for use on-site.

This validation should be performed at an appropriate frequency for the volume of material imported and must test for a suitable suite of chemical determinands. Details of suitable suites of chemical to test for are given above.

Required sampling frequencies are dictated by the source of the fill material intended for (re)use on-site:

- 1. Material of Greenfield origin: This is material sourced from a recognised Greenfield site (ie: land which has not previously been subject to development or industrial use) and supporting documentation is available to corroborate this fact;
- 2. Material of Brownfield, remediated or unknown origin: This is material sourced from either:
  - A Brownfield site (i.e. that which has been previously-developed or subject to industrial use);
  - A remediated site (i.e. that which has previously been a Brownfield site, but has been remediated to the satisfaction of the LPA);
  - An unknown site (i.e. no supporting information/certification is available to corroborate origin/quality/composition of the imported fill material).

Recommended sampling frequencies are also dictated by the proposed end use of the fill material intended for (re)use on-site:

- Material intended for garden areas: This is fill material which is to be used within areas of the proposed development described as 'gardens'. Typically, any area of private lawns, soft-landscaping or planting areas, where there is the potential to grow vegetables and/or for prolonged exposure of human health receptors to imported fill materials.
- Material intended for soft-landscaping: This is fill material which is to be used within areas of the proposed development described as soft-landscaping, common or public open spaces. Typically, any area of public lawns, soft-landscaping or planting areas, where there is no potential to grow

vegetables and the potential for prolonged exposure of human health receptors to imported fill materials is more limited.

Material intended for other areas of the site: This is fill material which is to be used in or on any
area of the proposed development site other than those listed above. This may include beneath
building footprints, carriageways, footways or car-parking areas.

Recommended sampling frequencies (per cubic metre) attracted by the varying sources and/or intended end uses are presented in Table 4.3:

Intended End-Use:	SOURCE / ORIGIN OF FILL MATERIAL:			
	GREENFIELD	REMEDIATED	BROWNFIELD	UNKNOWN
GARDENS	1:250 m <sup>3</sup>	1:100 m <sup>3</sup>	1:50 m <sup>3</sup>	1:50 m <sup>3</sup>
SOFT-LANDSCAPING	1:250 m <sup>3</sup>	1:150 m³	1:150 m <sup>3</sup>	1:150 m <sup>3</sup>
OTHER	1:250 m³	1:250 m <sup>3</sup>	1:250 m <sup>3</sup>	1:250 m <sup>3</sup>

Table 4.3: Sampling frequencies recommended by the Public Protection Service for imported or site-won fill materials

In the interest of statistical confidence, a minimum of at three samples per soil type should be collected and samples identified as outliers will require further sampling. All statistical analysis and calculation should be carried out in accordance with CIEH/CL:AIRE *Guidance on Comparing Soil Contamination Data with a Critical Concentration* document.

#### Depth of Growth Mediums & Planting

Typically, the depth of sub-soil should be at least double the depth of top-soil installed within the cover system or capping layer, although topsoil depth shall not normally exceed 300 mm as per British Standard BS3882. Total minimum rooting depth for planting (that is, top-soil and sub-soil combined) within growth mediums, whether gardens, soft-landscaping or common areas are described in British Standard BS3882 and is summarised in Table 4.4:

Total		Vegetation Type:			
Rooting	GRASS	PLANTS	SHRUBS	TREES	
Depth:	450 mm	450 mm	600 mm	900 mm	

Table 4.4: Idealised total growth medium rooting depths for various vegetation types

#### Depth of Cover Systems & Capping Layers

Where used as a capping layer of cover system, fill materials should be installed at prescribed depths according to their soil type and the role they play within the cover system. As cover systems are almost always site-specific, the various depth of fill can vary greatly depending on how complex or engineered the cover system is to be, but there are a few minimum standards to be observed, which are described below.

Typical cover system design requires a capillary break layer at its base, which is then overlain by various depths/types of fill material. These individual layers working in unison form the cover system or capping layer.

The minimum acceptable total depth for fill materials (including the break layer) within private garden areas should be 600 mm. This figure is recommended and has been adopted for the following reasons:

- 1. Root systems for shrubs are typically up to 600 mm;
- 2. Excavations are unlikely to be deeper than 600 mm in typical gardening activities;
- 3. Bio-turbation (soil-mixing by biological organisms) is typically limited to the top 600 mm of the soil profile;
- 4. Excavations by children or pets are unlikely to exceed 600 mm.

The minimum acceptable total depth for fill materials (including the break layer) within areas of soft-landscaping, common areas or public open spaces is 450 mm. This relaxation of cover depth is designed to reflect the reduced risk afforded by diminished exposure of human health receptors to potentially contaminated soils within these public areas via direct contact (dermal, ingestion, inhalation).

#### On-site or Off-site Validation

Fill material imported onto site should be stored in a designated area, which is clearly identified on an appropriate scale plan. Stockpile management protocols consistent with best practice apply.

The Public Protection Service does not routinely accept off-site validation of fill material (whether this is top-soil, sub-soil or other substrate), as this often results in chemical testing of different material to that actually imported to site. It is therefore difficult to prove the exact chemical nature of the material eventually imported, as off-site validation tends to involve composite samples taken from a 'typical batch' of the material intended for import. As such, validation testing of imported fill materials should be carried out in-situ, after materials have been imported to site.

#### **Documentary Evidence**

- Chemical analysis: All raw laboratory data should be submitted with the analytical test certificate;
- **Statistical analysis of datasets**: Calculations in line with CIEH/CL:AIRE guidance should be provided;
- **Photographic evidence**: Photographs of installed remedial measures (of any type) are required. Photographic evidence should be representative and where necessary, include a scale/ruler. This is of particular importance when photographing cover depths to verify the agreed depth of cover has been installed;
- **Plans**: Showing pertinent information relating to remediation, such as stockpile locations, areas subject to remedial measures or areas of further investigation;
- **Import/export data**: Pertinent data relating to fill materials/wastes, including volumetric data (ie: how much was imported to site), source data (ie: where the material came from) and waste transfer data (where applicable).

#### **Obtaining Representative Samples**

All sampling strategies should be designed to provide data that is representative of the site conditions as a whole. Sampling should be undertaken in accordance with recognised sample collection methodology and guidance, with reference made to recommendations within the British Standard BS10175 guidance document. It is essential to derive a CSM using the information obtained from the PRA to target possible sources of contamination and also to ensure that an appropriate suite of analysis is performed. Justification for the chosen sampling regime and analysis suite should be clearly set out in the site investigation report.

A suitably accredited laboratory should be used to undertake analysis of samples. The site investigation should include a detailed plan showing the location of sampling points and accreditation details of the laboratory used, together with summary tables of results. A full set of results, including exploratory hole logs, should be submitted.

#### 4.6.4 Japanese Knotweed

Neither the EA nor the Council are responsible for controlling Japanese knotweed, other than that growing on Council-owned land. Managing knotweed is the responsibility of the landowner of a site.

#### **Further Information:**

Link to Environment Agency Japanese Knotweed Guidance:

http://www.environment-agency.gov.uk/homeandleisure/wildlife/31364.aspx

Link to Environment Agency Invasive Species Guidance:

http://www.environment-agency.gov.uk/homeandleisure/wildlife/31350.aspx

#### **Contact Details:**

**Environment Agency** 

Telephone: 08708 506 506 (Mon-Fri, 8am - 6pm)

E-mail: enquiries@environment-agency.gov.uk

Postal Address: National Customer Contact Centre PO Box 544 Rotherham S60 1BY

#### 4.6.5 Asbestos

There are three issues related to Asbestos that may require the applicant to contact the Public Protection Service:

- 1. Dealing with Asbestos as part of a contaminated land condition or in relation to the planning process;
- 2. Members of the public concerned about asbestos in their homes, in/on neighbours property or on current developments close by, and;
- 3. Members of the public working with, and/or being exposed to asbestos in their workplace.

#### **Further Information:**

#### Asbestos and Contaminated Land

If the presence of asbestos within made ground is suspected or within a building due for demolition then contact the Public Protection Service on Tel: 01925 442 653

#### Asbestos, Neighbours and Current Developments

If the issue is with members of the public having concerns with their house, neighbours or building sites dealing with asbestos sheeting or similar, then please contact Council Contact Centre on Tel: 01925 443 000

#### Asbestos at Work

If the issue is work related then please review the Health and Safety Executive (HSE) website at the following link for information and contact details: http://www.hse.gov.uk/asbestos/

## 4.7 References

- 1. Department of Environment, Food & Rural Affairs/Environment Agency, 2004, CLR Report No 11, Model Procedures for the Management of Land Contamination;
- British Standards Institute, 2011, BS10175, Investigation of Potentially Contaminated Sites Code of Practice;
- 3. Department of the Environment, 1994, CLR Report No 3, Documentary Research on Industrial Sites;
- 4. Department of the Environment, 1994, CLR Report No 2, Guidance on Preliminary Site Inspection of Contaminated Land;
- Chartered Institute of Environmental Health (CIEH) / Contaminated Land: Applications in Real Environments (CL:AIRE), 2008, Guidance on Comparing Soil Contamination Data with a Critical Concentration;
- 6. CIRIA, C665, 2007, Assessing risks posed by hazardous ground gases to buildings.
- 7. Building Research Establishment 414 (2001) Protective Measures for Housing on Gas Contaminated Land;
- 8. National House Building Council (NHBC), Report Edition No. 4 (March 2007) Guidance on Evaluation of Development Proposals on Sites where Methane and Carbon Dioxide are present;
- 9. British Standards Institute BS8485 (2007) Code of practice for the characterisation and remediation of ground gas in affected development, Draft for Public Comment;
- 10. Chartered Institute of Environmental Health (2008) Local Authority Guide to Ground Gas;
- 11. British Standards Institute BS3882 (2007) Specification for Topsoil and Requirements for Use;
- 12. Chartered Institute of Environmental Health (CIEH) and Land Quality Management Limited (2009) Assessment Criteria for Human Health Risk Assessment (Second Edition).
- 13. Environment Agency (2010) Guiding Principles for Land Contamination.

## **Contaminated Land**

#### 4.8 Glossary

Borehole - A hole drilled into the ground in order to obtain samples

**Brownfield Sites** - A term generally used to describe previously developed land, which may or may not be contaminated

**Conceptual model** - A representation of the characteristics of the site in diagrammatic or written form that shows the possible relationships between contaminants, pathways and receptors.

**Contaminant** - A substance that is in, on or under the land and that has the potential to cause harm or to cause pollution of controlled waters.

**Controlled waters** - Defined by Water Resources Act 1991, Part III, section 104, which includes all groundwater, inland waters, estuaries and coastal water to three nautical miles from the shore.

**Desk study** - Interpretation of historical, archival and current information to establish where previous activities were located, where areas or zones that contain distinct and different types of contamination may be expected to occur, and to understand the environmental setting of the site in terms of pathways and receptors.

**Detailed quantitative risk assessment** - Risk assessment carried out using detailed site-specific information to estimate risk or to develop site-specific assessment criteria.

**Generic assessment criteria** - Criteria derived using generic assumptions about the characteristics and behaviour of sources, pathways and receptors. These assumptions will be protective in a range of defined conditions.

**Generic quantitative risk assessment** - Risk assessment carried out using generic assumptions to estimate risk or to develop generic assessment criteria.

**Ground gas** - A general term to include all gases (i.e. including VOCs or vapours) occurring and generated within the ground whether from made ground or natural deposits

Hazard - A property or situation that in particular circumstances could lead to harm or pollution.

**Land affected by contamination** - Land that might have contamination present which may, or may not; meet the statutory definition of contaminated land.

**Made ground** - Ground where there are deposits that have not been formed through natural geological processes. These may comprise a combination of natural deposits together with products and materials and waste produced by man.

**Maintenance** - Activities carried out to ensure that remediation performs as required over a specified design life.

**MCERTS** - The Monitoring Certification Scheme is a quality assurance scheme for providers of monitoring services, equipment and systems that is administered by the Environment Agency and accredited by UKAS.

**Monitoring** - A continuous or regular periodic check to determine the ongoing nature and performance of remediation, which includes measurements undertaken for compliance purposes and those undertaken to assess performance.

Pathway - A route or means by which a receptor could be, or is exposed to, or affected by a contaminant.

**Pollutant linkage** - The relationship between a contaminant, pathway and receptor.

**Preliminary risk assessment** - First tier of risk assessment that develops the initial conceptual model of the site and establishes whether or not there are any potentially unacceptable risks.

**Receptor** - In general terms, something that could be adversely affected by a contaminant, such as people, an ecological system, property or a water body.

**Remediation** - Action taken to prevent or minimise, or remedy or mitigate the effects of any identified unacceptable risks.

**Remediation strategy** - A plan that involves one or more remediation options to reduce or control the risks from all the relevant pollutant linkages associated with the site.

**Response zone** - The perforated section of a standpipe/borehole which allows gas in the unsaturated zone to enter a standpipe

**Risk** - A combination of the probability, or frequency of occurrence of a defined hazard and the magnitude of the consequences of the occurrence.

**Risk assessment** - The formal process of identifying, assessing and evaluating the health and environmental risks that may be associated with a hazard.

**Sampling** - Collection of a portion of material for experimentation such that the material taken is representative of the whole

Sensitive receptors - Receptors which are more likely to be affected by a hazard

Site reconnaissance - A walk-over survey of the site.

**Site investigation** - An intrusive investigation, which involves the collection and analysis of soil, surface water, groundwater, soil gas or other media as a means of informing the conceptual model and the risk assessment. This investigation may be undertaken in a single or a number of successive stages.

**Site-specific assessment criteria/target values** - Values for concentrations of contaminants that have been derived using detailed site-specific information on the characteristics and behaviour of contaminants, pathways and receptors and that correspond to relevant criteria in relation to harm or pollution for deciding whether there is an unacceptable risk.

**Verification** - The process of demonstrating that the risk has been reduced to meet remediation criteria and objectives based on a quantitative assessment of remediation performance.

**Verification report** - Provides a complete record of all remediation activities on site and the data collected as identified in the verification plan to support compliance with agreed remediation objectives and criteria.

## Contaminated Land

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## **5 Light Pollution**

## **5.1 Introduction**

The problems and issues associated with the provision of outdoor lighting are becoming more widely recognised. Obtrusive lighting may cause an environmental and intrusive visual nuisance arising predominantly from glare and light spillage. Light pollution in the countryside can lead to the illusion of a suburban environment with the sense of distinctiveness associated with the countryside being lost.

## 5.1.1 What is Light Pollution?

Light pollution is the term used to describe unwanted light from artificial light sources. Light pollution can occur as:

- Sky Glow the orange glow visible around urban areas resulting from the scattering of artificial light by dust particles and water droplets in the sky;
- Glare the uncomfortable brightness of a light source when viewed against a dark sky;
- Light Trespass light spillage beyond the boundary of the property on which a light is located.

#### Excessive artificial lighting

There is growing recognition of the potential problems arising from artificial light within the environment. Problems can arise from:

- Illuminated shop windows and advertising signs left on overnight;
- Badly designed lighting in car parks and shopping centres;
- Domestic security lighting which is poorly angled thereby flooding the neighbourhood in light and accentuating the darkness of the surrounding areas;
- Badly floodlit sports facilities, such as golf driving ranges, or motorway service areas which bathe rural areas in brightness;
- New housing estates or shopping complexes with discordant lighting, often much more intrusive than neighbouring lighting; and
- Excessive lighting of churches and other architecturally interesting buildings.

By establishing the objectives of any lighting scheme and agreeing guidelines a compromise can be met to reduce the impact of any scheme and potentially save energy and expense to the Applicant/Developer.

## 5.2 Light & Planning

## **5.2.1 Will a Lighting Scheme Require Planning Permission?**

Maintenance, improvement or other alterations to any building works, which affect only the interior of the building or do not materially affect the external appearance of the building, do not require planning permission (unless the building is listed, in which case listed building consent may be required for both internal and external works). Most work involving lighting particularly of the householder 'DIY' type, will fall within this category e.g. home security lights. However, the installation of a lighting scheme of such nature and scale that it would represent an engineering operation and typically be undertaken by specialist lighting engineers could be deemed "development" and as such, is likely to require planning permission.

Large-scale lighting installations such as the floodlighting of a football stadium or public tennis courts are clearly a form of development, which comes within this statutory definition and would require planning permission. Listed building consent is required for lighting schemes if it is deemed that the character of the building would be materially affected by the lighting. Advice should be sought from the LPA prior to installation.

The Council would advise prospective Developers/Applicants to check with the LPA before installing any lighting scheme. Developers/Applicants are encouraged to submit details of lighting schemes (nature and extent), including light scatter diagrams, as part of the planning application in order to demonstrate that the proposed scheme is appropriate in terms of its purpose and setting. In so doing, the LPA aims to minimise potential pollution from glare and spillage to neighbouring properties, roads and rural areas. It may be necessary to condition a planning approval to allow the LPA to monitor the development and enforce the condition if necessary, this is discussed in Section 5.3.3.

## 5.2.2 Determining of Planning Applications

The Council has identified a number of factors that will be taken into consideration when determining of planning applications for proposals that include lighting. These are:

#### 1. An Assessment of the Need for Lighting

The LPA will request the applicant assess the need for the lighting scheme proposed.

#### 2. The Location of the Proposal in Relation to Neighbouring Uses

The LPA has identified the following environmental zones against which impacts of external artificial lighting will be judged:

Zone	Surrounding	Lighting Environment	Examples
E1	Natural	Intrinsically dark	National Parks, Areas of Outstanding Natural Beauty etc.
E2	Rural	Low district brightness	Village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Small town centres or suburban locations
E4	Urban	High district brightness	Town/city centres with high levels of night-time activity

The Institution of Lighting Professionals has provided guidance on acceptable levels of illumination for specific environmental zones, which relate to the areas identified above.

The LPA recommends that any applications for lighting schemes to adhere to the relevant guidance for the appropriate environmental zone in the *Institute of Lighting Professionals: Guidance Notes for the Reduction of Obtrusive Light GN01:2011* 

#### 3. The Nature of the Use of the Lighting Proposed

For all lighting proposals, the Applicant/Developer should identify the purpose and use of the lights, the potential users of the lighting scheme (e.g. for recreation facilities) and the hours the lights will be in operation (summer-time and winter-time). The hours of operation will be expected to be kept to a working minimum and Applicants/Developer should show this in their application. Keeping the use of the lighting to a minimum will reduce the impact the lighting may have on the environment.

#### 4. The Design of the Lighting Proposed

To achieve the necessary minimisation of obtrusive light the Applicant/Developer should adhere to the following general principles taken from the Institute of Lighting Professionals, Guidance Notes for the Reduction of Obtrusive Light, GN01: 2011.

- 5
- 1. Lighting is directed downwards wherever possible to illuminate its target. If there is no alternative to up lighting, then the use of shields and baffles will help reduce spill light to a minimum. Up lighting is a particularly bad form of obtrusive light and contributes to sky glow;
- 2. Lighting is designed so as to minimise the spread of light near to, or above the horizontal. Again any light that shines above the horizontal line of the light adds to the sky glow effect;
- 3. Lighting should be designed to the correct standard for the task and should not over light. 'Over' lighting is a cause of obtrusive light and also represents a waste of money and energy;
- 4. The main beam angle of all lights proposed directed towards any potential observer is kept below 70 degrees. It should be noted that the higher the mounting height, the lower the main beam angle could be. This will help reduce the effect of glare and light spill on neighbouring dwellings, passing motorists, pedestrians, etc.;
- 5. Lighting should be directed to minimise and preferably avoid light spillage onto neighbouring properties;
- 6. Wherever possible use floodlights with asymmetric beams that permit the front glazing to be kept at or near parallel to the surface being lit;
- 7. The lights used should be the most efficient taking into account cost, energy use, colour rendering and the purpose of the lighting scheme required. All lighting schemes should meet British Standards.

## 5.2.3 Planning Conditions

Where the LPA grants planning consent for a development proposal it may impose conditions controlling the lighting scheme provided. These may include:

- Limiting the time of use of the lighting;
- Limiting the light levels to a designed uniformity;
- Limiting the use of lighting schemes to identified uses or users;
- Specifying lamps, luminaires and columns;
- Specifying the need for full horizontal cut-off;
- The design, height and position/angle of the lighting;
- The retention of screening vegetation;
- The use of planting and bunding to contain lighting effects;
- The future maintenance of the lighting schemes and post-installation checks in accordance with the original design and planning approval; and
- In exceptional circumstances, the granting of temporary planning permission to enable a review of lighting impacts after installation.

These conditions will be applied as necessary by the LPA to help reduce obtrusive light from new proposals, particularly glare and spillage, from areas of wildlife importance, open countryside and residential amenity.

These conditions may be subject to change dependant on any updates in guidance.

## 5.3 What Information is Required?

Any proposal for artificial lighting should be accompanied by that information normally required for any other planning proposal and additionally the information set out below.

- A statement setting out why a lighting scheme is required, the proposed users, and the frequency and length of use in terms of hours of illumination;
- A site survey showing the area to be lit relative to the surrounding area, the existing landscape features together with proposed landscaping features to mitigate the impacts of the proposed lighting;
- A technical report prepared by a qualified Lighting Engineer or lighting company setting out the type of lights, performance, height and spacing of lighting columns. The light levels to be achieved over the intended area, at the site boundaries and, for large schemes, 50m outside of the boundary of the site should be superimposed on a map of the site and its surrounding area.

Any proposal for the display of illuminated advertisements should be accompanied by that information normally required for any other planning proposal and additionally the information set out below.

- Details of the proposed location, positioning and dimensions of the sign face;
- The sign face maximum luminance in candelas per square metres;
- The number, size and type of light sources and details of the sign face materials;
- The type of illumination internal or external; static or intermittent;
- Details of the make and catalogue number of any luminaires/floodlights;
- Size, type and number of lamps fitted within any luminaire or floodlight;
- The mounting height of the luminaires/floodlights specified;
- The location and orientation of the luminaires/floodlights.

Provision of this information may require professional advice and potential advisors can be found in Section 5.8. For significant lighting schemes professional advice from a lighting manufacturer or from a qualified lighting engineer is recommended.

## **5.3.1 Requirements for Specific Lighting Schemes**

A list of land uses/developments are contained below with the requirements set out for each one. These extracts have been taken from the Department of the Environment and the Countryside Commission publication, *Lighting in the Countryside: Towards Good Practice, 1997.* 

#### A. Advertisements

- Acceptable lighting levels for illuminated signs are given in 'Brightness of Illuminated Advertisements' – Technical Report Number 5 produced by the Institute of lighting Engineers (now Institute of Lighting Professionals). All advertisement applications should conform to the recommendations set out in this report;
- Signs should not positioned where they may affect the clarity of traffic signs or disturb those living close by;
- Position promotional lighting/signs so that they are not visible from the open rural areas i.e. concentrate at public.

N.B: Planning permission is not required for certain categories of illuminated advertisements displayed on business premises. The Town and Country Planning (Control of Advertisement) Regulations 1992 states luminance values and criteria for such proposals.

#### B. Security Lighting

- Passive infrared detectors should control lighting. Avoid sensors that can be tripped by road or footway users. Lamps of higher intensity create too much light, more glare and darker shadows. For all-night lighting at low brightness use a compact fluorescent porch light of 9W (600 lumen);
- Lighting should be directed downwards to illuminate its target and mounted below the property boundary height so as to reduce light spill;
- Develop an integrated approach to security lighting, balancing levels of light with other lighting in and around the site to avoid glare and light spill as well as dark spots.

#### C. Commercial & Industrial Developments

- Avoid use of lights simply to create a 'presence' at night;
- Concentrate lights where they are needed and establish a clear hierarchy, with minimum lighting around the outer, perimeter of the complex.

#### D. Decorative Building Lighting

- Keep lighting understated and aim to enhance rather than swamp architectural character;
- Ensure light is directed only at the structure, resiting lights and using baffles and shielding where possible;

- Minimise up-lighting where it distorts architectural detailing;
- Consider timing of lighting to maximise the visual beauty of the building to the public at night-time but not to floodlight the building at dusk or nightfall;
- Consider the choice of surface materials being illuminated, the reflectance value may be high causing reflected light to generate excessive sky glow.

#### E. Agricultural/Horticultural Uses

- Mount lights below the roof height of buildings and direct light downwards, to where it is needed reducing light spillage;
- Avoid use of sensors that can be tripped by animals;
- As far as possible, position lights so that they are shielded by buildings and are not visible from the surrounding countryside;
- The potential impact of light from glasshouses will be considered as part of the planning application.

#### F. Lighting railway stations & Road/Rail Interchanges

- Design the lights for the station as a whole, balancing the need for lighting in different areas and considering the impact of light in views from the surrounding countryside;
- Concentrate on lighting to enhance the architectural character of the station building rather than on creating an 'urban' level of light on the platform and in the station forecourt;
- Direct car park and security floodlights downwards and to where the light is required.

#### G. Mineral Extraction

- Mount lights below the roof height of buildings, and perimeter fencing, and direct light downwards, to where it is required;
- Position lights so that they are shielded by buildings or permanent plant and are not visible from the surrounding rural areas;
- Avoid lights mounted on the side of the buildings that shine directly out, dazzling users of the facility.

#### H. Petrol Filling Stations

- Canopy lights should be positioned to avoid light spill from the sides of the canopy;
- Avoid the use of dish diffusers, which cause additional glare.
- Reduce lighting or avoid it during daylight hours;
- Integrate design for promotional signage with that of the canopy.
- Avoid lighting internal fascia around canopy;
- Design and position signs so that they are visible only from the carriageway and not from the surrounding landscape.

#### I. Car Parks

- Direct lighting downwards and design equipment to control levels of light spill and glare;
- Site lighting equipment carefully, making use of the backdrop provided by any existing vegetation and introducing new planting within the car park to help integrate the lighting structures and minimise the visual impact of both equipment and lighting;
- Use new hedgerows or tree planting to help minimise the impact of car park lights around the car park boundaries;
- All vegetation needs to be maintained and trimmed once it has been established otherwise it will block out the light.

All of the above lighting schemes should be balanced with securing safe and efficient operation of the proposed facility especially where external guidance expresses the need for defined illumination levels for Health & Safety reasons. Lighting installations which require higher illumination levels for Health and Safety reasons can still be designed following the spirit of the guidance from the Institute of Lighting Professionals.

#### 5.4 Technical Guidance for Consultants / Specialists

For a list of guidance documents when considering lighting schemes please refer to Section 5.9. Different development proposals will warrant more specific guidance. It is the policy of the LPA that this more specific guidance is complied with as relevant.

#### 5.4.1 Crime Prevention and Security Safety

It is assumed that a generous use of artificial lighting, whether street lighting or domestic security lighting, will reduce the risk of crime. However, studies have shown that whilst lighting can reduce the fear of crime, bright, poorly positioned, misdirected lights and security lighting can assist would-be criminals finding easy access points and can create deeply shadowed areas for concealment.

Guidance suggests "Those installing security lighting need to strike a balance between their desire to increase the security of their properties and the possible effect that unnecessarily obtrusive and glaring light, due to badly installed or designed lighting fixtures, may have on neighbours. Care should be taken to ensure that the intensity and focus of security lighting respects the amenity of others."

## **5.4.2 Floodlighting for Sports Pitches and Courts**

Regarding the placement of floodlighting for sports pitches and courts in Warrington, careful consideration will need to be given to any proposals for the provision of floodlit sports facilities in areas of special landscape value and also where they immediately adjoin housing.

New sports facilities are almost always accompanied by artificial lighting schemes. Whilst recognising the advantages that lighting can bring in making more effective use of recreational facilities, the Council is also conscious that such proposals can have an adverse environmental impact in terms of obtrusive light.

The ever increasing interest in sport has prompted many sports centres and schools to install floodlighting to enable extra activities to take place after dark. The inclusion of floodlights to upgrade sports facilities enables a pitch or court to be used during the winter evenings and provides an opportunity for the community to utilise the facilities and in doing so, will be contributing financially towards the maintenance costs.

#### Design of Floodlighting

It is recommended that Applicants/Developers should commission a professionally produced design, including light scatter diagrams that will accurately predict the performance of the scheme, both inside and outside the pitch area, before any equipment is procured. This will avoid expensive mistakes and also provide the LPA with the necessary details needed when considering the planning application.

For further technical advice regarding sports floodlighting, guidance can be obtained from the Sports Council and also the Chartered Institute of Building Services Engineers (CIBSE).

Most sporting facilities require lighting of a uniform level over the whole playing area. This is normally best provided by downward facing lights mounted on columns. The Institution of Lighting Professionals recommends that the most effective way of achieving this and preventing light spillage into surrounding areas is to use floodlights with an asymmetric beam that, while producing the main beam at around 60-70 degrees, permits the front glass to be kept horizontal. The upper limits of the beam will also need to be specified depending on circumstances, but should normally not exceed 70 degrees downward from the vertical.

Different sporting activities require different light levels on the playing surface. Sports such as hockey, with a fast moving small ball, require a much higher level of illumination than, for example, netball. It is usually the case that the higher level at which a sport is played, for example County or National standard, the higher the level of illumination required. Training or more informal use may be undertaken with a lower level of illumination. For guidance on the relevant illuminance for particular sports see the Sports Council's Fact file Two, *Floodlighting for Sport*.

Some sports facilities such as golf driving ranges present particular difficulties for floodlighting. Most sites tend to be in rural areas and have floodlights aimed either horizontally or slightly above the horizontal plane to enable players to follow the flight of the ball. These lights, which are often of considerable intensity and with a wide beam, can cause inconvenience to neighbouring properties and can be a safety hazard; particularly where dazzle affects highway users. Golf driving range lights are probably one of the most polluting forms of floodlighting in that they invariably illuminate a much larger area than is required. The only circumstance where a horizontal beam of this nature may be permitted is where the natural landform or a permanent natural or manmade landscape feature can effectively contain/attenuate the light.

Careful consideration needs to be given to the positioning and height of lighting columns if an even light distribution over the playing surface is to be achieved, whilst maintaining light spillage into adjacent property to a suitable level. Floodlighting columns may vary in height from around 5m - 25m depending upon the type of illumination required and the area to be lit. The higher the lighting columns, the easier it is to ensure that the beam is directed downwards as indicated above and to minimise light spillage to surrounding areas. A judgement in all cases will need to be made on the visual impact of the lighting columns during daylight hours as well as the impact of the floodlighting system when in use.

Floodlighting systems can utilise a number of different light sources each with its own particular characteristics in terms of colour rendering, operating costs, and the amount of glare produced. The type of light source will need to be carefully matched with the level of illumination required and the height and positioning of columns, the visual impact of which will be a material planning consideration. It is also essential that the fittings are sufficiently robust to ensure that lamps carefully aimed minimise light spillage outside the floodlit site are not knocked out of alignment by high winds or heavy snowfall.

In coming to a decision on the merits of a particular proposal, the Council will take into account the use of the facility and the likely benefits to the general public. By definition, floodlighting allows sports facilities to be used for longer hours and throughout the winter. Floodlights must be operational for long hours to justify their initial capital cost and provide for the needs of the community. The English Sports Council recommends a curfew time of 22:00hrs for floodlighting. Consideration will be given to the relationship between the use of the facility and the interests of conservation, amenity and safety. Where the impact of a proposal is considered to be unacceptable or cannot be mitigated through ameliorative measures, the protection of those recognised interests will prevail.

## 5.4.3 Advertisements

Paragraph 2 of Schedule 3, Part II of the Town and Country Planning (Control of Advertisement Regulations 2007) states that "the permitted levels of luminance for advertisements where the illuminated area is not more than 10 square metres, should be 600 candela per square metre and where the illuminated area is more than 10 square metres, 300 candela per square metre".

## 5.5 Excessive Lighting

Effective illumination should be well directed and almost invisible from a distance. The lighting scheme should not exceed that which is required for the satisfactory undertaking of the task involved.

## 5.5.1 Proper Design and Planning

It is possible to reduce many of the negative effects of lighting through proper design and planning. This can be achieved by using lighting only where and when necessary; using an appropriate strength of light; and by adjusting light fittings to direct the light to where it is required. Luminance should be

appropriate to the surroundings and character of the area as a whole. 'Over lighting' should be avoided and shields, reflectors and baffles used to help reduce light spill to a minimum. Use specifically designed equipment that once installed, minimises the spread of light above the horizontal should also be considered.

## 5.5.2 Direction of Light

Light should be directed downwards wherever possible to illuminate its target and not upwards. Many floodlit buildings are lit from the ground with the light beams pointing into the sky. This often leads to columns of stray light pointing up into the sky creating vast amounts of light pollution and wasting energy. Consideration should be given to providing lighting that does not glare on approach and which places light onto the ground and not into the sky where it is wasted. In other cases, simply lowering the angle of the beam will stop light from overshooting the building into the sky. To ensure glare is kept to a minimum, the main beam of all lights directed towards any potential observer should be kept below 70°. It should be noted that the higher the mounting height, for the light source the lower the main beam angle can be. In places with low ambient light, glare can be very obtrusive and extra care should be taken in positioning and aiming light sources. Wherever possible, floodlights with asymmetric beams that permit the front glazing should be kept at or near parallel to the surface being lit.

#### 5.5.3 Amount of Light

Rural lighting should be kept to a minimum necessary for safety. Highway authorities should be encouraged to apply this principle when building new roads or bypasses in the open countryside or upgrading existing installations with the use of low energy, light efficient fittings. Consideration should be given to taken where and when lights are activated.

#### 5.5.4 Sensor Switches

For domestic and small-scale security lighting there are two options: (1) The use of 'Passive Infra-Red Sensors' (PIR); (2) All-night lighting at a level of low brightness. If correctly aligned and installed, a PIR Sensor that switches on lighting when an intruder is detected, often acts as a greater deterrent than permanently floodlit areas, which allow the potential intruder to look for weaknesses in security (e.g. open windows).

#### 5.5.5 Types of Lamps

Low pressure sodium (LPS) street lamps which scatter their orange light all around, including skywards, are a common sight along many streets and in residential areas. However an increasingly popular alternative is the full cut-off, high pressure sodium (HPS) lamp. Although these are more expensive to install, full cut-off lamps prevent any light from being emitted above the horizontal and they create a bright pinkish white light, which is carefully directed to avoid light trespass. In a recent survey, 85% of drivers stated that they prefer the light from HPS lamps and for the same reasons HPS lamps are the preference for lighting sports pitches.

#### 5.5.6 Wasted Energy

It is recommended that lights are switched off when not required for safety or security. Large quantities of energy are consumed and vast amounts of greenhouse gases are produced due to the wastefulness of all night shop advertising and display lighting, building illumination, upward floodlighting and permanent domestic and industrial security lights.

## 5.6 Advisory Organisations

- The Institute of Lighting Professionals
- British Standards Institution
- Dept of Environment, Transport and Regions
- DoE & DoT Publication Sales Unit

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- The Chartered Institute of Building Services Engineers (Lighting Division) CIBSE
- Council for the Protection of Rural England (CPRE)
- British Astronomical Association: Campaign for Dark Skies (CfDS)
- Lighting Industry Federation
- International Commission on Illumination (CIE)
- English Sports Council

## **5.7 References**

- 1. Institute of Lighting Professionals: Guidance Notes for the Reduction of Obtrusive Light, GN01:2011 (2011)
- 2. Brightness of Illuminated Advertisements Technical Report TR5, Institute of lighting Engineers (now Institute of Lighting Professionals) (1991)
- 3. *Sports Lighting*, CIBSE Lighting Guide LG4 (London: Chartered Institution of Building Services Engineers) (1990)

#### 5.8 Glossary

**Asymmetrical Beam** - Floodlights giving a fan shaped lighting pattern – available in wide, medium and narrow beams.

**Beam Angle** - The angle formed by the centre of the beam of light from a lamp relative to the vertical. When light is emitted from a lamp it forms a cone from the light source. The shape of this cone will depend on the reflector design in the lamp.

Candela - The unit of luminous intensity of a light source in a given direction.

Front Glazing - The front face of the lighting unit through which the light passes.

**Glare** - The discomfort or impairment of vision, which is experienced when part of the visual field is excessively bright in relation to the general surroundings. Direct glare normally occurs when the viewer can see the light source. Glare can cause discomfort or disability to see detail.

Illumination - The process of lighting an object or surface.

**Light Trespass** - Any light which illuminates beyond that which needs to be lit, particularly into residential areas or properties, which is perceived to be a nuisance.

Lumen - The unit of luminous flux (light) emitted by a light source or falling on a surface.

**Luminance** - A term which expresses the intensity of the light emitted in a given direction by unit area of a luminous or reflecting surface. It is the physical equivalent of what is subjectively called brightness. The unit most commonly used is the candela per square metre.

**Luminaire** - Formerly known as a lighting fitting. The apparatus which controls the distribution of flux from a lamp or lamps, and which includes all the components necessary for fixing and protecting the lamps and for connecting them to the local supply circuit. Floodlights and some other luminaires retain their individual names.

Luminous Flux - The light emitted by a source or received by surface. The unit is the lumen (lm).

**Luminous Intensity** - The power of a source or illuminate surface to emit light in a given direction. The unit is the candela (cd)

Lux - A measurement of illumination. One lux equals one lumen per square metre.

**Main Beam Angle/Horizontal Cut-Off** - A term applied to a luminaire. The angle measured from the downward vertical upwards to the first line of sight at which the lamp(s) or surface of high brightness is no longer visible. This angle is usually measured from the downward vertical or, for a floodlight, from the beam axis. Horizontal cut-off refers to the limiting of light above an imaginary line at horizontals with the luminaire.

Mounting Height - The vertical distance between the luminaire and the ground or floor.

**Obtrusive Light** - Any light, which illuminates areas beyond that, which needs to be lit can be considered to be a form of light pollution. The extent to which it is perceived as being a nuisance will often depend on the background light from other sources and the intensity of the light.

**Statutory Nuisance** - An obtrusive light which is considered to have an adverse impact on surrounding land – as determined by the Council. The Council may serve an abatement notice requiring the nuisance to be stopped – which may result in the operator being unable to use any such light or restrict hours where it can be used.

**Sky Glow** - A phenomenon where light – usually from a major light source such as an urban area or industrial/recreational floodlight installation is seen, often from many miles distance, as a glow in the sky. Some of the light is reflected from the illuminated surfaces although most is emitted directly skyward

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from poorly designed lighting systems. Sky glow resulting from poorly designed systems is particularly noticeable in dark landscapes where there are few other light sources. Most rural areas and in particular the Area of Best Landscape would fall into this category.

## 6 Noise

#### **6.1 Introduction**

Noise is defined as unwanted sound and is an unavoidable part of everyday life. It is often a source of stress and irritation for many individuals, but noise pollution may also have a significant impact on health and well-being.

## 6.1.1 What is Noise Pollution?

Noise pollution can occur as an intrusive or offensive sound. An intrusive sound may be noticeably louder than, or significantly different to, background noise and is considered likely to disturb or interfere with individuals who are able to hear it. An offensive sound can be dependent on the times of day or duration of the noise.

Typically any developments involving residential dwellings are the most noise-sensitive, whilst industrial developments such as general industry are one of the least noise-sensitive. However, industrial uses are amongst the most likely to cause a noise impact off-site. This is discussed in more detail in Section 6.2 of this document. Developments which are particularly noise-sensitive may require noise control or protection measures to mitigate against the effects of noise from outside sources, which include the effects of noise from road or rail, industry or entertainment premises.

## 6.2 Noise & Planning

Noise is a material planning consideration for the following developments:

- A new potentially noisy development on a proposal site, which may adversely impact upon existing land uses surrounding the site;
- A new noise sensitive development on a proposal site which, may be adversely affected by existing noise sources in the area of the proposal.

Noise pollution could arise as a result of the land use itself (e.g. a factory or leisure centre) or as a result of ancillary activities associated with that land use (e.g. transport movements, loading/unloading, etc.).

## 6.2.1 Planning Use Classes

The Town and Country Planning Order 1987 puts uses of land and buildings into various categories known as 'use classes'. Sufficient knowledge of where development proposals fit into the use class system may provide an indication of the key considerations with respect to noise.

It is important to note that noise impact from transport networks can only be dealt with at the planning stage, as current legislation prevents action being taken either to increase insulation at affected properties or to take action against road users for noise. As such, on a legislative basis, noise which is likely to affect development from traffic must be addressed at the planning stage if it is to be addressed at all.

Potentially noisy development may cover a large range of different activities and planning use classes. Typically the following use classes would be considered to have a greater impact on noise sensitive land uses at or around the proposal site:

- A3/A4/A5 Retail Food and Drink activities
- B2/B8 General Industry and Warehouse activities
- D1/D2 Non Residential Institutions and Assembly and Leisure activities

Sui Generis uses are inherently more varied therefore specific consideration of any proposal within this category is required to ensure that any noise impacts are minimised.

An individual noise impact review will be carried out by the Public Protection Service when determining an application to assess the suitability of a proposed development and end use. The applicant/developer may also carry out a similar review when preparing a development proposal to identify potential noise impacts and to ascertain whether any protection or mitigation measures are required to counteract the impacts of noise.

The determination of a noise review may be sufficient for the Public Protection Service to consider recommending refusal of a planning application, if the proposed works are deemed to be incompatible with existing uses. However, pre-application discussions and liaison with the LPA during the application process may help to identify suitable noise protection or mitigation measures, which may result in re-designs/revisions of development proposals rendering an application more suited to the proposal site.

Due to the complex nature of noise and noise control engineering, it may be necessary to engage an acoustic consultant to address the requirements of any noise conditions attached to the consent. The acoustic consultant may need to carry out noise surveys and recommend appropriate noise mitigation measures either in order to respond to pre-determination requests from the LPA or in support of applications to discharge conditions; noise conditions are discussed in more detail in Section 6.2.3.

It may be necessary for the Applicant/Developer to obtain the services of a suitably qualified acoustic engineer to assess the existing noise levels in the vicinity of the proposed development and to calculate/predict potential noise levels following the development, if planning permission was granted. Determining the difference between the calculated noise levels and the existing noise levels should inform the Applicant/Developer whether any acoustic mitigation measures or other controls are necessary to allow development to progress without undue impacts on amenity in the local environment/area.

#### 6.2.2 Determining Planning Applications

Consideration of noise will depend upon the development proposal. If a particular development is for a noise-sensitive end use then consideration of the locality of the proposal is imperative. The LPA will assess/review the local transport networks as well as local businesses and commercial developments. The review will also consider the operational times of local businesses as well as any noise that they may emit. Transport noise sources may also affect recommendations made by the LPA, especially if the development proposal is near to a busy road or major railway line.

Noise conditions may include recommendations for upgraded glazing, which can be a vital means of protecting future occupiers from transport noise or industrial noise sources. However, upgraded glazing may only protect or mitigate against noise if windows are kept shut. As such, some developments may also need to provide acoustic trickle vents and/or acoustically-treated forced ventilation, to help reduce the need to open windows in the first place.

Consideration for new businesses will typically involve a review of the noise likely to be emitted from the business. This can include plant or equipment associated with that business and its operation, but may also consider transport noise from deliveries or dispatched merchandise as well as possible increased traffic flows from visitors or staff arriving or leaving the site. Certain types of business may also be expected to have similar patterns of operation; for example, public houses and hot food takeaways tend to concentrate on afternoon and evening trade, whereas warehousing is likely to include overnight operation.

All development proposals should consider the ambient noise levels already present in a given area. The LPA is unlikely to grant planning permission to a development that will massively increase existing noise levels in an area, as this may significantly change the character of the local environment. For developments that are likely to have a significant noise impact, then consideration of appropriate acoustic mitigation measures will be necessary to reduce the impact from the development site to an acceptable level.

The Public Protection Service may make recommendations for basic mitigation measures to be adopted on smaller scale developments, which will attain the correct acoustic standards within the development. These recommendations will be made in discussion with the Applicant/Developer where possible. Noise emitted by new plant and equipment should not exceed the existing background noise level by more than -10dB(A). Once the background noise level has been established and specific plant or equipment selected, acoustic calculations can be made to determine whether the plant or equipment will meet requirements including the effect of separation distance (i.e. the further away from a noise source, the quieter the noise will become). Quieter equipment is also usually available, which may assist in achieving the required/desired noise levels.

In some circumstances, no matter what equipment is selected, it may not be feasible to achieve the desired acoustic levels, meaning additional acoustic shielding may be required or alternatively, the relocation of equipment or plant to achieve the required/desired levels.

In rural areas the background noise level may be significantly quieter than that found in urban/built-up areas. It can be technically much more difficult to achieve target noise levels in these areas. A flexible approach will be considered where it is clear that the Applicant/Developer has tried all reasonable methods to reduce noise to an acceptable level.

Specific problems may arise for residential developments near to town centre locations or entertainments premises. Additional acoustic requirements above and beyond the usual recommendations of BS8233 may be considered necessary for such locations. These noise sources can be particularly bass-heavy, meaning the resulting noise has the ability to bypass some of the normal acoustic mitigation measures. Up-rated acoustic mitigation measures can be recommended in these circumstances or alternatively, Noise Rating (NR) curves may be used to specify noise limits at specific locations or premises.

The recommended design criteria for these dwellings are as follows:

- Noise rating curve NR25 in bedrooms (11pm-7am)
- Noise rating curve NR35 in all habitable rooms (7am–11pm)
- (Noise rating curves should be measured as a 15 minute linear Leq at the octave band centre frequencies).

#### 6.2.3 Planning Conditions

Noise conditions may require standard provisions such as specialist plant and equipment to achieve levels below the background noise level. Alternatively, noise conditions may require direct measures to be carried out, such as specialist glazing specifications or acoustic ventilation systems. Noise conditions may also relate to operating hours, opening hours or delivery hours where these are considered to be a key element for controlling noise levels.

Noise conditions may require an assessment of noise and the submission of a scheme of works to achieve target or previously agreed noise levels.

Where complex or a combination of issues is likely within a development proposal, it is possible that the LPA may require a 'Noise Management Scheme' to be submitted. This would require the Applicant/Developer to consider the range of issues presented by the development and identify suitable and appropriate noise mitigation measures to be implemented. These schemes generally require proactive re-assessment on a regular basis or when complaints arise.

Any application for the discharge of a condition must be supported by all information requested in the condition. If any element of the condition has not been addressed either in part or fully, then it is likely that the condition discharge application will be recommended for refusal.

#### 6.2.4 Noise During Construction/Demolition Works

Noise from construction or demolition works can be intrusive or disruptive to local businesses and/or noise sensitive land uses. For this reason construction or demolition activities should be restricted to daytime periods and have finite start and finish times. It is usually recommended that all noisy works (i.e. those that are audible beyond the site boundary), are restricted before 08:00 hrs and no later than

18:00 hrs on Monday to Friday to minimise disruption. Noisy activities occurring on Saturday should be restricted to 08:30 hrs to 13:30 hrs and no noisy works should take place on Sundays or Public or Bank Holidays. These restrictions apply to anyone working on site or deliveries to the site.

By utilising set working hours for activities on site as well as deliveries to the site, respite is provided for local residents and businesses/workers near to the development. Noise and disruption to local residents will occur during development works, so it is important to remember that local residents may not necessarily be in favour of the development or all aspects of it. By keeping an open dialogue and attempting to placate any complaints or grievances, the development may be allowed to progress more smoothly.

For larger developments or developments that are likely to progress over a long period of time, it may be worth considering a 'Considerate Contractors Scheme'. These schemes suggest guidelines to minimise disruption to local residents and businesses and provide a code of conduct for employees on site so that their work does not unduly upset local residents and/or businesses/workers. These schemes include noise as well as many other elements such as dust suppression, deliveries, working hours, behaviour on site, approved delivery routes, etc.

#### 6.2.5 Vibration

Significant vibration within the Borough, with the exception of temporary construction works, is only likely to be generated by passenger or freight trains travelling along railway lines. Ideally, track form and wheel/rail interface would be in the optimum condition to minimise vibration generation. However, wear and tear will over time change the condition of the track surfaces. Road traffic is unlikely to generate any significant vibration, providing the road wearing surface is in reasonable repair. The exception to this is where there is a significant proportion of Heavy Goods Vehicle traffic present, as this can create vibration issues regardless of road surface condition.

A vibration assessment may be required where railway lines are within 75m of a proposed development site. Building services, plant and equipment, including air conditioning and air handling plant, may generate vibration and in turn, re-radiate noise within buildings. All building services plant and equipment should be supported on proprietary anti-vibration mounts. As such, planning permission granted for the installation of services, plant and equipment may include a condition to assess or control plant vibration.

#### 6.3 Technical Guidance for Consultants/Specialists

The following reference documents and guidance constitute some of the more important and relevant legislation and standards relating to noise and the planning process.

# 6.3.1 BS8233:1999 Sound Insulation And Noise Reduction For Buildings

BS8233 provides a range of factors to be considered through the planning process. It identifies key stages in the design and development of a proposal and considers different types of activities and uses, providing advice and guidance on how to achieve ambient noise levels. This standard suggests design criteria for noise to achieve within a range of differing activities including the work environment, leisure environment and the home environment. It identifies 'Good' and 'Reasonable' noise levels to achieve for the specific proposals/situations. Wherever possible it is expected that the 'Good' level should be aimed for in any new design.

Criterion	Typical Situations	Design Range L <sub>Aeq</sub> ,T dB		
		Good	Reasonable	
Reasonable	Heavy Engineering	70	80	
conditions	Light Engineering	65	75	
	Garages, Warehouses	65	75	
Reasonable speech	Department Store	50	55	
communications	Cafeteria, Canteen, Kitchen	50	55	
	Wash-room, Toilet	45	55	
	Corridor	45	55	
Reasonable	Library, Cellular Office, Museum,	40	50	
and work requiring	Staff Room	35	45	
concentration	Meeting Room, Executive Office	35	40	
Reasonable	Classroom	35	40	
insterning conditions	Church, Lecture Theatre, Cinema	30	35	
	Concert Hall, Theatre	25	30	
	Recording Studio	20	25	
Reasonable resting	Living Rooms	30	40	
	Bedrooms*	30	35	

Note - For a reasonable standard in bedrooms at night, individual noise events (measured with F time-weighting) should not normally exceed 45 dB LAmax.

Table 6.1 Indoor ambient noise levels in spaces when they are unoccupied.

For residential buildings/dwellings, the main criteria are reasonable resting/sleeping conditions in bedrooms and good listening conditions in other rooms. Occupants will usually tolerate higher levels of anonymous noise, such as that from road traffic. More obvious sources, such as that noise from neighbours may trigger complex emotional reactions that are ultimately disproportionate to the noise level. As well as noise protection for the residential buildings, barriers or bunds should be considered to protect the gardens or outdoor areas. For gardens and balconies it is desirable that the steady noise level does not exceed 50 LAeq,T dB and 55 LAeq,T dB should be regarded as the upper limit.

## 6.3.2 BS4142:1997 Method For Rating Industrial Noise Affecting Mixed Residential And Industrial Areas

BS4142 considers industrial or commercial development proposals; it assesses noise in a local area and compares noise from a particular activity or from equipment against the ambient background noise level. Different noises may attract a rating, which is applied where a noise is distinct, tonal or intermittent. The rated noise level is then compared to the background noise level and the difference between the two levels is used to assess the likelihood of complaints.

This standard also introduces the concept of 'Statutory Nuisance'. If a Statutory Nuisance is proven, then the Council has no option but to take appropriate actions to abate the Nuisance. There are arguments both for and against the use of this standard in the planning process, but what must not be forgotten, is that should planning permission be granted for a development which subsequently receives complaints about noise, then it is quite possible that this standard will be used to assess the noise and determine whether or not the noise constitutes a Statutory Nuisance. As such, it is recommended that this guidance is given due consideration through the planning process and that noise from plant, equipment or activities is assessed and considered under this standard as part of the planning consultation.

## 6.3.3 Approved Document E – Building Regulations

Building Regulations Approved Document E is the main reference document which relates to the insulation of buildings against airborne and structure borne noise. These regulations do not cover environmental noise, meaning that reference to other technical documents is required if environmental noise is a significant consideration.

Approved Document E covers general building situations and common issues, which could arise if appropriate attention is not paid to the construction elements of a building. It identifies minimum standards for airborne and impact noise within a building. It reviews both new build and conversion of existing buildings (i.e. a change of use). It identifies common structural designs and comments upon the level of acoustic protection that these may offer, allowing review of these factors against guideline values, which should generally protect residential amenity. The document also covers impact noise arising from 'foot fall' on floors and details construction techniques designed to mitigate against such noise. The document either requires testing to be carried out to demonstrate compliance with the required standards or alternatively, construction to a 'robust detail' standard.

#### 6.4 Measures to Deal With Noise Reduction

The prevention of noise pollution is key to ensuring future noise problems are unlikely to be experienced by local residents and businesses/workers and to ensure that any additional noise has a limited effect on the health and well-being of individuals. Therefore, when preparing a development proposal the following matters must be considered:

## 6.4.1 Building Orientation

A building should be orientated in such a way as to minimise noise exposure. For example, buildings can be arranged so that they form a natural acoustic barrier against any noise sources. This is particularly effective where one side of the development has a dominant noise source, such as a busy road/factory. The façade facing a noise source should be constructed with high performance acoustic mitigation measures built in with all windows and doors having high performance acoustic glazing. Windows should also have proper acoustic edge seals, acoustic trickle vents and the provision of fixed windows should also be considered. Acoustically-treated forced ventilation may also be necessary to minimise the need to open windows. These techniques can be used to great advantage, particularly if designed in conjunction with the layout of the rooms, allowing bedrooms or living rooms to face away from a noise source(s).

## 6.4.2 Screening of the Site

Barriers or acoustic screens can be used to reduce noise levels. Whether they are an existing feature, such as a railway cutting or embankment; a purpose-designed acoustic barrier, such as a solid boundary fence or earth mound; a purpose-designed feature of the building, such as a courtyard; or the building itself, which attempts to arrange sensitive internal spaces away from any noise source, barriers can prove extremely effective in mitigating or attenuating noise. The main points to consider when designing barriers are:

- They are most effective when located close to either the source of noise or the receiver;
- They protect low-rise buildings better than high rise buildings;

- Generally the taller the barrier the better, but there are physical limits above which the barrier will
  not realistically offer any additional protection;
- They should usually extend well beyond the site boundary to ensure adequate protection is offered.

Acoustic barriers are usually constructed from timber, although any solid material with a sizeable mass per unit area will provide acoustic shielding. Barriers can even be made from transparent/opaque materials such as plastic, for areas where visual amenity may be of importance. It is vital that an acoustic barrier does not have any gaps within it, as even a small gap or hole in the barrier at ground level is sufficient to render it ineffective.

## 6.4.3 Building Layout / Design

When considering the layout of a proposed building, it may be better to locate non-habitable rooms, such as kitchens, bathrooms and stairwells on the noisier aspects of the building. This allows these non-sensitive rooms to act as an acoustic barrier to the more sensitive, habitable rooms, which are located at the quieter side of the building.

For semi-detached/terraced houses and flats/apartments, the positioning of rooms relative to those in the adjacent residences is important to ensure that noisier areas such as kitchens, living rooms and bathrooms do not share party walls, ceilings or floors with bedrooms residing in separate occupancy. Such incompatible adjacent room types are highly likely to give rise to noise complaints in the future. If the layout of a building is such that these incompatible room types are adjacent to each other, either vertically or horizontally, then it is likely that uprated acoustic measures will be required in the walls and/or floors to mitigate against noise transfer.

Building Regulations Approved Document E considers impact noise through floors and provides appropriate mitigation measures to counter the effects of footfalls, but it does not consider impact noise through walls that would be commonplace in kitchen areas through the closing/slamming of kitchen doors and drawers. This can be a significant source of noise if a kitchen in one property is adjacent to a bedroom in an adjoining property.

#### 6.4.4 Windows and Doors

The windows and external doors of a building should be to a specification that ensures they provide sufficient insulation against external noise. To achieve a good standard of insulation external doors should be close-sealed with no gaps in or around them, and have sufficient mass to resist external noise.

Where necessary, higher standards may be achieved by providing entrance porches with double doors. Providing they are properly fitted, standard thermal double glazed window units will generally reduce external noise levels by approximately 30 decibels. The amount of noise that is reduced by a feature such as a window is known as the Sound Reduction Index (Rw).

Traffic noise can often result in reverberant noise being passed through glass into a building. This is usually due to the glazing panels being constructed of the same thickness of glass meaning that when the outer pane vibrates, it causes the inner pane to vibrate as well. Acoustic glazing often has different thicknesses of glass incorporated into the glazing unit, meaning each pane has a different reverberant frequency and therefore noise is not transmitted through it as easily. Increasing the thickness of the panes of glass (for example from 4mm to 6mm) provides an improvement in noise attenuation, as does increasing the air gap between the panes. For example panes of 10mm and 6mm with a 12mm gap between them will reduce noise levels by about 34 decibels.

Where external noise levels are very high, thermal double-glazing may fail to provide sufficient acoustic attenuation. If this is the case, then higher performance acoustic glazing, which utilises secondary glazing can be considered. This is usually characterised by an air gap between the panes of at least 100mm and can be constructed with secondary sashes. Again, it is advisable for the two panes to be of different thickness and performance can be further improved if the sides of the air space between

panes are lined with sound absorbent material. Under some circumstances, triple glazing will be sought by the LPA as a means of noise attenuation, but these measures are only usually required in proximity to sites exhibiting a significant noise impact.

Acoustic glazing is only of benefit when the windows are kept closed; this is obviously not always practical. Partially opening the window will typically reduce the acoustic performance by between 10-15dB. This is of great concern where the uprated acoustic performance is to protect occupiers of a bedroom, where opening the window to increase ventilation and comfort will instead introduce unacceptable levels of noise which may make sleep difficult. Windows may also be fitted with acoustic trickle vents, but these are primarily for background ventilation as opposed to rapid ventilation or summer cooling. It may therefore be necessary to introduce alternative acoustically-treated mechanical ventilation to bedrooms and some lounge areas, the aim being to increase ventilation rates in a room without physically opening the window.

#### **6.4.5 Acoustic Ventilation**

Where ambient noise levels are high and opening of windows is not desirable, acoustic ventilation may be considered. Whilst it does not usually replace opening windows, it aims to minimise the need to use opening windows, providing a more comfortable internal noise level. The use of acoustic trickle vents can be used to permit adequate background ventilation as required by the Building Regulations. These acoustic trickle vents usually have an acoustic performance in excess of that of uprated glazing, whilst still allowing background ventilation to occur.

Where noise is more extreme and the opening of windows is likely to be required to increase ventilation rates, then it may be necessary to consider forced acoustically-treated mechanical ventilation. This utilises acoustically-treated fans (quiet running) to provide additional fresh 'make up' air into a room. If combined with a boost facility, then this may reduce the need to open windows for summer cooling or rapid ventilation purposes. Mechanical systems may include fans within individual rooms or may be incorporated as part of a larger scheme, which provides 'whole house' ventilation. This may operate in conjunction with kitchen and bathroom extraction systems to provide both input and output air to the building, sometimes with heat recovery to pre-heat the incoming air with during colder periods. These systems usually filter and acoustically shield the incoming air to prevent external noise entering a building and are usually mounted inside the roof space. Sometimes 'make up' air is brought in from the quieter side of the building to utilise the natural acoustic shielding that the building itself provides.

Mechanical ventilation is often utilised in Air Quality Management Areas where there is the need to shield both transportation noise and polluted air from the occupiers of the buildings. Proofing against noise will usually satisfy many air quality issues; reconfiguration of the system to provide make up air from the furthest point away from a transport source or emission will typically satisfy many air quality issues.

## 6.4.6 Plant and Equipment

Noise from plant and equipment is an area commonly assessed by the LPA when determining planning applications. It is becoming more frequent in developments of all types. Typical equipment in both commercial and residential developments includes items such as air conditioning plant, retail refrigeration plant or lift motors. Industrial developments are much more varied with the types of plant and equipment being entirely related to the industry in question.

Regardless of the type of equipment the Applicant/Developer should ensure that any noise from external plant or equipment does not exceed the existing ambient background noise level by more than -10dB(A) at the boundary or façade of the closest noise sensitive land use. This should ensure that any noise from plant or equipment does not dominate the noise level in the area; it may be audible at a noise sensitive land use but will be a faint noise when compared to the background noise levels.

Consideration should be given to selecting quieter models of plant and equipment. If this is not feasible, then it may be advisable to consider relocating noisy plant and equipment to a less noise sensitive area of the site. It may also be possible to erect acoustic shielding around any necessary plant and

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equipment to contain noise and prevent it causing problems off-site. Some equipment may require additional acoustic mitigation measures to control the impacts from tonal noise or intermittent operation. The use of any plant and equipment overnight usually causes an increase in noise sensitivity, so it may be advisable to limit use during night time periods if possible. Consideration of the above measures at an early stage of the planning process is likely to progress an application more smoothly.

## 6.4.7 Quick Reference Guide to Residential Development

If a residential development is proposed near to or alongside road or rail networks, the following table and subsequent descriptions may provide an indication as to whether acoustic protection may be necessary to protect residential amenity according to a noise level:

Category	Times (hrs)	LAeq,T (dB) Road	LAeq,T (dB) Rail	Advice
Α	07:00 – 23:00 23:00 – 07:00	< 55 < 45	< 55 < 45	Noise need not be considered as a determining factor in granting planning permission, although the noise level at the high end of the category should not be regarded as a desirable level.
В	07:00 – 23:00 23:00 – 07:00	55 – 63 45 – 57	55 – 66 45 – 59	Noise should be taken into account when determining planning applications and, where appropriate, conditions imposed to ensure an adequate level of protection against noise to meet the Council's recommended outdoor and indoor noise levels.
С	07:00 – 23:00 23:00 – 07:00	63 – 72 57 – 66	66 – 74 59 – 66	Planning permission should not normally be granted. Where it is considered that permission should be given, conditions should be imposed to ensure a commensurate level of protection against noise to meet the Council's recommended outdoor and indoor noise levels.
D	07:00 - 23:00 23:00 - 07:00	> 72 > 66	> 74 > 66	Planning permission should normally be refused on the basis of elevated noise levels.

**Category A** will utilise standard glazing and standard trickle vents; no special acoustic mitigation measures will usually be required.

**Category B** would benefit from the use of acoustic trickle vents and slightly uprated acoustic glazing. If it is feasible changes to the layout of the property to put bedrooms away from the road or rail noise source would assist to achieve a quieter internal noise level.

**Category C** will require passive type wall mounted vents and/or acoustic trickle vents. Consideration of acoustically treated mechanical ventilation should be considered for all habitable rooms facing the noise source. Glazing will need to be uprated, use of different thickness glass on inner and outer panes will be necessary. A high level of acoustic protection will be necessary along the facades facing the

noise source. Building orientation should be considered to minimise bedrooms facing the road or rail noise source, any bedrooms which have to face the road or railway will need acoustically treated mechanical ventilation to be installed.

**Category D** will not normally be granted planning permission. If residential development is inevitable on a site, then extremely high specification glazing and ventilation will be necessary. Glazing will need to be significantly up-rated, use of different thickness glass on inner and outer panes will be necessary as may secondary glazing with a larger air gap. Ventilation must be forced acoustically treated mechanical ventilation as the opening of windows is not practical at many times. It may be recommended that certain windows are non-openable due to the external noise levels. Particular consideration of room orientation within the building will be necessary with non-habitable rooms to the facades facing the road or rail noise source.

#### 6.5 Applications with Potential Noise Implications

The following development proposals may require some element of acoustic review when included within any planning application:

#### 6.5.1 Renewable Energy – Wind Turbines & Heat Pumps

Applications involving renewable energy are becoming more popular as energy costs increase. Some technologies are silent, while others have a potential to create noise during their operation. The main technologies include: 'Solar Panel Arrays', which involves producing electricity from light or hot water from the sun; 'Ground Source Heat Pumps' or 'Air Source Heat Pumps', which produce heat from the ground or air; and Wind Turbines, which convert electricity from wind power.

Wind turbines and the ground or air source heat pumps are of particular relevance to noise. Wind turbines can emit noise as the turbine blades slice through the air. Depending on the location of the turbine and its design, an unacceptable impact may occur on nearby noise sensitive land uses or properties. Most current designs are not really suited for use in dense urban areas due to potential noise problems and the lack of undisturbed wind to power them. Any application for a wind turbine is likely to require a full noise assessment to be submitted with the application to enable the LPA to determine whether it will be suitable for its proposed location.

Ground and Air Source Heat Pump equipment may utilise pumps to assist in the transfer of heat. Obviously equipment utilising pumps and other motorised equipment has the potential to emit noise. As such, some assessment may be necessary to determine whether the heat pumps will have any adverse impacts on amenity beyond the site boundary and if mitigation measures may be required.

## 6.5.2 Other Potentially Noisy Activities

The following types of development proposals or applications may have additional specific guidance published to review noise impacts or may otherwise be a potential source of noise. It is recommended that pre-application discussions are held with LPA if any of the following application types are to be submitted:

- Clay Pigeon Shooting / Gun Clubs / Rifle Ranges
- Flying of Model Aircraft
- Airstrip
- Motor Vehicle Testing / Proving Grounds
- Off Road Motorbike Tracks
- BMX or Skateboard Ramps
- Electricity Substations/Transformers/Switchgear
- Sports Stadia
- B2 Use Class developments
- Waste Handling Facilities
- Wind Turbines / Wind Farms

The above list is far from exhaustive however it highlights some of the applications that have been considered with particular attention to noise in the past. If there is any doubt over whether noise issues may need to be addressed prior to submitting a planning application, please contact the Public Protection Service for further advice.

#### 6.6 References

- 1. British Standards [online] Available at: www.standardsuk.com/
- 2. BS 4142: (1997) Method for rating industrial noise affecting mixed residential and industrial areas.
- 3. Noise: Environmental: World Health Organisation [online]
- 4. BS8233 (1999) Sound Insulation and Noise Reduction for Buildings. Noise: Environmental: World Health Organisation [online]
- 5. Noise Act 1996 [online] Available at: www.legislation.gov.uk/
- 6. Institute of Acoustics Good Practice Guide on the control of noise from Pubs and Clubs Draft Annex 2 (Institute of Acoustics, 2002). [online] Available at: www.cieh.org
- 7. The Building Regulations (2010) Resistance to the passage of sound, approved E document [online] Available at: www.planningportal.gov.uk/
- 8. World Health Organisation. (2012) Noise (European Region) [online] Available at: www.who.int/topic/noise
- 9. Institute of Acoustics: www.ioa.org.uk
- 10. Association of Noise Consultants: www.association-of-noise-consultants.co.uk

## 6.7 Glossary

**Aerodrome**: Any area of land, water, or space on the roof of a building, which is commonly used to provide facilities for the landing and departure of aircraft - including types capable of descending or climbing vertically. The term is generic and embraces other terms such as airport, airfield and heliport. For a formal definition see the Civil Aviation Act 1982.

**Background Noise**: LA90,T the A weighted noise level exceeded for 90% of the specified measurement period (T). In BS4142:1990 it is used to define the background noise level.

**Decibel (dB)**: A unit of level derived from the logarithm of the ratio between the value of a quantity and a reference value. It is used to describe the level of many different quantities. For sound pressure level the reference quantity is 20 Pa, the threshold of normal hearing is in the region of 0 dB, and 140 dB is the threshold of pain. A change of 1 dB is only perceptible under controlled conditions.

**dB(A)**: Decibels measured on a sound level meter incorporating a frequency weighting (A weighting) which differentiates between sounds of different frequency (pitch) in a similar way to the human ear. Measurements in dB(A) broadly agree with people's assessment of loudness. A change of 3 dB(A) is the minimum perceptible under normal conditions, and a change of 10 dB(A) corresponds roughly to halving or doubling the loudness of a sound. The background noise level in a living room may be about 30 dB(A); normal conversation about 60 dB(A) at 1 metre; heavy road traffic about 80 dB(A) at 10 metres; the level near a pneumatic drill about 100 dB(A).

Hertz (Hz): Unit of frequency, equal to one cycle per second. Frequency is related to the pitch of a sound.

**LA10,T**: The A weighted level of noise exceeded for 10% of the specified measurement period (T). It gives an indication of the upper limit of fluctuating noise such as that from road traffic. LA10,18h is the arithmetic average of the 18 hourly LA10,1h values from 06.00 to 24.00.

**LA90,T**: The A weighted noise level exceeded for 90% of the specified measurement period (T). In BS 4142: 1990 it is used to define background noise level.

**LAeq,T**: The equivalent continuous sound level -the sound level of a notionally steady sound having the same energy as a fluctuating sound over a specified measurement period (T). LAeq,T is used to describe many types of noise and can be measured directly with an integrating sound level meter. It is written as Leq in connection with aircraft noise.

**LAmax**: The highest A-weighted noise level recorded during a noise event. The time weighting used (F or S) should be stated.

**Make Up Air**: Air brought in by often mechanical means to provide fresh air into a room or building. This air is to compensate for circumstances where it is either not possible or not desirable to open windows (e.g. along busy highways where opening windows would introduce unacceptable levels of noise).

**Noise Creep**: Noise creep occurs over a period of time where several noise sources are introduced gradually - each one causing an insignificant increase in noise. The cumulative effect of these noise sources can be significant. This effect is called 'Noise Creep'. To avoid or minimise this, noise sources should be less than 10dB below the existing ambient background noise level (La90,t) where logarithmic addition of sources will not exceed the existing background level.

**Noise and Number Index (NNI)**: A composite measure of exposure to aircraft noise that takes into account the average peak noise level and the number of aircraft in a specific period. Now generally superseded by Leq.

**Noise index**: A measure of noise over a period of time which correlates well with average subjective response.

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**Noise Management Scheme**: A comprehensive assessment of the noise impacts from a proposal or development which can include operational noise as well as construction noise during the development. Schemes may have an ongoing monitoring element to ensure that regular review and adjustments occur as the development progresses and evolves over time.

**Rating level**: The noise level of an industrial noise source which includes an adjustment for the character of the noise. Used in BS4142:1990.

**Rw**: Single number rating used to describe the sound insulation of building elements (sound reduction index). It is defined in BS5821:1984.



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## 14 Noise Planning for England

www.defra.gov.uk

# Noise Policy Statement for England (NPSE)

March 2010


2.21 Extending these concepts for the purpose of this NPSE leads to the concept of a significant observed adverse effect level.

#### SOAEL – Significant Observed Adverse Effect Level

This is the level above which significant adverse effects on health and quality of life occur.

2.22 It is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times. It is acknowledged that further research is required to increase our understanding of what may constitute a significant adverse impact on health and quality of life from noise. However, not having specific SOAEL values in the NPSE provides the necessary policy flexibility until further evidence and suitable guidance is available.

#### The first aim of the Noise Policy Statement for England

#### Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.

2.23 The first aim of the NPSE states that significant adverse effects on health and quality of life should be avoided while also taking into account the guiding principles of sustainable development (paragraph 1.8).

#### The second aim of the Noise Policy Statement for England

#### Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.

2.24 The second aim of the NPSE refers to the situation where the impact lies somewhere between LOAEL and SOAEL. It requires that all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development (paragraph 1.8). This does not mean that such adverse effects cannot occur.

#### The third aim of the Noise Policy Statement for England

Where possible, contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.

2.25 This aim seeks, where possible, positively to improve health and quality of life through the pro-active management of noise while also taking into account the guiding principles of sustainable development (paragraph 1.8), recognising that there will be opportunities for such measures to be taken and that they will deliver potential benefits to society. The protection of quiet places and quiet times as well as the enhancement of the acoustic environment will assist with delivering this aim.

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Proof of Evidence Margaret Steen representing Save Peel Hall Campaign Group (Rule 6 Party)

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# Planning Policy Guidance 24: Planning and Noise

#### Sources

Noise Levels <sup>0</sup> Corresponding To The Noise Exposure									
Categories For New Dwellings LAeq,T dB									
	Noise Exposure Category								
Noise Source	A	B	С	D					
road traffic									
07.00 - 23.00	<55	55 - 63	63 - 72	>72					
23.00 - 07.00 <sup>1</sup>	<45	45 - 57	57 - 66	>66					
rail traffic									
07.00 - 23.00	<55	55 - 66	66 - 74	>74					
23.00 - 07.00 <sup>1</sup>	<45	45 - 59	59 - 66	>66					
air traffic <sup>2</sup>									
07.00 - 23.00	<57	57 - 66	66 - 72	>72					
23.00 - 07.00 <sup>1</sup>	<48	48 - 57	57 - 66	>66					
mixed sources <sup>3</sup>									
07.00 - 23.00	<55	55 - 63	63 - 72	>72					
23.00 - 07.00 <sup>1</sup>	<45	45 - 57	57 - 66	>66					

#### Notes

<sup>0</sup>**Noise levels:** the noise level(s) (L<sub>Aeq,T</sub>)used when deciding the NEC of a site should be representative of typical conditions.

<sup>1</sup>Night-time noise levels (23.00 - 07.00): sites where individual noise events regularly exceed 82 dB L<sub>Amax</sub> (S time weighting) several times in any hour should be treated as being in NEC C, regardless of the L<sub>Aeq,8h</sub> (except where the L<sub>Aeq,8h</sub> already puts the site in NEC D).

<sup>2</sup>Aircraft noise: daytime values accord with the contour values adopted by the Department for Transport which relate to levels measured 1.2m above open ground. For the same amount of noise energy, contour values can be up to 2 dB(A) higher than those of other sources because of ground reflection effects.

<sup>3</sup>Mixed sources: this refers to any combination of road, rail, air and industrial noise sources. The "mixed source" values are based on the lowest numerical values of the single source limits in the table. The "mixed source" NECs should only be used where no individual noise source is dominant.

To check if any individual noise source is dominant (for the purposes of this assessment) the noise level from the individual sources should be determined and then combined by decibel addition (remembering first to subtract 2 dB (A) from any aircraft noise contour values). If the level of any one source then lies within 2 dB(A) of the calculated combined value, that source should be taken as the dominant one and the site assessed against the appropriate NEC for that source, rather than using the "mixed source" NECs. If the dominant source is industrial noise see paragraph 19 of Annex 3.

If the contribution of the individual noise sources to the overall noise level cannot be determined by measurement and/or calculation, then the overall measured level should be used and the site assessed against the NECs for "mixed sources".

#### Recommended Noise Exposure Categories For New Dwellings Near Existing Noise

#### Sources

Noise Levels <sup>0</sup> Corresponding To The Noise Exposure									
Categories For New Dwellings LAeg,T dB									
	Noise Exposure Category								
Noise Source	А	В	С	D					
road traffic									
07.00 - 23.00	<55	55 - 63	63 - 72	>72					
23.00 - 07.00 <sup>1</sup>	<45	45 - 57	57 - 66	>66					
rail traffic									
07.00 - 23.00	<55	55 - 66	66 - 74	>74					
23.00 - 07.00 <sup>1</sup>	<45	45 - 59	59 - 66	>66					
air traffic <sup>2</sup>									
07.00 - 23.00	<57	57 - 66	66 - 72	>72					
23.00 - 07.00 <sup>1</sup>	<48	48 - 57	57 - 66	>66					
mixed sources <sup>3</sup>									
07.00 - 23.00	<55	55 - 63	63 - 72	>72					
23.00 - 07.00 <sup>1</sup>	<45	45 - 57	57 - 66	>66					

#### Notes

<sup>0</sup>**Noise levels:** the noise level(s) (L<sub>Aeq,T</sub>)used when deciding the NEC of a site should be representative of typical conditions.

<sup>1</sup>Night-time noise levels (23.00 - 07.00): sites where individual noise events regularly exceed 82 dB L<sub>Amax</sub> (S time weighting) several times in any hour should be treated as being in NEC C, regardless of the L<sub>Aeq,8h</sub> (except where the L<sub>Aeq,8h</sub> already puts the site in NEC D).

<sup>2</sup>Aircraft noise: daytime values accord with the contour values adopted by the Department for Transport which relate to levels measured 1.2m above open ground. For the same amount of noise energy, contour values can be up to 2 dB(A) higher than those of other sources because of ground reflection effects.

<sup>3</sup>**Mixed sources:** this refers to any combination of road, rail, air and industrial noise sources. The "mixed source" values are based on the lowest numerical values of the single source limits in the table. The "mixed source" NECs should only be used where no individual noise source is dominant.

To check if any individual noise source is dominant (for the purposes of this assessment) the noise level from the individual sources should be determined and then combined by decibel addition (remembering first to subtract 2 dB (A) from any aircraft noise contour values). If the level of any one source then lies within 2 dB(A) of the calculated combined value, that source should be taken as the dominant one and the site assessed against the appropriate NEC for that source, rather than using the "mixed source" NECs. If the dominant source is industrial noise see paragraph 19 of Annex 3.

If the contribution of the individual noise sources to the overall noise level cannot be determined by measurement and/or calculation, then the overall measured level should be used and the site assessed against the NECs for "mixed sources".

## 16 Highways England – Road Works

#### **APPENDIX 16**

#### Email

Area10CCC 💌 @ Highways England Response - M62 Junction 9 to 10 Road Closures - ref: 21680916 To: Margaret Steen 20 July 2020 at 08:44

20 July 2020 at 13:16

#### Dear Ms Steen,

Thank you for your email on 17 July requesting information on road closures on the M62.

I'm happy to attach details of the closures we had in place. These are for May 22 and 23 and cover the M62 eastbound, junctions 9 to 12.

I hope this information is helpful and please contact me if you have any questions.

Kind regards,

Dianne

#### Senior Administrator – North West

Highways England | Atlantic House | Birchwood Boulevard | Birchwood | WA3 7WD

Web: https://highwaysengland.co.uk

	SCHEDULE_PLA NNED_STARTDA	SCHEDULE_PLA				
EVENT_NUMBER1	TE	NNED_ENDDATE	ROAD	DESCRIPTION	NOTES	SCHEDULED_EVENT
00082550-002	23/05/2019 20:00	24/05/2019 06:00	M62 (East Bound)	M62 East and Westbound Junction 9 exit slips Hardshoulder and lane one closures for electrical works		Hardshoulder, lane 1 Eastbound Jct 9 exit slip
00089057-003	23/05/2019 22:00	24/05/2019 06:00	M62 (East Bound)	M62 East and Westbound junction 9 to 10 lane and total closures for electrical works		M62 Junction 9 exit westbound Diversion Route
00104623-009	22/05/2019 21:00	23/05/2019 06:00	M62 (East Bound)	M62 Eastbound Junction 10 to 12 Total closure due to Improvements	M60 MP 26/6 - MP 43/7 M6 - MP 308/1 - MP 307/4 M6 - MP 306/6 - MP 307/3 M62 J9 Entry slip M62 J11 Exit & Entry slip	M62 Junction 10 to 12 Eastbourd - Total Closure
00104623-009	23/05/2019 21:00	24/05/2019 06:00	M62 (East Bound)	M62 Eastbound Junction 10 to 12 Total closure due to Improvements	M60 MP 26/6 - MP 43/7 M6 - MP 308/1 - MP 307/4 M6 - MP 306/6 - MP 307/3 M62 J9 Entry slip M62 J11 Exit & Entry slip	M62 Junction 10 to 12 Eastbound - Total Closure

#### Area10CCC 🏲

RE: Highways England Response - M62 Junction 9 to 10 Road Closures - ref: 21680916 To: Margaret Steen

#### Hello Margaret,

In general if we have lane closures or narrow lanes then a reduced speed limit is in place. This would be clearly signed.

The M62 junction 10-12 Smart Motorway works has a reduced speed limit of 50mph. This runs just prior to junction 10 and continues up to junction 12.

Kind regards,

#### Dianne

Senior Administrator – North West Highways England | Atlantic House | Birchwood Boulevard | Birchwood | WA3 7WD

Web: https://highwaysengland.co.uk

## 17 Planning Appeal APP/M06551/W/173181021



## **Appeal Decision**

Site visit made on 23 January 2018

## by Roy Merrett BSc(Hons) DipTP MRTPI

an Inspector appointed by the Secretary of State

#### Decision date: 08 February 2018

## Appeal Ref: APP/M0655/W/17/3181021 The Dog Bus / Dog Day Care Centre, Warrington Lane, Lymm WA13 0SW

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant planning permission.
- The appeal is made by Mr John Pearson, The Dog Bus, against the decision of Warrington Borough Council.
- The application Ref 2016/28369, dated 1 June 2016, was refused by notice dated 23 June 2017.
- The development proposed is change of use for site to be used as a dog day care centre.

## Decision

1. The appeal is dismissed.

## **Procedural Matter**

2. The proposal is retrospective, the use having been commenced.

## Main Issue

3. The main issue is the effect of the development on working conditions for nearby businesses with particular regard to noise disturbance.

### Reasons

- 4. The appeal site is part of a narrow linear estate which accommodates various industrial and office related land uses, located between Warrington Lane to the south and the Bridgewater Canal to the north. The site, which is relatively small and rectangular shaped, essentially comprises an external concrete compound with a timber cabin situated in one corner. Enclosed by a combination of a wall and security fencing, it is immediately bounded by other industrial uses on either side.
- 5. I have considered the appellant's noise assessment which has had regard to British Standard BS 8233:2014 – Guidance on sound insulation and noise reduction for buildings (BS). The assessment, which was based on a monitoring exercise, concluded that noise levels in relation to dogs barking, experienced within the nearest office to the appeal site would be well within parameters that are considered to be reasonable for work environments where concentration is required.
- 6. However it is undisputed that the assessment is based on the average noise levels recorded over a given period. I concur with the Council that the

potential effect of this would be to smooth out peaks in noise levels associated with sudden bouts of barking in amongst quieter periods.

- 7. Furthermore irrespective of levels, the BS recognises that people's sensitivity to noise varies and that it is not practicable within the guidance to consider psychological factors such as distinctions between pleasant and unpleasant sounds. The BS goes on to indicate that in a residential context there is usually more tolerance of noise without a specific character, which would not include that which is irregular enough to attract attention. I consider that it would be reasonable to regard the noise of a barking dog as having a specific character and therefore, having regard to the BS, a potentially less tolerable form of noise. Whilst I acknowledge that the appeal site is within an industrial rather than residential location, where there may be greater tolerance of a less quiet environment in general, I am not persuaded this means that a business worker seeking to concentrate on a particular task would not be sensitive to unpleasant noise.
- 8. I am in no doubt that the sudden experience of dog barking, when not expected, the characteristics of which may be unpleasant and aggravating, would be a startling source of disturbance and irritation for occupiers of nearby businesses seeking to focus on various aspects of work. Accordingly, it seems to me that this would be harmful to the working conditions of those occupiers.
- 9. From the information before me I have no reason to conclude that barking would occur infrequently, given the number of dogs that might be present on the site. Notwithstanding the presence of a high boundary wall to part of the site, the impact would be exacerbated given that barking may occur externally in relatively close proximity to offices with potentially open windows.
- 10. I accept that such disturbances would be unlikely to occur constantly and acknowledge the presence of isolation rooms within the cabin intended as space for calming excited animals. I also note the appellant's point that additional staff have been employed allowing dogs to be walked away from the site more frequently.
- 11. However, notwithstanding these considerations, I also note that the appellant has taken steps to procure a purposely constructed noise insulated building. Whilst, in principle, this would indicate a positive approach in terms of attempting to deal with the issue, irrespective of whether a solution could be found that is acceptable to the Council, it also indicates recognition on the part of the appellant that there is an ongoing issue that needs to be dealt with.
- 12. The appellant has suggested that if the appeal is allowed, he would then take steps to put a suitably constructed building in place on the site. However, there can be no guarantee that an effective solution would be found that would be acceptable to the Council. Accordingly this would not be an appropriate or realistic approach.
- 13. I am also mindful that a nearby occupier found reason to proactively complain to the Council about the appellant's business and whilst it appears that some land users are now content with the position, a significant number of others have maintained objections on disturbance related grounds. Although the appellant makes the point that industrial noise on the estate is greater than that being made by dogs, it has not been brought to my attention that other forms of noise are a source of disturbance to occupiers. Whilst I note the

appellant's intention not to accept noisier dogs at the site, this is not a solution that could be readily enforced.

14. Drawing the above considerations together, I give limited weight to the findings of the appellant's noise assessment and conclude that the development is causing genuine and ongoing harm to the working conditions of nearby businesses with particular regard to noise disturbance. Accordingly I find conflict with Policies CS 1 and QE 6 of the Warrington Borough Council Core Strategy 2014 and the National Planning Policy Framework insofar as they seek to secure a good standard of amenity for all existing and future occupants of land and buildings.

## Conclusion

15. Therefore, for the above reasons and having had regard to all other matters raised, I conclude that the appeal should be dismissed.

Roy Merrett

INSPECTOR

## 18 Case No: CO/454/2018 Ornua Ingredients v

## **Herefordshire Homes**

Neutral Citation Number: [2018] EWHC 2239 (Admin)

Case No: CO/454/2018

## IN THE HIGH COURT OF JUSTICE QUEEN'S BENCH DIVISION BIRMINGHAM DISTRICT REGISTRY PLANNING COURT

Birmingham Civil Justice Centre Bull Street, Birmingham B4 6DS

Date: 22/08/2018

Before :

#### **HHJ DAVID COOKE**

Between :

R (oao Ornua Ingredients Ltd) - and -Herefordshire Council Barratt Homes <u>Claimant</u>

Defendant Interested Party

## -----

Jenny Wigley (instructed by Burgess Salmon LLP) for the Claimant Hugh Richards (instructed by internal solicitors ) for the Defendant Peter Goatley (instructed by Shakespeare Martineau LLP) for the Interested Party

Hearing date: 5 July 2018

## **Approved Judgment**

### HHJ David Cooke :

- 1. The claimant challenges the decision of the defendant council on 21 December 2017, acting by officers under a delegated authority, to approve reserved matters including the layout of a housing development at Ledbury. That decision was taken in relation to outline planning permission for building 321 houses on the site that had been granted by an Inspector on appeal in April 2016. The claimant is the owner of a factory making cheese adjacent to the site. The Interested Party is now the owner of the development site, having bought it with the benefit of the outline planning permission.
- 2. The claim proceeds on one ground only, for which I gave permission on 27 March 2018, that the council failed to take into account a material consideration in that it did not take any account of representations made by the claimant on 15 December 2017 including a report by acoustic engineers on its behalf which, it says, casts doubt on a conclusion previously reached that it would in principle be possible to produce a scheme for mitigation of noise emitted by the claimant's factory such that it would be reduced to acceptable levels at houses built to the proposed layout.
- 3. It is not in dispute that the council received the representations and report concerned, and it is accepted that no consideration was given to them before the reserved matters decision was taken. The position of the council and the Interested Party is that this did not amount to an error of law because the outline permission was in any event subject to a condition (Condition 21) that before any development the council must first have approved "a scheme of noise mitigation for outdoor living areas, bedrooms and living rooms" for the houses to be built which would "include details of proposed ameliorative measures to mitigate against noise from operations within the nearby industrial estate... including the [claimant's] cheese factory...". The reserved matters decision did not amount to discharge of this condition, so that if it turned out in due course that acceptable noise mitigation could not be achieved with the approved layout no development could in any event begin and the developer would have to produce a revised layout, for which acceptable noise levels could be achieved. The representations on noise issues were thus, it is said, not material considerations at the point of approving the layout and no error was committed by ignoring them.
- 4. The claimant's commercial concern of course is that it should not be at risk in future of claims for noise nuisance by occupiers of the houses that might cause it to have to curtail its operations or pay for noise mitigation measures of its own. Insofar as such measures are necessary, it no doubt wants the developer to undertake them at the outset at its own expense, but it says that to the extent the developer has engaged in any discussion with it as to the measures it is prepared to undertake, they are not capable of producing acceptable levels given the proposed layout. It fears that if the layout is approved, in practice the council will come under pressure (and might even be obliged) to approve a scheme of noise mitigation which could be presented as the best practically achievable with that layout, but which would not be sufficient to protect it from future claims and the trouble and expense they would bring.
- 5. In return the council says there is no question of it being obliged to accept inadequate noise mitigation, and it would be fully entitled to withhold approval for discharge of condition 21 even if that meant revision of the layout previously approved.

- 6. It is obvious that there is a linkage between questions of layout of houses on the development and the noise mitigation measures that may be required to produce an acceptable noise level at and within those houses. The nearer a house is to the emitter of a given noise the louder that noise will be, as heard at the house itself, so that more effective measures of noise reduction or attenuation may be required to render it acceptable. Noise received in gardens will be less if the gardens are sited on the far side of the house from the source, and so shielded to some extent, than if they are on the near side. Noise heard in a given room, such as a bedroom, will also be affected by whether that room is on the near or far side from the source. In principle no doubt the two issues could be considered entirely separately, but in reality anyone seeking to design a layout would be bound to have some regard to this interaction and the likely effect of noise on the houses, not least because it might be very inefficient and expensive to have to revisit the layout if it emerged later that the noise condition could not be satisfied. I do not doubt either that in practice once a layout had been approved there would be a risk that the developer might seek to exert pressure on the planning authority to accept noise reduction measures it proposed, if the alternative was to revisit that layout with the possible delay disruption and expense that might cause. That does not mean of course that the authority would be necessarily bound to accede to any such pressure.
- 7. Noise was an issue before the Inspector. Her decision letter includes the following:

"Dominant noise sources likely to affect future occupiers are the adjacent industrial units and traffic on Leadon Way and Dymock Road. The appellant's noise report sets out various mitigation measures that could be secured by condition. The measures that provide the baseline for the conclusions in the report do not, it transpires, take account of the proposed roundabout on Leadon Way which would, potentially, introduce noise from vehicles braking on approach, and accelerating away from it. I have no reason to suppose, however, that associated noise would preclude development on the appeal site and am satisfied that an appropriately worded condition would deal with the matter and would ensure that acceptable living conditions were provided for future occupiers.

... As referred to earlier, a scheme of noise attenuation is necessary to ensure acceptable living conditions for future occupiers "

8. The application for approval of reserved matters was submitted in December 2016. It included, amongst other matters, the proposed layout for the site. It was referred by officers for consultation to the council's Environmental Health Department, and it is plain from the consultation responses that the officers in that department were significantly concerned by the potential impact of noise on the proposed houses, and wanted to be satisfied that appropriate mitigation measures could in principle be devised for the layout proposed. The developer's acoustic experts, Wardell Armstrong were asked to submit noise modelling reports to supplement reports they had prepared at the time of the original planning application in 2014 and 2015. These were sent in January and April 2017, and in the consultation response dated 8 May 2017, the

Environmental Health Department set out what appear to be fairly serious concerns about the information provided.

- 9. They said they did not agree with Wardell Armstrong that the appropriate limit for noise garden areas was 55 dB, that the acceptable limit ought to be 50 dB but the modelling provided showed levels between 55 and 60 dB. This was described as "not acceptable", and although this particular point seems to be directed at traffic noise, may indicate that the EHO considered that Wardell Armstrong were tending to seek to apply inadequate standards. In relation to noise from the cheese factory, it was noted that the mitigation levels proposed in the April report produced a worse result than had been suggested in the January report with noise levels "likely to be around 5 dB above background sound levels... This is not desirable."
- 10. It was noted that in the 2015 report Wardell Armstrong had anticipated that the houses closest to the cheese factory would have their gardens facing away from the factory so that they would be screened by the houses, but the layout now proposed included two houses where this was not the case. Further, the original report had suggested noise mitigation measures being taken on the factory premises but these were now omitted (though it was noted that this might have to be reconsidered). Further information was requested on this and also in relation to night-time noise where it was noted that "our concern is that closest residents may be adversely impacted in their bedrooms at night time when much lower background noise levels exist. Please can the applicants supply further noise contours of the closest dwellings... to evaluate the impact of this noise."
- 11. Further noise contour drawings were provided by Wardell Armstrong on 23 May, and the EHO made a site visit before submitting a further consultation response on 7 June. In that response it was noted "At visits to the proposed site both during the day and late evening officers from our department noted the constant humming noise emanating from [the cheese factory]... which was identified as the dominant noise source in the locality and was accompanied by a hissing (pressure relief type) noise every few seconds. Without mitigation, this would seriously impact on the amenity of residential properties in close proximity to the site. Mitigation of the 24/7 sound source on the roof at [the cheese factory] has been mentioned as an option in a number of Wardell Armstrong reports... Despite this at our meeting 26 May 2017 it would appear that... there has been no discussion with [the claimant] on this issue." It was also noted that the information provided indicated that during the daytime noise levels from the cheese factory would be between 5 and 10 dB above background level "thus indicating a likely adverse impact, depending on context." Further, the difference at night time was suggested to be between 23 and 26 dB, significantly more than the level of 10 dB which the relevant British standard suggested would be "likely to be indication of a significant adverse impact depending on context."
- 12. Further concern was expressed about low-frequency noise measurements, where the council's own measurements showed a significant difference from those provided by Wardell Armstrong. This was evidently a serious concern; this document concluded "we would strongly recommend the Wardell Armstrong proposed option to mitigate the [cheese factory] sound at source and this needs to be further explored with [the claimant]. Alternatively we recommend the site layout and design should be further reviewed to assess the suitability of siting dwellings close to [the cheese factory]... There must either be attenuation of this noise at source or a buffer zone on the site

where there is no residential development or a combination of the two so that we could be satisfied that noise from [the cheese factory] (including low-frequency noise) does not impact on the amenity of residents when their windows are open as well as closed."

- 13. A further response was sent by Wardell Armstrong on 16 June, in relation to which the EHO commented on 5 July 2017 "the proposal for mitigation of the noise [from the cheese factory ] at source has been dropped after repeated references to this in earlier submissions. The noise consultants advise that the low-frequency noise can be addressed by residents keeping their windows closed night time. Our submission is that this is not a reasonable expectation on residents... and is contrary to World Health Organisation guidelines... Our low-frequency noise assessment and the officers' site observations would support the BS:4142 assessment findings in that the [cheese factory] noise source is likely to have a significant adverse impact on the dwellings closest to the noise source. This is especially so at night time..." The "strong recommendation" that mitigation measures and or a change of layout be considered was repeated.
- 14. This led to a yet further proposal by Wardell Armstrong, which was sent on 10 October. That document provided, as had been requested, a specification for proposed mitigation measures on the cheese factory site, in the form of a 3 m high acoustic fence in combination with sound insulation measures at the principal sources of noise from the factory. This led the EHO to send an email to the planning officer dealing with the matter on 17 October in which she said "The proposed mitigation works... will be satisfactory for the site with windows open... as long as the mitigation at the [cheese factory] site namely a) acoustic fencing and b) extract plant mitigation... are undertaken."
- 15. An officers' report was then prepared for the meeting of the planning committee. It is accepted that it contained an adequate summary of the consultation that had been undertaken with the EHO and the result that had been reached. Members were informed that the layout had been referred to the EHO who had initially been concerned that it might not be possible to achieve acceptable noise mitigation but that "the work that has been completed by [Wardell Armstrong] has demonstrated that there are measures that can be taken. The provisions of condition 21 remain in force and it is incumbent upon the developer to provide further information for the condition to be discharged, but officers are sufficiently content that noise from [the cheese factory and the road] can be mitigated on the basis of the layout shown above."
- 16. The minutes of the committee meeting make clear that members of the committee were concerned about noise. They record that they were told by the officer "it was not a requirement of the reserved matters application to address all the conditions imposed by the inspector. With reference to condition 21 relating to noise, for example, the Environmental Health Officer had to be satisfied that a scheme could be implemented to mitigate that issue. It was then incumbent upon the developer to submit a suitable scheme to enable the application to proceed. The absence of the detailed scheme at this stage was not a ground upon which to refuse a reserved matters application." The committee resolved that (subject to conditions not relevant for present purposes) delegated authority be given to officers to issue the reserved matters approval.

- 17. It was only after this that the claimant became aware of the matters that had been under discussion. There had been no consultation by planning officers or the EHO with the claimant (it is not suggested there was any obligation to undertake such consultation) and the measures that Wardell Armstrong proposed by way of noise mitigation, which would require to be executed on the claimant's land, had not been agreed with the claimant. On 15 December 2017 the email that forms the basis of this challenge was sent, enclosing a report prepared by Hayes McKenzie, the claimant's acoustic consultants, and:
  - i) drawing attention to the fact that in its calculations of noise impact the latest Wardell Armstrong report had dropped a 6 dB "tonal penalty" that had been applied in its 2014 and 2015 reports, and stated that in their opinion further measurements showed that the sound from the cheese factory was not tonal in quality. However Hayes McKenzie had performed their own measurements which, in their view, showed a distinct tonal quality as a result of which the relevant British standard required a tonal penalty to be applied.
  - ii) Referring to further background noise data collected by Hayes McKenzie, including measurements for evening and night periods that had not previously been assessed.
  - iii) Stating that Hayes McKenzie's opinion was that in light of these factors the proposed mitigation measures would not prevent a significant adverse impact on residents likely to give rise to complaints, and that with the layout proposed, it would not be possible to achieve suitable mitigation.
- 18. The email requested that determination of the reserved matters application should be delayed "until this issue has been properly addressed and a suitable scheme agreed by [the claimant and the developer]". It is not clear exactly what happened on receipt of that email; the planning officer did not however refer the matter back to the EHO for any comment, nor did he ask the developer or Wardell Armstrong to respond to it, nor did he refer the matter back to members of the planning committee. There is no note or other record, or other evidence, showing what if any consideration was given to the email and the Hayes McKenzie report. Thus, although the position of the council now is that any information casting doubt on the advice the EHO had given was irrelevant because it could all be addressed as and when an application was made to discharge condition 21, there is no evidence at all that the relevant planning officer considered the matter and came to that conclusion at the time.
- 19. In fact, as Mr Richards points out, the email may have somewhat overstated Hayes McKenzie's opinion in relation to proposed mitigation. It is apparent from the content of the report that, whilst it strongly disputes Wardell Armstrong's conclusion that the tonal penalty should not be applied, stating that its measurements show "a tone at around 600 Hz which has a tonal audibility greater than 10 dB confirming the requirement for a 6 dB rating correction under BS 4142" the conclusion reached was that "it is therefore possible that the only way of achieving an acceptable external noise environment is through greater separation distance between the factory and nearby housing." This, Mr Richards says is not a conclusion that adequate noise mitigation *is not* possible, but only that it *may not* be possible.

- 20. It cannot however be said that this is the reason why no action was taken in relation to the email; there is simply no evidence that any planning officer considered it all came to any view of it at all.
- 21. Ms Wigley's submission is that the law in relation to what is a material consideration and the obligations on officers acting under a delegated power when a material matter arises after a delegated power is given to them but before they exercise that power to make a decision is set out on the judgment of Jonathan Parker LJ in *R (Kides) v South Cambridgeshire DC* [2002] EWCA Civ 1370, in which he said:

### ""material considerations"

121 In my judgment a consideration is "material", in this context, if it is relevant to the question whether the application should be granted or refused; that is to say if it is a factor which, when placed in the decision-maker's scales, would tip the balance to some extent, one way or the other. In other words, it must be a factor which has some weight in the decision-making process, although plainly it may not be determinative. The test must, of course, be an objective one in the sense that the choice of material considerations must be a rational one, and the considerations chosen must be rationally related to land use issues.

### "have regard to"

122 In my judgment, an authority's duty to "have regard to" material considerations is not to be elevated into a formal requirement that in every case where a new material consideration arises after the passing of a resolution (in principle) to grant planning permission but before the issue of the decision notice there has to be a specific referral of the application back to committee. In my judgment the duty is discharged if, as at the date at which the decision notice is issued, the authority has considered all material considerations affecting the application, and has done so with the application in mind – albeit that the application was not specifically placed before it for reconsideration.

123 The matter cannot be left there, however, since it is necessary to consider what is the position where a material consideration arises for the first time immediately before the delegated officer signs the decision notice.

124 At one extreme, it cannot be a sensible interpretation of section 70(2) to conclude that an authority is in breach of duty in failing to have regard to a material consideration the existence of which it (or its officers) did not discover or anticipate, and could not reasonably have discovered or anticipated, prior to the issue of the decision notice. So there has to be some practical flexibility in excluding from the duty

material considerations to which the authority did not *and could* not have regard prior to the issue of the decision notice.

125 On the other hand, where the delegated officer who is about to sign the decision notice becomes aware (or ought reasonably to have become aware) of a new material consideration, section 70(2) requires that the authority have regard to that consideration before finally determining the application. In such a situation, therefore, the authority of the delegated officer must be such as to require him to refer the matter back to committee for reconsideration in the light of the new consideration. If he fails to do so, the authority will be in breach of its statutory duty.

126 In practical terms, therefore, where since the passing of the resolution some new factor has arisen of which the delegated officer is aware, and which might rationally be regarded as a "material consideration" for the purposes of section 70(2), it must be a counsel of prudence for the delegated officer to err on the side of caution and refer the application back to the authority for specific reconsideration in the light of that new factor. In such circumstances the delegated officer can only safely proceed to issue the decision notice if he is satisfied (a) that the authority is aware of the new factor, (b) that it has considered it with the application in mind, and (c) that on a reconsideration the authority *would* reach (not *might* reach) the same decision."

- 22. Issues relating to noise were, she submitted, inevitably material considerations in addressing the reserved matters application because of the link between layout and perceived noise at the houses, notwithstanding the existence of the separate condition specifically requiring acceptable noise mitigation. The council was obliged, she submitted, to be satisfied at least that acceptable mitigation was possible in principle before approving a given layout, even if the detail was then left to a later application to discharge the condition. Alternatively, if the council was not obliged to take noise issues into account at that stage it was entitled to do so if it wished, and since the council had in this case plainly chosen to take noise into account at the reserved matters stage it had become a material consideration even if it need not have been treated as such.
- 23. As to the first point, that noise was an obligatory consideration, Ms Wigley submitted that it must be so, since otherwise when an application was made to discharge condition 21 it would be argued that the council could not lawfully refuse that application on the basis that acceptable mitigation was not possible unless the layout was changed. She pointed to *Thirkell v Secretary of State* [1978] JPL 844, holding that reserved matters approval could not be withheld on a ground that had already been decided in principle at the grant of outline planning permission as that would be to reopen an issue already decided and frustrate the permission granted. She accepted this could not be read across directly to the position where a condition is considered after reserved matters approval, but submitted the same would apply by analogy; the council having approved a layout at one stage could not make it impossible to

implement that layout by adopting standards for what constituted acceptable noise levels that could not practically be achieved with that layout.

- 24. Mr Richards submitted that there was no question of frustration. The permission granted was dependent on both an acceptable layout and acceptable noise mitigation; the fact that one layout had been approved did not preclude the developer submitting another and the council would be perfectly entitled to refuse discharge of condition 21 if not satisfied with the mitigation measures proposed, leaving the developer with the option of submitting revised mitigation measures or a revised layout, or a combination of the two.
- 25. Counsel are agreed there is no prior authority either way directly in point. For my part, I can see force in Ms Wigley's submission, and I do not find particularly persuasive the argument that because the layout was approved as a reserved matter the planning authority could in effect compel submission of a revised layout by a conclusion that the one approved could not result in satisfaction of an outstanding condition as to noise. Such a condition might equally be imposed on a grant of full planning permission, or on a grant of outline permission where layout was not one of the reserved matters. If it might be argued (as presumably it could) that refusal to discharge a condition amounted to frustration of a permission in those forms, why should it make a difference that the permission in place is a composite of an outline permission and a reserved matter approval, as here?
- 26. No doubt it would be fairly rare for a condition imposed to be absolutely impossible to fulfil. For instance, a condition as to noise could in principle always be discharged by procuring the cessation of the source of noise. In practice, the argument would no doubt be that refusal to discharge the condition made it impossible in the real world to implement the permission because the measures required were impractical or uneconomic (eg perhaps if noise mitigation to the standard required involved the closure of a road or factory). It is fairly easy to imagine circumstances in which such an argument could arise, so it cannot be said that it is so fanciful that the duty argued for cannot exist.
- 27. In the end however I have concluded that I do not need to decide that point in the present case, because Ms Wigley succeeds on her secondary argument. The interaction of layout with satisfaction of the noise condition was in my view plainly such that the council was entitled to have regard to it in considering the reserved matters application. It is evident from the consultation, the officers' report and the minutes of the meeting that it did so, and approached the matter on the basis it required to be satisfied that satisfaction of the noise condition would not be rendered impossible. The advice given to members was expressly on the basis that having regard to the measures the developer had proposed officers and the EHO were satisfied the condition was capable of discharge without changing the layout, and the delegated authority given to the officers was plainly premised on that advice.
- 28. In this context it is clear, it seems to me, that further information coming to light that cast significant doubt on the validity of that advice amounted to a material consideration. It would, adopting the test set out in *Kides*, have been bound to tip the balance of consideration to some extent- if for instance members at the meeting had been told that the acceptability of the revised proposals depended on the developers experts having apparently watered down the standards applied by excluding a tonal

penalty on a basis that now appeared open to challenge it is not realistic to say this would not have been considered relevant. This is particularly so given the history of concern on the part of the EHO, including apparent concern that Wardell Armstrong had sought to apply standards the EHO considered inadequate and provided measurements that did not appear to be supported by her own observations.

- Such information would not I think be an entirely new material consideration, arising 29. for the first time after the grant of delegated authority, such as Jonathan Parker LJ appeared to be envisaging in the passage quoted in Kides, but best considered as material bearing on a matter already taken into account. I am bound to say I have some difficulty in reconciling what he said at para 122, which seems to envisage that a new matter must have been considered by the authority before a delegated power is exercised, but not necessarily by the officer referring it back to the authority, and para 125 which seems to indicate that if the new material is received immediately before a decision is taken it must be referred back to the planning authority, ie members. But in the present context I think the resolution is that the delegated authority itself confers on officers a degree of power to consider for themselves new relevant information bearing on the exercise of the power they have been given such that, depending on the terms of the authority conferred, they may properly take a view as to whether in light of such information they should proceed to make a decision or refer the matter back to the members. If they do so, the new information has been considered by the planning authority, at the level of the officers acting under delegated powers, before the decision is taken and its duty is satisfied.
- 30. There may of course be issues that arise in a particular case whether the scope of the delegated authority is sufficient to allow officers to take their own decision on information they in fact receive, or, if it is, whether the decision they reach on that information is rational. But no such considerations arise in this case, because on the evidence before me the officers did not give any consideration at all to the 15 December email or the report it attached.
- 31. Mr Richards submitted that even if such consideration had been given, the result would inevitably have been the same because officers would have concluded that the matters raised could (indeed must) have been left to be addressed later on discharge of the condition. But this it seems to me flies in the face of the way the matter had been dealt with previously both by officers and members. Although Mr Richards points to textual matters in the email and the attached report that he says might have led to a conclusion they did not raise a strong enough doubt about the previous advice to prevent the decision proceeding, these are not such that the email and report must inevitably have been dismissed out of hand. It cannot be said, it seems to me, that responsible officers who had advised members they and the EHO were satisfied the noise condition was capable of discharge would inevitably have proceeded to a decision on considering new information, apparently supported by expert advice, casting doubt on what members had been told, without referring that information to the EHO or members or both.
- 32. It follows in my judgment that an error of law was committed. The error may be considered either as a failure by the planning authority to consider, either at the level of members or officers, a material factor in the form of the information provided with the 15 December email, or as a failure by officers properly to exercise the delegated

power they had been given by evaluating and coming to a conclusion on that information.

- 33. In either case, the result is the same and the decision taken must be quashed and remitted to the authority for redetermination.
- 34. I will list a hearing at which this judgment will be handed down. I do not require attendance on that occasion, though if there are matters arising that can be conveniently dealt with in 30 minutes I will take them at that hearing. If a longer or later hearing is required, counsel should submit and agreed time estimate and joint availability so that it can be listed.

## 19 Case No: CO/1639/2018 Cemex (UK) Operations Ltd

## v Richmondshire



Neutral Citation Number: [2018] EWHC 3526 (Admin)

Case No: CO/1639/2018

### IN THE HIGH COURT OF JUSTICE QUEEN'S BENCH DIVISION ADMINISTRATIVE COURT PLANNING COURT

Date: 19/12/2018

Before :

### HER HONOUR JUDGE BELCHER

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Between :

CEMEX (UK) OPERATIONS LIMITED Claimant
- and RICHMONDSHIRE DISTRICT COUNCIL Defendant
-andDAVID METCALFE Interested
Party

## -----

Miss Jenny WIGLEY (instructed by Clyde & Co) for the Claimant Mr Juan LOPEZ (instructed by Darlington Borough Council Legal Services) for the Defendant

Hearing dates: 9 and 26 November 2018

## Approved Judgment

## Her Honour Judge Belcher :

1. In this matter the Claimant challenges the decision of the Defendant local planning authority dated 15/03/2018 granting planning permission (the Permission") to the IP (the "IP") for the conversion of a stone barn into a three-bedroom dwelling with

detached garage on land at Quarry Barn, Moor Road, Leyburn, North Yorkshire (the "Property").

- 2. The Statement of Facts and Grounds contains five Grounds of challenge. By Order dated 20 June 2018, John Howell QC, sitting as a Deputy High Court Judge, granted permission on the papers in relation to Ground 4 and part only of Ground 5, but refused permission on Grounds 1, 2, and 3, and the remaining part of Ground 5. He ordered the matter to be listed for one day-based on that permission order. The Claimant sought to renew the Application for Permission on Grounds 1 to 3 and asked that this be considered within the substantive hearing. Those Grounds are substantial, and the net effect was that the one day allowed for the substantive hearing was insufficient. Fortunately, we were able to find a second day within a reasonably short time frame, but I repeat my advice to Counsel that in such circumstances, the time estimate given should be revisited and, if appropriate, a revised time estimate provided to the listing officer. Having heard argument over 2 days, I am satisfied that permission should be granted on Grounds 1, 2, and 3. I grant permission accordingly.
- 3. At the outset of the hearing, both parties sought permission to rely upon further witness evidence, and each opposed the other's Application on the basis that the evidence in question was inadmissible. I allowed both Applications on the basis that I considered the evidence to be admissible, and that the real issue was as to its relevance and or weight. There was also an Application by the Claimant for permission to add, whether as a new Ground or as part of Ground 5, the comments at Paragraph 8 of the Claimant's Response. I gave a preliminary indication that I did not consider this to be a new Ground, but in any event, Counsel agreed that all matters should be dealt with by the court within this hearing. References in this judgment to the trial bundle will be by Tab number, followed by the page number, for example [15/102]. References to the bundle of authorities will be by the capital letters AB, followed by the Tab number, for example [AB/10].

## The Facts

- 4. The Claimant is a global producer and marketer of cement, concrete and other building materials. Within the UK it is a leading producer of ready mix concrete, and the third largest cement and asphalt producer. The claimant operates a major limestone quarry (the "Quarry") on an industrial site which includes an asphalt road stone coating plant (the "Asphalt Plant") at Black Quarry, Leyburn North Yorkshire. The Asphalt Plant and the Property are located directly opposite each other on opposite sides of a road called Whipperdale Bank. The Property is located 64 m to the south of the Asphalt Plant. The distance between the Quarry and the Property is 569 metres.
- 5. The Quarry and Asphalt Plant operate subject to planning conditions imposed on 5 April 2000 in a Minerals Planning Permission granted by North Yorkshire County Council (the "Minerals Permission") [23/161-170]. Conditions 14 to 16 of the Minerals Permission limit the hours of operation of the Quarry, but there is no limit on the hours of operation of the Asphalt Plant [23/166]. Condition 17 of the Minerals Permission, which appears under the heading "Noise Control ", requires that noise from the operations on the site including the use of fixed and mobile machinery shall not exceed a noise limit of 55 dB (A) LA eq (1 hour) free field at two residential properties, namely Moor Farm, and Stonecroft, Washfold Farm [23/167]. There is no dispute in this case

that the Claimant's operations, and the Asphalt Plant in particular, generate a considerable amount of noise.

- 6. I have the benefit of an aerial photograph based on ordnance survey land line data [12/86]. I was provided with an enlarged and much clearer version of this document which was kept loose during the trial. For ease of reference I shall refer to that enlarged aerial photograph as "AP1". AP1 has a number of arrows and distances marked on it. There are arrows purporting to show distances between Moor Farm and the Property, and between Washfold Farm and the Property. Miss Wigley advised me that those arrows should in fact be from the respective farms to the Asphalt Plant, rather than to the Property. There is no dispute in this case that the distances shown on AP1 are from the respective farms to the Asphalt Plant, and Washfold Farm is 652 metres from the Asphalt Plant.
- 7. On 21/01/14 the Defendant granted planning permission for conversion of the Property in a manner almost identical to the development which is the subject of the Permission which is challenged before me. The Claimant's case is that it did not receive any notice from the Defendant in relation to that planning application, and did not otherwise become aware of it. In those circumstances, the Claimant was obviously not able to object to that application. It is the Claimant's case that had it been aware of that application, it would have objected to it because of the proximity of the Property to the Quarry and the Asphalt Plant, and the adverse impact those operations would have in noise terms for the residents of the Property. (See Witness Statement of Mark Kelly, paragraph 26: 25/176]. There is no dispute that the Defendant's own Environmental Health Department was not consulted with regard to noise emanating from the Claimant's operations in relation to the 2014 grant of planning permission.
- 8. The Property has been developed. However, there is no dispute that the works undertaken to convert the barn constituted unlawful development. This is because the pre-commencement conditions contained in the 2014 planning permission had not been discharged prior to the start of the works. Accordingly, in February 2017, the IP made a fresh planning application to regularise the position, with the proposed development being the same as that previously approved, save for the addition of a detached garage.
- 9. On 25/04/2017 the Claimant submitted objections in the form of an e-mail note from Dr Paul Cockcroft of WBM Acoustic Consultants, raising the issue of noise impacts at the Property. As a result, the Defendant's Planning Officer, Natalie Snowball, consulted Lindsey Wilson, a Scientific Officer in the Defendant's Environmental Health Department. Lindsey Wilson made an initial visit to the site to look at the relationship between the quarry and the dwelling. On 23/05/17 Lindsey Wilson sent an e-mail to Natalie Snowball about that visit. In her e-mail Lindsey Wilson describes clearly audible noise from the Asphalt Plant despite the wind direction blowing noise away from the Property. She comments that the noise had the potential to have a significant adverse impact on that the proposed dwelling, particularly at night as it would appear that the Asphalt Plant has permission to operate through the night where background noise levels will be low. In those circumstances, she recommended that the IP should be requested to carry out a noise impact assessment by reference to BS 4142:2014 "Methods for rating and assessing industrial and commercial sound", and should give consideration to BS 8233, "Guidance on sound insulation and noise reduction for buildings", with regard to whether recommended noise levels are achievable [16/117].

10. Her email continues as follows:

"I have also sought advice from North Yorkshire County Council mineral planning with regards to the planning permission for the quarry and whether any existing noise conditions would apply to [the Property] should permission be granted, or whether they could apply any review of the planning permission, which I understand is overdue. ..... My initial concern is that should a noise limit from quarry operations be applied to this property, the quarry may be unable to comply particularly to any night time limit applied, and this would therefore impact on the operations of the existing quarry. I would therefore also recommend that consideration is given to this aspect" [16/117].

- 11. The IP instructed Apex Acoustics to undertake the noise assessment. Apex Acoustics produced a report dated 10/08/2017 (the Apex Report") [17/119-138]. I shall have to consider the Apex Report in some detail later in my judgment, but for present purposes it suffices to say that the assessment carried out under BS4142 indicated a significant adverse effect from noise at the Property for both daytime and night time periods, and demonstrated high noise levels at the Property. The assessment results showed levels of noise far exceeding the threshold for the 'significant observed adverse effect level' as contained in the Noise Policy Statement for England ("NPSE"). This is the level of noise exposure above which significant adverse effects on health and quality of life occur and the policy aim is to avoid such levels [33/226 and 227]. The Apex Report sets out two "Feasible Ventilation Strategies" for achieving satisfactory noise levels within the Property, which options both include continuous mechanical ventilation [17/122]. Again, I shall return to this in more detail later in my judgment.
- 12. There is no dispute in this case that the IP did not wish to install mechanical ventilation at the Property. By way of follow-up to a meeting between Brian Hodges, Planning Consultant for the IP, and Natalie Snowball and Lindsey Wilson, Brian Hodges emailed Natalie Snowball on 08/12/17 to confirm "... the works proposed to satisfactorily attenuate the noise impact from the nearby quarry operations" [18/139]. That email was copied to Lindsey Wilson. He attached a further copy of the Apex Report and referred to the fact that with respect to internal noise levels, subject to appropriate glazing specification and ventilation arrangements, any Significant Observed Adverse Effect Level impacts can be avoided. He then gives details and specification of the existing glazing which had already been installed and which exceeds the example specification for glazing as referred to at Paragraph 2.9 of the Apex Report. He then goes on to deal with ventilation stating as follows:

"It is confirmed that the trickle vents used on the windows and doors are Greenwoods Slot Vents as referred to at 2.10 of the Noise Assessment Report and satisfy the performance requirements to achieve the acceptable internal noise levels. As detailed in Table 1 of the Noise Assessment Report Summary of minimum facade sound insulation treatment included in assessment calculations, in order to achieve the acceptable internal noise levels it is necessary to remove the slot vents from certain windows in the bedrooms." He then goes on to list the vents to be removed and confirms that the works would be carried out within two months from the grant of planning permission and would be the subject of a planning condition. There is no reference at all to mechanical ventilation in that email.

13. By further email dated 03/01/2018 Brian Hodges emailed Natalie Snowball (copied to Lindsey Wilson) indicating that in addressing the issue of the reduction of noise levels within the building involving the reduction in the ventilation arrangements, he was conscious of the implications and possible conflict with building regulations. He goes on to confirm that even with the removal of the required vents, the ventilation requirements to meet building regulations are still satisfied, and he encloses an email received from Yorkshire Dales Building Consultancy Ltd to confirm that [19/144]. The enclosed email from Yorkshire Dales Building Consultancy Ltd states as follows

"Further to our discussion regarding the provision of background ventilation... windows which will need to have the background ventilation openings (trickle vents) sealed in order to better meet the requirement for sound reduction into the building, will not reduce the background ventilation provisions required by building regulations as the provision can be met by the 2<sup>nd</sup> openings into each of the rooms....[19/147]."

In response to that, by email dated 08/01/2018, Lindsey Wilson replied

"Thank you for the additional information from Building Control who confirmed that the ventilation arrangements are satisfactory. I therefore confirm that Environmental Health are satisfied with the proposed glazing and ventilation arrangements."

- 14. On 12/03/18 Lindsey Wilson provided her report to Natalie Snowball. I shall visit the detail of this report when considering the Grounds of challenge. For present purposes it suffices to say that Lindsey Wilson confirmed that the noise assessment recommended certain glazing and ventilation options all entailing the use of mechanical ventilation in order to achieve the recommended noise levels. She notes that the IP does not propose to use mechanical ventilation ".... and has forwarded documentation from Building Control who have confirmed that the current ventilation arrangements are acceptable without the need for mechanical ventilation". She concluded that satisfactory internal noise levels can be achieved through the use of glazing and ventilation arrangements [21/150-151].
- 15. She also dealt with the question of the Mineral Permission and the need to protect the existing quarry operation. She sets out advice received from North Yorkshire County Council who advised that the conditions set out in the Minerals Permission for the Quarry are the only conditions that they would refer to and are in force until such time as that permission may be subject to a review under the ROMP (i.e. review of minerals permission) regulations or a variation. She confirms that the noise limits contained within the Minerals Permission would not apply to the Property and therefore there would be no breach of the Minerals Permission [21/151].
- 16. Natalie Snowball prepared a delegated application report dated 15/03/18. It was referred to throughout the proceedings as the Officer's Report and I propose to refer to

it in the same way but using the commonly recognised abbreviation "OR". In the OR, Natalie Snowball set out verbatim the final comments received from Environmental Health [14/94-96]. At paragraphs 6.8 to 6.13 of the OR, Natalie Snowball deals with "Noise and Amenity". The need for noise attenuation measures to overcome the unacceptable noise level was recognised and paragraph 6.11 provides as follows:

"Environmental Health commented on the agent's mitigation proposals confirming that the glazing specification of the building would appear to meet the requirements of the acoustic report, but raised concern regarding whether sealing up the trickle vents as proposed by the agent would result in unacceptable ventilation in the dwelling. The agent had this checked by a Building Control Inspector who confirmed that the ventilation in the dwelling was acceptable and met the requirements under the Building Regulations" [14/99]

17. The OR notes the Claimant's continuing concern about the very high noise levels generated by the Asphalt Plant and the impact of this on the amenity of the Property, and that the Claimant is concerned that if the planning permission is approved it would have the effect of placing unreasonable restrictions on the Cemex Asphalt Plant operations particularly at night time. Paragraph 6.13 provides as follows:

"Environmental Health have looked carefully at the proposal, and the concerns of Cemex, and whilst recognising that the proposed dwelling will experience relatively high levels of noise from the [Asphalt Plant], they have concluded that, with the mitigation measures proposed by the agent including removing and blocking up trickle vents in certain windows,.....satisfactory noise levels..... inside..... the dwelling can be achieved...... They have also confirmed that the proposal will not conflict with the mineral planning permission which relates to the operations at [the Quarry] including the roadstone coating plant" [14/99]

18. On 15/03/18 the Permission was granted by the Defendant's planning manager under the Defendant's scheme of delegation. The Permission is subject to a condition requiring the removal or blocking up of trickle vents in certain bedroom windows in the Property. There are no conditions expressly requiring the retention of specified window glazing or requiring the installation of a mechanical ventilation system. The "Informative" on the planning permission states as follows:

> "[The Property] is located in close proximity to [the Quarry], and in particular the [Asphalt Plant], which has permission to operate 24 hours per day if required. The occupants of [the Property] will therefore experience noise from the quarrying operations. By using a combination of glazing and ventilation to the property, guideline internal noise levels in accordance with BS 8233:2014 'Guidance on sound insulation and noise reduction from buildings' can be achieved with windows closed..." [11/83].

19. The Claimant's Minerals Permission is due for review in April 2025 under ROMP. Any review will be required to consider operating conditions alongside any change in circumstances, including the existence of any new dwellings in the vicinity of the Quarry. On the second day of the hearing, the Defendant provided me with a second aerial photograph showing a number of other properties in the vicinity of the quarry, all of which have been developed pursuant to planning permissions granted since the grant of the Minerals Planning Permission in April 2000. I shall refer to this aerial photograph as "AP2". The Claimant asserts that there is a very real risk that conditions could be imposed under ROMP in order to protect the residential amenity of occupants of the Property, and that such conditions could have a serious impact on the quarry operations. They suggest that such conditions could include restrictions on the level of noise from the Asphalt Plant measured at the Property.

### Legal Principles.

- 20. With the exception of an issue as to the relevance and or weight of evidence provided by the planning officer in relation to the decision-making process, there is no dispute between the parties as to the relevant legal principles. I shall first summarise those areas where there is no dispute as to the legal principles to be applied. This is drawn from the skeleton arguments provided by both Counsel for which I am grateful.
- 21. Planning applications are required to be determined in accordance with the statutory development plan unless material considerations indicate otherwise (S38(6) Planning and Compulsory Purchase Act 2004 and S70 Town & Country Planning Act 1990) [AB/1 and 2]. Whether or not a consideration is a relevant material consideration is a question of law for the courts: **Tesco Stores Ltd v Secretary of State for the Environment** [1995] 1WLR 759 at 780 [AB/6]. A material consideration is anything which, if taken into account, creates the real possibility that a decision-maker would reach a different conclusion to that which he would reach if he did not take it into account: **R (Watson) v London Borough of Richmond upon Thames** [2013] EWCA Civ 513, per Richards LJ at paragraph 28 [AB/16].
- 22. Decision-makers are under a duty to have regard to all applicable policy as a material consideration: Muller Property Group v SSCLG [2016] EWHC 3323 (Admin) [AB/14]. National Planning Policy is set out in the National Planning Policy Framework ("NPPF") and the National Planning Practice Guidance ("NPPG"). National planning policy is "par excellence a material planning consideration": R oao Balcombe Frack Free Balcombe Residents v West Sussex CC [2014] EWHC 4108 (Admin) at paragraph 22 [AB/15]. The weight to be given to a relevant material consideration is a matter of planning judgement. Matters of planning judgement are within the exclusive province of the local planning authority: Tesco Stores Ltd (supra).
- 23. An OR is not susceptible to textual analysis appropriate to the construction of a statute. Oxton Farms and Samuel Smith Old Brewery v Selby DC [1997] WL 1106106 [AB/12]); South Somerset District Council v Secretary of State for Environment [1993] 1PLR 80. The OR should not be construed as if it was a statutory instrument: R (Heath and Hampstead Society) v Camden LBC and Vlachos [2007] 2 P&CR 19. The OR must be considered as a whole, in a straightforward and down-to-earth way, and judicial review based on criticisms of the OR will not normally begin to merit

consideration unless the overall effect of the report significantly misleads the committee about material matters which are left uncorrected before the relevant decision is taken.

- 24. An OR is to be construed in the knowledge that it is addressed to a knowledgeable readership who may be expected to have a substantial local and background knowledge. There is no obligation for an OR report to set out policy or the statutory test, either in part or in full. **R v Mendip DC ex p Fabre** [2000] 80 P&CR 500 [AB/11]. Policy references should be construed in the context of general reasoning: **Timmins v Gelding BC** [2014] EWHC 654 (Admin) paragraph 83 [AB/17]. An OR is written principally for parties who know what the issues between them are and what evidence and argument has been deployed on those issues. A decision-maker does not need to rehearse every argument relating to each matter and every paragraph: **Seddon Properties v Secretary of State for the Environment** (1981) 42 P&CR 26 [AB/13]. These principles apply equally to a delegated application report.
- 25. The legal principles set out thus far are not in dispute. In this case Natalie Snowball, the Planning Officer, has provided two Witness Statements setting out, amongst other things, how she asserts she reached her decisions in relation to matters under challenge. It was suggested on behalf of the Claimant that this evidence was inadmissible as amounting to ex post facto rationalisation. As already indicated, I granted permission for both Witness Statements to be adduced in these proceedings, indicating that I would consider relevance and weight at a later point.
- 26. Having revisited the submissions made to me in relation to these matters, I conclude that there is in fact no real difference between counsel on the law to be applied in the circumstances. The law is helpfully set out by Green J in **Timmins v Gelding BC** [2014] EWHC 654 (Admin) at paragraphs 109 -113 (AB/17). In that case, Green J had regard to certain admissions made in the evidence of the principal planning officer (see paragraphs 47 and 55). Only at paragraphs 109 -113 did he deal with the more general issue of the relevance of witness statement evidence from the decision maker.
- 27. What is clear, for the reasons listed in paragraph 109 of Green J's judgment, is that there are a number of circumstances in which witness evidence can be properly received from a decision maker. In order to decide whether to accept or reject such evidence, is necessary for the court to identify the basis upon which the impugned statement is relied upon. It is equally clear that it should be rare for a court to accept ex post facto explanations and justifications which risk conflicting with the reasons set out in the decision. In support of that conclusion Green J referred to the decisions of the Court of Appeal in **Ermakov v Westminster City Council** [1995] EWCA Civ 42, and **Lanner Parish Council v the Cornwall Council** [2013] EWCA Civ 1290. Mr Lopez submitted that there is nothing in Miss Snowball's Witness Statement which conflicts with the reasons set out in her OR which formed the basis for the decision in this case. I accept that submission, and I do not understand it to be challenged by Miss Wigley.
- 28. However, the courts are also reluctant to permit elucidatory statements if produced for the purpose of plugging a gap in the reasoning. Green J refers to this principle at paragraph 113, citing the judgment of Ouseley J in **Ioannou v Secretary of State for Communities and Local Government** [2013] EWHC 3945. In my judgement this is where the issue lies between the parties in this case. Mr Lopez submits that the Witness Statements are not plugging any gap in the reasoning, whereas Miss Wigley submits that is exactly what the Witness Statements are designed to do. Thus, the issue is one

of construing the basis upon which the Witness Statements are relied upon, rather than an issue of law. In those circumstances I shall return to this issue when dealing with the relevant Grounds.

#### The Grounds

- 29. The Claimant's grounds of challenge are as follows:
  - i) Errors as to the scope of the decision making process including as to the ability of the Environmental Health Officer to object to the proposed development and as to the ability of the Defendant to control the development (including to refuse the application). [3/24]
  - ii) Taking into account an immaterial consideration, namely that the Property is occupied "by a long-standing local family aware of the presence of the adjacent quarry". [3/27]
  - iii) Failure to have regard to policy and guidance in the PPG relating to the reliance on keeping windows closed as a mitigation strategy. [3/28]
  - iv) Failure to take into account the impact on the Claimant of the fact that the Minerals Permission is due to be reviewed in 2025 and that, at that time, onerous conditions could be imposed on the Claimant's operation as a result of the grant of the Permission. [3/28]
  - Irrational failure to take into account all relevant considerations when deciding not to include all the conditions recommended by the IP's own noise consultant.
     [3/29]

### Grounds 1 and 2

- 30. As both Counsel did in their submissions before me, I propose to deal with these two Grounds together. The full Grounds are set out in paragraph 29 above. However, in essence, each of these Grounds amounts to an allegation that the Environmental Health Officer ("EHO") constrained her consideration of the issues in this case by reason of the fact that the development of the Property had already taken place, and that the Property was already occupied. Ground 2 suggests a further and more specific constraint on the decision-making process, namely that the Property was not simply already occupied, but that it was occupied by a long-standing local family aware of the presence of the adjacent quarry. The Claimant asserts that this implies that the family in residence will be more willing to accept the noise from the quarry operations than might be the case for future occupiers, and that it is an improper and irrelevant consideration.
- 31. In relation to the more general point under Ground 1, Miss Wigley submitted that the EHO has erroneously assumed the principle of residential development in this location has already been accepted and that the options to control or mitigate noise are limited by the fact that the dwelling is complete and occupied. The way the EHO approached the matter is set out verbatim in the OR report at [14/94]. Miss Wigley relies upon the fact that the EHO indicated that if Environmental Health had been consulted initially, it is likely they would have objected to the development. The EHO then states that as

the barn conversion is complete and occupied, she considers it appropriate to assess whether the noise impact can be mitigated and reduced to provide an acceptable level of amenity for the residents and also that the existing quarry operations can be protected.

- 32. Miss Wigley submitted that there cannot be two different standards of what is acceptable, one to be applied to a planning application for a future development which has not yet been commenced, and one for a property which is already occupied. She submitted that the EHO's assessment has been influenced by the fact of occupation and amounts to an attempt to squeeze the application through on the basis of what the IP wants because the property is already occupied. Whilst the EHO asked for a noise assessment, Miss Wigley pointed to the fact that the scope of that assessment is itself limited by reference to the fact that ".... The building has already been constructed, limiting the potential options for facade sound insulation design". (Apex Report, paragraph 3.2; [17/123]) Miss Wigley submitted that the assessment by the EHO as to what is acceptable is tainted by that approach, in effect adopting a starting point that "There's not much we can do in terms of design and layout". She submitted that the fact that the development has taken place should not preclude a finding that the mitigation needed to deal with noise does involve changes in design or layout.
- 33. Mr Lopez made the point that it is inevitable that the planning authority will approach this application on the basis of what has been built, precisely because it is an application to regularise the position. He submitted that the planning authority cannot consider the matter in a vacuum. For a future application, the planning authority of necessity considers plans and proposals; for an application to regularise the position, of necessity, they consider what has in fact been built. He submitted that does not mean they have restricted themselves, but simply that they have adopted a practical and sensible starting point. He also pointed out that whilst the EHO had said it was likely they would have objected to the development if consulted at an earlier stage, there is no certainty in that respect.
- 34. During her submissions in reply to Mr Lopez, I asked Miss Wigley to make the following assumptions in relation to a hypothetical property which was a sensitive receptor for noise. I asked her to assume, if an application for permission had been made prior to development, that it would have been granted with a noise mitigation package including alterations in design and layout. I further asked to assume that for the same property but already built, a perfectly proper package could be achieved to address the noise issues but without involving alterations in design and layout. I suggested to her that in those circumstances it was hard to see how it could be said that a grant of planning permission with the lesser noise package (by which I meant the package without alterations in design and layout) could be challenged on the basis that the local authority should have approached matter as if based on plans rather than actual build. Miss Wigley very properly conceded that would be a proper approach for the planning authority to take, provided it can truly be said that the package of noise measures for the property as built is a proper package, and even if the planning authority might have preferred something different had it been considering the matter at an earlier stage on the basis of plans only.
- 35. However, Miss Wigley submitted that concession did not invalidate Grounds 1 and 2 in this case. She submitted that the concern behind Grounds 1 and 2 is that the threshold of acceptability in terms of noise mitigation measures has been compromised by the

fact that this is a retrospective application for permission in respect of an occupied dwelling. In my judgment, it follows from that concession, that the true source of complaint here is not that the EHO has imposed improper constraints by considering the property as built, but rather that the package of noise mitigation measures produced is unsatisfactory for other reasons. There is nothing in the EHO's advice to the planning officer, or in the OR to suggest that either the EHO or the planning officer did not understand that this was an application that could be rejected, or that either failed to understand that mitigation measures going beyond those desired by the IP could be imposed if the planning authority thought that was the right thing to do.

- 36. Turning specifically to Ground 2, Miss Wigley submitted that the EHO's reference to the Property "....being occupied by a long standing local family aware of the presence of the adjacent quarry" ([21/149] and adopted verbatim in the OR [14/94]) shows that the assessment of appropriate noise mitigation measures has been compromised by an assumption that the environment need not be so good for a local family already occupying an unlawful development. Miss Wigley submitted that this was a curious statement to include if it has no relevance to the matter. She submitted it must have been included as factoring into the assessment on the impact on amenity, as in "This family is perhaps more tolerant of noise than others".
- 37. I agree that it is not immediately obvious why the fact that the Property is occupied by a long standing local family aware of the presence of the adjacent Quarry needs to be mentioned by the EHO or by the planning officer. However, it is a significant leap from the fact of that mention, to the assertion that the effect was that the EHO and the planning officer were effectively treating this as a personal planning application for a family more likely to put up with the noise because they were already occupying and aware of the Quarry. There is absolutely nothing in the documentation to suggest that an error of that sort was made. The statement about the occupiers may not have complained about noise, with the implication that future occupiers might. I cannot accept that single sentence evidences a constraint of the type argued for by Miss Wigley. In my judgment, if relevant at all, the issues raised under Grounds 1 and 2 are more relevant to and supportive of the complaint in Ground 3. It follows that I reject Grounds 1 and 2.

## Ground 3

- 38. Ground 3 is the alleged failure to have regard to policy and guidance in the PPG relating to the reliance on keeping windows closed as a mitigation strategy. At the time of the Permission decision, the relevant NPPF was the 2012 version. In this judgment all references to the NPPF are to the 2012 version. Paragraph 123 NPPF provides (so far as relevant) that planning policies and decisions should aim to:
  - i) avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of a new development
  - ii) recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established.

The above are the first and third bullet points in Paragraph 123 NPPF.

39. The PPG on noise defines the "Significant observed adverse effect level" as "....the level of noise exposure above which significant adverse effects on health and quality-of-life occur" [33/226]. For ease of reference I shall refer to this level as "SOAE" or "SOAE level", as appropriate. In a section entitled "How to recognise when noise could be a concern", there appears the following paragraph:

"Increasing noise exposure will at some point cause the [SOAE level] boundary to be crossed. Above this level the noise causes a material change in behaviour such as keeping windows closed for most of the time or avoiding certain activities during periods when the noise is present. If the exposure is above this level the planning process should be used to avoid this effect occurring, by use of appropriate mitigation such as by altering the design and layout. Such decisions must be made taking account of the economic and social benefit of the activity causing the noise, but it is undesirable such exposure to be caused." [33/226]

40. The same section contains a table summarising the noise exposure hierarchy, based on the likely average response. Noise that is noticeable and disruptive crosses the SOAE level and should be avoided. This is described as follows

".... noise which causes a material change in behaviour and/or attitude, eg avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to changing acoustic character of the area." [33/227]

It should be noted that the most serious noise in the table, described as noticeable and very disruptive, and of unacceptable adverse effect, should be prevented, rather than simply avoided [33/227].

41. The PPG goes on to consider what factors influence whether noise could be a concern, pointing out that the nature of noise is subjective such that there is not a simple relationship between noise levels and the impact on those affected. A number of general factors to consider are listed, followed by more specific factors to consider when relevant, including the following:

"consideration should also be given to whether adverse internal effects can be completely removed by closing windows and, in the case of new residential development, if the proposed mitigation relies on windows being kept closed most of the time. In both cases a suitable alternative means of ventilation is likely to be necessary. Further information on ventilation can be found in the Building Regulations" [33/228]
- 42. I now turn to the Apex Report, which is the noise assessment prepared for the IP at the request of the EHO. Apex Acoustics measured weekday noise levels at the facade of the Property exposed to noise from the Quarry and the Asphalt Plant. As requested by the EHO the tests were carried out under British Standard, BS 4142: 2014. Under BS 4142:2014 the methodology is to obtain an initial estimate of the impact of the specific sound by subtracting the measured background sound level from the rating level. Typically, the greater this difference, the greater the magnitude of the impact. A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context [38/380].
- 43. The results in the Apex Report indicated a SOAE for both daytime and night time periods. The differences between the background sound level and the rating level were reported by Apex Acoustics as +35dB for daytime, and +43dB for night-time [17/126; table 5]. I have a Witness Statement from Dr Paul Cockcroft, a specialist Acoustic Consultant engaged by the Claimant. He explains that the generally accepted rule is that a change of 10 dB(A) corresponds roughly to halving or doubling the loudness of a sound. The noise level for the night-time assessment, which is recorded as +43dB above the background sound level, would be eight times as loud as the level representing a significant adverse impact. [26/182].
- 44. The Apex Report proposes two alternative ways to address the noise issue and to meet internal noise criteria. Section 8 of the report deals with "Facade acoustic design to meet internal criteria". The internal criteria referred to are the noise criteria. The report sets out a proposed provision to meet the issues, whilst emphasising that it is not intended to constitute a ventilation strategy design, which is the responsibility of the mechanical engineers [17/127, paragraph 8.7]. In order to achieve the desired internal noise levels, the Apex Report recommends the glazing and ventilator performance specifications shown in the summary table, which is table 1 in the report. The author adds that the current construction design will need to be reviewed to comply with these requirements [17/128, paragraphs 8.24 - 8.25]. Table 1 contains the author's summary of minimum facade sound insulation treatment included in the assessment calculations (my emphasis added). Both options set out in Table 1 contain minimum glazing performance requirements, and continuous mechanical ventilation, Option A being for mechanical extraction with the use of a single trickle vent to each of the bedrooms for make-up air, and Option B being frame of continuous mechanical supply and extract with heat recovery, which does not require any trickle ventilators [17/122: Table 1].
- 45. Paragraph 2.8 of the Apex Report refers to the proposals in Table 1 as "...a set of minimum glazing and ventilation strategy options, interpreted from Approved Document F (AD-F)" [17/121]. The summary goes on to refer to the glazing options and concludes at paragraph 2.13 as follows: "On this basis it is considered that any [SOAE Level] impacts on internal noise levels are avoided..." [17/121].
- 46. As already mentioned, the proposal includes glazing options, and paragraph 8.13 of the Apex Report refers to the acoustic performance of the proposed glazing. There is no dispute in this case that the glazing currently installed at the Property meets the acoustic performance recommended. The Apex Report continues at paragraph 8.14 (still under the heading of "Glazing") "Opening windows may be acceptable to provide purge ventilation; all opening lights should be well fitted with compressible seals."

47. Miss Wigley submitted that there is a nexus between mechanical ventilation and purge ventilation, a nexus which she submitted is recognised both in the BS 4142:2014 and in Building Regulations. In BS 4142:2014 in Section 11 on "Assessment of the impacts" [of sound], amongst the pertinent factors to be taken into consideration is the following:

"The sensitivity of the receptor and whether dwellings or other premises used for residential purposes will already incorporate design matters that secure good internal and/or outdoor acoustic conditions, such as:

i) facade insulation treatment;

ii) ventilation and/or cooling that will reduce the need to have windows open so as to provide rapid or purge ventilation; and

iii) acoustic screening" [38/381]

48. (AD)-F of the 2010 Building Regulations deals with Ventilation. The "Key terms" are set out in Section 3 and include the following of relevance to this case;

*"Background ventilator* is a small **ventilation opening** designed to provide controllable *whole building ventilation*.

*Purge ventilation* is manually controlled ventilation of rooms or spaces at a relatively high rate to rapidly dilute pollutants and/or water vapour. Purge ventilation may be provided by natural means (e.g. an openable window) or by mechanical means (e.g. a fan).

*Whole building ventilation* (general ventilation) is nominally continuous ventilation of rooms or spaces at a relatively low rate to dilute and remove pollutants and water vapour not removed by operation of *extract ventilation*, *purge ventilation* or *infiltration*, as well as supplying outdoor air into the building. For an individual dwelling this is referred to as *'whole dwelling ventilation'*." [36/244-245]

49. Paragraph 5.7 of (A-D) F provides as follows:

"*Purge ventilation* provision is required in each *habitable room....* Normally, openable windows or doors can provide this function ..., otherwise a mechanical extract system should be provided...." [36/257]

Miss Wigley also referred me to Table 5.2a where there is reference again to the need for purge ventilation for each habitable room, where it is also noted "There may be practical difficulties in achieving this (e.g. if unable to open a window due to excessive noise from outside), and "As an alternative... a mechanical fan.... could be used" [36/261]. I note that the same wording is repeated in each of Tables 5.2b [36/263], 5.2c

[36/265] and 5.2d [36/266], with the addition, in the latter two cases, of an indication that expert advice should be sought in such situations.

- 50. Miss Wigley submitted that it is clear from the above matters that purge ventilation is not a binary matter. Where there is another form of ventilation, the need for purge ventilation will be reduced. She pointed out that the acknowledgement in the Apex Report that opening windows may be acceptable to provide purge ventilation is against a background of the recommendations in that report that a mechanical ventilation system is also needed. She further submitted that the alternative ventilation strategy to opening windows is a mechanical system (per Paragraph 5.7 (A-D) F set out in paragraph 48 above), and that there is no question of trickle vents alone providing this function. She also referred me to paragraphs 4.15 and 4.16 (A-D) F. It is clear from paragraph 4.15 that purge ventilation is ventilation of a separate type to whole building ventilation. Furthermore, purge ventilation is intermittent and required only to aid the removal of high concentrations of pollutants and water vapour released from occasional activities such as painting and decorating or accidental releases such as smoke from burnt food or spillage of water. It is noted that purge ventilation provisions may also be used to improve thermal comfort although this is not controlled under the Building Regulations [36/251, paragraph 4.15].
- 51. In paragraph 4.16 there is reference to trickle ventilators being used for whole dwelling ventilation and windows for purge ventilation [36/251]. Miss Wigley submitted that trickle vents are plainly for useful background ventilation of the whole building and are not a substitute for purge ventilation by the opening of windows and/or the use of a mechanical system.
- 52. As set out in paragraphs 12 -13 above, the IP did not wish to install mechanical ventilation and there were discussions between the EHO, the planning officer and the IP's agent concerning ventilation. The agent provided the email [18/147] from the building surveyor set out in paragraph 13 above. Miss Wigley submitted that discussion relates entirely to background ventilation, or whole dwelling ventilation and that no consideration was given to purge ventilation and whether purge ventilation would be adequate, given that mechanical ventilation was not being provided as recommended in the Apex Report.
- 53. Miss Wigley very properly accepted that the fact that there is no express reference by the EHO or the OR to the PPG is not, without more, a ground for challenging the reports of either officer. She submitted, however, that it must be clear that the issues concerned have been fully covered. There is no dispute between the parties that the PPG is a significant material consideration because it is government policy. The application of the policy is of course a matter of planning judgement and depends upon the facts of the case. The significance of the relevant policy will also depend on the facts of the case. Miss Wigley submitted that in this case the PPG is central, particularly as the noise mitigation relied upon in this case is closed windows, when the PPG clear policy is to try and avoid this. She pointed to the fact that there is no reference to any of these factors in the advice of the EHO or in the OR. She submitted that the OR shows that the planning officer placed total reliance on the EHO response on these matters as the OR sets out verbatim the EHO's final recommendations. Miss Wigley submitted there is no evidence at all that the EHO has considered the applicability of the PPG and, in particular, the desirability of avoiding relying on windows being closed to address the noise issues. She submits that the EHO has in effect cherry picked from the Apex

Report, and simply relied upon the email from the building surveyor (wrongly described as Building Control by the EHO but nothing turns on this) which "..... confirmed that the current ventilation arrangements are acceptable without the need for mechanical ventilation", and that they met the Requirements under the Building Regulations.

- 54. All the e-mail from the Building Surveyor does is to confirm that the sealing of certain trickle vents to assist with reducing sound in the building will not reduce the background ventilation provisions required by Building Regulations. Plainly, that email does not address in any way at all, the impact of noise and the proposed control of noise into the building by the use of closed windows. It simply deals with the adequacy of background ventilation. Obviously, it cannot address, and does not purport to address, how the residents of the Property might be affected by noise if, for example, they wish to keep windows open for lengthy periods of time during hot weather. Indeed, the Building Regulations themselves make it clear that they do not control the use of purge ventilation for thermal comfort (see paragraph 49 above). Miss Wigley relies upon the fact that nowhere is there any indication that the EHO or the planning officer considered that PPG advises that the SOAE level identified in the noise assessment, (a document expressly asked for by the EHO), should be avoided and is undesirable. She acknowledged that this is obviously not an absolute requirement, but it is nevertheless relevant policy and the council is required to have regard to it and take it into account. She submitted that the council should either have ensured that the mitigation measures overcame or avoided the SOAE level, or it should have been balanced against other considerations and an explanation given as to why it was not to be avoided in this case. She submitted that all the guidance in the PPG (quoted at paragraphs 39-41 above) contains a link between mechanical ventilation and the need to open windows, but no one at the council considered this.
- 55. She submitted that the EHO and the OR both state that internal noise levels can be met with glazing and the windows being closed, without any consideration as to the need for mechanical ventilation. Whilst the Apex Report allows for windows to be used for purge ventilation, it does so in the context of and contingent upon the provision of alternative mechanical ventilation, something Miss Wigley submitted, which has been completely missed by the council officers both in construing the Apex Report and in failing to consider the guidance in the PPG.
- 56. On behalf of the Council, Mr Lopez submitted that the treatment of the noise issues has been perfectly properly carried out and is consistent with the PPG guidance. He pointed out that both the NPPF and PPG indicate that planning decisions should aim to avoid noise from giving rise to significant adverse impacts, but neither is prescriptive. He further submitted that there is no rule that purging must be avoided and, therefore, that it is a matter of planning judgement for the decision taker to consider the acceptability of purging. There is nothing in the PPG identifying an acceptable degree of purging, subject to the issue of noise. Mr Lopez submitted that it is possible to depart from the guidance without their necessarily being an error. That is plainly right, and Miss Wigley accepted that in her submissions.
- 57. Mr Lopez submitted that it is plain on the face of her report dated 12 March 2018 that the EHO has carried out her own independent assessment and concluded that some purging would be acceptable. He submitted this is a matter of planning judgement and not open to challenge. The passage in question appears in the EHO report at [21/150]

and is repeated verbatim in the OR at [14/94]. I shall refer to the passage from the OR as this was the passage addressed by Mr Lopez in his submissions. Under the heading "Impact on amenity" there appears the following:

"BS 4142 recognises that not all adverse impacts will lead to complaints and it's not intended for the assessment of nuisance. [The Property] is occupied by a long standing local family aware of the presence of the adjacent quarry. BS 4142 also allow scope look at absolute noise levels rather than just relative levels and for other standards such as BS 8233 to be considered. It was therefore recommended that the applicant considered BS 8233:2014 'Guidance on sound insulation and noise reduction for buildings' as part of their assessment in order to see whether the recommended guideline indoor and outdoor noise levels can be achieved. The report shows that guideline indoor levels can be achieved with a combination of glazing and ventilation and that some areas of the garden can offer an acceptable amenity space in accordance with BS 8233.

With regards to internal noise levels, the noise assessment recommended certain glazing and ventilation options all entailing the use of mechanical ventilation in order to achieve the recommended noise levels. However, the applicant does not propose to use mechanical ventilation and has forwarded documentation from Building Control who have confirmed that the current ventilation arrangements are acceptable without the need for mechanical ventilation. I note the view of Cemex that windows should be sealed shut to protect residents, however, I consider that the option for windows to be openable for the purposes of purge ventilation to be acceptable." [14/94]

- 58. Mr Lopez emphasised the use of the word "However". He submitted that marks a clear transition. He submitted that prior to the transition the report shows that the EHO was aware of the contents of the Apex Report. The transition shows that the EHO has moved on to make an assessment based on her knowledge that the IP did not want to use mechanical ventilation. He submitted the transition represented by the word "However" supports the fact that there has been a separate assessment by the EHO. He submitted the EHO has stood back, with the knowledge and understanding that mechanical ventilation would not be used but has concluded in her own assessment that purging was an acceptable way of addressing matters. He submitted that relates not just to the issue of ventilation, but also to the issue of noise.
- 59. Mr Lopez reminded me that the Claimant's challenge on this Ground is not a reasons challenge, or an irrationality challenge. He submitted that the Claimant's challenge is that the EHO has either forgotten the fact that the IP did not want mechanical ventilation or has forgotten that the Apex report was all prefaced on mechanical ventilation. In my judgment that is not an accurate statement of the Claimant's challenge. The challenge is a failure to have regard to policy and guidance in the PPG relating to the reliance on keeping windows closed as a mitigation strategy.

- 60. Miss Wigley accepted that Ground 3 is neither a reasons nor an irrationality challenge. Her challenge is that the policy and guidance has simply not been considered, and because of that there are no reasons given for departing from policy, and thus there are no reasons to challenge. Further there is no irrationality challenge which could only follow from an assessment which had been undertaken. The whole thrust of the Claimant's submissions in support of Ground 3 is that there is no evidence of an independent assessment or any independent calculations carried out by the EHO.
- 61. Mr Lopez submitted that the EHO was clearly aware of the Apex Report, a report which gave options, but which was not saying these are the only options. He submitted it was therefore open to the EHO to depart from the options proposed in the Apex Report, and to say why she had done so. He submitted she did not need to go into figures and that she had everything in front of her to entitle her to make the judgement she made. He submitted it was completely unreal to suggest that the EHO had not exercised her own judgement and made a wholly separate assessment, separate from the Apex Report. He submitted there is nothing in the EHO's report which signposts back to the Apex Report, and he refuted the suggestion put forward on behalf the Claimant that the EHO has effectively cherry picked from the Apex Report, taking background ventilation alone and not considering the ventilation strategy as a whole.
- Whilst I accept that the EHO has clearly recognised that the IP did not wish to use 62. mechanical ventilation, I am wholly unpersuaded by the suggestion that the EHO has necessarily carried out a wholly separate and independent assessment. The word "however", is at the beginning of a sentence which goes on to place reliance on the documentation described as being from Building Control and relies in that sentence on the fact that Building Control have confirmed that the current ventilation arrangements are acceptable without the need for mechanical ventilation. That is of course a reference to the email set out in paragraph 13 above. As I have already said, that email was dealing simply with whether the background ventilation provision after the sealing of certain trickle vents satisfied the ventilation requirements in the Building Regulations. In my judgement the straightforward reading of the sentence commencing with the word "however" is that the provision of the information from Building Control is such that it can properly be concluded that mechanical ventilation is not needed. The e-mail from "Building Control" [19/147; guoted at paragraph 13 above] refers to the provision of background ventilation. As already set out, the Building Regulations address ventilation, not noise in this respect.
- 63. Mr Lopez made much of the fact that the EHO is a scientific officer. He asserted that she is just as much an expert as Dr Cockcroft, the Claimant's acoustic expert, although there is no evidence as to the EHO's qualifications. In any event, whatever her qualifications, they do not protect her from the possibility of making a mistake, any more than the professional qualifications of Dr Cockcroft, or indeed the qualifications of any of the lawyers in this case, protect each or any of them from the possibility of making mistakes. Human beings all make mistakes. Mr Lopez repeatedly submitted that it was unreal to suggest that the EHO had not made her own independent assessment taking into account not just ventilation, but also noise impact. Miss Wigley suggested that the reason he kept relying on something being unreal, was precisely because he had no other point to put forward.
- 64. The court is plainly not constrained to assume it is unreal that officers may not have carried out their functions properly. If that were the position, the jurisprudence as to the

need for reasons for decisions to be provided would be wholly otiose. Indeed, there would be no need for this court to have a reviewing function, as it would be obliged to assume that all officers had done what they were required to do, and had done it properly, whether or not they had signposted that fact in the relevant documents.

- 65. I accept Miss Wigley's submissions that nowhere in the EHO's report or the OR is there any indication that, having set aside the provision of mechanical ventilation as recommended as a minimum in the Apex Report, the EHO then made a separate assessment of her own as to the noise impacts in the light of the policy guidance as to the undesirability of managing noise by keeping windows closed. Of course, it is not an absolute requirement, but it is relevant policy which the Defendant is required to have regard to and to take into account. In those circumstances, the Defendant should have ensured either that appropriate mitigation measures were in place designed to avoid the SOAE level for internal noise at the Property or have taken the policy into account and balanced it against other considerations to justify any position which did not seek to avoid the SOAE level internally. I recognise this is not a reasons challenge, but the absence of any reasons or explanation designed to show why it is appropriate in this case (if indeed it is) to allow a scheme of glazing and background ventilation which does not avoid the SOAE level, particularly in the face of the Apex Report setting out minimum requirements to achieve that and which are being expressly rejected for the purposes of the Permission application, suggests to me that no such independent assessment was carried out. Alternatively, if it was carried out, in my judgment, it is not clear that it was taking the documents at face value, and recognising they are addressed to a knowledgeable readership, and must not be read in an over legalistic way. In my judgment, the Claimants challenge on Ground 3 is made out.
- 66. I have before me two Witness Statements from Natalie Snowball [28/198-204] and [29/205-209]. Both are addressed to issues arising under Grounds 4 and 5. Unsurprisingly, Natalie Snowball does not address the reasoning in relation to Ground 3 as she adopts the advice of the EHO. There is no Witness Statement from the EHO, Lindsey Wilson. I regard that as unsurprising. Any evidence which she might purport to give on this subject would, of necessity, involve plugging gaps given the findings which I have made.
- 67. By Section 31(2A) Senior Courts Act 1981 the High Court must refuse to grant relief on an application for judicial review if it appears to the court to be highly likely that the outcome for the applicant would not have been substantially different if the conduct complained of had not occurred. I do not consider Section 31(2A) assists me in this case. In my judgment I cannot possibly conclude that the outcome for the applicant would not have been substantially different if the conduct complained of had not occurred. Had the PPG guidance been considered in the context of the need to avoid closing windows as a way of controlling noise, it might be the case that mechanical ventilation would have been required as recommended in the Apex Report. Equally, some other form of mitigation might have been proposed. These are matters of planning judgement, properly within the sphere of those qualified to make these decisions, and not matters upon which I could or should make any judgment.
- 68. It follows that Ground 3 succeeds and the planning permission in this case must be quashed. Whilst that is sufficient to dispose of the proceedings, I should plainly also consider Grounds 4 and 5 in this judgment.

#### Ground 4

- 69. Ground 4 is the alleged failure to take into account the impact on the claimant of the fact that the minerals permission is due to be reviewed in 2025 and that, at that time, onerous conditions could be imposed on the claimant's operation as a result of the [grant of planning] permission. [3/28]
- 70. In relation to noise effects and existing businesses, the PPG states as follows

"The potential effect of a new residential development being located close to an existing business that gives rise to noise should be carefully considered. This is because existing noise levels from the business even if intermittent (for example, a live music venue) may be regarded as unacceptable by the new residents and subject to enforcement action. To help avoid such instances, appropriate mitigation should be considered, including optimising the sound insulation provided by the new developments building envelope. In the case of an established business, the policy set out in the third bullet of paragraph 123 of the Framework should be followed." [33/227]

The third bullet of paragraph 123 of the NPPF is set out in paragraph 38 above.

- 71. There is no dispute in this case that the EHO properly recognised at the outset that she had to consider the potential impact on the quarry operations of a grant of planning permission for the Property. This is clear from her initial response of 23 May 2017 as set out in paragraph 10 above. The Claimant relies on the fact that the existing Minerals Permission requires that noise from the Claimant's mineral operations shall not exceed a noise limit of 55dB (A) for the two properties named in condition 17 [23/167]. As is clear from AP1, the two named properties are 1131m and 652m from the Asphalt Plant. The Property is only 64m from the Asphalt Plant. Miss Wigley submitted that the fact that such conditions were considered necessary to protect the residential amenity in relation to those two dwellings, indicates a strong likelihood that a similar condition would be considered necessary in relation to the Property, at which the effects on residents are likely to be more acute given how much closer it is to the Asphalt Plant. The Claimants rely upon the fact that the Apex Report demonstrates that if such a condition were imposed in relation to the Property, it would be immediately breached.
- 72. In his Witness Statements ([25/172] and [27/194]) Mark Kelly, the Claimant's Planning Manager, gives detailed evidence as to the likely impact on the Claimant's business of the imposition of such a planning condition. Mr Lopez correctly makes the point that none of that evidence was before the planning authority at the time the decision was made. The objections before the planning authority made clear in general terms that there was the potential for adverse effect on the Claimant's business if the quarry operations were restrained in the future, but without the level of detail given in Mr Kelly's Witness Statements. Those statements give details as to potential impacts on the viability of the operation, and as a result the possible loss of employment for local people, and possible loss of business rates income for the Defendant. Mr Lopez invites me to disregard that detailed evidence on the basis that none of it was before the Council at the time it made the decision. In my judgement that submission must be correct. I should approach this on the basis of the information that was before the Council at the

time it made its decision. What was before the Council, was the Claimant's concerns that its business might be restricted by planning conditions on the Minerals Permission in the future.

- 73. The Claimant's case is that the Council has failed to consider the risk that the Claimant's business could be the subject of unreasonable restrictions by reason of conditions imposed at ROMP as a result of changes in nearby land uses, namely the grant of a residential planning permission for the Property.
- 74. There is no dispute that North Yorkshire County Council (which is the minerals planning authority) confirmed that the grant of planning permission for residential use at the Property would not amount to a breach of the existing minerals permission. The following appears in the OR, (having been taken verbatim from the EHO's report at [21/151]):

"Throughout this application I have been aware of the need to protect the existing quarry. I am also aware of the concerns of Cemex in this regard. I have therefore made enquiries with North Yorkshire County Council Mineral Planning with regards to the existing permissions for [the Quarry] and whether any noise limits would be applied to [the Property]. The reply from North Yorkshire County Council mineral planning advises that the conditions set out under the permission are the only conditions that they would refer to and enforce until such time that the permission may be subject to a review under the ROMP regulations or a variation, which at the present time is not applicable. They advised that the authority cannot impose new conditions which would consider any new development which may be nearer to [the Quarry] outside of these remits. The current planning permission names 2 properties were existing noise conditions apply. [The Property] is not one of those named" [14/95]

- 75. The Claimant's case is that neither the EHO nor the planning officer have considered the potential for the noise conditions to be expanded to include the Property on a review of the ROMP conditions, and that the risk of that happening and its consequences were not evaluated, assessed or taken into account by the Defendant.
- 76. The first point which Mr Lopez took in reply to this Ground was a highly technical point and one which I consider lacks merit. He referred me to the Order granting permission on this Ground, where John Howell QC sitting as a Deputy High Court Judge acknowledged that the planning officers considered the effect of the grant of planning permission on the Claimant's business pending the review of the Claimant's planning permission. Mr Lopez submitted that it follows from that that the Council has acted properly in relation to this issue in respect of the period between now and the ROMP review in 2025. He submitted that it would be open to the Defendant Council to issue a Noise Abatement Notice at any time between now and 2025, and that such a notice would address the same species of noise as would be addressed at a ROMP review. In the light of the permission order, Mr Lopez pointed out that the claimant could not argue that it would be wrong for the Council to issue an Abatement Notice at any stage during that period. He submitted that there was no qualitative difference

between an assessment of an actionable noise subject to an Abatement Notice, and the tasks to be undertaken in relation to noise on a ROMP review. Since the result of an Abatement Notice might be to require the quarrying activity to be restricted in some way in order to bring about a satisfactory noise scenario, and given that this could be done legitimately prior to the ROMP review, Mr Lopez submitted there is no qualitative distinction between that which the Claimant cannot challenge (i.e. a Noise Abatement Notice), and that which the Claimant seeks to challenge (the impact of the ROMP review).

- 77. Whilst I accept that the scope of an Abatement Notice would target the same noise complaint that might be of concern at ROMP, I do not accept that the two procedures necessarily produce the same result. By way of example, if the Defendant received a noise complaint, it would be entitled to consider, amongst other things, whether the issues could be properly addressed by requiring occupants of the Property to keep certain windows closed. A ROMP review is directed solely to the Claimant's operations, and not the actions of the occupants of any noise sensitive receptor. In any event, the issue here is whether the Council failed to have regard to the possible effects on the Claimant's business of a ROMP review occurring after the grant of the Permission in this case.
- Mr Lopez' next point is that this is a wholly speculative complaint. He referred me to 78. AP2 which shows the locations of a further four dwellings which have received planning consent since the Mineral Permission granted to the Claimant in this case. Notwithstanding those four dwellings, he pointed to the fact that the Minerals Planning Authority (the "MPA") has not caused a review to take place notwithstanding the erection of those further dwellings. He relied on the letter of North Yorkshire County Council dated 24 February 2016 which postpones the ROMP review until 3 April 2025 [25/171]. He submitted, therefore, that the indications are that the Quarry is not an issue in noise terms. On the contrary, he suggests this is good news, reflecting the way the Quarry is operating with regards to all those dwellings. Whilst Mr Lopez accepted that he cannot say that the MPA would not impose a condition, he submitted that the Claimant cannot say that the MPA would impose condition in the light of the above, and that the Claimant's Ground is purely speculative. He pointed out it is not for the EHO or the planning officer to crystal ball gaze or constrain the ROMP review. He submitted, therefore, that there was nothing more that the EHO or planning officer could do other than have regard to the fact that the powers are available to the MPA at the ROMP review.
- 79. In response to these points, Miss Wigley pointed out that the postponement of the ROMP review to 2025 is no indication that the MPA is content with the impact of noise in relation to the further dwellings which have been built since the Minerals Permission was granted in April 2000. AP2 was produced by the Defendant on the second day of the hearing, and whilst Miss Wigley has not objected to it, she pointed to the fact that the Claimant has had no opportunity to check the circumstances of the planning applications in respect of the four dwellings in question. She also pointed to the fact that they are all much further away from the Asphalt Plant than the Property is.
- 80. More significantly, she drew my attention to the statutory provisions which have resulted in the postponement of the ROMP review until April 2025. It is clear from the letter from North Yorkshire County Council, that the Claimant had requested a postponement of the periodic review of their mineral permission until 03/04/2025. It is

equally clear that the planning authority had not responded to that within three months from the date of the receipt of the request. The letter therefore confirms that in accordance with Schedules 13 and 14 of the Environment Act 1995 the request for postponement is approved. I have the relevant provisions at AB3. By paragraph 7(1) of Schedule 13 Environment Act 1995, a company such as the Claimant may apply to the Mineral Planning Authority for the postponement of the date specified for a first review. By paragraph 7(10), where the Mineral Planning Authority has not given notice of a decision on such an application within a period of three months, the Authority shall be treated as having (i) agreed to the specified date being postponed and (ii) having determined that date should be substituted as the date for the next review. Miss Wigley made the point that the postponement of the ROMP review was therefore automatic as a result of the failure of North Yorkshire County Council to respond to the Claimant's request for it to be postponed, and does not represent any substantive consideration of the merits of the position, and the noise environment in particular. She submitted that the fact that there are other properties which have been built in the vicinity has no relevance as North Yorkshire County Council has clearly not undertaken any substantive consideration in relation to the Minerals Permission since the relevant dwellings were erected or converted.

- 81. Miss Wigley submitted that it is not mere speculation to look at the existing Condition 17 in the Minerals Permission, and to recognise that the concerns which led to the imposition of that condition are likely to feed into a similar condition in relation to the Property. She submitted it is not outlandish speculation to consider that a similar condition would be imposed in relation to the Property which is very much closer to the Asphalt Plant than the two properties named in Condition 17. She submitted it is a clear indication of the MPA's stance and what the MPA considers necessary to protect the residential amenity near the Asphalt Plant. I accept that submission. In my judgment that is a possibility that could, and should, have been considered when considering this planning application, and the impact for Cemex under the third bullet point of Paragraph 123 of the NPPF.
- 82. Mr Lopez' next point related to a further document which was provided to me on the second day of the hearing. This is an elevation plan showing the elevations of the Property, with various windows shaded in yellow. This was referred to at the hearing as the yellow window plan. I shall refer to this as the "YWP", as shorthand for the yellow window plan. This was simply handed to me and there is no evidence as to its provenance. Miss Wigley accepted that the yellow highlighting on the YWP accurately indicates the windows which were required to have the trickle vents permanently closed as part of the planning permission. That is all she accepts in relation to the YWP. Mr Lopez told me that this was a document that Miss Snowball had in front of her when considering the issues in this case, but there is no evidence to support that.
- 83. Mr Lopez relied upon the YWP as showing that the blocked up trickle vents are all within the elevations fronting the Quarry. The property is set at an angle and both the north-west and south-west elevations front the Quarry. Within each of the habitable bedrooms, there are windows on other elevations away from the Quarry where the trickle vents are not blocked up. Mr Lopez submitted that there is no evidence that opening of windows in those elevations would cause an actionable noise event. He submitted, therefore, that the EHO was entitled to exercise her own planning judgement

and to conclude that there would be no noise issues on the elevations away from the Quarry, and that there is no merit in Ground 4.

- 84. Miss Wigley submitted that Mr Lopez had made an enormous leap from the Apex Report to the submission that because one window in each bedroom was not required to have the trickle vent removed, it meant that window could be opened without any unacceptable noise effects. In support of this she pointed to calculations in the Apex Report. In particular, she drew my attention to the fact that at Paragraph 8.21 in the section dealing with "calculated internal noise levels", the cumulative impact is considered through all windows to the room under assessment. In the table at Paragraph 8.24, the upper limit of internal noise levels in the first column is right up against the limit and is calculated quite clearly after mitigation levels including both the glazing and mechanical ventilation. The fact that those items are included is made clear in Paragraph 8.25. In those circumstances, Miss Wigley submitted that Mr Lopez cannot assert that it is fine to open the non-highlighted windows on the YWP without there being any unacceptable noise. I accept that submission.
- 85. Further, and in any event, Miss Wigley submitted that there is no evidence at all that any of this was considered at the time by the EHO. Miss Wigley made the points again about trickle vents being background ventilation and not as a substitute for purge ventilation, a submission I have already dealt with and accepted.
- 86. I accept the points made by Mr Lopez that there is no power or option for the EHO to second guess what the MPA would do. Mr Lopez suggested that when the MPA, North Yorkshire County Council, replied to the EHO indicating that there would be no breach of the current planning restrictions, there is nothing to suggest that the MPA was not also forward-looking about conditions it might impose. He pointed to the fact that North Yorkshire County Council did not object to the grant of planning permission in this case. It does not seem to me to be necessarily within the remit of Yorkshire County Council to object to the planning application. However, what clearly was within the remit of the EHO and the Defendant was to consider the third bullet point in NPPF paragraph 123, and to recognise that the Claimant should not have unreasonable restrictions put on them because of changes in nearby land uses since the business was established.
- 87. I recognise that there will be matters of planning judgement in considering what restrictions might be imposed in the future, and whether such restrictions might amount to unreasonable restrictions on the Claimant in the future. If it was clear from the documents that these matters had been considered, that would be one thing. However, in my judgment, whilst the documents do show that the EHO, and through her the planning officer, recognised that the quarry business needed protection, I am not satisfied that any consideration was given to the likely impact that the grant of planning permission for the Property might have on a ROMP review. Whilst in her Witness Statement Natalie Snowball asserts that all of these matters were considered, I am of the view that amounts to evidence seeking to plug the gaps in the decision-making process. I regard it as of no assistance to me.
- 88. Furthermore, Natalie Snowball's evidence is to the effect that the future position on a ROMP review was considered in the context of all the information before her including "... the adequacy of the proposed development in noise impacts and attenuation terms..." [28/199, paragraph 5]. Given the conclusions I have reached in relation to

Ground 3, and, in particular, the failure to have regard to the PPG relating to the reliance on keeping windows closed as a mitigation strategy, it follows, in my judgment, that failure would inevitably also feed through into the assessment which Natalie Snowball alleges she has undertaken. I recognise, as Mr Lopez repeatedly reminded me, that this is not a reasons challenge or an irrationality challenge. I equally appreciate that the comment I have made in this paragraph goes to the issue of reasons, but those being reasons which are provided ex post facto in the form of a Witness Statement. Had those reasons been provided in the OR, no doubt they would have been the subject of a challenge. As with Ground 3, there is no reasons challenge here precisely because the challenge is that nowhere in the OR is there any indication that the issues have been considered.

- 89. In my judgement Ground 4 is also made out. I am satisfied that the EHO set out to consider not only the current position as regards the Minerals Permission, but also to consider the future impact on the Quarry. However, based on the EHO reports and the OR, there is nothing to suggest that any consideration was in fact given as to whether a condition similar to Condition 17 of the Minerals Permission was likely to be imposed at ROMP, or that any consideration was given as to the risks such a condition would pose to the future operation of the Claimant's business, all matters which should have been considered as part of the consideration under paragraph 123 NPPF. I further note, in passing, that the EHO mentioned the 55dB being a limit in a fairly old permission and the absence of a tighter night time condition such as 42dB [38/440]. This formed no part of the Claimant's case before me and forms no part of my decision in this matter, but it appears nowhere in the consideration of these issues.
- 90. In relation to Ground 4, again I do not consider Section 31(2A) Senior Courts Act 1981 assists me in this case. In my judgment I cannot possibly conclude that the outcome for the applicant would not have been substantially different if the conduct complained of had not occurred. Had the likely future impact of a similar planning restriction to Condition 17 of the Minerals Permission been considered, it might be the case that this would have informed the adequacy of proposed noise mitigation measures. It could be the case that mechanical ventilation might have been required as recommended in the Apex Report, or even that mitigation going to the physical building and/or it's layout might have been considered. It is even possible that the conclusion might have been reached that the grant of planning permission would not be appropriate. These are all matters of planning judgement, properly within the sphere of those qualified to make these decisions, and not matters upon which I could or should make any judgment of my own.

#### Ground 5

- 91. Ground 5 is the alleged irrational failure to take into account all relevant considerations when deciding not to include all the conditions recommended by the IP's own noise consultant.
- 92. The Claimant's case is that the conditions imposed in the Permission should have included conditions to ensure that the standard of glazing for the future was maintained and that those windows where the trickle vents were to be blocked up, could not have trickle vents reintroduced. The Claimant's case is that having required these factors to be included as noise mitigating measures, it is irrational not to include conditions in the Permission to ensure the mitigation measures are retained in place for the future.

Ground 5 is drafted to include an irrationality challenge for the failure to include mechanical ventilation as a condition, but it seems to me that more properly forms part of Ground 3. This Ground is really based on the premise that even if the Permission was unobjectionable on the application of PPG, nevertheless there is still a challenge based on the failure to incorporate appropriate conditions. The oral submissions were based on the failure to include conditions relating to glazing and the retention of the blocked trickle vents.

- 93. Miss Wigley submitted that there was no consideration by the Council as to the retention of the specified glazing properties for the windows, nothing to keep the removal of the trickle vents in the yellow highlighted windows in place, and nothing to prevent the introduction of new trickle vents. She submitted that the EHO's report and the OR are silent on these matters, showing that there has been no consideration as to how to secure that these requirements stay in place. She submitted that looking at the documents there is a clear lacuna in failing to ensure that the mitigation measures endure.
- 94. The Defendant seeks to rely on Condition 3 of the Permission which abrogates the usual permitted development rights, and requires what would otherwise be permitted development to be the subject of a formal application for planning permission. The reason given for that Condition is that it is in the interests of the appearance of the proposed development and to reserve the rights of the local planning authority with regard to those matters [11/80]]. Natalie Snowball deals with this in her Second Witness Statement where she asserts that any work involving the replacement of the existing windows or glazing, the introduction of new opening trickle vents, the removal of blocked up trickle vents, or the insertion of new windows not incorporating necessary noise mitigation measures required under condition 4 would require there to be a full planning application by reason of Condition 3 of the Permission. She expresses her opinion that any such works would materially affect the external appearance of the building, and so would amount to development. She asserts that the question of whether proposed works would materially affect the external appearance of the building is a question of planning judgement [29/206; paragraphs 6-12]. In reliance on that, Mr Lopez submitted that Ground 5 is wholly misconceived and must fail.
- 95. In response to this Miss Wigley submitted that a change of the windows would not amount to development. She submitted that I should disregard the evidence of Natalie Snowball on these issues for the following reasons. Firstly, she submitted that this is ex post facto rationalisation which should not be permitted. Secondly, she relied upon the fact that the reasons now suggested are different from the stated reason on the planning decision notice which relates to the appearance of the building and has nothing to do with noise mitigation measures. She further pointed to the fact that whilst in her first Witness Statement Natalie Snowball does rely on Condition 3 of the Permission, nowhere in that statement does she explain how she considers replacement windows would be development in any event. Miss Wigley submitted that Miss Snowball's thought processes were eked out over the course of the Witness Statements and are inherently unreliable. None of these reasons is given in the reports and she invited me to disregard them.
- 96. In response to this Mr Lopez submitted that these are quintessentially matters of planning judgement. He also pointed to Miss Snowball's evidence that the trickle vents had been permanently blocked and cannot be reopened. He denied that Condition 3 was

limited solely to the appearance of the building, pointing to the second part of Condition 3 which refers to the reservation of the relevant rights to the local planning authority with regard to the permitted development matters. I accept that submission in relation to the reasons given for the condition. He submitted that if I accept that submission, there is no reason to attach less weight to the evidence of Miss Snowball on this matter.

- 97 It is right that I should record that I mentioned that I was aware, from sitting on other cases, that not all planning officers necessarily regard a change of windows as amounting to development. I therefore suggested that a future planning officer might not take the same view as Miss Snowball as to whether windows amounted to development and whether Condition 3 applied. In response to that Mr Lopez pointed out that any planning decision taker imposing a condition cannot unduly or improperly bind the authority or other planning officers moving forwards. The planning decision taker must simply exercise his or her own planning judgement. Mr Lopez submitted that any concern I might have that a future person might reach a different view is irrelevant. It is a matter for the planning judgement of the relevant officer at the relevant time. It seems to me that must be correct. He further submitted that for this challenge to succeed, the Claimant would have to say that the planning officer's judgement in this case that a change to the windows would amount to development is irrational. He pointed to the fact that there is no evidence put forward on behalf of the Claimant to suggest that such a conclusion is irrational.
- 98. Whilst accepting that she has no evidence on that point, Miss Wigley did not accept that it was necessary. She submitted that it was plainly irrational for Miss Snowball to assert that any works to replace windows, for example simply with different glazing, or simply with a different slot vents, would always materially affect the external appearance of the building. She submitted that is irrational, and that Miss Snowball's evidence on this is simply not credible. She submitted that this simply was not considered at the time of the grant of the Permission and there no decision at all was taken which was designed to retain the mitigation measures for the future. She submitted it is not acceptable to rely on the convoluted evidence of Miss Snowball in seeking to plug the gaps, particularly where such a serious issue of noise exists.
- 99. In response to questions from me as to whether, rather than this being an issue of planning judgement, it was a matter of law as to the construction of Section 55 Town & Country Planning Act 1990 which defines development, Miss Wigley reminded me that if a future occupier wanted to assert that a change of windows would be lawful development, the procedure would be for the occupier to make an application for a Certificate of Proposed Lawfulness on the local planning authority. It would then be for the local planning authority to decide whether that amounted to lawful development, and any appeal against their decision would lie to a Planning Inspector.
- 100. Having considered the submissions, I do not consider I could properly conclude that Condition 3 is not capable of covering any future work in relation to the windows given that there is plainly a matter of planning judgement to be made as to whether or not any works proposed amount to lawful development. I recognise that Miss Snowball's evidence is once again ex post facto rationalisation. However, even if the need to keep the mitigation measures for the future was not addressed by the decision-makers, if there is a route by which they can properly address those issues in the future, then the fact they failed to consider them would make no difference.

- 101. I have come to the conclusion that Ground 5 is made out in that there is nothing on the face of the documents to suggest that any consideration was given to the retention of those noise mitigation measures which the EHO and the planning officer thought were necessary and sufficient in this case. I do consider that the evidence of Natalie Snowball is evidence attempting to plug the gaps in this case. However, in relation to this Ground, I would not grant relief on the basis that the outcome for the Claimant would not have been substantially different if the conduct complained of had not occurred. I consider that the fact that there are matters of planning judgement involved in the application of Condition 3 of the Permission means that Condition 3 can be used as a method to secure the retention of mitigation measures in the future. Indeed, it allows for a degree of flexibility in the future and for the imposition in future applications of measures which might not be available now, but which become available with advancements in technology, development materials and the like.
- 102. In summary, I reject Grounds 1 and 2. I accept Grounds 3, 4 and 5 are proved. I decline to give any relief on Ground 5 on the basis that Section 31 (2A) Senior Courts Act 1981 applies in relation to that Ground. However, I also find that Section 31 (2A) has no application when considering Grounds 3 and 4. It follows that the planning permission in this case must be quashed.

### 20 Human Rights

## Human Rights: Human Lives

A Guide to the Human Rights Act for Public Authorities



Equality and Human Rights Commission

Equality and Human Rights Commission www.equalityhumanrights.com

# Article 8: Right to respect for private and family life

Everyone has the right to respect for their private and family life, their home and their correspondence. This right can be restricted only in specified circumstances.

#### What does this right mean?

Everyone has the right to respect for their private and family life, their home and their correspondence.

This right may be restricted, provided such interference has a proper legal basis, is necessary in a democratic society and pursues one of the following recognised legitimate aims:

- · national security
- public safety
- the economic well-being of the country
- · the prevention of disorder or crime
- · the protection of health or morals
- the protection of the rights and freedoms of others.

But the interference must be necessary (not just reasonable) and it should be 'proportionate' – that is, not more than is needed to achieve the aim desired.

#### Key words and meanings

**Private life** – The concept of 'private life' under Article 8 is broad. In general, the right to respect for private life means that a person is entitled to live their own life with such personal privacy as is

Equality and Human Rights Commission Publication GD.13.401 | Last Updated April 2014 reasonable in a democratic society, taking into account the rights and freedoms of others. For example, it gives people protection from intrusion by the media.

Respect for an individual's personal dignity is part of the protection of their private life. Any interference with a person's body or psychological integrity or the way they live their life is likely to undermine their dignity, potentially in breach of Article 8.

The right to respect for private life under Article 8 also encompasses matters of autonomy and self-determination that may include, for example:

- freedom to choose one's own sexual identity
- freedom to choose one's personal relationships
- freedom to develop one's own personality
- freedom to choose how one looks and dresses.

The right to private life can also include the right to have personal information, such as a person's official records, photographs, letters, diaries, medical information or DNA profile, kept private and confidential. Any disclosure of personal information about someone to another person or body is likely to affect a person's right to their private life under Article 8. Unless there is a very good reason, public authorities should not collect or disclose information like this;

### 21 Embankment Heights - Images

MP01 – 7.5 metres from highway



Embankment 2 metres above highway

MP02 – 10 meters from highway



Embankment height = 1 metre below highway

MP04 - 16 metres from highway



Embankment 4.5 meters above highway



Embankment – 25 meters width – 7.5 meters above motorway



Embankment is 11 metre in width and 2.5 meters below highway



# Proof of Evidence Vol 3 - Greenbelt

Produced by Margaret Steen Rule 6 Party Peel Hall - APP/ M0655/W/17/3178530

#### **Green Belt**

- 1 The Rule 6 Party dispute the claim by both Warrington Borough Council and the Appellant that Peel Hall does not form part of the Green Belt. The Rule 6 party considers part of the site to be within the Green Belt.
- **2** Warrington Unitary Development Plan (UDP) was adopted on 23<sup>rd</sup> January 2006.
- 3 In October 2007, as a result of a legal challenge by Satnam Millennium Ltd, the High Court ruled Warrington UDP Proposals Map should be quashed <u>insofar as it</u> <u>shows the site known as Peel Hall Farm</u> as included in the North Cheshire Green Belt.



#### 4 Satnam - Peel Hall boundary 2007

#### **5** Satnam - Peel Hall Boundary 2020 – including Winwick Farm



- 6 Mr Justice Sullivan said, " it follows that the UDP proposals map must be quashed insofar as it includes the <u>claimant's part of the Peel Hall site</u> (shown in black on the plan annexe to this judgement) within the Green Belt judgment) within the Green Belt. That result may appear somewhat anomalous in respect of the remainder of the site, but it flows from the legislative scheme because the owners of that part of the site did not challenge the adoption of the UDP.
- Para.58 "MR LOCKHART-MUMMERY: My Lord, for the sake of certainty, I am wondering whether it would be appropriate to attach to the order of the court a plan showing the extent of the land to which your Lordship has made reference in the judgment, that is to say the claimant's land within the Peel Hall area.
  (Appendix 1- High Court Decision)

**8** Warrington Borough Council did not appeal the decision.

#### WINWICK FARM

**9** The adjoining parcel of land to the west of Peel Hall, known as Winwick Farm, was purchased by Satnam Millennium in 2008, and was advertised at that time as follows:

### Planning

The site is covered by the Warrington Unitary Development Plan (UDP) and is located within the Warrington Greenbelt. The UDP states that the erection of new buildings will be inappropriate unless they are required for agricultural, forestry, or connected with outdoor sport.

However, interested parties should note that by way of a High Court decision on 26 October 2007, the adjoining land to the east (Peel Hall Farm) was removed from the Greenbelt designation within the UDP proposals map.

#### (Appendix 2-UDP MAP & WINWICK FARM SALE)

**10** The status of the land at Winwick Farm remained as Greenbelt.

#### 11 Warrington Local Plan Core Strategy 2014 Examination

Warrington Borough Councils Public Consultation on the proposed Local Plan Core Strategy produced significant representations, including many suggestions for a review of the Warrington Green Belt. In all cases the Warrington Borough Council Officer's Comments (Council Responses) were consistent.

- The Council is not satisfied that exceptional circumstances to justify a review of the Green Belt exist.
- It can be delivered within the 2006 established green belt boundaries. In the absence of exceptional circumstances, the alteration of the Green Belt to accommodate more housing would undermine the permanence of the Green Belt and community confidence in the planning system.
- The suggested site is within the established Green Belt and is not a sustainable location. No exceptional reasons to justify a review of the Green Belt have been given, and the Local Plan provides for the borough's employment development elsewhere. (<u>Appendix 3- Consultation</u> <u>Responses</u>)
- 12 In March 2013, during the Local Plan Core Strategy Examination In Public, the issue of a review of Warrington Green Belt was discussed in detail and the Council's comments included the following in the hearing statement produced for the Inquiry:

- 31. The Council's stance on the issue of Green Belt review is unequivocally no. The position has been made clear from the outset. No convincing reasons have been put forward by the proponents of Green Belt review to persuade the Council to change its stance.
- 32. The primary objective of the Plan in this regard is to maintain the intended permanence of the Green Belt boundaries first established in January 2006. The Council is not satisfied that exceptional circumstances to justify a strategic review of the Green Belt exist. The alteration of recently established Green Belt boundaries to accommodate development would undermine the permanence of the Green Belt and community confidence in the planning system.

#### Extracts from Local Plan Core Strategy Hearing Statement

49. The Council's evidence (Issue 1.8 and Issue 2.2) demonstrates that, at the planned levels of development for housing and employment growth, the Green Belt boundary is capable of enduring beyond the plan period and has identified broad locations where longer term needs will continue to be met.

There is no need to review the Green Belt to ensure its continuing permanence.

Extracts from Local Plan Core Strategy Hearing Statement – Appendix 4

#### Conclusions

- 50. There is no sound reason for a review of the Green Belt. It is entirely appropriate for the Plan to respect the permanence of the tightly drawn Green Belt boundaries in the Borough, established in 2006, as an overriding restraint on the outward expansion of the town and other settlements.
- 51. The objectors fail to recognise that the Green Belt serves positive purposes, and is consistent with a positively prepared plan. By no means the least of these purposes is the positive support the Green Belt lends to urban regeneration. Most if not all of the sites now promoted by objectors for release from the Green Belt were considered to serve at least one Green Belt purpose by the UDP Inspector, and circumstances have not changed since then.
- 52. The abolition of Regional Spatial Strategies does not equate to the abolition of the need for strategic planning. A Green Belt Review cannot be considered or justified on the basis of circumstances in a single plan area. The appropriate context for determining the need for Review is and always has been much broader, and in future will be guided by cross-boundary considerations under the Duty to Cooperate.
- 53. There is no indication in any relevant strategic forum that a Green Belt Review in Warrington is needed or would be supported by neighbouring Councils.
- 54. No objector has addressed the Strategic need for Review other than by simple reference to the impending abolition of NW RSS. No case has been made to justify a radical departure from the established strategic spatial development framework.

#### (Appendix 4 LOCAL PLAN CORE STRATEGY – HEARING STATEMENT 2013)

13 The subsequent Report on the Examination into Warrington Local Plan Core Strategy, by Planning Inspector Mike Fox, dated 12<sup>th</sup> May 2014, contains the following references to the examination of Warrington green belt.

#### At (46)

Policy CS4 affirms the Council's commitment to the long term protection of the Green Belt, which washes over much of the Borough and is contiguous with the Green Belt in Merseyside, Greater Manchester and North Cheshire. This strategy is in accordance with the Framework, which states (paragraph 79) that the Government attaches great importance to Green Belts, and that the essential characteristics of Green Belts are their openness and permanence, and that once established, Green belt boundaries should only be altered in exceptional circumstances (paragraph 83).

At (47)

#### There are no proposals to review the Green Belt during the plan period,

which I consider to be sound for reasons that I explore more fully further on in my report

(Appendix 5 - Local Plan Core Strategy 2014 - Inspectors Report)

#### Green Belt

6.20 The integrity of the Green Belt, which was established within the borough for the first time in2006, is to be preserved across the entirety of the plan period and beyond. National policy makes clear that the fundamental aim of the Green Belt is to prevent urban sprawl by keeping land permanently open. The essential characteristics of Green Belts are therefore their openness and their permanence

Appendix 5 - Warrington Adopted Local Plan Core Strategy 6.20)

#### 15 Policy CS 5

#### Policy CS 5

#### **Overall Spatial Strategy - Green Belt**

The Council will maintain the general extent of the Green Belt for as far as can be seen ahead and at least until 2032, in recognition of its purposes:

- to check the unrestricted sprawl of large built-up areas;
- to prevent neighbouring towns from merging into one another;
- to assist in safeguarding the countryside from encroachment; and
- to assist in urban regeneration by encouraging the recycling of derelict and other urban land.

The boundaries of the Green Belt in Warrington, which is contiguous with the Green Belt in Merseyside, Greater Manchester, and North Cheshire, are shown on the Policies Map.

The strategic locations and proposals set out in Policy CS2 - Quantity and Distribution of Development provide for significant growth throughout and beyond the plan period. There is therefore no need to review Strategic Green Belt boundaries during the plan period.

A minor detailed change to the approved Green Belt boundary in the Warrington Unitary Development Plan has been made at Bents Garden Centre, Glazebury.

Development Proposals within the Green Belt will be approved where they accord with relevant national policy.

#### (Appendix 5 - Warrington Adopted Local Plan Core Strategy 6.23)

**16** Freedom of Information request to Warrington Borough Council

16<sup>th</sup> November 2018 - A Freedom of Information request to Warrington Borough Council – received the following response from Michael Bell, Planning and Programmes Manager, Warrington Borough Council.

Bell, Michael, Warrington Borough Council 16 November 2018		
Dear Jerry		
I can confirm that no Green Belt Assessment was undertaken for the 2014		
Local Plan.		
Depende		
kegaros		
Michael Bell		
Planning Policy and Programmes Manager		
Planning Policy and Programmes		
Growth Directorate		
Warrington Borough Council		
New Town House		
Buttermarket Street		
Warrington		
WA1 2NH		
Tel: 01925 442795		
Email: [1][email address]		
show quoted sections		
Show quoted sections		
https://www.whatdotheyknow.com/request/warrington_green_belt_assessment#incor	Link to this	Report

Once the general extent of a Green Belt has been approved it should be altered only in exceptional circumstances. If such an alteration is proposed the Secretary of State will wish to be satisfied that the authority has considered opportunities for development within the urban areas contained by and beyond the Green Belt. Similarly, detailed Green Belt boundaries defined in adopted local plans or earlier approved development plans should be altered only exceptionally. Detailed boundaries should not be altered or development allowed merely because the land has become derelict.

Where existing local plans are being revised and updated, existing Green Belt boundaries should not be changed unless alterations to the structure plan have been approved, or other exceptional circumstances exist, which necessitate such revision.

There is no documentary evidence that Winwick Farm was officially removed from the Green Belt.

#### Appendix:

- 1. High Court Decision
- 2. U.D.P. Addendum
- 3. Local Plan Core Strategy 2014Consultation Responses
- 4. Local Plan Core Strategy 2014 Hearing Statements
- 5. Local Plan Core Strategy Hearing Statements 2013
- 6. Warrington Adopted Local Plan Core Strategy

### 1. High Court Decision
CO/2093/2007

Neutral Citation Number: [2007] EWHC 2648 (Admin) IN THE HIGH COURT OF JUSTICE QUEEN'S BENCH DIVISION THE ADMINISTRATIVE COURT

Royal Courts of Justice Strand London WC2A 2LL

Friday, 26th October 2007

#### Before:

#### MR JUSTICE SULLIVAN

Between: THE QUEEN ON THE APPLICATION OF SATNAM MILLENNIUM LTD

Claimant

v

#### WARRINGTON BOROUGH COUNCIL

Defendant

Computer-Aided Transcript of the Stenograph Notes of WordWave International Limited A Merrill Communications Company 190 Fleet Street London EC4A 2AG Tel No: 020 7404 1400 Fax No: 020 7831 8838 (Official Shorthand Writers to the Court)

Mr Christopher Lockhart-Mummery QC and Mr David Blundell (instructed by Messrs Wright Hassall Solicitors) appeared on behalf of the Claimant Mr Stephen Sauvain QC and Mr Colin Crawford (instructed by Warrington Council Solicitors) appeared on behalf of the Defendant

> J U D G M E N T (As Approved by the Court)

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consider that issue. It was not submitted that if I concluded that the Inspector had erred in deciding that there was no need to demonstrate exceptional circumstances (referred to as "very special circumstances" in paragraph 1.350 of his report) it would be appropriate to refuse the claimant relief as a matter of discretion.

- 54. In these circumstances, I can deal very shortly with Mr Lockhart-Mummery's subsidiary ground of challenge that the Inspector, having set out the correct test in paragraph 1.139 of his report that any Green Belt boundary should "endure for a period that satisfies national guidance..." then selected boundaries at the site which lacked that quality of permanence and did not comply with the guidance in paragraph 2.9 of PPG2. Alternatively, it was submitted that the Inspector's reasoning on this point was inadequate.
- 55. In my view, the Inspector's reasoning on this issue is clear. He in effect agreed with Mr Estall that, while the proposed boundaries were not as strong and well defined as the M62, they were nevertheless acceptable in terms of the guidance in PPG2, any lack of quality and clarity being overridden by the strategic imperative of including the site in the Green Belt. That was effectively the approach adopted by the Inspector in the last three sentences of paragraph 1.351 of his report. I do not therefore accept the subsidiary ground of challenge but the application succeeds on the principal ground and it follows that the UDP proposals map must be quashed insofar as it includes the claimant's part of the Peel Hall site (shown edged in black on the plan annexed to this judgment) within the Green Belt. That result may appear somewhat anomalous in respect of the remainder of the site, but it flows from the legislative scheme because the owners of that part of the site did not challenge the adoption of the UDP. Whether this decision will have any practical effect, bearing in mind the policy guidance in RPG13 and the Inspector's endorsement of the strategic policies in the UDP, would appear to be an open question but it is not a question for the court to attempt to answer in these proceedings.
- 56. For these reasons, the application is allowed.
- 57. MR JUSTICE SULLIVAN: Yes.
- 58. MR LOCKHART-MUMMERY: My Lord, for the sake of certainty, I am wondering whether it would be appropriate to attach to the order of the court a plan showing the extent of the land to which your Lordship has made reference in the judgment, that is to say the claimant's land within the Peel Hall area.
- 59. MR JUSTICE SULLIVAN: Yes.
- 60. MR LOCKHART-MUMMERY: My Lord, may I hand up a plan which the defendant has seen? (Handed)
- 61. MR JUSTICE SULLIVAN: Would that be sensible? I would have thought, Mr Crawford -- I can easily incorporate reference to the plan in the very early stages of my judgment. Where I say this application relates only to the claimant's land, I can just put

SMITH BERNAL WORDWAVE

# 2. U.D.P. Addendum

#### ADDENDUM

In October 2007, as a result of a legal challenge by Satnam Millennium Ltd, the High Court ruled that the UDP Proposals Map should be quashed insofar as it shows the site known as Peel Hall Farm as included in the North Cheshire Green Belt. The status of the site will now be addressed in the Local Development Framework Core Strategy.





Me site is situated immediately to the south of the M62 motorway on the northern edge of Warrington and is located at the eastern end of Birch Avenue, which is immediately off Winwick Road, the A49, close to Junction 9 of the M62 motorway.

#### Description

rectangular site laid down to permanent pasture at the present time. The site area is 20.5 acres (8.3 Ha) approx, as highlighted on the aerial photograph for identification purposes only.

#### Tenure

We are advised that the site is freehold to be subject to a Lease to United Utilities Plc in relation to a Water Pumping Station situated on the extreme northern boundary of the site, alongside the motorway. The lease is presently in negotiation. Full details will be available in the Tender Pack.

#### Planning

The site is covered by the Warrington Unitary Development Plan (UDP) and is located within the Warrington Greenbelt. The UDP states that the erection of new buildings will be inappropriate unless they are required for agricultural, forestry, or connected with outdoor sport.

However, interested parties should note that by way of a High Court decision on 26 October 2007, the adjoining land to the east (Peel Hall Farm) was removed from the Greenbelt designation within the UDP proposals map. Further enquines should be made to the Local Authority Planning Department.

#### Disposal Terms

The premises are offered for sale freehold to be subject to a lease to United Utilities Plc by formal ender, by 1pm on 27 February 2008.

Interested parties must register their interest and request Tender Packs from the sole agent's Warrington Office.

The contract will provide for clawback to be paid by the purchaser to the vendor at 50 per cent of any additional residential value created, less costs incurred by the purchaser, and will apply for a period of 25 years from the date of transfer of the freehold interest

In addition the contract for sale will also include an overage clause whereby if the site is sold on to a third party within two years of the date of the transfer from English Partnerships, 75% of the difference between the price at which the site is sold on and the price paid to English Partnerships will be payable to English Partnerships.

#### Costs

The purchaser will be responsible for a contribution to the vendor's disposal costs amounting to 2 per cent of the purchase price.

#### VAT

It should be noted that VAT will be charged on the disposal price.

# For further information





#### DISCLAIMER

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# 3. Local Plan Core Strategy 2014Consultation Responses

2										
	unsound - The Council presumes that the respondent considers that the Core Strategy its unsound, because it is not:					Justified				
	unsound - If you consider the Core Strategy is unsound, is it because it is not:								Positively Prepared Justified	Effective Consistent with National Policy
	Sound - Do you consider the Core Strategy is: Sound?	Yes	Yes	Yes				Yes		2
	Legally Compliant - Do you consider the Core Strategy is: Legally Compliant?			Yes				Yes		92
	Council Proposed Action	Support and / or No Change Required	Support and / or No Change Required	Support and / or No Change Required		No Change Considered Necessary		Support and / or No Change Required	No Change	Necessary
	Officer Comments - Council Response	NA	NA	NA	The issues raised are acknowledged. Whilst the LPCS does not specifically address these issues, it provides the strategic framework to ensure that they are considered moving forward. The Council's Local Transport Plan is also relevant to traffic issues in the borough.	Parking and transport issues will be considered through Policy MP7. The LPCS is not capable of protecting sites from traveller encompenents, but it, and the subsequent Local Plan referred to by Policy SN3 will work to provide appropriate permanent and transit accommodation for Travellers, which should ensure that occurrences of unauthorised encompments are minimised.	The infrastructure section does consider social infrastructure such as allotments and Policy SN7 will help to protect existing allotments as well as requiring additional provision in line with Council standards.	NA	The suggested site is within the established Green Belt. No exceptional circumstances to justify a review of the Green Belt have been stated, and the Local Plan provides for the borough's development needs etsewhere.	The primary focus for development in the borcugh is the town of Warrington and this has always been the case in the history of development planning in the borcugh. This approach is set out in Policy CS2 and is
,	Representation Summary	Support	Support	Support		There are significant traffic and parking issues in the Birchwood Area that need addressing. Areas should be protected from traveller encampments. Allotment provision is an issue in the area.		Support	A new strategic policy should be added after policy CS9 to identify the strategic area of search	at Culchern North East to meet housing needs and deliver the sustainable growth of the viltage.
	٩	<u>SCS7</u>	<u>SCS8</u>	<u>SC868</u>		SCS82		<u>SCS105</u>		SCS130
	Number									
	Type	document	document	fooument		document		focument		Jocument

(35)

e.	Number	9	Representation Summary	Officer Comments - Council Response	Council Proposed Action	Legaly Compliant - Do you consider the Core Strategy is: Legally Compliant?	Sound - Do you consider the Core Strategy is: Sound?	unsound - If you consider the Core Strategy is unsound, is it because it is not:	unsound - T presumes th respondent that the Core is unsound, is not:
				more housing is not justified by exceptional direumstances and would undemline the permanence of the Green Belt and community confidence in the planning system.					
ction	4	<u>SCS53</u>	Support	N/A	Support and / or No Change Required	Yes	Yes		
ction	4	SCS77	Support	NA	Support and / or No Change Required	Yes	Yes		
dion	4	<u>SCS123</u>	The Strategic Vision should be amended to reflect the need for much more housing including more greenfield sites and a review of Green Belt boundaries to release sustainable sites for housing growth.	These amendments would each make the vision incompatible with Approved RSS. The planned housing provision represents a significant increase and is considered to be sound and robust. It can be delivered within the 2006 established green belt boundaries. In the 2006 established green belt to accommodate more housing would undermine the alteration of the Green Belt to accommodate more housing would undermine the planning system.	No Change Considered Necessary	°N	2	Positively Prepared Justified Effective Consistent with National Policy	
ction	4	<u>SCS136</u>	Support	NA	Support and / or No Change Required	Yes	Yes		
ction	4	SCS154	Support	NA	Support and / or No Change Required		Yes		
clion	4	SCS223	Generally support the vision, but would support original option 1 rather than option 3.	Noted.	Support and / or No Change Required				Justified
ction	10	26852	The BGS guidance states that Where the largest part of the safeguarding process is to be set out in a subsequent DPD, the broad extent of the mineral resources should be shown on the Key Diagram. (para 5.1.5). This has not been done making the plan UNSOUND	The recognition of the role of a Core Strategy as written in the BGS guidance is very much linked to county level planning (this is clearly visible through the 7 step process of identifying MSAs , pare 1.3.3 of the BGS guidance), and the guidance does not recognise the complex levels of planning which must be addressed by a Unitary Authority. Furthermore, paragraph 1.5.1 clearly identifies the status of the document as <i>Indopendent</i> advice that is intended to support and facilitate implementation of the document as <i>Indopendent</i> advice that is intended to support and facilitate implementation of the Governments	No Change Considered Necessary	Yes	°N	Consistent with National Policy	

				Lecally		unsound - M	-
Repre	sentation Summary	Officer Comments - Council Response	Council Proposed Action	Compliant - Do you consider the Core Strategy is: Legally Compliant?	Sound - Do you consider the Core Strategy is: Sound?	you consider the Core Strategy is unsound, is it because it is not:	unsound - The Council presumes that the respondent considers that the Core Strategy its unsound, because it is not:
Sup	port	NA	Support and / or No Change Required	Yes	Yes		
Sup	port	N/A.	Support and / or No Change Required	Yes	Yes		
		These amendments would each make the objective incompatible with Approved RSS. The justification for the plan period is set out in the housing background paper.				Decelhada	
0220 0225	bjective W1 should be amended to make ovision for at least 1100 new homes per nrum and 17,600 homes over a period of 201 027. bjective W2 should be amended to make ovision for the review of the Green Bat in atsinable locations to make provision for the quired level of housing growth.	The planned housing provision represents a significant increase and is considered to be sound and robust. It can be delivered within the 2006 established green bek boundantes, the alteration of which to accommodate more housing in the absence of exceptional droumstances would undermine the permanence of the Green Belt and community confidence in the planning system. This level of housing would bead to a significant oversupply in the Mid-Mersey sub-regional housing markst, would undermine regeneration within and beyond the borough, would raise issues of deliverability.	No Change Considered Necessary	2	Ŷ	Prepared Justified Effective Consistent with National Policy	
0	upport	N/A	Support and / or No Change Required	Yes	Y83		
08#30	bjective W2 should be amended to read: "To taintain the permanence of the Green Belt and te character of the countryside in the borough nd protect them from inappropriate evelopment.	Proposed amendment would ensure consistency with Policy CS1 and is therefore welcomed.	Suggest Further Main Modification		Yes, with minor changes		Consistent with National Policy
	Deletive V/4 & Policy CS2 should be	It is considered that Objective W4 essentially says the same thing as the suggested amendment, and is therefore already deemed to be in accordance with the NPPF.	No Change		Yes, with		Consistent with National
in C.	eegurened to renets the refer to one planening Inciples.	"Where possible" should not be deleted from the final bullet of Policy CS2 because it may not always be possible to access rait and / or the Ship Canal.	Necessary		changes		Policy
	Support. Recognition should be given to windle sites in the housing figures.	Noted: The clarification statements produced as a result of the Exploratory Meeting now suggest a modification which recognises and	No Change Considered Necessary				Justified
							Ø

## 4. Local Plan Core Strategy 2014 – Hearing Statements





## Warrington Borough Council Local Plan Core Strategy

## Hearing Statement WBC-A

## Warrington Borough Council Response

# Matter 1 (Statement 1 of 10)

## Issues:

0

- 1.1 Legal Requirements
- 1.2 Duty to Co-operate
- 1.4 Spatial Strategy
- 1.16 Green Belt
- ~1.17 Strategic Green Links

Warrington Borough Council New Town House Buttermarket Street Warrington WA1 2NH

Tel:01925 442795

March 2013

www.warrington.gov.uk/localplans Idf@warrington.gov.uk region that a departure from the existing RSS [RP011] is required or will take place.

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- 45. There has been some suggestion through the consultation process that Warrington is out of step with other local authorities in Cheshire and Merseyside who are reviewing their Green Belts. The Council refutes this as the reviews referred to are anticipated in RSS (Policy RDF4) but clearly not in Warrington 'before 2021'. Indeed the Council's approach to Green Belt is welcomed by neighbouring authorites.
- There is no basis for a review of the Green Belt in Warrington arising from cross-boundary considerations.
  - More houses are needed to meet aspirations for economic growth
- 47. The current UDP and the RSS [RP011] housing requirement is less than the level now planned for in the Plan, and was significantly less than levels achieved before the end of the New Town period. Economic growth has been maintained across a wide range of levels of housing development. There is no reason to suggest that this will not resume when the economy emerges from recession.
- 48. The issue is more fully addressed in relation to the balance between employment land supply and housing provision, addressed by the Council in their response to the Inspector's Issues 1.18, under Matter 1.

#### A Review is necessary to identify 'Safeguarded Land'

49. The Council's evidence (Issue 1.8 and Issue 2.2) demonstrates that, at the planned levels of development for housing and employment growth, the Green Belt boundary is capable of enduring beyond the plan period and has identified broad locations where longer term needs will continue to be met.

# 5. Local Plan Core Strategy Hearing Statements 2013

## **Report to Warrington Borough Council**

#### by Mike Fox

an Inspector appointed by the Secretary of State for Communities and Local Government Date 12 May 2014

PLANNING AND COMPULSORY PURCHASE ACT 2004 (AS AMENDED)

SECTION 20

## REPORT ON THE EXAMINATION INTO WARRINGTON LOCAL PLAN CORE STRATEGY

Document submitted for examination on 19 September 2012 Examination hearings held between 4 -7 June, 11 June 2013 and 5 March 2014

File Ref: PINS/M0655/4291

Warrington Borough Council Warrington Local Plan Core Strategy, Inspector's Report XXXX 2014

within the Mid-Mersey Housing Market Area (HMA), comprising Warrington and its neighbouring authorities of Halton and St Helens. This grouping, which stems from the NWRSS, has been endorsed at various levels over the last few years and is addressed in more detail under Issue 2 below.

- 43. Policy CS2 aims to deliver a minimum of 10,500 new homes between 2006 and 2027, with 80% of all new homes to be developed on previously developed land (PDL) and 60% to be developed within Inner Warrington. These aims are supported by the evidence base in the Council's latest version of the *Strategic Housing Land Availability Assessment* (SHLAA)<sup>29</sup>. The SHLAA provides detailed site locations within each phase of the Plan and trajectories of expected housing delivery, both in total and on PDL over the plan period.
- 44. Policy CS2 also supports economic growth by providing 277 ha of employment land over the plan period. Its relatively large employment land provision reflects Warrington's role as an economically vibrant centre within its sub-region.

#### Transport

45. Policy CS3 sets out the strategic transport parameters for Warrington, to support its role as a regional transport gateway.

#### Green Belt

- 46. Policy CS4 affirms the Council's commitment to the long term protection of the Green Belt, which washes over much of the Borough and is contiguous with the Green Belt in Merseyside, Greater Manchester and North Cheshire. This strategy is in accordance with *the Framework*, which states (paragraph 79) that the Government attaches great importance to Green Belts, and that the essential characteristics of Green Belts are their openness and permanence, and that once established, Green belt boundaries should only be altered in exceptional circumstances (paragraph 83).
- 47. There are no proposals to review the Green Belt during the plan period, which I consider to be sound for reasons that I explore more fully further on in my report.

Strategic overview

48. Taking all these matters into consideration, I conclude that the spatial strategy of the Plan is the most appropriate for Warrington. It is therefore justified and accords with national policy.

# Issue 2 – Is the Plan's approach to the Borough's housing provision, both in terms of its requirement, and its distribution and delivery, sound? Are the needs for particular types of housing addressed satisfactorily, including affordable housing?

49. The Plan's approach to both its housing requirement and its housing provision and delivery was challenged on a number of grounds, both in written

<sup>&</sup>lt;sup>29</sup> Warrington Borough Council: Draft 2012 Strategic Housing Land Availability Assessment (SHLAA); February 2013 [Examination Document TPS074].



# 6. Warrington Adopted Local Plan Core Strategy



# Local Plan Core Strategy

Adopted July 2014



#### Green Belt

**6.20** The integrity of the Green Belt, which was established within the borough for the first time in 2006, is to be preserved across the entirety of the plan period and beyond. National policy makes clear that the fundamental aim of the Green Belt is to prevent urban sprawl by keeping land permanently open. The essential characteristics of Green Belts are therefore their openness and their permanence.

Warrington Borough Council Adopted Local Plan Core Strategy



# Proof of Evidence Vol 4 - Air Quality

Produced by Jim Sullivan Rule 6 Party Peel Hall - APP/ M0655/W/17/3178530

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My name is Jim Sullivan. I have lived in the area since 1987. I would like to speak about air quality

## 1. Introduction

1.1 This evidence is concerned with air quality as it impacts on both the proposed build area and the surrounding area. We shall consider the air quality impacts of the proposed development on a child living within the urban area adjoining the site.

The site at Peel Hall is at the intersection of two Air Quality Management Areas (AQMAs). These are areas which breach WHO international guidelines for concentrations of harmful particulates and/or gases. The appellant's evidence asserts that, at the traffic flows modelled, the level of harmful gases and particulates within the occupied section of the site will not breach WHO thresholds and will have 'negligible' impact on existing air quality levels.

1.2 There are significant weaknesses in the air quality modelling undertaken by the appellant:

- a) The road traffic model which underpins the air quality model is based on inadequate monitoring (please see Traffic PoE for detail) and relies on assumptions about future trends in traffic – particularly HDVs – which are unsound. This, in turn, undermines the air quality modelling, which completely relies on the road traffic model
- b) The settings for the air quality model have not been provided in sufficient detail to either verify or challenge the model
- c) The plan is in direct opposition to Warrington's Air Quality Action Plan, as detailed below
- d) The model used by Satnam explicitly excludes impact on air quality from site traffic, even though this is accepted to be at high volumes over a 10 year period. HGV movements related to site traffic are missing in their entirety from Satnam's predicted future traffic levels

## 2. Key reasons for objection on air quality grounds

- a) This is an unusually sensitive site. Several existing homes already fall within one of the Air Quality Management Areas, with many families currently living in or very close to the 'red zone' – ie locations which currently breach the WHO threshold for dangerous levels of air pollution. These families are at current and persistent risk of ill health and premature death. The development at Peel Hall will exacerbate these conditions, leading to an increased probability of air-quality induced illness and premature death
- b) The modelling carried out by Miller Goodall is based on inadequate road traffic modelling (see 'Road Traffic Modelling' below). Without accurate and rigorous traffic modelling it is not possible to accurately estimate the impact of the additional c. 3,000 vehicles on air quality both within the site and in the Air Quality Management Areas. The appellant's claim that impact on air quality would be 'negligible' is therefore unproven, given the weaknesses in the traffic modelling
- c) Impact to health caused by construction activity is shown by the appellant's consultants to have a Medium to High risk to human health. Within an existing Air Quality Management Area, where the local population's respiratory health is already compromised, this is an even more significant finding. The directly affected population is approximately 35,000 people

whose homes directly border the site ie Orford, Poplars & Hulme and Poulton North Wards. The development is currently estimated to last for 10 years

- d) We note that the construction traffic impact on NOx and particulate pollution has not been included in the modelling, on an assumption that this will have negligible impact. This is not a safe assumption, particularly in such a sensitive site
- e) There is no safe level of air pollution. Both particulates and NOx pollution cause harm and premature death at levels well below the current WHO threshold levels which have been cited in the appellant's documentation. Some of the relevant independent, peer reviewed medical and scientific evidence is summarised in the following paper: <u>https://onlinelibrary.wiley.com/doi/full/10.1111/1753-6405.12264</u> This evidence unequivocally shows that **any** level of increased air pollution brings increased harm to health and increased risk of death

## 3. Previous Inspector's Report

3.1 We would highlight a number of comments made in Mr Schofield's 2018 report, as these remain relevant. We would note that whilst the Judicial Review quashed the decision letter, this does not invalidate the previous Inspectors' Report which was compiled after examining the evidence.

Paragraph numbers below relate to the 2018 inspectors' report.

13.2 At the start of the Inquiry, one of my main considerations was: "whether the appeal scheme would provide appropriate living conditions for future occupiers, with regard to highway noise and air quality".

13.3 Such matters, should, in my view, be addressed before the reserved matters stage, so that there is a clear basis on which to take forward detailed design. This would certainly seem prudent given the site's proximity to the M62.

13.4 Nonetheless, on the basis of all that I heard, and having regard to what became a joint position between the main parties on this matter, it appears that these considerations could be addressed satisfactorily by condition (notwithstanding my overall conclusions on the wider issue of air quality). Even so, I do not regard this position as ideal, and feel obligated to reiterate the strong proviso that I made at the Inquiry. That is to say, any mitigation in relation to noise and air quality should be addressed through building situation and orientation rather than through such means as non-opening windows and mechanical ventilation. Others may form a different view, but I do not consider that such mechanisms can be regarded as conducive to the provision of optimum living conditions for future residents.

3.2 IR13.55 to 13.67 – makes clear that 'There is no real dispute that the appellant's initial air quality work had some failings' and details these failings including specifically: 13.66 The evidence provided lacks clarity in a number of areas, with some conclusions being presented absent the necessary supporting detail. In addition, given my doubts about some of the transport modelling work from which parts of the air quality work appears to derive, precaution is warranted. 13.67 Thus, I conclude that, overall, the appeal proposal has failed to demonstrate that it would not give rise to an adverse impact upon local air quality. It would conflict with Core Strategy policy QE6, and relevant paragraphs of the Framework, the requirements of which are set out above.

3.3 There can be no doubt that the evidence submitted to the previous PI was deficient and that despite ample opportunity at that time the applicant was unable to correct these failings. The Judicial Review that led to the re-opening of this PI was not related to air quality and **it is against natural justice that the applicant has been given a second bite of the cherry when additional evidence should have been gathered to support a completely new planning application**.

3.4 It is clear that with respect to both noise and air quality, Mr Schofield's comments have not been taken into consideration in this – only slightly revised - application. The appellant continues to rely on people choosing to live in a state of permanent lockdown in order to mitigate noise and air quality impacts, rather than designing a reasonable site which more effectively addresses these concerns through design. Rather than a resubmitted appeal, what is required is a fresh planning application with fresh design parameters which address the very serious issues identified.

## 4. Health impact of air pollution

### 4.1 Defra (<u>https://uk-air.defra.gov.uk/air-pollution/effects</u>) highlights the impact of poor air quality:

Pollutant	Health effects at very high levels
Nitrogen Dioxide, Sulphur Dioxide, Ozone	These gases irritate the airways of the lungs, increasing the symptoms of those suffering from lung diseases
Particles	Fine particles can be carried deep into the lungs where they can cause inflammation and a worsening of heart and lung diseases
Carbon Monoxide	This gas prevents the uptake of oxygen by the blood. This can lead to a significant reduction in the supply of oxygen to the heart, particularly in people suffering from heart disease

4.2 The World Health Organisation <u>https://www.who.int/airpollution/ambient/health-impacts/en/</u> notes that:

"Ambient (outdoor air pollution) is a major cause of death and disease globally. The health effects range from increased hospital admissions and emergency room visits, to increased risk of premature death.

An estimated 4.2 million premature deaths globally are linked to ambient air pollution, mainly from heart disease, stroke, chronic obstructive pulmonary disease, lung cancer, and acute respiratory infections in children.

Worldwide ambient air pollution accounts for:

- 29% of all deaths and disease from lung cancer
- 17% of all deaths and disease from acute lower respiratory infection
- 24% of all deaths from stroke
- 25% of all deaths and disease from ischaemic heart disease
- 43% of all deaths and disease from chronic obstructive pulmonary disease

Pollutants with the strongest evidence for public health concern, include particulate matter (PM), ozone (O3), nitrogen dioxide (NO2) and sulphur dioxide (SO2).

The health risks associated with particulate matter of less than 10 and 2.5 microns in diameter (PM10 and PM2.5) are especially well documented. PM is capable of penetrating deep into lung passageways and entering the bloodstream causing cardiovascular, cerebrovascular and respiratory impacts. In 2013, it was classified as a cause of lung cancer by WHO's International Agency for Research on Cancer (IARC). It is also the most widely used indicator to assess the health effects from exposure to ambient air pollution.

In children and adults, both short- and long-term exposure to ambient air pollution can lead to reduced lung function, respiratory infections and aggravated asthma. Maternal exposure to ambient air pollution is associated with adverse birth outcomes, such as low birth weight, pre-term birth and small gestational age births. Emerging evidence also suggests ambient air

pollution may affect diabetes and neurological development in children. Considering the precise death and disability toll from many of the conditions mentioned are not currently quantified in current estimates, with growing evidence, the burden of disease from ambient air pollution is expected to greatly increase"

4.3 Air pollution affects the health and quality of life of people living in Warrington daily. It aggravates breathing conditions and increases the risk of asthma attacks leading to more hospital admissions. Prolonged exposure can cause serious medical conditions, such as cancer, heart attacks and strokes. While we are all affected, those who are the most vulnerable in our society are more at risk, especially children and older people. Exposure to air pollution can cause children to develop breathing conditions and stunted lungs. There is also a growing body of research linking air pollution to other illnesses, including diabetes, developmental problems for children and suggested links to dementia.

4.4 Legal firm Client Earth have repeatedly proven in the courts that the UK government is failing in its legal duty to protect us from toxic air pollution and that local authorities are doing too little too late. The legal action has forced Government to produce two new air quality plans. But apart from the failings of central Government, local government is not acting fast enough. Developments like Peel Hall are why we're still breathing illegally dirty air in Warrington. Approval of this polluting new development rather than one based on active travel will condemn existing and future residents to more disease, death and a poorer quality of life than if it is refused.

4.5 Given this context, the very high population density in the surrounding urban area and the cardependent nature of the site, it should be clear that this development would cause and exacerbate a range of serious health problems in a large population.

It is particularly reckless to locate a care home in such an area.

## 5. There is no safe level of air pollution

5.1 As shown in numerous studies, the international thresholds which have been referenced in the appeal documents do not indicate **safe** levels of air pollution. Whilst these levels are informed by research they are also arbitrary in the sense that they seek to find a point on a continuous scale of harmfulness which is politically acceptable, as the following graphic from *Evolution of WHO Air Quality Guidelines* (Appendix 1) illustrates:

# Fig. 2. Schematic representation of degree of health protection as a function of cost of air pollution control



Source: WHO (1972). Reproduced with permission.

5.2 The WHO guidelines therefore define an arbitrary level of harmful concentrations against arbitrarily defined time durations. These thresholds would be expected to continue to change over time, in much the way that they have since the first WHO guidelines were published in 1958.

5.3 For example, in 1958 the WHO recommended threshold for oxides of nitrogen was  $500\mu g/m^3$  at any one time and  $150 \ \mu g/m^3$  per 24 hour average. Current WHO guidelines for NO<sub>2</sub> are 40  $\mu g/m^3$  annual mean and 200  $\mu g/m^3$  per 1-hour mean – a much stricter standard, even allowing for the slightly different definitions ('oxides of nitrogen' includes NO<sub>2</sub> but also other oxides. The appellant's calculations, using the Defra calculator, give NOx values slightly less than 1.5 times NO<sub>2</sub>

values across the site). Thus a standard of  $500\mu g/m^3$  in 1958 becomes a standard of  $<60 \ \mu g/m^3$  in 2020.

5.4 We would expect standards to continue to become much stricter in future, and would note that this development will be in place for at least a century. The appellant makes reference to electric charging points but makes no explicit, quantifiable defined commitment to fund these. It should be anticipated that levels of traffic-related pollution will improve over time. So, too, will our expectations of air quality – as they have over the past 60 years, as shown by the WHO guidelines.

5.5 Clearly, homes are needed and therefore building must take place somewhere. What makes this site so ill-suited to development?

a) The sensitivity of the site (discussed in sections 6 and 7 below). This is the key point; the health of a significant population is already impacted by poor air quality, and this development would worsen that situation

This is supported by two related issues:

- b) The car-dependent nature of the site, which is in opposition to principles of sustainable development
- c) The access difficulties which mean that any increase in traffic within this road network will exacerbate existing congestion, in turn worsening air pollution from existing traffic in addition to the new journeys caused by the development

## 6. Air Quality Action Plan

6.1 This is a highly sensitive site, which is subject to an Air Quality Action Plan (AQAP). The proposed development breaches four of the five priorities in this AQAP.

6.2 Quoting from the appellant's submission:

"The AQAP describes the key priorities for Warrington Borough Council as;

Priority 1 – Reduce traffic volume and improve flows

Priority 2 - Reduce emissions from HGVs and LGVs

Priority 3 – Reduce emissions from bus and public transport including taxis

Priority 4 – Reduce exposure for those who are most vulnerable

Priority 5 – Ensure that future development is designed to reduce exposure and improve air quality"

### 6.3 Priority 1 – Reduce traffic volume and improve flows

This site is landlocked and has very challenging access arrangements. 1,200 dwellings, a care home and a 2,000 m<sup>2</sup> retail outlet would generate significant additional levels of additional car usage, much of which can only access the site by passing through one of the AQMAs ie traffic volume in the AQMA would be **increased** rather than reduced.

Traffic *flows* would also be worsened because of the access arrangements. Traffic from the site would be required to exit via inappropriate, congested and very narrow routes. This traffic would also worsen the existing congestion in the area.

The site is poorly located for public transport:

- a) Bus utilisation in the surrounding area is low and declining
- b) Any extension of bus services into Peel Hall would tangibly extend current journey times, making the bus a less appealing service; it seems likely that any take-up by residents at Peel Hall would be offset by existing users abandoning the bus
- c) The Memorandum of Understanding between the appellant and Warrington's Own Buses is for 5 years only, with a break option after 3 years. This does not provide certainty of public transport even for the build phase, let alone steady state thereafter
- d) The current 20/21 services are notoriously long, serving Cinnamon Brow and Orford before reaching the town centre. Residents from Gorse Covert currently face a journey of up to 58 minutes to reach the town centre a distance of only 6.3 miles. By car this would take 15 minutes. Residents in Cinnamon Brow along Enfield Park face a journey time of up to 30 minutes 4.3 miles. By car this journey would take 10/13 minutes. To extend this service by say, 15 minutes to serve Peel Hall, some passengers face a one-way journey into town of more than an hour even longer when waiting time is added on. A return journey into town could take up to two and a half hours.
- e) Central Station is 2.99 km away from the nearest point in the site as the crow flies, and 3.83 km away from the furthest point as the crow flies. Padgate station is 1.87 km as the crow

flies from the nearest point on the site; 3.1 km away as the crow flies at the furthest point. Actual journey distances would be markedly higher than these distances.

- f) The appellant suggests that residents would cycle to these railway stations. This seems unlikely to take place at sufficient volume to impact positively on air quality. Current levels of cycling are low, possibly because of the extremely busy roads which serve the area. The appellant's own traffic survey recorded 0.266 % of vehicles as bicycles (please see table below, taken from the appellant's traffic survey). This is so low as to be considered negligible and reflects the poor support for cycling in the existing road network. It is of little relevance if the site itself has good cycle paths if the roads which then connect the site to railway stations are, themselves, unsafe or otherwise unappealing for cyclists.
- g) We note the appellant's suggestion to address some of the parked car issues in Poplars Avenue. We would note that low cycle takeup was recorded by the appellant on **every** road they surveyed, which would suggest that mitigations in Poplars Avenue alone would not address the root causes of low cycling takeup.
- h) "Between 2010/2011 to 2015/16 there has been a decline in bus patronage from 11.5 million to 6.6 million journeys per year. This is nearly a 43% drop in patronage and vastly exceeds the 10% decrease in patronage observed across the North West region over the same time period". Source: Warrington LTP4 Evidence Base Review.
- i) Traffic flows would be severely hampered by the access arrangements. Traffic will need to enter and leave the site via inadequate and already congested road networks. This will inevitably increase emissions. The appellant has not been able to find an answer to this problem since their first planning application; we may assume that this is because the problem is, indeed, intractable – the nature of the site simply makes it unsuitable for additional traffic.

6.4 **Journeys by cycle** as a proportion of total journeys recorded during the appellant's traffic survey are shown below:

	TOTAL CYCLE	TOTAL JOURNEYS
J1	21	3,763
J2	3	75
J3	6	2,293
J4	60	4,589
J5	16	2,055
J6	0	158
J7	11	9,878
J8	12	7,967
Saturday	19	22,598
19	9	11,129
J10	12	2,740
J11	37	2,693
J12	16	4,398
J13	26	3,256
J14	4	10,414
J15	20	15,623
J16	27	12,730
J17	18	2,669
TOTALS	317	119,028

Only 0.266% of journeys were undertaken by bicycle.

## 6.5 **Priority 2** – Reduce emissions from HGVs and LGVs

The construction phase is acknowledged by the appellant to involve high levels of HGV traffic throughout the 10 year+ construction phase. Quite apart from the major disruption to local traffic flows – with resultant increases in emissions from existing vehicles – which this would cause, the HGVs themselves would introduce additions to air pollution and congestion for at least 10 years. Note that the appellant has chosen not to model the impact of this traffic at all (12.8.1).

HGVs and LGVs will also be required to support a 2,000 m2 retail facility. This is clearly a challenging location for such a unit, given that access can only be achieved through the populated urban network. We note that the air quality model assumes a reduction in HDVs between start and completion of the build, despite the planned developments at Parkside and the next phase of the Omega site development.

This is simply illogical and is discussed further below.

## 6.6 Priority 3 – Reduce emissions from bus and public transport including taxis

Public transport provision is solely based on conventional diesel buses which produce high amounts of oxides of nitrogen and particulate, the two key pollutants in poor air quality. While the number of buses would be low, the absence of bus priority and indicative timetables suggests that vehicle speeds would be low with a consequent increase in pollution. There are no plans to fund electric or alternative fuel buses. In addition, where public transport is unattractive, taxi use tends to be higher for households without access to cars. These will also be almost entirely diesel powered and add to pollution for new and existing residents.

### 6.7 **Priority 4** – Reduce exposure to those who are most vulnerable

This development is at the intersection of Warrington's two AQMAs. Very large numbers of people live within these areas of poor air quality, the majority in Orford and Poplars & Hulme Wards. Some statistics regarding these Wards are therefore relevant:

- 20.8% of children in Orford Ward and 24.3% of children in Poplars & Hulme Ward qualify for free school meals, against a Warrington average of 11.1%
- Male life expectancy (77.8 years Orford, 75.1 years Poplars & Hulme) is significantly lower than the Warrington average (78.8 years)
- Female life expectancy (81.2 years Orford, 79.8 years Poplars & Hulme) is slightly lower than the Warrington average (81.8 years)

6.8 Consider an 8 year-old child growing up in Orford or Poplars & Hulme. Children here already experience poorer health outcomes than children in most parts of Warrington and, indeed, England. Poor air quality is one of the factors disadvantaging children in this area. The development would have the following impacts for such a child:

- Increased air pollution in a ward already badly affected by vehicular pollution
- Increased road congestion over at least the next 10 years due to construction traffic, and further congestion caused by additional vehicles relating to residents and business located at the site. This congestion will, in turn, lead to raised pollution levels
- Road safety issues related to the site construction traffic. These would continue *at least* until she reaches adulthood
- Other impairments not covered in this evidence (such as school overcrowding due to phasing of additional provision, GP availability etc)

6.9 This proposed development would impair the life chances of children growing up in Orford or Poplars & Hulme in many ways, not least because their already poor health and life expectancy would be further worsened.

6.10 The proposal also includes the location of a care home within the site, exposed to existing poor air quality which can only worsen following the development of this site. This is directly counter to Priority 4 of Warrington's AQAP.

6.11 **Priority 5** - Ensure that future development is designed to reduce exposure and improve air quality

There is literally no commitment to air quality improvement at any point in this proposed development. There is an unquantified reference to electric charging points, though these would only mitigate the impact of around 3,000 extra vehicles rather than reducing net exposure to air pollution. The site's location means that residents will be significantly dependent on cars. Public transport usage and cycling will be negligible, as they are in the surrounding urban area.

6.12 It is clear that the proposed development is in direct opposition to Warrington's Air Quality Action Plan.

- 7. Many hundreds of people are significantly affected by poor air quality bordering this site
- 7.1 The following map shows the current Air Quality Management Areas:



7.2 If we zoom in on just one part of the red zone and look at the population density, we can see that very large numbers of people already live and travel within an area which falls outside nationally-mandated air quality levels:



7.3 Orford and Poplars & Hulme Wards are the wards most directly impacted by current air quality issues. These two wards have a combined population of 24,603.

A fuller picture of the area bounded by the two AQMAs and the density of population bounded by them can be seen in the following image:



7.4 The appellant's claim that air quality will be unaffected by filling in the green part of this map with further high density housing is, clearly, incorrect. It may be the case that air quality levels within the Peel Hall site itself fall largely within WHO guidelines. Nevertheless, even if that were the case it would not change the fact that air quality in this landlocked area, bounded as it is by the M62 and A49 – two AQMAs – would worsen. This would have significant health implications for a population of 40,000 people when the site is fully occupied.
7.5 The poor air quality in populated areas is shown in the appellant's published data:

			Level of nitrogen dioxide (µg/m <sup>3</sup> )				
Site ID	Type of site	OS Grid reference	2015	2016	2017	2018	Verification values 2018- 19
WA123 M62 Radley Lane	Roadside	361655, 391914	2	Ξ.	2	29.7	25.0
WA95 Winwick Road 1	Roadside	360598, 389820	39.5	39.9	34.7	32.6	32.1
WA96 Winwick Road 2	Roadside	360484, 390416	47.2	50	44.2	40.3	39.3
WA112 Winwick Road 3	Roadside	360434, 390968	52	55	49.3	43.9	41.9
			2 <b>/S</b>	40 µg/m <sup>3</sup>	5		

#### Table 12.15 - Local Authority Annual Mean NO<sub>2</sub> Results - Diffusion Tubes

**Note**: Winwick Road 2 and 3 sites have persistently breached WHO guidelines for NO2, although site 2 was just within the current guideline at its latest reading.

7.6 The Winwick Road 2 site is at the junction of Winwick Road and Long Lane, a very denselypopulated area. The location of the diffusion tube is shown in the following satellite image, which also illustrates the high population density at this location:



7.7 The Winwick Road 3 site is close to the junction of Winwick Road with Sandy Lane West, also a densely populated area. The location of the diffusion tube is shown in the following satellite image. Once again, this demonstrates NO2 emissions which breach WHO guidelines in an area of high population density:



### 8. Impact of construction on health

8.1 We note that no assessment or modelling has been undertaken with regard to vehicular pollution during the 10+ year construction process. We note, also, that the traffic modelling assumes a completed build by 2022 and takes no account of HGV movements. Given the already congested nature of the local road network and the scale of construction, these are remarkable omissions. The number of vehicle journeys will be significant and these will be large vehicles accessing a site which is wholly unsuited to such vehicles, due to its challenging access arrangements.

8.2 The appellant notes that: "The potential effects of construction traffic and combustion sources associated with the proposed development have been scoped out of this assessment". This statement assumes that any risk to health in adjacent properties from vehicular emissions is negligible, even though these movements have not been included in the appellant's model. This is unacceptable.

8.3 The access arrangements for construction traffic have not been set out, which is also unacceptable, given the nature of local road infrastructure.

As noted in Addendum 2 Volume 8:

- **Construction**: The total building volume to be constructed is >100,000m<sup>3</sup>. The dust emission magnitude for construction is, therefore, considered to be Large.
- **Earthworks**: The total site area is >10,000m<sup>2</sup>. The dust emission magnitude for earthworks is, therefore, considered to be Large.
- **Trackout**: It is assumed that there are likely to be more than 50 HDV outward movements in any one day. The dust emission magnitude for trackout is, therefore, considered to be Large

8.4 Some generic mitigations have been listed, **but no assessment has been made of the probable effectiveness of such mitigations in preventing negative impact on human health** in this denselypopulated site. The risks to health from the construction phase are noted in the appellant's table below:

Detectic Impost	Sensitivity of the Surrounding Area					
Potential Impact	Demolition	Earthworks	Construction	Trackout		
Dust Soiling	High	High	High	High		
Human Health	Medium	Medium	Medium	Medium		

#### Table A12.5.2 Outcome of Defining the Sensitivity of the Area

#### Step 2C Risk of Impacts

The dust emission magnitude and sensitivity of the area were combined and the risk of impacts determined using the criteria detailed in Table 12.6 to Table 12.9 of Chapter 12.0.

- Demolition is considered to be High risk for dust soiling, High risk for human health;
- Earthworks is considered to be High risk for dust soiling, Medium risk for human health;
- Construction is considered to be High risk for dust soiling, Medium risk for human health; and
- Trackout activities is considered to be High risk for dust soiling, Medium risk for human health.

A summary of the risks, before mitigation measures are applied, for dust soiling and human health are shown in Table A12.5.3

#### Table A12.5.3 Risk of Dust Impacts

Detential Impost	Dust Risk					
Potential impact	Demolition	Earthworks	Construction	Trackout		
Dust Soiling	High	High	High	High		
Human Health	High	Medium	Medium	Medium		

8.5 This is a 10 year construction plan generating significant levels of dust in a population which already suffers from the effects of chronic exposure to high levels of airborne pollutants. The appellant has listed a number of generic mitigations but has not committed to an agreed standard of dust control. This is unacceptable. As stated, the development imposes a significant additional risk to the health of the local population.

### 9. Road traffic modelling

- 9.1 The air quality model relies on the traffic modelling. As noted in the Traffic PoE, the scope and scale of traffic assessment is considered to be inadequate, with some key junctions assessed only on one day and the remainder assessed only for a single week. Notably, these were not heavy traffic weeks, and the omission of a home game Saturday was particularly indefensible.
- 9.2 Here are some of the predicted AADT figures for a number of key junctions, both with and without the development. This data was used by Miller Goodall in the development of the air quality model; the complete table can be found at Table A12.4.1 in ES Volume 9:

Link		2	019 Base	rear/Verific	cation	202	22 Opening Develo	Year With pment	out	20	22 Openin Develo	g Year W pment	ith
Number	Name	AADT	LDV	HDV	%HDV	AADT	LGV	HDV	%HDV	AADT	LDV	HDV	%HDV
1-	A49 Northbound (JunctionNINE Retail Park - Hawleys Lane)	<mark>21,417</mark>	20,417	1,000	4.7%	22,278	21,295	983	<mark>4.4</mark> %	22,744	21,759	985	4.3%
2 -	A49 Northbound (M62 - Birch Avenue)	22,019	21,003	1,016	4.6%	22,485	21,490	995	4.4%	22,843	21,848	995	4.4%
3 -	A49 Northbound (north of M62)	23,198	22,242	956	4.1%	24,102	23,165	937	3.9%	24,433	23,496	937	3.8%
4 -	A49 Northbound (parallel to Brendon Avenue - Sandy Lane West)	22,019	21,003	1,016	4.6%	22,485	21,490	995	4.4%	22,843	21,848	995	4.4%
5 -	A49 Northbound (Sandy Lane West - JunctionNINE Retail Park)	22,009	21,005	1,004	4.6%	22,806	21,822	984	4.3%	23,271	22,285	986	4.2%
6 -	A49 South of A50 (Northbound)	16,851	16,109	743	4.4%	17,563	16,835	728	<mark>4.1</mark> %	18,328	17,600	728	4.0%
7 -	A49 South of A50 (Southbound)	20,631	19,960	671	3.3%	21,522	20,863	659	<mark>3.1</mark> %	22,540	21,880	659	2.9%
8-	A49 Southbound (JunctionNINE Retail Park - Hawleys Lane)	24,199	23,446	753	3.1%	23,960	23,238	722	3.0%	24,032	23,309	723	3.0%
9.	A49 Southbound (M62 - Birch Avenue)	23,742	22,853	890	3 7%	24,466	23,594	872	3.6%	24,727	23,809	918	3.7%
10 -	A49 Southbound (north of M62)	22,025	21,150	875	4.0%	22,540	21,683	858	3.8%	22,838	21,981	858	3.8%
11 -	A49 Southbound (parallel to Brendon Avenue - Sandy Lane West)	23,742	22,853	890	3.7%	24,466	23,594	872	3.6%	24,727	23,809	<mark>918</mark>	3.7%
12 -	A49 Southbound (Sandy Lane West - JunctionNINE Retail Park)	23,813	23,068	745	3.1%	23,551	22,836	715	3.0%	23,620	22,904	716	3.0%
13 -	A49 Winwick Link Road	21,767	20,610	1,157	5.3%	22,672	21,539	1,134	5.0%	22,829	21,695	1,134	5.0%
14 -	A50 Long Lane	12,162	11,879	283	2.3%	12,379	12,107	271	2.2%	12,505	12,234	271	2.2%
15 -	A50 Orford Green	11,111	10,826	286	2.6%	11,106	10,824	282	2.5%	12,081	11,806	275	2.3%
16 -	Birch Avenue (Site entrance)	194	192	2	0.9%	203	201	2	0.8%	380	378	2	0.4%
17 -	Blackbrook Avenue (Ballater Dr - Capesthorne Rd)	6,573	6,547	26	0.4%	7.039	7.013	26	0.4%	11,707	11,681	25	0.2%
18 -	Blackbrook Avenue	6,543	6,502	41	0.6%	6,909	6,869	41	0.6%	9,794	9,750	44	0.4%

Table A12.4.1 Traffic Data

9.3 The assumptions which underpin this traffic model are not stated. This is a significant omission which calls into question the validity not only of the traffic model, but also of the air quality model which relies on these traffic projections. It is not possible to confirm or challenge the traffic modelling because the settings for the model have not been published.

9.4 There are good reasons to question these projected traffic levels:

- a) The model assumes a *reduction* in HDV journeys between 2019 and 2022 in the 'without development' option. This increases only marginally in the 'with development' option, resulting in an overall **reduction** in HDV journeys
- b) The reduction in HDV journeys between 2019 and 2022 'without development' equates to 1.98% (Appendix 2 The reduction in HDV journeys between 2019 and 2022 'with development' equates to 1.64% (Appendix 2). No rationale is provided for these assumptions, which appear highly questionable given the underlying trend for *increased* traffic

- c) The model takes no account of HDV journeys associated with the building works themselves. Table A12.5.1 of the appellant's report notes that "There are likely to be >50 HDV movements in any one day". This may not be a significant figure in the overall context of Warrington's traffic levels, but HDV movements of this magnitude through densely populated areas and focusing on the two AQMAs is significant - these are frequent movements of large, pollution-emitting vehicles in areas where large numbers of people live. Their absence from any air quality modelling is unacceptable
- d) The model appears to take no account of HDV journeys associated with facilities within the development - care home, retail facility, school

9.5 The Department for Transport's traffic modelling for Warrington shows a slight year on year reduction from 2017 to 2018 (the latest dates available) for cars and taxis, and a slight increase in those years for HGVs. The data also shows a clear underlying trend for increase in traffic volumes for all vehicle types, which is unsurprising considering the continued population growth in the town:



Annual traffic by vehicle type in Warrington

#### https://roadtraffic.dft.gov.uk/local-authorities/74

9.6 It is, therefore, not credible to build a model on an assumption of a baseline reduction in HDV movements. The data used by Miller Goodall in their air quality modelling contradicts the most recent DfT data.

### 10. Conclusion

10.1 This is a highly sensitive site, bounded by two Air Quality Management Areas in an already congested and densely-populated location. The development would lead to an increase in car journeys, and therefore air pollution, and will inevitably lead to further illness and premature deaths.

10.2 The appellant's modelling indicates that the air quality levels at most areas within the site will meet national standards and that the impact of additional traffic on the existing population will be negligible. However, the model itself has not been provided – only contour maps of the outputs – and the model is therefore unavailable for analysis or challenge.

10.3 Reasons to reject the development on air quality grounds are summarised below:

- a) The air quality model is based on an inadequate traffic model relying on an inadequate survey period and an unproven assumption of a general reduction in HDV movements
- b) The traffic model is not defined sufficiently to enable it to be reproduced by a third party. This means that it is not susceptible to analysis or challenge
- c) The air quality model is not defined sufficiently to enable it to be reproduced by a third party. This means that it is not susceptible to analysis or challenge
- d) Existence of two AQMAs bordering the site define this as a sensitive site
- e) The planned development is in direct opposition to the town's Air Quality Action Plan
- f) Extremely high population density, already health-disadvantaged, which will be affected by the associated increase in air pollution
- g) The site has been designed to be heavily dependent on car transport
- h) The site's access arrangements will inevitably lead to increased traffic congestion in the surrounding road network, itself a contributory factor to air pollution. This will further impact on the AQMAs
- i) The presence of a care home and 2,000 m<sup>2</sup> retail unit will add significantly to the number of journeys through the adjacent road network
- j) The care home will expose a vulnerable cohort to the poor air quality already present in this area

10.4 This development will worsen an already serious position with regard to the impact of poor air quality on human health. It would not be overstating the case to say that human life is likely to be lost prematurely as a consequence of this worsening of air pollution in a densely-populated area. The scientific data is clear: air pollution at the levels already experienced in the urban area adjacent to the site are sufficient to cause illness and premature death.

### 11. Appendix 1



# **Evolution of WHO air quality** guidelines:

past, present and future

### Abstract

This document summarizes key WHO publications in the field of air quality and health since the 1950s, which led to the development of the series of WHO air quality guidelines. It outlines the evolution of the scientific evidence on the health effects of air pollution and of its interpretation, supporting policyand other decision-makers in setting outdoor and indoor air quality management strategies worldwide. Current WHO activities and their future directions in this field are also presented.

### Keywords

AIR POLLUTION AIR POLLUTANTS ENVIRONMENTAL EXPOSURE WORLD HEALTH ORGANIZATION EUROPE



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### Abbreviations

AQGs	air quality guidelines
BaP	Benzo[a]pyrene
CO	carbon monoxide
CRF	concentration-response function
FEV	forced expiratory volume
FVC	forced vital capacity
GRADE	Grading of recommendations assessment, development and evaluation (framework)
HRAPIE	Health risks of air pollution in Europe (project)
ISO	International Organization for Standardization
NO <sub>2</sub>	nitrogen dioxide
PM	particulate matter
PM <sub>10</sub>	particulate matter with a diameter of 10 microns or less
PM <sub>2.5</sub>	particulate matter with a diameter of 2.5 microns or less
REVIHAAP	Review of evidence on health aspects of air pollution (project)
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	sulfur oxides
US EPA	United States Environmental Protection Agency
USSR	(former) Union of Soviet Socialist Republics





## Introduction

Air pollution from both outdoor and indoor sources represents the single largest environmental risk to health globally. WHO estimates that more than 6 million premature deaths were caused by air pollution exposure in 2012 (WHO, 2014a; 2016a). The enormous burden of disease due to air pollution is increasingly being recognized by governments and institutions around the globe as a major public health concern.

In May 2015 the World Health Assembly, the decision-making body of WHO, adopted resolution WHA68.8 on health and the environment: addressing the health impact of air pollution, which urged Member States and WHO to redouble their efforts to protect populations from the health risks posed by air pollution. The resolution recognized for the first time the role of WHO air quality guidelines (AQGs) in providing guidance and recommendations for clean air that protect human health.

This report outlines WHO's trajectory on air quality and health, from its initial manuals and reports published as early as 1957 to the series of editions of AQGs that serve as a reference tool in developing ambient and indoor air quality management policies in many countries worldwide. It describes and provides critical commentary on the importance and key features of these documents, and highlights future directions and challenges of WHO's work in this area of increasing relevance to public health.



# WHO publications on air quality and health before the AQGs (1958–1984)

### 2.1 Air pollution (WHO Technical Report Series, No. 157)

Air pollution (WHO, 1958) was published in the WHO Technical Report Series and was the first to deal with air pollution and its effects on health. It was written by a group of experts acting for the Expert Committee on Environmental Sanitation, which met in November 1957, which included members from Belgium, India, Italy, South Africa and the United States of America and representatives from the World Meteorological Organization.

The report was laudably concise: 26 pages providing an introduction to air pollution science, the sources of air pollutants, factors affecting ambient concentrations, methods of measuring concentrations of pollutants and effects on health. Emphasis was placed on smoke and sulfur dioxide (SO<sub>2</sub>), photochemical generated smog (ozone, peroxyacids and peroxynitrates), secondarv aerosols and hydrogen fluoride. The toxicological effects of individual pollutants were not discussed in any detail, although the photochemical pollutants were noted to cause effects ranging from lachrymation to pulmonary oedema. For SO<sub>2</sub>, emphasis was placed on its irritant effects, recognized by the Committee as an adverse health effect. It was clearly appreciated that exposure to unusually high concentrations of air pollutants could damage health although, and very curiously, no mention was made of the Donora air pollution episode of 1948 or the London smog of 1952.

### Box 1. Highlights of Air pollution (WHO, 1958)

- This was the first WHO publication that dealt with air pollution and health.
- The report represented the work of an expert group, an approach consistently used by WHO in this field in the years following 1957.
- The authors accepted that air pollutants could damage health, but categorized effects as (a) serious, when concentrations were unusually high, and (b) relatively minor and probably transient, consisting mainly of irritation of mucous membranes, at lower concentrations.
- For the first time, the case for air quality standards was considered briefly, although it was agreed that not enough data were available to allow standards designed to safeguard health to be set.
- An argument against standards was developed, based on possible inhibitory effects on industry.
- The terms *criteria*, *guidelines* and *guides* were not used; these appeared in subsequent reports.
- No mention was made of the potential carcinogenic effects of air pollutants.

### 2.2 Air pollution and other ancillary reports

Progress towards the WHO AQGs began in WHO Technical Report 157 described above, and continued with WHO Technical Reports 271 and 506 (see sections 2.3 and 2.4). In addition, between 1958 and 1972 WHO produced a number of additional interesting reports on air pollution (Barker et al., 1961; Katz, 1969; Lawther, Martin & Wilkins, 1962; WHO, 1963a; 1963b; 1968; 1970).

Of these ancillary reports, *Air pollution* (Barker et al., 1961) remains of significant interest. This 442-page report deals with many aspects of air pollution science in 15 substantial chapters and includes attractive colour plates showing the effects of air pollutants on plants. The report provided a historical review of atmospheric pollution and addressed the effects of air pollution on human health. It included reasonably detailed accounts of the Donora incident of 1948 and the London smog of 1952. Los Angeles smog was discussed in some detail,

and short accounts were provided of what was then known of the effects on health of individual pollutants, including beryllium, manganese, fluorides, radioactive materials, insecticides, aeroallergens and carcinogens. One chapter, "Air pollution legislation: standards and enforcement", included a short review of the legislation enacted in the United Kingdom, the United States and the former USSR, with notes on the position in a selection of other countries. Only for the former Union of Soviet Socialist Republics (USSR) was a set of hygienic standards for urban air quoted from 1956 (reproduced in Table 1), expressed as "maximum permissible concentrations".

The list of compounds in Table 1 is as interesting for the compounds included – and those excluded – as for the standards themselves. No discussion of the derivation of the standards was provided, however.

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lable 1. Ma	aximum p	ermissible	pollution	levels

Pollutant	Maximum permissible concentration (mg/m <sup>3</sup> )		
	At any one time	24-hour average	
Sulfur dioxide	0.5	0.15	
Chlorine	0.1	0.03	
Hydrogen sulfide	0.03	0.01	
Carbon disulfide	0.5	0.15	
Carbon dioxide <sup>a</sup>	6	2	
Oxides of nitrogen	0.5	0.15	
Non-toxic dusts	0.5	0.15	
Soot	0.15	0.05	
Phosphorus pentoxide	0.15	0.05	
Manganese and compounds	0.03	0.01	
Fluorine compounds	0.03	0.01	
Sulfuric acid	0.3	0.1	
Phenol	0.3	0.1	
Arsenic (non-organic compounds, with the exception of arsine)	-	0.003	
Lead and compounds (with the exception of lead tetraethyl)	-	0.0007	
Metallic mercury	-	0.0003	

<sup>a</sup> The authors of the current report note that carbon dioxide is presumably a misprint for carbon monoxide. The ambient concentration of carbon dioxide is 300 ppm; about 600 mg/m<sup>3</sup>.

Source: Barker et al. (1961). Reproduced with permission.

### 2.3 Atmospheric pollutants (WHO Technical Report Series, No. 271)

Progress was made in the years following the publication of Air pollution and a number of additional reports and publications appeared on the subject: a monograph on air pollution (Barker et al., 1961), a report on a symposium on the epidemiology of air pollution (Lawther, Martin & Wilkins, 1962) and a paper surveying existing legislation on air pollution (WHO, 1963a). These provided the background against which a second meeting of experts was held in 1963. This group met as the WHO Expert Committee on Atmospheric Pollutants. Its members were drawn from Chile, France, Japan, South Africa, the United Kingdom of Great Britain and Northern Ireland, the United States and the USSR.

The resulting report, Atmospheric pollutants (WHO, 1964), was again concise, at 18 pages in all. Progress in developing legal instruments for the control of air pollution was noted and attention focused on technical methods for controlling it. These included control of emissions from motor vehicles, the use of liquid petroleum gas as a means of reducing hydrocarbon emissions and methods to reduce the use of coal and thus emissions of SO<sub>2</sub> and smoke. Increasing the use of electricity produced by "atomic power stations" and the use of natural gas were also mentioned. Further, a number of indirect means were advanced, such as improved traffic management, improved town planning, development of green belts and the introduction of "meteorological warning systems to allow temporary steps to reduce emissions of pollutants to be taken".

In discussing smoke and how it should be monitored, the group commented, providing forward-looking advice: "the object may be to measure blackness, particle mass or surface area of particles".

*Atmospheric pollutants* also reviewed the report of the WHO Interregional Symposium on Criteria for Air Quality and Methods of Measurement held in Geneva in 1963 (WHO, 1963b). As a result of the Symposium's deliberations, the terms *criteria* and *guides* for air quality were discussed and defined as follows.

- Criteria for guides to air quality are the tests which permit the determination of the nature and magnitude of the effects of air pollution on man and his environment.
- Guides to air quality are sets of concentrations and exposure times that are associated with effects of varying degrees of air pollution on man, animals, vegetation and the environment in general.

During the Symposium it was further suggested that guides to air quality for a given pollutant could be divided into four categories or levels. These were defined as the concentration and exposure times, which may vary for a given pollutant, at or above which:

- either no direct or indirect health effects occurred (level 1);
- likely irritation of the sensory organs or harmful effects on vegetation, visibility reduction or other adverse effects on the environment occurred (level 2);
- likely impairment of vital physiological functions or changes that may lead to chronic diseases or shortening of life occurred (level 3); or
- acute illness or death in susceptible groups of the population might occur (level 4).

Finally, it was highlighted that for some known pollutants it might not be possible to state concentrations and exposure times corresponding to all four of these levels because:

- the effects corresponding to one or more of the levels are not known;
- exposures producing effects corresponding to certain levels also produce more severe effects; or
- the present state of knowledge does not permit any valid quantitative assessment.

#### Box 2. Highlights of Atmospheric pollutants (WHO, 1964)

- The report called for international guides to air quality and requested that WHO take action to formulate these. This led, later, to the development of the first edition of the WHO AQGs (WHO Regional Office for Europe, 1987).
- The terms *criteria* and *guides* were first defined and introduced. In addition, guides were subdivided into four levels according to concentrations and exposure times in relation to increasing severity of effects on health and/or the environment.
- The report stated that some pollutants may have mutagenic effects, but it was concluded that too little was known about this subject to permit classification of such pollutants in the defined categories.
- For the first time it was accepted that long-term exposure to pollutants could induce chronic disease and shortening of life, and that lower concentrations could lead to more severe health effects than merely irritation.
- The term "threshold concentration" was not used but it seemed that, at least for non-mutagenic substances, the Committee accepted that such thresholds were likely to exist.
- The report concluded that it would be impossible to set internationally applicable emission standards, and that the prescription of such standards must be left to the discretion of individual governments or local authorities.

### 2.4 Air quality criteria and guides for urban air pollutants (WHO Technical Report Series, No. 506)

Air quality criteria and guides for urban air pollutants was produced in 1972 by an expert group with members drawn from Canada, Egypt, India, Japan, Sweden, Switzerland, the United States and the former USSR (WHO, 1972). It ran to 35 pages: again, a short report, which remains especially interesting in that - in addition to discussing a few common air pollutants in more detail than previous reports - it addressed the need to take into account the balance between health protection and the cost of lowering levels of air pollutants. WHO expert groups convened in the period 1957-1972 had few inhibitions about discussing methods for controlling levels of air pollutants, the likely costs of such methods and the need for "social decision-making".

The report represented a significant step towards AQGs. It included short chapters dealing with sulfur oxides (SO<sub>2</sub>) and suspended particles, carbon monoxide (CO), photochemical oxidants and nitrogen dioxide  $(NO_2)$ , providing narrative reviews of the literature then available. Although no guidelines were formulated, the report provided the lowest ambient concentrations, defined in terms of specific averaging times, known to be associated with effects on health (i.e. guides, as defined in *Atmospheric pollutants* – see section 2.2). Much of the evidence is now very dated, but a few of the summary tables of interest are reproduced below.

Table 2 reflects substantial uncertainty and/or differences of opinion within the Committee's conclusions (see table footnotes and the wide concentration ranges proposed for  $SO_2$ ). By modern standards, the concentrations of  $SO_2$ suggested seem very high: the upper figure was based on data collected in London (see Table 2, footnote b).

Pollutant	Excess mortality and hospital admissions	Worsening of patients with pulmonary disease	Respiratory symptoms	Visibility and/or human annoyance effects
SO <sub>2</sub> <sup>b</sup>	500 μg/m³ (daily average)	500–250 µg/m³° (daily average)	100 µg/m³ (annual arithmetic mean)	80 μg/m³ (annual geometric mean)
Smoke⁵	500 µg/m³ (daily average)	250 μg/m³ (daily average)	100 μg/m³ (annual arithmetic mean)	80 μg/m³ (annual geometric mean) <sup>d</sup>

### Table 2. Expected health effects of air pollution on selectedpopulation groups<sup>a</sup>

<sup>a</sup> The Committee specifically urged that this table should not be considered independently of the accompanying text: "a numerical value associated with a given effect does not mean that all exposed individuals will be thus affected. There is no valid information available that permits precise quantification of this risk. Usually, the proportion of the population that may be expected to be affected is small."

<sup>b</sup> British Standard Practice. [...] Values for sulfur dioxides and suspended particulates apply only in conjunction with each other. They may have to be adjusted when translated into terms of results obtained by other procedures.

° These values represent the differences of opinion within the Committee.

<sup>d</sup> Based on high-volume samplers.

Source: WHO (1972). Reproduced with permission.

The report's choice of a 4% concentration of carboxyhaemoglobin as a break point (Table 3) was agreed to be difficult and would nowadays be regarded as too high.

### Table 3. CO concentrations required to reach 4% carboxyhaemoglobin levels<sup>a</sup>

Am	bient CO <sup>b</sup>	Time (hours)
mg/m <sup>3</sup>	ppm	-
29	25	24
35	30	8
117	100	1

<sup>a</sup> The Committee specifically urged that this table should not be considered independently of the accompanying text: "...the formulation of an air quality guide is fraught with difficulties... It can be seen that the time required to reach equilibrium depends to a large extent on whether the subject has acquired CO from smoking or other sources before exposure to ambient air..."

<sup>b</sup> Light activity at sea level with initial "basal" values is assumed. Above 4% carboxyhaemoglobin levels there may be increased risk for patients with cardiovascular disease.

Source: WHO (1972). Reproduced with permission.



The concentrations recommended for photochemical oxidants (Table 4) are not very different from those discussed in the first edition of the WHO AQGs (WHO Regional Office for Europe, 1987). No guides for  $NO_2$  were produced as the evidence available at that time was judged to be insufficient.

### Table 4. Expected health effects of photochemical oxidants onvulnerable groups

Increased	Increased asthmatic	Pulmonary	Annoyance and eye
mortality	attacks	dysfunction	irritation
Not reported to date	250 μg/m <sup>3a</sup>	200 µg/m³	200 μg/m³
	1 hour	1 hour	1 hour

<sup>a</sup> Oxidant as measured by neutral buffered KI [potassium iodide] method and expressed as ozone. *Source*: WHO (1972). Reproduced with permission.

From the perspective of 2016 perhaps the most interesting section of Air quality criteria and guides for urban air pollutants is section 6 on the administrative use of air quality criteria and guides. The authors introduced a diagram, reproduced here as Fig. 1.

### Fig. 1. Schematic spectrum of biological response to pollutant exposure<sup>a</sup>



<sup>a</sup> Based on a diagram in United States Congress Document N° 92-241, 1972. *Source*: WHO (1972). Reproduced with permission.

This was the first time this now well known triangle or pyramid had been used in WHO discussions of the effects on health of air pollutants. The authors agreed that a line could be drawn between concentrations likely and those not likely to produce adverse effects on health; however, they pointed out that the use of safety factors was advisable when using the guides as a basis for standards because of uncertainties about dose-response relationships. This approach was followed in later reports when guidelines were recommended. The implication that standards should be set at lower concentrations than the guides suggested in the report was clear. In discussing the size of safety factors the authors listed several elements they thought should be considered:

- political considerations, with an emphasis on cost-benefit calculations (this might be seen as controversial today);
- the significance and reliability of the data suggesting effects on health;
- the source of the data (for example, from studies in animals or in humans); and

• the nature of the effect against which protection is sought (for example, mortality or some lesser effect).

A definition of standards, taken from an earlier WHO report, was also provided: "Standards of environmental quality are guides that have been adopted by governments and other competent authorities and therefore have legal force. In some contexts, however, standards may include recommendations that need not be rigidly enforced" (WHO, 1970).

The same section, discussing health protection and air pollution control costs, introduced a diagram, presumably constructed by the authors as no source was provided, reproduced here as Fig. 2. This represents a clear and helpful piece of advice to anybody setting standards.

### Fig. 2. Schematic representation of degree of health protection as a function of cost of air pollution control



Source: WHO (1972). Reproduced with permission.

The last section of the report was devoted to discussion of long-term goals. Members of the expert group argued that they had set criteria and guides for (some) urban air pollutants and that these could "be used by countries wishing to set air quality standards". It was accepted that these standards, especially when developed as short-term goals, might vary from country to country depending on "exposure conditions, the socioeconomic situation, and on the importance of other health problems". The expert group declined to provide such standards but pointed out that "severe effects are obviously to be avoided" and that "exposure to the air pollutants discussed in this report should be kept

as low as possible". A rather stronger line was taken with regard to long-term goals, and in this context the following table was produced, emphasizing that these recommendations were subject to change as more data within different populations became available (see Table 5).

It is also interesting to note that the proposed long-term guide for ozone (8-hour average of 60  $\mu$ g/m<sup>3</sup>) is lower than later WHO recommendations. Indeed, it is lower than both the 150–200  $\mu$ g/m<sup>3</sup> range proposed in the first edition of the WHO AQGs (WHO Regional Office for Europe, 1987) and the 100  $\mu$ g/m<sup>3</sup> proposed in the 2005 WHO AQGs global update (WHO Regional Office for Europe, 2006a).

### Table 5. Recommended long-term goals<sup>a</sup>

Pollutant	Measurement method	Limiting level
Sulfur oxides <sup>b</sup> – British Standard Procedure <sup>c</sup>	Annual mean 98% of observations <sup>d</sup> below	60 μg/m³ 200 μg/m³
Suspended particulates <sup>b</sup> – British Standard Procedure <sup>c</sup>	Annual mean 98% of observations <sup>d</sup> below	40 μg/m³ 120 μg/m³
Carbon monoxide – nondispersive infrared <sup>c</sup>	8-hour average 1-hour maximum	10 μg/m³ 40 μg/m³
Photochemical – oxidant as measured by neutral buffered KI method expressed as ozone	8-hour average 1-hour maximum	60 μg/m³ 120 μg/m³

<sup>a</sup> The Committee specifically urged that this table should not be considered independently of the accompanying text (see section 7.2 [of the original report]). [Note: the text that should accompany this table has been summarized by the authors in the current report.]

<sup>b</sup> Values for sulfur oxides and suspended particulates apply only in conjunction with one another.

<sup>c</sup> Methods are not those necessarily recommended but indicate those on which these units have been based. Where other methods are used an appropriate adjustment may be necessary.

 $^{\rm d}$  The permissible 2% of observations over this limit may not fall on consecutive days.

Source: WHO (1972). Reproduced with permission.



### Box 3. Highlights of *Air quality criteria and guides for urban air pollutants* (WHO, 1972)

- Although guidelines were not proposed in the report, the lowest ambient concentrations defined in terms of specific averaging times known to be associated with effects on health (i.e. guides) were provided for SO<sub>2</sub>, smoke, CO and photochemical oxidants.
- Hydrogen fluoride, radioactive materials, lead and other metals that had featured in earlier reports were excluded.
- The authors clearly stated that standards should be set at lower concentrations than the proposed guides; they suggested applying safety factors to account for uncertainties about dose-response relationships and other considerations left to regulatory authorities.
- The pyramid (or triangle) diagram of health effects due to exposure to air pollutants was used by WHO for the first time.
- The report concluded that WHO should publish critical reviews for each individual pollutant, which led to the inclusion of such reviews in the first edition of the WHO AQGs (WHO Regional Office for Europe, 1987).

### 2.5 Manual on urban air quality management (WHO Regional Publications, European Series, No. 1)

The Manual on urban air quality management (Suess & Craxford, 1976) remains a valuable contribution to the field. Two chapters are especially relevant to the current discussion: Chapter 4 on ambient air quality standards and their application and Chapter 6 on economic aspects of air pollution abatement. Air quality criteria and guides for urban air pollutants (see section 2.4) was reprinted as Chapter 3.

The advice on standard setting avoided too much focus on thresholds when considering responses at a population level. It proposed a trade-off between the costs and benefits of reducing levels of air pollutants, illustrated by a now well known graph reproduced here as Fig. 3.

### Fig. 3. Derivation of ambient air quality standards



Source: Suess & Craxford (1976). Reproduced with permission.

The dotted line in Fig. 3 was derived by adding the cost line to the risk line and applying weighting factors:  $\alpha_1$  for risk and  $\alpha_2$  for cost. The author pointed out that the lowest point on the dotted line could be moved from left to right by adjusting the values given to  $\alpha_1$  and  $\alpha_2$ . This point (where the standard could be set) was taken as the point of optimal balance between costs and reduction of risks. Decisions regarding the relative values of  $\alpha_1$  and  $\alpha_2$  should, it was suggested, be

greatly dependent on "political climate and public opinion" and would involve a weighing of economic development and protection of health. The approach suggested was clearly based on the perception that WHO should not be providing air quality standards, but should be providing the evidence upon which such standards might be set and, very importantly, providing advice on how standards should be set.

# 2.6 *Glossary on air pollution* and the Environmental health criteria series

The period from 1976 to 1984 (when the planning meeting for the 1987 edition of the WHO AQGs was held) saw the publication of a number of very significant reviews on the effects of air pollutants on health. The WHO Regional Office for Europe published a *Glossary on air pollution* (1980). An initiative between WHO and the United Nations Environment Programme led to the establishment of

the International Programme on Chemical Safety, and a series of documents entitled "Environmental health criteria" began to appear. These provided international, critical reviews of the effects of chemicals or combinations of chemicals and physical and biological agents on human health and the environment (WHO, 2016b). A number of these documents dealt with air pollutants.





Since the mid-1980s the WHO Regional Office for Europe has coordinated the development of a series of AQGs, widely used as reference tools to help policymakers across the world in setting standards and goals for air quality management. Although methodologies and requirements have evolved over time, the WHO AQGs remain, in essence, manuals that provide evidence-based recommendations with the goal of protecting populations worldwide from the adverse health effects of air pollutants. Ensuring the necessary funding to conduct such work has never been easy. The support of Member States that use the WHO AQGs as a basis for policy development to improve public health is

essential in order for this process to be continued.

Three editions of ambient AQGs have been published since 1987. These are intended to have a wide application in environmental decision-making, particularly in setting standards at a global level, despite the inclusion of the words "for Europe" on the cover of the first two editions.

Since 2006 WHO has worked on developing separate guidelines for indoor air quality and has published a series of three indoor-specific AQGs, providing health-based recommendations on selected air pollutants commonly found in indoor environments, biological agents (dampness and mould) and household fuel combustion.

### 3.1 Air quality guidelines for Europe

The first edition of Air quality guidelines for Europe was a complete, standalone manual on air pollution and health (WHO Regional Office for Europe, 1987). At that time the WHO regional Health for All strategy provided a stimulus and policy framework for this work, specifically through the target that "by 1995, all people of the Region should be effectively protected against recognized health risks from air pollution" (WHO Regional Office for Europe, 1985). Support for production of the guidelines and some of the funding was provided by the Netherlands, following the successful publication and uptake by end-users of the WHO guidelines for drinkingwater quality (WHO, 1984). A project coordinator was appointed and a total of 12 meetings were held between early 1984 and November 1986, attended by many of the most distinguished experts in the air pollution field at that time, to produce a 426-page comprehensive report, which provided recommendations

for 28 organic and inorganic chemical air pollutants.

A definition of an adverse health effect proposed by the United States Environmental Protection Agency (US EPA) was adopted: "any effect resulting in functional impairment and/or pathological lesions that may affect the performance of the whole organism or which contributes to a reduced ability to respond to an additional challenge" (US EPA, 1980). The AQGs were intended to provide a basis for "protecting public health from adverse effects of air pollutants and for eliminating, or reducing to a minimum, those contaminants of the air that are known or likely to be hazardous to human health and well-being" (WHO Regional Office for Europe, 1987). The authors clearly stated that "compliance with recommendations regarding guideline values does not guarantee the absolute exclusion of effects at levels below such values". They recognized the limitations

in protection provided by adherence to the guidelines in sensitive groups of the population (especially those impaired by concurrent disease or other physiological limitations) and the uncertainties related to "combined exposure to various chemicals or exposure to the same chemical by multiple routes".

A clear distinction was drawn between guidelines and standards:

It should be strongly emphasized that the guideline values are not to be regarded as standards in themselves. Before standards are adopted, the guideline values must be considered in the context of prevailing exposure levels and environmental, social, economic and cultural conditions. In certain circumstances there may be valid reasons to pursue policies which will result in pollutant concentrations above or below the guideline values.

In this regard, it was assumed that regulatory authorities would consider costs and other factors when using the AQGs as basis for setting standards, placing a heavy responsibility on regulators and exposing them to potential criticism if they proposed standards at higher concentrations than those recommended by the guidelines.

Different approaches were used to deal with carcinogenic and non-carcinogenic health end-points. In the case of genotoxic carcinogens, it was accepted that it was impossible to define a noeffect or threshold level of exposure and a risk assessment approach was adopted. A unit risk factor was calculated: this estimated the excess cancer risk likely to be imposed by lifetime exposure to the unit concentration (1 µg/m<sup>3</sup> was adopted for most of the compounds) of the chemical considered. The methodology used to derive guidelines for non-carcinogens involved the assumption that, in general, a threshold of effect could be identified. In these cases, an approach regarded as standard in toxicological practice was adopted. Either the lowest observed adverse effect level (generally preferred) or the no observed adverse effect level (in the case of irritant effects) was used

as a starting-point to derive a numerical guideline value, after applying a series of protection factors (also referred to in the guidelines as safety or uncertainty factors). A priori, no method for agreeing on suitable protection factors was found and a range of factors was used; these represented the expert judgement of the scientists involved in the work. Such arbitrary judgements were based on considerations of extent and quality of the available evidence, the question of sensitive groups, the need to allow for possible inter-species variations in sensitivity when animal studies were used as a basis for the guideline and the reversibility, or otherwise, of the effects considered. As an example, when deriving guidelines for SO, and particulate matter (PM) (considered in the guidelines as a combined exposure), a protection factor of 2 was used in relation to morbidity and mortality, and a protection factor of 1.5 in the case of reductions in indices of lung function.

The AQGs summarized recommended individual air pollutant guideline values for 19 pollutants for non-carcinogenic effects (excluding sensory effects and annoyance reactions), reproduced in Table 6.



Table	6. Guideline	values fo	or individual	substances	based o	n effects
other	than cancer	or odour	/annoyance	<del>)</del> a		

Substances	Time-weighted average	Averaging time	Chapter
Cadmium	1–5 ng/m³ 10–20 ng/m³	1 year (rural areas) 1 year (urban areas)	19
Carbon disulfide	100 µg/m³	24 hours	7
Carbon monoxide	100 mg/m <sup>зь</sup> 60 mg/m <sup>зь</sup> 30 mg/m <sup>зь</sup> 10 mg/m <sup>3</sup>	15 minutes 30 minutes 1 hour 8 hours	20
1.2-Dichloroethane	0.7 mg/m <sup>3</sup>	24 hours	8
Dichloromethane (Methylene chloride)	3 mg/m <sup>3</sup>	24 hours	9
Formaldehyde	100 μg/m³	30 minutes	10
Hydrogen sulfide	150 μg/m³	24 hours	22
Lead	0.5–1.0 μg/m <sup>3</sup>	1 year	23
Manganese	1 μg/m³	1 year <sup>c</sup>	24
Mercury	1 µg/m <sup>3d</sup> (indoor air)	1 year	25
Nitrogen dioxide	400 μg/m³ 150 μg/m³	1 hour 24 hour	27
Ozone	150–200 μg/m³ 100–120 μg/m³	1 hour 8 hours	28
Styrene	800 μg/m³	24 hours	12
Sulfur dioxide	500 μg/m³ 350 μg/m³	10 minutes 1 hour	30
Sulfuric acid	_e	-	30
Tetrachloroethylene	5 mg/m³	24 hours	13
Toluene	8 mg/m <sup>3</sup>	24 hours	14
Trichloroethylene	1 mg/m <sup>3</sup>	24 hours	15
Vanadium	1 μg/m³	24 hours	31

<sup>a</sup> The Information from this table should not be used without reference to the rationale given in the chapters indicated.

<sup>b</sup> Exposure at these concentrations should be for no longer than the indicated times and should not be repeated within 8 hours.

<sup>c</sup> Due to respiratory irritancy, it would be desirable to have a short-term guideline, but the present data base does not permit such estimations.

<sup>d</sup> The guideline value is given only for indoor pollution; no guidance is given on outdoor concentrations (via deposition and entry into the food-chain) that might be of indirect relevance.

<sup>e</sup> See Chapter 30.

Note: when air levels in the general environment are orders of magnitude lower than the guideline values, present exposures are unlikely to present a health concern. Guideline values in those cases are directed only to specific release episodes or specific indoor pollution problems.

Source: WHO Regional Office for Europe (1987). Reproduced with permission.

Table 7 presents the unit risks estimated for seven carcinogenic air pollutants. For cadmium, lead and ozone, ranges rather than single figures were recommended as guidelines. Further, in the case of ozone it was stated that some studies had suggested that no threshold of effect could be identified; this led to the guidelines being set close to concentrations at which "significant" effects had been demonstrated. The use of a range rather than a single value recommendation for ozone may reflect the fact that high natural background concentrations for this pollutant are found in some areas.

Substances	IARC Group classification	Unit risk <sup>♭</sup>	Site of tumour
Acrylonite	2A	2 × 10 <sup>-5</sup>	lung
Arsenic	1	4 × 10 <sup>-3</sup>	lung
Benzene	1	4 × 10 <sup>-6</sup>	blood (leukaemia)
Chromium (VI)	1	4 × 10 <sup>-2</sup>	lung
Nickel	2A	4 × 10 <sup>-4</sup>	lung
Polynuclear aromatic hydrocarbons (carcinogenic fraction) <sup>c</sup>	_	9 × 10 <sup>-2</sup>	lung
Vinyl chloride	1	1 × 10⁻ <sup>6</sup>	liver and other sites

### Table 7. Carcinogenic risk estimates based on human studies<sup>a</sup>

<sup>a</sup> Calculated with average relative risk model.

<sup>b</sup> Cancer risk estimates for lifetime exposure to a concentration of 1 µg/m<sup>3</sup>.

<sup>c</sup> Expressed as benzo[a]pyrene (based on benzo[a]pyrene concentration of 1 μg/m<sup>3</sup> in air as a component of benzene-soluble coke-oven emissions).

Source: WHO Regional Office for Europe (1987). Reproduced with permission.

Table 8 shows that SO<sub>2</sub> and PM were considered together in the guidelines – the latter expressed both in terms of black smoke as per reflectance assessment or total suspended/thoracic particles as per gravimetric assessment methods. The guideline values for this

combination of pollutants were based on studies in areas affected by coal smoke pollution (such as London). This was the first time that gravimetric assessment methods for particles were recommended in a WHO publication on air pollution. The guidelines provided for

Length of	Averaging	Sulfur dioxide	Reflectance	Gravimetric assessment	
exposure	ume	(μg/m )	black smoke <sup>b</sup> (µg/m <sup>3</sup> )	Total suspended particulates° (μg/m³)	Thoracic particles <sup>d</sup> (μg/m³)
Short term	24 hours	125	125	120°	70 <sup>e</sup>
Long term	1 year	50	50	-	-

### Table 8. Guideline values for combined exposure to sulfur dioxide and PM<sup>a</sup>

<sup>a</sup> No direct comparisons can be made between values for PM in the right- and left-hand sections of this table, since both the health indicators and the measurement methods differ. While numerically total suspended particulate/thoracic particle values are generally greater than those of black smoke, there is no consistent relationship between them, the ratio of one to the other varying widely from time to time and place to place, depending on the nature of the sources.

<sup>b</sup> Nominal µg/m<sup>3</sup> units, assessed by reflectance. Application of the black smoke value is recommended only in areas where coal smoke from domestic fires is the dominant component of the particulates. It does not necessarily apply where diesel smoke is an important contributor.

<sup>c</sup> Measurement by high-volume sampler, without any size selection.

<sup>d</sup> Equivalent values as for a sampler with International Organization for Standardization (ISO) thoracic particle characteristics (having 50% cut-off point at 10 µm): estimated from total suspended values using site-specific total suspended particulate/ISO thoracic particle ratios.

<sup>e</sup> Values to be regarded as tentative at this stage, being based on a single study (involving sulfur dioxide exposure also). Source: WHO Regional Office for Europe (1987). Reproduced with permission. thoracic particles (equivalent to PM with a diameter of 10 microns or less ( $PM_{10}$ )) were extrapolated from figures for total suspended particles and were not based on studies in which  $PM_{10}$  had been measured. The possible effects of longterm exposure to PM were beginning to be recognized since they had first been suggested by Lawther (1961) as likely to be important – perhaps more important than the effects of occasional exposure to very high concentrations.

The AQGs also recommended measures to prevent pollutant-associated risks,

such as conducting population exposurerelated surveys or monitoring (for example, of lead deposition in dust and soil or of radon-daughter concentrations in buildings), and underscored from the beginning the need for an integrated view of air quality management that included eco-toxicological aspects. This last point was reflected in the final section of the guidelines on effects of inorganic substances on vegetation, which described the effects of nitrogen, ozone and other photochemical oxidants and SO, on terrestrial vegetation.

### Box 4. Highlights of *Air quality guidelines for Europe* (WHO Regional Office for Europe, 1987)

- This was the first edition of the WHO AQGs, providing recommendations in the form of numerical values/ranges or unit risk factors for a total of 28 air pollutants.
- The authors recognized the limitations and uncertainties in health protection provided by adherence to the guidelines, especially in the case of sensitive groups and because of multiple routes of exposure and simultaneous exposure to various chemicals.
- It was strongly emphasized that the guideline values should not be regarded as standards in themselves. The latter would be left to the judgement of regulatory authorities, who would need to consider economic, social and cultural factors when using the guidelines as a basis for setting standards.
- Sulfur and black smoke were considered together in providing recommendations, and for the first time WHO recommended the use of gravimetric methods for assessment of particle concentration in this field.
- An eco-toxicological dimension was also considered; guideline values for a few pollutants, SO<sub>x</sub>, nitrogen oxides and ozone/photochemical oxidants, based on effects on terrestrial vegetation, were provided.

### **3.2** Acute effects on health of smog episodes (WHO Regional Publications, European Series, No. 43)

The WHO Regional Office for Europe published a report after a meeting held in late 1990 (WHO Regional Office for Europe, 1992); this may be regarded as ancillary to the development of the WHO AQGs. The main goals of the report were to produce advice on the likely short-term effects on health of acute and episodic exposures to both winter and summer smog and to advise on measures that could be taken to reduce such effects. This was the last of the WHO reports in this area that dealt with the effects of the combination of black smoke and  $SO_2$  and photochemical oxidants as "winter/ summer smog".

In the report participants in the expert group meeting, based on previous work conducted by the US EPA (Lippmann, 1988; 1989), sought to grade health effects observed at different concentrations of  $SO_2$ , PM and ozone according to the degree of severity of the outcomes, as reproduced in Table 9.

For ozone, the report also defined the proportion of the population likely to

be affected at different concentrations (reproduced in Table 10).

### Table 9. Gradation of acute lung function, symptomatic and other responses toair pollution exposure into different classes of adversity

Response	Gradation			
	Mild	Moderate	Severe/incapacitating	
Change in FVC or FEV <sup>a</sup> symptoms	5–10% Mild to moderate cough	10–20% Mild to moderate cough, pain on deep inspiration, shortness of breath	20–40%/>40% Repeated/severe cough, moderate to severe pain on deep inspiration and shortness of breath; breathing distress	
Limitation of activity	None	Few individuals choose to discontinue activity	Some/many individuals choose to discontinue activity	

<sup>a</sup> Note added in the current report: FVC = forced vital capacity; FEV = forced expiratory volume.

Source: WHO Regional Office for Europe (1992). Reproduced with permission.

# Table 10. Expected acute effects of photochemical smog on days characterizedby maximum 1-hour average ozone concentrations, as indicated forchildren and non-smoking young adults on the basis of observations madein toxicological, clinical and epidemiological studies

Ozone level (µg/m <sup>3</sup> )	Eye, nose and throat irritation	Average FEV, decrement in active people outdoors		Imposed avoidance of time and	Respiratory inflammatory and clearance	Respiratory symptoms (mainly in	Overall classification
		Whole population	Most sensitive 10% of population	activity outdoors	response, hyper-reactivity in active people outdoors	adults)	
<100	No effect	None	None	None	None	None	_
200	In few sensitive people	5%	10%	None	Mild	Some chest tightness, cough	Mild
300	< 30% of people	15%	30%	Some individuals	Moderate	Increased symptoms	Moderate
400	> 50% of people	25%	50%	Many individuals	Severe	Further increase of symptoms	Severe

*Note*: In large cities, scavenging of ozone may lead to relatively low concentrations of ozone. Under such circumstances, other indicators of summer-type smog may be more useful.

Source: WHO Regional Office for Europe (1992). Reproduced with permission.

Concerning measures to protect the general public, the advice focused on reducing exposure by limiting physical activity outdoors during smog episodes. Short-term abatement measures, such as traffic bans or temporary reductions in industrial emissions, were not thought likely to be very effective. The report stated that traffic bans would lead to extreme overloading of the public transport system, and that outdoor population exposure to pollutants was likely to increase as people waited for buses or trains, walked to stations and bus stops, or walked or bicycled to work. Instead, it recommended providing advance warnings of smog episodes. It suggested that the "physically active general population" should be especially targeted during periods when summer smog episodes were likely to occur (as these are associated with warm, sunny weather encouraging the population to spend more time outdoors). Those with cardiorespiratory disease should be targeted predominantly during periods when episodes of winter smog were likely to occur, based on knowledge from the London smog episodes in 1952 (see Barker et al. (1961), outlined in section 2.3 above). The report further concluded that long-term measures to reduce baseline levels of pollution represented the most sensible and effective preventive measure.

# 3.3 Air quality guidelines for Europe, second edition

Early in the 1990s it was already recognized that evidence of the effects of air pollutants on health was accumulating rapidly, and that the 1987 AQGs were in need of revision (Brunekreef, Dockery & Krzyzanowski, 1995). A second edition of the WHO AQGs was published in 2000 (WHO Regional Office for Europe, 2000), as a result of close cooperation with the International Programme on Chemical Safety. Funding was provided by the European Commission, the Netherlands and Sweden. Work began in 1993, and more than 100 experts participated in a total of 10 meetings that were summarized in a series of WHO reports. These advance drafts were used in the years previous to the publication of the second edition to support the development of the European Union's legally binding limit values in the framework of the air quality directives. As a result of this work, detailed guidelines covering 35 air pollutants were produced, including reviews of evidence for essentially the same pollutants discussed in the first edition of the WHO AQGs (WHO Regional Office for Europe, 1987), with a few additional ones (butadiene, polychlorinated biphenyls, dibenzodioxins and dibenzofurans, fluoride and platinum). With some exceptions where evaluations from the previous WHO AQGs were retained (including for acrylonitrile, carbon 1,2-dichloroethane, disulfide, vinyl chloride, asbestos, hydrogen sulfide and vanadium), updated reviews of evidence were prepared and used as a basis for recommending guideline values. The final hard-copy report provided only summaries of the available evidence, but the lengthy reviews were made available

electronically as an interactive CD-ROM and, later, on the WHO website.

For the first time, recommendations for PM were provided separately from those for SO<sub>2</sub>. It was also recognized that the rapidly expanding database of time-series studies should be used for guideline development and, importantly, that these studies did not suggest clear thresholds of effect. The results pointed to a near linear relationship between the logarithm of pollutant concentrations (24hour average concentrations of ozone and PM monitored as  $PM_{10}$  or PM with a diameter of 2.5 microns or less (PM<sub>2.5</sub>)) and percentage changes in indices of effects on health, including daily mortality and admissions to hospital. Similar results were appearing with regard to SO<sub>2</sub> and NO<sub>2</sub>; there was concern that NO, was acting as an index or surrogate for an urban mixture of air pollutants, and effects on health of low concentrations of NO<sub>2</sub> per se were questioned.

While conventional numerical guideline values were recommended for NO<sub>2</sub> and SO<sub>2</sub>, a new approach was taken for PM<sub>25</sub> and PM<sub>10</sub>, for both long- and short-term exposure. PM guidelines were provided as the slopes (in the form of relative risks) of the estimated concentration-response functions (CRFs) developed for several outcomes (reproduced in Tables 11 and 12). This allowed regulatory authorities to develop their own policies (by explicitly selecting a level of acceptable exposure and associated health risk) and to set standards by taking into account their local circumstances as regards ambient concentrations and socioeconomic factors.

# Table 11. Summary of relative risk estimates for various end-points associated with a 10 $\mu$ g/m<sup>3</sup> increase in the concentration of PM<sub>10</sub> or PM<sub>2.5</sub>

End-point	<b>Relative risk for PM</b> <sub>2.5</sub> (95% confidence interval)	Relative risk for PM <sub>10</sub> (95% confidence interval)
Bronchodilatator use	-	1.0305 (1.0201–1.0410)
Cough	-	1.0356 (1.0197–1.0518)
Lower respiratory symptoms	-	1.0324 (1.0185–1.0464)
Change in peak expiratory flow (relative to mean)	-	-0.13% (-0.17% to -0.09%)
Respiratory hospital admissions	-	1.0080 (1.0048–1.0112)
Mortality	1.015 (1.011–1.019)	1.0074 (1.0062–1.0086)

*Note*: The authors of the current report note that the table lacks specification that the numbers provided relate to short-term exposure.

Source: WHO Regional Office for Europe (2000). Reproduced with permission.

### Table 12. Summary of relative risk estimates for effects of longterm exposure to particulate matter on the morbidity and mortality associated with a 10 $\mu$ g/m<sup>3</sup> increase in the concentration of PM<sub>2.5</sub> or PM<sub>10</sub>

End-point	<b>Relative risk for PM</b> <sub>2.5</sub> (95% confidence interval)	Relative risk for PM <sub>10</sub> (95% confidence interval)
Death	1.14 (1.04–1.24)	1.10 (1.03–1.18)
Death	1.07 (1.04–1.11)	-
Bronchitis	1.34 (0.94–1.99)	1.29 (0.96–1.83)
Percentage change in FEV1, children <sup>a</sup>	-1.9% (-3.1% to -0.6%)	-1.2% (-2.3% to -0.1%)
Percentage change in FEV1, adults	-	-1.0% (not available)

<sup>a</sup> [FEV in 1 second;] for PM<sub>2.1</sub> rather than PM<sub>2.5</sub>

Source: WHO Regional Office for Europe (2000). Reproduced with permission.

This thinking did not represent a completely novel proposition; it had already been brought forward by WHO in 1972 (in Air quality criteria and guides for urban air pollutants, discussed in section 2.4). The same approach was developed for ozone, although for this pollutant an 8-hour average concentration of 120 µg/m<sup>3</sup> was further recommended as a conventionally framed guideline. At this concentration it was agreed that "acute effects on public health are likely to be small", and a cautionary note was attached to this guideline, stating: "For those public health authorities that cannot accept such levels of health risk, an alternative is to select explicitly some other level of acceptable exposure and associated risk." In spite of general agreement among the experts about a lack of indication of any threshold below which adverse effects of PM or ozone would not be anticipated, not all participants in the development of the guidelines regarded this approach as a step forward. Indeed, some experts argued that in the absence of a conventional guideline, regulatory authorities would be unlikely to develop and implement vigorous policies designed to reduce ambient concentrations of air pollutants.

Finally, another notable change from the 1987 publication was the inclusion of a chapter on the use of the guidelines in protecting public health. This was based on a report from a WHO working group on guidance for setting air quality standards, which had met in Barcelona in 1997 (WHO Regional Office for Europe, 1998). The working group included senior officials from regulatory authorities. The report reflected their expertise and experience of policy-making by explaining that air quality standards should be defined in terms of:

 how and where air pollutants should be monitored for comparison with standards;

- how the measurements should be handled in a statistical sense;
- the date by which the standard should be met; and
- the acceptable level of exceedance of the standard – for example, in terms of percentage of days per year that should be allowed or, rather, not be regarded as a failure to meet the standard.

Other issues such as the need for involvement of stakeholders in standard development, the raising of public awareness and the need for cost–benefit analysis were also raised.

### Box 5. Highlights of *Air quality guidelines for Europe, second edition* (WHO Regional Office for Europe, 2000)

- The second edition of the WHO AQGs provided recommendations in the form of numerical values/ranges and unit risk factors or CRFs for the pollutants included in the previous edition, in addition to butadiene, polychlorinated biphenyls, dibenzodioxins and dibenzofurans, fluoride and platinum. A separate section for indoor air pollutants (environmental tobacco smoke, man-made vitreous fibres and radon) was also provided.
- No new evaluations were conducted for acrylonitrile, carbon disulfide, 1,2-dichloroethane, vinyl chloride, asbestos, hydrogen sulfide and vanadium, for which the recommendations from the 1987 AQGs were retained.
- For the first time guidelines were provided separately for SO, and PM.
- CRFs for PM and for ozone were developed pollutant concentrations associated with specific levels of health response among defined population subgroups. A numerical guideline was proposed for ozone, while for PM only estimated relative risks for different outcomes from the CRFs were provided.
- A chapter on the use of the guidelines in protecting public health was introduced in this edition, discussing several air quality management issues to be considered when guidelines are to be used for the development of legally enforceable standards.

### 3.4 Air quality guidelines: global update 2005

Air quality guidelines: global update 2005, published in 2006, was a substantially different report from the 1987 and 2000 AQGs, as it focused on just four classical air pollutants: PM, ozone,  $NO_2$  and  $SO_2$ . These were selected on the basis of the conclusions of a WHO project called "Systematic review of health aspects of air pollution in Europe" (WHO

Regional Office for Europe, 2004). WHO explicitly recognized that the fact that other pollutants – such as CO – were not included in the update reflected the limited resources available for the project.

The first part of this 484-page manual provided outstanding detailed reviews in nine chapters, written by recognized experts in the field, on air pollutants

concentrations and global sources, trends, human exposure, health effects of susceptibility, environmental equity, health impact assessment, application of the guidelines in policy formulation and indoor air quality. The second part comprehensive consisted of health risk assessments of the four selected pollutants. The detail provided reflects the rapid expansion of research on these pollutants that occurred in the period 1995-2005.

As already stressed, a stern demand for guidelines framed in the conventional form was recognized and, in addition to concentration–effect relationships, numerical guideline values were now provided for PM, for both annual and 24hour mean concentrations (reproduced in Tables 13 and 14).

Remarkably, the guideline values for NO<sub>2</sub>  $(40 \ \mu g/m^3$  for annual mean and  $200 \ \mu g/m^3$  for 1-hour mean concentrations) remained at the same levels as those set in the second edition of the WHO AQGs (WHO

Regional Office for Europe, 2000), despite many time-series studies that linked 24hour average concentrations with effects on health. This decision reflected the residual concerns at that time that NO<sub>2</sub> per se might not have effects on health at ambient concentrations, and that it might be acting as a surrogate for other, not routinely measured, components of combustion-related pollution mixture.

Further, a new approach was introduced in this edition of the guidelines, as interim targets were proposed for levels of three of the air pollutants: PM, ozone and  $SO_2$ . These are pollutant concentrations associated with a specified decrease of mortality risk proposed as "incremental steps in progressive reduction of air pollution, and are intended for use in areas where pollution is high". Interim targets were set on an arbitrary basis – other levels of effect might have been chosen – and they reflect the essence of benefit assessment based on linear concentration–response associations.

Annual mean level	PM <sub>10</sub> (μg/m³)	ΡΜ <sub>2.5</sub> (µg/m³)	Basis for the selected level
WHO interim target 1	70	35	These levels are estimated to be associated with about 15% higher long-term mortality than at AQG levels.
WHO interim target 2	50	25	In addition to other health benefits, these levels lower risk of premature mortality by approximately 6% (2–11%) compared to interim target 1.
WHO interim target 3	30	15	In addition to other health benefits, these levels lower risk of premature mortality by approximately another 6% (2–11%) compared to interim target 2 levels.
WHO AQGs	20	10	These are the lowest levels at which total, cardiopulmonary and lung cancer mortality have been shown to increase with more than 95% confidence in response to $PM_{2.5}$ in the ACS study (323). <sup>a</sup> The use of the $PM_{2.5}$ guideline is preferred.

### Table 13. AQGs and interim targets for PM: annual mean

<sup>a</sup> The authors of the current report note that reference 323 mentioned in the table is a misprint, as this should be reference 295 in the original guideline document: Pope CA et al. Lung cancer, cardiopulmonary mortality, and long-term exposure to fine particulate air pollution. JAMA, 2002, 287:1132–1141. *Source*: WHO Regional Office for Europe (2006a). Reproduced with permission.

24-hour mean level <sup>a</sup>	ΡΜ <sub>10</sub> (μg/m³)	PM <sub>2.5</sub> (µg/m³)	Basis for the selected level
WHO interim target 1	150	75	Based on published risk coefficients from multicentre studies and meta-analyses (about 5% increase in short-term mortality over AQG)
WHO interim target 2	100	50	Based on published risk coefficients from multicentre studies and meta-analyses (about 2.5% increase in short-term mortality over AQG)
WHO interim target 3 <sup>b</sup>	75	37.5	About 1.2% increase in short-term mortality over AQG
WHO AQGs	50	25	Based on relation between 24-hour and annual PM levels

### Table 14. AQGs and interim targets for PM: 24-hour mean

<sup>a</sup> 99th percentile (3 days per year).

<sup>b</sup> For management purposes, based on annual average guideline values, the precise number to be determined on the basis of local frequency distribution of daily means.

Source: WHO Regional Office for Europe (2006a). Reproduced with permission.

As emphasized in the first edition of the WHO AQGs (WHO Regional Office for Europe, 1987), the text accompanying the numbers in the tables is an integral part of the recommendations, so the guideline values and interim targets must be interpreted alongside the text explaining the reasoning behind the numbers and indicating, sometimes simplifying, assumptions and caveats. As an example, the guidelines for annual mean concentrations of PM<sub>10</sub> were derived from the results of epidemiological studies on PM<sub>25</sub> effects using a simple conversion formula:  $PM_{10} = 2 \times PM_{2.5}$ . Observations quoted in the supporting text, however, indicate that PM<sub>25</sub> makes up, in various locations and at certain times, 40-90% of PM<sub>10</sub>.

As well as the full text with the evidence assessment, WHO published an executive summary of the guidelines in all official languages (WHO, 2016c). This contained a short introduction on the role of the guidelines in protecting public health, as well as the rationale on which the guidelines for each of the four air pollutants were based.

Chapter 9 of the guidelines focused on indoor air pollution, addressing the conditions prevalent in developing countries as result indoor а of combustion of solid fuels, and making some preliminary recommendations for WHO work to be conducted in this area, including a framework for the future

development of WHO indoor AQGs. The topic of environmental equity was also addressed (Chapter 6): the unequal distribution of environmental exposure to air pollutants and associated health risks was recognized, and policy implications as well as future research needs discussed.

Although national standards set as a result of the AQGs update vary considerably from country to country, none were set at lower levels than the recommended WHO guidelines. Setting standards below WHO AQGs would be likely to raise complaints from industry about what might be seen as an overcautious approach, considering the common perception that WHO guidelines represent "safe" (or at least safe enough) levels of exposure, and that straining for lower levels simply penalizes industry without benefiting health. Such criticism might be avoided by framing guidelines as concentrationeffect relationships, suggesting that every additional reduction in ambient concentrations would be linked with benefits to health.

Finally, the importance of risk communication in relation to air pollution was clearly stated at the end of Chapter 8. Communication of health risks associated with air pollution should be addressed not only to policy-makers but to a wider audience. Public opinion and perception of risk among the general public is viewed as an important factor
in influencing decisions, in that "the political capability of decision-makers is directly proportional to the interests and concerns of their constituents". The use of air quality indexes and other tools to inform people about air quality and health was briefly discussed in this section.

Evidence of the effects of air pollutants on health has continued to grow in the years following the publication of the 2005 WHO AQGs global update. The report of an expert review led by the WHO Regional Office for Europe, published in 2013, supported the update's scientific conclusions that adverse health effects occur at air pollutant levels lower than those used to establish the guidelines (WHO Regional Office for Europe, 2013a). Considering the significant expansion of the evidence on air pollution health effects, including their better quantification and detection, the project recommended that WHO should initiate the process of developing new revisions to its ambient AQGs.

# Box 6. Highlights of *Air quality guidelines: global update 2005* (WHO Regional Office for Europe, 2006a)

- This was the last WHO publication to date that provided numerical ambient AQGs for PM, ozone, NO<sub>2</sub> and SO<sub>2</sub>.
- The same guideline values were retained from the second edition of the WHO AQGs (WHO Regional Office for Europe, 2000) for NO<sub>2</sub>, and concentration–response estimates (relative risks) were presented for PM in addition to the guideline values.
- For the first time interim targets were proposed for PM, ozone and SO<sub>2</sub>. These were pollutant concentrations associated with a specified increase of mortality risk over that expected at the guidelines level, intended to guide Member States especially those with high levels of air pollution in moving towards lower levels of population exposure to ambient air pollution.
- A chapter was devoted to indoor air quality and proposed a framework for the future development of WHO indoor AQGs. The topic of environmental equity was also discussed for the first time, documenting the unequal distribution of health risks due to air pollution within and among nations, and its possible underlying causes.
- The importance of risk communication to a wide range of stakeholders, including the general public, was also addressed and viewed as a necessary component in air quality management.

# 3.5 WHO guidelines for indoor air quality

One of the results of the expert discussions held during the preparation of the 2005 WHO AQGs global update (WHO Regional Office for Europe, 2006a) was the recommendation that WHO should initiate the process of developing WHO guidelines focusing on indoor air quality. Populations spend a substantial proportion of their time in indoor environments, and problems of indoor air pollution were increasingly recognized as important risk factors for human health, requiring different management approaches from those used for outdoor air pollution.

Following the initial plan established in a working group meeting held in Bonn, Germany, in 2006 (WHO Regional Office for Europe, 2006b), WHO developed indoor AQGs on selected chemical and biological contaminants of indoor air, as well as on household fuel combustion (WHO Regional Office for Europe, 2009; 2010; WHO, 2014b).

## 3.5.1 Dampness and mould

The first volume of *WHO guidelines for indoor air quality* focused on dampness and mould and was published in 2009, as a result of collaboration between the WHO Regional Office for Europe and WHO headquarters (WHO Regional Office for Europe, 2009). Funding was provided by the governments of Germany and the United Kingdom.

These guidelines addressed and reviewed the scientific evidence on health effects resulting from dampness, associate microbial growth and contamination of indoor spaces, considering both private and public spaces. Quantitative guidelines for specific biological agents could not be developed due to the complex nature of the exposure and associated uncertainties, however. Instead, a set of recommendations was provided addressing a number of defined indicators of health risk in indoor environments, such as persistent dampness and presence of mould in buildings – often as a result of insufficient moisture control and ventilation. This decision was based on the evidence showing that excess moisture on almost all indoor materials leads to growth of microbes - such as mould, fungi and bacteria - which subsequently emit spores, cells, fragments and volatile organic compounds into indoor air. Moreover, dampness initiates chemical or biological degradation of materials, which also pollutes indoor air. Dampness has been found to be a strong, consistent indicator of risk of asthma and respiratory symptoms (such as cough and wheeze) in epidemiological studies.

The objective of the guidelines was to raise general awareness and provide a tool for public health authorities on how to identify and reduce the health hazards associated with indoor exposure to biological agents. While they provided recommendations for indoor air quality management, focusing on prevention of persistent dampness and microbial growth on interior surfaces and building structures to minimize the occurrence of associated adverse health effects, they did not give instructions for achieving those objectives. The determination of specific methods to enforce these recommendations was left to the judgement of the competent authorities, allowing for considerations of technical feasibility, level of development, resources available or human capacities, among other factors.

## **3.5.2 Selected pollutants**

The second volume of *WHO guidelines for indoor air quality*, on selected pollutants, was published in 2010 and supported by donations from the governments of Canada, France and the Netherlands (WHO Regional Office for Europe, 2010).

Guidelines were provided for nine indoor air pollutants: benzene, CO, NO<sub>2</sub>, formaldehyde, naphthalene. polycyclic aromatic hydrocarbons, radon, trichloroethylene and tetrachloroethylene. The pollutants were selected by the working group of experts who met in 2006 to plan the development of the guidelines (WHO Regional Office for Europe, 2006b). They considered the presence of the pollutants in indoor environments in concentrations of concern for health, as well as the availability of toxicological, epidemiological and clinical data. Regarding indoor exposure to PM, which can be higher than outdoor exposure in the presence of an indoor source of PM, readers were referred to the guideline values on PM from the 2005 WHO AQGs global update (WHO Regional Office for Europe, 2006a), which relate to all environments. A synthesis of the guidelines provided for the nine selected indoor air pollutants is reproduced in Table 15.

The development of these guidelines adopted a similar approach to that used for the previous AQGs for individual air pollutants. A unit risk approach was taken for carcinogenic compounds, as in the 1987 and 2000 AQGs. Note that the recommended guideline values for NO2 remained identical to those recommended in the 2005 WHO AQGs global update (WHO Regional Office for Europe, 2006a), and it was stated that epidemiological studies provided no evidence of a threshold of effect.

Pollutant	Critical outcome(s) for guideline definition	Guidelines	Comments
Benzene	<ul> <li>Acute myeloid leukaemia (sufficient evidence on causality)</li> <li>Genotoxicity</li> </ul>	<ul> <li>No safe level of exposure can be recommended</li> <li>Unit risk of leukaemia per 1 µg/m<sup>3</sup> air concentration is 6 × 10–6</li> <li>The concentrations of airborne benzene associated with an excess lifetime risk of 1/10 000, 1/100 000 and 1/1 000 000 are 17, 1.7 and 0.17 µg/m<sup>3</sup>, respectively</li> </ul>	-
Carbon monoxide	Acute exposure-related reduction of exercise tolerance and increase in symptoms of ischaemic heart disease (e.g. ST-segment changes)	<ul> <li>15 minutes - 100 mg/m<sup>3</sup></li> <li>1 hour - 35 mg/m<sup>3</sup></li> <li>8 hours - 10 mg/m<sup>3</sup></li> <li>24 hours - 7 mg/m<sup>3</sup></li> </ul>	-
Formaldehyde	Sensory irritation	0.1 mg/m <sup>3</sup> – 30-minute average	The guideline (valid for any 30-minute period) will also prevent effects on lung function as well as nasopharyngeal cancer and myeloid leukaemia
Naphthalene	Respiratory tract lesions leading to inflammation and malignancy in animal studies	00.01 mg/m³ – annual average	The long-term guideline is also assumed to prevent potential malignant effects in the airways
Nitrogen dioxide	Respiratory symptoms, bronchoconstriction, increased bronchial reactivity, airway inflammation and decreases in immune defence, leading to increased susceptibility to respiratory infection	• 200 μg/m³ – 1-hour average • 40 μg/m³ – annual average	No evidence for exposure threshold from epidemiological studies
Polycyclic aromatic hydrocarbons	Lung cancer	<ul> <li>No threshold can be determined and all indoor exposures are considered relevant to health</li> <li>Unit risk for lung cancer for polycyclic aromatic hydrocarbon mixtures is estimated to be 8.7 × 10<sup>-5</sup> per ng/m<sup>3</sup> of Benzo[a]pyrene (BaP)</li> <li>The corresponding concentrations for lifetime exposure to BaP producing excess lifetime cancer risks of 1/10 000, 1/100 000 and 1/1 000 000 are approximately 1.2, 0.12 and 0.012 ng/m<sup>3</sup>, respectively</li> </ul>	BaP is taken as a marker of the polycyclic aromatic hydrocarbon mixture
Radon	Lung cancer Suggestive evidence of an association with other cancers, in particular leukaemia and cancers of the extrathoracic airways	<ul> <li>The excess lifetime risk of death from radon- induced lung cancer (by the age of 75 years) is estimated to be 0.6 × 10<sup>-5</sup> per Bq/m<sup>3</sup> for lifelong non-smokers and 15 × 10<sup>-5</sup> per Bq/m<sup>3</sup> for current smokers (15-24 cigarettes per day); among ex-smokers, the risk is intermediate, depending on time since smoking cessation</li> <li>The radon concentrations associated with an excess lifetime risk of 1/100 and 1/1000 are 67 and 6.7 Bq/m<sup>3</sup> for current smokers and 1670 and 167 Bq/m<sup>3</sup> for lifelong non-smokers, respectively</li> </ul>	WHO guidelines provide a comprehensive approach to the management of health risk related to radon
Trichloroethylene	Carcinogenicity (liver, kidney, bile duct and non-Hodgkin's lymphoma), with the assumption of genotoxicity	<ul> <li>Unit risk estimate of 4.3 × 10<sup>-7</sup> per μg/m<sup>3</sup></li> <li>The concentrations of airborne trichloroethylene associated with an excess lifetime cancer risk of 1:10 000, 1:100 000 and 1:1 000 000 are 230, 23 and 2.3 μg/m<sup>3</sup>, respectively</li> </ul>	-
Tetrachloroethylene	Effects in the kidney indicative of early renal disease and impaired performance	0.25 mg/m <sup>3</sup> – annual average	Carcinogenicity is not used as an end-point as there are no indications that tetrachloroethylene is genotoxic and there is uncertainty about the epidemiological evidence and the relevance to humans of the animal carcinogenicity data

# Table 15. Summary of indoor AQGs for selected pollutants

Finally, the guidelines addressed measures to reduce the concentrations of air pollutants both outdoors and indoors. The main measure is controlling the primary factor that determines their presence in the air: the source(s) of emission. In indoor environments, in addition, secondary factors (dispersion and dilution) can also be controlled to some extent by, for example, ensuring adequately ventilated spaces or through the use of low-emission materials in buildings and appropriate devices and fuels for indoor combustion. This last point was addressed in detail in the third volume of WHO guidelines for indoor air quality.

# 3.5.3 Household fuel combustion

The WHO guidelines for indoor air quality on household fuel combustion were published in 2014, building on the 2005 WHO AQGs global update for PM and carbon monoxide (WHO, 2014b). The project was coordinated by WHO headquarters, and financial support for its completion was obtained from Canada, Germany, the Indian Council for Medical Research, the United Kingdom and the United Nations Foundation Global Alliance for Clean Cookstoves.

The evidence on health effects of indoor air pollution due to combustion of household fuels was reviewed, but the recommendations focused on the reduction of emission rates by targeting the determinants of contamination of indoor spaces, such as the use of certain fuels (coal and kerosene) and types of stoves. This approach was intended to facilitate interventions to improve indoor air quality and reduce health risks due to contamination of indoor spaces by combustion of household fuels, and to reduce safety problems associated with their use (such as burns, poisoning or house fires). The guidelines emphasized that local ambient air quality conditions had to be considered in achieving the proposed indoor AQGs, considering the infiltration of outdoor air into indoor environments.

These were the first AQGs developed following the procedures outlined in the first edition of the WHO handbook for guideline development, published in 2012. This provides guidance on the steps needed to ensure that WHO guidelines are of high methodological quality and are developed through a transparent, evidence-based decisionmaking process, to guarantee that the final guidelines are free from biases and meet public health needs (WHO, 2012). This handbook, for which a second edition was published in 2014 (WHO, 2014c), provides detailed instructions for guideline developers on the following topics:

- application of high-quality methodology for guideline development using systematic search strategies, synthesis and quality assessment of the best available evidence to support the recommendations;
- appropriate collection and management of experts' declared conflict of interest;
- expert group composition, including content experts, methodologists, target users and policy-makers, with gender and geographical balance;
- instructions for the management of group process to achieve consensus among experts;
- standards for a transparent decisionmaking process, taking into consideration potential harms and benefits, and end-user values and preferences;
- developing plans for implementing and adapting guidelines; and
- minimum standards for reporting.



# Update of the WHO global AQGs

Between 2011 and 2013 the WHO Regional Office for Europe coordinated two international projects co-funded by the European Union: Review of evidence on health aspects of air pollution (REVIHAAP) and Health risks of air pollution in Europe (HRAPIE) (WHO Regional Office for Europe, 2013a; 2013b). REVIHAAP provided the European Commission and its stakeholders with evidence-based advice on the latest scientific aspects of air pollution and health in the form of answers (supported by extensive rationale) to a series of policy-relevant questions. This project was grounded on a review conducted by a group of experts of all air pollutants regulated in European directives 2008/50/ EC and 2004/107/EC. The output of the second project, HRAPIE, was a technical report recommending CRFs for costbenefit analysis for several mortality and morbidity effects associated with shortand long-term exposure to PM, ozone and NO<sub>2</sub>.

Results from these two projects aimed to support the comprehensive review of European Union air quality policy in 2013. One of the specific expert recommendations from the REVIHAAP project, however, was that WHO should begin the process of revising the current AQGs for ambient air pollutants. This recommendation was based, inter alia, on the availability of a large amount of scientific information that had emerged since the last ambient AQGs were published in 2006, including findings revealing associations between ambient air pollutants and adverse health effects at concentrations lower than previously identified.

As a result, and in preparation for an update of the AQGs, a global consultation meeting was organized by the WHO Regional Office for Europe in 2015 to obtain expert advice on air pollutants and other issues relevant to be considered in the future guidelines. Experts discussed the latest available scientific evidence on the health effects of 32 ambient air pollutants for which WHO had developed AQGs in the past, as well as the occurrence and trends of these pollutants in ambient air. The topic of air quality interventions to reduce ambient air pollution and improve public health was also discussed as part of this consultation (WHO Regional Office for Europe, 2016). The conclusions of the expert consultation contributed to the scoping of the content of the next update of the WHO global AQGs.

The update of the WHO global AQGs thus initiated is so far receiving funding and in-kind support from the European Commission (Directorate-General for Environment) and the governments of Germany, Switzerland and the United States of America. It is expected that the next AQGs will provide updated numerical concentration limits and, where possible, an indication of the shape of the CRFs for PM<sub>10</sub>, PM<sub>2.5</sub>, ozone, NO<sub>2</sub>, SO<sub>2</sub> and CO, for short- and/or long-term exposure. Further, a statement on the relationship between exposure to mineral dust of natural origin and health outcomes will also be developed, based on a review of the latest evidence.

The process of updating the WHO global AQGs will follow the requirements described in the second edition of the WHO handbook for guideline development (WHO, 2014c). It will face the challenge of ensuring a comprehensive systematic review of the enormous amount of new scientific evidence related to the topic of the guidelines. It will also need to use Grading of recommendations

assessment, development and evaluation (GRADE), which is the methodological framework adopted by WHO to assess the quality of the body of evidence for guideline development (GRADE Working Group, 2016). This framework was initially developed in the context of clinical guidelines and interventions; it will therefore need to be adapted to the area of environmental health. This is a current topic of discussion and a work in progress by many experts in the field (Morgan et al., 2016).

The process will benefit from new performed available studies in various environmental. social and health conditions, and will face the challenge of integrating results from different geographical locations with heterogeneous levels and sources of air pollutants, in order to provide recommendations of global application.

The updated AQGs will also address, in general terms, air quality management

and the importance of reducing emissions of harmful air pollutants, which is the most effective way to improve air quality and protect populations from the adverse health effects of air pollution. As their effectiveness is highly context dependent, however, no recommendations for specific air quality interventions will be developed in the updated guidelines.

Future issues of the AQGs may consider developing evidence-based recommendations on the effectiveness available personal interventions of to decrease individual exposure to ambient air pollutants and associated health effects, like the use of protective equipment (face masks, air filters and similar) or following certain behavioural recommendations in daily activities, such as reducing outdoor exercise during peaks of air pollution. Nevertheless, inclusion of these recommendations in the next update of the AQG will depend on the availability of additional resources.



# **5** Final remarks

WHO's work on air pollution and health, and in particular the various AQGs for ambient and indoor air pollutants, have made a most important contribution to the synthesis of the latest knowledge on the health effects of air pollutants. They have provided expert and detailed guidance to regulatory authorities since the publication of the first edition of the WHO AQGs (WHO Regional Office for Europe, 1987). It has repeatedly been stressed that the guidelines are not intended to be taken as recommendations for air quality standards per se, but rather as a rigorous scientific tool that can be used by regulatory authorities as a basis for setting standards, taking into account local sociopolitical and economic conditions and prevailing ambient concentrations of air pollutants. Cost-benefit analysis of various pollution reduction options is an increasingly common tool supporting development of air quality policies. The evaluation of evidence provided by the WHO guideline process, and not only the numerical guidelines, is an essential input to such analysis.

Achievement of clean outdoor and indoor air is recognized as a basic right, and WHO activities in the air pollution field for the past 60 years have contributed substantially in moving towards this goal. That such work should be continued is beyond doubt, especially considering recent data ranking air pollution among the top risks for mortality and lost years of healthy life globally, which affects everyone in developed and developing countries, in both urban and rural areas. This was recognized in the roadmap for an enhanced global response to the adverse health effects of air pollution, presented by WHO at the Sixty-ninth World Health Assembly (WHO, 2016d), in which further development of the AQGs is included as an element of "expanding the knowledge base" - one of the cornerstones of the global action.



**Disclaimer**: the views presented here reflect those of the authors and should not be taken as reflecting the views of WHO.



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#### The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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# 12. Appendix 2

2010	2022 without	2022 with	% reduction for 'without
2019	development	development	development' option
1000	983	985	1.70%
1016	995	995	2.07%
956	937	937	1.99%
1016	995	995	2.07%
1004	984	986	1.99%
743	728	728	2.02%
671	659	659	1.79%
753	722	723	4.12%
890	872	918	2.02%
875	858	858	1.94%
890	872	918	2.02%
745	715	716	4.03%
1157	1134	1134	1.99%
283	271	271	4.24%
286	282	275	1.40%
2	2	2	0.00%
26	26	25	0.00%
41	41	44	0.00%
188	187	187	0.53%
54	48	52	11.11%
78	78	79	0.00%
10	10	10	0.00%
138	136	136	1.45%
637	623	669	2.20%
33	32	32	3.03%
22	23	23	-4.55%
73	72	72	1.37%
129	127	126	1.55%
0	0	0	
0	0	0	
99	98	98	1.01%
101	99	96	1.98%
753	734	734	2.52%
0	0	0	
3244	3178	3178	2.03%
2164	2120	2120	2.03%
3407	3337	3337	2.05%
607	594	594	2.14%
444	435	435	2.03%
446	437	437	2.02%
846	829	829	2.01%
5716	5599	5599	2.05%
6115	5991	5991	2.03%
35	35	34	0.00%
33	32	32	3.03%
33	32	31	3.03%
4	4	4	0.00%
0	0	0	

2010	2022 without	2022 with	% reduction for 'without development' option	
2019	development	development		
57	56	55	1.75%	
62	61	61	1.61%	
364	357	357	1.92%	
16	22	21	-37.50%	
84	82	82	2.38%	
192	189	189	1.56%	
184	181	181	1.63%	
0	0	0		
269	270	270	-0.37%	
207	219	215	-5.80%	
0	0	0		
4	4	4	0.00%	
235	238	238	-1.28%	
71	76	77	-7.04%	
106	110	110	-3.77%	
404	396	396	1.98%	
40018	39227	39360	1.98%	1.64%



# Proof of Evidence Vol 5 – Hydrology, Drainage, & Flood Risk Assessment

Produced by David Sawyer Rule 6 Party Peel Hall - APP/ M0655/W/17/3178530 Contents

1.0 Personal Details

2.0 Introduction

3.0 Site History

4.0 Review of Appellant's Current Hydrology, Drainage and Flood Risk Assessment and Appendices

5.0 Current Site-Specific Flood Risk Assessment and Guidelines

6.0 Warrington New Town Documents

7.0 Discussion

8.0 Closing Statement

\*Appendix A - Environment Agency E-Mail

Appendix B - Densham Avenue Flood Alleviation Works

Appendix C - Warrington New Town Documents

\*Note: the above appendices are enclosed in a separate core document in pdf format.

# 1.0 Personal Details

My name is David Sawyer and I am a retired civil engineer.

I was formerly employed at Warrington and Runcorn Development Corporation from 1974-1987.

I have also worked for a number of major consulting engineers including:

Rendel Palmer and Tritton Atkins Montgomery Watson Bullens

Prior to retirement I was employed as a Project Coordinator at United Utilities

I live at

# 2.0 Introduction

- 2.1 Since August 2016 when the current planning application was first submitted there has been a series of major flood events throughout the UK.
- 2.2 Warrington has not been immune to these events. In the past few years alone a substantial number of locations\* around the town have suffered from serious flooding, including:

March 2020 - Riverside Retail Park Warrington

February 2020 - Hillock Lane Woolston

February 2020 - Mee Brow Culceth

November 2019 - Densham Avenue Longford

November 2019 - Hawley's Lane Dallam

October 2019 - Densham Avenue Longford

October 2019 - Denham Avenue Gt Sankey

September 2019 - Longford Skoda Garage

August 2019 - Reddish Lane Lymm

July 2019 - Hawley's Lane Dallam

April 2019 - Hilden Road Warrington

December 2017 - Warrington Lane Lymm

September 2012 - Densham Avenue Longford

September 2012 - Hawley's Lane Dallam

September 2012 - Meadowside Primary School Warrington

\*Source: Warrington Guardian and Warrington Worldwide

- 2.3 In the light of events both locally and nationally there is now great concern amongst residents living in the vicinity of the Peel Hall site that the proposed development will lead to flooding on local roads and housing areas going forward. For example the appellant's FRA confirms that he proposes to use existing watercourses and ditches on the site to dispose of surface water and yet it is a well known fact locally that many of these watercourses and ditches connect to areas downstream that are already prone to flooding, despite flood alleviation works having been carried out in the recent past.
- 2.4 It is also clear from information we have recently obtained from the Cheshire Record Office that Warrington New Town Development Corporation (WNTDC) actually rejected the idea of using the largest of these watercourses, namely the Spa Brook, for the disposal of surface water from Peel Hall Development. The Development Corporation concluded as long ago as 1977 that the 'Spa Brook has no spare capacity for any increase in flow.'
- 2.5 Given these and other concerns we have now completed a full review of the appellant's FRA. Areas we have covered include a detailed examination of the contents of the current FRA and a full assessment of the FRA when measured against current and future legislation. We have also highlighted important information which we believe should have been included in the FRA as part of the overall assessment of the site. Finally we have carried out a full assessment of the information we recently received from the Cheshire Record Office in respect of WNTDC's proposals for the Peel Hall Site.

# 3.0 Site History

- 3.1 The Peel Hall site is one of the last remaining areas of open land in the north of Warrington.
- 3.2 The site is essentially land-locked. It is bounded to the north by the M62 motorway and to the south and east by existing housing estates. Winwick Road is located at the western end of the site.
- 3.3 Warrington was designated as a New Town in 1968 and the Peel Hall site formed part of the original New Town Master Plan. The site was previously used as farmland.
- 3.4 Warrington New Town, later to become Warrington and Runcorn Development Corporation was planned as a series of local centres designed to sit around the existing town centre.
- 3.5 New Town development commenced in the early 1970s across the north of the town starting with the Birchwood and Oakwood sites.
- 3.6 By the end of the decade much of the New Town development east of the A49 Winwick Road had been completed, with the main exception being the Peel Hall site.
- 3.7 In a speech to Parliament in June 2000 the former MP for Warrington North Helen Jones referred to the Peel Hall site as follows:

'The strength of feeling of the residents in the area has already been tested on many occasions when there have been development proposals. Originally, when the plans for the new town were being unveiled, people in what was then the small village of Orford Green were assured that the area between the M62 down into Orford would be preserved as a linear park. Eventually, the development corporation abandoned plans to build on the site generally. It considered it unsuitable because of problems associated with mining subsidence.'

- 3.8 Helen Jones was referring to Parkside Colliery which opened in 1957 and finally closed in 1993. The site of the former colliery is located approximately 2.5km north of the Peel Hall site and the mine workings themselves extended below much of north Warrington during coal extraction.
- 3.9 My own recollection, as a design technician working in the drainage department of the New Town at that time, was that the Peel Hall site was regarded as extremely difficult to drain, and it transpires from

information recently obtained from the Cheshire Record Office that both Helen Jones and myself were correct.

- 3.10 In1980, having spent the previous four years assessing the Peel Hall site the New Town's action area team concluded that due to drainage and mining constraints in particular the site could only accommodate 'some 175 private dwellings and 10.21 ha of open space. The remaining area will continue to be farmed.' This was a far cry from the 900 private and rented dwellings that had originally been envisaged for the site in the Padgate District Area Plan.
- 3.11 The Peel Hall housing development was completed some time around 1984/85 and can be accessed via Ballater Drive. The remainder of the Peel Hall site was eventually sold to the appellant as farmland in September 1988 on the instruction of the then Conservative Government led by Margaret Thatcher.
- 3.12 Since then the site has been the subject of numerous planning applications spanning a period of more than 30 years. Each of these applications has been met with robust opposition from many local residents throughout north Warrington who wish to retain the site for public use.

# 4.0 Review of Appellant's Current Hydrology, Drainage and Flood Risk Assessment and Appendices

- 4.1 This is a review of the current Hydrology, Drainage and Flood Risk Assessment contained in Section 7 of the appellant's ES Addendum, and the accompanying documentation contained in the appellant's ES Volume 3 Appendices.We also make particular reference in the review to the appellant's original Flood Risk Assessment from 2016 and three further documents produced by Warrington Borough Council (WBC), as follows:
- 4.1.1 WBC Strategic Flood Risk Assessment Volume I SFRA Guidance Report
- 4.1.2 WBC Strategic Flood Risk Assessment Volume II SFRA Technical Report
- 4.1.3 WBC Local Flood Risk Management Strategy 2017-2023
- 4.2 For ease of reference each of the paragraphs in the appellant's current Hydrology, Drainage and Flood Risk Assessment which we have chosen to comment upon in this review has been reproduced in this document on its own dedicated page, commencing on page 10 below. All of our comments and observations relating to a particular paragraph can be found immediately after the paragraph in question.
- 4.3 The appellant's initial Flood Risk Assessment (FRA) was prepared in January 2016 by TPA and approved for issue in June 2016.
- 4.4 The initial FRA was accompanied by the following appendices:
- 4.4.1 Appendix A Site location plan, Topographical Survey, CCTV Report, GI Extract and Draft Masterplan.
- 4.4.2 Appendix B United Utilities Asset Maps.
- 4.4.3 Appendix C Envirocheck Extract, EA Flood Maps and Warrington SFRA Extract.
- 4.4.4 Appendix D Greenfield Calculations and Storage Calculations.
- 4.4.5 Appendix E United Utilities Correspondence and Foul Flow Calculations.
- 4.5 The original FRA from 2016 has recently been updated for the purposes of the 2020 Planning Inquiry. It is contained in Section 7 of the appellant's ES Compendium and is referred to as 'Hydrology,

Drainage and Flood Risk Assessment'. It is essentially the same document that first appeared in June 2016 with some minor additions.

- 4.6 The appendices which support the current Hydrology, Drainage and Flood Risk Assessment are the same as those which were attached to the appellant's FRA in June 2016. They are contained in the ES Volume 3 Appendices and are designated as follows:
- 4.6.1 Volume 3 Appendix HYD 1 Site location plan, Topographical Survey, CCTV Report, GI Extract and Draft Masterplan.
- 4.6.2 Volume 3 Appendix HYD 2 United Utilities Asset Maps.
- 4.6.3 Volume 3 Appendix HYD 3 Envirocheck Extract, EA Flood Maps and Warrington SFRA Extract.
- 4.6.4 Volume 3 Appendix HYD 4 Greenfield Calculations and Storage Calculations.
- 4.6.5 Volume 3 Appendix HYD 1- United Utilities Correspondence and Foul Flow Calculations.

4.7 Hydrology, Drainage and Flood Risk Assessment Section 7.2 Site Description Paragraph 7.2.1

> 'The topographical survey confirms that the site falls from east to west with levels ranging from approximately 10.32m AOD to the west and 17.97m AOD to the east. A high point is located to the north east with levels at approximately 20.69m AOD. Refer to topographical survey within Volume 3 Appendix HYD 1. A desk top ground study was prepared for the site by Environmental Management Solution Limited. Refer to Volume 3 Appendix HYD 1. According to this study the application site is underlain by Glaciofluvial deposits comprising sand and gravel. The British Geological Survey (BGS) records indicate that the bedrock geology at the development is formed of Chester Pebble Beds Formation which comprises sandstone. The BGS borehole logs confirm that clay gravel and sand form the superficial strata at the application site.'

- 4.8 Comments
- 4.8.1 The above statement *'refer to topographical survey within Volume 3 Appendix HYD1'* is incorrect. There is no evidence of a topographical survey in Volume 3 Appendix HYD 1 or its predecessor from 2016, Appendix A.
- 4.8.2 The above statement 'a desk top ground study was prepared for the site by Environmental Management Studies Ltd. Refer to Volume 3 Appendix HYD 1' is difficult to understand. Only three pages of the desk top study can be found, and there is no explanation in the FRA as to their relevance. In addition the pages in question are located in Volume 3 Appendix HYD 3, not Volume 3 Appendix HYD 1.

4.9 Hydrology, Drainage and Flood Risk Assessment Section 7.2 Site Description Paragraph 7.2.2 Existing Drainage Networks and Water Supply

'Sewer maps provided by United Utilities confirm an existing clean water supply pipe runs adjacent to Peel Cottage Lane and runs to Peel Hall. According to this mapping there are also existing public sewers crossing the western end of the application site. Existing foul and surface water sewers are located to the east at Mill Lane and to the west within the existing residential development at Poplars Avenue. Refer to Volume 3 Appendix HYD 2.'

- 4.10 Comments
- 4.10.1 Volume 3 Appendix HYD 2 consists of a single A4 sheet showing a number of public sewers at the western end of the application site. There is no record provided of the existing clean water supply pipe running to Peel Hall nor the existing foul and surface water sewers located to the east at Mill Lane.

4.11 Hydrology, Drainage and Flood Risk Assessment Section 7.3 Flood Risk Paragraph 7.3.3

> 'A Strategic Flood Risk Assessment (SFRA) was prepared by Jeremy Benn Associates (JBA) in 2011 for Warrington Borough Council. A Flood Risk Management Strategy was also prepared by the Environment Agency (EA) in March 2011, in which sub-catchments have been identified as areas at risk and how flooding can be managed. The application site is not located within any of these areas and is not identified within the SFRA as being at risk of flooding.'

- 4.12 Comments
- 4.12.1 The SFRA in question was prepared for WBC in two separate volumes. Volume 1 - SFRA Guidance Report is a 60 page document which introduces the process of the WBC SFRA. Volume 2 - SFRA Technical Report is an 85 page document which provides the detailed flood risk assessment collected and produced as part of the Level 1 and Level 2 assessment. The appellant has appended seven pages and the front cover of Volume 2 to his flood risk assessment in support of his application.
- 4.12.2 Firstly we have noted that there is no cross referencing between the appellant's FRA and the SFRA pages. Hence it is extremely difficult for the reader to understand the appellant's statements in the FRA in the light of the small amount of documentation attached.
- 4.12.3 However it is clear that Peel Hall itself is never mentioned by name in either of the two volumes of the SFRA, and there is nothing in either document to suggest that the site ever formed part of the SFRA undertaken by WBC in the first place. Hence we believe that the claim by the appellant that 'the site is not identified within the SFRA as being at risk of flooding' is irrelevant given its continued status as a greenfield site and its non-appearance in the SFRA.
- 4.12.4 We also take the view that any conclusions derived from the SFRA in relation to the Peel Hall site should not be taken in isolation and without reference to the surrounding catchments. In that respect there are a number of statements in Volume 2 of the SFRA which clearly demonstrate that certain areas downstream from Peel Hall are at serious risk of flooding.

4.13 Hydrology, Drainage and Flood Risk Assessment Section 7.3 Flood Risk Paragraph 7.3.4 Tidal and Fluvial Flooding

> 'The SFRA confirms that the main sources of flooding in Warrington are the River Mersey and its 5 key tributaries (Sankey, Padgate, Spittle, Penketh and Whittle Brooks). The development is not within the vicinity of any of these sources. According to the EA map the nearest major watercourse is the Cinnamon Brook, this is approximately 125m from the development. There are minor watercourses and ponds located within the application boundary however according to the EA map these do not pose a risk to the site.'

- 4.14 Comments
- 4.14.1 The WBC Flood Risk Management Strategy 2017-2023 Paragraph 3.3.2 confirms that all watercourses within Warrington have been identified using the EA's Detailed River Network and are classified as either main river or ordinary watercourse. Cinnamon Brook is designated as an ordinary watercourse, not a major watercourse as described above.
- 4.14.2 The nearest watercourses to the site which are classified as main rivers are Mill Brook to the west and Black Brook to the east.
- 4.14.3 The appellant states that 'there are minor watercourses and ponds located within the application boundary, however according to the EA map these do not pose a risk to the site.' The minor watercourses to which the appellant refers include the Spa Brook which represents the main watercourse for the discharge of surface water from the proposed development site.
- 4.14.4 It is incorrect to state that 'the development is not within the vicinity of any of these sources.' In actual fact the proposed development is well within the catchment of Sankey Brook, and Spa Brook itself discharges to Sankey Brook via Mill Brook and Dallam Brook.
- 4.14.5 Once again we take the view that any conclusions derived from the SFRA in relation to the Peel Hall site should not be taken in isolation and without reference to the surrounding main rivers and ordinary watercourses. The Spa Brook connects to and forms part of a major network of watercourses downstream from the proposed development and it has to be considered and dealt with in that context.

 4.15 Hydrology, Drainage and Flood Risk Assessment Section 7.3 Flood Risk Paragraphs 7.3.5/7.3.6/7.3.7 Groundwater Flooding Paragraph 7.3.8 Overland Flooding

#### Paragraph 7.3.5 Groundwater Flooding

'The EA indicative flood map confirms that the application site is located within a Zone 3 groundwater source protection zone. This is described by the EA as:

'Defined as the area around a source within which all groundwater recharge is presumed to be discharged at the source. In confined aquifers, the source catchment may be displaced some distance from the source. For heavily exploited aquifers, the final Source Catchment Protection Zone can be defined as the whole aquifer recharge area where the ratio of groundwater abstraction to aquifer recharge (average recharge multiplied by outcrop area) is >0.75. There is still the need to define individual source protection areas to assist operators in catchment management;'

#### Paragraph 7.3.6 Groundwater Flooding

The Envirocheck report within the desk top study for Phase 1 of the development, that the drinking water source itself is located approximately 560m to the north of the site. The sites groundwater is also assumed to be moderately to highly susceptible to groundwater contamination.

#### Paragraph 7.3.7 Groundwater Flooding

According to the EA groundwater maps the application site is underlain by secondary A aquifers, which are described as:

Secondary A - permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

#### Paragraph 7.3.8 Overland Flooding

As previously mentioned the site falls from east to west and bounded by the M62 to the north and existing residential development at Mill Lane to the east which will act as a cut off preventing overland flow from reaching the development. Due to topography, any overland flow from the south and west will flow away from the development. Surface water from the development will be managed on-site and will be restricted to Greenfield run-off rate; therefore the risk of overland flooding causing by the development is negligible.'

- 4.16 Comments
- 4.16.1 In 2012 the appellant submitted a planning application for a proposed 150 home development on part of the Peel Hall site, as follows:

# *'2012/20610*

Land off Mill Lane (part of Peel Hall Farm) and land at Windermere Avenue and Grasmere Avenue. Outline application for 150 homes off Mill Lane, sports pitches refurbishment at Windermere Avenue and Grasmere Avenue. Applicant - Satnam Investments Ltd, 17 Imperial Square, Cheltenham. Application Date - 07/08/12 Appeal Date - 29/05/13 Appeal dismissed - 31/07/13 Reasons - Highway safety, scheme does not accord with national planning policy, release of land prejudicial to council's approach, lack of adequate material considerations.'

- 4.16.2 The FRA which was undertaken at that time by the appellant's representatives at TPA contains an email from Mark Thewsey of the Environment Agency dated 17th January 2012 in which he replies to Alex Halford of TPA on the question of soakaway drainage for the proposed Mill Lane development.
- 4.16.3 The reply from Mark Thewsey is extremely thorough and it goes into great detail about the potential for groundwater flooding and overland flooding across the whole of the proposed Peel Hall site and not just the section under consideration at that time.
- 4.16.4 The email also describes in some detail the source of the Spa Brook and the manner in which water has been abstracted from Spa Well for the public supply for over 140 years. This is a matter which we will return to later in this review.
- 4.16.5 We believe that the details provided by Mark Thewsey are crucial to any future proposals for the Peel Hall site. In particular we think that the matters he outlines with regard to groundwater flooding, overland flooding and soakaways should be investigated thoroughly at the earliest possible opportunity and simply not left to chance.
- 4.16.6 A copy of the original email from Mark Thewsey is enclosed in a separate pdf as Appendix A. We have reproduced several paragraphs of that email below which highlight some of the major issues to which he refers, and we believe that they are self explanatory.

'To the north of the Motorway at a place called Spa Well there used to rise a substantial spring which formed the commencement of Spa Well Brook that then flowed SW and across your wider site before passing under Poplars Avenue and onward to ultimately join Sankey Brook.

This spring effectively stopped discharging during development of water gathering tunnels beneath for a public supply well extension in 1878, and thereafter the Brook had very little dry weather flow in it headwaters. The watercourse from Spa Well to the present M62 thereafter became little more than an agricultural ditch.

Many decades after this artificial diminution in Spa Well flow took place, Spa Brook downstream of your site was incorporated into a culvert/pipe drainage system beneath the expanding housing area of Hulme.

Historically local groundwater levels at/near your site have been controlled, usually well below surface, by the substantial public water supply abstractions made from the underlying sandstone.

From the mid 1990s, for operational reasons, there was a long period of non-abstraction by the local groundwater pumping stations, allowing water levels to return to the historical natural levels before abstraction recommenced on a smaller scale than before in 2008/2009.

While the pumping stations were off, local groundwater levels quickly rose to surface in the low-lying areas to the north of the motorway, where the sandstone is either exposed or generally covered only by a thin veneer of sand. This gave rise to significant groundwater flooding in that area, probably made worse by the land having been also slightly lowered by mining in the 1960s to 1980s.

To the south of the motorway, despite the land being similar or even slightly lower along Spa Brook, this groundwater flooding problem did not seem to prevail to the same extent, or at least not so as to cause such an obvious problem.

Upon investigation by desk study, it would seem that this lesser groundwater flooding problem was probably on account of a layer of clay developed here between the underlying sandstone and the thin sandy soils at surface. This clay, although very thin, appears to have served as an intervening aquitard suppressing a probably small Artesian head of groundwater beneath it.

Field drainage of the superficial sand above this clay layer was probably helped by the presence of a few former agricultural land drains or ditches remaining in the fields that comprise your wider site.

At the time of the persistent high groundwater levels (mid 1990s through to circa late 2000s when the local abstractions finally resumed) it struck me that any development perforating this thin clay mantle just below the

surface, might initiate a significant outflow of water to surface from the underlying sandstone.

As such I would suggest the development, or even site investigations that perforate this might cause a problem in the future if it is left unsealed.

This would not only cause a risk of groundwater discharge and flooding on site, but may perhaps exacerbate any limitations in the capacity of the now culverted Spa Brook downstream. (N.B. I do not know if there are any such limitations, but I am mindful that when the culvert was built, the flow would have been much less than the historical norm, and of course the catchment has since been largely built over with substantial paved areas).

At present the local groundwater abstractions are active again, but on a much smaller scale than in the past. There is no guarantee that they would always keep operating, and there is certainly no obligation upon them to do so.

As such, it seems only fair to warn you of the potential drainage difficulties or risks that may prevail on this site - especially in the low-lying areas where the potential for groundwater discharge is greatest, especially if the excavations should pierce the thin clay layer.

Fortunately the Superficial deposits across this site are already well characterised by many logs drilled in the late 1970s, but it is important to be aware that any water level details on those logs will not be representative of the much higher levels that were achieved between 1996 and 2008, and which may be achieved again from time to time in the future.

I should also point out that the higher ground in the vicinity of your phase one area probably makes that part of the site relatively immune to this problem, which is probably the best of the good news that I can offer.

As far as soakaway prospects are concerned, beware misleadingly favourable groundwater levels in site investigations done either before 1996 or since 2008 up to the present.

If you have groundwater level data obtained circa 1997 to 2007, then that is probably reasonably representative of the high 'natural' groundwater levels.'

4.16.7 Please note that the contents of the email from Mark Thewsey are discussed further in Section 7 of this review.

4.17 Hydrology, Drainage and Flood Risk Assessment Section 7.3 Flood Risk 7.3.9 Sewer Flooding

> 'The United Utilities DG5 records are provided within the SFRA. These records show a data set of all properties that have been previously flooded by a drainage system. The application site is not highlighted on this plan as being at risk of flooding from the existing sewerage network and therefore flood risk due to sewers is considered to be low. Areas to the north east and south are also highlighted as low risk and the area to the west is considered as medium risk. Refer to Volume 3 Appendix HYD 3'.

## 4.18 Comments

4.18.1 In paragraph 4.12.3 of this review we stated that Peel Hall itself is never mentioned by name in either of the two volumes of the SFRA, and that there is nothing in either document to suggest that the site ever formed part of the SFRA undertaken by WBC in the first place. Hence we believe that the claim above by the appellant that *'the application site is not highlighted on this plan as being at risk of flooding from the existing sewerage network'* is incorrect simply because Peel Hall should never have been considered in that context. In reality the site is simply a greenfield site with very few houses located on it.

4.19 Hydrology, Drainage and Flood Risk Assessment Section 7.3 Flood Risk Paragraph 7.3.10 Surface Water Flooding

> According to the EA flood maps, the application site is at low risk of surface water flooding. According to the SFRA there are certain locations within Warrington that are at risk of surface water flooding. The critical drainage map within the SFRA confirms that development does not fall within a critical drainage area. However land to the east south and west are within critical drainage areas, according to the SFRA there are a number of culverts through the area which if unmaintained could increase flood risk. Surface Water from the development will be managed on-site via attenuation and will be restricted to the existing run-off rate.'

- 4.20 Comments
- 4.20.1 The WBC SFRA Volume II highlights two areas in particular downstream from the proposed site that are deemed to be *Warrington Critical Drainage Areas*' according to the SFRA, namely the Longford and Orford area and the Dallam area.
- 4.20.2 In that respect Paragraph 3.5.2 in Volume II of the SFRA confirms that 'The Orford area is at significant risk of flooding from a range of flood events'.
- 4.20.3 In addition the Longford surface water flooding map comparison which is set out on Page 24 of Volume II of the SFRA shows severe flooding for both scenarios in the vicinity of Densham Avenue and Northway. Both of these locations are prone to flooding, and both are located only a very short distance downstream from the Peel Hall site.
- 4.20.4 We also reproduce two entries from Table 4-2 'Warrington Critical Drainage Areas' on Page 35 of Volume II of the SFRA, as follows:

## Longford and Orford

'The risk associated with both the Longford and Orford drainage areas are similar in that they include the risk associated with Longford Brook, its contributing urban drainage and mechanisms downstream including the United Utilities pumping station and Sankey Brook confluence. There is also an interaction between Padgate Brook during flood events and water flows over into Longford Brook. There are a high number of historical flood records in this area. Development may have to look at alternative connections other than the current surface water drainage systems. It is **recommended that it is one of the hotspot areas for further assessment of any upcoming Warrington SWMP.'** 

## Dallam

'Dallam drainage area is located on the confluences of a number of watercourses including Longford, Dallam and Sankey Brook. Both Longford and Dallam Brook could be classified as urban watercourses as they receive the majority of the inflow from urban drainage and are heavily modified and culverted in sections. Flood risk is high is this area due to the interaction between a number of sources: fluvial, surface water and the drainage system. There are a number of redevelopment sites identified in this area, unless managed, could increase risk.'

- 4.20.5 Since we commenced this review in March 2020 WBC has announced a further flood relief scheme for Densham Avenue and Northway. This follows on from work undertaken near to Densham Avenue in 2012 which is referred to as Appendix B in the pdf which accompanies our review. Work will commence in August 2020 to construct a new pumping station in Dallam which WBC say will alleviate flooding in Densham Avenue and Northway in particular.
- 4.20.6 It is not clear from the information provided whether there has been a catchment-wide approach to flood alleviation in this area or whether it is simply a scheme local to Densham Avenue. If there has been a catchment-wide approach then you would expect Peel Hall to be included, and for the appellant's FRA to acknowledge this given his comment above that 'land to the east south and west are within critical drainage areas, according to the SFRA there are a number of culverts through the area which if unmaintained could increase flood risk'. We note however that there is no mention in the appellant's FRA of these proposals.
- 4.20.7 According to the FRA the appellant intends to discharge surface water to Dallam Brook via Spa Brook and Mill Brook. In addition the appellant highlights a drainage ditch as a means of discharge within the application boundary which connects to Dallam Brook via a large diameter culvert which runs via Densham Avenue and Northway.
- 4.20.8 However he makes no attempt in the FRA to explain how he proposes to deal with these issues other than to continue to restate that *'surface water from the development will be managed on-site via attenuation and will be restricted to the existing run-off rate.'* Crucially there is nothing in the appellant's FRA to suggest that there has been an integrated approach to the problems associated with the critical drainage areas downstream from the Peel Hall site.

4.21 Hydrology, Drainage and Flood Risk Assessment Section 7.4 Proposed Surface Water Drainage Strategy Paragraph 7.4.1 Existing Surface Water Drainage

'The United Utilities maps confirm there are no public surface water sewers crossing the development site. An existing domestic kennels and dwelling are located within the development but do not form part of the application boundary. The site is currently Greenfield; it is proposed that discharge from the proposed development will be restricted to the existing QBAR as calculated using the HR Wallingford IH124 Greenfield run-off calculation. QBAR has been calculated as 334.8 l/s, refer to Volume 3 Appendix HYD 4.'

- 4.22 Comments
- 4.22.1 The statement above 'The United Utilities maps confirm there are no public surface water sewers crossing the development site' contradicts the statement in Paragraph 7.2.2 Existing Drainage Networks and Water Supply which states that 'According to this mapping there are also existing public sewers crossing the western end of the application site'.

 4.23 Hydrology, Drainage and Flood Risk Assessment Section 7.4 Proposed Surface Water Drainage Strategy
 7.4.2 Proposed Surface Water Drainage Strategy

> 'The hierarchy of surface water disposal stated within The Building Regulations approved document Part H is as follows:

- An adequate soakaway/infiltration system
- A watercourse
- A sewer

The proposed options of surface water discharge include the following: • SuDS.'

- 4.24 Comments
- 4.24.1 The appellant's statement above has been abstracted from the Building Regulations approved document Part H. Its inclusion contributes nothing technically to the FRA other than to reaffirm what is an accepted hierarchy for the disposal of surface water.
4.25 Hydrology, Drainage and Flood Risk Assessment Section 7.4 Proposed Surface Water Drainage Strategy Paragraph 7.4.3

It is proposed that surface water from the development is restricted to the QBAR rate of 334.8l/s.

- 4.26 Comments
- 4.26.1 The above statement simply repeats the wording contained in Paragraph 7.4.1 of the FRA.

4.27 Hydrology, Drainage and Flood Risk Assessment Section 7.4 Proposed Surface Water Drainage Strategy Paragraph 7.4.4/Paragraph 7.4.5

#### Paragraph 7.4.4

The desk top study prepared by Environmental Management Solution Ltd indicates that the superficial strata at the site is formed from gravel and sand, therefore infiltration drainage may be feasible at the development, however the site is also located within a groundwater source protection zone and therefore discussions with Environment Agency as the design progresses will need to be undertaken in order to agree what areas could be utilised for soakaway drainage but at the same time protect the groundwater from contamination.

#### Paragraph 7.4.5

Due to this reason and to avoid causing any contamination to groundwater soakaways we would need to make sure areas that go to a soakaway are areas that do not generate or have a risk of generating contamination to groundwater.

- 4.28 Comments
- 4.28.1 We have covered this matter extensively in Paragraph 4.15 and Paragraph 4.16 above where we discuss the information provided by Mark Thewsey of the EA in his email dated 17 January 2012.
- 4.28.2 In his email Mr Thewsey provides the following summary:

'The low-lying parts of the site may be vulnerable to a very high water table or even groundwater flooding, and may therefore be unsuitable for soakage.

If any attempts are made to excavate deep soakaways in the lower lying parts a of the site, which is a practice that the EA normally resists anyway for anything other than clean, non-industrial roof-water soakaways, (because of the risk of direct discharge of pollutants such as fuels, herbicides, pesticides, and deicing agents) then there may be a significant risk that from time to time these would be prone to drown out or even cause artesian discharge, which may result as a result of 'groundwater flooding' events when local abstractions stop.' 4.29 Hydrology, Drainage and Flood Risk Assessment Section 7.4 Proposed Surface Water Drainage Strategy Paragraph 7.4.6 Watercourses

'There are existing ponds and minor watercourses located within the application site including the Spa Brook. It is proposed that surface water from the development will discharge to these minor watercourses at the restricted run off rate. The Spa Brook is located to the west of the application site and appears to be culverted to the rear of the existing properties at Poplars Avenue. United Utilities records suggest that this drains to Mill Brook behind the Alban Retail Park. It is assumed that flows from the site restricted to the Greenfield rate will be able to discharge into this surface water system with a system of onsite attenuation as proposed. Further modelling of this pipe may be requested.'

- 4.30 Comments
- 4.30.1 The Spa Brook is an ordinary watercourse according to the EA classification, not a minor watercourse.
- 4.30.2 The email from Mark Thewsey of the EA that we refer to in Paragraph 4.16 in respect of a previous planning application in 2012 provides accurate details of the Spa Brook, including details of the Spa Brook's recent history, as follows:

'To the north of the Motorway at a place called Spa Well there used to rise a substantial spring which formed the commencement of Spa Well Brook that then flowed SW and across your wider site before passing under Poplars Avenue and onward to ultimately join Sankey Brook.

This spring effectively stopped discharging during development of water gathering tunnels beneath for a public supply well extension in 1878, and thereafter the Brook had very little dry weather flow in it headwaters. The watercourse from Spa Well to the present M62 thereafter became little more than an agricultural ditch.

Many decades after this artificial diminution in Spa Well flow took place, Spa Brook downstream of your site was incorporated into a culvert/pipe drainage system beneath the expanding housing area of Hulme.'

4.30.3 The information set out above was sent to the appellant's representative in 2012 in respect of an earlier planning application. However the appellant has not provided any of these details for inclusion in the current FRA and appendices. Hence it is still unclear how he proposes to utilise the Spa Brook for the purposes of discharging surface water from the Peel Hall site.

- 4.30.4 Our own investigation would suggest that the Spa Brook is culverted from a point close to the apartments on Poplars Avenue at the southern end of the appeal site through to Mill Brook located approximately a half mile to the south.
- 4.30.5 The discharge point at Mill Brook is located to the west of the Junction 9 retail park on Winwick Road, and Mill Brook itself discharges to Dallam Brook a short distance downstream. In turn Dallam Brook passes beneath Hawley's Lane before it discharges to Sankey Brook approximately 500m downstream near to Southworth Avenue.
- 4.30.6 Mr Thewsey has also provided certain advice regarding the ability of the Spa Brook culvert to deal with future surface water discharges from the site, as follows:

'At the time of the persistent high groundwater levels (mid 1990s through to circa late 2000s when the local abstractions finally resumed) it struck me that any development perforating this thin clay mantle just below the surface, might initiate a significant outflow of water to surface from the underlying sandstone.

As such I would suggest the development, or even site investigations that perforate this might cause a problem in the future if it is left unsealed.

This would not only cause a risk of groundwater discharge and flooding on site, but may perhaps exacerbate any limitations in the capacity of the now culverted Spa Brook downstream. (N.B. I do not know if there are any such limitations, but I am mindful that when the culvert was built, the flow would have been much less than the historical norm, and of course the catchment has since been largely built over with substantial paved areas).

At present the local groundwater abstractions are active again, but on a much smaller scale than in the past. There is no guarantee that they would always keep operating, and there is certainly no obligation upon them to do so.'

4.30.7 Once again we would point out that the above information was never included in the current FRA despite the fact that it was sent to the appellant's representative in 2012. Indeed there is no information whatsoever in the current FRA regarding the size, condition or the ability of the Spa Brook culvert to convey surface water away from the site. 4.31 Hydrology, Drainage and Flood Risk Assessment Section 7.4 Proposed Surface Water Drainage Strategy Paragraph 7.4.7

'In addition to Spa Brook, there appears to be a drainage ditch located within the application boundary. This ditch is connected to Dallam Brook via a large diameter culvert which runs via Densham Avenue and Northway.'

- 4.32 Comments
- 4.32.1 The appellant has not provided any information relating to the drainage ditch located within the application boundary or the manner in which it connects to Dallam Brook via Densham Avenue and Northway.

4.33 Hydrology, Drainage and Flood Risk Assessment Section 7.4 Proposed Surface Water Drainage Strategy Paragraph 7.4.8

'The area to the north west of the site which will comprise the employment space and residential units falls to the North West. It is proposed that surface water from the development will discharge to the watercourses at the restricted rate, attenuation will be used to achieve this. Discharge to this existing drainage ditches and watercourse will require consent from the Local Authority and may require discharge consent.'

#### 4.34 Comments

4.34.1 The employment space referred to above is not part of this inquiry. It was included in the Option B proposal for Peel Hall which was submitted to the 2018 inquiry and subsequently withdrawn by the appellant part way through.

4.35 Hydrology, Drainage and Flood Risk Assessment Section 7.4 Proposed Surface Water Drainage Strategy Paragraph 7.4.9

'The QBAR for the whole development has been calculated as 334.8 l/s. This will be pro rata'd per sub-catchment and the storage requirement will be based on this restricted rate.'

- 4.36 Comments
- 4.36.1 The above statement repeats the wording contained in Paragraph 7.4.1 and 7.4.3 of the FRA. It also introduces a chart in the FRA which sets out the proposals for eleven ponds to be constructed across the site for attenuation purposes. However the appellant has not provided any details of these ponds in his FRA nor has he provided a plan showing their proposed location.

4.37 Hydrology, Drainage and Flood Risk Assessment Section 7.4 Proposed Surface Water Drainage Strategy Paragraph 7.4.10 Water Quality

> 'Due to the application site being in a groundwater protection zone, groundwater quality needs to be controlled to limit any contamination from the development. It is proposed that a two stage treatment will be provided, initially using lined permeable paving with this discharging to the designated ponds and secondly via the ponds themselves. The commercial areas in particular will require use of permeable paving and oil separators where appropriate.'

#### 4.38 Comments

4.38.1 The appellant proposes that 'a two stage treatment will be provided, initially using lined permeable paving with this discharging to the designated ponds and secondly via the ponds themselves.' It is difficult to understand what this statement actually means given that so little detail has been provided. In that respect there is no information relating to any early discussions the appellant may have had with the EA relating to groundwater and Zone 3 protection.

 4.39 Hydrology, Drainage and Flood Risk Assessment Section 7.4 Proposed Surface Water Drainage Strategy Paragraph 7.4.11 Attenuation Features Paragraph 7.4.12 Attenuation Ponds Paragraph 7.4.13 Permeable Paving

#### Paragraph 7.4.11 Attenuation Features

'Potential use of SuDS have been considered for the attenuation of surface water on-site and are listed below, infiltration drainage cannot be used at the site due to the development being located within in groundwater protection zone. Water quality has also been considered when proposing the following attenuation features:'

#### Paragraph 7.4.12 Attenuation Ponds

'It is proposed that surface water from the development will discharge to attenuation ponds which in turn will discharge to the existing watercourses and ditches within the site. The discharge into these watercourses will be restricted to QBAR rates listed above in Table 1.'

#### Paragraph 7.4.13 Permeable Paving

'Further attenuation can be provided using permeable paving for private drive areas. Permeable paving would be beneficial as it allows for a reduction of the occurrence of runoff flooding. Permeable paving would also improve water quality by filtration through the pavement as they are an effective initial method of removing total suspended solids, heavy metals and hydrocarbons from runoff.'

- 4.40 Comments
- 4.40.1 Paragraph 7.4.11 above states that *'infiltration drainage cannot be used at the site due to the development being located within in groundwater protection zone.'*
- 4.40.2 This statement appears to contradict Paragraph 7.4.4 which states that 'infiltration drainage may be feasible at the development......therefore discussions with Environment Agency as the design progresses will need to be undertaken in order to agree what areas could be utilised for soakaway drainage.'
- 4.40.3 Paragraph 7.4.12 simply repeats what has already been stated a number of times throughout the FRA with regard to attenuation and the QBAR runoff rate.

4.41 Hydrology, Drainage and Flood Risk Assessment Section 7.4 Proposed Surface Water Drainage Strategy Section 22 Response

#### 'Paragraph 7.4.14

Given the outline nature of the application, it is not considered that a full Water Framework Directive (WFD) assessment is necessary and that it should be conditioned as part of the outline planning permission to be undertaken as part of a reserved matters application, where a more detailed drainage strategy will be completed.'

#### 'Paragraph 7.4.15

The development proposals, in tandem with the surface water and foul water management strategies, will be tailored throughout the detailed design process to ensure that there is no adverse impact on water and ground water as a result of the development. Additionally, given the outline nature of the application, information required to complete a full WFD assessment is not available, and as such it is not considered necessary to undertake the WFD assessment at this stage.'

#### 'Paragraph 7.4.16

However, for the purposes of ensuring a complete response to the matters raised by the Planning Inspectorate, a preliminary WFD assessment has been undertaken (document reference: 1506-45/TN/03, dated November 2017) and is contained within Volume 3 Appendix HYD 5.'

- 4.42 Comments
- 4.42.1 Paragraph 7.4.16 above states that 'a preliminary WFD assessment has been undertaken (document reference: 1506-45/TN/03, dated November 2017) and is contained within Volume 3 Appendix HYD 5.'
- 4.42.2 However our review of the FRA and appendices has confirmed that no such document is contained within Volume 3 Appendix HYD 5 or anywhere else in the appellant's FRA documentation.

4.43 Hydrology, Drainage and Flood Risk Assessment Section 7.5 Proposed Foul Water Drainage Strategy Paragraph 7.5.1 Existing Foul Flow

> 'An existing dwelling and kennels are located within the site but these do not form part of the application boundary, therefore the site is considered to be greenfield.'

- 4.44 Comments
- 4.44.1 The paragraph above is entitled 'Existing Foul Flow.' However it fails to mention the existing foul flow referred to in Paragraph 7.2.2 of the appellant's FRA where he states that 'according to this mapping there are also existing public sewers crossing the western end of the application site.'

4.45 Hydrology, Drainage and Flood Risk Assessment Section 7.5 Proposed Foul Water Drainage Strategy Paragraph 7.5.2 Proposed Foul Flow

> 'The proposed development will comprise up to circa 1300 new residential dwellings, commercial areas and a school. Based upon Sewers for Adoption 7th Edition and British Water Flows and Loads the foul flow has been calculated as: 64.52 l/s. This flow has been based on the following assumptions, refer to Foul Flow calculations within Volume 3 Appendix HYD 5:

Commercial Area:

Employment zone comprising approximately 150 members of staff and Supermarket comprising 80 members of staff

School: Comprising approximately 180 pupils and 25 members of staff

Retirement Housing: Comprising approximately 60 residents'

- 4.46 Comments
- 4.46.1 The proposed development is comprised of up to 1200 dwellings and apartments, not *'up to circa 1300 new residential dwellings'* as stated above.
- 4.46.2 There is no *'retirement housing comprising approximately 60 residents'* planned for the development. This should say *'residential care home'*. To date this construction has an undisclosed number of residents and care staff.
- 4.46.3 There is no mention of the public house/family restaurant planned for the development.
- 4.46.4 There is no mention of any of the other establishments planned for the development, including financial and professional services, restaurants and cafes, drinking establishments and hot food takeaways.
- 4.46.5 The appellant refers above to an *'employment zone comprising approximately 150 members of staff.'* However the employment zone in question was removed in the course of the 2018 inquiry and hence does not form part of the current proposals for the site.
- 4.46.6 We understand that Sewers for Adoption 7th Edition will be superseded later in 2020.

- 4.46.7 British Water Flows and Loads was prepared by the British Water Package Sewage Treatment Plant Focus Group for non-mains sewage treatment systems. The details confirm that the table of leadings may be used to design all sizes of sewage treatment systems serving up to 1000 population.
- 4.46.8 The 'Foul Flow calculations within Volume 3 Appendix HYD 5' are based upon:
- 1300 dwellings, when the proposed development is actually comprised of up to 1200 dwellings and apartments.
- 230 commercial staff, a figure which includes 150 from the employment zone which was removed from the proposals in the course of the 2018 inquiry.
- 60 care home residents, when the actual figure is still unknown.

In addition there is no reference in the foul flow calculations to the public house/family restaurant, the financial and professional services, restaurants and cafes, drinking establishments and hot food takeaways.

4.47 Hydrology, Drainage and Flood Risk Assessment Section 7.5 Proposed Foul Water Drainage Strategy Paragraph 7.5.3 Proposed Foul Water Drainage Strategy

'Foul networks are located to the east at Mill Lane, to the west at Windermere Lane, and to the west within the site boundary. Any sewers located within the application site will require easements either side. The sewer sizes have been confirmed as a maximum of 225mm on the existing site so assuming that these are laid at no deeper than 3m cover to invert then a 3m easement will need to be provided for these pipes in line with the statutory requirement defined by the statuary undertaker. United Utilities have not given a preference for a point of connection but have no objection with foul flows communicating with their sewers, preferably via a gravity connection. Refer to correspondence within Volume 3 Appendix HYD 5.'

- 4.48 Comments
- 4.48.1 The appellant states that 'foul networks are located to the......west at Windermere Lane.' In fact there are foul sewers located to the south of the proposed development at Windermere Avenue.
- 4.48.2 The correspondence from United Utilities in Volume 3 Appendix HYD 5 to which the appellant refers is dated 27th October 2015. It confirms that *'this pre-development advice will be valid for 12 months.'* At the time of compiling this review we note that the correspondence from United Utilities is almost 4 years out of date.

4.49 Hydrology, Drainage and Flood Risk is Assessment Section 7.6 Conclusions and Recommendations

#### 'Paragraph 7.6.1

This report concludes that the development is not at risk of fluvial, tidal, overland or groundwater flooding and will not increase flooding to surrounding catchments.'

#### 'Paragraph 7.6.2

It is proposed that surface water from the development will be restricted to the existing Greenfield run-off rate of 334.8l/s.'

#### 'Paragraph 7.6.3

The site is located within a groundwater source protection zone and therefore to prevent any contamination, surface water infiltration drainage will need to be subject to Environment Agency confirmation. Areas contributing to soakaways will need to be carefully designed and selected so they do not pose any risk of contamination to groundwater.'

#### 'Paragraph7.6.4

It is proposed that surface water from the development will discharge to the watercourses at the restricted rate; attenuation will be used to achieve this. Discharge to this existing drainage ditches and watercourse will require consent from the Local Authority and may require discharge consent.'

#### Paragraph7.6.5

CCTV has been carried out to determine the nature and condition of onsite drainage features.

#### 'Paragraph 7.6.6

Due to the application site being located within a groundwater protection zone, groundwater quality needs to be controlled to limit any contamination from the development.'

#### Paragraph 7.6.7

United Utilities have not given a preference for a point of connection but have no objection with foul flows communicating with their sewers, preferably via a gravity connection.

#### 'Paragraph7.6.8

Foul capacity has been confirmed at a rate of 64.52l/s.'

#### 'Paragraph 7.6.9

A minimum of 3m easements are required for all existing on site drainage owned by United Utilities in line with the statuary requirement.' 'Paragraph 7.6.10 A preliminary WFD assessment has been undertaken which concludes that the proposed development is not considered to have an impact on the current ecological and chemical quality of the local rivers and watercourses.'

#### 4.50 Comments

- 4.50.1 The appellant has not provided any firm evidence in his FRA to support the statement in Paragraph 7.6.1 that 'the development is not at risk of fluvial, tidal, overland or groundwater flooding and will not increase flooding to surrounding catchments'.
- 4.50.3 The statement in Paragraph 7.6.7 is based upon correspondence that is almost 4 years out of date.
- 4.50.4 Our review of the FRA and appendices has confirmed that the preliminary WFD referred to in Paragraph 7.6.10 above has not been included within Volume 3 Appendix HYD 5 or anywhere else in the appellant's FRA documentation.

# 5.0 Current Site-Specific Flood Risk Assessment Guidelines

5.1 The site-specific flood risk assessment guidelines and the accompanying checklist set out in Paragraph 5.2 and Paragraph 5.3 below have been abstracted from the Flood Risk and Coastal Change guidance documents set out on the GOV.UK website. They advise how to take account of and address the risks associated with flooding and coastal change in the planning process. We have included them in our review because we believe that they provide an appropriate yardstick by which to measure the contents of the appellant's flood risk assessment.

#### 5.2 Guidelines

'A site-specific flood risk assessment is carried out by (or on behalf of) a developer to assess the flood risk to and from a development site. Where necessary the assessment should accompany a planning application submitted to the local planning authority. The assessment should demonstrate to the decision-maker how flood risk will be managed now and over the development's lifetime, taking climate change into account, and with regard to the vulnerability of its users.

The objectives of a site-specific flood risk assessment are to establish:

- whether a proposed development is likely to be affected by current or future flooding from any source;
- whether it will increase flood risk elsewhere;
- whether the measures proposed to deal with these effects and risks are appropriate;
- the evidence for the local planning authority to apply (if necessary) the Sequential Test, and;
- whether the development will be safe and pass the Exception Test, if applicable.

The information provided in the flood risk assessment should be credible and fit for purpose. Site-specific flood risk assessments should always be proportionate to the degree of flood risk and make optimum use of information already available, including information in a Strategic Flood Risk Assessment for the area, and the interactive flood risk maps available on the Environment Agency's web site.

A flood risk assessment should also be appropriate to the scale, nature and location of the development.'

5.3 Site-specific flood risk assessment: Checklist

- 5.3.1 Development site and location
  - a. Where is the development site located?
  - b. What is the current use of the site?
  - c. Which Flood Zone is the site within?

#### 5.3.2 Development proposals

a. What are the development proposal(s) for this site? Will this involve a change of use of the site and, if so, what will that change be?b. In terms of vulnerability to flooding, what is the vulnerability classification of

the proposed development?

c. What is the expected or estimated lifetime of the proposed development likely to be? (eg less than 20 years, 20-50 years, 50-100 years?).

#### 5.3.3 Sequential test

Not applicable - development site is wholly within flood zone 1

#### 5.3.4 Climate Change

a. How is flood risk at the site likely to be affected by climate change?

#### 5.3.5 Site specific flood risk

a. What is/ are the main source(s) of flood risk to the site?

b. What is the probability of the site flooding, taking account of the maps of flood risk available from the EA, the local planning authority's Strategic Flood Risk Assessment and any further flood risk.

c. Are you aware of any other sources of flooding that may affect the site?

d. What is the expected depth and level for the design flood?

e. Are properties expected to flood internally in the design flood and to what depth?

f. How will the development be made safe from flooding and the impacts of climate change for its lifetime?

g. How will you ensure that the development and any measures to protect the site from flooding will not cause any increase in flood risk off-site and elsewhere?

h. Are there any opportunities offered by the development to reduce the causes and impacts of flooding?

#### 5.3.6 Surface water management

a. What are the existing surface water drainage arrangements for the site?b. If known, what (approximately) are the existing rates and volumes of surface water run-off generated by the site?

c. What are the proposals for managing and discharging surface water from the site, including any measures for restricting discharge rates?

d. How will you prevent run-off from the completed development causing an impact elsewhere?

e. Where applicable, what are the plans for the ongoing operation and/or maintenance of the surface water drainage systems?

## 5.3.7 Occupants and users of the development

a. Will the development proposals increase the overall number of occupants and/or people using the building or land, compared with the current use? If this is the case, by approximately how many will the number(s) increase?b. Will the proposals change the nature or times of occupation or use, such that it may affect the degree of flood risk to these people? If this is the case, describe the extent of the change.

c. Where appropriate, are you able to demonstrate how the occupants and users that may be more vulnerable to the impact of flooding (eg residents who will sleep in the building; people with health or mobility issues etc) will be located primarily in the parts of the building and site that are at lowest risk of flooding? If not, are there any overriding reasons why this approach is not being followed?

## 5.3.8 Exception test

Not applicable - development site is wholly within flood zone 1

5.3.9 Residual risk

a. What flood related risks will remain after the flood risk management and mitigation measures have been implemented?

b. How, and by whom, will these risks be managed over the lifetime of the development?

#### 5.3.10 Flood risk assessment credentials

- a. Who has undertaken the flood risk assessment?
- b. When was the flood risk assessment completed?

## 5.4 Other considerations

Managing Surface Water

The site-specific flood risk assessment will need to show how surface water runoff generated by the developed site will be managed. In some cases it may be advisable to detail the surface water management for the proposed development in a separate drainage strategy or plan. You may like to discuss this approach with the lead local flood authority. Surface water drainage elements of major planning applications (eg of 10 or more homes) are reviewed by the lead local flood authority for the area. As a result, there may be specific issues or local policies, for example the Local Flood Risk Management Strategy or Surface Water Management Plan, that will need to be considered when assessing and managing surface water matters. It is advisable to contact the appropriate lead local flood authority prior to completing the surface water drainage section of the flood risk assessment, to ensure that the relevant matters are covered in sufficient detail.

## 6.0 Warrington New Town Documents

- 6.1 Following a request to the Cheshire Record Office for Peel Hall documentation we have now received over 250 pages and a number of drawings relating to the site. The documents generally cover the period from the inception of the Peel Hall Action Area Team in 1976 through to the compilation of the Peel Hall tender list in November 1982.
- 6.2 The documents record that the first meeting of the team took place on 25th June 1976 and that meetings continued for almost four years before a Planning Statement in respect of the Peel Hall site was submitted for approval in April 1980 under Section 6(1) of the New Towns Act 1965.
- 6.3 Throughout this period the documents confirm that there were a considerable number of discussions relating to drainage matters at the site. Our appraisal below refers to three team meetings in particular which highlighted a number of major drainage issues encountered across the site which the team could not resolve. These issues, combined with other major concerns around mining beneath the site are what ultimately led to the Peel Hall residential development being substantially reduced in scale.
- 6.4 Minutes of the 3rd Team Meeting 6th September 1976 Paragraph 3.2 Drainage

#### H Phillipson,

(i) indicated from a drawing the limit of the area (east of Ridley Plantation) which could be drained by gravity to Cinnamon Brow drainage system. The area amounts almost to the residential area requirement in the DAP brief.

(ii) said that there did not seem to be any spare capacity in other existing drainage system (Orford) to cater for PA5 [Peel Hall 5] area west of Radley Plantation. Both foul and surface water would have to be pumped into CB [Cinnamon Brow] drainage for substantial residential development west of Radley Plantation.

(iii) explained the proposal of routing main drainage to the south of the Action Area because the effects due to mining are likely to be less here than in the north. The team discussed the physical and financial aspects of the proposals which would be considered further in view of Action Area plan options. 6.5 Minutes of the 9th Team Meeting - 7th February 1977 Paragraph 3.0 Drainage

3.1 with reference to drawing number HG 87/300, A McIntyre;

3.1.1 indicated extent of the area that could be drained by gravity west of the proposed surface water sewer. He would send a copy of the drawing, showing approximate invert levels of the proposed sewer to B.Kar. To K.Pimm's query, he agreed that the watershed line would need to be updated in view of latest mining situation.

3.1.2 said that in order to increase the amount of developable land an area(shown yellow) had been identified where pumping of surface water would be required. D. McNicholl suggested that in view of suspect ground conditions in the area if an alternative area could be identified near Peel Hall. A. McIntyre to look into this together with costs involved. It was also suggested that the developable land area could be increased by raising, wherever feasible, existing ground level west of the proposed sewer by up to perhaps a metre.

3.1.3 reported on the preliminary investigations carried out regarding alternatives suggested at the last team meeting for drainage of surface water for the area west of the watershed line:

(i) regarding improvements to existing drainage systems to carry extra flows there was no spare capacity in Spa Brook. The only possibility, for a gravity system, could be the spare capacity of about 10 ha of developable land, or 20 ha of playing fields, in Dallam Brook but a new outfall sewer from the proposed developments (housing and playing fields) would be required as improvements to existing culvert to take additional run offs did not seem possible.

(ii) use of balancing reservoir/dry lake would mean construction of a dam at the south west corner (north of Greenwood Crescent) of the Action Area but safety factors, particularly for storm and flash run-offs which cannot be predicted accurately, and also land take aspects, make it a less favoured alternative.

(iii) pumping of surface water into Padgate Brook would require additional pump capacity to cater for storm and flash run-offs which would mean excessive costs and the risk of flooding in the event of a breakdown In the pumping system. 3.1.4 said that further investigations, together with costs involved would be made for above alternatives.

6.6 Minutes of the 11th Team Meeting - 4th April 1977 Paragraph 3.0 Drainage - Current Situation

> 3.1 A. McIntyre brought the team members up to date with the latest situation on surface water drainage of the western area. He had earlier sent a note to E.P. Jones regarding this and copies of the note are to be circulated to team members. Briefly the latest situation is:

> (i))that any increase in the current catchment of Mill Brook will exacerbate the flooding situation, due to high tides and adverse winds on the Mersey, in the Sankey/ Mill Brook area. This means that alternatives ii/a and iii/a suggested at the previous team meeting were no longer feasible.

(ii) the only other alternative would be pumping of the surface water into the Cinnamon Brow drainage system, but, because of excessive costs and likely breakdowns in the pumping system, this solution was not recommended.

(iii) in view of the above any development at all in the western part of PH [Peel Hall] did not seem possible and the area would have to remain under present, or a similar use which ruled out district park provision.

3.2 E.P. Jones said that the above presented a situation which was worse than had been envisaged before and this would have three obvious implications:

(i)departure from the Outline Plan proposals which had shown the area allocated for a district park.

(ii) review of District Park provision in the Padgate District and

(iii) alternate use/uses to which the said area could be assigned. In the case of (iii) the team members, after a lengthy discussion, agreed that the situation would have to be looked into carefully to seek a positive way of dealing with the area; to leave it in its present (agricultural) use could involve problems since the area will be subjected to great pressure from existing and future developments. A. McIntyre stated that, from run off point of view, uses like golf course, parkland would not constitute a 'similar' use but grazing land, urban farm, tree nursery, tree planting or allotments would. 6.7 Further to the series of team meetings which we refer to above a Planning Statement in respect of the Peel Hall site was eventually submitted for approval in April 1980 under Section 6(1) of the New Towns Act 1965. The Planning Statement covered all aspects of the site appraisal which had been carried out by the Peel Hall Action Area Team over the previous four years and the following extract clearly demonstrates how the development proposals were significantly scaled down over that period:

#### 2.0 Context

2.2 Although the proposals are also compatible with the Padgate District Area Plan, considerably less development is proposed now than envisaged in the DAP. The DAP envisaged a District Park and Linear Open Space of some 48 ha and a residential development of some 900 private and rented dwellings. In view, however, of mining, drainage and financial constraints the Submission proposals relate to the development of some 175 private dwellings and approximately 10.21 ha of open space. The remaining area will continue to be farmed.

6.8 Further to the above the following extract from the Planning Statement provides a clear and concise summary of the proposals for surface and foul water drainage for the Peel Hall site:

#### 5.0 Engineering Services

#### 5.2 Surface water drainage

Surface water drainage of the area is a present dependent upon natural features with the catchment draining southwards towards Spa Brook in the south-west and Black Brook in the south-east. Spa Brook has no spare capacity for any increase in flow.

5.3 Proposed surface water drainage from site A will be through the adjacent CB 20 housing site into Mill Brook/Black Brook and from site B southwards into Black Brook.

#### 5.4 Foul Water Drainage

A foul sewer exists alongside Blackbrook Avenue up to the location of the proposed petrol filling station and continues in a north-easterly direction alongside Black Brook/ Mill Brook. There is no foul sewer system serving Houghton Green Village. The foul sewer system in the Warrington Borough Council Development to the south of the area has no spare capacity. 5.5 Foul sewerage for site A will be provided through the adjacent CB20 housing site to connect with the existing sewer alongside Mill Brook. An outfall connection has been provided at the southeastern corner of the site.

6.9 The three sets of minutes and the Planning Statement referred to above are referred to collectively as Appendix C. This appendix has not been included in the body of this report, but instead it has been sent as a core document in pdf format with the title 'Appendices A,B and C'.

# 7.0 Discussion

- 7.1 The guidelines for the preparation of a site-specific flood risk assessment set out in Paragraph 5.2 above state that *'the information provided in the flood risk assessment should be credible and fit for purpose'*. The guidelines also say that *'a flood risk assessment should also be appropriate to the scale, nature and location of the development.'*
- 7.2 Having now completed our review we don't believe that either of the above statements can be applied to the appellant's current FRA when viewed alongside the site specific FRA checklist set out in Paragraph 5.3 above.
- 7.3 Firstly we would like to draw attention to the quality and content of the appellant's FRA itself. This document consists of just nine pages of text supported by five appendices. The text appears to be virtually the same as that contained in the appellant's original FRA from 2016 save for a number of additional paragraphs relating to a Water Framework Directive (WFD). The five appendices are exactly the same as those contained in the original 2016 FRA and they have simply been copied across from that report.
- 7.4 We have highlighted in Section 4 of this review that both the text and the appendices of the appellant's current FRA contain a substantial number of errors of a general nature including omissions, incorrect statements and out of date references.
- 7.5 It is also the case that the current FRA generally offers very little if any explanation in relation to much of the content of the appendices attached to the main document. In particular we would highlight foul and surface water run-off calculations with no supporting documentation and flood maps which have simply been abstracted from the EA website and attached to the main document, again without comment. There is also some evidence of a CCTV survey having been carried out at the western end of the site, but again there is no explanation as to why this was undertaken or what results were achieved.
- 7.6 The appendices also contain selected pages taken from two separate reports dated 2011 which appear to have been included in support of the current FRA. Once again however there is no clear explanation as to what their relevance is or why only a few pages of each document have been included in the appendices.
- 7.7 Finally on this issue we are concerned that the appellant continues to rely upon a document that was originally prepared over four years ago and has

remained virtually unchanged ever since. This is despite the fact that advice, procedures and legislation in respect of the appellant's proposals has continued to evolve to this day. In that respect Paragraph 4.2.1 of Warrington Borough Council's Local Flood Risk Management Strategy 2017-2023 highlights a number of documents that will inform the Local Planning Framework in relation to flood risk, as follows:

- Warrington Surface Water Management Plan (SWMP) 2012;
- Mersey Estuary Catchment Management Plan (CFMP) 2009;
- Strategic Flood Risk Assessment Level 2 (SFRA Level 2);
- Mid Mersey Water Cycle Strategy Study 2011;
- National Planning Policy Framework (NPPF) 2012.
- 7.8 It is noted that the appellant only refers to one of the above documents in support of his FRA, namely the SFRA Level 2 Assessment, and even then he has only included seven pages of this document in his submission.
- 7.9 Turning to the Peel Hall site itself then Section 4 of this review highlights a number of major issues in relation to the site and the surrounding catchments which simply haven't been addressed in the appellant's current FRA. These issues include:
- the ability or otherwise of the Spa Brook and other field ditches to discharge surface water run-off from the site
- the source of the Spa Brook upstream and the potential for flooding should local groundwater abstractions eventually cease
- the potential for flooding via the use of a long and fixed diameter existing culvert to discharge surface water at the downstream end of the site
- the potential for flooding across the site from existing groundwater discharge
- the location of two critical drainage areas immediately downstream from the site and the potential to cause additional flooding in these locations
- 7.10 In addition we note that the email from Mark Thewsey of the EA which we refer to in Section 4 of this review states that the Peel Hall site *'is generally a low lying parcel of land falling from a mounded ridge circa 17m AOD in the area of your 'Phase 1' down to about 10m AOD at the southern end where Spa Brook passes under Poplars Avenue.'*
- 7.11 We are aware from the site plans that the southern end of the site near to Poplars Avenue is the proposed location of the local centre which includes a new care home. The guidelines for the preparation of a site-specific flood risk assessment set out above in Paragraph 5.3.7 *Occupants and users of the development* state that *where appropriate, are you able to demonstrate how*

the occupants and users that may be more vulnerable to the impact of flooding (eg residents who will sleep in the building; people with health or mobility issues etc) will be located primarily in the parts of the building and site that are at lowest risk of flooding? If not, are there any overriding reasons why this approach is not being followed?'

- 7.12 Clearly the proposal to locate the care home in what is considered to be the lowest part of the Peel Hall site and adjacent to the Spa Brook goes very much against these guidelines. Hence we believe that this decision not only makes the care home more vulnerable to any future flooding in the area but also places the safety of its residents at greater risk.
- 7.13 Finally and perhaps most importantly we would point to the fact that the appellant's FRA makes no reference as to how flood risk at the site will be affected by climate change. Section 3.5.2 '*The impacts of climate change*' set out in Warrington Borough Council's Local Flood Risk Management Strategy 2017-2023 states that:

'Over the past century around the UK sea level rises have occurred and more of our winter rain falls in intense wet spells. Seasonal rainfall is highly variable. It seems to have decreased in summer and increased in winter, although winter amounts changed little in the last 50 years. Some of the changes might reflect natural variation; however the broad trends are in line with projections from climate models.

Greenhouse gas (GHG) levels in the atmosphere are likely to cause higher winter rainfall in future. Past GHG emissions mean some climate change is inevitable in the next 20-30 years.

Lower emissions could reduce the amount of climate change further into the future, but changes are still projected at least as far ahead as the 2080's. There is enough confidence in large scale climate models to say that Warrington Borough Council and the UK must plan for change.'

- 7.14 Flood events in 2019 and 2020 have made this a more prominent issue within the planning system and there have been policy changes. Climate change will make the situation more critical.
- 7.15 The UK has suffered over 20 major storm events over the past four years and February 2020 was the wettest on record in the UK. The development site is low lying and marshy and further urbanisation and increased run-off rates will lead to flooding on existing local roads and housing areas as well as the proposed development. Existing watercourses and ditches that the appellant proposes to utilise for the disposal of surface water connect to areas downstream that remain prone to flooding despite past flood alleviation works.

- 7.16 The appellant's FRA was carried out before the latest research from the Met Office on changed rainfall patterns was available and the report requires updating to look at how changed rainfall patterns due to climate change will impact on the two small brooks which he proposes to utilise to drain the development.
- 7.17 The UK weather is changing or has changed and the design rainfall event that needs to be accounted for also needs to change. The traditional use of historical records and the statistically derived data (often called Monte Carlo Modelling simulation) used to derive flows and flood levels cannot now be relied upon as the statistics of extreme rainfall and hence pluvial and fluvial flooding have changed.
- 7.18 The National Flood Resilience Review published by the UK Government in September 2016 was the first publication to identify that a new approach was necessary, but the original FRA report does not appear to have included an 'uplift' in rainfall levels. The climate emergency means many catchments routinely experience a 1:100-year flood every year making accounting for climate change imperative.
- 7.19 The FRA and the impact of the site on the local stream network needs to be reassessed against the most recent and relevant climate data available from the Met Office. This includes an assessment of the likelihood of groundwater flooding and the role played by watercourses bordering and running through the site.
- 7.20 Given the size of the proposed Peel Hall development and the scope and extent of the drainage issues that are all too apparent across the site then it is our contention that the information provided to date is not appropriate to the scale, nature and location of the development. As such we don't believe that the appellant's current FRA and appendices are credible and fit for purpose.
- 7.21 On the question of Warrington New Town's earlier development of the site then we believe that the information we recently received from the Cheshire Record Office clearly demonstrates the drainage problems that the site continues to pose. What started out as a major scheme to construct 900 residential properties for purchase and rental ended up as a much smaller project of some 175 houses which we see today on Ballater Drive.
- 7.22 As we know the appellant's current proposals are centred upon the use of Spa Brook to discharge surface water from the site. However as early as 1977 the Peel Hall Action Area Team dismissed the idea of using the Spa

Brook on the basis that 'Spa Brook has no spare capacity for any increase in flow.'

- 7.23 What followed was a lengthy review undertaken by the Action Area Team to find a solution to the drainage problems across the site which we have detailed in Section 6.
- 7.24 Eventually the Team concluded that there was no clear way ahead with respect to the site drainage and it was decided that the bulk of the site should remain as farmland. This decision removed over 700 programmed properties from the very same land where the appellant is now proposing to build 1200 additional properties.
- 7.25 Hence we believe that this is another very clear example of why the appellant's FRA in respect of the Peel Hall development is neither credible nor fit for purpose.

## 8.0 Closing Statement

The appellant's FRA has failed to demonstrate that the Peel Hall site can be adequately drained as part of the current planning application.

Vital issues such as the potential for the Spa Brook to flood should groundwater abstractions eventually cease have simply not been addressed, despite the fact that the appellant's representative was provided with this information in 2012.

Further, the unsubstantiated statements in the FRA regarding the use of the Spa Brook culvert as an outfall sewer for the proposed development are deeply concerning given that Warrington New Town concluded that Spa Brook has no spare capacity for any increase in flow. The FRA also fails to address flooding issues that might arise downstream of the Peel Hall site in areas already at risk from regular flood events.

There are many hundreds of residents who live in close proximity to the site whose properties might be put at greater risk of flooding as a result of the proposed development. Their welfare is paramount when it comes to making decisions about the Peel Hall site and yet their concerns have been completely ignored by the appellant's FRA.

For all of these reasons we don't believe that the current planning application provides sufficient evidence that the hydrology, drainage and flood risk at the Peel Hall site has been adequately assessed by the appellant.

Accordingly the Rule 6 group believes that appellant's FRA should be rejected as a formal submission and that the appeal against refusal to allow the Peel Hall site to be developed should again be turned down.

# Peel Hall

Application No. 2016/28492

Hydrology, Drainage and Flood Risk Assessment

Proof of Evidence Appendices

Appendix A - Environment Agency E-Mail

Appendix B - Densham Avenue Flood Alleviation Works

Appendix C - Warrington New Town Documents

Produced by David Sawyer for the Peel Hall Rule 6 Party



Appendix A - Environment Agency E-Mail

#### Halford, Alex

From: Sent: To: Subject: Thewsey, Mark 17 January 2012 16:10 Halford, Alex RE: 120109/NV08 - Peel Hall Farm, Warrington

#### Dear Alex,

Following on from your query this morning about soakaway drainage prospects in the vicinity of Peel Hall Farm Housing development at north Warrington:

Thank you for the location plan. It confirmed that it was indeed the development area I thought you were talking about, and therefore worthy of a word of warning about the expected ground conditions.

As indicated on the telephone, this is a generally low lying parcel of land falling from a mounded ridge circa 17m AOD in the area of your 'Phase 1' down to about 10m AOD at the southern end where Spa Brook passes under Poplars Avenue.

The superficial deposits here are generally very thin with surface sands above sandstone bedrock, with a laterally extensive but thin layer of intervening clay. Off site, this clay thickens significantly to the south.

To the north of the Motorway at a place called Spa Well, (Marked on OS maps) there used to rise a substantial spring which formed the commencement of Spa Well Brook that then flowed SW, and across your wider site area before passing under Poplars Ave and onward to ultimately join Sankey Brook.

This spring effectively stopped discharging during development of water gathering tunnels beneath for a public supply well extension in 1878, and thereafter the brook had very little dry weather flow in its head-waters. The watercourse from Spa Well to the present M62 thereafter became little more than an agricultural ditch.

Many decades after this artificial diminution in Spa Well flow took place, Spa Brook downstream of your site was incorporated into a culvert/piped drainage system beneath the expanding housing area of Hulme.

Historically, (since construction of the first of the bug public supply abstraction wells about 1868) local groundwater levels at/near you site have been controlled, usually well below surface, by the substantial public water supply abstractions made from the underlying sandstone.

From the mid 1990s, for operational reasons, there was a prolonged period of non- abstraction by the local groundwater pumping stations, allowing water levels to return to their historical 'natural' levels before abstraction recommenced on a smaller scale than before in 2008-9.

While thepumping stations were off, local groundwater levels quickly rose to surface in the low lying area to the North of the motorway, where the sandstone is either exposed or generally covered only by a thin veneer of sand. This gave rise to significant groundwater flooding in that area, probably made worse by the land having been also slightly lowered by mining in the 1960s to 1980s.

To the south of the motorway, despite the land being similar or even slightly lower along Spa Brook, this groundwater flooding problem did not seem to prevail to the same extent, or at least not so as to cause such an obvious problem. Upon investigation by desk study, it would seem that this lesser groundwater flooding problem was probably on account of a layer of clay developed here between the underlying same some single si

'Field drainage' of the superficial sand above this clay layer was probably helped by the presence of a few ormer agricultural land drains or ditches remaining in the fields that comprise your wider site.

At the time of the persistent high groundwater levels (Mid 1990s through to circa late 2000s when the local abstractions finally resumed) it struck me that any development perforating this thin clay mantle just below the surface, might initiate a significant outflow of water to surface from the underlying sandstone. As such I would suggest that development, or even site investigations that perforates this layer might cause a problem in the future if it is left unsealed. -7 S22 232

1

This would not only cause a risk of groundwater discharge and flooding on site, but may perhaps exacerbate any limitations in the capacity of the now culverted Spa Brook downstream. (NB I do not know if there are any such limitations, but I am mindful that when the culvert was built, the flow would have been much less than historical norm, and of course the catchment has since been largely built over with substantial paved areas.)

At present, the local groundwater abstractions are active again, but on a much smaller scale than in the past. There is no guarantee that they would always keep operating, and there is certainly no obligation upon them to do so.

As such, it seems only fair to warn you of the potential drainage difficulties or risks that may prevail on this site especially in the lower lying areas where the potential for groundwater discharge is greatest, especially if the excavations should pierce the thin clay layer.

Fortunately the superficial deposits across this site are already well characterised by many logs drilled in the late 1970s (Available from British Geological Survey) but it is important to be aware that any water level details on those logs will not be representative of the much higher levels that were achieved between 1996 and 2008 ... and which may be achieved again from time to time in the future.

I should also point out that the higher ground in the vicinity of your Phase 1 area probably makes that part of the site relatively immune to this problem, which is probably the best of the good news that I can offer.

As far as soakaway prospects are concerned: Beware misleadingly favourable groundwater levels in site investigations done either before 1996 or since 2008 up to the present. If you have groundwater level data obtained circa 1997 to 2007, then that is probably reasonably representative of the high 'natural' groundwater levels.

Soakaway drainage from roads etc should be collected through trapped gullies to percolating granular infiltration in the unsaturated soil zone, and not discharged directly into deeper soakaways that may by-pass some or all of the unsaturated zone or the attenuating properties of the soils. The amount of unsaturated zone necessary to prevent a soakaway 'drowning out' will depend upon a combination of the ground soakage properties, and how much soakage you are trying to achieve in a given area. Solutions may present in the form of detention capacity between collection and percolating soakaway, or by increasing the soakage area if availability of land allows. In this locality, drainage towards low ground is more likely to run up against problems of drowning out,

#### IN SUMMARY:

The low lying parts of the site may be vulnerable to a very high water table or even groundwater flooding, and may therefore be unsuitable for soakage.

If any attempts are made to excavate deep soakaways in the lower lying parts of the site, which is a practice that the EA normally resists anyway for anything other than clean, non-industrial roof-water soakaways, (because of the risk of direct discharge of pollutants such as fuels, herbicides, pesticides, and de-icing agents etc) then there may be a significant risk that from time to time these would be prone to drown out or even cause artesian discharge, which may result as a result of 'Groundwater Flooding' events when local abstractions stop.

Groundwater levels in the underlying sandstone aquifer of this locality are naturally inclined to be circa 10m to 13.5 mAOD or thereabouts, although they are often suppressed by artificial abstraction activity. It is suggested that any site investigation groundwater level data should be read in the context of where it fits in with these potentially significant changes over time.

I hope this information proves helpful, and saves the development from the possibility of considerable expense or inconvenience in the future.

Yours Sincerely, M Thewsey

2012,20610

From: Halford, Alex Sent: 17 January 2012 09:52 To: Thewsey, Mark Subject: Ref: 120109/NV08 - Peel Hall Farm, Warrington

- 7 SEP 2812

Appendix B - Densham Avenue Flood Alleviation Works
## **Case Studies**



## **Densham Avenue Flood Alleviation Scheme**

#### About the project

DWM Plant Limited were employed by Harry Fairclough to undertake works on a logistically challenged scheme for Warrington borough council. Sever flooding on a residential estate required urgent attention to prevent a reoccurrence of previous floods from 2008. A scheme was designed to provide attenuation for storm water during period of heavy rainfall.



### **Our service**

Due to the design and build nature of the contract and with input from Sheet Pile Solutions Ltd, at conception stage, several options were considered, ranging from permanent sheet piled structure, RFC storage tank, and segmental shafts, however the scheme to be adopted was a 2.8m diameter Tubosider tank system. During the evaluation process of the tender consideration about the logistical aspects had to be considered predominantly the single access to the site through a 3.0m wide access, this would mean that all deliveries of plant and temporary works equipment, excavated material to be disposed of and suitable backfill material to be imported, all within a residential estate.

Due to the ground conditions consisting of medium dense sands, and a high water table 1.0m below ground level. A robust temporary works solutions would be required, this consisted of 9.0m long L604 sheet piles (250No) and a 406\*406 heavy duty bracing system, attention had to be made in choice of piling equipment given to close proximity of residential houses, DWM Plant Ltd used a RTG RG16 telescopic leader rig c/w variable moment vibratory hammer to install the piles without disruption to the local resi-

#### About Us

Our company has been formed to provide a single point of contact for a full range of services in association with below ground construction. Trading as DWM Plant Limited, we offer nationwide coverage from our operating base in Manchester. DWM Plant Limited has over 15 years' experience and trading history in the construction industry, from its origins in plant hire and pipeline construction to more recent contracts including groundwork and external works packages.

If you have any questions about this case study or would like to discuss your own proposal, please contact us via the details below. Appendix C - Warrington New Town Documents

B. LANGFORD SCAO

#### PEEL HALL ACTION AREA PLAN - PAS

Minutes of the 3rd Team Meeting held at 2:00 P.M., on Monday, 6 September 1976 in Room 261, New Town House.

PRESENT:

E. P. Jones (Convener) B. Kar M. Burgess

- P. Goulder
- H. Phillipson
- P. Lloyd
- APOLOGIES:
- P. Hodgson

K. Pimm

Planning • Planning Estates Landscape Engineers Finance

Architects Social Development

ACTION

#### 1.0 MINUTES OF THE LAST TEAM MEETING

Confirmed.

- 2.0 MATTERS ARISING
- 2.1 Work Programme and DCB.

2.1.1 Copies of the revised Work Programme and Brief from the DAP Team were circulated to team members and the following corrections in the programme were noted:

Draft Board Report to DCOC	- 10	February 1977
COC	- 7	March 1977 All
Report to Board	- 29	March 1977
Formal S6(1) Submission	-	July 1977

- 2.1.2 Appendix 'D' in the Brief will be circulated EPJ/ separately. BK
- 2.1.3 DCB to be prepared on the basis of the Work Programme covering 1st team meeting to S6(1) Board Submission period. Draft DCB to be All circulated to team members by the end of the EPJ week and the final one to be presented to DCOC on 26 September for approval. Inputs re EPJ Urban Design aspects will be covered within CAPO's Department.

#### 2.

#### 3.0 SPECIAL STUDIES

#### 3.1 Mining

H. Phillipson explained the various aspects on the likely patterns and phasing of mining operations. He would be circulating a Team Note on this. B. Kar to supply a copy of the 1:5000 base map of the Action Area.

#### 3.2 Drainage

H. Phillipson,

- (i) indicated from a drawing the limit of the area (east of Radley Plantation) which could be drained by gravity to Cinnamon Brow drainage system. The area amounts almost to the residential area requirement in the DAP brief.
- (ii) said that there did not seem to be any spare capacity in other existing drainage system (Orford) to cater for PA5 area west of Radley Plantation. Both foul and surface water would have to be pumped into CB drainage for substantial residential development west of Radley Plantation.
- (iii) explained the proposal of routing main drainage to the south of the Action Area because the effects due to mining are likely to be less here than in the north. The team discussed the physical and financial aspects of the proposals HP/ wich would be considered further in view of BK/ Action Area Plan development options. PL

#### 3.3 Ground Conditions

H. Phillipson said that a report, along with drawings would be available soon.

ΗP

MB

#### 3.4 Landscape Appraisal

P. Goulder said that this would be available by the end PG of the week. B. Kar to prepare a note requesting information on the actual facilities to be provided and the final formal/informal split in the District Park from I. Parkin. 'District Park' to be included as Item 3.7 under 3.0 (Special Studies) in the Work Programme Check List.

#### 3.5 Land Ownership

M. Burgess tabled drawing showing details of land ownership and schedules on acquisition costs and tenancies. Copies of these to be made available to P. Lloyd and B. Kar.

HP

BK

B. LANGFORD 49.03 2062 10

#### PEEL HALL ACTION AREA PLAN - PA5

Minutes of the 9th Team Meeting held at 2:00 P.M., on Monday, 7 February 1977 in Room 160, New Town House.

TI:	E. P. Jones	(Convener)
	B. Kar	
	K. Pimm	
	D. McNicholl	
	A. McIntyre	(Item 3.0)
	P. Lloyd	

P. Goulder

G. Dickenson

M. Burgess (part)

Planning Planning Architects Engineers Engineers Finance Landscape Social Development Estates

ACTION

#### 1.0 MINUTES OF THE LAST TEAM MEETING

Confirmed.

- 2.0 MATTERS ARISING
- 2.1 DCB

E. P. Jones informed the team that the DCB for Engineering inputs (February to July 1977) had been received and total expenditure to end of December 1976 amounted to 22%.

- DRAINAGE 3.0
- 3.1 With reference to Drawing No. HG87/300, A.McIntyre;
  - 3.1.1 indicat 1 extent of the area that could be drained by gravity west of the proposed surface water sewer. He would send a copy of the drawing, showing approximate invert AM/ levels of the proposed sewer, to B. Kar. DM To K. Pimm's query, he agreed that the water shed line would need to be updated in view AM/ of latest mining situation. DM
  - 3.1.2 said that in order to increase the amount of developable land an area (shown yellow) had been identified where pumping of surface water would be required. D. McNicholl suggested that in view of suspect ground conditions in the area if an alternate area could be identified near Peel Hall. A.McIntyre AM/ to look into this together with costs involved. DM It was also suggested that the developable area could be increased by raising, wherever feasible, KP/ existing ground level west of the proposed sewer BK by up to perhaps a metre.

- 3.1.3 reported on the preliminary investigations carried out regarding alternatives suggested at the last team meeting for drainage of surface water for the area west of the water shed line:
  - (i) recording improvements to existing drainage systems to carry extra flows there was no spare capacity in Spa Brook. The only possibility, for a gravity system, could be the spare capacity of about 10 ha of developable land, or 20 ha of playing fields, in Dallam Brook but a new outfall sewer from the proposed developments. (housing and playing fields) would be required as improvements to existing culvert to take additional run offs did not seem possible.
  - (ii) use of balancing reserveir/ dry lake would mean construction of a dam at the south-west corner (north of Greenwood Crescent) of the Action Area but safety factors, particularly for storm and flash run offs, which cannot be predicted accurately, and also land-type aspects, make it a less favoured alternative.
  - (iii) pumping of surface water into Padgate Brook would require additional pump capacity to cater for storm and flash run offs which would an excessive costs and the risk of flooding in the event of a breakdown in the pumping system.
- 3.1.4 said that further investigations, together with costs involved would be made for above AM/ alternatives. DM
- 3.2 A. McIntyre suggested that since pumping of foul water from the proposed pavillion (and possible housing) west of the water shed line would be necessary, it would be desirable to locate these elements as near as possible to the proposed foul AM/ sewer. D. McNicholl suggested that the relatively DM/ small amount of surface water from the proposed PG/ pavillior could be combined with foul water drainage. BK
- 3.3 P. Goulder undertook to look into the possibilities, including cost implications, of providing a pervious base, like a sand/cinder bed to proposed pitches in order to control run offs.
- 3.4 With reference to AAP Work Programme, E. P. Jones said that in view of drainage problems, which had proved more complicated to resolve than had initially been

PG

#### PEEL HALL ACTION AREA PLAN - PA5

Minutes of the 11th Team Meeting held from 2.00 pm to 4.30 pm, on Monday 4th April 1977 in Room G151 New Town House.

PRESENT: E P Jones (Convener) B Kar D McNicholl A McIntyre R Maxwell (for P Lloyd) P Goulder G Dickenson

Engineers Finance Landscape Social Development

Planning

Planning

Engineers

APOLOGIES: K A L Pimm Architects Estates M Burgess

ACTION

2062 11

#### 1.0 MINUTES OF THE LAST TEAM MEETING

- 1.1 Confirmed
- 2.0 MATTERS ARISING
- 2.1 E. P. Jones reported that 34% of the total budget had been spent upto the end of February 1977. This indicated an underspending - by all departments - by about 16%

#### 3.0 DRAINAGE - CURRENT SITUATION

- 3.1 A. McIntyre brought the team members up to date with the latest situation on surface water drainage of the western area. He had earlier sent a noteto E. P. Jones regarding this and copies of the note are to be circulated to team members. Briefly, the latest situation is:
  - (i) that any increase in the current catchment of Mill Brook will exacerbate the flooding situation, due to high tides and adverse winds on the Mersey, in the Sankey/Mill Brook area. This means that alternatives ii/a and iii/a suggested at the previous team meeting were no longer feasible.
  - (ii) The only other alternative would be pumping of the surface water into the Cinnamon Brow drainage system, but, because of excessive costs and likely breakdowns in the pumping system, this solution was not recommended.
  - (iii) In view of the above any development at all in the western part of PH did not seem possible and the area would have to remain under present, or a similar use which ruled out district park provision.

ALL

## ALL

ALL

AM/ BK

- 3.2 E. P. Jones said that the above presented a situation which was worst than had been envisaged before and this would have three obvious implications:
  - i, departure from the Outline Plan proposals which had shown the area allocated for a District Park,
  - ii, review of District Park provision in the Padgate District and(iii) alternate use/uses to which the said area could be assigned. In the case of (iii), the team members, after a lengthy discussion, agreed that the situation would have to be looked into carefully to seek a positive way of dealing with the area; to leave it in its present (agricultural) use could involve problems since the area will be subjected to great pressure from existing and future developments. A. McIntyre stated that, from run-off point of view, uses like golf course, parkland would not constitute a "similar" use but grazing land, urban farm, tree ALL nursery, tree planting or allotments would.

#### 4.0 NAZ HOUSING

- 4.1 A. McIntyre reported that C.C.C. ad not yet confirmed the change in the estimated (1973) traffic volumes on M62.
- 4.2 To BKar's query A. McIntyre said that in view of new volumes the NAZ would not necessarily be reduced uniformly by 15m. A proper contour would be located after confirmation of the new volumes by C.C.C.

#### 5.0 DEVELOPABLE LAND - OPTIONS

- 5.1 Development of the eastern part of the Action Area did not pose any problems so far as drainage was concerned. It was agreed by the team members that the area shown yellow (unhatched) on drawing HGS1/300 should be excluded in view of complicated drainage proposals.
- 5.2 The team members discussed whether whole or part of the eastern part of the Action Area should be developed to achieve a maximum return on the infrastructure provision that would already be available to open in the Action Area - i.e. the DDR and main drainage - and it was agreed that the following options need to be appraised financially:
- (i) The very minimum area i.e. developing gap sites in Houghton Green Village. These sites could be drained into Houghton Green Village improved drainage system to be undertaken by WBC.
- (ii) Developing areas as in (i) plus about 10 to 12ha of land to accommodate 350 dwellings. T is would involve the very minimum road length from the DDR roundabout and drainage would be linked to Phase II CB drainage.

.

DM/AM

BK

ALL

RM/BK

#### PLANNING STATEMENT

#### 1.0 INTRODUCTION

- 1.1 The Development Corporation proposes the development of some 18.93 ha of land in the Padgate District, principally for residential development and open space uses. The area, referenced PA5.1, lies within the Parishes of Winwick and Poulton-with-Fearnhead.
- 1.2 The development of Cinnamon Brow immediately to the east mainly for houses for sale is progressing rapidly. Approval of these proposals is urgently required in order to sustain the highly successful marketing of private housing in this part of the New Town. The development is considered to be physically and economically attractive as it represents a "rounding off" of Cinnamon Brow and utilises infrastructure already built.

#### 2.0 CONTEXT

- 2.1 The proposals are compatible with the WNTDC's Outline Plan which was accepted, with certain minor modifications, by the Secretary of State for the Environment on 25 June 1973. None of the modifications apply to the submission area.
- 2.2 Although the proposals are also compatible with the Padgate District Area Plan, considerably less development is proposed now than envisaged in the DAP. The DAP envisaged a District Park and Linear Open Space of some 48 ha and a residential development of some 900 private and rented dwellings. In view, however, of mining, drainage and financial constraints the Submission proposals relate to the development of some 175 private dwellings and approximately 10.21 ha of open space. The remaining area will continue to be farmed.

#### 4.8 Footpaths

Main and secondary footpaths outside the new residential areas will link the proposed development to Cinnamon Brow, Houghton Green Village and the WBC housing to the south.

#### 4.9 Public Transport

Buses serve the nearby areas of Cinnamon Brow, Houghton Green Village and WBC housing areas. It may be possible to extend a service into Peel Hall.

#### 4.10 Buffer Zone

A buffer zone of 10 m (average) width is proposed outside the limits of the western verge to Blackbrook Avenue (DDR) to be incorporated in a comprehensive landscape scheme for the DDR.

## 5.0 ENGINEERING SERVICES

#### 5.1 Public Utilities

Public utilities will be available when required.

#### 5.2 Surface Water Drainage

The surface water drainage of the area is at present dependent upon natural features with the catchment draining southwards to Spa Brook in the south-west and Black Brook in the southeast. Spa Brook has no spare capacity for any increase in flow.

5.3 Proposed surface water drainage from site 'A' will be through the adjacent CB2O housing site into Mill Brook/Black Brook and from site 'B' southwards into Black Brook.

#### 5.4 Foul Water Drainage

A foul sewer exists alongside Blackbrook Avenue up to the location of the proposed petrol

filling station and continues in a northeasterly direction alongside Black Brook/Mill Brook. There is no foul sewer system serving Houghton Green Village. The foul sewer system in the Warrington Borough Council development to the south of the area has no spare capacity.

5.5 Foul sewerage for site 'A' will be provided through the adjacent CB20 housing site to connect with the existing sewer alongside Mill Brook. An outfall connection has been provided for site 'B' at the southeastern corner of the site.

#### 6.0 PHASING

- 6.1 The development of infrastructure and housing should take place within the 'mining window' which is currently seen as extending to the Financial Year 1984/1985. The current Private Housing Programme envisages house construction from May 1981.
- 6.2 Open space implementation, which is less sensitive to mining constraints, is phased over 4 years starting in 1981/1982. Initial works will be mainly concentrated to the south.

#### 7.0 CONSULTATIONS

7.1 The following bodies and organisations have been consulted informally:

Cheshire County Council Warrington Borough Council Winwick Parish Council Poulton-with-Fearnhead Parish Council Public Utilities Undertakers Public Transport Authorities National Coal Board North West Water Authority Department of the Environment

- New Towns Division
- Regional Controller, Highways & Transportation



## Proof of Evidence Vol 6 – Climate Change

Produced by Peter Black Rule 6 Party Peel Hall - APP/ M0655/W/17/3178530

## Contents

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## 0 Proof of Evidence – Climate Change

## 1 Personal Details

1.1 I am Peter Black, a Chartered Town Planner with experience of over 20 years in town planning, transport, climate change and sustainable development. I served as an elected Councillor in Warrington 1995-2001 and am familiar with the site.

## 2 Scope of Evidence

2.1 This evidence covers climate change and why the current planned development will increase climate change gas emissions contrary to central and local Government policy. It explores an alternative that would create a sustainable development that reduces emissions.

## 3 Introduction

- 3.1 David Attenborough 'We are facing a man-made disaster on a global scale. Right now, we are facing our greatest threat in thousands of years. Climate change. Scientists across the globe are in no doubt that at the current rate of warming we risk a devastating future. The science is now clear that urgent action is needed. What can be done to avert disaster and ensure the survival of our civilisations and the natural world upon which we depend?'
- 3.2 One of the three NPPF overarching objectives includes '... mitigating and adapting to climate change, including moving to a low carbon economy.'
- 3.2 Since the original planning application was made, and since the initial Public Inquiry the world has moved on:
  - Parliament declared a Climate Change Emergency in May 2019
  - Government has made many commitments and policy decisions on climate change
  - Warrington Borough Council declared a Climate Change Emergency in 2019
- 3.3 These are serious developments to tackle a serious situation. Wiki defines an emergency as 'a situation that poses an immediate risk to health, life, property, or environment. Most emergencies require urgent intervention to prevent a worsening of the situation'.
- 3.4 The Court of Appeal ruled in February 2020 that the Government unlawfully ignored the UK's climate commitments. While this related to a 3<sup>rd</sup> runway at Heathrow, the decision has implications for planning decisions across the UK, including Peel Hall.
- 3.5 Transport was the largest emitting sector of UK greenhouse gas emissions in 2018 (28%), much arising from personal car journeys. Reductions since 1990 have been negligible (3%). We must change the way we travel; new communities must not be car dependent. It means careful consideration of where new development is located, and how we design new communities.
- 3.6 The car-dependent urban sprawl proposed at Peel Hall does not meet new tests on climate change that are required by recent policy developments and Court decisions. We think there are potential forms of development including on the Peel Hall site that make best use of land that meet the terms of an 'Emergency' as declared by the UK Parliament.
- 3.7 While this proof focusses on transport climate change emissions, the development aspires to the lowest legal standard for building emissions there is no mention of district heating, renewable energy generation or anything else that would reduce emissions.

## Page 2 of 7 Climate Change Main Proof of Evidence - Peel Hall Action Group - 3178531

## 4 Warrington

- 4.1 In Warrington car traffic increased by about 8% from 2000 to 2015, but cycling dropped as a proportion of travel to work from 3.5 to 2.8% about 20%, and in absolute terms by 12%. Fewer people walk compared to either northwest or national averages, and the trend is towards less walking. Bus use declined precipitously by 43% (from 11.5 to 6.6 million journeys) in the five years to 2016. Only 10% of Warrington's residents use active travel to get to work. This is far lower than the national average and other New Towns (50% lower than Peterborough at 15%).
- 4.2 In 2016, road transport created 37% of CO<sub>2</sub> emissions in Warrington. The only possible conclusion is that Warrington has a sustainable travel crisis., and that this has fuelled the emission of climate change gases in Warrington.
- 4.3 Traffic dominance brings many issues apart from climate change:
  - **Obesity and other health issues**. Hospital admissions where obesity was a factor is increasing at health clinics. In Warrington schools over 20% of reception and 30% of Year 6 children were overweight and obese. This is a shocking inditement of the lack of opportunities for and promotion of active travel in Warrington housing developments.
  - Local Air pollution is the top UK environmental risk to human health, and the greatest threat to public health in Warrington after cancer, heart disease and obesity (all worsened by car dependency). It shortens lifespans and damages quality of life. The Warrington AQAP requires over 40% reductions in motorway and town AQMAs. Poor air quality caused by car-dependency leads to several hundred additional deaths in Warrington every year.
  - Accessibility For those without access to a car, the dominance of vehicular traffic makes it much harder to get around, deters journeys and reduces quality of life.
- 4.4 Opportunities for sustainable travel in the Peel Hall area are sparse, so existing residents are car dependent. Car commuting is high and increasing. Other options are unviable:
  - Bus: services are limited, infrequent, expensive, and their use is declining.
  - **Rail**: Birchwood, Warrington BQ/Central and Newton-le-Willows all involve a slow, unreliable bus, or a car/taxi access journey; cycling to stations is indirect, inconvenient, and dangerous.
  - **Cycle**: Almost no safe or convenient cycling routes anywhere in the area. Traffic dominance makes cycling unpleasant; major roads are a huge physical and psychological barrier.
  - **Walk**: Traffic dominance makes walking generally unattractive. Many routes and pavements are not suitable for those with mobility needs including mobility scooters and prams.

## 5 Peel Hall – proposed development

- 5.1 The overall development at Peel Hall proposes 1,200 units on 69 hectares an average density of about 17 homes per hectare. This is a low density even by the low standards of volume builder speculative estates and is hugely wasteful of land.
- 5.2 The current parameters plan suggests a layout along a spine road that is easy to access by car, and easy to reach major Motorways that would be constructed for vehicles, not people.
- 5.3 Other proofs highlights the inadequacy and temporary nature of bus provision. As Warrington bus use has almost halved in six years, it stretches credibility to think that the modest, tortuous, slow bus route proposed will attract new residents to public transport.

- 5.4 Rail use is suggested via Birchwood or Warrington Central. These would all involve a slow, unreliable bus journey. Any Car/taxi access journeys would add to local congestion and danger. Parking at stations is limited. Cycling to these stations would be indirect, inconvenient, and dangerous as no improvements are proposed to cycle routes off-site.
- 5.5 The estate layout will be dominated by cars. Cycle and pedestrian provision is derisory and even if residents could get off Peel Hall safely, cycle and walking provision in Warrington is largely non-existent. It is hard to see anyone walking or cycling along the A49 by choice.
- 5.6 Overall, it would be hard to find a site in Warrington that was worse for encouraging public transport, walking, or cycling.
- 5.7 Almost all journeys outside the estate and most within will be by private car or taxi with associated problems of congestion, poor heath (both from lack of exercise and air pollution) and increasing climate change gas emissions. This applicant has been unable to demonstrate that there will not be chaos on the local road network.
- 5.8 The appellant has not provided any figures on climate change gas generation by the development for transport or for the development when occupied. The Environmental Statement does not make a single reference to climate change apart from a quote from NPPF on the importance of climate change which is then ignored.
- 5.9 The estate and associated transport demand will be a significant emitter of carbon dioxide which goes against local and national policy and declared Climate Change Emergencies.

## 6 An alternative future

- 6.1 There is a clear alternative. The dominant form of urban development in northern Europe is the 'compact city' model. This produces much higher densities (typically 60 to 100 dph), usually in dwellings with a larger floorspace than typical UK dwellings. This allows viable concentrations of both city and local services with the potential to provide both fixed public transport links and high quality, attractive and convenient walking and cycling links. Communities have much lower car use, accessibility is improved for most people, not just individuals with access to a car. As a result, compact cities enjoy a much higher quality of life.
- 6.2 Examples of 'Compact City' development are seen in the UK, for instance at Cambridge North. Entries for the Wolfson Economic Prize 2014 showed that high housing densities were compatible with a garden city atmosphere. The Shelter entry for the Hoo Peninsula gave 15,000 dwellings at 30 – 90 dph (average 60 dph\_. This included 40% open space and 37% affordable housing. I have studied examples, for instance Freiburg (Germany) – see appendix and Ypenburg (Netherlands) that provide high quality housing but low carbon emissions.
- 6.3 Ghent (comparable to Warrington) created a car free centre to tackle traffic jams, pedestrian and cyclist safety, climate change gas emissions and air quality, and to improve town centre viability. Over just two years, the results were 30% less accidents, 15% more users for bus & tram and 27% more cyclists. This meant a substantial reduction in climate change emissions.
- 6.4 To the east of Warrington, Greater Manchester aspires to be 'carbon neutral and accommodate all growth to 2035 without any additional car journeys. They have a clear strategy for effective delivery of a public transport, cycling and walking network that makes active travel a viable choice.

- 6.5 Sustainability means building in locations that are well-placed for high quality public transport and good local facilities and have a genuine potential for high levels of walk and cycling.
  - High quality public transport frequent rail-based or other quality mass transit, not just a couple of buses an hour with a slightly improved bus stop.
  - Developments that are built around walking and cycling, not around a road with car parking.
  - Local facilities mean the full range of shopping, leisure, and education, not an estate with a supermarket like Chapelford in West Warrington.
  - Developments are dense enough to make it viable to provide the walking and cycling routes, public transport and local facilities that are required.
- 6.6 Housing densities are critical. They are a key factor in increasing sustainability and reducing energy use. If more people are housed in the same area, then sustainable transport facilities become viable. The need for travel is reduced and high-quality walking and cycling routes can be provided and a much higher standard of public transport can be supported with lower subsidy and cheaper fares. Car dependency, noise and severance are reduced and air quality improved. Space that would have been used by roads and parked cars is available for people.
- 6.7 We think that new housing development should be concentrated in areas of existing or potential high public transport accessibility, and at densities that encourage walking and cycling. The current low-density sprawl proposed for this greenfield site cannot be effectively served by non-car-based modes, and we should not pretend that it can be.
- 6.8 A solution is to consult with the local community to agree the scale and density of housing to be built on Peel Hall, and for this to be significantly less than the proposal. Higher density accommodation could then be developed in or near the town centre, where public transport links are present. The majority of the Peel Hall site would then be developed as a Forest Park as a 'Great Green Lung' for north Warrington. The area would be a massive carbon sink that would mean the site helps in the fight against climate change rather than accelerating it. This would also benefit the local population, which suffers the effects of poor air quality on a daily basis.

## 7 Conclusion

- 7.1 **Climate change** is the biggest problem facing the world. Transport contributes almost 40% of CO2 emissions in Warrington. The climate change, environmental and obesity crises fuelled by car dependency in towns like Warrington exist now. We can already see similar towns where land-use planning and appeal decisions have reduced the need to travel, where public transport, walking and cycling are high quality and normal and where transport emissions and the health of local communities are far better than Warrington.
- 7.2 Cars, taxis and Lorries are not energy efficient and we cannot encourage unrestrained use. We know that bold steps are needed to make our development patterns more sustainable. We are facing major, irreversible climate change if we do not make significant changes as well as the public health challenge and costs from car dependency and lack of active travel.
- 7.3 Central Government and local government in Warrington are agreed there is a Climate Change Emergency. A **'situation that poses an immediate risk to health, life, property, or environment.'** This emergency requires urgent intervention.

7.4 The Peel Hall proposal is oblivious to the well-documented threat of climate change. It will be low-density sprawl that will not only encourage travel but will encourage travel by private vehicles that are largely responsible for the inability of the transport sector to cut climate change gas emissions.

End of main document.

## 8 Appendix – Good European practice<sup>1</sup> – Freiburg, Germany

- 8.1 Freiburg is a small city of 230,000 people (comparable to Warrington) which builds around 1,000 houses a year. Although Germany doesn't have formal Green Belt, outward expansion of Freiburg is constrained by strict landscape designations. Housing growth has been concentrated in redevelopment areas 1-2 miles from the town centre. A typical suburb is Vauban, on a former military base 3km from the centre (very similar to the former RAF Burtonwood base in Warrington). Built 2000-10 it houses 5,000 people in 2,000 new dwellings with 600 jobs at a net density of 95 dph, mainly in human-scale 4 and 5 storey buildings with no high-rise blocks. Public transport and cycle use are both high and car use low. There are some local shops and a cafe, but as it takes 10 minutes either to cycle or take public transport to the centre, most people use central facilities. Despite the high density for a suburb, the quality of life is high, energy use and costs are low, and Freiburg is often cited as 'Germany's happiest city'. Warrington could choose this type of development too.
- 8.2 Freiburg is a good example of what is called a 'compact city'. There are numerous examples particularly in the Netherlands (Randstaat) and Germany where compact city development has created popular, high quality living which makes best use of land.

End of appendix

<sup>&</sup>lt;sup>1</sup> Personal experience – Peter Black visited Freiburg in 2017 and has extensive experience of other European developments.



# Proof of Evidence Vol 7 – Ecology

Produced by Geoff Settle Rule 6 Party Peel Hall - APP/ M0655/W/17/3178530

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## 0 Peel Hall – Proof of Evidence - Ecology

## 1 Personal Details

1.1 My name is Geoff Settle. I appear on behalf of the Rule 6 Party, I have lived in the area for 36 years at **Settle Party** and I was a ward councillor between 2010 & 2016. I have a degree in Geography and Economics, served on both the Mersey Gateway Environmental Trust and Mersey Forest and for the last 10 years I have chaired the Warrington Nature Conservation Forum.

## 2 Scope of Evidence

- 2.1 This proof covers wildlife and biodiversity. In May 2019, a UN report declared that human activity is causing an unprecedented decline in biodiversity, with more than a million species across the planet threatened with extinction. I will cover why wildlife and biodiversity are important in general and specifically to the people of north Warrington including how Covid-19 has revealed exactly how nature enhances physical health and mental well-being.
- 2.2 I will cover how the applicant has treated wildlife over several decades, but how despite this, the site contains a lot of wildlife despite the active mismanagement.
- 2.3 I will discuss the requirement for net environmental gain and how the proposals measure up and consider both on-site change and off-site mitigation measures.

## 3 The last great green wild space of Warrington

- 3.1 Peel Hall is a large site and is known as the "last great green wild space of North Warrington". Local people spend their leisure time there enjoying the wildlife and habitat, walk, or run or ride horses across the fields. It is a place where they have gone to relax and improve their mental health and wellbeing for decades.
- 3.2 The landscape consists of a tapestry of woods, ponds, hedges, and grassland that is surrounded by the busy M62 and A49 to the north and dense housing around the rest of the area. It is the last remaining example of the way the landscape use to be in North Warrington. It has huge potential as the lung of north Warrington.
- 3.3 The recent coronavirus (COVID-19) pandemic has demonstrated the benefits of Peel Hall because during lockdown hundreds more people were out and about using the footpaths and wild areas they have trodden over many decades. When the landowner ploughed up the footpaths in April 2020 – at the height at the Covid-19 pandemic there was outrage. Perplexed, saddened, and angered people immediately began re-establishing what they consider as their paths. They even asked if the paths could be considered for inclusion on the rights of way definitive map so that the footpaths could receive some protection.
- 3.4 People posted their feelings about what the paths and place meant to them on Facebook pages with moving testimonies and photographs of the wildlife they saw (Appendix A). Photographs included foxes, raptors (birds of prey), herons, and wetland features. Many people on their walks noticed things they had not seen before.
- 3.5 Jean Hall said 'I have been on furlough from work and would have gone stir crazy had it not been for walking my dog every day across Peel Hall. It helps clear my head listening to the sounds of nature. Shame its been ploughed over though'.

## Page 2 of 8 Ecology Proof of Evidence - Peel Hall Action Group - 3178531

- 3.6 Sammy Dobson said "I'm struggling to comment as it's so upsetting to think it might all disappear, 😥 I can spend hours just watching the bird life, buzzards, kestrel, sparrow hawk, and the last 5yrs a sky lark which has now GONE."
- 3.7 The Environmental Bill states that "people care about wildlife in its own right' and that 'our ecosystems and their component species plays a vital role in climate change mitigation, by removing, trapping and storing carbon, as well as in pollination, flood alleviation, and public health and wellbeing.' All these considerations apply to Peel Hall
- 3.8 Local people can and certainly do relate to these comments, aims and objectives.

## 4 Site Land Management and current wildlife value

- 4.1 Although poorly drained, the site has a long farming history. There is evidence of a Medieval Moat at Peel Hall that was unearthed during an exploratory dig in 2001 by Lancaster University Archaeological Unit. Cheshire Archaeology Planning Advisory Service have stated that **Peel Hall moat** is of County Interest (Appendix B) and no development should take place within the area until a programme of archaeological work has been secured.
- 4.2 Very soon after the current owner acquired the site farming ceased, and fields were abandoned as the applicant had no interest in land or wildlife, just the profit they could make from development. There have been three or four occasions when machinery has been brought on to spray the land and turn it over without any benefit to nature and simply to destroy any wildlife value that might reduce development profits. The applicant has no interest in wildlife or the local community.
- 4.3 In 1999 the developer cleared the fields of self-seeded saplings and bushes that had taken root, flourished, and were developing into woodland. The greenery was put into piles and set alight and the smoke from the fires billowed across the M62 causing motorists all sort of problems. A fire appliance was called out to extinguish the fires.
- 4.4 During the bird nesting season of 2016/17, the land was sprayed and as recently as April 2020 the fields were ploughed but not in preparation for any planting. Just to stop people using the land. And this, despite the worst peacetime emergency we have ever faced, when people needed to exercise and get out into the countryside for their well-being.
- 4.5 The spraying operation was filmed by a drone showing what appears to be a ground nesting bird flying down to its nest in front of the spray machine, protecting its young. The driver of the large yellow spray machine just carried on spraying and there was no movement from the bird afterwards, as can be seen on the footage. (Appendix C). This incident was reported to the police however they were reluctant to act without more evidence.
- 4.6 I believe that a responsible landowner should be taking every action they can to protect the environment and encourage the increase of local biodiversity, they should not be reducing or destroying it.
- 4.7 We just need to look one kilometre away, the other side of Delph Lane, to see how the local wildlife site of Houghton Green Pool has prospered over the years. It has had its battles with changing levels of the Pool, but it has fought back through a massive increase in self-seeding trees. There are around 10 concentric rings of 16,000 beech and willow growing around the Pool. In 2017 over one thousand common spotted orchids blossomed around the western

perimeter attracting many thousands of butterflies and insects. The place shows that if left alone nature can grow and prosper. The Peel Hall site would look like this.

- 4.8 Even with the best of intent, things do not always turn out the way that they are expected after development takes place. A large pond outside Cinnamon Brow Farm disappeared as brooks dried up and stream beds became dry. This was because rainfall was directed into the new drainage system and away from the pond. This demonstrates that if Peel Hall is developed, habitats proposed for retention may just disappear anyway, particularly as land drainage patterns change.
- 4.9 Evidence provide to the last PI in 2016 contained over 282 different species which can be broken down into 110 species of Bird, 84 flowering plants, 4 Fungi, 7 Beetle, 14 Butterflies, 4 Dragonflies, 6 Bees, 6 moths, 2 grasshoppers, 31 bugs, 101 flies, 2 molluscs, and 7 mammals.
- 4.10 Of the 110 species of birds, eight were on the critical Red at risk list and include Skylark, Grey Partridge, Grey Wagtail, Pochard and Woodcock. These birds are facing increasingly severe declines in breeding populations across the UK, so it is good that they have found a haven at Peel Hall. There were twenty-seven birds on the amber list of which examples include Black-necked Glebe, Common Sandpiper, House Martin, Willow Warbler, Kingfisher, and Tawny Owl whilst not under so much of a threat as the red list but are at a high risk and just as welcome at Peel Hall.
- 4.11 Surveys have shown that Peel Hall supports a population of great crested newts. A mitigation plan has been put forward as part of the amended ES. However given the record of the applicant in deliberately destroying wildlife, and the potential constraint GCN are on development, together with inevitable hydrology changes after development it is impossible to see a situation where the GCN colony would even survive, let alone thrive.
- 4.12 The site is of value several important bird species, including at least 8 'priority' species for conservation. Loss of and fragmentation of habitat is likely to affect the local population status of at least some of these species by reducing opportunities for feeding and nesting.
- 4.13 The site also supports valuable foraging habitat for local bat populations. The loss of certain habitats to the development (notably ponds, watercourses and woodlands), and the fragmentation of the landscape, without sufficient mitigation, is likely to affect the nature conservation status of local bat populations by reducing the local feeding resource.
- 4.14 The field study provided by the developer picks up on several mammals that would be expected to be found on site but do not appear present when the habitat is suitable for example badger and water vole. These may be present but have been missed (for instance an inactive badger sett was found). The most likely answer is the land management practice that the developer has pursued to deliberately deter wildlife.
- 4.15 Another mammal that has been proving elusive is the hedgehog. In 2013 several hedgehogs were found injured close to Peel Hall, maybe because of work being done on the site. They were taken to the local hedgehog rescue centre (now closed) in Padgate for treatment. The centre was visited at the time by David Lindo when he came to film in the North West wildlife as part of the BBC North West Urban Jungle TV programme highlighting the hard work of the hedgehog centre saving local wildlife and promoting conservation. It would appear that none of the hedgehog details were entered into RECORD at the time.

- 4.16 The good news is that this year (2020) there have been sightings in people's gardens and the animals have been seen crossing local roads near the site. Healthy hedgehogs have been seen during May and June wandering into people's gardens in Coldstream Close, Radley Lane and Gairloch Close whilst others have been seen crossing Ballater Drive from the playing fields, so they are active healthy and doing well this year. Given they often walk as much as 2 miles a night they are probably once more active on Peel Hall, but a survey would have to be done during the evening and into the night to confirm that they are once more on Peel Hall.
- 4.17 Continuing the positive theme, a huge number of moths have been trapped by the Peel Hall Conservation Group's George Dunbar in a local garden over a 5 year-year period leading up to 2019. RECORD only shows 6 moths whereas George's list is 106 (Appendix E). Many are not found so far north.
- 4.18 Local ecologist Rob Smith from Culcheth said on reviewing the records, "It's an impressive moth list for such a narrow window of trapping, goes to show the potential of the area?"

## 5 Net Environmental gain

- 5.1 The National Planning Policy Framework (NPPF), requires a measurable net environmental gain and the forthcoming Environment Act will require new developments to improve biodiversity value by at least 10 per cent.
- 5.2 The developer makes much of the technicality that the Environment Bill has not passed into law and that Net Environmental gain is not a formal legal requirement. However, the concept is accepted by central and local Government, ecologists, other professionals within the built environment and most of the construction industry. If Peel Hall is developed, the houses and the environmental consequences could still be around in 100 years or more. It seems bizarre that this Inquiry would accept a lower standard that we know will lead to environmental degradation and accelerate the crisis we already know exists around wildlife and biodiversity in Britain.
- 5.3 The developer provides an offsetting report. It does NOT say that the scheme will result in a net biodiversity gain, but concludes (5.12), just that this is theoretically possible although *'it is recognised that further stakeholder engagement is required along with off-site baseline surveys of potential compensation sites.'* One wonders why this stakeholder engagement, site identification and baselines surveys have not been carried out. In the absence of this evidence it is hard to see how the applicant can claim any biodiversity gains.
- 5.4 There are further serious flaws. The current site is a large, interconnected area which adds greatly to its wildlife value, but this will be completely fragmented by development habitats and species will become isolated islands, and much more likely to die out as populations fluctuate.
- 5.5 In calculations of current wildlife value, the Offsetting Report uses the current relatively impoverished state of the site. This state has been deliberately created by site management practices intended to reduce the wildlife value.
- 5.6 Biodiversity gain appears to include 'Suburban mosaic of natural/developed surface' (82 units of gain). It is not obvious what this is, but it doesn't sound like a natural habitat.

- 5.7 GMEU conclude that 'Currently I would regard the amount of mitigation and/or compensation for impacts on local nature conservation impacts as insufficient, ... the full details of the development, including landscape and habitat creation, are unknown. I would recommend that proposals for a new, meaningful area of enhanced, un-fragmented, seminatural greenspace, either on or off-site, should be put forward as compensation for lost habitats and green infrastructure and to achieve biodiversity net gain.'
- 5.8 Off-site mitigation measures are not detailed we can't be sure they will be delivered, establish or be maintained over 30 years and in any case they will be remote from existing and future residents. GMUE suggest that '*Currently the plans do not appear to include the provision of any significant new, un-fragmented areas of semi-natural greenspace incorporated into the scheme that could be managed for people and for nature conservation. Much of the greenspace shown on the outline plans is existing space which will be retained. The proposed new strip of landscaping along the northern boundary will function much more as a noise and landscape screen between the motorway and the new development rather than functioning as an effective area for public recreation or wildlife, although it is referred to in places as an ecology park* '.
- 5.9 The site was included by the Greater Manchester and Cheshire LNPs (local nature partnership) in the Greater Manchester Wetlands Nature Improvement Area (NIA). The developer proposes miniscule wetlands enhancements and as explained elsewhere, development will change the hydrology of the area such that existing wetland may degrade further.
- 5.10 The predicted condition of proposed habitats is based on assumed conditions 30 years after development (Offsetting report 2.24). This means for any theoretical biodiversity gain to materialise will take 30 years.

## 6 Developer Proposals

- 6.1 Large developments like this take the approach of building as many properties on a space as possible and wildlife is treated as an afterthought. There have been numerous failed attempts to get permission to build on this land over the last 30 years and none have proposed any benefit to wildlife or any solutions to their issues both now and in the future.
- 6.2 The developer proposes an 'Ecology Park', although the sketchy details so far suggest that this is an abuse of the term. It is not clear what is meant by this term or what its aim is other than perhaps a nod to wildlife. They appear to propose to landscape an undevelopable area hard up against the M62 that they could not use any other way. It is hard to imagine wildlife surviving such conditions alongside the pollutants, noise and light next to the M62.
- 6.3 A green bund, rather than artificial acoustic fences, was built a kilometre away at Cinnamon Brow between the Poulton Golf course and the M6. It is now a mature woodland protecting the houses of Cinnamon Brow built during the New Town Development.
- 6.4 It is even harder to imagine humans (which are also animals) living in these conditions either. I wouldn't want to read about another asthmatic death like Ella Kissi-Debrah. (Appendix D)

## 7 Is there a better way?

- 7.1 It is not contested by the applicant that their proposal would mean significant habitat destruction. But if more trees were planted on the Peel Hall land it could become a mini carbon sink, capturing the fumes from the M62 traffic and soaking up the rainfall throughout the year. The place is already regarded as a green lung by the local community and a great amenity that could be enhanced if protected and managed as a green resource.
- 7.2 Peel Hall is now in the newly designated Northern Forest where there is a joint aim between the Mersey Forest and Woodland Trust to plant 50 million trees between Liverpool and Hull, the M62 has been designated as the spine of the project. The project has government support and initial funding and planting began in 2016 again. Peel Hall would be an excellent place to be part of that vision. Trees bring many benefits, they produce oxygen, help cleanse the air by intercepting airborne particles acting as a filter, clean the soil, control noise pollution, lock away carbon dioxide, provide shade and cooling, acts as a windbreak and fight soil erosion, soak up rainfall and of course help increase biodiversity by attracting and sheltering all sorts of fauna and flora.
- 7.3 We feel that a development built in the human scale 'Compact City' style that is common in other northern European countries in towns like Warrington, and of which there are some examples in Britain would allow a significant number of houses to be built near the A49, close to amenities, and a fast and effective bus route. This would allow the remainder of the site to become a Forest Park as part of the Northern Forest.
- 7.4 Peel Hall is ideally placed to contribute to mitigating the impact of traffic pollution, light at night and noise from the M62 using nature, rather than making a large number of people live next to it.

## 8 Conclusion

- 8.1 In conclusion.
  - 1. Wildlife and biodiversity are important in general and specifically to people of north Warrington
  - 2. Covid-19 has revealed exactly how important the chance to enjoy nature is to physical health and mental well-being
  - 3. The developer has actively tried over several decades to destroy biodiversity on site to maximise its development value. They are no friend of nature.
  - 4. The site contains a lot of wildlife despite the active mismanagement think how much more biodiversity there would be with a more enlightened owner
  - 5. Environment Bill requires net environmental gain. The development will be here for 100+ years. The PI should accept 110% (as Government and the housebuilding industry does) as the standard to judge the scheme.
  - 6. The proposals are mean to wildlife. Isolated, bog standard spec builders landscaping is not a replacement for genuinely wild habitats. They don't even meet a requirement for net environmental gain.
  - 7. Off-site mitigation measures are not detailed we can't be sure they will be delivered, establish or be maintained over 30 years and in any case they will be remote from existing and future residents.

8.2 The proposed Peel Hall application fails to deliver any ecological benefit. It is the wrong plan for the wrong location and will simply add issues to the area and resolve none. Trying to deliver a housing solution for 1,200 properties and addons will have a disastrous impact on wildlife and will place too much pressure on what will be left of the natural habitat, the rest having been dug up and built on.

End of main document, appendices follow.

## **Appendices**

Appendix A - Residents Testimonials - see attached

Appendix B - Peel Moat Documents - see attached

Appendix C – Crop spraying machine footage Chris Digitas – on **Warrington Worldwide** – (24<sup>th</sup> May 2016) <u>https://www.warrington-worldwide.co.uk/2016/05/24/wildlife-destroyed-by-developers-claims-former-mayor/</u>

Appendix D - https://www.bbc.co.uk/news/uk-england-london-48132490

Appendix E – Moths trapped by George Dunbar

## For the complete collection see his spreadsheet (Appendix E) attached.

The following are moths that caught which are noteworthy.

They are mainly found in the Sothern half of Britain but good to see that they have been found in the north west.

Triple-spotted clay Dingy footman Suspected Beautiful hook-tip Small ranunculus - formerly thought to be extinct but now recovering Red twin-spot carpet Barred Sallow Chocolate-tip Dwarf Pug Marbled white spot Round-winged muslin Obscure wainscot Red-necked footman Buff footman Grey shoulder-knot Silky wainscot

## <u>Appendix A – Testimonials</u>

1. Neil R Stanley

We first arrived in Cinnamon Brow in 1986 - the New Town was still new as were most of the roads, houses and other infrastructure. The open space at Peel Hall has always been there. Yes we have the more structured areas at Peel Hall and Enfield parks but the fields and adjacent woodlands are the wilder and more natural local spaces.

Whilst you are working you don't always have the time to spend out and about locally but since retirement (7 years ago) I have made up for this, making sorties into the area, getting exercise and indulging in my passion for photography, trying to get images of the birds, flowers and other aspects of this wild space. We have our regular buzzards, kestrel, swifts, whitethroat and chiffchaff, and the hunt for bluebells, orchids and dragonflies is an important part of seasonal life.

This area has been particularly important at this time of lockdown when we have been discouraged, and even prevented, from travelling outside our locality.

Peel Hall is a natural lung for this part of Warrington and if we lost it we would have no other similar local wild open space to enjoy. Space that can be reached on foot from a wide area of already very congested residential development.

2. Debbie Peppert

Both us and our neighbours have been frequently walking through the woodland Areas round Peel Hall. We also used the Mill House field to play football with our little boy and teach him to ride without stabilizers. It's a shame the footpaths are not better maintained as we also realised that you can walk/ cycle over to Winwick without walking down the Narrow Delph Lane road. There is so much opportunity here to improve the green space availability to North Warrington that will be lost if this development goes ahead.

3. Gary Wernham

I absolutely love Peel Hall and go there most days with my dogs usually about 7am. Sometimes I walk through to Elm Avenue or alternatively I go over the footbridge to Winwick. The dogs love it too, there is something magical about this place. It's not uncommon to see foxes, lots if rabbits the place abounds with wildlife. I was saddened to see that Satnam had sanctioned this beautiful place to be ploughed destroying the footpaths and any creature that got in its way. What a disgrace. So yes, please count me in too I will do anything to help prevent this land from being developed it's too special for that.

4. Jean Hall

I have been on furlough from work and would have gone stir crazy had it not been for walking my dog every day across peel hall. It helps clear my head listening to the sounds of nature. Shame its been ploughed over though.

5. Joan Rogers

The field on Ballater drive has been so used during covid. Kids parents dog walkers and many more. People are driving in as the green spaces are far and few. Don't steal it from the next generation.

## 6. Mary Burke

We have a dog who loves to walk - hubby has taken him out first thing then I take him out at lunchtime -as I have MS I can't walk very far but I can get into Peel Hall Park on my mobility scooter so that has given the chance to exercise the dog and see more butterflies in a few years as well as some beautiful wild flowers. I've even been waving to new friends as we go to the park at more or less the same time.

## 7. Pauline Parr

When I was 5 years old we moved to **provide the second sec** 

8. Phil Kemp

I live on **Exercise** and prior to the lockdown I regularly saw people going past my house making their way onto the Peel Hall land. These were families out for a walk, dog walkers, ramblers and runners, the latter including myself.

Since the lockdown this has increased significanly to almost a constant stream of people going past to make the most of this valuable green space.

Also, because of the reduction in both local and motorway traffic there is a distinct increase in the wildlife in the area. We have had hedgehogs in our garden for the first time and a major increase in birds, specifically Swifts and Raptors.

I believe that people should have the right to continue to enjoy this green space in the future, because like we say, once its gone its gone forever.

9. Rob Shaw

Here's our recent experience of how having this beauty spot right on our doorstep has helped us.

My daughter has used the Peel Hall area to complete her assignments for A-Level Photography.. we obviously couldn't travel anywhere so to have it on our doorstep was a godsend for her (and us) as it has meant that she found being in lockdown and preparing her coursework for her a-levels next year much less stressful.

Unlike the students who would have been taking their exams this year, she won't get any help with the studies she has missed because she isn't doing her exams until next year. The coursework still had to be completed. This had been stressing her out - which, as you can imagine, caused some friction at times.

It has also genuinely brought her and her younger sister closer during the current lockdown too because they have been going out together to explore the area for the 'perfect picture'.

To be able to get some advancement of her education and combine that with the essential exercise we all need at the moment more than ever has been an absolute blessing.

I would certainly hate to think what problems we would have had at home sometimes over the past 8 weeks or so - and counting- with six of us being cooped up in the same house 24/7 without having somewhere local to escape to and get some 'edu-cise'.

## 10. Sammy Dobson

I'm struggling to comment as it's sooo upsetting to think it might all disappear, ill can spend hours just watching the bird life, buzzards, kestrel, sparrow hawk, and the last 5yrs a sky lark which has now GONE as of this year it's not been seen or heard I moved in 10 yrs ago and on my first day in my house I turned to see a male fox walk up my path and cock it's leg up against the hedge ...being and massive animal lover I nearly had a heart attack I'd never seen one so very close up ...just you know having a wee 😫 !

I knew then this is the perfect home for me and my son, to grow up and old in, never dreamed it might all be gone one day, I just pray its NOT in my life time 😥 XXX amen xx



Dear Wendy,

Thank you for your enquiry to the Cheshire Historic Environment Record (HER) for further information on Peel Hall, Winwick.

## **HER records**

I have enclosed the details of the site (monument) recorded on the HER. (See attached MonFullRpt.pdf) I also enclose the details of 3 surveys and interventions (events) whose associated reports contain information yet to be incorporated into the HER monument record. (See attached EventFullRpt.pdf)

## Please note:

• By accepting this information, you agree to the licence outlined in the enclosed Conditions of Use and Licence for Re-use of information (see *ConditionsOfUse.pdf*). A copy of the final report or research should be submitted directly to the HER at the address above.

Please find below the consultation response to planning application 2016/28492 by APAS (Archaeology Planning Advisory Service) on 17/08/2016. This can also be viewed on the Warrington Borough Council planning application website.

# Planning Application: 2016/28492 - Land at Peel Hall; Land South of M62 bounded by, Elm Road: Birch Avenue; Poplars Avenue; Newhaven Road; Windermere Avenue, Grasmere Avenue; Merewood Close, Osprey Close Lockerbie Close, Ballater Drive and Mill Lane

Thank you for your consultation concerning the above application which is supported by and archaeological desk-based assessment which has been prepared by Nexus Heritage on behalf of the applicants.

This study which appears as Chapter 10 of the accompanying EIA considers information held on the Cheshire Historic Environment Record. It also contains a consideration of the evidence from the historic mapping, aerial photographs, and studies concerned with earlier proposals for the development of the site. In particular, it draws on the conclusions of a programme of field evaluation carried out by the Lancaster University Archaeological Unit in 2001 in connection with earlier proposals for the development of the site.

This work successfully identified the areas of archaeological interest which are focussed on the land immediately to the south of Peel Hall, which contains the remains of a medieval moat (CHER 595) at SJ6154 9185 and an area of undated ditches extending over an area of c 50m by 50m in the north east corner of the application area at SJ 6199 9187 which may represent an area of earlier settlement.

Both of these sites lie within the latest and application area and, on present evidence, it is likely that they will be damaged or destroyed by the proposed development. It is advised, therefore, that if planning permission is granted, these two area should be subject to programmes of archaeological mitigation which ensure that the archaeological remains present are excavated and fully recorded before the land which they occupy is developed. In the case of the moated site at Peel Hall, this is likely





to involve the formal excavation of the moated platform and surrounding ditches whilst the northeasterly site should be subject to a strip and record exercise extending across an area measuring c 50m by 50m. A report will also need to be produced and the work may be secured by condition, a suggested wording for which is given below:

No development shall take place within the area indicated until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the local planning authority. The work shall be carried out strictly in accordance with the approved scheme.

The use of such a condition would is in line with the guidance set out in Paragraph 141, Section 12 (Conserving and Enhancing the Historic Environment) of the National Planning Policy Framework (2012), published by the Department for Communities and Local Government and Managing Significance in Decision-Taking in the Historic Environment, Historic Environment Good Practice Advice in Planning: 2 (Historic England 2015).

The Cheshire Archaeology Planning Advisory Service does not carry out archaeological work and the applicants would need to appoint their archaeological consultant to organise the mitigation. The Service will be able to provide further details of the work on request.

Mark Leah

Yours sincerely

Moya Watson







# Proof of Evidence Vol 8 - Loss of Amenity

Produced by Jon Parr Rule 6 Party Peel Hall - APP/ M0655/W/17/3178530
## Contents

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## **Section 1 – Introduction**

## Rule 6 Member

My name is Jon Parr, I am a local resident that has lived in Orford, Cinnamon Brow & Fearnhead for the majority of my forty-three years. I have played on Ballater playing fields from a young child, I continue to play there with my children and our family often walk here as part of the daily routine with our dogs – just like many other local families and residents do.

Within this proof of evidence, it is my intention to set out the Rule 6 and local residents combined concerns with respect to the appellants proposal to steal this valuable amenity from under the residents feet in an attempt to gain access to this landlocked and unsustainable piece of land.

We do not use the word 'steal' lightly, and we will set out our case within this document to justify the use of this word and our strong feelings against this land grab.

Likewise, the same can be said about the Radley Common Playing Fields. This too is a valuable community asset that offers open and safe informal leisure. The appellant also intends to use this facility at the detriment of local residents and for the betterment of a community that does not yet exist.

These are two of a series of issues the community expect to make their quality of life worse.

## Proof of Evidence Scope

Our main area of concern quite simply is that the appellant proposes to utilise Ballater Playing fields to provide houses and more importantly, to provide a through road to serve the site. Radley Common will be utilised to part relocate Ballater Playing Fields to justify taking possession of this section of land and thus displacing a valuable community asset into a completely different ward/community.

In doing so, the local residents and users of Ballater playing fields stand to lose a valuable amenity whilst gaining nothing in return. Local residents of Radley Common playing fields can expect to see a change of use from informal to formal sports. In both cases, this constitutes a significant net loss of amenity to the existing community to benefit a new community in years to come.

As a local resident, I am staggered to believe that anyone could seriously entertain taking these facilities away from local residents that have been enjoyed for over 35 years.

Clearly there are also issues with provision of healthcare allowance as waiting times for doctors surgeries are continually rising. We expect these to be robustly challenged by Warrington Borough Council.

## **Section 2 – Site Location and Description**

## Site Location

- 2.1 Ballater Playing Fields are located to the east of the proposed development and lies between Mill Lane, Ballater Drive and Radley Lane – see Appendix 1. The 3.2 hectare site is used for formal sports use and more importantly for informal uses including, but not limited to;
  - i. Football
  - ii. Kite Flying
  - iii. Picnics
  - iv. Dog Walking
  - v. Family Walks
  - vi. Bat and Ball Sports
  - vii. Other informal leisurely activities
- 2.2 Radley Common Playing Fields are located to the south of the proposed development and is bounded by Radley Plantation to the north, Windermere Avenue to the west and Grasmere Estate to the south and east see Appendix 2. The 2.97 hectare site is used for occasional formal sports use and more importantly for informal uses including, but not limited to;
  - i. Football
  - ii. Kite Flying
  - iii. Picnics
  - iv. Dog Walking
  - v. Family Walks
  - vi. Bat and Ball Sports
  - vii. Other informal leisurely activities

## **Section 3 – Recreational Amenity**

- 3.1 Appletons Addendum 2 to Environmental Statement Volume 8 item 13.97 asserts the proposed 1200 dwellings amounts to a population increase of 2,753 new residents.
- 3.2 The 2,753 residents also allows for 60 residents living in the proposed 100 person care home facility. We assume this is based on a percentage of residents being immobile.
- 3.3 This reduction of 60 care home residents therefore equals equates to 2693 residents at an average of 2.24 people per household.
- 3.4 The current UK average household lies at 2.4 people per household. This figure being taken from the Office of National Statistics - Families and households in the UK: 2017
- 3.5 This would equate to an increase in local population of 2,880 residents & 60 care home residents, providing a total of 2,940 residents.
- 3.6 We would therefore query these occupation figures, given that they no doubt plug in to transport and journeys which in turn have a direct correlation with noise and air quality.
- 3.7 We note from footnote 27 (bottom of page 212) that;
   <sup>27</sup> These 60 residents have been excluded from the requirement calculations in the Table for equipped play, informal play and outdoor sports.
- 3.8 The appellant would appear to be asserting that care home residents do not have any recreational requirements or desire to access the outdoors for leisurely walks with family and friends – this is unacceptable.

3.9 Notwithstanding 3.8, we have undertaken some calculations to review Table 13.15: Adopted Open Space Provision Standards and On-Site Provision within the Proposed Development.

Both the appellants figures and Rule 6 parties are presented separately and then together as a summary.

Typology	General Standard	Standard per person	Peel Hall Development Requirement	Peel Hall Proposed Site Figures	
Equipped Play	0.25 ha per 1,000 population	2.5m² per person	0.67 ha per 2,693 residents	Play Space Provisions	The equipped and informal play space
Informal Play	0.55 ha per 1,000 population	5.5m² per person	1.48 ha per 2,693 residents		by individual housing plots
Outdoor Sports	1.6 ha per 1,000 population	16m² per person	4.31 per 2,693 residents	Formal Sport Ground	See Table 13.16
Parks & Gardens	1.6 ha per 1,000 population	16m² per person	4.40 per 2,753 residents	Natural/ Semi Natural Areas (this includes all areas	10.1 ha (Open space shown on the proposed Parameters Plan meets this
Natural/Semi Natural Greenspace	2 ha per 1,000 population	20m² per person	5.51 per 2,753 residents	set aside as ecological/ motorway buffer zones, retained	
Allotments	0.07 ha per 1,000 population	0.7m² per person	0.19 ha per 2,753 residents	and attenuation pond areas):	requirement)

#### **APPELLANTS FIGURES**

## **RULE 6 PARTY FIGURES**

Typology	General Standard	Standard per person	Rule 6 Calculation Figures
Equipped Play	0.25 ha per 1,000 population	2.5m² per person	0.72 ha per 2,880 residents
Informal Play	0.55 ha per 1,000 population	5.5m² per person	1.58 ha per 2,880 residents
Outdoor Sports	1.6 ha per 1,000 population	16m² per person	4.61 per 2,880 residents
Parks & Gardens	1.6 ha per 1,000 population	16m² per person	4.61 per 2,880 residents
Natural/Semi Natural Greenspace	2 ha per 1,000 population	20m <sup>2</sup> per person	5.76 per 2,880 residents
Allotments	0.07 ha per 1,000 population	0.7m² per person	0.2 ha per 2,880 residents

## **COMBINED FIGURES**

Typology	General Standard	Standard per person	Peel Hall Development Requirement	Rule 6 Calculation Figures	Residual Deficit
Equipped Play	0.25 ha per 1,000 population	2.5m² per person	0.67 ha per 2,693 residents	0.72 ha per 2,880 residents	0.05 ha or 500 sq m
Informal Play	0.55 ha per 1,000 population	5.5m² per person	1.48 ha per 2,693 residents	1.58 ha per 2,880 residents	0.1 ha or 100 sq m
Outdoor Sports	1.6 ha per 1,000 population	16m² per person	4.31 ha per 2,693 residents	4.61 per 2,880 residents	0.3 ha or 3,000 sq m
Parks & Gardens	1.6 ha per 1,000 population	16m² per person	4.40 per 2,753 residents	4.61 per 2,880 residents	0.21 ha or 2,100 sq m
Natural/Semi Natural Greenspace	2 ha per 1,000 population	20m² per person	5.51 per 2,753 residents	5.76 per 2,880 residents	0.25 ha or 2,500 sq m
Allotments	0.07 ha per 1,000 population	0.7m² per person	0.19 ha per 2,753 residents	0.2 ha per 2,880 residents	0.01 ha or 100 sq m

- 3.10 Based on national average of 2.4 persons per household, the Rule 6 party argue that the current provision recommended by the appellants is inadequate on the basis that local amenities are effectively being taken away from existing communities to service a new development this demonstrates a net loss in amenity to existing communities and this is wholly unacceptable.
- 3.11 We will justify the above statement for individual items as follows;

#### a. Equipped Play

The appellant asserts that 'the equipped and informal play space provision to be met by individual housing plots'.

- i. By providing equipped playing facilities within each housing development for informal play, the Rule 6 party would assert that the appellant therefore also agrees that these spaces are solely intended for that small community.
- ii. What isn't clarified in the appellants plan is the intention to utilise the existing playground as a means of overspill parking for the woefully inadequate proposed parking facilities. This therefore constitutes a complete loss of playground facilities for the children of the Grasmere Estate see Appendix 5.

#### b. Informal Play

The appellant advises that 'the equipped and informal play space provision to be met by individual housing plots'.

- i. The Rule 6 party argues that this drastically alters the character and feel of the rest of the area by segregating individual housing plots into micro communities.
- ii. By providing segregated sections of land within each housing development for informal play, the Rule 6 party would assert that the appellant therefore also agrees that these spaces are solely intended for that small community.
- iii. The idea of informal playing spaces is to bring communities together, much like a village green.
- iv. Finally, there has been a total disregard towards the existing local community using the informal play area on Ballater Playing Fields. The appellants plan proposes to take this valuable amenity and use it for new dwellings and access road and with it, completely takes away thousands of residents access to a field that has serviced the community for over 35 years.

#### c. Outdoor Sports (Formal Play)

The appellants Addendum 2 to Environmental Statement Volume 8 Table 13.16 Proposed Outdoor Sports Provision states;

- i. The proposed on-site facilities shall comprise of 2 No. 11x11 Grass Pitches and 1 7vs7 Grass Pitch.
- ii. The appellants plan ref 1820\_28 Revision J suggests there will be 3x 11v11 Grass Pitches, 1x 9v9 Grass Pitch and 1x 7v7 Grass Pitch.
- iii. Could we please request some clarity over which proposal is being suggested?
- iv. The calculation in table 13.15 suggests a sporting provision of 4.31 ha to accommodate 2,693 residents which is to be provided by a combination of the appellants land and that of Radley Common playing fields.
- v. The combined area of both existing facilities is 6.17 ha made up of Ballater Playing Fields 3.2 ha and Radley Common Playing Fields 2.97 ha.
- vi. Given this land already facilitates the existing community, the appellant is therefore only offering an additional 2.98 ha. Based on the appellants figures, this equates to a net gain of 11.07 m<sup>2</sup> per person against the standard prescribed 16m<sup>2</sup> per person.
- vii. We therefore fail to see why Warrington Borough Council and the appellant would agree to a net provision of 4.4 ha (Item 13.100) when this is less than the existing provision prior to adding almost 3,000 additional residents quite simply, this is not acceptable.
- viii. Furthermore, these calculations make no allowance for the complete loss of amenity on Ballater Playing Fields that would be lost entirely to the community.
- ix. On the basis of 3.2 ha being divided up at 16m<sup>2</sup> per person that would suggest Ballater Playing Fields is capable of servicing 2,000 residents, arguably, this figure is already quite low for the area of community it serves.
- x. Given this fact and that item vi. clearly demonstrates insufficient allowance for the proposed development, it absolutely goes without saying that the impact of losing Ballater Playing Fields would be high, there would be a demonstrable net loss of amenity and as such, should not be taken away from the local community.
- xi. Appendix 6 & 7 demonstrate additional walking and driving distances required for residents losing Ballater Playing Fields to travel to the proposed site.

xii. Irrespective of the promise of new quality pitches which may seem appealing to the council and Sports England, the simple fact is that the numbers do not add up. The existing community will lose a significant amenity, it will only benefit those of the new development and the provision of a road and houses through this playing field would irreversibly destroy the character of the area – the final slap in the face to existing local residents.

#### d. Parks & Gardens, Natural, Semi Natural Green Spaces & Allotments

The following topologies have been bundled together in line with the appellants table 13.15.

The appellant advises that 'Natural/ Semi Natural Areas (this includes all areas set aside as ecological/motorway buffer zones, retained vegetation areas and attenuation pond areas):

- i. The Rule 6 party in the first instance would like to request what realm of fantasy and planning does motorway buffer zones and attenuation ponds constitute parks and green spaces?
- ii. The motorway buffer zone is directly along the path of an air quality management area where air pollution is at its worst. This buffer zone will also be subject to noise both of which make this plot of land completely unappealing and of very low recreational value.
- iii. Attenuation ponds are typically deep and dangerous. Their secluded location referred to in the appellants Parameters Plan gives rise to concern with respect to younger members of the public falling into serious risk through youthful misadventure.
- iv. Attenuation ponds would require to be securely fenced off to prevent such use, in doing so, detracting from the green ecological haven the appellant believes can be created.
- v. Appendix 8 highlights the areas of green space and park that the appellant believes amounts to 10.1 ha of space. We would appreciate a detailed breakdown of where this space is and which parcels of land contribute what area.
- vi. To the best of our abilities, we can account for 7.58 ha of land the majority of which is along the motorway buffer zone. This proposal is woeful in both terms of quality (refer to PoE's for Noise and Air Quality) and quantity.
- 3.12 The appellants proposal for playing fields on the Radley Common and proposed site appears to suggest that all the pitches would be protected by barriers/fencing. This is in keeping with a typical Sports England playing surface specification.

- 3.13 On this basis, the sole intended purpose of the playing facilities will be formal, access will not be available to the public to turn up and play in real terms therefore the net loss of amenity to the existing general public amounts to 6.17 ha made up of Ballater Playing Fields 3.2 ha and Radley Common Playing Fields 2.97 ha.
- 3.14 Finally, we wish to draw attention to the existing facilities within the general vicinity of the proposed development. The majority of which provide both formal and informal sports/recreational provision.
- 3.15 The appellant claims in Addendum 2 Vol 8 item 13.100 that the existing pitches are of poor quality and that the current playing fields are not utilised.
- 3.16 This is wholly inaccurate, the Ballater Playing fields are being utilised by Winwick JFC as well as a number of adult social groups both during the week and at weekends.
- 3.17 The pitches are in good shape and are being regularly maintained by Warrington Borough Council.
- 3.18 Appendix 9 sets out plans for the coming season on Ballater Playing Fields.
- 3.19 Appendix 10 sets out potential future use for the existing facilities at Radley Common.
- 3.20 Appendix 11 provides context of availability of playing facilities across north Warrington.
- 3.21 Based on the information provided above and within the appendices, we are therefore extremely concerned that the local community are about to lose their access to large sections of informal amenity on the basis that new facilities will be provided in their place when ultimately it takes away from the public and does not give back.
- 3.22 Instead of re-inventing the wheel, all that is required, is a little investment in existing facilities.

## Section 4 – IR Comments

- 4.1 Finally, we wish to address comments from the previous inquiry and inspectors report that were not refuted;
- 4.2 IR5.19 Paragraph 97 is clear that existing open space, sports and recreational buildings and land, including playing fields, should not be built on unless, among other things, the loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location.

The Rule 6 party has demonstrated within this proof of evidence that the quantity is insufficient and the location only benefits those of the proposed development and Grasmere. Existing residents and community of Cinnamon Brow and Houghton Green lose out immeasurably – this can not be deemed acceptable.

4.3 IR10.51 The appeal proposal would result in the loss of Mill Lane playing field and its relocation to Radley Playing Fields. Local residents will not venture to the relocated fields because of local school affinities. This will deprive residents of an easily accessible facility that has stood for over 30 years.

School affinities and looking after 'their patch' really exists and students do not typically stray from the their own for this very reason. No desktop study will take account of this, it's local knowledge, it's being a child in the very same predicament running home to avoid conflict.

This is still a very valid consideration that cannot and should not be neglected from consideration.

4.4 IR14.10 The proposed sports hub would be of greater benefit, albeit that it would be provided chiefly as mitigation for the loss of the Mill Lane playing fields and to meet the demands arising from the new development. It would be a qualitative improvement over what is currently provided in this area of Warrington. It is also common ground between the main parties that it would be a quantitative improvement, although the rationale behind this agreement is not readily apparent from the evidence.

- 4.5 IR14.11 Even so, I am mindful of the views expressed by residents living near, and using, the Mill Lane playing fields. They noted, formally and in questions to witnesses, that the appeal proposal would result in the loss of this area of green space, which is used recreationally by many residents for more than just formal sport (e.g. dog walking; informal kickabouts; etc) [10.51; 10.82; 11.1]. This would be detrimental as residents would have to travel further to access such space, with no facility in as close proximity as there is at present.
- 4.5 Nothing in regard of items 4.4 & 4.5 has changed. New changing facilities is little compensation to the residents and local community that use Ballater Playing Fields. As previously communicated Ballater Playing Fields provides significant informal recreational opportunity, none of which will ever benefit from a set of changing facilities some 1km away.

## Section 5 – WBC Local Plan Core Strategy Adopted July 2014

- 4.1 The following excerpts define where the proposed development and intended decommission of Ballater Playing Fields are in direct opposition to the Core Strategy.
- 4.2 Policy QE3 Green Infrastructure

#### Policy QE 3

#### **Green Infrastructure**

The Council will work with partners to develop and adopt an integrated approach to the provision, care and management of the borough's Green Infrastructure. Joint working and the assessment of applications will be focussed on:

- protecting existing provision and the functions this performs;
- increasing the functionality of existing and planned provision especially where this helps to mitigate the causes of and addresses the impacts of climate change;
- improving the quality of existing provision, including local networks and corridors, specifically
  to increase its attractiveness as a sport, leisure and recreation opportunity and its value as
  a habitat for biodiversity;
- protecting and improving access to and connectivity between existing and planned provision to develop a continuous right of way and greenway network and integrated ecological system;
- securing new provision in order to cater for anticipated increases in demand arising from development particularly in areas where there are existing deficiencies assessed against standards set by the Council.

Item 1 – The appellant clearly fails to meet this criteria

- Item 2 The appellant clearly fails to meet this criteria
- Item 3 The appellant clearly fails to meet this criteria
- Item 4 The appellant clearly fails to meet this criteria

Item 5 – The appellant is providing a plot of land that is insufficiently sized to meet the requirements of the proposed development capacity and instead aims to utilise existing land that is already utilised to service Grasmere and surrounding area – we assert therefore that the appellant clearly fails to meet this criteria.

#### Each item of QE3 has not been met.

## **Section 5 – Conclusion**

5.1 The very thought of this valuable amenity being taken away from local residents angers me.

In essence, we have a developer who speculatively purchased land, sold for the simple reason that development was simply too problematical and disadvantageous to the surrounding area. That was the opinion of planning officers over 30 years ago long before the use of cars had grown exponentially.

To make this wholly unsustainable proposal stand the slightest chance of becoming a reality, the appellant is effectively land grabbing and stealing from the local community. Stealing would normally be deemed a little excessive, but in this case it perfectly describes the scenario.

Residents stand to have a valuable amenity taken from them with nothing offered in return. This can not be allowed to be the case – it is the responsibility of our representatives within council and government to ensure that this gross lack of regard for our community is not allowed to continue.

## **Appendices**

- Appendix 1 Ballater Location Plan
- Appendix 2 Radley Common Location Plan
- Appendix 3 Aerial View & Community Served Ballater
- Appendix 4 Aerial View & Community Served Radley Common
- Appendix 5 Proposed Sports and Recreation Provision
- Appendix 6 Walking distance from Ballater Playing Fields to Proposed Playing Fields
- Appendix 7 Driving distance from Ballater Playing Fields to Proposed Playing Fields
- Appendix 8 Area of Parks and Green Areas
- Appendix 9 Future Proposal for Ballater Playing Fields
- Appendix 10 Future Proposal for Radley Common Playing Fields
- Appendix 11 Existing Playing Facilities in the area

# Appendix 1 - Ballater - Location Plan



# Appendix 2 - Radley Common - Location Plan



## Appendix 3 - Aerial View & Community Served - Ballater





Scale - NTS

# Appendix 4 - Aerial View & Community Served - Radley Common







Appendix 4

Radley Common Playing Fields

Aerial View & Community Served

Scale - NTS

Appendix 5 - Proposed Sports and Recreation Provision





Site Boundary



Proposed Tree Planting

Proposed Footpath/ Re-surfacing existing

Existing Trees

# PEEL HALL, WARRINGTON Indicative Sports and Recreation Provision

FIGURE APP 16

Project		
PEEL HALL, WARRINGTO	DN	
Title Indicative Sports and Recreat		
<sup>Client</sup> Satnam Millennium Ltd		
Date 28.06.16	Scale 1:1,250@A1	appletons
Drawn SW/ DS	Drawing No. 1820_28	
Checked DA/ DS	Revision J	
Landscape	letons 17 Chorley Old Road, Bolton Bl 1 3AD, Tel: 1	01204 393006 Eax: 01204 388792

Web: www.appletons.uk.com Email: info@appletons.uk.com

Appendix 6 - Walking distance from Ballater Playing Fields to Proposed Playing Fields





The following route has been based on a child who lives at the top end of Dundee/Shetland Close making their way to the new playing facility.

The route constitutes an increase of 1.2km to get to the centre of the proposed playing fields.

This is an excessive distance to expect a child to travel and places them some distance away from the safety of their home.

No parent would be comfortable with their child making this journey through the Park.



Appendix 6

Walking distance from **Ballater Playing** Fields to Proposed **Playing Fields** 

Scale - NTS

Appendix 7 - Driving distance from Ballater Playing Fields to Proposed Playing Fields







The following route has been based on the need to drive to the current facility for what could be a number of reasons, eg;

- 1. Football coach with need to carry equipment.
- 2. Parent taking child c/w smaller children in tow.
- 3. No desire to walk in poor weather conditions.

Anyone who has children that play football know the above situations all too well.

The route constitutes an increase of 1.92km car travel (not a sustainable solution).



Appendix 7

**Driving distance** from Ballater **Playing Fields to** Proposed **Playing Fields** 

Scale - NTS

Appendix 8 - Area of Parks and Green Areas



# Appendix 9 - Future Proposal for Ballater Playing Fields



# Appendix 10 - Future Proposal for Radley Common Playing Fields




## Appendix 11 - Existing Playing Facilities in the area







Appendix 11

Existing Playing Facilities in the area

Scale - NTS