

Ashall Property Limited

Annex 2:

Land South of Chester Road Technical Reports



STONECROFT

CHESTER ROAD | WALTON

A Vision for a New Neighbourhood

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Executive Summary



Executive Summary

Land at Stonecroft – a comprehensive and sustainable extension to Walton that will:

- Deliver an attractive and distinctive new residential destination for Warrington;
- Offer a choice of high quality new homes to meet local needs;
- Reinforce and enhance Stockton Heath's District Centre status;
- Create a place of character, strong community and a quality of life which is inkeeping with the existing settlement; and
- Improve the transition from the countryside into the town

This statement has been prepared by Ashall Property to support the promotion of land at Chester Road, Walton for the development of a Retirement Village, 3, 4 and 5 bedroomed homes as well as land set aside for 8 self-build plots. The proposed development site, which totals approximately 5.85 hectares (14.45 acres), after setting aside the land required for the Western Link Road, comprises a single parcel of land to the south of Chester Road (A56).

It is Ashall Property's considered opinion that new housing and retirement provision within settlements such as Walton is essential in supporting the future vitality of the area and Warrington as a whole. It caters for new residents that can widen the demographic profile and sustain essential local facilities. Such development is firmly aligned with the principles of sustainable development. The development of land at Chester Road for housing and retirement care, provides an opportunity to achieve these sustainability objectives, whilst at the same time making a significant contribution to the Borough's housing supply requirements.

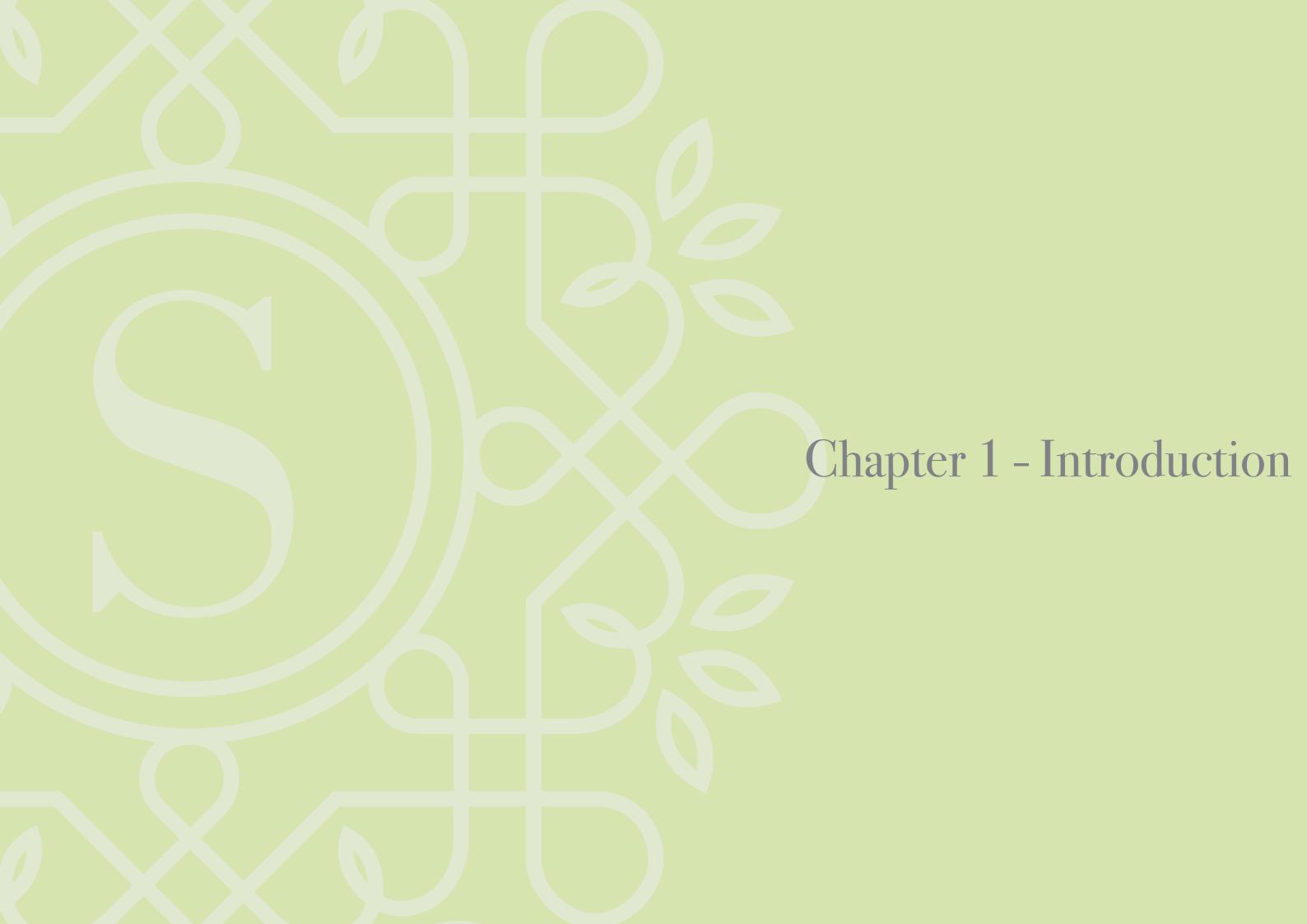
Ashall Property encourages the support of Warrington Borough Council and other local stakeholders for the residential development of the site. It is considered that the land represents a suitable strategic site which should be included as an allocation within the revised Local Plan Core Strategy. It offers the opportunity to be brought forward as an early phase of new homes, and that by working in partnership with the Council, stakeholders and the local community, this would provide all parties with the ability to plan properly so that the immediate and future needs of Walton can be met in the most sustainable way possible, particularly when considering the absence of a 5 year deliverable land supply across the Borough.

This Development Statement therefore seeks demonstrate the credentials of Stonecroft as a sustainable extension to Walton, boosting Warrington's five year housing land supply and its portfolio of residential development land over the full plan period to 2037.

In summary, the Development Statement will demonstrate that Land at Chester Road, Walton:

- Is directly accessible from the A54 and proposed new Western Link Road roundabout;
- Can be delivered now with access off Brookwood Close and then the permanent primary access point can be constructed off the Western Link Road roundabout once it is delivered;
- Is a sustainable and deliverable site on the edge of Lower Walton, and the development accords with the principles of sustainable development;
- Is available, suitable and achievable for residential development on land adjacent to the existing settlement boundary;
- Is in a sustainable location for new housing, located in close proximity (within a 3-25 minute walk) to public transport links, transport routes and a range of shops, services, schools, jobs and community facilities;
- Incorporates an on-site green infrastructure network which will provide space for general amenity, recreation and formal play facilities for use by residents and the wider community
- It could provide in the region of 200 new homes and therefore directly assist the Council in meeting their housing need and requirement;
- It would contribute towards an identified need for market, affordable housing, and specialist housing for older persons in the Borough, and therefore help to meet the identified need for Walton and support Stockton Heath as a District Centre and focus for future development.
- Residential development of the site is compatible with the existing surrounding land uses, with the proposals being sensitive to the character of the local landscape in terms of scale, design, layout, building style and materials;
- Provides new housing on this site that will generate a number of local economic and social benefits, supporting the wider economy and helping to sustain existing services; and
- There are no significant technical, physical or environmental constraints to the development of housing at land at Chester Road.





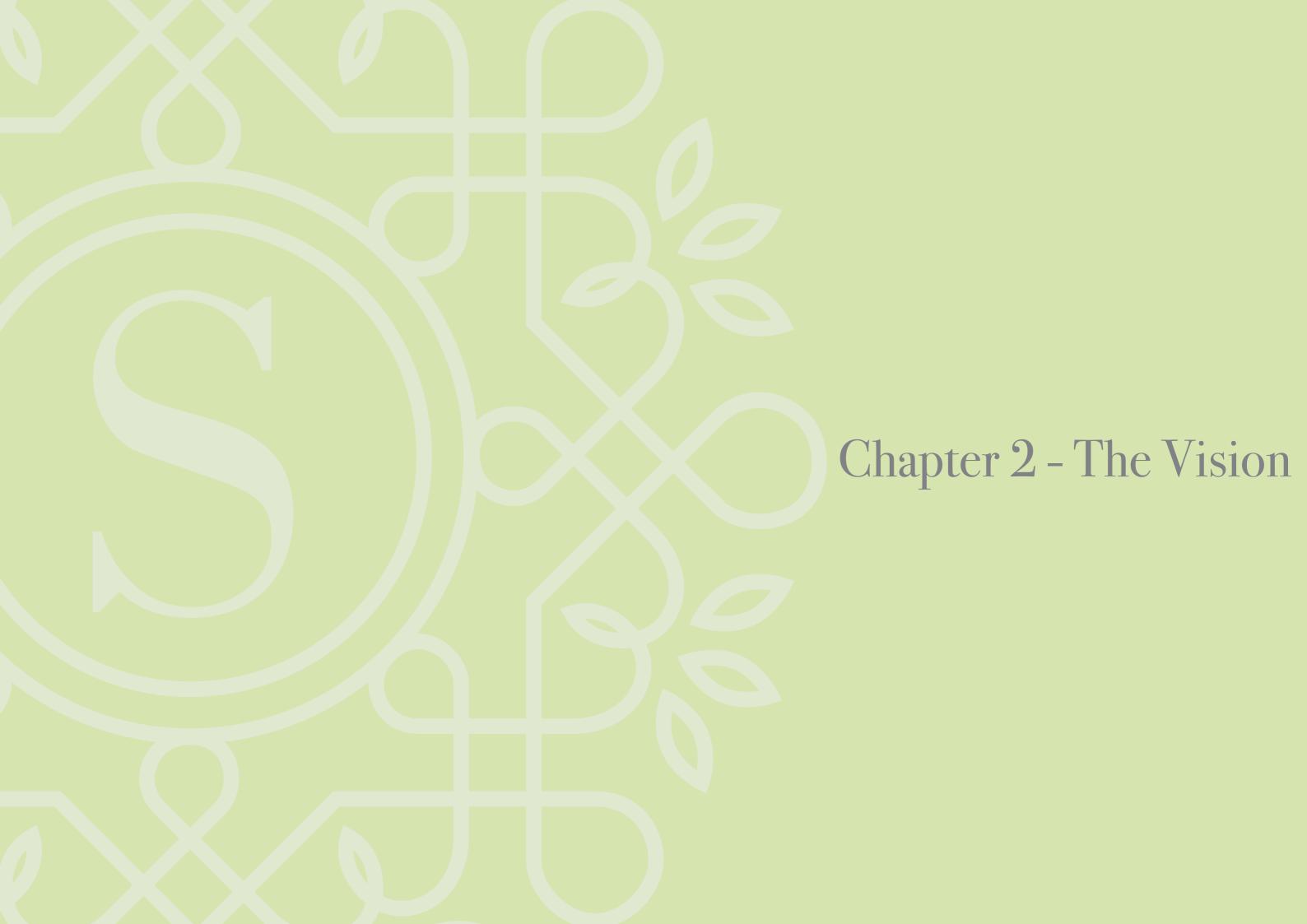
Introduction

- 1.1 This Development Statement has been prepared to consider the merits of land at Chester Road, 1.3 Walton to be removed from the Green Belt and included within the Updated Proposed Submission Version Local Plan, either as part of the SWUE or as a standalone allocation/safeguarded site or white land.
- 1.2 The suitability of the site for residential development is supported by a range of assessments which have informed the preparation of an initial masterplan (prepared by e*SCAPE Urbanists). This has included the following documents:
 - · Landscape & Visual Overview
 - Preliminary Ecological Appraisal
 - · Arboricultural Appraisal
 - FRA & Drainage Strategy
 - Air Quality Assessment
 - Phase 1 Geo-environmental Assessment
 - Utilities Review Report
 - Soils And Agricultural Use & Quality
 - Heritage Statement
 - Social and Community Infrastructure Analysis
 - Social Needs Report Supporting the Development of Further Specialised Accommodation for Older People
 - Site Specific Viability Statement

Site Location and Context

- 1.3 The site extends to 5.85 hectares (14.45 acres), after setting aside the land required for the Western Link Road and comprises a single parcel of land to the south of Chester Road (A56) as illustrated in Figure 01:01. The site lies adjacent to the western edge of Walton and is bordered to the east by an unadopted road, leading to the Walton Lea Project and sports fields associated with Warrington Sports Club to the south. An established residential area is located to the site's eastern boundary and includes a mix of bungalows and primarily detached dwellings. Land to the north east has recently been developed by Elan Homes (Hall Gardens) for 14 no. 4 and 5 bed properties. Blocks of woodland are located to the site's eastern and western boundaries which are protected under Tree Preservation Orders (TPOs).
- 1.4 The site is generally flat with a rise in levels from approximately 17m A.O.D. (Above Ordnance Datum) at the north eastern corner to approximately 31m A.O.D. to the south west. The site is currently in use as agricultural land. A Public Right of Way (reference: 304/6) runs along the site's western boundary and provides access to the Walton Lea Project and 1-3 Walton Lea Cottages and 99 Chester Road. This access will be severed by the proposed Western Link Road and whilst provision has been made for a new access by the link road proposals the layout of our proposed scheme offers an alternative access through the development which provides a more direct and legible route to the existing properties.
- 1.5 In terms of the wider settlement, Walton forms part of the Hatton, Stretton and Walton ward and has a population of approximately 3,092 residents (2013 mid-year estimate) and 1,188 households (2011 Census). The settlement is currently identified by the Council as a Green Belt settlement in the proposed settlement hierarchy within the adopted Local Plan.
- 1.6 The site is within a sustainable location and is within:
 - 60m of a bus stop which provides frequent services to Warrington and St Helens;
 - 200m of a local 'one stop shop' and public house;
 - 900m of amenity open space at Walton Hall Gardens;
 - 10m of recreational playing fields at Warrington Sports Centre;
 - 0.6km of Stockton Heath Primary School;
 - 1.6km of Bridgewater High School and
 - 1.2km of shops and services within Stockton Heath district centre.
- 1.7 The site location and context is considered to demonstrate that the site is within a sustainable location for new development, and that the western edge is a natural and sustainable location for such development.



























Vision Statement:

"Land at Chester Road, referred to here as 'Stonecroft' will be a comprehensive and sustainable extension to Walton that will:

- Deliver an attractive and distinctive new residential destination for Warrington;
- Offer a choice of high quality new homes to meet local needs including retirement provision;
- Reinforce and enhance Stockton Heath's District centre status;
- Create a place of character, strong community and a quality of life which is in-keeping with the existing settlement; and
- Improve the transition from the countryside into the town with outward facing development.

The development proposals for Stonecroft will deliver new market, affordable family homes and retirement living; thus freeing up existing family homes and providing the opportunity for individuals to build their own homes, all to the benefit of the local community, at a time when there are severe challenges to housing supply across the Borough."

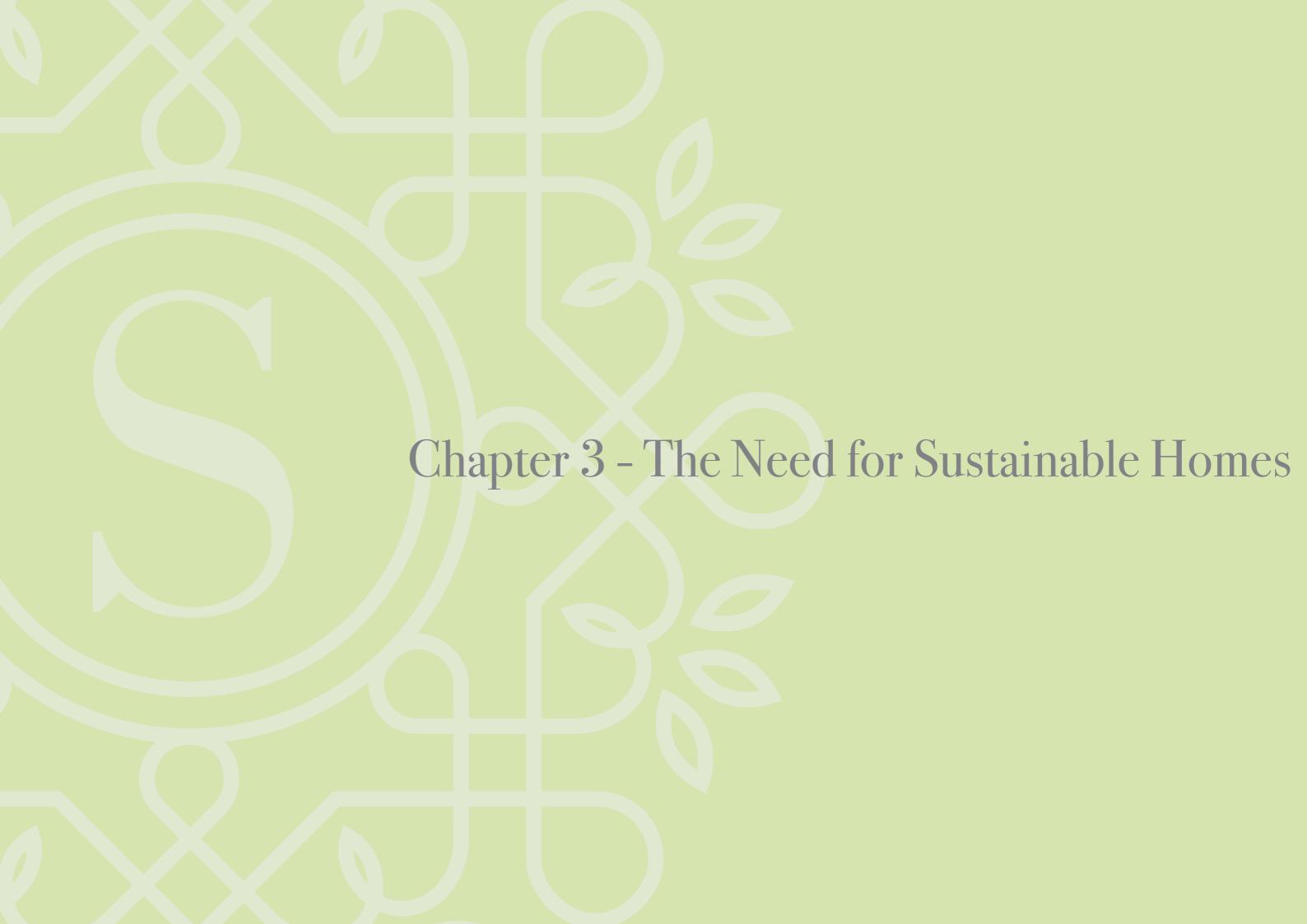




- 2.1 Our vision for the site is therefore underpinned by the following goals:
 - **Delivering quality new homes** the appointed developer will build quality new homes, which make use of and are sensitive to the distinctive character of the surrounding area.
 - Achieving a choice of housing The proposed development will offer a mix of family and retirement housing in terms of type, tenure and size to satisfy local needs and help to broaden the demographic profile of Walton and Warrington as a whole.
 - Providing affordable homes The proposals will help to address a recognised local housing need for affordable homes, meeting the needs of those currently unable to afford a new home.
 - **Investing in the community** the proposed scheme will seek to strengthen the local economy through the provision of housing to attract the economically active.
 - Creating a safe, desirable place to live The proposals will aspire to create a safe and attractive environment, which discourages crime and engenders a strong community spirit, building upon the strengths of the wider area.
 - **Supporting the community** The proposals will sustain the local community by providing more places to live and offer dedicated retirement living to free up existing family homes in the area.
 - **Promoting ecological conservation** The proposals will seek to sustain and enhance the quality of the existing habitats and features of conservation value.
 - Incorporating environmental and sustainability measures The proposals will incorporate a range of environmental and sustainability credentials, aimed at reducing carbon emissions and improving energy efficiency.
 - Working in partnership The appointed developer will collaborate with local residents and other key stakeholders to create a development that delivers community-wide benefits for all.
 - Enhance the profile and standing of the town Located at its western gateway, Land at
 Chester Road will provide a positive statement of the quality of life and environment that can be
 enjoyed and experienced within Walton and Warrington more generally.







The Need for Sustainable Homes

3.1 This chapter of the Development Statement summarises how the development proposals can support the Council in meeting their significant housing need through delivering quality new homes in a sustainable location which responds to planning policy at the national and local level, and therefore represents sustainable development.

The Need for New Housing in Warrington

- 3.2 There is a recognised national shortage of new homes; which is driving central government through the National Planning Policy Framework (NPPF) and supporting Planning Practice Guidance to prioritise significantly boosting the supply of housing across the Country.
- 3.3 Warrington Borough Council has undertaken further evidence base work to establish the need for new homes in the Borough, the results of which will inform a review of the adopted Local Plan Core Strategy (LPCS). This has confirmed the need to provide land to accommodate around 20,000 new homes over the next 20 years, of which 5,000 will need to be accommodated within the existing Green Belt, given the constrained capacity of sites within the settlement area.
- 3.4 The Updated Proposed Submission Version Local Plan (UPSVLP) proposes delivering a minimum of 14,688 new homes (equating to 816 per year) between 2021 and 2038 as a response to meeting the Council's stated housing need and requirement, which has been informed by their 2021 Local Housing Need Assessment.
- 3.5 This is a significant change from the Council's 2019 Proposed Submission Version Local Plan (PSVLP) where they were seeking to deliver a minimum of 18,900 new homes (equating to 945 per year) between 2017 and 2037. This has led to the Council removing certain land from the UPSVLP, which includes land south of Chester Road that was previously part of the South West Urban Extension under PSVLP policy MD3 South West Urban Extension.
- 3.6 In response Ashall Property Ltd has collaborated with a consortium of leading developers and housebuilders operating in the North West housing market including Barratt Developments (Barratt Homes and David Wilson Homes), Metacre Limited, Satnam Group, Story Homes, and Wainhomes to challenge the UPSVLP's housing requirement and housing land supply. The consortium has instructed Lichfields to set out their key issues of soundness in relation to the UPSVLP housing requirement and housing land supply. The conclusion of this exercise is summarised as follows:
 - The UPSVLP's housing target of 816 dpa is not positively prepared or justified and must therefore
 be revisited and robustly adjusted upwards. There are clear and indisputable arguments to go
 significantly higher than this, which Lichfields reasoned justification provides evidence that should
 be 1,015dpa over the Plan period that would meet the requirements of paragraph 60 of the NPPF
 to significantly boost reasoned the housing requirement.
 - Secondly, that the quantum and composition of the WBC's identified housing land supply is not 3.8 justified or effective, so that:
 - a. WBC cannot demonstrate a 5YHLS because they unjustifiably and arbitrarily sought to reduce their housing requirement in the first 5 years;
 - b. the need for housing, generally and in respect of an acute affordability issue, will not be met across the Plan period, specifically in respect of serious housing land supply deliverability

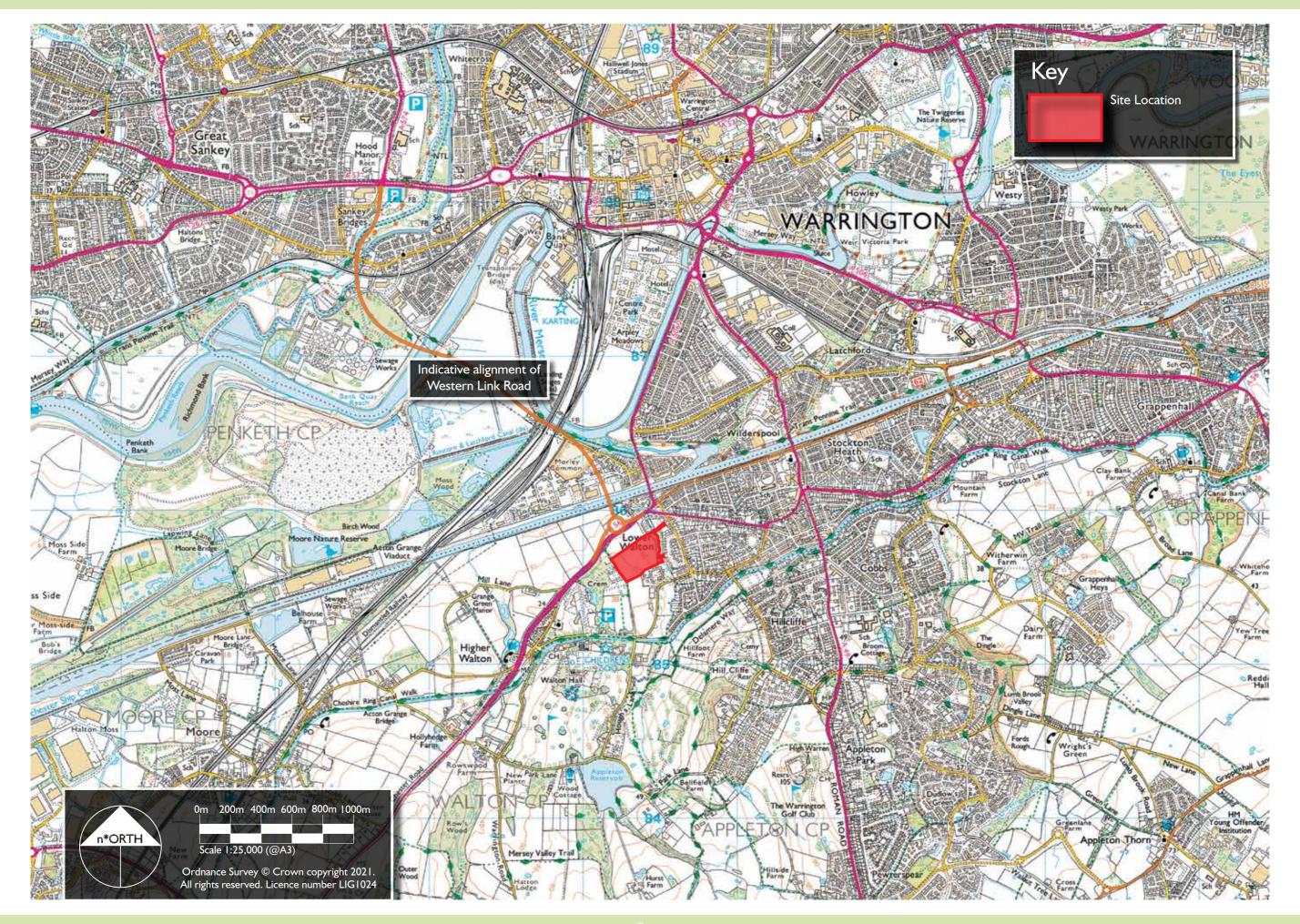
- concerns, which includes serious concerns with the selection of Fiddlers Ferry as a strategic housing allocation to be released from the Green Belt and its development capacity and deliverability;
- c. there is a need for additional land to be allocated and/or safeguarded for new homes to address the outcome of failing to meet (a) and (b) and to protect the long term integrity and permanence of the GB boundaries. This will require WBC to identify the following a minimum additional capacity for 2448 homes (6,309 additional dwellings if pursuing an economically aligned housing figure) over the plan period that will help to deliver over 70% of the identified affordable housing need. This should, be identified for allocation and safeguarding now to meet the needs beyond the Plan period and ensure that the Green Belt boundaries endure beyond the Plan period. The identification of additional capacity will be best achieved by identifying a number of smaller and sustainably located Green Belt releases for residential development (i.e. sites with capacity to deliver 200-500 units) should be identified, through an appropriate evidence base, within this additional land supply. These sites would be able to come forward immediately upon adoption of the Warrington Local Plan and negate the need to backload the housing requirement.

Green Belt Assessment

- 3.4 This Development Statement has been informed by a Landscape & Visual Overview report, which includes an independent Green Belt Review of land south of Chester Road. This assessment provides a critique of the Council's own Green Belt assessment (undertaken by ARUP) and provides their own discursive analysis of the contribution of the site to the five purposes of the Green Belt as outlined within the NPPF, as well as making an assessment of openness. The review also includes a further discussion as to the changes to that contribution that would be brought about by the proposed development and any recommendations to mitigate or compensate for those changes.
- 3.5 The results of the independent Green Belt assessment is contained in Table 03:01 opposite, which sets out a summary of the previous ARUP 2016 findings and our own up-to-date assessment. This finer-grain assessment has been based on both desktop and fieldwork undertaken in October 2021.
- 3.6 In conclusion, land to the south of Chester Road can be seen to make a weak contribution to 4 out of 5 purposes of the Green Belt and no contribution to the final Green Belt purpose (To preserve the setting and special character of historic towns).
- 3.7 The delivery of the Warrington Western Link Road (WWL) will also provide the site with a greater measure of self-containment than previously identified by the 1997 Deposit Draft Local Plan Inspector who identified that the current Chester Road dual carriageway combined with the tree belt and housing on the other boundaries, created a noticeable measure of self-containment.
- Ashall Property believes that this presents strong evidence for exceptional circumstance for the UPSVLP to be modified through the exclusion of their land to the south of Chester Road from the Green Belt. This would either be as safeguarded land for future development or as white land, notwithstanding the strong evidence that has been alluded to in the Planning Policy section of this Statement that the site should be a residential allocation given the serious issues in relation to the housing requirement and housing land supply.

NPPF Purpose	ARUP 2016 Assessment Contribution	Re-Assessment of Contribution of the Site	Mitigation
	(Parcel WR64)		
To check the unrestricted sprawl of large built-up areas	There are some areas of dense tree lining however on the whole the boundaries may not be permanently durable enough to prevent sprawl into the parcel in the long term. Moderate Contribution	The principal consideration here is the sprawl of the urban edge of Lower Walton westwards and potential coalescence with Higher Walton. The Site provides durable long-term boundaries to the east in the form of the Brookwood Close open space. Furthermore, the watercourse, mature vegetation and scattered buildings along the close itself form an identifiable boundary. The proposed junction on the A56 Chester Road is a strong feature that limits sprawl to the north. There is already established inter-visibility and some connectivity with the adjoining buildings to the south and west. The Site offers the ability to round-off development edge of Lower Walton. Sprawl can be restrained by the durable boundary features to the north, east, south and west.	The creation of strong Green Infrastructure to the north and east of the Site, utilising existing features and including new woodland planting where suitable. This will create a defensible boundary.
		Weak Contribution	
To prevent neighbouring towns merging into one another	The parcel forms a less essential gap between the Warrington urban area and Runcorn in the neighbouring authority of Halton whereby a reduction in the gap would slightly reduce the distance between the towns but would not result in them merging. Weak Contribution	The Site forms a smaller portion of less essential (east-west) gap between Warrington and Runcorn. At-worst, the proposed development parameters could result in a 300m reduction in the gap between settlements, but that has to be considered against the width of the existing gap which is in the region of 4km. There is no perceptible reduction in the (north-south) gap between the Site and Warrington situated to the north of the Ship Canal. Furthermore, there is no inter-visibility between the settlements and no location from which the separation of the two settlements would be perceived as merging. Weak Contribution	The retention and strengthening of the existing landscape features associated with the eastern boundary of the Site would ensure continued visual separation between Runcorn and the Site, particularly when approached along the A56.
To assist in safeguarding the countryside from encroachment	The boundaries between the parcel and the built up area are not all durable and would not be able to prevent encroachment in the long term. In particular the boundary at the north with the new housing development of Hall Gardens is particularly weak and would not be able to prevent encroachment into the parcel. The boundaries between the parcel and the countryside consists of Walton Lea Road to the south, Chester Road to the north and a dense wooded area to the west which is durable and may be able to prevent encroachment beyond the parcel Strong Contribution	Due consideration needs to be given to the durability of the eastern boundary of the Site, which safeguards encroachment of future development further to the east through the presence of the Brookfield Close Open Space and associated watercourse. Walton Lea Road also defined by a number of features (track, trees and the PRoW) which in combination represent a durable boundary. To the north, the proposed junction on the A56 corridor physically restricts encroachment. Tree cover does limit wider visibility and the fieldwork and accompanying photography demonstrates that open long line views are not readily available. Weak Contribution	The creation of strong Green Infrastructure to the east of the Site and, the retention and strengthening of the existing landscape features associated would reduce the visual and perceptual intrusion of the proposed development into the countryside.
To preserve the setting and special character of historic towns	Warrington is a historic town however the parcel is not within 250m of the Warrington Town Centre Conservation Areas. The parcel does not cross an important viewpoint of the Parish Church. No Contribution	There is no perceptual influence or inter-visibility with the historic core of Warrington Town Centre or Conservation Area. No Contribution	N/a
To assist in urban regeneration, by encouraging the recycling of derelict and other urban land	The Mid Mersey Housing Market Area has 2.08% brownfield urban capacity for potential development, therefore the parcel makes a moderate contribution to this purpose. Moderate Contribution	The updated Local Plan (2021) recognises the need for both housing and employment land, plus the need for some removal of land from the Green Belt to accommodate that identified need. In this case the Site represents a very sustainable location immediately adjoining proposed junction on the A56 and close to services situated within Lower Walton. Weak Contribution	N/a
Justification & Overall Assessment	In line with the methodology, professional judgement has therefore been applie d to evaluate the overall contribution. The parcel has been judged to make a moderate overall contribution as although it supports a strong degree of openness, the boundaries between the parcel and the countryside are durable thus any development would be contained and would therefore not threaten the openness and permanence of the Green Belt. Moderate Contribution	The re-assessment of the Site itself has judged that overall, it makes a weak contribution to the Green Belt purposes. The Site is evidentially associated with the established urban edge and represents a sustainable location. A combination of durable boundary features (which include the Brookwood Close open space, Walton Lea Road and proposed A56 junction) provide a strong and permanent sense of enclosure, to limit any perception of sprawl, merging or encroachment. Tree cover does limit wider views and the assessment demonstrates that open long line views and inter-visibility between settlements are not available. Weak Contribution	The creation of strong and connecting network of Green Infrastructure, that utilises and enhances existing features, will create a more diverse landscape, capable reducing any sense of visual and perceptual intrusion and ensuring that the proposed development assimilates into the countryside.

Table 03:01 - Independent Green Belt Assessment



Planning Policy Revision

- 3.9 Land south of Chester Road, Walton should be removed from the Green Belt and included within the UPSVLP, either as part of the SWUE or as a stand alone allocation/safeguarded site or white land because it serves none of the purposes of the Green Belt and is a sustainable and deliverable residential development site that will directly contribute to meeting core objectives of WBC's UPCVLP, namely homes within the first 5years of the Plan period, much needed affordable homes and specialist elderly care accommodation, as well as providing land that is critical to the delivery of the WWL.
- 3.10 Ashall Property welcomes the opportunity to work with the Council, its stakeholders and local community to bring new homes forward in this location, to assist in meeting the five year housing land supply shortfall and to maintain a flexible and responsive supply of land for housing over the plan period. In doing this, Ashall Property believe that they can directly assist the Council in demonstrating that the UPSVLP can be amended so that it can be found sound at its Examination in Public.

Walton: A sustainable location for new development

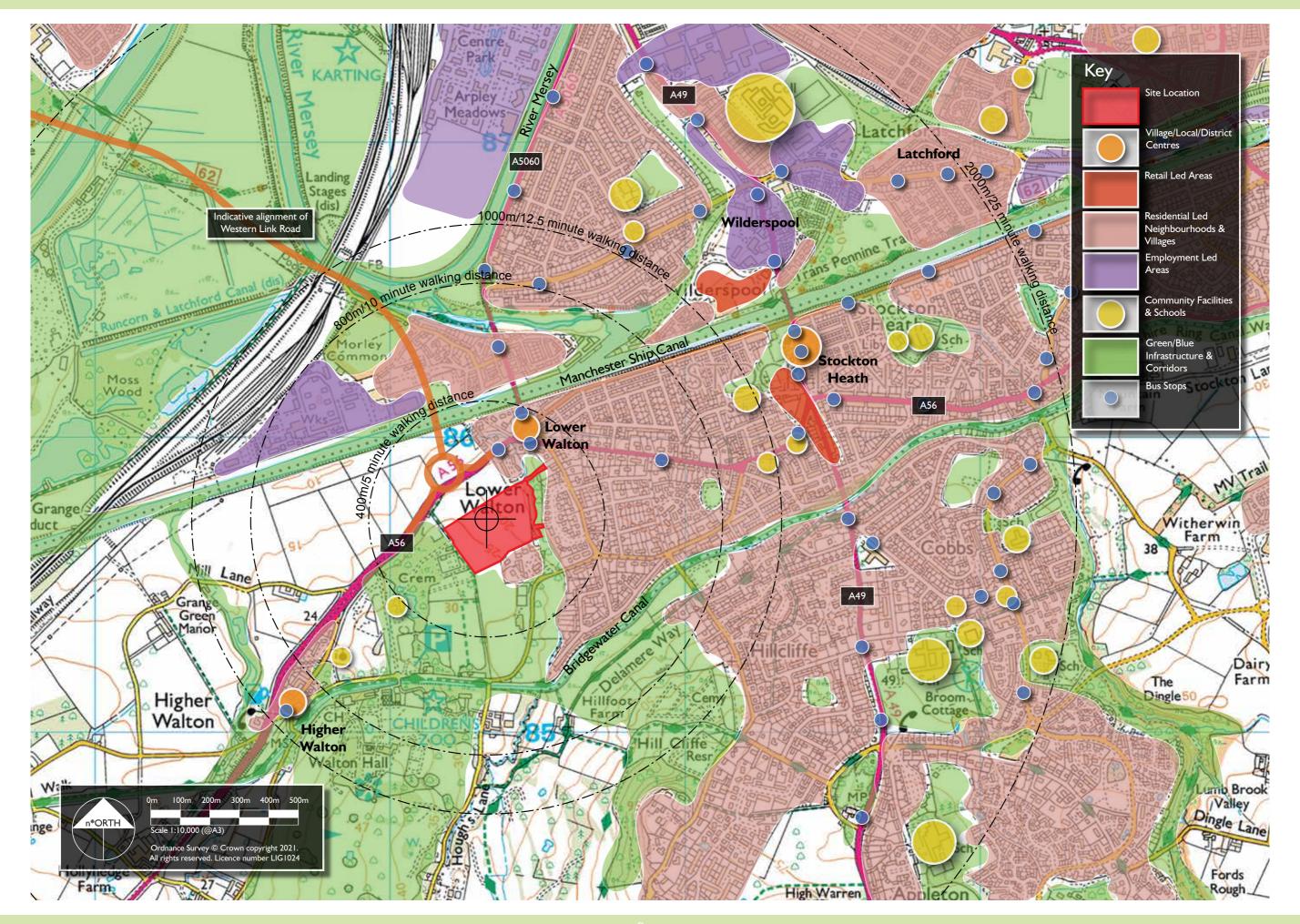
- 3.11 Walton is located to the south of Warrington and west of Stockton Heath, and forms part of the suburban area of Warrington. It is separated into two settlement areas Higher Walton and Lower Walton, with the site being in close proximity to the latter. To the south and east lies Walton Hall and Gardens, farmland and golf courses. Stockton Heath adjoins Lower Walton to the west, and to the north lies the Manchester Ship Canal and River Mersey which separate Lower Walton from Warrington. Land between the Manchester Ship Canal and River Mersey falls within Flood Zones 2 and 3.
- 3.12 As such, land to the west of Lower Walton is considered to be the only sustainable, suitable location for new development in this area, and should therefore be considered as part of the suburban area of South Warrington.
- 3.13 In terms of accessibility, land to the west of Lower Walton can be considered suitable for new development, given the excellent road connections provided by the A56 into Warrington and towards the M56 which links Manchester and Chester, as well as the proposed new links into Warrington through the Warrington Western Link (which has been approved through the Local Majors Fund, Autumn Statement 2016) and the Warrington Waterfront redevelopment.
- 3.14 The site is within close proximity to a selection local retail and community facilities on Ellesmere Road/Hill Cliffe Road, and is only a 15 minute walk to Stockton Heath centre where a wider range of facilities are available. Nearby bus stops located on Chester Road and Hill Cliffe Road provide regular connections to Warrington and Chester. The nearest train station to the site is at Warrington Bank Quay, approximately 2km from the site, which provides connections to Manchester, Liverpool, London and Glasgow.
- 3.15 Furthermore, land to the west of Lower Walton is directly adjacent to the currently proposed route for the Warrington Western Link, a new high level link across the Manchester Ship Canal, and the Warrington Waterfront redevelopment area. The significant highways and transport infrastructure improvements proposed in close proximity to the site further demonstrate the site's suitable location for new development.
- 3.16 This has demonstrated that due to a number of physical and infrastructure factors, the optimum location for additional development is to the west of Lower Walton where there is the opportunity to deliver a sustainable urban development.

Land at Chester Road

3.17 The proposed development site, situated to the south of Chester Road (A56) sits within land to the west of Lower Walton. As set out below, the site has clear advantages which demonstrate that it is a sustainable site and has the capability of accommodating new homes to meet local housing need for Walton and for Warrington as whole.

Land at Chester Road: The Advantages

- 3.18 Land at Chester Road has the following advantages:
 - It is visually well-located adjacent to the existing built form of Lower Walton and the southern suburbs of Warrington;
 - It is well-related to the road network, particularly the A56;
 - It is located within Flood Zone 1, whereas land to the north of the Manchester Ship Canal located in Flood Zones 2 and 3;
 - It is capable of accommodating a significant level of housing development that is able to respond
 to its immediate context allowing it to sit well in its environment and deliver an attractive western
 gateway to the urban edge of Warrington and Stockton Heath;
 - The site is not subject to any international, national or regional environmental designations;
 - The site is located approximately 2km to the east of Stockton Heath centre, where a broad range of shops, facilities, services and associated employment opportunities can be found;
 - Further employment opportunities can be found in Warrington, which is located approximately 2.6km to the north of the site:
 - Stockton Heath Primary School is circa 800m from the site and Bridgewater High School is approximately 1.6km from the site;
 - As detailed later in this Development Statement, the site at Chester Road is well-served by public transport with bus stops located along the A56 and Hill Cliffe Road adjacent to the site, and train services at Warrington Bank Quay and Warrington train stations; and
 - The site is also considered to be accessible on foot and by cycle; and
 - Ashall Property is committed to working with the Council to promote the site through the UPSVLP examination and adoption process.
- 3.19 On this basis, land at Chester Road will go a considerable way towards meeting the identified need for housing development in a sequentially preferable location which is well-related to Warrington and Stockton Heath and existing and proposed transport infrastructure.

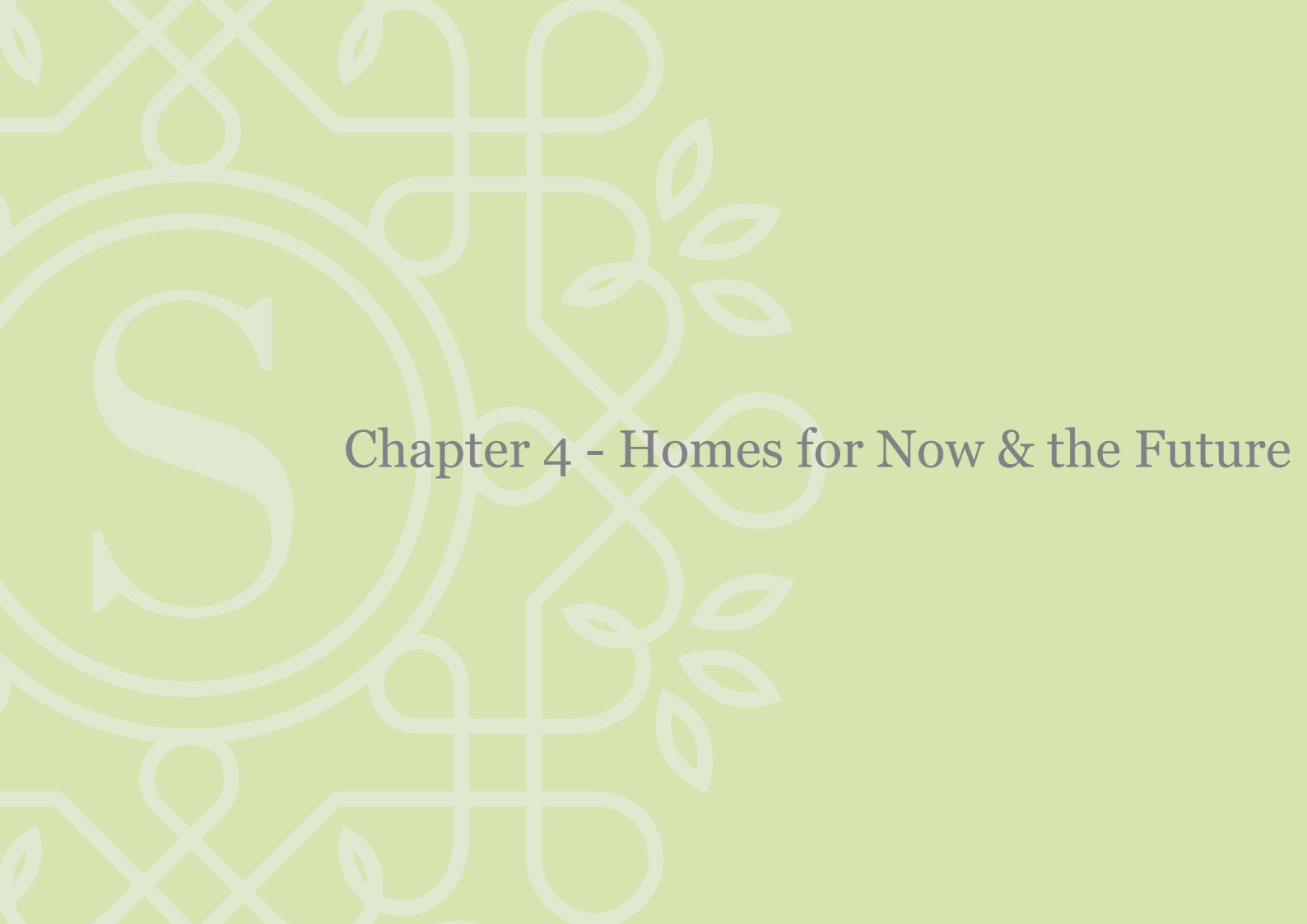


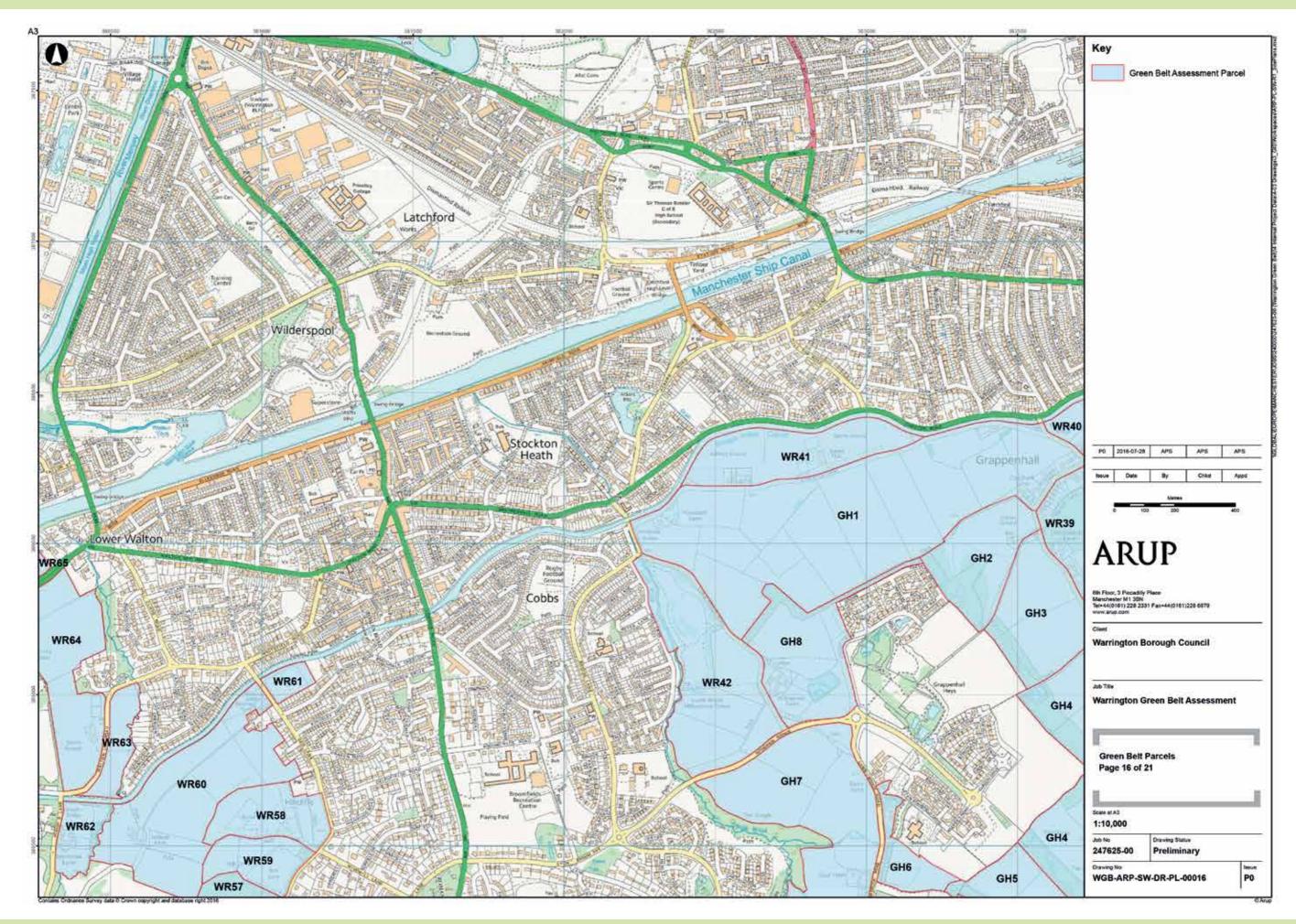
Summary

- 3.20 This chapter of the Development Statement has demonstrated that there is a clear case for supporting the residential development of land at Chester Road. In summary:
 - This is underpinned by a significant unmet need for new housing, comprising family homes and affordable homes, to help support the vitality of Warrington and Stockton Heath;
 - The proposed development would contribute towards the Borough's housing land supply at a time when the Council cannot demonstrate a five year supply of housing land, and there is a significant identified requirement to release Green Belt land sufficient to address the Council's acute housing need;
 - The proposed development would contribute towards building a strong, responsive economy by
 providing short term economic and fiscal benefits in terms of job creation, additional monies to the
 local authority and increased expenditure in the local economy;
 - The site is extremely well-located in proximity to public transport links, strategic transport routes and a range of shops, services, schools, jobs and community facilities;
 - · The development of this site could be readily accommodated within the landscape setting; and
 - Ashall Property is committed to working with the Council to promote the site through the UPSVLP examination and adoption process.
- 3.21 The development proposals for the site are therefore firmly aligned with the principles of sustainable development which underpin national and local planning policy.









Homes for Now & the Future

In line with Planning Practice Guidance, plan makers should assess the suitability of the identified use of a particular site and be guided by the development plan, market requirements in that housing market, as well as any physical constraints. These key elements have therefore been considered below.

Suitability

Planning Policy and Site Allocation

- 4.1 The statutory development plan for Warrington Borough Council comprises the Local Plan Core Strategy (LPCS) (adopted 2014) which designates the site as Green Belt (Policy CS5) with the site lying directly adjacent to the South Area Boundary.
- 4.2 Warrington Borough Council are in the process of replacing the LPCS with the UPSVLP covering the period between 2021 and 2038. The current UPSVLP retains the site within the Green Belt.
- 4.3 Notwithstanding this, the Council has acknowledged that they do not currently have a five year supply of housing land in place and has recognised the need to release Green Belt sites for development as part of the UPSVLP process to meet an acute need for new homes across the Borough.
- 4.4 Earlier chapters of this statement demonstrate that the site should be removed from the Green Belt and included within the UPSVLP, either as part of the SWUE or as a stand alone allocation/ safeguarded site or white land because it serves none of the purposes of the Green Belt and is a sustainable and deliverable residential development site that will directly contribute to meeting core objectives of WBC's UPCVLP, namely homes within the first 5years of the Plan period, much needed affordable homes and specialist elderly care accommodation, as well as providing land that is critical to the delivery of the WWL.
- 4.5 Ashall Property therefore considers that the site is suitable for new homes to meet the Council's direct housing need and would welcome the opportunity to work with the Council, its stakeholders and local community to demonstrate this and directly assist the Council in demonstrating that the UPSVLP can be amended so that it can be found sound at its Examination in Public.

A popular residential location with growing market interest/value

4.6 The site is located within an existing and popular residential area that has growing market interest and value based upon local agency intelligence. From our on-going dialogue with regional and national house builders the demand for sites in the immediate area is very strong and this is likely to result in a number of parties expressing interest in any residential development opportunity.

An Accessible and Sustainable Location

4.7 The site is incredibly well located in terms of its proximity and accessibility to key modes of public transport and local amenities and facilities. The site is within close proximity from local bus stops (within 60 m) which provide regular services to Warrington, Runcorn and Chester. The site's location is also well placed to provide access to the strategic highway network, providing access to key local and sub-regional employment destinations.

- 4.8 The site also provides positive accessibility and connectivity to local shops and services, within Walton itself, as well as within Stockton Heath, access to open space and sporting facilities (Warrington Sports Club and Walton Gardens) and Stockton Heath Primary School and Bridgewater High School are within 20-30 minutes of the site.
- 4.9 It is clear therefore that the location of the site is inherently sustainable.

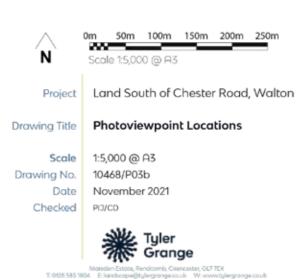
An Unconstrained and Available Development Site

The land is considered to be free from any significant impediments to delivery within the short term. Initial technical due diligence has been undertaken in support of the development of the site for residential uses:

- Landscape & Visual Overview
- Preliminary Ecological Appraisal
- Arboricultural Appraisal
- FRA & Drainage Strategy
- Air Quality Assessment
- Phase 1 Geo-environmental Assessment
- Utilities Review Report
- Soils And Agricultural Use & Quality
- Heritage Statement
- Social and Community Infrastructure Analysis
- Social Needs Report Supporting the Development of Further Specialised Accommodation for Older People
- Site Specific Viability Statement
- 4.10 The key physical, environmental and technical findings from these site assessments are summarised in the remainder of this chapter to demonstrate that there are no significant physical, environmental or technical constraints to residential development of the site.
- 4.11 All of the detailed site assessments can be made available upon request.



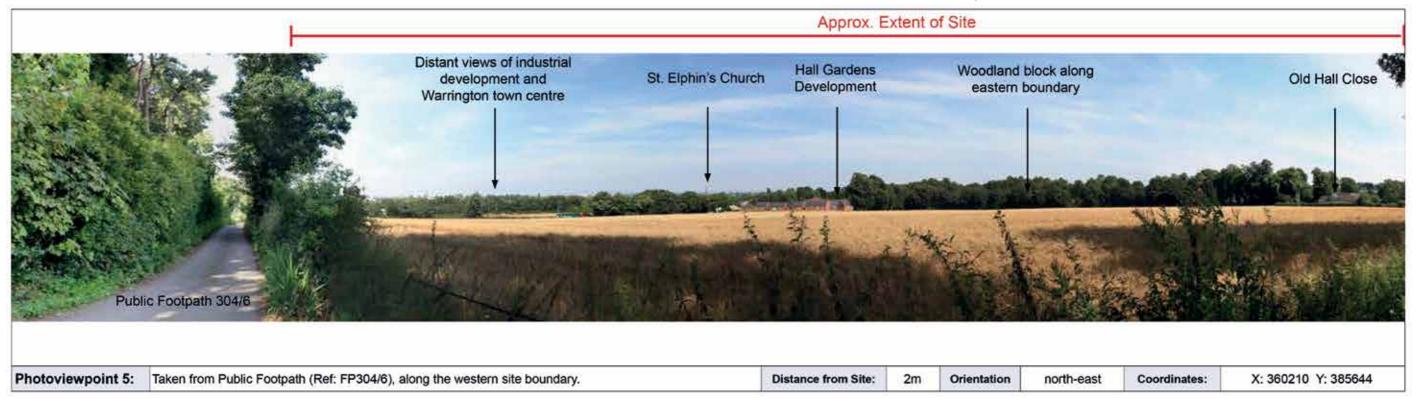


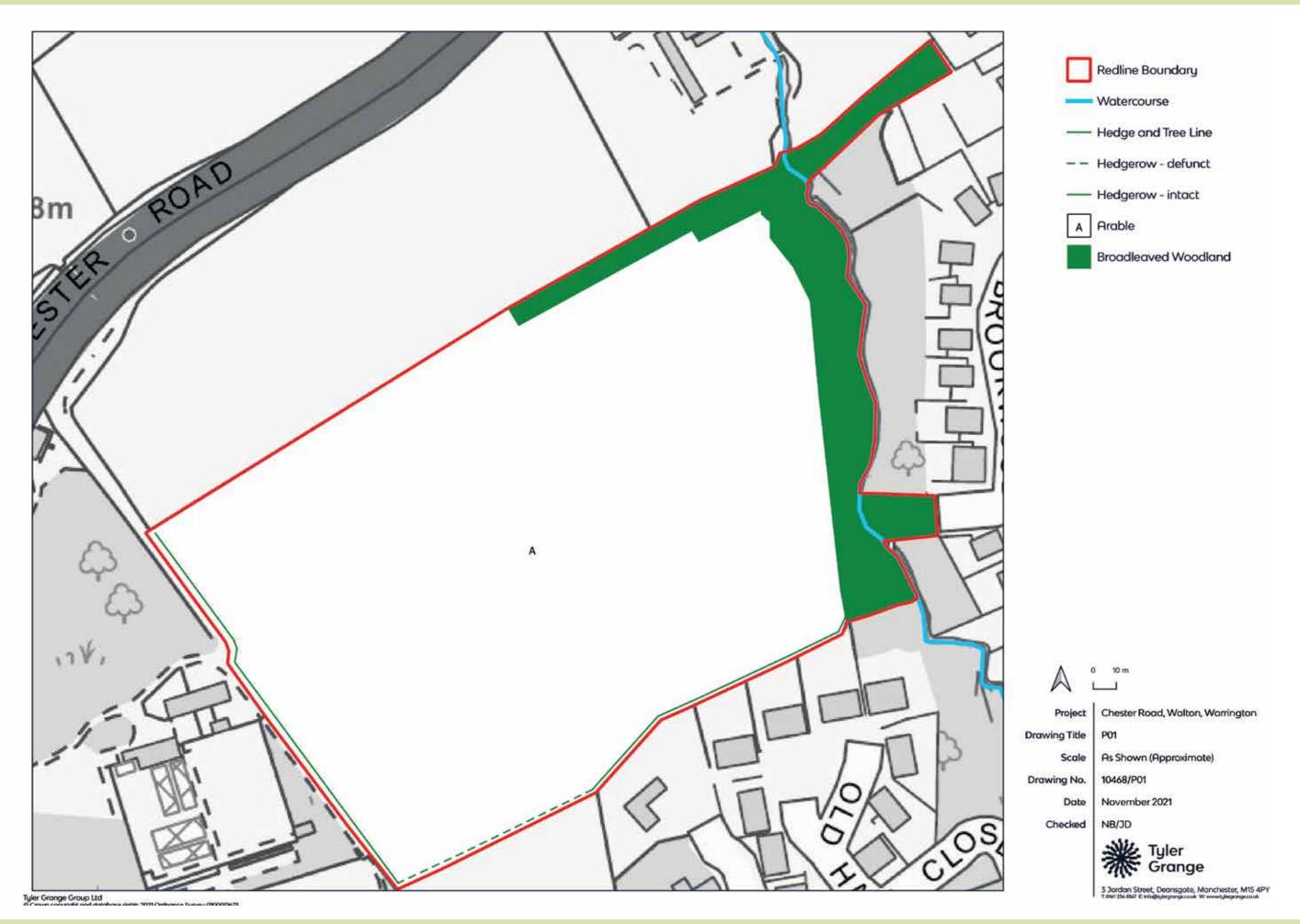


Landscape and Visual Character

- 4.12 An appraisal of the site has been undertaken by Tyler Grange which confirms that the site sits within the 'Mersey Valley' Character Area which includes densely populated urban and suburban areas, including Warrington, large-scale visible industrial development set within a natural landscape comprising large-scale, predominantly flat farmland, trees and woodland.
- 4.13 More specifically, the site is set within the Appleton Park & Grappenhall Character Area which comprises 'strongly sloping land to the north, affording sweeping long distance views, occasionally 4.18 Residential amenity from the properties adjoining the site will also be maintained through the addition restricted by the presence of linear deciduous woodlands, coverts and tree groups'. This character area is also noted to have 'advanced' landscaping and 'entrance' features relating to proposed housing development'.
- 4.14 The site is also influenced by adjacent landscape character areas the River Mersey/Bollin and Victoria Park to Fiddlers Ferry. This includes 'widespread residential and industrial development on the floodplain'.
- 4.15 Whilst the characteristics set out above provide some context to the site, the site itself has been characterised by Tyler Grange as being agricultural in nature but it has an urban fringe and an enclosed character. The site is influenced by the visual backdrop of Lower Walton and Warrington, and is associated with the surrounding established residential area due to the proximity and visual connectivity to the adjacent dwellings off Chester Road.
- 4.16 The site at Chester Road has generally limited visibility in the wider landscape due to the relatively flat nature of the land and existing vegetation at site boundaries and in the wider landscape. The site is well enclosed due to its vegetated boundaries of hedgerows and hedgerow trees, and the adjoining woodland blocks. This assists in filtering and screening views and is therefore likely to assist in reducing the visual impact of any new development within this landscape.
- 4.17 There are relatively few receptors that are likely to be impacted on and there is a limited visual relationship between the site and the wider Green Belt. The main receptor is from Public Footpath

- 304/6 which runs along the western boundary. This allows views towards the residential edge of Lower Walton and Warrington, including the spire of St Elphin's Church. Appropriate mitigation is proposed to be incorporated within the indicative design proposals (see Figure 05:03) which includes a comprehensive green infrastructure network, incorporating native tree, hedgerow and woodland planting.
- of soft landscaping and screening.
- 4.19 Consideration has been given as to the site's suitability for release from Green Belt in relation to the principal Green Belt objectives as set out within the NPPF, and with reference to adopted Local Plan Policy CS 5. This confirms the following key points:
 - That development on the site would reinforce the robustness of access to the Walton Lea Project and 1-3 Walton Lea Cottages as edge to the settlement;
 - The site is visually well enclosed by existing vegetation which separates it from any visual relationship to Higher Walton.
 - · There is potential to retain and enhance the existing boundary vegetation and woodland block along the eastern boundary;
 - The existing public footpath (304/6) connects Walton Hall and Gardens to the south of the site and as such there is an opportunity to create a link through the site from Chester Road at the northern boundary;
 - The containment of the site afforded by the surrounding vegetation will limit the extent to which any proposed development would introduce uncharacteristic features into the landscape and the wider Green Belt landscape.
- 4.20 On this evidence it is considered that there are no landscape reasons to prevent the site being allocated for residential development.





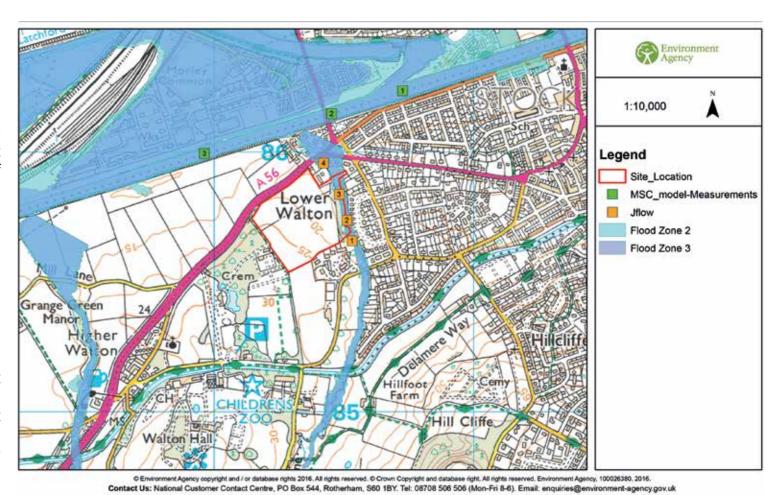
Preliminary Ecological Appraisal

- ecological features present within the likely zone of influence of the proposed development, and the ecological issues and opportunities that may arise as a result of the proposal.
- 4.22 The PEA has confirmed that the site is not covered by any statutory or non-statutory nature conservation 4.33 The majority of the site is therefore within an area considered to have a low risk of flooding (i.e. designations.
- 4.23 The predominant feature of the site is the arable land which has been identified as being is floristically poor and uniform in structure and having very limited field margins. Hedgerows and trees line the perimeter of the site and comprise a mix of species and trees of differing maturity.
- 4.24 A small brook which flows into the Manchester Ship Canal lines the eastern site boundary, within the broadleaf woodland. It provides an important linear feature which is considered to be of local importance as illustrated in Figure 04:04 opposite.
- 4.25 A belt of mature semi-natural broadleaved woodland lines the eastern boundary and extends into the middle of the field. It provides a strong boundary to the site and provides connectivity to habitats in the wider locality. It is considered to be of local importance.
- 4.26 Habitats on site have been identified as having the potential to support badger, bats, breeding birds, otter and water vole. The PEA therefore recommends that additional surveys are undertaken to support any future planning application, including a full badger survey, a preliminary roost assessment of trees for bats (if any trees are to be lost), a breeding bird survey and otter and water vole survey (if the brook is to be affected by development).
- 4.27 No ecological issues have been identified that could affect the principle of development on the site. Existing ecological features, including the woodland is proposed to be retained and there is an opportunity, as a result of the proposed development, to enhance the biodiversity of the site.
- 4.28 On this evidence it is considered that there are no ecological reasons to prevent the site being allocated for residential development.

Flooding

- 4.29 A Flood Risk Assessment and Drainage Strategy has been carried out by WaterCo. This confirms that the majority of the site is within Flood Zone 1 – an area considered to be outside of the extreme flood extent meaning it has a less than 1 in 1000 (0.1%) annual probability of flooding. The eastern extent of the site, adjacent to the unnamed watercourse, is situated in Flood Zone 2 – an area considered to be at risk of fluvial flooding with between a 1 in 100 (1%) and a 1 in 1000 (0.1%) annual probability and in Flood Zone 3 – an area considered to be at risk of fluvial flooding with less than a 1 in 100 (1%) annual probability as illustrated in Figure 04:05.
- 4.30 Notwithstanding this, given the steepness of the catchment, the flood extent is minimal and confined to areas immediately adjacent to the watercourse. The risk of fluvial flooding to the majority of the site is low and the flood extent is confined to the wooded area to the east of the site. Locating all properties outside of the wooded area would mitigate the potential fluvial flood risk.
- 4.31 The site is also at a low risk of flooding from artificial sources.

- 4.21 A Preliminary Ecological Appraisal (PEA) has been undertaken by Tyler Grange to review the 4.32 An initial drainage strategy has also been undertaken which has confirmed that there is potential to dispose surface water via soakaways or via the existing watercourse to the eastern boundary of the site.
 - less than a 1 in 1,000 annual probability of flooding) and is sequentially preferable in terms of the NPPF and associated technical guidance. These indicate that all uses of land, including housing, are appropriate within this zone.
 - 4.34 On this evidence it is considered that there are no flood risk constraints preventing the site coming forward for development.



Phase 1 Geo-Environmental Scoping

- by Earth, Environmental & Geotechnical. The report identifies the underlying environmental setting of the site, including the geology, hydrology, flood risk and ecology.
- 4.36 The majority of the site is underlain by superficial deposits which comprises Shirdley Hill Sand Formation and Tidal Flat Deposits (Clay, Silt and Sand). This is shown to be underlain by bedrock deposits consisting of the Wilmslow Sandstone Formation.
- 4.37 According to the Environment Agency's online Groundwater Vulnerability Mapping, the superficial Shirdley Hill Sand Formation and Tidal Flat Deposits are a Secondary (undifferentiated) aguifer. These are layers which have typically previously been classed as aguifers and non-aguifers due to the variable characteristics of the rock type. The Wilmslow Sandstone Formation bedrock is classified as a Primary aguifer. These are permeable layers capable of supporting water supplies at a local rather than strategic scale and in some cases form an important source of base flow to rivers.
- 4.38 The likelihood of contamination on the site has been identified as low to medium, however further ground investigations would be required to determine the nature of proposed foundations, ahead of submitting a planning application.
- 4.39 It is therefore considered that there are no geo-technical reasons why the site could not come forward for residential development.

Highways/ Transport

- 4.40 DTPC has undertaken an initial highways assessment of the site.
- 4.41 The site is located off Chester Road (A56). East of the site, Chester Road consists of a single carriageway which provides a northbound lane, northbound right-turn lane and a single southbound lane. The carriageway is approximately 11.5m wide and provides 2m wide footways, dropped kerbs and street lighting. This section of Chester Road is subject to a 30mph speed limit.
- 4.42 Along the frontage and west of the site, Chester Road forms a dual carriageway which provides two lanes in each direction of travel. Each carriageway is approximately 8m wide and a shared footway/ cycleway is provided alongside the northbound carriageway. A grass verge approximately 1m wide separates the carriageway from the footway/cycleway and street lighting is provided along the length of the carriageway. The dual carriageway is subject to a 40mph speed limit.
- 4.43 Chester Road forms a priority controlled junction with the A5060 Chester Road, approximately 255m northeast of the site and extends in a south-westerly direction towards a junction with the M56. Approximately 200m northeast of the existing site access Chester Road forms a priority junction with Walton New Road and Pool Lane.
- 4.44 The proposed development site is thus considered to be in a strategic location for access to key road networks within Warrington and the wider region.
- 4.45 The proposed development is located on the edge of an existing urban area with a range of services and facilities. There are existing pedestrian routes within the vicinity of the site that will assist the accessibility of the site for pedestrians, as well as easy access to an existing bus stop to provide additional opportunities for sustainable travel. Bus services (62 and X30) are provided from the bus stop within 60 m from the site, providing access to Warrington, Runcorn, Widnes, Hough Green and Chester.

- 4.35 A Phase 1 Geo-Environmental Site Assessment report for the site was produced in September 2016 4.46 Opportunities are also identified for cycling, as Warrington, Grappenhall and Great Sankey are all within 5km of the site. Traffic free cycle routes exist heading west on Chester Road (A56) and heading east along the northern bank of the Manchester Ship Canal, approximately 700m from the application site. A mixed on-road and traffic free cycle route extends west towards Runcorn along the St Helen's Canal.
 - 4.47 As such there are considered to be no identified highways constraints that would prevent the site being allocated and developed for residential purposes, and the application site has good potential to be accessible by sustainable modes of transport.

Arboricultural

- 4.48 Tyler Grange has prepared an arboricultural appraisal to inform the indicative masterplan for the site, and to fully understand the tree constraints and associated root protection areas.
- 4.49 A total of 11 no. individual trees, 6 no. groups of trees, 4 no. hedgerows and a woodland have been identified.
- 4.50 The wooded area to the eastern boundary of the site is subject to a Tree Preservation Area (reference 13 ref A1 and 9 ref W1) and as such the approximate extent of the root protection area associated with this has been determined and has influenced the indicative masterplan for the site. Trees within the TPO have been identified as category A and will be retained and protected as part of any future development.
- 4.51 The scheme has been designed to incorporate and retain as many B quality trees as possible, and further consideration will be given to the ecological and amenity value of the trees when the scheme is developed further.
- 4.52 A residential scheme on the site would also likely lead to a net-gain in tree cover due to the provision of new street trees, incidental landscaping and residential gardens.
- 4.53 On this basis it is considered that there are no arboricultural issues which would prevent the site from coming forward for residential development. The protected trees within the Tree Preservation Order (TPO) would be retained and protected as part of any future scheme.

Agricultural Land Classification

- 4.54 An agricultural land assessment has been undertaken by Land Research Associates which has confirmed that the agricultural quality of land is limited by droughtiness and soil wetness. The majority of the site is identified as subgrade 3a which will affect crop yields and the flexibility of cropping in winter and early spring, and the potential profitability of the land through economies of scale for agriculture or horticulture is limited due the scale of the site and that the site is separated on all sides from other agricultural land.
- 4.55 There are no land quality issues which would prevent the site being allocated for residential development, given that there is adequate good quality agricultural land available in and around Warrington.

Availability

4.56 The site is wholly within Ashall Property's control and there are no known legal or ownership problems which could impact the deliverability of the site. The site is vacant and is used for occasional crop planting by way of an agricultural lease which can be easily surrendered. It can therefore come forward for delivery in the short term.

Achievability

4.57 The site is economically viable for an appropriate residential development and, as previously stated, there is likely to be significant market interest in this location.



Figure 04:06 - Aerial Photograph of Site

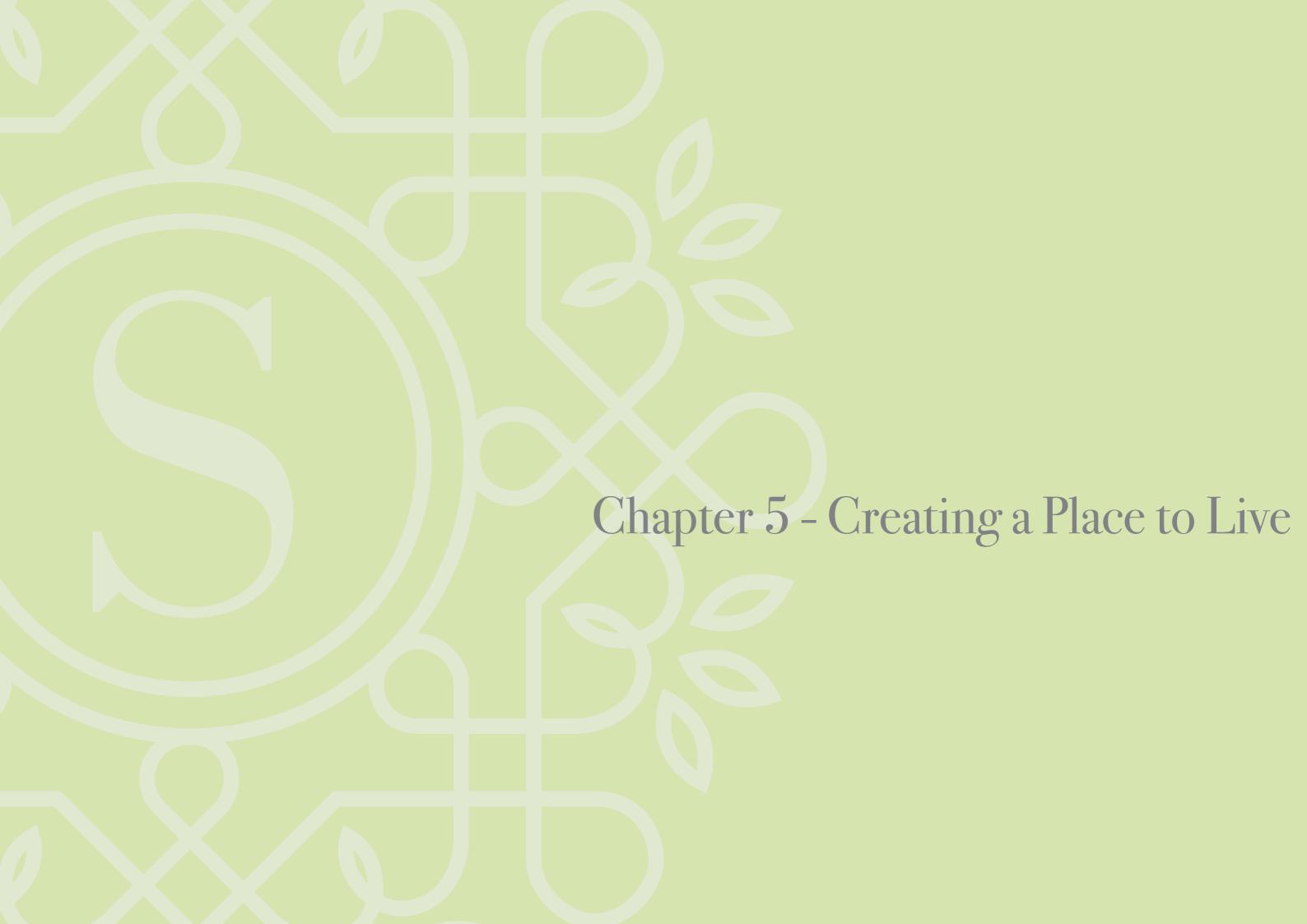
Conclusions on the Deliverability of the Development

It has been demonstrated that the Chester Road site is deliverable in terms of the relevant tests within the NPPG. The site is not subject to any technical or environmental constraints that would prevent it coming forward for housing. It is considered that it should be released and allocated in preference to other suggested sites.

These matters can be summarised as follows:

- Available: Ashall Property owns the freehold of the site and as such the site is within the control of a developer with phase(s) that can be brought forward for development at the earliest opportunity.
- Achievable: Ashall Property is keen to develop the site for residential uses at the earliest opportunity and as a well-financed developer, has the resources to do so. Ashall Property is committed to delivering such housing at this site and in turn, helping to create a sustainable community for all.
- **Suitable:** The preceding sections have demonstrated that land at Chester Road is suitable for housing by virtue of its setting, relative to adjacent residential and leisure uses, its accessibility by public transport and major transport routes, and its proximity to a range of local facilities and services.
- **Developable:** Initial supporting investigations have identified no physical, environmental or technical constraints to residential development at the site, and have established that the proposed development can be accommodated within its boundaries and appropriately to its context.
- **Deliverable:** It is considered that the site is readily deliverable in the current market and would be capable of contributing towards housing land supply within the five year period and across the wider plan period.







Design & Form of Development

- 5.1 Ashall Property has prepared the scheme layout presented in this Chapter to demonstrate how the 5.7 design and form of development will respond sensitively to the characteristics of the site and the wider area, and to demonstrate the contribution that the site could make to the sustainable growth of Warrington.
- 5.2 The vision for the site is based on present analysis. It is intended that these ideas will evolve further in consultation with the Council, local community, and key stakeholders at the appropriate time.

Site Constraints and Opportunities

- 5.3 The vision for the site derives from a careful analysis of the characteristics for the site, its context, and the opportunities and constraints which arise. Those characteristics are illustrated in Figure 05:01 opposite and in the supporting narrative below.
- The site is bordered by hedgerows and woodlands which in turn link into a wider established green infrastructure network as illustrated. The site offers the opportunity to connect into this network and further enhance and provide greater connectivity in terms of green spaces and wildlife corridors.
- 5.5 The site has a limited visual relationship with the wider landscape and is well enclosed due to the boundaries being vegetated with hedgerows and hedgerow trees, as well as the adjoining woodland blocks. The visual envelope is limited to only the immediate surroundings. The visible areas of the 5.10 There are no existing underground services within the site as confirmed by an initial utilities strategy. site provide an opportunity to create a transitional edge between the urban and rural area, and ensure that the site responds well to the surrounding context through ensuring appropriate development offsets, additional landscaping and the retention of existing established vegetation.
- A vista runs from the western boundary north east towards the spire of St Elphin's Church in Warrington. This has played a key role in determining the masterplan layout of the site.

- Existing residential properties adjoin the site to the east, south and west. Properties to the east and west are screened from the proposed development areas of the site by the extensive mature woodlands, whilst the properties to the south back onto the site. Any proposed development to the south shall back onto the established properties to finish the development blocks and provide suitable and sympathetic stand-off distances, ensuring visual amenity and appropriate privacy in maintained in their rear gardens.
- 5.8 Within the site the landform is broadly flat with a rise in levels from approximately 17m Above Ordnance Datum (A.O.D.) at the north eastern corner, to approximately 31m A.O.D. to the south west. The site is bounded by woodland vegetation to the east and west which provides an opportunity to create focal features within the development which can also benefit wildlife and ecology. There is also an opportunity to provide additional landscaping within the development which would complement the existing character of the site.
- There is potential to provide safe highway access into the site from Chester Road (A56). The access would most likely comprise a roundabout. Properties shall front Chester Road and shall be set back into the site to provide a visual and acoustic buffer from the road. In addition acoustic mitigation to the building facades shall be incorporated to ensure noise levels are reduced internally and that rear garden noise levels are kept to a minimum.
- There are therefore no easements which would prevent development coming forward on the site.
- 5.11 The site is in agricultural use but is interspersed by hedgerow and scattered hedgerow trees. There is also an established woodland area along the eastern and western edge. Existing high quality vegetation adds character and maturity to development and should be retained where possible. Any loss of vegetation can be mitigated by providing extensive new tree and hedgerow planting throughout the development.



Panorama from public right of way looking east across site to mature woodland adjoining Brookwood Close



- 5.12 An existing Public Right of Way (PROW) lies adjacent to the site, to the site's western boundary. Development on the site therefore provides an opportunity to promote and improve pedestrian and cycle access through the site and to connect into the existing footpath network.
- 5.13 The key principles of development arising from the opportunities and constraints are:
 - Strengthen existing site boundaries and create a positive and finished edge;
 - Improve the western 'gateway' into Higher Walton;
 - Retain existing valued landscape features;
 - Retain existing PROW's and their setting;
 - Provide appropriate landscape buffers where necessary.
- 5.14 There is potential on the Chester Road site to develop a high quality residential scheme with a coherent landscape structure which conserves the natural assets present on the site, as well as enhancing the western edge of Higher Walton.

Parameters Masterplan

- 5.15 The masterplan parameters have been informed by the site constraints and opportunities as illustrated in Figure 05:02 opposite.
- 5.16 The existing mature woodlands are retained. To maximise site permeability a pedestrian/cycleway link is provided onto Brookwood Close. Impact on the retained woodland is minimised and will be sensitively designed and located to ensure the retention of these protected trees. This connection links the site to the existing settlement and also provides direct pedestrian access from the existing settlement out to the surrounding countryside, public rights of way, Walton Hall, Crematorium, the Bridgewater Canal and Higher Walton.
- 5.17 The green infrastructure network within the site provides public open spaces in the form of greens and linear parks around and through the proposed development linking and joining with the woodlands, watercourses and surrounding green spaces.

- 5.18 The proposed roundabout creates a new gateway into Walton on Chester Road and will aid in slowing traffic speeds before vehicles enter the village and provide an announcement of arrival.
- 5.19 Secondary gateways into the site are created to the east between Brookside Close and the site as well as from the public right of way to the west.
- 5.20 The development parcels have been located to create complete outward facing blocks. Where existing development or development currently under construction backs onto the site the proposed development blocks back onto these boundaries to complete these development blocks, following best urban design practice.
- 5.21 The movement and public realm hierarchy has been designed to create a legible and permeable network of avenues, streets, lanes and associated spaces, as illustrated in Figure 05:02. The Avenue creates a strong vista through the centre of the site from the roundabout south east, terminating in a focal element. Streets and lanes branch off the avenue providing a variety of routes around and through the site, each of which is unique and aids in the legibility of the development.
- 5.22 The avenue visually connects the development and creates direct pedestrian and cycle links into the site. Vehicles move through the site via the street hierarchy ensuring low traffic speeds throughout the development. The majority of the homes are accessed from Chester Road with the Care village and self build homes accessed via Brookwood Close.
- 5.23 In addition to the shared routes through the site, pedestrian and/or cycleway routes and links are provided which encourages walking and cycling through the site and into the wider settlement or out to the surrounding countryside.
- 5.24 The development blocks shall be outward facing overlooking the movement network, public realm or surrounding green spaces providing surveillance and activity onto those areas.
- 5.25 Landmark elements in the form of architectural statements/header buildings shall be created at the head of avenues, streets, lanes and vistas or in gateway locations to provide visual interest or statements of arrival.



View west from Lower Walton along Chester Road site frontage



View south west from Chester Road across site to Walton Lea woodlands



Vista to St Elphin's Church Spire



Illustrative Masterplan

- 5.26 The high quality residential scheme proposed will deliver the following key features:
 - Up to 75 dwellings at a maximum net density of 35 dwellings per hectare;
 - Up to 8 self-build homes allowing individuals to build their own homes;
 - Up to 139 retirement apartments and maisonettes as part of a Retirement Care Village;
 - Approximately 1.95 hectares of accessible, safe and multi-functional greenspace, providing recreational and environmental benefits;
 - A softened western edge and new 'gateway' into Higher Walton;
 - Extensive new footpaths and cycleways;
 - Extensive new tree and hedgerow planting.
- 5.27 A lot of work has gone into understanding the area and the site itself. This chapter clearly demonstrates that all the work culminates in an exciting and vibrant Masterplan, which not only delivers residential development on this site, but creates a three dimensional place with varied spaces, built form and layers of interest.
- 5.28 This depth and breadth is picked up in the form of the street hierarchy and public realm, the variety and choice of homes proposed, as well as the naturalistic and ecological nature of the open spaces. All these elements come together to create a thoughtful masterplan which has all the physical attributes to create a strong 'sense of place'.
- 5.29 It must be stressed that this masterplan is only the start and as stated it is an 'initial masterplan' solidifying the parameters and illustrating how it can be delivered. It also demonstrates site capacity and viability. We anticipate that the design shall further evolve and develop over the coming months.
- 5.30 The Initial Masterplan in Figure 05:03 over page is supported by the following narrative and other supporting technical documents submitted as part of this proposal. The plan demonstrates site access, movement, overlooking distances, plot sizes and depths, street widths, sufficient space for on and off street parking and the relationship of the development to the existing surrounding neighbourhoods.
- 5.31 The following narrative therefore covers:
 - Land Use and Quantum of Development
 - Scale and Massing
 - Spatial Layout A Legible Hierarchy
 - Amenity
 - · Secured by Design
 - Access
 - Landscape

Land Use & Quantum of Development

- 5.32 The density of homes varies according to their position within the development. Around the main gateway the number of houses increases as more semi-setached dwellings are used to create a more enclosed, intimate character.
- 5.33 Overall the number of homes illustrated in the masterplan stands at circa 222 over a site of 5.85ha. This provides a gross density of circa 38 units/ha. The residential development itself covers just over 3.90ha of the site, leaving 1.95ha as public open space in the form of village greens, linear parks and woodlands, providing new open spaces for the benefit of the wider community.
- 5.34 The public realm within the development is also considered to be part of the wider open space network, with the Streets, Squares, Lanes and Mews offering additional formal spaces within this new neighbourhood for the community to interact within.

Scale and Massing

- 5.35 In order for this development to positively add to the existing townscape, create a statement at gateways and provide variety in terms of a skyline, the building storey heights shall vary according to their position in the layout. At the heart of the development around the Avenue some 2.5 storey homes and apartments are proposed, as housing densities drop the storey heights also drop from 2.5 to 2. At other key locations, for example around the secondary gateways the storey heights rise back up to 2.5.
- 5.36 The massing in key locations will not only add variety to the streetscape, but also to the skyline with varied ridge heights offering relief to the usual 'one height house types' of past developments.

Spatial Layout - A Legible Hierarchy

- 5.37 The hierarchy of routes, as touched upon previously is expanded on here. In effect the development should be legible; a visitor should be able to find their way around the development intuitively by understanding the importance of the streets and spaces through which they are moving. It should also be permeable; a visitor should be able to get from 'A' to 'B' without having to literally go round the houses.
- 5.38 Therefore the proposals illustrated in the Initial Masterplan are both legible and permeable, a movement and street hierarchy has been developed as discussed previously and set out below in the order of importance:
 - The Gateway
 - The Avenue
 - The Streets
 - The Squares
 - The Lanes
 - The Mews
- 5.39 This interlinked hierarchical approach to the Movement and Public Realm ensures that variety, and uniqueness to each and every route and space is integral to the Masterplan. Each route changes in width, location of the footpaths, varied planting and street tree species, enclosure and boundary treatments, relationship to built forms etc. This approach makes each route unique and legible within the development.



Figure 05:04 Massing Model - Aerial view from Chester Road South East across Site

Amenity

5.40 The amenity of existing and future residents of the development and surrounding neighbourhoods will be protected as part of the masterplan. Existing neighbours are not overlooked by the development. many of the existing properties are also screened from the development by the mature woodlands which surround the site. In terms of overlooking, the proposals follow best practice, striking the balance between urban design and guideline overlooking distances.

Secured by Design

5.41 The layout responds to Secured by Design principles in terms of maximising the opportunities for overlooking of the streetscape, public realm and open spaces from habitable rooms. The streets and spaces are designed to be legible in terms of movement and their public, semi-private or private nature. All spaces, streets and paths will be lit to a suitable standard as agreed with the local authority. Pedestrian/Cycle routes are safe, secure, overlooked and direct to ensure they reflect the aspirations for the reduction of the occurrence and perception of crime.

Access and Accessibility

- 5.42 The site is intended to be highly permeable, allowing and offering easy access into the development for all forms of movement. Access and movement is an integral element in the design process. Vehicular access to the development is via the main gateway, with traffic speeds reduced using a number of traffic calming techniques which are seamlessly part of the design proposals. Vehicles are dispersed from the avenue via the streets. Provision for the turning and manoeuvring of larger vehicles, including refuse and emergency vehicles has been allowed for within the masterplan.
- 5.43 Pedestrian and Cycle access is a strong integral element of the masterplan, the new footpath/ cycleways link into existing road/footpath network ensuring good connectivity between the site, wider settlement and countryside beyond. The footpaths also provide good direct access to the surrounding bus stops and public transport network.

Landscape Strategy

- 5.44 As described above, the landscape within the public realm and open spaces is key to creating a development of quality and character.
- 5.45 In terms of soft landscape elements; formal planting and ornamental species shall be restricted to the avenue. Street trees shall be selected which are of a size and shape to complement the streets width. Gardens shall be enclosed by railings and/or native hedgerows.
- 5.46 Planting within the public open spaces shall utilise locally indigenous native species of trees, shrubs and herbaceous planting to create a naturalistic landscape. The parks shall also provide variety in terms of grasslands; with wet meadows, hay meadows and general amenity grasslands providing habitat diversity, as well as space for informal play. Where possible allotments and orchard trees shall also be incorporated into the open spaces.
- 5.47 Hard landscape elements shall be drawn from a simple pallet to reflect those found in the surrounding areas. Street furniture including benches, lighting and signage shall all come from a common suite to ensure consistency and unification of the development, as will fences and railings.
- 5.48 The final detailing of the external environment will be tackled in more detail as part of any planning application, as would be expected.

Creating a Sustainable Neighbourhood

- 5.49 The site location, linked as it is with the existing urban edge of Lower Walton, the road and public transport networks means that Stonecroft is in a highly sustainable location.
- 5.50 Specifically the form and layout also ensures it is sustainable in terms of orientation, social gain, variety and choice of homes, character and sense of place, landscape setting, biodiversity and accessibility. This sites specific approach to sustainability shall also be delivered at the detailed individual building level later on in the design development process, looking to delivering energy efficiency to minimise impact on the environment.
- 5.51 The masterplan demonstrates that the site is capable of delivering a high quality scheme which will complement the wider area and deliver a range of attractive benefits.

Delivery Phasing

- 5.52 It is anticipated that the site could be developed over the first five years of the plan period.
- 5.53 There is a recognised need for investment in infrastructure to open up the wider site and enable the delivery of the development. The development of the highways infrastructure in the form of the roundabout will also bring forward key utilities connections from the A56.
- 5.54 The development of the site from Chester Road allows for maximum sales and marketing visibility from the A56, calming traffic approaching Lower Walton and making a statement about the quality of life to be realised at the scheme.
- 5.55 In landscape and visual terms, the southern parcel represents the most logical location for Phase 1. The site is best related to the existing settlement of Walton and is considered to have a limited visual connection with the wider landscape.
- 5.56 There is the opportunity to bring forward additional land, north of Chester Road (A56) as part of a future development proposal. Ashall Property has an interest in approximately 10 hectares (up to 25 acres) of land to the north of Chester Road. There is therefore the opportunity to create a more comprehensive sustainable extension to the west of Walton, which would help support the Council meeting local housing need over the plan period.



Figure 05:05 - Massing Model - Aerial view from South East over Care Village



Figure 05:06 Massing Model - Street view North East from Public Right of Way towards St Elphin's Church Spire



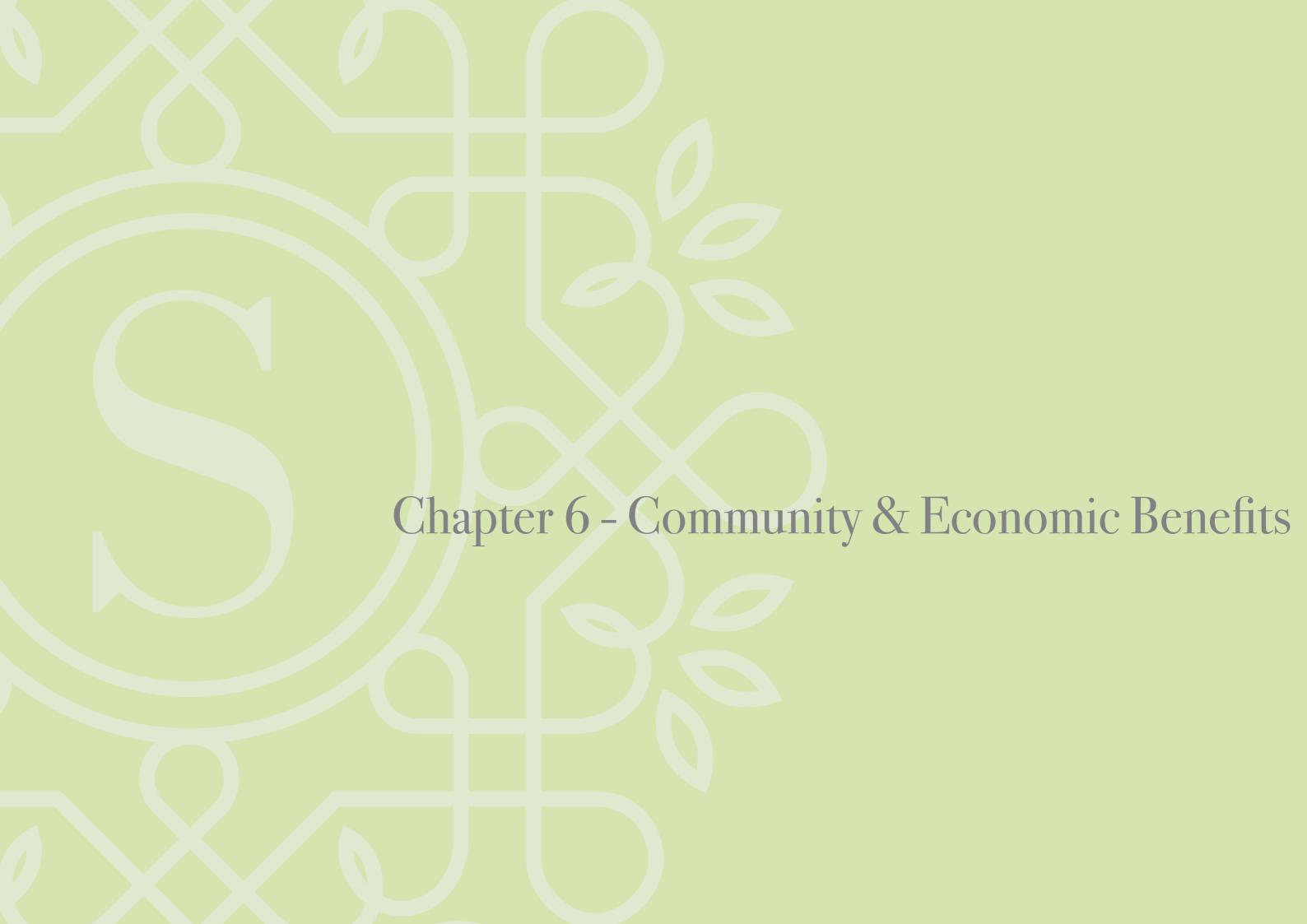




Figure 06:01 Massing Model - Street view south along avenue

Associated Benefits of Development

- 6.1 The development of land at Chester Road for residential dwellings will generate a number of local economic and social benefits.
- 6.2 The delivery of up to 222 new homes, retirement apartments and maisonettes in Walton will generate both construction benefits (in the form of direct and indirect employment) and on-going benefits arising from the completion of the development and the occupation of new homes over time. The proposals will also make an important contribution to meeting local policy objectives and priorities. The associated benefits of development at the site is summarised in the table.
- Construction Related Benefits Capacity to generate an additional jobs associated with the construction process and to sustain over further additional indirect jobs within the local economy. There is associated potential to reduce levels of unemployment and increase economic activity locally, alongside diversifying the population profile to include greater proportions of younger working age people.
- **Population Benefits** Potential to increase the population by approximately 222 households. Given the potential appeal of the site, there is an opportunity to introduce young, family households which will help to sustain essential services within the settlement.
- **Spending Power** Potential to create additional expenditure within the local economy, which will help to sustain local shops and businesses essential to the vitality of the District Centre. Importantly, this can provide the impetus to support existing and new retail provision and essential facilities in Walton and Stockton Heath.
- Enhancing Council Tax Revenues and New Homes Bonus Potential to generate additional Council Tax revenue and contribute a significant amount in New Homes Bonus.
- **Apprenticeships** Potential to work with education providers and others to incorporate appropriate opportunities for apprentices supported by recognised training and development programmes for young and unemployed people in the area.
- **Connectivity** Development of the site provides the opportunity to enhance the existing Public Right of Way as well as provide new pedestrian and cycle routes through the site connecting onto the existing networks and providing access to Higher Walton and the wider landscape.



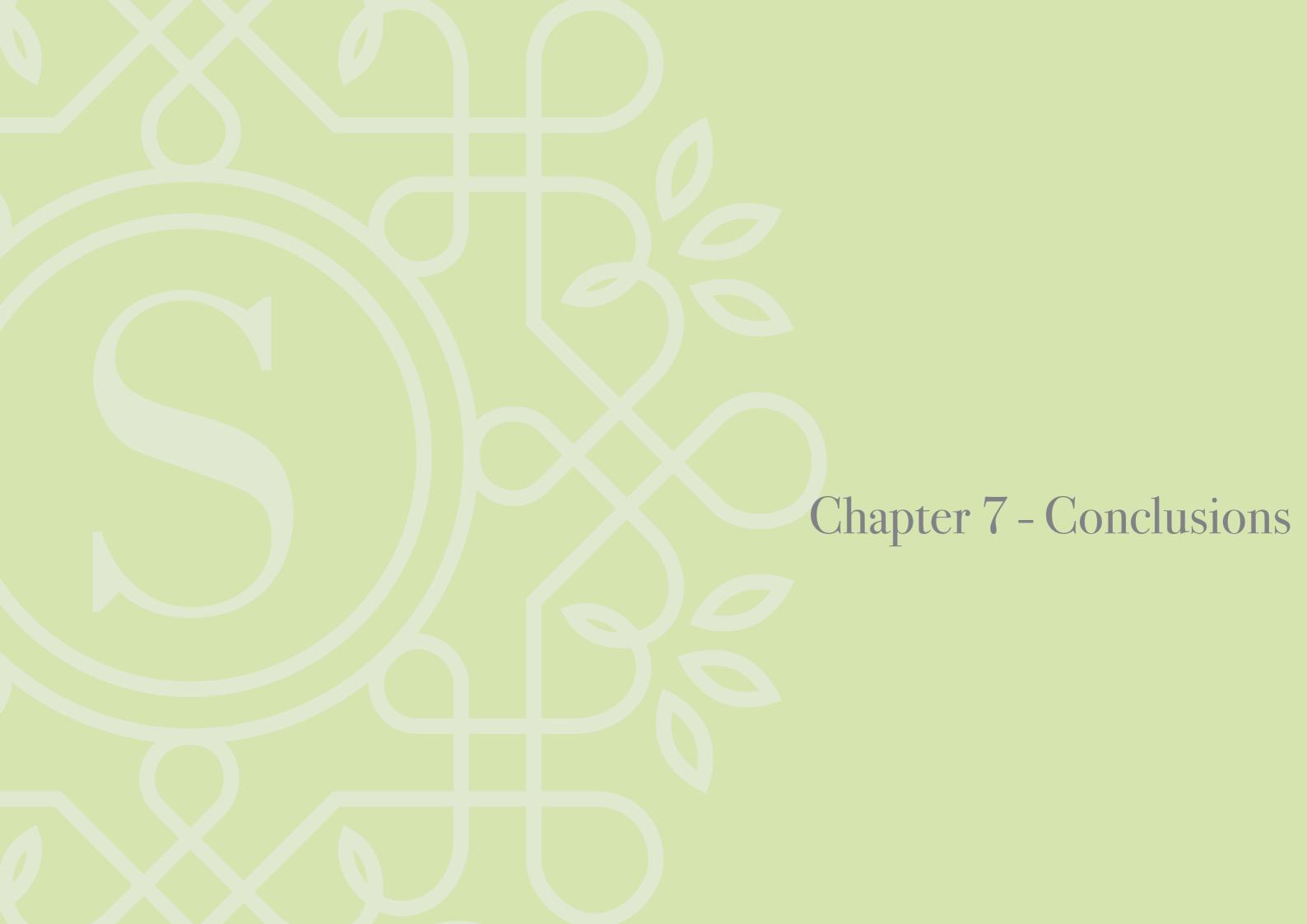




Figure 07:01 Massing Model - Aerial view from South West across Site

Conclusion

- 7.1 This Development Statement has demonstrated that the development of the site for approximately 222 new homes, retirement apartments and maisonettes would make a substantial, and necessary, contribution towards a recognised local housing need a need for more family homes and more affordable homes to help support the future vitality of Walton and Warrington as a whole. Further justifications are set out in the box opposite.
- 7.2 It is considered that this site represents the most appropriate and logical location for a sustainable extension without harming the wider sensitive landscape surrounding the settlement, with the site largely being contained by existing development and sitting well within its countryside context.
- 7.3 In our view, the release of the site from Green Belt is wholly justified as the scheme will provide a high quality residential environment which is balanced with the provision of social and physical infrastructure and supports the economic and regeneration ambitions of the Council.
- 7.4 It is considered that this Development Statement provides compelling reasons for development of the Chester Road site for new homes to be supported by Warrington Borough Council, other local stakeholders and the existing and future community. It is a starting point for exploring and shaping the development vision for the site, with Ashall Property firmly committing to engage with the local community and stakeholders to develop these concepts further.

Summary

- 7.5 There is a compelling need to deliver additional development in Walton in the short term. The site provides the best fit in terms of location and environmental capacity within the wider constraints of the suburb.
- 7.6 The proposals can be sensitively designed to have no significant adverse visual impact and will contribute towards meeting the development needs of the area. The allocation of this site will help meet this need and contribute to Warrington's housing requirement.

As set out in this statement, Ashall Property has demonstrated that:

- The site is located close to a District Centre, which is identified as a top tier settlement in the settlement hierarchy and a focus for new development.
- The site could accommodate in the region of 222 residential dwellings, retirement apartments and maisonettes and therefore assist in meeting the Borough's housing targets.
- That the site will contribute towards meeting the identified and planned development needs within Walton, and to Warrington's five year housing land supply.
- The site adjoins residential development to the east and leisure to the south which are compatible with residential development.
- The development proposals can provide for a choice of high quality homes and in terms of type, tenure and size to meet local needs.
- The creation of a retirement care village will free up existing family homes in the borough.
- The development would contribute towards the need for affordable housing in the Borough.
- The site is available, suitable and achievable for residential development.
- This site represents the most appropriate location for residential development to meet Walton's needs and will result in less harm than alternative options.
- The development proposals are economically viable and will be financed by a reputable developer.
- The site is in a sustainable location for new housing, located in close proximity to public transport links, transport routes and a range of shops, services, schools, jobs and community facilities.
- The provision of new housing on this site will benefit the wider economy and help to sustain existing services.
- The immediate delivery of the development would help meet housing needs in the short term and assist the Council in demonstrating a five year housing land supply.
- The development would generate a number of local economic and social benefits.
- There are no technical, physical or environmental constraints to the development of housing at land at Chester Road.
- The proposals will be sensitive to the character of the local landscape in terms of scale, design, layout, building style and materials.







About Ashall Property

Ashall Property is a private property investment and development company which focuses on creating investment value through property development and asset management.

Ashall Property was established in the 1930s in Padgate, Warrington and as such has strong local connections and interest, and over 70 years' experience in the property construction and development sector. Land at Chester Road, Walton was acquired by JR Ashall (Ashall Property) in 1943.

Ashall Property has developed circa 4,000 dwellings since across Appleton, Padgate, Woolston, Thelwall and Lymm and in Walton on land adjoining Stonecroft.

Ashall Property thrives on collaboration and long-term engagement with its partners to create high quality schemes and mutually working relationships. We look forward to the opportunity of working with Warrington Borough Council for land at Chester Road, Walton.







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Landscape & Visual Overview



Landscape & Visual Overview

Land South of Chester Road, Walton 12th November 2021

TG Report No. 10468_R01e_CD_CW



Section 1: Introduction

- 1.1. This overview report has been prepared by Tyler Grange Group Limited (TG) on behalf of Lane End Group to advise upon the feasibility of development in terms of landscape character and visual amenity matters, as well as to provide a review of existing Green Belt context.
- 1.2. Fieldwork was initially undertaken in 2016 and was updated in October 2021 to ensure that the current baseline conditions are taken into consideration.
- 1.3. It is to be read alongside the following plans and photosheets:
 - Landscape Policy Context (10468/P01b);
 - Landscape Character (10468/P02b);
 - Photoviewpoint Locations (10468/P03b);
 - Landscape Opportunities & Constraints (10468/P04b); and
 - Photoviewpoints 1 to 7 (10468/P07b).
- 1.4. The work does not constitute a full Landscape and Visual Appraisal (LVA) or a full Landscape and Visual Impact Assessment (LVIA). It is intended to support representations and inform the requirements for a future planning application.



Section 2: Site Context

- 2.1. The site is located at the western periphery of Lower Walton, a village in Warrington. Walton is at the southwestern edge of the town, next to Stockton Heath and lies approximately 2.5km (1.5 miles) from Warrington town centre.
- 2.2. The site is centred on OS grid reference SJ 60311 85717 and extends to approximately 5.8 hectares. It currently comprises one arable field, with hedgerow and scattered hedgerow trees along the southern boundary and to the eastern and western boundaries blocks of woodland. To the north, a strip of land and associated hedgerow separates the site from the A56. The site adjoins a recent residential development to the north-east (Hall Gardens) and the existing residential edge of Walton (Brookwood Close). At the southern boundary of the site is situated Warrington Sports Club off Walton Lea Road and residential development (Old Hall Close). Along the western boundary are residential properties (99 Chester Road and 1-3 Walton Lea Cottages) and the Walton Lea Project (a charity enterprise which includes a garden centre and farm shop). These are set within a woodland block which extends south to Walton Lea Road.
- 2.3. The block of woodland to the eastern boundary partially extends westward into the site along a former field boundary and also contains a small brook which flows north to the Manchester Ship Canal. The site rises east from Chester Road towards the sports playing field located directly behind the site.
- 2.4. Public Right of Way Ref 304/6 runs along the western boundary of the site and the A56 runs in parallel to the northern boundary, separated from the site by a singular field. The public footpath runs along a lane from the A56 along the western boundary to access the Walton Lea Project and 1-3 Walton Lea Cottages and 99 Chester Road.
- 2.5. The site has an urban fringe character due to its edge of settlement location, with direct visibility towards the current settlement edge, agricultural and industrial land use to the north and adjacent land use for sporting activities (rugby, cricket and hockey) to the south. views are foreshortened by the woodland vegetation to the east and west, and hedgerow with scattered hedgerow trees to the north and south. The site is influenced by urban references where views extend towards the built up edge of Lower Walton, industrial development off Baronet Road along the Manchester Ship Canal, railway embankments, pylons and overhead lines.
- 2.6. The Grade II* listed St Elphin's Church is visible to the north east from the western edge of the site alongside taller buildings within Warrington town centre. The Grade II listed Walton Hall and Gardens are located to the south of the site off Walton Lea Road.
- 2.7. The Walton Village Conservation Area is located within Higher Walton to the south west of the site (approximately 500m away), however this does not have a visual relationship with the site. Warrington historic town centre Conservation Area is located north of the site and distant views can be seen from the site. There is no intervisibility between the site and Conservation Area and Church and Walton Hall Gardens.





- 2.8. To the south and west of the site, the landscape continues to have a mostly recreational land use including golf courses (Warrington and Walton Hall) and Walton Hall and Gardens with agricultural land further south and to the west and north along the Manchester Ship Canal.
- 2.9. There are three Tree Preservation Orders within influence of the site:
 - Larger section of woodland along western boundary Hill Cliffe Road, Walton TPO No. 9 ref. W1;
 - Northern section of the woodland along western boundary Walton New Road/Walton Old Hall TPO No. 13 ref. A1; and
 - Off-site trees towards the south eastern boundary Walton New Road/Walton Old Hall TPO No. 13 ref. A3.





Section 3: Planning Context & SPD

Policy Context (see Landscape Policy Context plan (10468/P04b)

- 3.1. The site falls within the administrative borough of Warrington and is subject to a Green Belt designation (Overall Spatial Strategy Green Belt Policy GB1) within the Warrington Borough Council Local Plan Core Strategy (Adopted July 2014).
- 3.2. As of November 2021, an Updated Proposed Submission Version Local Plan has been prepared, which includes emerging landscape polices that will need to be considered as part of the site promotion. Once adopted the new Local Plan will provide statutory planning framework for the entire borough of Warrington for the period of 2021-2038 and will be used to guide decisions on planning applications. This Draft Local Plan Warrington Updated Proposed Submission Version Local Plan 2021-2038 (September 2021) will replace the Local Plan Core Strategy (2014).
- 3.3. The Warrington Updated Proposed Submission Version Local Plan 2021-2038 (September 2021) contains and an overall vision, a range of objectives and an overall strategy for development, helping to inform developers, residents and services provides on achieving the overall vision within the set-out time frame. landscape polices that will need to be considered as part of each object are as follows.

Warrington Proposed Submission Local Plan 2021-2038 (September 2021)

- **GB1 Green Belt:** In order for Warrington to meet its future development needs there is the need for an amount of land to be released from the Green Belt. "The general extent of the Borough's Green Belt will be maintained but as set out in Chapter 3, it is not possible for Warrington to meets its development needs without releasing some Green Belt land for development. The land proposed for release equates to around 5% of Warrington's total area of Green Belt."
- **DC3 Green Infrastructure:** All development proposals should, where a loss of, or negative impact on green infrastructure functionality or ecological system/network is unavoidable, development proposals should demonstrate what mitigation measures are proposed and/or replacement green infrastructure will be provided.

The Draft Local Plan addresses the NPPF and identifies how green infrastructure can help support several planning policies.

• DC5 - Open Space, Outdoor Sports and Recreation Provisions: All residential development proposals of 40 dwellings or more will be required to contribute to the provision of open space and equipped play where appropriate. If this is not possible within the site extents, a financial contribution towards suitable provisions or enhancement of existing off-site facilities will be sought. The Draft Local Plan has identified Open Space standards, these standards are used to inform the open space requirements for new housing developments set out in this policy.





- **DC6 Quality of Place: Design and layout,** provide for new open space and landscaping which enhances and/or provides mitigation against loss of biodiversity and assists with the physical and visual integration of new development (see Policies DC3 DC5);
 - a. Delivering a wide choice of high-quality homes, providing opportunities for recreation, social interaction and play in new and existing neighbourhoods and enhancing local landscape character, contributing to a sense of place.
 - b. Promoting healthy communities by improving environmental quality in new development, helping create safe and accessible environments, providing opportunities for recreation and exercise and delivering mental and physical health benefits.

This policy will also supersede CS 6 Overall Spatial Strategy from the Local Core Strategy (Strategic Green Links) (Adopted 2014), which is mentioned within this report, if the Draft Local plan is adopted.

- 3.4. Local Policies relating to landscape character and visual amenity with *Warrington* Borough *Council Local Plan Core Strategy (Adopted July 2014),* are still relevant, until the new 2021 Draft Local Plan has been adopted. Where new policies will supersede the 2014 version of the local plan. These policies include:
 - Policy CS 1 Overall Spatial Strategy Delivering Sustainable Development;
 - Policy CS 2 Overall Spatial Strategy Quantity and Distribution of Development;
 - Policy CS 3 Overall Spatial Strategy Maintaining a 10 Year Forward Supply of Housing Land;
 - Policy CS 5 Overall Spatial Strategy Green Belt;
 - Policy CS 6 Overall Spatial Strategy Strategic Green Links;
 - Policy QE 3 Green Infrastructure;
 - Policy QE 6 Environment and Amenity Protection;
 - Policy QE 7 Ensuring a High Quality Place;
 - Policy CC 1 Inset and Green Belt Settlements; and
 - Policy CC 2 Protecting the Countryside.
- 3.5. The Overall Spatial Strategy policies focus on sustainable development, managing the quantity and distribution, housing supply, the Green Belt and strategic Green Links.
- 3.6. Policy CS 1 states that "development proposals that are sustainable will be welcomed and approved without delay". The policy goes on to list the criteria by which development should accord with alongside national and local planning policy frameworks and the material considerations in order to be considered sustainable. Specific material considerations relevant to the site and proposed residential development include:
 - "Priority afforded to the protection of the Green Belt and the character of the countryside;
 - The need to address the causes of and be resilient to the effects of climate change;
 - The need to safeguard environmental standards and residential amenity;





- The delivery of high standards of design and construction, that have regard to local distinctiveness and efficiency; and
- The need to make the best use of existing transport, utility, social and environmental infrastructure within existing settlements, and ensure additional provision where needed to support development."
- 3.7. Policy CS 2 relates to the quantity and distribution of development. Principles in the policy relevant to the site and residential development include:
 - "The general extent of the Green Belt and the detailed boundaries as indicated on the Local Plan Core Strategy Policies Map will be maintained for as long as can be seen ahead and at least until 2032;
 - Within the Green Belt area, development will only be allowed where it is considered to be appropriate in accordance with national policy; and
 - All new development should where appropriate make provision for supporting infrastructure in accordance with Policy MP10."
- 3.8. Policy CS 3 states that:

"Should monitoring indicate that an on-going, 5 years' deliverable and a subsequent 5 years' supply of developable housing land can no longer be sustained or where it can be demonstrated that housing need cannot be met within Warrington, the Council will review its housing land provision, and bring on-stream additional housing sites as required, with priority given to encouraging the reuse of previously developed land and avoiding sites in the Green Belt where possible."

- 3.9. Policy CS 4 states that development will be located to reduce the need to travel, especially by car, and to enable people as far as possible to meet their needs locally. The policy states that the Council will support development which "improves access to the Town Centre, health facilities, education, culture, leisure and the natural environment by all modes, especially by walking and cycling."
- 3.10. In relation to Policy CS 5, planning permission for new buildings in the Green Belt "will be approved where they accord with relevant national policy." It will be important to ensure that the development of the site does not contribute towards urban sprawl of Warrington with Runcorn (approximately 3.83km to the south west) or significant encroachment into the countryside in order to ensure the strategic role of the Liverpool, Manchester and West Lancs Greenbelt remains valid. Furthermore, the development will need to respect the setting and character of Lower Walton, despite its location at the edge of the settlement.
- 3.11. Policy CS 6 relates to Green Infrastructure and states that the Council "is committed to supporting wider programmes and initiatives which seek to connect the borough's Strategic Green Links with employment areas, residential communities, and Green Infrastructure Assets". This includes the Walton Hall Estate which is within the study areas for this report. Further requirements in relation to Green Infrastructure are set out in Policy QE3 which provides more detail on the criteria against applications will be assessed.





- 3.12. Policy QE 6 details considers the protection of environmental and amenity within development. Areas taken into consideration relevant to site and residential development include:
 - The quality of water bodies, including canals, rivers, ponds and lakes;
 - Land quality;
 - Levels of light pollution and impacts on the night sky; and
 - The need to respect the living conditions of existing neighbouring residential occupiers and future occupiers of new housing schemes in relation to overlooking / loss of privacy, outlook, sunlight, daylight, overshadowing, noise and disturbance."
- 3.13. Policy QE 7 describes the Council's expectations in term of the quality of place in relation to development. Proposals which have considered the following aspects will be positively received:
 - "Be sustainable, durable, adaptable and energy efficient; create inclusive, accessible and safe environments;
 - function well in relation to existing patterns of movement and activity;
 - reinforce local distinctiveness and enhance the character, appearance and function of the street scene, local area and wider townscape;
 - harmonise with the scale, proportions and materials of adjacent and / or existing buildings;
 - maintain and respect the landscape character and, where appropriate, distinctiveness of the surrounding countryside;
 - use the density and mix of development to optimise the potential of the site without damaging the character of the area; and
 - be visually attractive as a result of good architecture and the inclusion of appropriate public space."
- 3.14. The remaining applicable landscape and visual related policies deal with improvements to the Green Infrastructure the retention of landscape features and recreational public routes, including cycleways, as well as the requirement for built form to complement the materiality of the locality in order to preserve local distinctiveness and the local character features to ensure the suitable assimilation of development proposals. The policies also direct development towards achieving high quality design within new development, and providing landscaping as an integral part of the overall design.
- 3.15. Policy CC1 covers Green Belt Settlements (that is washed over) within the Green Belt. Although the site is within the Green Belt its location on the edge of Lower Walton is not included within the designated Green Belt Settlements. However, the criteria by which development is assessed in terms of its scale, design and character would still be relevant.
- 3.16. Policy CC 2 supports development within the countryside provided that:
 - "the detailed siting and design of the development relates satisfactorily to its rural setting, in terms of its scale, layout and use of materials;





- they respect local landscape character, both in terms of immediate impact, or from distant views;
- unobtrusive provision can be made for any associated servicing and parking facilities or plant, equipment and storage;
- they relate to local enterprise and farm diversification; and
- it can be demonstrated that there would be no detrimental impact on agricultural interests."
- 3.17. The contribution the site makes to the Green Belt in landscape and visual terms is covered further in **Section 5** of this report.
- 3.18. In addition to the above policies, the following Supplementary Planning Documents (SPD) and Supplementary Planning Guidance (SPG) also need to be taken into consideration:
 - Supplementary Planning Documents
- 3.19. Relevant supplementary planning document considerations are set out below:

Environmental Protection SPD (May 2013)

- 3.20. This SPD supports Policy QE6 Environment and Amenity Protection and details the councils approach to dealing with environmental protection including light pollution. Development schemes which include street lighting proposals should adhere to the design principles set out in the SPD. Principles relating to landscape and visual include:
 - "Limiting the light levels to a designed uniformity;
 - limiting the use of lighting schemes to identified uses or users;
 - the retention of screening vegetation; and
 - the use of planting and bunding to contain lighting effects.
- 3.21. The SPD states that "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."

Design and Construction SPD October 2010 Amended (February 2016)

3.22. This document provides advice and guidance to developers about aspects of the design and construction process. The document states that "A well designed landscape scheme should enhance the appearance and setting of any new development and its location. A successful scheme will have considered and correctly interpreted the landscape character of the location to produce the most appropriate design solution for the development."

The document also provides advice and guidance on landscaping and the natural environment, "Almost all development sites will have some existing or potential values as wildlife habitat or public open space. The retention, protection and extension of areas of wildlife habitat will help conserve and enhance biodiversity and the richness of the natural environment".





- Existing attractive or valuable natural features must be retained and protected on a site and be the starting point for the development of building design and landscaping proposals. These could include trees, hedges, ponds or streams. They may be valuable because of their visual amenity or their wildlife or biodiversity value. The Council has identified significant areas for nature conservation within the borough. Development proposals on or close to designated wildlife sites will warrant special scrutiny and those that will have an adverse effect on these sites will not be permitted without mitigation to reduce damage.
- Planting that enhances nature conservation, wildlife habitat and diversity will be encouraged, particularly on sites that are close to existing wildlife areas or enhance and expand "green corridors".

Planning Obligations SPD January 2017

3.23. This SPD details the council's approach to the use of planning obligations to facilitate decision making, relevant key objectives include:

Biodiversity:

- The Council will work with partners to protect and where possible enhance sites of recognised nature and geological value. These efforts will be guided by the principles set out in national planning policy and those which underpin the strategic approach to the care and management of the borough's Green Infrastructure in its widest sense.
- Under Policies QE5 and QE6 the protection of habitats such as hedgerows, trees and ponds are of importance for wildlife flora and fauna and should be retained. Certain species of animals and plants receive additional special protection under Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended). If development proposals are likely to affect sites important to wildlife habitat, landscaping and/or protected species then the Council will attach a condition to any permission to achieve implementation of mitigation measures. This may involve the creation of other sites of at least equal nature conservation value, or the creation of adequate alternative habitats for the protected.
- Where it is considered unfeasible for development to provide adequate on-site biodiversity enhancements, or where projects in nearby open space or enhancement to nearby rivers and water bodies offer better opportunities to enhance biodiversity or access to nature, the council will seek to secure off-site provision enhancement.





Green Infrastructure

- The guidance in this section primarily supports Local Plan Core Strategy Policy CS1
 (Overall Spatial Strategy Delivering Sustainable Development), Policy CS6 (Overall
 Spatial Strategy Strategic Green Links), Policy QE3 (Green Infrastructure), Policy SN7
 (Enhancing Health and Well-being) and Policy MP10 (Infrastructure). Policy QE3 seeks
 to:
- protect the existing level of provision and the functions that it performs,
- improve 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,
- In line with these policies new housing developments will be required to provide sufficient recreation and amenity open space and facilities in order to cater for the anticipated increase in demand arising from the development. The type of provision that is required will vary with the nature, scale and location of the development but may involve the provision of formal open space, informal amenity space (including, for example, dog walking areas), children's play areas, allotments or improvements to the public realm.

Open Space

- Developments of any type (residential or non-residential) that would lead to a loss of an existing open space will be required to make replacement provision available, of at least an equivalent quantity, quality and accessibility to that which is lost. The only instances where this will not be the case will be where the development is in an area of overall surplus provision (after the completion of the development).
- Any necessary on-site provision for new development will be expected to be incorporated within the development proposals and will be secured by condition.

Evidence Base Documents

3.24. Relevant evidence base considerations are set out below:

Strategic Housing Land Availability Assessment (SHLAA) (July 2018)

3.25. The SHLAA identifies potential sites for housing development within the borough; the site is located within the Appleton district and has not been allocated within the SHLAA.

Walton Village Conservation Area Guidance Leaflet

3.26. The Walton Village Conservation Area is located approximately 0.6km (0.4 miles) west of the site and covers Higher Walton. This guidance leaflet describes the character and appearance of the conservation area and summarises the main components contributing to character as "the combination of buildings of character, their grouping and the numerous belts of trees and the areas of open space which gives Walton its great charm."





Stockton Heath Conservation Area Guidance Leaflet

3.27. The Stockton Heath Conversation Area is located approximately 1km (0.6 miles) east of the site, the guidance leaflet describes the character and appearance of the conservation area which is of Roman origins "route of a Roman Road passes within 100 metres and traces of Roman occupation have been found nearby".

The Greenalls Brewery Conservation Area Guidance Leaflet

- 3.28. The Greenalls Brewery Conversation Area is located approximately 1.1km (0.7 miles) northeast of the site across the Manchester Ship Canal. The guidance leaflet describes the character and appearance of the conservation area "the large red brick brewery buildings form an impressive gateway to the town with their Victorian ornamentation and clock tower."
- 3.29. Although all three Conservation Areas within the study area, there is no visual relationship between them and the site. The large woodland blocks surrounding the Walton Lea Project and Walton Lea Crematorium blocks views from the site to Higher Walton to the south west. Views of the Stockton Heath and Greenalls Brewery Conservation Areas are restricted by the settlement of Lower Walton.
- 3.30. This document identifies current infrastructure and details what provisions are required to meet future development requirements. Environmental infrastructure of relevance to landscape and visual focuses on:
 - Open Spaces;
 - Sports and Leisure Provision; and
 - Play Areas.
- 3.31. The site is adjacent to a public footpath (Ref PF304/6) To the south Warrington Sports Club is located adjacent to the site and locally can be found Walton Hall and Gardens, two golf courses and a network of public rights of way within the open countryside and adjacent to the Bridgwater Canal. To the north Morley Common contains a small equipped children's play area and playing pitches and a network of public rights of way around the Moore Nature Reserve.

Climate Change Strategy for Warrington

3.32. This document details the council's approach to climate change and aims to promote sustainable development that are resilient to climate change including: "through locating development away from flood risk areas, increasing tree cover or increasing the use of permeable surfaces."





Warrington Borough Council SPD Design and Construction (October 2010) (Amended 2016)

3.33. This document details the council's approach to design and construction within the Borough of Warrington. The document addresses the need for good design and scope for Landscaping and the natural environment though local policy documents.

Design and layout

'Almost all development sites will have some existing or potential value as wildlife habitat or public open space. The retention, protection and extension of areas of wildlife habitat will help conserve and enhance biological diversity and the richness of the natural environment. Good quality landscaping also helps make a development attractive and maintain its desirability and use'.

- Existing attractive or valuable natural features must be retained and protected on a site and be the starting point for the development of building design and landscaping proposals. These could include trees, hedges, ponds or streams. They may be valuable because of their visual amenity or their wildlife or biodiversity value. The Council has identified significant areas for nature conservation within the borough. Development proposals on or close to designated wildlife sites will warrant special scrutiny and those that will have an adverse effect on these sites will not be permitted without mitigation to reduce the damage.
- Planting that enhances nature conservation, wildlife habitat and diversity will be encouraged, particularly on sites that are close to existing wildlife areas or enhance and expand "green corridors".
- New landscaping should be designed for easy maintenance to ensure that the visual amenity continues into the long term and that the plants will thrive. Factors to consider include the appropriateness of species for the local climate, topography and soil; the landscape mix; ensuring that there is sufficient space for plants to thrive without constant maintenance and attention; and minimising the requirement for importing topsoil and using artificial irrigation.
- New development should be designed to harvest rainwater which can be used for irrigation of the site's landscaping.

Landscape in New Development

'A well-designed landscape scheme should enhance the appearance and setting of any new development and its location. A successful scheme will have considered and correctly interpreted the landscape character of the location so as to produce the most appropriate design solution for the development. Landscape schemes should therefore':

- Integrate new development sympathetically with its surroundings
- Enhance the setting of new buildings
- Create a high-quality environment in which to live and work
- Promote quality landscape schemes which are sensitive to the locality and provide local distinctiveness





Residential developments may comprise a solitary building or a number of buildings on one site. Landscape design solutions for each site will depend upon the scale and type of development in relation to its landscape context, and therefore the design of the development must be considered in terms of the landscape. This is achieved through assessment and appraisal of the existing landscape features, identifying constraints and solutions and the potential use of mitigation measures to ensure that the development is compatible with the local landscape character. Developers should not only consider how the site will function within itself but also how it relates to the surrounding landscape or townscape.

<u>Green Belt Landscapes</u>

3.34. Development proposals in the Green Belt must be compatible with the character of the surrounding countryside. Design solutions should protect and, where appropriate, enhance existing landscape features by incorporating the features into the development layout and ensuring that new tree planting mirrors the locally native species. Where the development results in the loss of existing features such as trees, hedgerows or ponds, replacement planting or pond construction will be required to maintain the character of the locality and enhance the visual quality of the new development and its local setting





Section 4: Landscape Character

Policy Context (see Landscape Character plan (10468/P02b))

- 4.1 At a national level the site lies within the 'Mersey Valley' Character Area (National Character Area 60).
- 4.2 The key characteristics relevant to the site and surrounding study area are:
 - Trees and woodland are mainly associated with settlements, occasional parkland and isolated woodland blocks;
 - Large-scale, open, high-quality farmland occurs between developments, with primarily arable farming to the north of the valley and a mixture of arable and dairying to the south;
 - The field pattern is regular and large scale, often defined by hedgerows with isolated hedgerow trees; many hedgerows are intermittent and have been replaced by post-and-wire fencing;
 - There are densely populated urban and suburban areas, with major towns particularly at the river crossings, including Warrington;
 - There is large-scale, highly visible industrial development, with docks, chemical works and oil refineries; and
 - The river valley has a dense communication network with motorways, roads, railways and canals running east-west, and power lines are also prominent."
- 4.3 At a district level, the site is part of the 'Red Sandstone Escarpment' (Type 3 as set out within the Warrington: A Landscape Character Assessment (2007)) and more specifically identified within the 'Appleton Park & Grappenhall' Character Area (3.A).
- 4.4 The Appleton Park and Grappenhall landscape character area comprises "of strongly sloping land to the north, affording sweeping long distance views, occasionally restricted by the presence of linear deciduous woodlands, coverts and tree groups."
- 4.5 The key characteristics are:
 - "Sweeping northerly views;
 - Strongly sloping land to the north;
 - Incised stream valleys running in a northerly direction;
 - Exposed red sandstone in outcrops, walls and older buildings;
 - Gorse in hedgerows and sandy banks;
 - Numerous small ponds in the farmland;
 - Linear woodlands, coverts and tree clumps;
 - Raised knolls;
 - Sparsity of hedgerow trees (mainly oak);
 - Hedges running along contour lines or at right angles to them; and
 - 'Advanced' landscaping and 'entrance' features relating to proposed housing development."





- 4.6 The Character Assessment sets out management objectives for the Appleton Park and Grappenhall landscape character area, including:
 - "Control planned housing development, pulling back construction on the skyline crest;
 - Encourage hedgerow retention and restoration;
 - Encourage the replacement of new hedgerow trees; and
 - Encourage the restoration of marl pit ponds."
- 4.7 The wider study area includes the River Mersey / Bollin and the Victoria Park to Fiddlers Ferry Landscape Character Areas defined by the Landscape Character Assessment. These are both located to the north of the site and the Manchester Ship Canal.
- 4.8 The key characteristics of the River Mersey / Bollin which are found within the study area include:
 - "The River Mersey;
 - The Manchester Ship Canal and
 - Widespread residential and industrial development on the floodplain"
- 4.9 The key characteristics of the Victoria Park to Fiddlers Ferry which are found within the study area include:
 - "Dominance of surrounding industrial use and landfill downstream; and
 - relatively undisturbed areas with important nature conservation value"
- 4.10 The site is located on the edge of the settlement of Lower Walton which has not been assessed as part of the Council's study and so has been shown on the plan as 'Urban'
- 4.11 Whilst the character information set out above does provide some context relevant to the promotion of the site, it does not address the characteristics specific to the site. In response to fieldwork and desktop research, further observations have been made with regards the site and its immediate surroundings:
 - Arable agricultural land, with well-established hedgerow field boundaries containing mature hedgerow trees along the southern boundary;
 - The site is made up of a single field parcel, broadly square in shape, with evidence of historical division into three parcels up until 1950's and two 1990's;
 - Dense woodland blocks along the eastern and western boundaries restrict views to Lower Walton and Higher Walton;
 - Chester Road has a verdant character, with established hedgerows and trees which channel views along the road albeit separated by a single field parcel from the site;
 - The flat topography and boundary vegetation limits the extent of the views to the east, south and west of the site;
 - From the site looking north, north-east and north west, views extend towards the residential edge of Walton to the industrial development along the Manchester Ship Canal and beyond to Warrington; and





- To the south and west, the character of the landscape beyond Walton Lea Road becomes more rural with views becoming more far reaching, and less urbanising elements present/visible.
- 4.12 It is evident from the fieldwork, that although the site is agricultural in nature, it has an urban fringe and enclosed character. This is due the surrounding land use and the visual backdrop of Lower Walton and Warrington. The site has some association with the surrounding residential built form owing to the proximity and visual connectivity to adjacent dwellings off Chester Road. Consideration of the density of development and the siting of built form as well as the balance of open space provision with regards to the existing suburban edge will be an important consideration to ensure the development complements and enhances the existing residential area in terms of adjacent residential amenity and functionality.





Section 5: Visual Circumstances

(See Photoviewpoint Locations (10468/P03b) and Photoviewpoints 1-7 (10468/P07b)

- 5.1 Visually, the site is relatively well enclosed due to the boundaries being vegetated with hedgerows and hedgerow trees, and the adjoining woodland blocks.
- 5.2 The approximate extent of the visual envelope (VE) is set out below:
 - To the north views extend to Chester Road in parallel to the northern boundary (see **Photoviewpoint 7**). Further north visibility of the site is restricted to glimpsed partial views of the site boundary vegetation only by intervening field boundary vegetation and vegetation along the banks of the Manchester Ship Canal;
 - To the north-east views extend to the adjacent residential settlement edge along Chester Road and the recent residential development at Hall Gardens (see **Photoviewpoint 1**);
 - To the east slightly elevated views from Hill Cliffe Road, Grantham Avenue, Rutland Avenue are possible through gaps in the woodland block on the eastern boundary and between the shrub and canopy layers which extend across the site. Views beyond the site are restricted by the woodland block along the western boundary (see **Photoviewpoint 2**);
 - To the south where gaps in the residential built form along Old Hall Close allow, the site boundary vegetation is visible (see **Photoviewpoint 3**). The southern edge of the site is visible through the field boundary hedgerows from the playing pitches and built form of Warrington Sports Club;
 - To the south-west immediate views of the site are possible through the boundary trees, informal hedgerow and fencing along Public Footpath 304/6 which runs along the western boundary (See **Photoviewpoint 4**). Views extend across the site to the eastern boundary and glimpsed views of residential edge of Lower Walton;
 - To the west views across the site are possible through gaps in the boundary trees, informal hedgerow and fencing along Public Footpath 304/6 which runs along the western boundary (See **Photoviewpoint 5**). Views towards the residential edge of Lower Walton and Warrington are possible to the north of the woodland block which includes the spire of St. Elphin's Church and taller buildings associated with Warrington town centre; and
 - To the north-west views extend to Chester Road along the northern boundary (see **Photoviewpoint 6**). Further north visibility of the site is restricted to glimpsed partial views of the site boundary vegetation only by intervening field boundary vegetation and vegetation along Chester Road.
- 5.3 Overall, the existing framework of site boundary vegetation and the adjacent built up edge result in the visual envelope being limited to only the immediate surroundings. Where more distant visibility towards the site is possible, views are largely obscured the layering of intervening vegetation or comprise views of the site boundary vegetation only. In these cases the site boundary vegetation appears in the background of views.





- 5.4 Potential visual receptors to development of the site include:
 - Users of the Public Footpath 304/6 adjacent to the site's western boundary;
 - Recreational users of Warrington Sports Club adjacent to the site's southern boundary;
 - Private residents at 99 Chester Road and 1-3 Walton Lea Cottages on the western boundary of the site;
 - Private residents associated with the adjacent settlement edge (Hall Gardens, Hill Cliffe Road, Brookwood Close and Old Hall Close);
 - Visitors to the Walton Lea Project (a charity enterprise which includes a garden centre and farm shop);
 - Agricultural users associated with the adjacent farmland to the north; and
 - Transient highway views from vehicular users of the Chester Road.
- 5.5 It is evident that due to the visual context of the site and surrounding landscape, there are relatively few receptors that are likely to be impacted on and there is a limited visual relationship between the site and the wider Green Belt, despite the site's location on the settlement edge. There are opportunities to utilise the screening provided by the framework of green infrastructure already present surrounding the site to create a sensitive settlement extension to Lower Walton that does not impact upon the perceived openness of the wider Green Belt landscape or sensitive receptors.
- 5.6 The key consideration in terms of visual impact will be to ensure that the visual amenity of users Public Footpath 304/6 is maintained or mitigated through appropriate development layout design. This may include the incorporation of development offsets, the enhancing of the vegetation at the site boundaries to screen views of the new built form, the retention of open views where already existing to prevent footpaths becoming enclosed, the provision of links to new and existing public open spaces and the creation of new permissive routes.
- 5.7 The setting and residential amenity of the properties adjoining the site (Hall Gardens, Brookwood Close, Old Hall Close, 1-3 Walton Lea Cottages and 99 Chester Road) and east (Brookwood Close) will need to be respected. This could be carried out through appropriate development offsets and the orientation of the development and materiality. Soft landscaping along the boundaries with residential properties and screening through green buffers would also be proposed where appropriate.
- 5.8 Ensuring the development complements the more open character of the adjacent landscape to the south and west, through the retention and enhancement of site boundary vegetation, as well as the incorporation of a development offset, should be a primary design consideration. The careful consideration of development densities and building heights will also be necessary to ensure that the development of the site responds to the landscape and visual context described above.





Section 6: Suitability of the Site for Release from the Green Belt

- 6.1 This Green Belt Review is separate to the landscape and visual matters considered within this report, as Green Belt is not a landscape designation. However, the assessment of the contribution of a Site to the Green Belt and the potential effects of the development promotion on its function as Green Belt requires an understanding of some character and visual matters, such as the identification of defensible boundaries, the relationship between settlements and the understanding of the potential for development to physically, visually and perceptually impinge upon the countryside.
- 6.2 This Green Belt Review assesses the contribution of the site to the five purposes of the Green Belt as outlined within the National Planning Policy Framework (NPPF). It also provides an assessment of openness. The five purposes of Green Belt are set out in paragraph 138 and are as follows:
 - To check unrestricted sprawl of large built-up areas;
 - To prevent neighbouring towns merging into one another;
 - To assist in safeguarding the countryside from encroachment;
 - To preserve the setting and special character of historic towns; and
 - To assist in urban regeneration, by encouraging the recycling of derelict and other urban land.
- 6.3 With regards to the alteration of Green Belt boundaries, paragraph 142 also notes the following:

"When drawing up or reviewing Green Belt boundaries, the need to promote sustainable patterns of development should be taken into account. Strategic policymaking authorities should consider the consequences for sustainable development of channelling development towards urban areas inside the Green Belt boundary, towards towns and villages inset within the Green Belt or towards locations beyond the outer Green Belt boundary. Where it has been concluded that it is necessary to release Green Belt land for development, plans should give first consideration to land which has been previously-developed and/or is well-served by public transport. They should also set out ways in which the impact of removing land from the Green Belt can be offset through compensatory improvements to the environmental quality and accessibility of remaining Green Belt land."

6.4 This section provides a discursive analysis of the contribution that the Site makes to the purposes of the Green Belt a set out within the NPPF as summarised above. It includes a further discussion as to the changes to that contribution that would be brought about by the proposed development and any recommendations to mitigate or compensate for those changes. The Site is assessed as currently making a contribution based on the following scale:





- Strong contribution the Site strongly provides a contribution to that purpose, or developing the Site will result in increased pressure on adjacent Green Belt Land and/or a reduction in that land's ability to fulfil the purpose;
- Moderate (some) contribution the Site makes some contribution to the purpose, or developing the Site will result in some weakening of the ability of the adjacent Green Belt land to meet that purposes;
- Weak (limited) contribution the Site makes a limited contribution to the purpose, or developing the Site will result in a limited weaking of the ability of the adjacent land to fulfil its purpose; or
- No contribution.

Overview of Council's Assessment

- 6.5 Warrington's Green Belt was first considered in the Cheshire Structure Plan in 1979 which contained the first formal Green Belt policy in the county. The New Town Designated Area was proposed to accommodate local housing needs and the Green Belt covered the surrounding area. It wasn't until 2006 when the Unitary Development Plan was adopted that a detailed Green Belt boundary for Warrington was actually defined.
- 6.6 In January 2016, Ove Arup and Partners (Arup) was appointed by Warrington Borough Council (WBC) to undertake a Green Belt Assessment for the local authority area of Warrington designated by Green Belt. Warrington's Local Plan Core Strategy was adopted in July 2014, but following its adoption, a legal challenge was made by a landowner with respect to the housing policies. This was subsequently successful and the High Court decision in February 2015 resulted in the Plan no longer having a housing target.
- 6.7 The Arup Green Belt Assessment clearly noted (paragraph 1.1, item 6) that:

"It is an initial assessment and there will be the need to undertake more detailed site specific assessment work as part of the Local Plan Review process. This Assessment will not consider whether 'exceptional circumstances' exist or make any recommendations relating to the alteration or review of Green Belt boundaries".

- 6.8 A Green Belt Addendum was published in June 2017 to take into account a number of issues raised in the Regulation 18 consultation specifically relating to some minor amendments required to certain parcel assessments and also the implications resulting from the updated position of High Speed Rail 2 (HS2).
- 6.9 A further Green Belt Assessment and Additional Site Assessment Report was published in July 2017 and subsequent Green Belt site assessments were undertaken for the remaining Call for Sites and SHLAA sites (July 2017, May 2018, and November 2018).
- 6.10 Most recently and following on from the consultation in 2019 on the Proposed Submission Version Local Plan under Regulation 19 of The Town and Country Planning (Local Planning) (England) Regulations 2012, the Council has undertaken a review of the options for the Plan's spatial strategy. This has included a re-assessment of all sites submitted for consideration through the Local Plan process and an update of the supporting evidence base. The August 2021 Green Belt Site Selection summarises the implications for the Green Belt resulting from

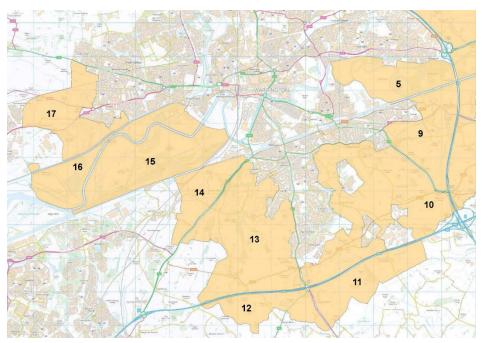




the proposed allocations in the updated 'Proposed Submission Version Local Plan'. This takes into account any harm to the function and integrity of the Green Belt and the resultant Green Belt boundary.

Assessment Finding for the Site & Surrounding Area

6.11 As set out within the Warrington Borough Council Green Belt Assessment (2016), the Site is located within 'General Area 13', which covers an extensive geographical area (see extract).



Extract of the Stage 1 Green Belt Assessment General Areas Plan

6.12 The assessment firstly (Stage 1) considers the General Areas against the 5 Green Belt Purposes. The main 3 landscape related purposes have been considered further at this stage. In relation to 'sprawl', the study clearly states that:

"The boundary between the GA and the built up area consists predominantly of the limits of development which do not form durable boundaries, thus the GA plays a strong role in preventing sprawl"

6.13 In relation to the topic of 'merging', the assessment notes that General Area 13 forms s a less-essential gap between the Warrington urban area and Runcorn in the adjacent neighbouring authority of Halton. however, it also confirms that:

"whereby a reduction in the gap would reduce the actual distance between the towns but would not result in them merging".

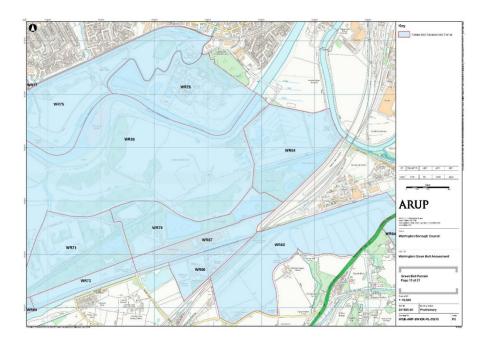
6.14 In terms of encroachment, the wider GA is considered to represent a 'Strong Contribution'.

The assessment determines that:



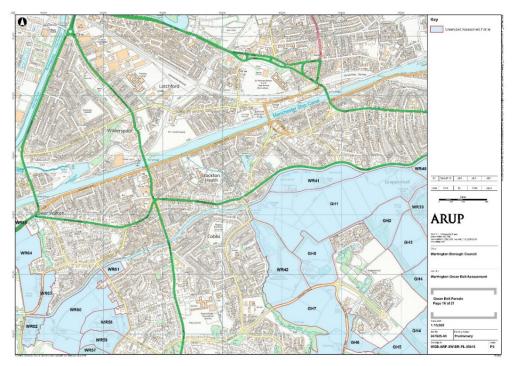


- "The boundaries between the settlement and the GA are not durable and would not prevent encroachment. The boundary between the GA and the countryside consists of the M56 to the south, the A56 to the north west and the administrative boundary to the west2."
- 6.15 The overall Green Belt contribution for 'General Area 13' is considered to be 'strong.
- 6.16 As follow-up, a Stage 2 assessment was undertaken by the Council. Parcel boundaries were defined to reflect the NPPF, requiring the use of physical features which are readily recognisable and likely to be permanent. Durable features were used in the first instance with parcels drawn from the settlement outwards to the nearest durable feature. Where this resulted in large expanses of countryside, which was more akin to the General Areas, features lacking durability were utilised in order to enable division of the Green Belt into manageable parcels.
- 6.17 For the Site, assessment parcel WR64 was identified as illustrated on the map extract below.









Extract of the Stage 2 Green Belt Assessment Parcels Plan

6.18 In relation to 'sprawl' the study parcel is considered to make a 'moderate contribution' to the Green Belt, the main justification for the 'moderate contribution' appears to relate to the long-term durability of boundaries. The assessment states that:

"There are some areas of dense tree lining however on the whole the boundaries may not be permanently durable enough to prevent sprawl into the parcel in the long term."

- 6.19 In relation to the Site, it is important to note that it was deemed to make a 'weak contribution' to 'Purpose 2' and the topic of 'merging'. Confirming that the parcel does "not play a role in preventing towns from merging".
- 6.20 In relation to 'encroachment', the study parcel is considered to represent a 'strong contribution'. Justification for this is somewhat generic although it provides an indication that the northern and western section of the Parcel could be perceived as having a more durable boundary. The assessment states that:
 - "The boundaries between the parcel and the countryside consists of Walton Lea Road to the south, Chester Road to the north and a dense wooded area to the west which is durable and may be able to prevent encroachment beyond the parcel".
- 6.21 The overall judgement for the Site (WR64) is that it make a 'moderate contribution' to the Green Belt. Overall, the main justification for the 'moderate contribution' appears to relate to the prevention of sprawl. The assessment notes that:

"The parcel has been judged to make a moderate overall contribution as although it supports a strong degree of openness, the boundaries between the parcel and the





countryside are durable thus any development would be contained and would therefore not threaten the openness and permanence of the Green Belt. The parcel makes a moderate contribution to checking unrestricted sprawl and assisting in urban regeneration."

6.22 No further consideration or assessment has been undertaken by the Council in relation to the Green Belt parcel associated with the Site.

Other Problems Associated with the ARUP Green Belt Assessment

- 6.23 The use of large study parcels has the potential to skew the findings of the Green Belt Assessment and does not allow for the proper assessment of smaller discreet parcels within larger areas that may make a more limited contribution to the Green Belt and offer opportunities for release.
- 6.24 Other issues that have been identified include:
 - Reliance upon a number of subjective judgements without defined criteria and measurable parameters. This introduces degree of interpretation and lack of transparency and replicability in the assessment;
 - Lack of detailed analysis and justification of assessment and recommendations, with repetitive text used throughout the document;
 - The assumption that whole areas will be lost to development which results in areas being discounted without full and robust consideration of how they could be developed to include new Green Belt boundaries, mitigation measures and enhancement of land retained in the Green Belt;
 - The assessment does not always use recognisable and durable boundaries and features on the ground which has led to failings in properly sub-diving larger parcels; and
 - The assessment sometimes fails to consider local circumstances when determining which areas should be retained in the Green Belt and the preservation of settlement gaps (i.e. physical, visual and perceptual gaps between settlements and the role of individual land parcels within them).

Contribution of the Site to the Green Belt

Existing Green Belt Boundaries

- 6.25 Given the observations and criticisms set out in the previous Section of this report on the ARUP assessment, it is important to consider the existing boundaries of the Site and re-visit the previous judgements made regarding the durability of the parcel boundaries, as that informed the assessments made into the conformity (or not) with the Green Belt purposes.
- 6.26 How boundaries are defined was set out clearly within the ARUP methodology. An extract is provided below of the ARUP methodology and Table 3 (Boundary Definitions) as contained on page 24 of the 2016 Green Belt Assessment.





	Infrastructure:			
	• Motorway			
Durable Features (Readily recognisable and likely to be permanent)	Roads (A roads, B roads and unclassified 'made' roads)			
	Existing development with clear established boundaries (e.g. a hard or contiguous building line)			
	Natural:			
	 Water bodies and watercourses (reservoirs, lakes, meres, rivers, streams and canals) 			
	Protected woodland (TPO) or hedges or ancient woodland			
	Prominent landform (e.g. ridgeline)			
	Combination of a number of boundaries below			
	Infrastructure:			
Features Lacking Durability (Soft boundaries which are recognisable but have lesser permanence)	Private/unmade roads or tracks			
	Existing development with irregular boundaries			
	Disused railway line			
	Footpath accompanied by other physical features (e.g. wall, fence, hedge)			
	Natural:			
	Watercourses (brook, drainage ditch, culverted watercourse) accompanied by other physical features			
	Field boundary accompanied by other natural features (e.g. tree line, hedge line)			

6.27 The boundary features are described below in detail:

Brookwood Close open space

6.28 This feature was not described within the ARUP assessment of parcel WR64 however, as an area of woodland with distinctive features including a watercourse, this area of landscape is important and intended for retention and enhancement.

Walton Lea Road

6.29 The road provides vehicular access to Walton Lea Walled Garden, it is tree lined and also the route of PRoW 00304/6.





Warrington Sports Club

6.30 There is only one short section of the southern boundary which currently has weaker containment due to the presence of only boundary vegetation. However, the views are still limited by the woodland and scattered mature tree planting evident at the periphery of the club.

Proposed road junction on the A56

6.31 Although currently undeveloped, the proposed road junction on the A56 does represent a durable boundary situated directly north of the Site.

Re-Assessment of the Contribution of the Site to the Purposes of the Green Belt

- 6.32 As already noted, the Council has not produced an updated or more refined Green Belt Assessment for this area of landscape, therefore the table below sets out a summary of the previous ARUP 2016 findings and an up-to-date assessment undertaken by Tyler Grange. This finer-grain assessment has been based on both desktop and fieldwork undertaken in October 2021.
- 6.33 The assessment has considered the contribution to the Green Belt purposes and a definition of the underlying terminology is set out below for assistance.
 - Sprawl spread or develop irregularly or without restraint;
 - Merge combine or cause to combine to form a single entity; and
 - Encroachment a gradual advance beyond usual or acceptable limits.
- 6.34 Consideration of mitigation has also been included, which is consistent with the ARUP 2021 assessment produced for the Fiddler's Ferry development option.





NPPF Purpose	ARUP 2016 Assessment Contribution (Parcel WR64)	Re-Assessment of Contribution of the Site	Mitigation
To check the unrestricted sprawl of large built-up areas	There are some areas of dense tree lining however on the whole the boundaries may not be permanently durable enough to prevent sprawl into the parcel in the long term. Moderate Contribution	The principal consideration here is the sprawl of the urban edge of Lower Walton westwards and potential coalescence with Higher Walton. The Site provides durable long-term boundaries to the east in the form of the Brookwood Close open space. Furthermore, the watercourse, mature vegetation and scattered buildings along the close itself form an identifiable boundary. The proposed junction on the A56 Chester Road is a strong feature that limits sprawl to the north. There is already established inter-visibility and some connectivity with the adjoining buildings to the south and west. The Site offers the ability to round-off development edge of Lower Walton. Sprawl can be restrained by the durable boundary features to the north, east, south and west. Weak Contribution	The creation of strong Green Infrastructure to the north and east of the Site, utilising existing features and including new woodland planting where suitable. This will create a defensible boundary.





To prevent
neighbouring
towns merging
into one another

The parcel forms a less essential gap between the Warrington urban area and Runcorn in the neighbouring authority of Halton whereby a reduction in the gap would slightly reduce the distance between the towns but would not result in them merging.

Weak Contribution

The Site forms a smaller portion of less essential (east-west) gap between Warrington and Runcorn

At-worst, the proposed development parameters could result in a 300m reduction in the gap between settlements, but that has to be considered against the width of the existing gap which is in the region of 4km.

There is no perceptible reduction in the (north-south) gap between the Site and Warrington situated to the north of the Ship Canal.

Furthermore, there is no intervisibility between the settlements and no location from which the separation of the two settlements would be perceived as merging.

Weak Contribution

The retention and strengthening of the existing landscape features associated with the eastern boundary of the Site would ensure continued visual separation between Runcorn and the Site, particularly when approached along the A56.

To assist in safeguarding the countryside from encroachment

The boundaries between the parcel and the built up area are not all durable and would not be able to prevent encroachment in the long term. In particular the boundary at the north with the new housing development of Hall Gardens is particularly weak and would not be able to prevent encroachment into the parcel. The boundaries between the parcel and the countryside consists of Walton Lea Road to the south, Chester Road to the north and a dense wooded area to the west which is durable and may be able to prevent encroachment beyond the parcel

Strong Contribution

Due consideration needs to be given to the durability of the eastern boundary of the Site, which safeguards encroachment of future development further to the east through the presence of the Brookfield Close Open Space and associated watercourse.

Walton Lea Road also defined by a number of features (track, trees and the PRoW) which in combination represent a durable boundary.

To the north, the proposed junction on the A56 corridor physically restricts encroachment.

Tree cover does limit wider visibility and the fieldwork and accompanying photography demonstrates that open long line views are not readily available.

Weak Contribution

The creation of strong Green Infrastructure to the east of the Site and, the retention and strengthening of the existing landscape features associated would reduce the visual and perceptual intrusion of the proposed development into the countryside.





Warrington is a historic town however the		
parcel is not within 250m of the Warrington Town Centre Conservation Areas. The parcel does not cross an important viewpoint of the Parish Church. No Contribution	There is no perceptual influence or inter-visibility with the historic core of Warrington Town Centre or Conservation Area. No Contribution	n/a
The Mid Mersey Housing Market Area has 2.08% brownfield urban capacity for potential development, therefore the parcel makes a moderate contribution to this purpose. Moderate Contribution	The updated Local Plan (2021) recognises the need for both housing and employment land, plus the need for some removal of land from the Green Belt to accommodate that identified need. In this case the Site represents a very sustainable location immediately adjoining proposed junction on the A56 and close to services situated within Lower Walton. Weak Contribution	n/a
In line with the methodology, professional judgement has therefore been applie d to evaluate the overall contribution. The parcel has been judged to make a moderate overall contribution as although it supports a strong degree of openness, the boundaries between the parcel and the countryside are durable thus any development would be contained and would therefore not threaten the openness and permanence of the Green Belt. Moderate Contribution	The re-assessment of the Site itself has judged that overall, it makes a weak contribution to the Green Belt purposes. The Site is evidentially associated with the established urban edge and represents a sustainable location. A combination of durable boundary features (which include the Brookwood Close open space, Walton Lea Road and proposed A56 junction) provide a strong and permanent sense of enclosure, to limit any perception of sprawl, merging or encroachment. Tree cover does limit wider views and the assessment demonstrates that open long line views and inter-visibility between settlements are not available. Weak Contribution	The creation of strong and connecting network of Green Infrastructure, that utilises and enhances existing features, will create a more diverse landscape, capable reducing any sense of visual and perceptual intrusion and ensuring that the proposed development assimilates into the countryside.
I TELECOLOR STATE OF THE STATE	Town Centre Town Centre Town Centre Tonservation Areas. The parcel does not cross an important viewpoint of the Parish Church. No Contribution The Mid Mersey Housing Market Area mas 2.08% brownfield urban capacity for cotential development, therefore the parcel makes a moderate contribution to this curpose. Moderate Contribution In line with the methodology, professional judgement mas therefore been applied to evaluate the coverall contribution. The correct has been judged to make a moderate coverall contribution as although it supports a compose the parcel and the countryside are durable thus any development would be contained and would therefore not thereaten the openness and permanence of the Green Belt.	There is no perceptual influence or inter-visibility with the historic core of Warrington Town Centre or Conservation Areas. The parcel does not cross an important diewpoint of the Parish Church. No Contribution The Updated Local Plan (2021) recognises the need for both housing and employment land, plus the need for some removal of land from the Green Belt to accommodate that identified need. In this case the Site represents a very sustainable location immediately adjoining proposed junction on the A56 and close to services situated within Lower Walton. Weak Contribution Weak Contribution The re-assessment of the Site itself has judged that overall, it makes a weak contribution to the Green Belt purposes. The Site is evidentially associated with the established urban edge and represents a sustainable location. A combination of durable boundary features (which include the Brookwood Close open space, Walton Lea Road and proposed A56 junction) provide a strong and permanent sense of enclosure, to limit any perception of sprawl, merging or encroachment. Moderate Contribution There is no perceptual influence or inter-visibility with the historic core of Warrington Town Centre or Conservation Area. No Contribution The updated Local Plan (2021) recognises the need for both housing and employment land, plus the need for some removal of land from the Green Belt to accommodate that identified need. In this case the Site represents a very sustainable location on the A56 and close to services situated within Lower Walton. Weak Contribution The updated Local Plan (2021) recognises the need for both housing and employment land, plus the need for some removal of land from the Green Belt to accommodate that identified need. In this case the Site represents a very sustainable location on the A56 and close to services situated within Lower Walton. Weak Contribution The re-assessment of the Site itself has judged that overall, it makes a weak contribution to the Green Belt purposes. The Site is evidentially associ





Section 7: Landscape Themes

- 7.1 In response to the desktop and fieldwork undertaken, a landscape strategy response has been set out as guidance for the appropriate development of the site. The landscape themes to be used to shape a deliverable masterplan are illustrated on the Landscape Opportunities & Constraints plan (10468/P04b) and include:
 - The incorporation of a development offset along the northern boundary to allow for new native hedgerow and tree planting to soften views of the new built form the A56;
 - The provision of a landscape buffer between the residential properties at Hall Gardens and the site to soften views of new built form for existing private residents. This would be formed by the retention and enhancement of existing gappy hedgerow along the north-eastern boundary;
 - Retention and enhancement of the woodland block along the eastern boundary and
 provision of a development offset; provision of a development offset to the section of
 the eastern woodland block which extends into the site and the opportunity to
 incorporate into an area of public open space within the development;
 - The provision of a landscape buffer between the existing residential properties along the southern boundary at Old Hall Close and the site to soften views of new built form for existing private residents;
 - Retention and enhancement of existing hedgerow along the southern boundary where the site adjoins Warrington Sports Club development including the planting of characteristic linear woodland;
 - Existing vegetation along the western boundary adjacent to Public Footpath 304/6 to be retained and enhanced, supplementing with additional hedgerow planting. This would retain the verdant character of this footpath and ensure views of the development edge remains softened;
 - A view of St. Elphin's Church spire can be seen from the Public Footpath 304/6, this view could be retained to maintain the visual connectivity of the footpath with a local landmark; and
 - Proposed development should look to reflect the scale, and density of the existing neighbouring residential development to the north and east.





Section 8: Conclusions

- 8.1 Whilst it is appreciated that only a broad level assessment has been undertaken, this technical note has demonstrated that development within the proposed site could be accommodated with reference to site specific circumstances and the ability to deliver sustainable growth in Lower Walton.
- 8.2 With regards to the Green Belt, the site makes a limited contribution to the purposes of the Green Belt as set out within the NPPF. This is a lower assessment than that included within the ARUP (2016) Green Belt Assessment. This is due to the finer-grain consideration undertaken by Tyler Grange, which has assessed a smaller parcel size and categorised a number of boundaries as being permanent and durable.
- 8.3 There is also a considerable level of visual screening and filtering offered by field boundary vegetation including woodland blocks, which restrict the extent to which the site relates to the wider open countryside of the Warrington Green Belt further to the north, west and south.
- 8.4 The Proposed Development will have a limited effect on openness due to limited area from which it is possible to perceive the open nature of the Site. The Proposed Development will result in a significant increase in publicly and privately accessible open space, including Green Infrastructure, amenity land and wildlife habitats.
- 8.5 As a result of the containment provided by the surrounding vegetation, few receptors will be affected and the effects on landscape character will be localised to the immediate setting.
- 8.6 Responding to the woodland and recreational usage to the west and south (Public Footpath 304/6 and Warrington Sports Club) will be key in the future development of the site, and could be achieved through the incorporation of development offsets and the retention and enhancement of existing site boundary vegetation.
- 8.7 The most likely adverse effects are deemed to relate to the change in views from users of the public footpath to the west of the site, as well as the interruption of residential views from properties along Hall Gardens, 1-3 Walton Lea Cottages, Brookwood Close and Old Hall Close. These will need to be sensitively considered as part of future design proposals for the site, with development offsets, the consideration of appropriate screen planting, the enhancement of existing boundary vegetation and the provision of new soft landscaping. Whilst there would be a likely noticeable increase in the extent of built form for receptors overlooking the site in close proximity, the perceived impacts would be localised. This would be likely to diminish over time due to the scope for implementing appropriate areas of open space, landscaping, development offsets, densities, buffers, materials and scaling. The enhancement of boundary vegetation to mitigate impacts and assimilate the scheme proposals into the surrounding landscape could also be incorporated.
- 8.8 With respect to landscape and visual matters, this site should therefore be considered suitable for residential development and release from the Green Belt.





Plans:

Landscape Policy Context (10468/P01b)

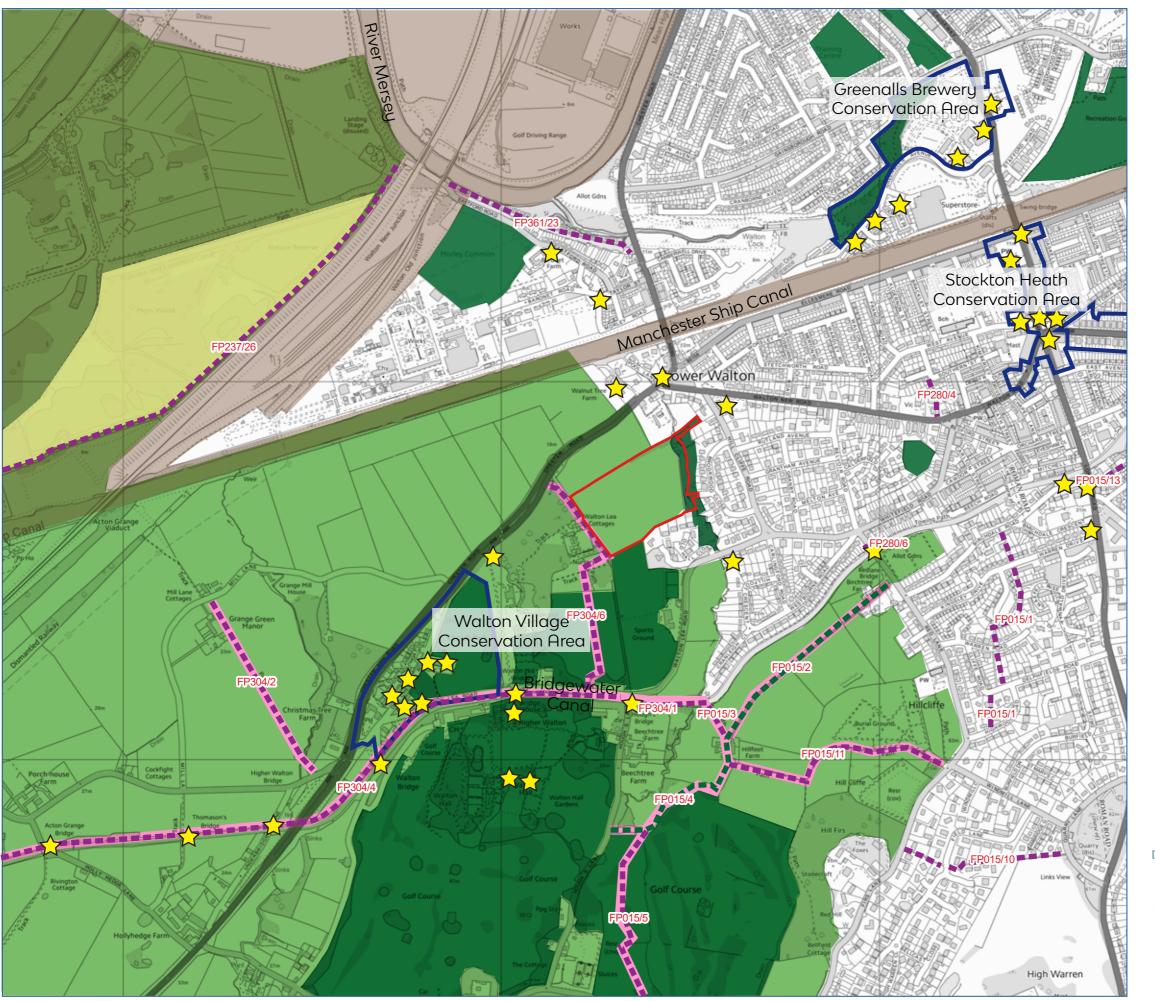
Landscape Character (10468/P02b)

Photoviewpoint Locations (10468/P03b)

Landscape Opportunities & Constraints (10468/P04b)

Photoviewpoints 1 to 7 (10468/P07b)





Site Boundary

Warrington Updated Proposed Submission Version Local Plan (UPSVLP) 2021-2038

Date plotted from the Warrington Borough Council Policies Map 2021

https://www.warrington.gov.uk/sites/default/files/2021-09/warrington_local_plan_-_policies_map_2021.pdf

Conservation Areas Policy DC2

Warrington's Green Belt Policy GB1

Green Infrastructure / Open Space Policy DC3 / DC5

Greenway Network DC3

Local Wildlife Sites DC4

Strategic Green Links DC3

Local Planning Designations

Date plotted from http://www.magic.gov.uk/MagicMap.aspx

Listed Buildings
Policy BH3

Public Rights of Way

Date plotted from the Warrington Borough Council Interactive Online Map: http://maps.warrington.gov.uk:8080/connect/

Footpath Policy LUT4

Bridleway Policy LUT17

Public Right of Way Reference

N 0m Scc

n 100m 200m 300m 400m 500m

Scale@1:10,000

Land South of Chester Road, Walton

Drawing Title Future Landscape Planning Policy Context

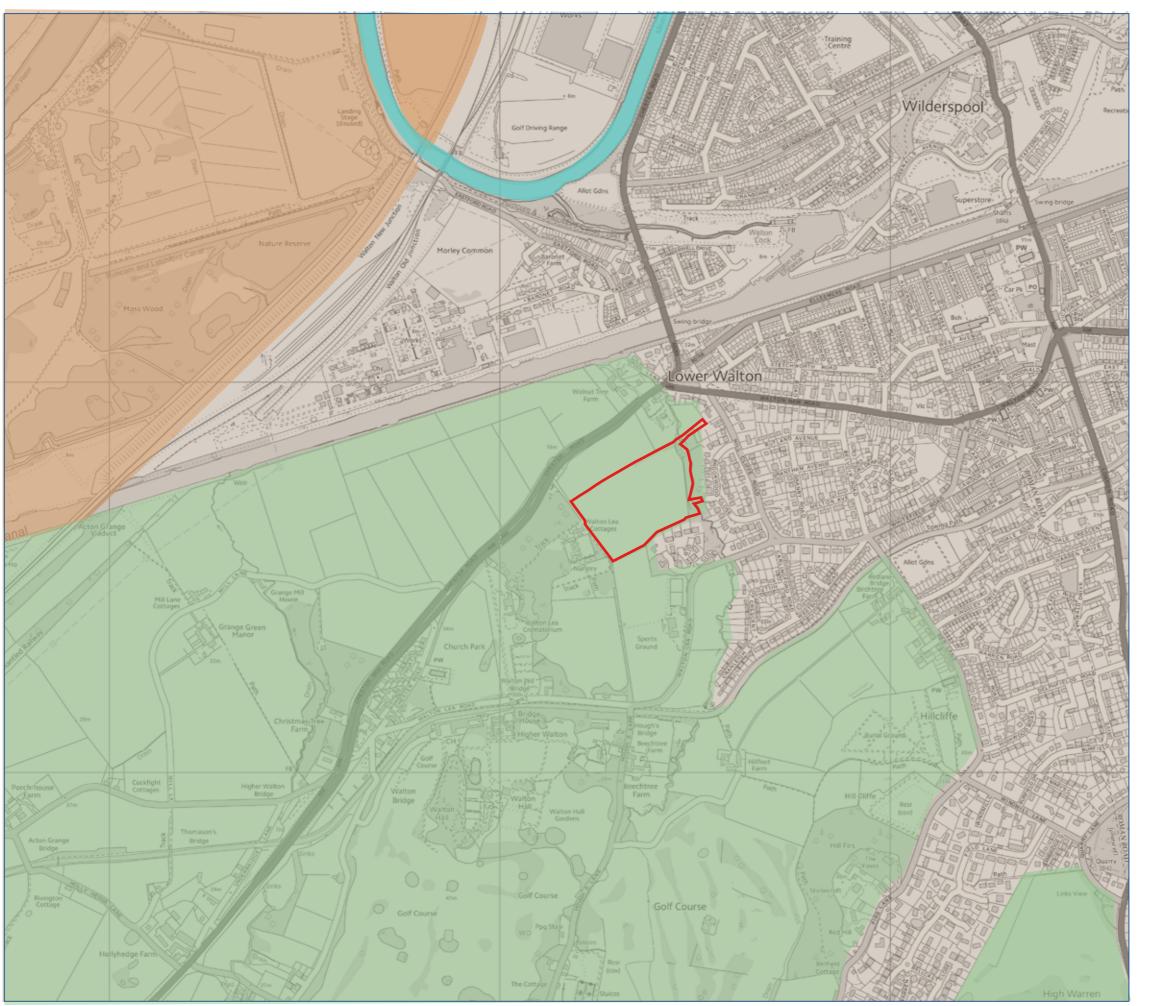
and Public Rights of Way
1:10,000 @ A3

Scale /
Drawing No.
Date I
Checked I

lo. 10468/P01b lite November 2021 ed PIJ/CD



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<u>National Character</u> The entire study area lies within NCA Profile: 60 Mersey Valley (NE492)

Local Character

Information obtained from the Warrington Borough Council Landscape Character Assessment (2007)



Character Type 3: Red Sandstone Escarpment Area 3.A: Appleton Park & Grappenhall



Character Type 5: River Flood Plain Area 5.A: River Mersey / Bollin



Character Type 6: Inter-Tidal Areas Area 6.A: Victoria Park to Fiddlers Ferry



Urban



0m 100m 200m 300m 400m 500m Scale@1:10,000

Land South of Chester Road, Walton

Drawing Title

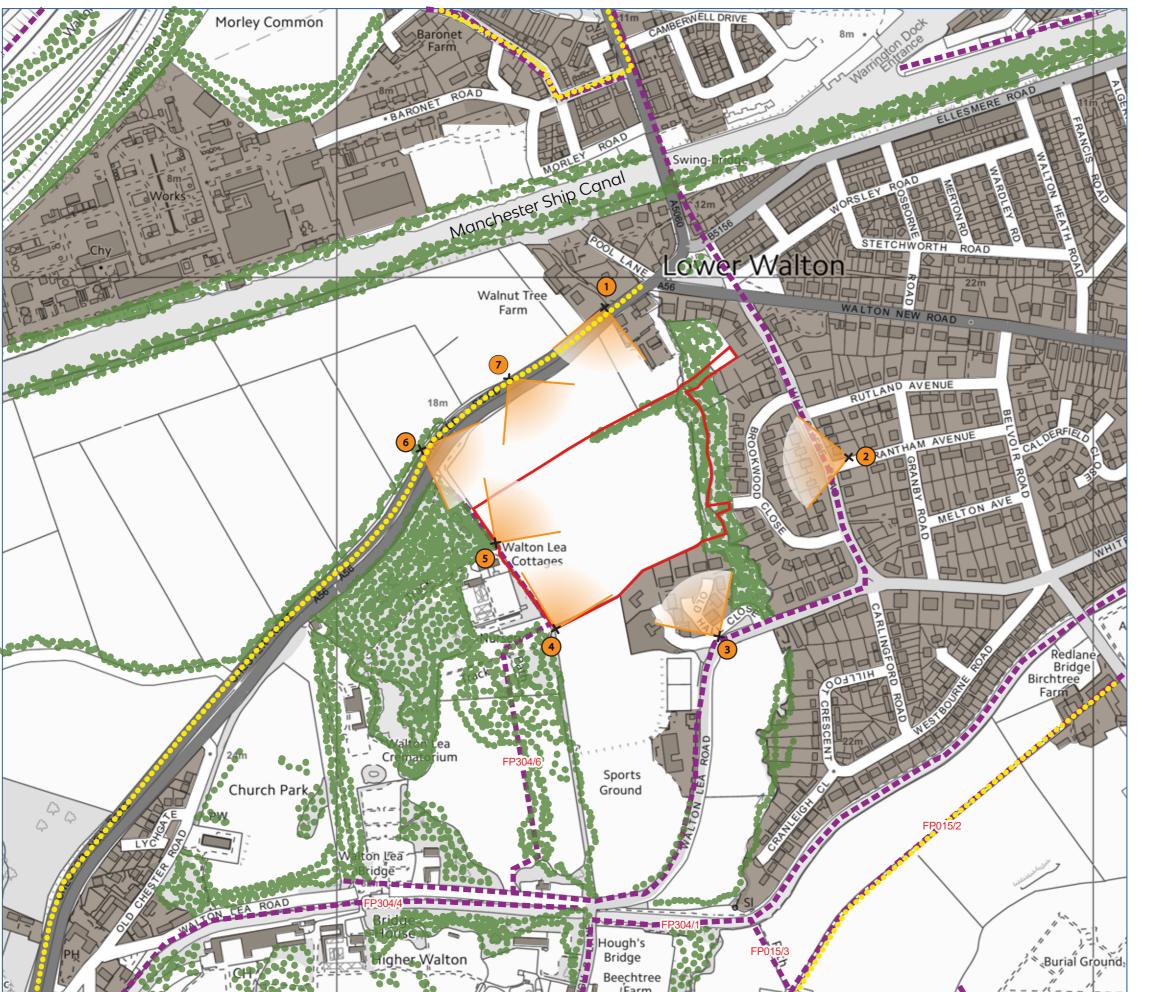
Landscape Character Areas

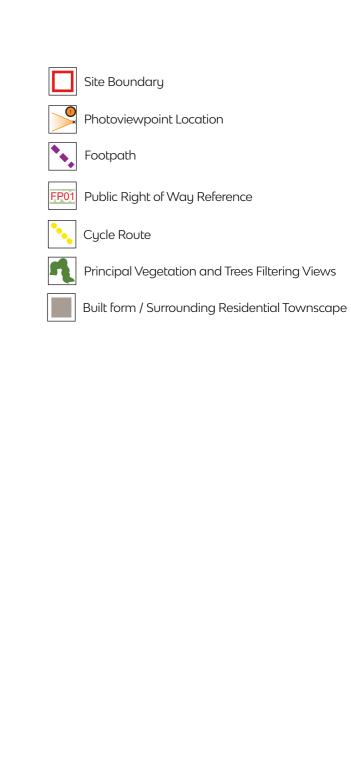
Scale 1:10,000 @ A3 Drawing No. Date

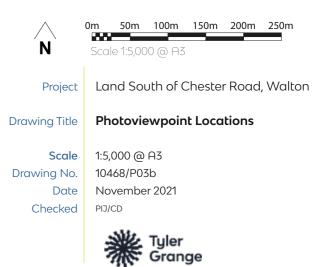
10468/P02b November 2021

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Site Boundary

Key View

Developable Area

Development Offset

Link to Public Right of Way

Strengthen Existing / Provide New Vegetation to Filter Views of Development

Potential Public Open Space



Project

Land South of Chester Road, Walton

Drawing Title

Landscape Opportunities and Constraints

Scale

Drawing No. 1046 Date Nove

Not to scale 10468/P04c November 2021 PIJ/CD



For Context Only



Taken from Chester Road looking south towards the northern boundary of the Site. Photoviewpoint 1:

Distance:

28m

South

Coordinates: X: 360352 Y: 385958



Photoviewpoint 2:

Taken from Grantham Avenue looking west towards the Site.

Distance:

178m

West

Coordinates: X: 360671 Y: 385756

Project No:

10468

Date:

Orientation:

Nov-21

Client:

Lane End Developments Construction Ltd. Project:

Land South of Chester Road, Walton

Status:

Planning

Figure: Data Sheet

For Context Only



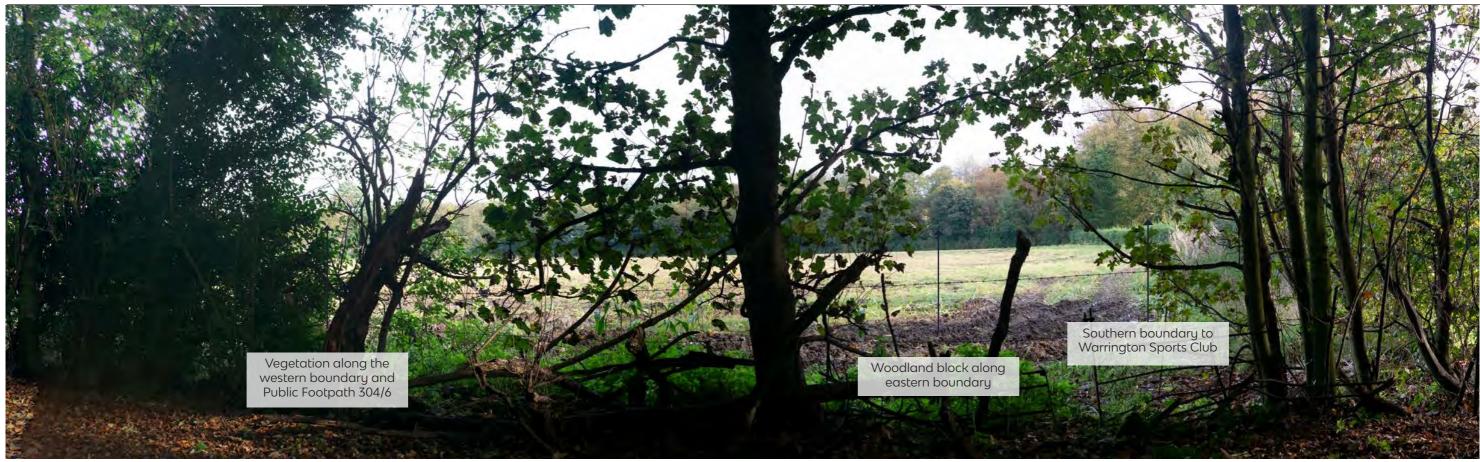
Taken from Old Hall Close on the southern boundary on the Site. Photoviewpoint 3:

132m Distance:

Orientation:

North-west

Coordinates: X: 360497 Y: 385527



Taken from Public Footpath (Ref: FP304/6), at the south-western corner of the Site boundary. Photoviewpoint 4:

Distance: 1m Orientation:

North-east

Coordinates: X: 360287 Y: 385541

Project No: 10468

Lane End Developments Construction Ltd. Project: Client:

Land South of Chester Road, Walton

Status: Planning Figure:

Date:

Data Sheet

Nov-21



Photoviewpoint 5: Taken from Public Footpath (Ref: FP304/6), at the south-easten corner of the Site boundary.

Distance: 2m

Orientation:

North-east

Coordinates: X: 360210 Y: 385644



Taken from Chester Road at the north western corner of the Site.

Distance:

24m

Orientation:

East

Coordinates: X: 360100 Y: 385743

Client:

10468

Nov-21

Project No:

Lane End Developments Construction Ltd. **Project:**

Date:

Land South of Chester Road, Walton

Status:

Planning

Figure: Data Sheet

For Context Only



Photoviewpoint 7: Taken from Chester Road, 1800 view of northern boundary.

Distance:

22m

Orientation:

South

Coordinates: X: 360197 Y: 385850



Project No: 10468 Date: Nov-21

Client: Lane End Developments Construction Ltd. Project:

roject.

Land South of Chester Road, Walton

Status: Planning F

Figure: Data Sheet



Land South of Chester Road, Walton

10468_R03d Arboricultural Appraisal

1.0 Introduction

- 1.1. This overview report has been prepared by Tyler Grange Group Ltd (TG) on behalf of Ashall Property Ltd in response to desktop analysis and updated fieldwork undertaken in October 2021. This report sets out the findings of an Arboricultural Appraisal of a parcel of land to the south of Chester Road, Walton (centred on OS Grid Reference SJ 60311 85717), hereinafter referred to as the 'site'.
- 1.2. A BS5837:2012 Tree Survey of the site and surrounding tree cover has been undertaken to provide a robust baseline for reviewing the site's potential development implications from an arboricultural perspective. The survey findings have denoted the principal distribution of trees and hedgerow on and adjacent to the site, as well as an assessment of their condition and constraints towards a potential future residential development, chiefly; a grading of BS5837 tree quality categorisations, tree shading and root protection areas. An appraisal of the likely acceptability of development proposals on the site in relation to trees is provided, with supporting recommendations and key arboricultural-related design considerations to assist with the overall promotion of the land for a prospective future development.
- 1.3. This document should be read in conjunction with the Tree Constraints Plan (TCP) (10468/P06b) and Tree Survey Schedule (Appendix 1) alongside the corresponding Tree Survey Explanatory Notes (Appendix 2) and Cascade Chart for Tree Quality Assessment (Appendix 3) contained to the rear of this report.

2.0 Site Context

- 2.1. The site is located at the western edge of Lower Walton, a village in Warrington. Walton is at the southwestern edge of the town, next to Stockton Heath and lies approximately 2.5km from Warrington town centre.
- 2.2. The site covers 5.8ha and currently comprises a single arable field bound by hedgerows and scattered hedgerow trees with a belt of woodland blocks aligning the site to the east.
- 2.3. The northern site boundary is currently open, with the A56 Chester Road located beyond. The surrounding context includes residential development to the north-east (Hall Gardens and Brookwood Close) with Warrington Sports Club, off Walton Lea Road, and further residential development (Old Hall Close) located beyond the southern site boundary.
- 2.4. Residential properties (99 Chester Road and 1-3 Walton Lea Cottages) and the Walton Lea Project (a charity enterprise which includes a garden centre and farm shop) are located beyond the tree line to the west of the site.



3.0 Methodology

- 3.1. An arboricultural walkover was carried out in October 2021 to update and verify baseline tree survey data originally collected during 2019. The survey included trees measuring above 75mm in diameter at breast height (dbh) within or within influence of the site. The distribution of trees surveyed is illustrated on the TCP.
- 3.2. The survey included gathering key tree data to determine the principal context of tree cover across the site boundaries, including; a review of tree quality and condition, principal stem dbh, tree heights and their distribution across the site.
- 3.3. In accordance with arboricultural best practice, topographical survey data was used to inform the tree survey. Aerial photography and OS Mapping was used to approximately identify the locations and canopy spreads of off-site trees; which is considered sufficient in illustrating the principal structure of the adjacent tree cover, particularly where trees occur in groups which is frequently the case for this site. Measurements were taken using a stem diameter tape and a digital clinometer app. Where this was not possible or reasonably practical, measurements have been estimated by eye.
- 3.4. The quality and value of trees has been assessed in accordance with the Cascade Chart for Tree Quality Assessment included within BS5837:2012. Grading subcategories (1, 2 and 3) included within the Cascade Chart for Tree Quality Assessment (Appendix 3) are intended to reflect arboricultural, landscape and cultural values respectively.
- 3.5. The BS5837 Tree Survey Categories can be summarised as:
 - Category Grading A: Trees of high quality and value, which are in such a condition as to be able to make a substantial contribution from an arboricultural, landscape or cultural perspective;
 - Category Grading B: Trees of moderate quality and value, which are in such a condition as to make a significant contribution from an arboricultural, landscape or cultural perspective;
 - Category Grading C: Trees of low quality and value, which are currently in adequate condition to remain until new planting could be established or young trees with a stem diameter below 150mm; and
 - Category Grading U: Trees which are in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management.

4.0 Arboricultural Planning Policy and Statutory Designations

4.1 Under the Town and Country Planning Act 1990 (as amended) the requirement to consider trees as part of development is a material planning consideration and will be taken into account in the determination of planning applications. Arboricultural planning policy that relates to the Site are set out by policy at a National and local level.

National Planning Policy

4.2 The consideration for existing trees and woodlands in relation to planning and new development is set out within Sections 12 and 15 of the NPPF published in July 2021.



- 4.3 Section 12, paragraph 131 states that "Trees make an important contribution to the character and quality of urban environments and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users."
- 4.4 Section 15, paragraph 174 states that "Planning policies and decisions should contribute to and enhance the natural and local environment by: Subsection B; "recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland"
- 4.5 Section 15, paragraph 180 states that "When determining planning applications, local planning authorities should apply the following principles:" Subsection C; "that development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists".

Local Planning Policy

Updated Proposed Submission Version Local Plan (2021-2038)

- 4.6 The current draft local plan was submitted for consultation in September 2021.
- 4.7 Policy DC3 Green Infrastructure states that "The Council, in partnership with other agencies and stakeholders will adopt a strategic approach to the care and management of all the Borough's green infrastructure and seek to protect, enhance and extend the multifunctional network in order to maintain and develop the wider public health, active travel, flood management, climate change, ecological and economic benefits it provides". The policy seeks to "expand tree cover in appropriate locations across the Borough" and to "protect existing green infrastructure".
- 4.8 Should the draft local plan currently submitted for consultation be adopted the following policies contained with The Warrington Local Plan Core Strategy, adopted by the council on 21 July 2014 will be superseded.

Policy CS1 – Overall Spatial Strategy - Delivering Sustainable Development

4.9 The policy includes requirements for development to make the best use of existing "environmental infrastructure" and to "ensure additional provision where needed to support development". The policy also states the need to "sustain and enhance the borough's built heritage, biodiversity and geodiversity".



Policy CS6 - Overall Spatial Strategy - Strategic Green Links

4.10 The policy relates to Green Infrastructure and states that the Council "is committed to supporting wider programmes and initiatives which seek to connect the borough's Strategic Green Links with employment areas, residential communities, and Green Infrastructure Assets".

Policy QE3 - Green Infrastructure

4.11 The policy states that:

"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.

Design and Construction (October 2010, amended February 2016)

- 4.12 This document provides advice and guidance to developers about aspects of the design and construction process, including urban design matters associated with Green Infrastructure such as shadowing, character and amenity.
- 4.13 Addressing the 'Landscaping and the Natural Environment' the document states that "The retention, protection and extension of areas of wildlife habitat will help conserve and enhance biological diversity and the richness of the natural environment. Good quality landscaping also helps make a development attractive and maintain its desirability and use", adding that "Existing attractive or valuable natural features must be retained and protected on a site and be the starting point for the development of building design and landscaping proposals. These could include trees, hedges, ponds or streams. They may be valuable because of their visual amenity or their wildlife or biodiversity value".
- 4.14 The document states that "Design solutions should protect and, where appropriate, enhance existing landscape features by incorporating the features into the development layout and ensuring that new tree planting mirrors the locally native species. Where the development results in the loss of existing features such as trees, hedgerows or ponds, replacement planting or pond construction will be required to maintain the character of the locality and enhance the visual quality of the new development and its local setting".



4.15 Section 10 of the SPD document addresses the 'Protection of Trees on Development Sites' stating that "Trees and woodland are of vital importance to people especially in urban areas. They provide a host of benefits including cleaner air, shade and shelter, and an attractive environment, reducing noise and improving people's sense of well-being. Trees may be of important ecological value. It is important not only to maintain a sustainable tree population by planting new trees but also to protect existing trees. With proper consideration from the outset the protection and retention of existing trees can enhance a new development and make it more attractive to a potential purchaser".

Statutory Designations relating to Arboriculture

- 4.16 As shown on the Warrington Borough Council online mapping tool, the northern section of W1 is protected by Tree Preservation Order (TPO) "Walton New Road/Walton Old Hall TPO No. 13 ref. A1". The central section of the eastern boundary W1 woodland is protected by "Hillcliffe Road, Walton TPO No. 9 ref. W1".
- 4.17 Off-site trees towards the south eastern boundary, incorporating G5, are protected by "Walton New Road/Walton Old Hall TPO No. 13 ref. A3".
- 4.18 A TPO is a written order made by a local planning authority (e.g. a borough, district or unitary council or a national park authority) which, in general, makes it an offence to cut down, top, lop, uproot, wilfully damage or wilfully destroy a tree protected by that order without the authority's permission. If you deliberately destroy a protected tree, or damage it in a manner likely to destroy it, you could be liable to an unlimited fine. Consent to undertake works to protected trees is not required where the work is in relation to proposed development that has been granted full / detailed planning permission.
- 4.19 As shown at www.magic.defra.gov.uk the eastern boundary woodland (W1) and the woodland adjacent to the western boundary is identified as Deciduous Woodland within the National Woodland Inventory 2014.
- 4.20 There are no identified Ancient Woodlands within or adjoining the site.
- 4.21 The site is not located within a Conservation Area, as illustrated on the Warrington Borough Council online mapping tool.

5.0 Arboricultural Appraisal Summary / Design Considerations

- 5.1. A total of 14no. individual trees, 7no. groups of trees, 4no. hedgerows and a woodland have been included within the baseline survey. The tree cover addressed within this appraisal is illustrated on the TCP and listed individually within the Tree Survey Schedule (Appendix 1) contained to the rear of this report.
- 5.2. The surveyed tree cover comprises a mix of off-site roadside planting beyond the northern site boundary, inclusive of Sycamore (*Acer pseudoplatanus 'Leopoldii' T1, T3, T7, T9*), Lime (*Tilia sp. T2, T5, T6, T8*), Elm (*Ulmus sp. T4, T12, T13*), Turkey Oak (*Quercus cerris T10, G1*), Scots Pine (*Pinus sylvestris G1*) and Ash (*Fraxinus excelsior T14*). Hedgerows (H1 and H2) are present providing understorey vegetation and low level screening along Chester Road.
- 5.3. With the site occupying an arable field, the surveyed trees immediately abutting the site's boundaries have generally been left to naturalise with the onset of low level scrub and self-seeded infill and has not been subject to regular close inspection or management other than



- on-going flail cutting works across the site-side boundaries (commonly found within agricultural tree management strategies) where field margins have been maintained to reduce tractor strike.
- 5.4. The western site boundary is intermittently treed with stands of young to mature Sycamore, Turkey Oak (G3) interspersed with Juniper (Juniperus communis), Ash (Fraxinus excelsior), Sweet Chestnut (Castanea sativa), Purple Plum (Prunus cerasifera), Privet (Ligustrum sp.) and Sycamore (Acer pseudoplatanus) (G4) forming a diverse mix of ornamental planting and a good visual screen. The tree cover along the western boundary falls offsite, with trees being located just west of the sites perimeter fence. The future growth and current shading implications associated with the western boundary tree stock will need to be considered as part of the emerging design process.
- 5.5. Southern boundary hedgerows, incorporating a mix of Hawthorn (*Crataegus monogyna*), Pin Oak (*Quercus palustris*), Hazel (*Corylus avellana*), Beech (*Fagus sylvatica*), Leyland Cypress (*Cupressus* × *Ieylandii*), Sycamore and Privet (H3 and H4) provide low level screening that would benefit from future re-stocking and enhancement. H4 has been more actively managed as a residential screen, and H3 is represents a defunct hedgerow of minimal arboricultural valve.
- 5.6. G5 (Lime) represents a notable design consideration given the predicted shading constraints in relation to the south eastern reaches of the site. As sizeable high-canopy mature specimens with dimensions of 20m in height, an appropriate development offset will need to be sought to address future adverse residential amenity impacts.
- 5.7. Eastern site boundary tree stock represents a dense belt of woodland (W1) with good screening value. Flail damage is noted across the lower site-side canopies with the remaining woodland having been left to naturalise with predominantly self-seeded Sycamore. The boundary treatments in relation to the adjoining woodland will need to consider the potential impacts of unregulated garden waste tipping and pruning / damage by residents. Buffers would allow the development of a varied woodland edge and may reduce disturbance effects from members of the public and future site occupants, including noise and light spill from on-site development. A woodland buffer in the form of a fenced / gated maintenance strip or similar, with no public access would be appropriate if gardens are to abut the eastern site boundary.
- 5.8. A tree line of predominantly Common Lime extends into site from the edge of W1. This feature is not considered to be a natural extension of W1 but more a planted tree line of ornamental purposes. This feature should be incorporated into an emerging scheme through sufficient development off-sets from the canopies and RPAs. The design should avoid incorporating trees within G6 into residential gardens and consider the shade cast by the group. This should be achieved by integrating the group as an arboricultural feature within open space.
- 5.9. Except for a dead Horse Chestnut tree established within G6 and some declining elm in the wider roadside boundary north of the site, the majority of trees were found to be in a fair to good physiological and structural condition. No major health issues were noted, besides the presence of flail-wounds and incidents of localised standing deadwood in place. This is likely to be age related and owing to the largely naturalised form and arable-fringe context of much of the tree stock.
- 5.10. There was a broad mix of ages across the surveyed tree stock. It should be noted that many of the mature trees will be in the final third of their life span and should be incorporated with new tree planting to provide a continued tree presence as part of longer term management and development proposals for the site.



- 5.11. Much of the boundary stock was found to be of moderate quality and value (Category B) largely consisting of broad mixed belts of established mature trees, containing several visually prominent specimens. Such trees are also considered to have a greater collective landscape value, given their importance in the locality due to their urban greening value, notably their contribution to the visual experience of the adjacent street scenes, and the visual containment they afford to adjacent dwellings.
- 5.12. W1 along the eastern site boundary represents a high quality woodland resource, classified as a collective Category A tree group.

6.0 Tree Quality and Value in Design

- 6.1. The purpose of categorising surveyed trees based on their arboricultural quality and value is to ensure that potential development proposals have considered the presence of important trees on site, and informed decisions are made concerning the removal or retention of trees as a result of development, in conformity with BS5837:2012.
- 6.2. Category A trees represent significant arboricultural features and should be regarded as particularly important trees that are desirable to retain within a completed development; they subsequently represent a major constraint towards potential development. Category A trees are denoted by a Green tree canopy outline as illustrated on the **TCP** located to the rear of this report. W1 (protected by TPOs "Walton New Road/Walton Old Hall TPO No. 13 ref. A1" and "Hillcliffe Road, Walton TPO No. 9 ref. W1") represents a collective Category A tree group.
- 6.3. Category B trees signify those that provide moderate arboricultural quality and value to the site. This level of classification has been frequently assigned to trees which attract a higher collective rating than they might as individuals, particularly in terms of their visual prominence where contributing to continuation of mature tree belts. Category B trees are denoted by a Blue tree canopy outline as illustrated on the **TCP** and include T1, T2, T5, T6, T7, T8, T9, T11, G4, G5 and G6.
- 6.4. The integration of Category C trees into the emerging design is recognised as important where practical as they contribute to the overall tree cover within the site vicinity and will assist with the assimilation of new development. Nonetheless they are of less priority for retention, particularly where their removal benefits to the retention of higher quality tree cover. All remaining trees surveyed (T3, T4, T10, T12, T13, T14, G1, G2, G3, H1, H2, H3 and H4) are considered to represent lower value examples of the species that are readily replaceable. Category C trees are denoted by a Grey tree canopy outline as illustrated on the **TCP** located to the rear of this report.

7.0 Root Protection Area Constraints

- 7.1. The **TCP** contained to the rear of this report shows the approximate extent of Root Protection Areas (RPAs). The RPAs have been calculated in accordance with the methodology set out within Appendices C and D of BS5837:2012, using the stem diameter dimensions obtained during the site visit.
- 7.2. The RPAs are considered to contain sufficient rooting volume to ensure the survival of the tree and should be left undisturbed in order to avoid damage to the roots or rooting environment surrounding the tree. Particular care is needed regarding the proximity of trees which may become enclosed within new development, or are disturbed by unsuitable working methods or proximity during the construction phase of a development.



- 7.3. Whilst the locations of RPAs must be respected, and development or excavations avoided wherever within them, regulated minor works can be undertaken within the root protection area in some cases, but this must be carried out carefully by hand, avoiding damage to roots. Appropriate protective measures should be implemented to avoid desiccation and undue disturbance of roots if a tree is to be retained. Any sudden and major alteration of the soil or surface conditions within RPAs will lead to progressive shoot and branch dieback until the roots have adapted to the altered conditions and have been able to source sufficient water and oxygen levels. If damage is progressive or so severe that the tree is unable to adapt then it is likely that the tree will ultimately die. It should be noted that in general, with increased maturity of a specimen, the ability of that tree to adapt to dramatic alterations in relation to its root system is lessened.
- 7.4. Any future design for development should be informed by the RPAs of the surveyed trees.

8.0 Tree Canopies and Shading Constraints

- 8.1. The distribution of tree canopy cover within and in influence of the site is illustrated on the **TCP** located at the rear of this report. Canopies have been plotted using a combination of site observations, the supplied topographic survey data and aerial photography. Similarly to plotted RPAs, a full BS5837:2012 will be required to obtain a fully accurate representation of the sites tree canopy cover.
- 8.2. Tree canopies represent a physical constraint to development, as siting proposed buildings within these areas will result in pruning works or tree removal. It is recommended that potential developments parameters respond to the extent of tree canopies encroaching into the fields.
- 8.3. Where it is unavoidable to assemble proposed structures in close proximity to canopies, an allowance for future growth should be considered. This is heavily dependent on the sites existing context and species attributes, which should be addressed during refinement of a new scheme.
- 8.4. BS5837:2012 states that, "An indication of potential direct obstruction of sunlight can be illustrated by plotting a segment, with a radius from the centre of the stem equal to the height of the tree, drawn from due north-west to due east, indicating the shadow pattern through the main part of the day" (BS5837:2012 para. 5.2.2 NOTE 1).
- 8.5. The principal tree shadow constraints are shown on the **TCP**. This signifies the area within which the amenity interests of shading, available daylight and the proximity of trees for any future site uses may be impacted upon should a tree be retained as part of a scheme.
- 8.6. As well as the potential adverse impacts of shadowing, such impacts should also be reviewed on balance with the positive aspects of retaining a degree of canopy shade. BS5837:2012 (para. 5.3.4, a) NOTE 1) states that "shading can be desirable to reduce glare or excessive solar heating, or to provide comfort during hot weather. The combination of shading, wind speed/turbulence reduction and evapo-transpiration effects of trees can be utilised in conjunction with the design of buildings and spaces to provide local microclimatic benefits".
- 8.7. Where the proposed use or future function of a site is dependent on a need to avoid or retain a degree of shading, the plotted tree canopy shadow areas shown on the **TCP** should be utilised to inform the scheme parameters.



8.8. It is also advised that any residential aspects of development ensures that habitable rooms and garden spaces are located outside of the tree canopy shadow where possible. Excessive tree shading can cause a negative relationship between trees and new residential occupants, resulting in future pressure for tree removal. Existing trees should also be excluded from proposed private gardens.

9.0 Recommendations and Development Opportunities

- 9.1. The principal design recommendations to consider can be summarised as:
 - Prioritise the retention of Category A and Category B tree cover;
 - Suitable development offsets in accordance with Root Protection Areas (RPAs);
 - On-site habitable rooms and garden areas to avoid plotted shadowing constraints to reduce future tree resentment issues / adverse residential amenity impacts;
 - Ensure appropriate boundary treatments in relation to the W1 woodland edge, utilising management strips to safeguard against adverse residential impacts; and
 - Avoid locating retained trees within proposed residential gardens, utilise strips of public open space to act as ownership barriers.
- 9.2. Opportunities to consider should a scheme be prepared include:
 - Utilise the existing tree cover to create a scheme that offers a high quality landscape setting with instant maturity and enhanced assimilation;
 - Establish a soft-landscaping / tree planting scheme that mitigates the impact of any tree losses:
 - Management of scrub, Ivy and brambles in accordance with ecological requirements;
 - Gapping up of defunct hedgerows / strengthening of weaker tracts of site boundary stock with native hedgerows planted to ensure development of a diverse native hedgerow species mix; and
 - Enhance the physiological and structural condition of the mature tree stock through tree management recommendations identified following full BS5837:2012 tree survey, including the removal of any hanging branches, thin standing or unsafe / poorly attached deadwood, remedial target pruning of weighty leaders within canopies overhanging proposed vehicle and pedestrian routes and lifting or reduction of crowns where needed to avoid future vehicular strike. Selected retention as hibernaculum / habitat features where appropriate and works undertaken in accordance with TPO restrictions in relation to W1 and G5.

10.0 Future Work Requirements to Accompany a Planning Application

- 10.1. If a full / detailed planning application is to be submitted then an Arboricultural Impact Assessment (AIA), Tree Protection Plan and corresponding Arboricultural Method Statement (AMS) would need to be prepared to inform the design process and establish a robust tree protection strategy. Such work will ensure that trees of merit can be safeguarded during the construction phase of the development. This work should be based on a full tree survey, undertaken in accordance with BS5837:2012 using measured topographic survey data of the entire site.
- 10.2. It is our professional opinion that the provision of well-considered development parameters that propose the enhancement of the existing arboricultural baseline via management, re-planting



- and appropriate development offsets could lead to beneficial effects with regard to arboricultural matters.
- 10.3. It is expected that a residential scheme on-site would lead to a net-gain in tree cover via the provision of new street trees, incidental landscaping, site boundary planting and residential garden spaces. New site-wide green infrastructure can serve to not only enhance existing features but also to create new habitats, filter views and break up the overall development. The effects of localised tree loss and the full impact of scheme proposals will however depend upon the detailed design approach and the delivery of a layout that addresses site access, the drainage regime, detailed planting proposals, the alignment of built form in relation to surveyed tree stock and a consideration of microclimatic effects in detail.

11.0 Limitations

- 11.1. The contents of this report are valid at the time of writing. Tyler Grange shall not be liable for any use of this report other than for the purposes for which it was produced. Owing to the dynamic nature of ecological, landscape, and arboricultural resources, if more than twelve months have elapsed since the date of this report, further advice must be taken before you rely on the contents of this report. Notwithstanding any provision of the Tyler Grange Group Limited Terms & Conditions, Tyler Grange Group Limited shall not be liable for any losses (howsoever incurred) arising incurred as a result of reliance by the client or any third party on this report more than twelve months after the date of this report.
- 11.2. The comments made are based on observable factors present at the time of inspection and are based on maximising the trees' safe life expectancy given their existing context. Although the health and stability of trees in their current context is an integral part of their suitability for retention, it must be stressed that this report is not a tree risk assessment and should not be construed as such. While every attempt has been made to provide a realistic and accurate assessment of the trees' condition at the time of inspection, it may have not been appropriate, or possible, to view all parts or all sides of every tree to fulfil the assessment criteria of a risk assessment.
- 11.3. The Wildlife and Countryside Act (WCA) 1981 (as amended) makes it an offence to disturb nesting birds or recklessly endanger a bat or its roost. Bats are also a European protected species and are additionally protected under the Conservation (Habitats & c) Regulations 1994 and 2010 (as amended).
- 11.4. Any arboricultural recommendations are proposed on the basis that they are advised and undertaken by a qualified arboricultural contractor working in accordance with best practice as, for instance, embodied in BS3998: 2010 Recommendations for Tree Work, or in the European Tree Pruning Guide, published in 2001 by the Arboricultural Association and who must be listed in the Arboricultural Association's Approved Contractors Directory (www.trees.org.uk) following the completion of a full BS5837:2012 Tree Quality Survey.



Appendices

Appendix 1: Tree Survey Schedule

Appendix 2: Tree Survey Explanatory Notes

Appendix 3: Cascade Chart for Tree Quality Assessment

Plan

Tree Constraints Plan (TCP) (10468/P06c)

The contents of the reports will be valid at the time of writing. Tyler Grange shall not be liable for any use of the reports other than for the purposes for which they are produced. Owing to the dynamic nature of landscape, and arboricultural resources, if more than twelve months have elapsed since the date of any of the reports, further advice must be taken before you rely on their content. Notwithstanding any provision of the Tyler Grange Group Ltd Terms & Conditions, Tyler Grange Group Ltd shall not be liable for any losses (howsoever incurred) arising incurred as a result of reliance by the client or any third party on the reports more than twelve months after the date of the reports. This fee quote remains valid for a period of 30



Appendix 1: Tree Survey Schedule

Tree Number	Common Species Name	Height (m)	Trunk Diameter (mm)	Cr N	own S	pread (Height of Crown Clearance (m)	Height and direction of lowest branch (m)	Age Class	Physiological Condition	Structural Condition	Estimated Remaining Contributed (Years)	BS5837 Category	Comments/Preliminary Management Recommendations	RPA Radius (m)	Root Protection Area (m2)
T1	Leopoldii Sycamore	11m	615	5#	6.00	6.00	4.00	4	4.25 (s)	Mature	Good	Fair	20 - 30	B2	Component of roadside tree line, previous pruning works to south of crown. Structure is typical for species, considered to be of moderate arboricultural value. Offsite.	7.4	171
Т2	Lime	11m	560	4.00	4.00	5.00	4.00	3	3	Mature	Fair	Fair	20 - 30	B2	Component of roadside tree line, heavy epicormic growth at base, die back and above average deadwood in upper crown, considered to be of moderate arboricultural value. Offsite.	6.6	137
Т3	Sycamore	11m	680#	6.5#	6.00	6.00	4.00	5	5 (s)	Mature	Poor	Fair	20 - 30	C12	Component of roadside tree line, sparse canopy and above average deadwood. Offsite.	8.2	211
T4	Elm	7m	180		2	.00		3	3 (s)	Early Mature	Fair	Fair	10 - 20	C12	Self-set specimen, structure is typical for species	1.9	11
Т5	Lime	13m	880#	8#	6.00	6.00	6.00	3	2.75 (s)	Mature	Good	Fair	20 - 30	B12	Principal specimen in tree line, stem forks at 2m into 4 x co- dominant stems with will distributed crown, conjested unions structure, upper canopy has structure typical for species, some age related deadwood, considered to be of moderate arboricultural quality and value.	10.6	353
Т6	Lime	13m	670# 220#	4.50	7.25	5.00	5.00	3.00	3 (s)	Mature	Good	Fair	20 - 30	B12	Component of tree line along roadside, large sucker at base to W, primary limb failure at 2m to south crown with associated decay, upper canopy has a stricture typical for species, significant epicormic growth at base, considered to be of moderate arboricultural quality and value. Offsite.	8.5	227
17	Leopoldii Sycamore	11m	620	5.50	6.00	6.50	5.75	4.5	3 (s)	Mature	Good	Fair	20 - 30	B12	Component of tree line along roadside, maintains a central leading stem with well distributed crown, lower canopy pruned back from field boundary, upper canopy has a structure typical for species, considered to be of moderate arboricultural quality and value.	7.4	174
Т8	Lime	12m	500#	5#	4.00	4.00	3.00	2	3 (s)	Mature	Fair	Fair	20 - 30	B2	Component of tree line along roadside, epicormic growth recently removed from base, structure is typical for species, considered to be of moderate arboricultural value. Offsite.	6.0	113
Т9	Leopoldii Sycamore	12m	680	5#	6.00	6.00	6.00	4	4 (s)	Mature	Good	Fair	20 - 30	B12	Component of tree line along roadside, stem forks at 3.5m into well distributed crown, good foliage density, upper canopy has structure typical for species, minor pruning works to lower crown site side, considered to be of moderate arboricultural quality and value. Offsite.		209
T10	Turkey Oak	8m	300# 150#	4.00	4.00	3.00	4.00	4	3 (s)	Early Mature	Good	Fair	20 - 30	B12	Likely planted specimen, 1 x dominant stems and 1 x sub- dominant stem, structure is typical for species	4.0	50
T11	Lime	20#	800#		9	.00		-	3 (e)	Mature	Fair	Fair	20 - 30	B12	Off site tree, structure is typical for species, component of off site mature tree stock, upper canopy overhangs site by 3 metres form 5 metres height. considered to be of moderate arboricultural quality and value	9.6	289

T12 Elm 6m 160 2-00 4 3-60 Young Fair Fair 20-30 C12 Component of models ever line, our book eventy field edge. 2.2 15												-			
TH4 Aith 5m 100 200 1 Voting Feir Feir 10-20 C12 Netterdend from Flowdride specimen, Now value. 19 11 Soole Fire all Soole Fi	T12	Elm	8m	180	2.00	4	3 (s)	Young	Fair	Fair	20 - 30	C12	Component of roadside tree line, cut back along field edge.	2.2	15
Social Private 3 G1 Turkey Obd. Littler, Prima 2 G2 English Clask 6m 200 2.75 2.5 Early Mature Peor to Good Poor to Good 20 - 30 G3 Sycamore, Horse G3 Chestruk, Turkey Obd. Littler, Obd. 1509, Harrison Russian G4 Department of Chestruk, France International Chestruk, Carlo Sycamore, Horse G5 Chestruk, Turkey Obd. 1509, Harrison Russian G6 Lime, Prima 200 5608 4 max 7m Mediure Poor to Good Poor to Good 20 - 30 G5 Lime, Prima 200 5608 4 max 7m Mediure Poor to Good Poor to Good 20 - 30 G6 Lime, Prima 200 5608 4 max 7m Mediure Poor to Good Poor to Good 20 - 30 G7 Compt. Prima 200 30 - 30 G8 Lime, Prima 200 5608 4 max 7m Mediure Poor to Good Poor to Good 30 - 40 G8 Lime, Prima 200 5608 4 max 7m Mediure Poor to Good Poor to Good 30 - 40 G7 Compt. Prima 200 5000 70 max 8 max 4 max 4 max 7m Mediure Poor to Good Poor to Good 30 - 40 G7 Compt. Prima 200 30 - 5000 70 max 8 max 4 max 7m Mediure Poor to Good Poor to Good 30 - 40 G7 Compt. Prima 200 30 - 5000 70 max 8 max 4 max 7m Mediure Poor to Good Poor to Good 30 - 40 G7 Compt. Prima 40 max 40 max 7m Mediure Poor to Good Poor to Good 30 - 40 G7 Compt. Prima 40 max 40 max 7m Mediure Poor to Good Poor to Good 30 - 40 G7 Compt. Prima 40 max 40 max 4 max 7m Mediure Poor to Good Poor to Good 30 - 40 G7 Compt. Prima 40 max 40 max 4 max 7m Mediure Poor to Good Poor to Good 30 - 40 G7 Compt. Prima 40 max 40 max 4 max 7m Mediure Poor to Good Poor to Good 30 - 40 G7 Compt. Prima 40 max 40 max 4 max 4 max 4 max 4 max 5 max 4 max 5 max 4 max 5 max 4 max 5 max 4 max 6 max 4 max 7m Mediure Poor to Good Poor to Good 30 - 40 G7 Compt. Prima 40 max 4 max 4 max 4 max 4 max 5 max 4 max 5 max 4 max 6 max 4 max 5 max 4 max 6 max 4 max 6 max 4 max 7 m Mediure Poor to Good Poor to Good 90 - 40 G7 Compt. Prima 40 max 4 max 4 max 4 max 4 max 5 max 4 max 5 max 4 max 4 max 6 max	T13	Elm	7m	160#	2.00	3	3 (s)	Early Mature	Fair	Fair	10 - 20	C12	Self-set specimen, structure is typical for species	1.9	11
G1 Tuting Calc All Ceebs 7 max 200 max 3.75 2 Early Mature Poor to Good Poor to Good 20 - 30 C12 Pine in poor condition, structures are considered bytical 3.0 - 1 miles of the poor to Good 10 miles 10	T14	Ash	5m	100	2.00	1	-	Young	Fair	Fair	10 - 20	C12	Naturalised form. Roadside specimen, low value.	1.9	11
G2 English Oak 6m 200 2.75 2.5 Early Mature Poor to Good Poor to Good 20 - 30 C12 boundary Free, heavily failed sate side crowns. Cheshine style fencing through RPA. Posts and ties to monitor and remove. Sycamore. Hone G3 Cheshrut. Turkey Oak, 9m 275 max 4 max 4 Early Mature Poor to Good Poor to Good 20 - 30 B12 Turkey Oak, Juniper, Ash, Sweet Cheshrut, 6m to 400 4.5 max 2 min Young to Mature Poor to Good Poor to Good Poor to Good 20 - 30 B12 Sycamore, Purple Bundless Provide drive to west of stems. G4 Sycamore, Purple Bundless Provide And Andrew Poor to Good Poor to Good Poor to Good 20 - 30 B12 B7 Universel Order to Good Poor t	G1	Turkey Oak x2, Beech	7 max	250 max	3.75	2	-	Early Mature	Poor to Good	Poor to Good	20 - 30	C12	Pine in poor condition, structures are considered typical for species. Field side tears, snapped lower branches (tractor	3.0	-
G3 Cheshut, Turkey Oak, Juniper, Ash, Sweet Cheshut, G4 Speamore, Purple Plum, Buddelia, Privet, Apple, Laurel, Poplar G5 Lime, Pine 20# 560# 4 max 7m Mature Good Fair 20-30 Lime, Norway Maple, Horse Cheshut, G6 Turkey Oak, Yew, Sycamore G6 Turkey Oak, 9 max 600 av. Sycamore G7 Cherry, Field Maple, S-8m to 100 Mixed. 0 Young to Early Fair Fair Fair 30-40 Mixed garden edge planting, ornamental stock. Off-site beyind 122 Mixed garden edge planting, ornamental stock. Off-site beyind 122 Mixed garden edge planting, ornamental stock. Off-site beyind 122 Mixed garden edge planting, ornamental stock. Off-site beyind 122 Mixed garden edge planting, ornamental stock. Off-site beyind 122 Mixed garden edge planting, ornamental stock. Off-site beyind 122 Mixed garden edge planting, ornamental stock. Off-site beyind 122 Mixed garden edge planting, ornamental stock. Off-site beyind 122	G2	English Oak	6m	200	2.75	2.5	-	Early Mature	Poor to Good	Poor to Good	20 - 30	C12	boundary fence, heavily flailed site side crowns. Cheshire style	2.4	-
A system or purple Plum, Buddlela, Privet, Apple, Laurel, Poplar G5 Lime, Pine 20# 560# 4 max 7m Mature Good Fair 20-30 B12 Lime, Norway Maple, Horse Chestrut, Turkey Oak, Yew, Systemore G6 Lime, Norway Maple, Horse Chestrut, Turkey Oak, Yew, Systemore G7 Cherry, Field Maple, 3-8m to 100 Mixed. 0 Value Fair Fair Fair 30-40 C12 Mixed garden edge planting, or manufact was planting, or more started and sold considered to be of moderate arboricultural feature, site side canopies pruned / falled back from field margin upto c.7m, locations approximated due to absence on 6.7 and arboricultural quality and value as a collective. Victorian style fencing through RPA. Considered to be of moderate arboricultural feature, site side canopies pruned / falled back from field margin upto c.7m, locations approximated due to absence on 6.7 and considered to be of moderate arboricultural quality and value as a collective. Victorian style fencing through RPA. Considered to be of moderate arboricultural feature, site side canopies pruned / falled back from field margin upto c.7m, locations approximated due to absence on 6.7 and constructive quality and value as a collective. Victorian style fencing through RPA. Considered to be of moderate arboricultural feature, site side canopies pruned / falled back from field margin upto c.7m, locations approximated due to absence on 6.7 and constructive quality and value as a collective. Victorian style fencing through RPA. Considered to be of moderate arboricultural quality and value as a collective. Victorian style fencing through RPA. Considered to be of moderate arboricultural quality and value as a collective. Victorian style fencing through RPA. Considered to be of moderate arboricultural quality and value as a collective. Victorian style fencing through RPA. Considered to be of moderate arboricultural quality and value as a collective. Victorian style fencing through RPA. Considered to be of moderate arboricultural quality and value as a collective. Victorian style fencing th	G3	Chestnut, Turkey Oak,	9m	275 max	4 max	4	-	Early Mature	Poor to Good	Poor to Good	20 - 30	B12	boundary fence, heavily flailed site side crowns. Victorian style fencing through RPA. Scrubby arable margin to site-side bases.	3.3	-
St. Lime, Pine 20# 560# 4 max 7m Mature Good Fair 20 - 30 B12 site side canopies pruned / flailed back from field margin upto c.7m, locations approximated due to absence on 6.7 _ topographical survey, considered to be of moderate arboricultural quality and value Lime, Norway Maple, Horse Chestnut, 23 max 600 av. 730 max 6m av. 4 av Mature Poor to Good Poor to Good 30 - 40 B12	G4	Ash, Sweet Chestnut, Sycamore, Purple Plum, Buddleia, Privet,		400	4.5 max		-		Poor to Good	Poor to Good	20 - 30	B12	boundary, good species diversity and future potential, site side crowns flailed up to 2.5 metres at 0.75 metres from stems, considered to be of moderate arboricultural quality and value as a collective. Victorian style fencing through	4.8	-
Lime, Norway Maple, Horse Chestnut, Turkey Oak, Yew, Sycamore Lime, Norway Maple, Horse Chestnut, Turkey Oak, Yew, Sycamore Mature Poor to Good Po	G5	Lime, Pine	20#	560#	4 max		7m	Mature	Good	Fair	20 - 30	B12	site side canopies pruned / flailed back from field margin upto c.7m, locations approximated due to absence on topographical survey, considered to be of moderate	6.7	_
G7 Cherry, Field Maple, 3 - 8m to 100 Mixed. 0 Young to Earry Fair Fair 30 - 40 C12 Mixed garden edge planting, ornamental stock. Urt-site beyind 1.2	G6	Horse Chestnut, Turkey Oak, Yew,			6m av.	4 av.	-	Mature	Poor to Good	Poor to Good	30 - 40	B12	one principal Turkey Oak, prominent arboricultural feature, lower crowns flailed up to c.4m at 1m from stems. Western end of group recently crown lifted to 2 metres and epicormic growth removed from base. Number of Limes subject to above average deadwood, considered to be of	11.3	-
	G7	Cherry, Field Maple,	3 - 8m	to 100	Mixed.	0	-	Young to Early Mature	Fair	Fair	30 - 40	C12	Mixed garden edge planting, ornamental stock. Off-site beyind field side fence line.	1.2	-

BS5837: 2012 Tree Survey Schedule Chester Road, Walton

Н1	Elder, Sycamore, Elm	2m to 5m	150 max	1.50	0	0	Young to Mature	Fair	Fair	10 - 20
H2	Hawthorn	2 - 3m	75 max	.75	0	0	Early Mature	Good	Good	20 - 30
Н3	Hawthorn, Buddleia, Elder, Sycamore, Pin Oak x1	1m to 4m	75 max	1.00	0	0	Young to Mature	Fair	Fair	10 - 20
Н4	Hazel, Privet, Hawthorn, Beech, Leyland cypress, Field Maple, Holly	2 - 4m	75	.75	0	0	Young to Mature	Good	Good	20 - 30
W1	Sycamore, Horse Chestnut, Silver Birch, Norway Maple, Lime, Hawthorn, Holly, English Oak, Elm	25m max	1000 max 450 av.	5m av.	4m av. Trees	0 Under stem	Mature	Poor to Good	Poor to Good	30 - 40

Understorey hedgerow to trees, maintained back from field margin, heights maintained, epicormic / suckers from trees form section of the hedgerow	1.8	-
Field boundary hedgerow, left to naturlise, 0.5m wide	.9	-
Intermittent field boundary hedgerow, opportunity to restock and enhance. Gaps to south western end of hedge. Ivy clad. Arable scrubby margin to site-side.	.9	-
Ornamental hedgerow bordering rear garden to dwelling South of site boundary; maintained, uniform.	.9	-
Area of woodland, predominantly comprising of Sycamore established along east boundary, lower crowns flailed to form understorey hedgerow up to 4m in average at 1.5m from stems. Canopies of trees 5m average from stems, limited topographical survey data to survey individual trees within the woodland, of good overall structure and health, considered to be of high arboricultural quality and value. Average overhang into site of 3 metres from 3.5 meters height.	13.2	-

C12

C12

C12

C12

B12



Appendix 2: Tree Survey Explanatory Notes



Appendix 2: Tree Survey Explanatory Notes

Tree Numbers

'T' prefixes have been used to identify individual trees and commence with 'T1'.

'G' prefixes have been used to identify groups of trees.

Species

Species are listed by their common name, both in the schedule and in the report text.

Height and Stem Diameter

The stem diameter of single stemmed trees is measured at 1.5m above ground level and given in millimetres (mm). The diameter measurement of multi-stemmed trees is taken immediately above the root flare. Tree heights are measured in metres (m).

Crown Spread and Height of Crown Clearance

Radial crown spread is measured in metres and is listed for each of the four cardinal points. The canopy shape for individually surveyed trees depicted on the accompanying plans accurately represents the canopy spread as measured on-site.

The height crown clearance is measured above ground in metres from the attachment point of the first significant branch, or the height to which the lowest (living) branch reaches; whichever is the lower.

Age Class

The age of each tree is defined as follows:

Young - within the first third of life expectancy;

Young-Mature - within the second third of life expectancy;

Mature - within the last third of life expectancy;

Over mature - Tree in decline; and

Veteran – tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned. For the purpose of this report the term 'ancient tree' and 'veteran tree' are interchangeable.

Physiological and Structural Condition

The physiological or structural condition of each tree is defined as either; good, fair, poor or dead. For each tree, where appropriate, notes on the structural integrity are provided on form, taper, forking habit, storm damage, decay, fungi, pests, etc.

An assessment of a tree's physiological condition is defined as:

Good – fully functioning biological system showing expectant vitality for the species i.e. normal bud growth, leaf size, crown density and wound closure.

Fair – fully functioning biological system showing below average vitality i.e. reduced bud growth, smaller leaf size, lower crown density and reduced wound closure



Poor – a biological system with limited functionality showing clear physiological decline, disease or significantly below average vitality i.e. limited bud growth, small and chlorotic leaves, low crown density and limited wound closure.

An assessment of a tree's structural condition is defined as:

Good - no significant structural defects.

Fair – structural defects which could be alleviated through remedial tree surgery or arboricultural management practices

Poor – structural defects which cannot be alleviated through tree surgery or arboricultural management practices.

Estimated Remaining Contribution (ERC) in Years

The Estimated Remaining Contribution (ERC) for each tree is based on species and existing and apparent physiological and structural condition of the tree. The ERC may affect the proposed development layout, since the longer the tree is likely to live the greater the contribution it will make and the greater the need for retention.

<10 - Unsuitable for retention

10 - 20 - Can be retained in the short term

20 - 40 - Will continue to offer benefits for the foreseeable future

40+ - Good longevity potential



Appendix 3: Cascade Chart for Tree Quality Assessment

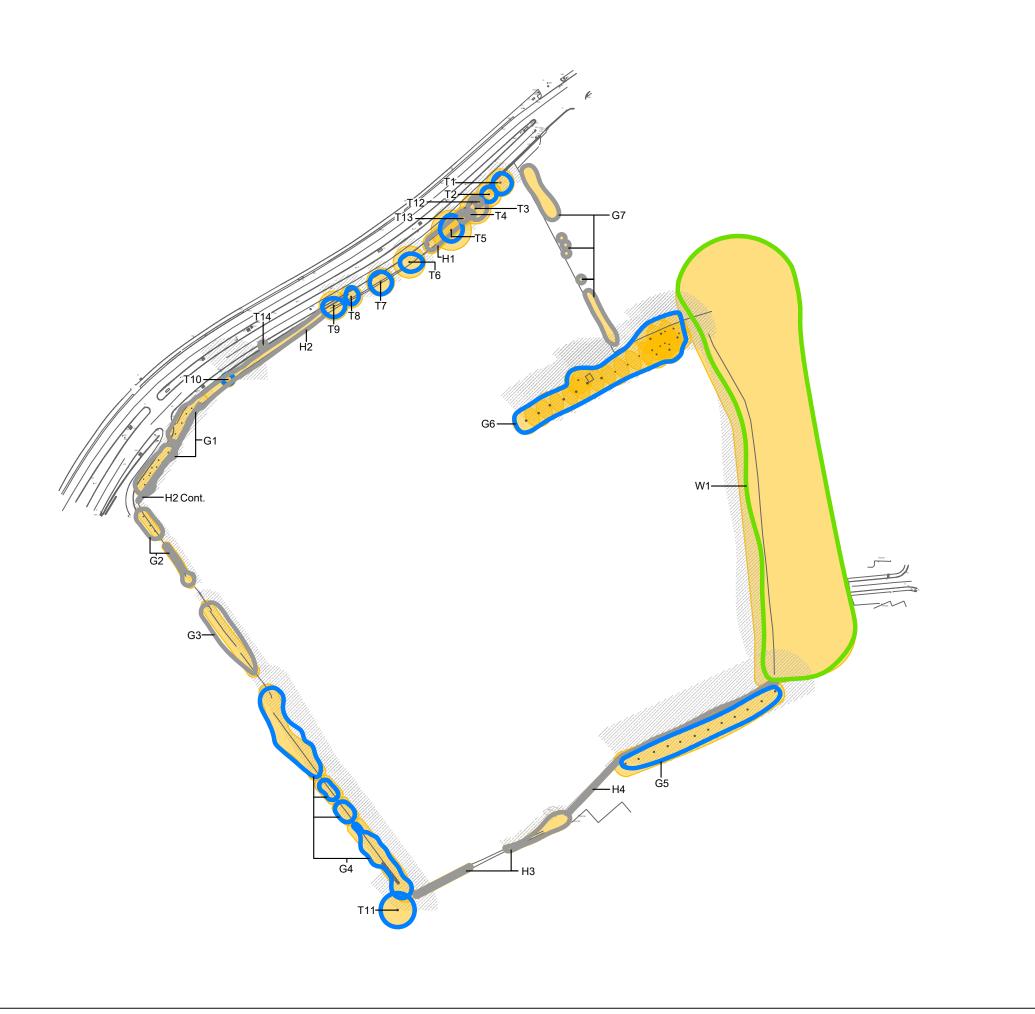


Appendix 3: Cascade Chart for Tree Quality Assessment

TREES FOR REMOVAL						
Category and Definition	Criteria			Identification on Plan		
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	 Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning). Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. Trees infected with pathogens of significance to the health and/or safety of other trees nearby or very low quality trees suppressing adjacent trees of better quality. (NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve) 					
TREES TO BE CONSIDERED FO				I		
Category and Definition	1. Mainly Arboricultural Values	2. Mainly Landscape Values	3. Mainly Cultural Values, including Conservation	Identification on Plan		
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue).	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture).	LIGHT GREEN		
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remedial defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.	Trees with material conservation or other cultural benefits.	MID BLUE		
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or temporary/transient landscape benefit.	Trees with no material conservation or other cultural value.	GREY		



Plan: Tree Constraints Plan (TCP) (10468/P06c)



Key



Category A - Trees of high quality and value



Category B - Trees of moderate quality and value



Category C - Trees of low quality and value



BS5837 Tree Shading



Approximate Extent of BS5837 Calculated Root Protection Areas (RPAs)



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Tree Constraints Plan | Project

Land South of Chester Road, Walton

Drawing No 1:2000 @ A3 Date

10468/P06c October 2021

Preliminary Ecological Appraisal



Land South of Chester Road, Warrington 12th November 2021



Report No:	Date	Revision	Author	Checked
10468_R04a	12 th November 2021	А	Nick Bell BA (Hons) QCIEEM	Joseph Dance BSc (Hons) MCIEEM

Disclosure:

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Appendix 1: Legislation and Planning Policy

Appendix 2: Photographs

Appendix 3: Biodiversity Net Gain Assessment

Plans:

Plan Title 10468/P01: Habitats Features Plan

Plan Title 10468/P02: BNG Post Development Plan



Summary

- S.1. This report has been prepared by Tyler Grange Group Ltd on behalf of Ashall Property Ltd. It sets out the updated findings of a Preliminary Ecological Appraisal (PEA) of a parcel of land to the south of Chester Road, Walton (centred on OS Grid Reference SJ 60311 85717); hereafter referred to as 'the site'.
- S.2. The findings of a desk study, Extended Phase 1 habitat survey and Biodiversity Net Gain (BNG) Assessment are described below.
- S.3. Potential effects on **statutory conservation designations:**
 - There are three internationally designated sites within 10km of the site. All three sites are over 8km from the sites, with no direct habitat connections; at this distance it is considered that no impacts will occur from future development of the site either to habitats or species covered by the designations.
- S.4. Potential effects on **non-statutory conservation designations:**
- S.5. There are two non-statutory nature conservation designations within 1km of the site. The brook that runs through the site does connect to the Manchester Ship Canal, however, this is downstream of Walton lock Local Wildlife Site (LWS) and as such it is unlikely to be affected by development of the site, with no further habitat linkages. Moor nature reserve LWS is managed and maintained for public access. It has no direct habitat connections to the site and is separated from the site by the Manchester Ship Canal and is considered unlikely that development at the site will have a negative impact on this LWS.
- S.6. The predominant habitat on site is arable cropland, which is considered to be of negligible ecological importance. The remaining habitats on site (woodland, hedgerows and watercourse) are all considered to be of local ecological importance and are therefore being retained. Recommendations for enhancement and the creation of new habitats are included as part of this assessment.
- S.7. Potential effects on **protected and priority species** are as follows:
 - Bats: No buildings on site which could provide roosting habitat. All trees on site are to be
 retained as part of the proposals, therefore roosting bats are unlikely to be effected.
 However, mitigation recommendations have been made to safeguard existing and
 proposed habitats which could provide some commuting and foraging opportunities.
 - Birds: The arable field could provide nesting habitat for species such as lapwing *Vanellus vanellus* and skylark *Alauda arvensis*, of which are both present in the local area. Further bird survey is therefore recommended.
 - Badgers: Badgers are present on site and as such a full badger survey will be required to accompany any future planning application. If a sett is to be affected, then sett monitoring and/ or a licence for sett closure from Natural England (NE) will be required.



- Otter and Water vole: Should the brook be affected by development (i.e. a proposed crossing to provide access to the site), further survey would be required to determine likely presence or absence of these species.
- Amphibians (Including Great Crested Newt), reptiles and other Schedule 41 species: negligible potential for these species to utilise this site no further action is required.
- S.8. No ecological issues that could affect the principle of development of the site have been identified. Those valuable ecological features that exist, or could exist, at the site could be accommodated by the adoption of relatively simple design principles, albeit these would need to be informed by further detailed survey work at a later stage, and prior to submission of a planning application. The potential to improve the biodiversity of the site also exists, and recommendations are made that should contribute to local BAP targets.
- S.9. In conclusion, it is considered that development within the site of the scale proposed would be in conformity with both Local and National legislation relating to biodiversity. Opportunities also exist to enhance the biodiversity value of the site with a detailed landscaping scheme. All potential effects on protected/ notable protected species could also be avoided or adequately mitigated.



Section 1: Introduction, Context Purpose

Introduction

1.1. This report has been prepared by Tyler Grange Group Ltd on behalf of Ashall Property Ltd. It sets out the updated findings of a Preliminary Ecological Appraisal (PEA) of a parcel of land to the south of Chester Road, Walton (centred on OS Grid Reference SJ 60311 85717) and measures 5.8 Hectares, hereinafter referred to as the 'site'. Ecological appraisals of this land have been conducted previously in 2016 and 2019.

Context

1.2. The site is located at the western edge of Lower Walton, a village in Warrington. Walton is at the southwestern edge of the town, next to Stockton Heath and lies approximately 2.5km from Warrington town centre. The site covers 5.8ha and currently comprises a single arable field bound by hedgerows and scattered hedgerow trees with a belt of woodland blocks aligning the site to the east. The proposal include the development of residential units and associated infrastructure.

Purpose

- 1.3. This report aims to advise on the feasibility of development of the site in terms of ecology by:
 - Using available background data and results of field surveys, to describe and evaluate the ecological features present within the likely 'zone of influence' (Zol)¹ of the proposed development;
 - Describing the actual or potential ecological issues and opportunities that might arise as a result of the site's future development;
 - Where appropriate, makes recommendations for mitigation of adverse effects and ecological enhancement, to ensure conformity with policy and legislation listed in **Appendix 1**; and
 - Identifying any further work required to inform a future planning application.
- 1.4. It is not intended that this report should be submitted with a planning application, unless supported by the results of further surveys and an assessment of proposed impacts.
- 1.5. This assessment and the terminology used are consistent with the 'Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine Guidelines for Ecological Impact Assessment in the UK and Ireland' (CIEEM, 2018).

¹ Defined as the area over which ecological features may be subject to significant effects as a result of activities associated with a project and associated activities (CIEEM 2018).



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Section 2: Methodology

Data Search

- 2.1 The aim of the data search is to collate existing ecological records for the site and adjacent areas. Obtaining existing records is an important part of the assessment process as it provides information on issues that may not be apparent during a single survey, which by its nature provides only a 'snapshot' of the ecology of a given site.
- 2.2 The data search has been undertaken for a 10km radius around the site for European statutory sites, a 2km radius for national statutory and non-statutory sites and a 1km radius for protected and priority² species records. The search area was extended to 2km for bats records.
- 2.3 'Record' the biological records centre for Warrington was contacted in October 2021 for details of protected and priority species and non-statutory sites and, was received on 1st November 2021. Where relevant, the information provided has been incorporated with acknowledgement within this report.
- 2.4 The Multi-Agency Geographic Information for the Countryside website³ was accessed in October 2021 for information on the location of statutory designated nature conservation sites within the Zol.
- 2.5 The Warrington Borough Council website [available at: https://www.warrington.gov.uk] was consulted in October 2021 for details of relevant local planning policies and supplementary planning guidance.
- 2.6 The Cheshire Local Biodiversity Action Plan (LBAP) was consulted in October 2021 for priority habitats and species subject to conservation action, to assist with the evaluation of ecological features and to inform site enhancement strategies

Extended Phase I Habitat Survey

2.7 An 'extended' Phase I habitat survey was undertaken on 25th October 2021 by Mr Nick Bell; Mr Bell is an experienced field ecologist, a member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and holds Natural England licences for both bats and Great Crested Newt (GCN). The technique was based upon Phase I survey methodology (JNCC, 2010)⁴. As the standard Phase I Habitat survey methodology is largely concerned with vegetation communities only, the survey was 'extended' in accordance with the *Guidelines for Baseline Ecological Assessment* (IEA 1995)⁵ to include:

⁵ Guidelines for Baseline Ecological Assessment (IEA 1995); Taylor & Francis; 1st edition (10 Aug. 1995)



² UK priority species and habitats are those subject to conservation action and referred to as Species of Principal Importance (SoPIs) or Habitats of Principal Importance (HoPIs). They are listed at Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 of the NERC Act states that local planning authorities must have regard for the conservation of both SoPIs and HoPIs.

³ http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx

⁴ Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey - a technique for environmental audit. JNCC, Peterborough. http://data.jncc.gov.uk/data/9578d07b-e018-4c66-9c1b-47110f14df2a/Handbook-Phase1-HabitatSurvey-Revised-2016.

- Preliminary searches for evidence of protected or conservation-notable species/ speciesgroups (including bats; great crested newts; badger; water vole; reptiles; and otter), and for habitats or features likely to support them if direct evidence is absent; and
- The identification of other constraints (e.g. non-native invasive plant species) or opportunities (e.g. opportunities for micro-siting or enhancement) that may be present at the site.
- 2.8 Note was taken of the more conspicuous fauna and any evidence of, or the potential for, the presence of protected notable flora and fauna. A basic inventory of the habitats and a representative species list for the site was produced. Where access allowed, adjacent habitats were also considered in order to assess the site within the immediate landscape and to provide information with which to assess possible impacts within the immediate landscape surrounding the site.
- 2.9 The weather conditions for the survey were cool, clear with a light wind and a temperature of 13°C.

Limitations

- 2.10 No limitations or constraints to survey were encountered during the Extended Phase I survey. Some species of flowering plant may not have been observable at the time of year the survey was conducted but this is not considered to have impacted the broad habitat assessments made in this report.
- 2.11 The findings of this report are valid at the time of writing. Owing to the dynamic nature of ecological resources, if more than 12 months have elapsed since the report was written, advice should be sought to determine whether update work is required. The findings of the report should not be relied upon without this advice.
- 2.12 This report is also partly based on 3rd party data held by the Local Record Centre, which Tyler Grange Group Ltd. cannot guarantee the accuracy of.

Evaluation

- 2.13 The evaluation of habitats and species is defined in accordance with published guidance (CIEEM, 2019). The level of importance of specific ecological feature is assigned using a geographic frame of reference, with international being the most important, then national, regional, county, district, local and lastly, within the site boundary only.
- 2.14 Evaluation is based on various characteristics that can be used to identify ecological features likely to be important in terms of biodiversity. These include site designations (such SSSI's), or for undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological feature. In terms of the latter, quality can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type), other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages. In the case of the evaluation of the value of fauna at the site, an assumed valuation of each ecological feature has been given based on the habitats observed at the Site during the initial survey. Where further surveys are required, the valuation may be subject to variation following the interpretation of survey results.



Quality Control

2.15 All ecologists at Tyler Grange Group Ltd are members of CIEEM, or are working towards membership and act under the direction of members, and abide by the Institute's Code of Professional Conduct



Section 3: Ecological Features and Evaluation

Site Context

3.1. The site comprises an arable field bounded by hedgerows, tree lines and a broadleaved woodland which contains a small brook which flows north to the Manchester Ship Canal. In previous years, the A56 Chester Road bordered the site to the north, however, the boundary has now been reduced, meaning the redline boundary now bisects the arable field (**Plan 1**). A new residential development is present to the northeast and further residential properties lie to the east and southeast with their gardens backing onto the site. Walton sports club lies southwest with its sports pitch at a level several feet below the site. A public footpath and driveway to a nursery lines the western boundary within broadleaved woodland.

Protected Sites

Statutory Designated Sites

3.2. The following statutory sites lie within the study area defined in paragraph 2.2.

Table 3.1: Statutory Protected Sites within 10km of the site

Site Name and Designation	Distance and Direction from Site	Reason for Designation
Mersey Estuary Ramsar and SPA	9.6km W	The intertidal flats and saltmarshes provide feeding and roosting sites for large populations of waterbirds. During the winter, the site is of major importance for ducks and waders. The site is also important during the spring and autumn migration periods, particularly for wader populations moving along the west coast of Britain. It qualifies as a wetland of international importance by regularly supporting 20,000 waterfowl.
Manchester Meadows SAC	8km NE	Designated for its degraded raised bog habitat still capable of natural regeneration.
Rixton Clay Pits SAC	8.9km NE	Designated for its population of great crested newts <i>Triturus cristatus</i> that occur within 20 ponds on site.

3.3. Ramsar sites, Special Protection Areas (SPA's) and Special Areas of Conservation (SAC's) are sites of **international importance.**

Non-Statutory (Local) Designated Sites

3.4. Non-statutory nature conservation designated sites are known in Warrington as Local Wildlife Sites (LWS). Eight LWS occur within the study area and are described in Table 3.2:



Table 3.2: Non-statutory Protected Sites within 2km of the site

Site Name and Designation	Distance and Direction from Site	Reason for Designation
Walton locks LWS	0.48km NE	Designated for birds
Moore nature reserve LWS	0.89km NW	Designated for birds
Appleton Reservoir LWS	1.20km SW	Designated for birds
Stockton Heath Quarry LWS	1.42km SE	Designated for its habitat
Latchford Railway Sidings LWS	1.71km NE	Designated for birds
Dennow Wood LWS	1.85km SE	Designated woodland
Bog Rough LWS	1.85kmS	Designated woodland
Rows Wood LWS	1.93km SW	Designated woodland

3.5. LWS are selected on the basis that they meet the criteria for local wildlife sites selection for sites of importance or potential importance at a county level. They are therefore of **county importance**.

Habitats and Flora

- 3.6. The site supports the following habitats:
 - Arable Land;
 - Hedgerows and Mature Trees;
 - Watercourse; and
 - Woodland (semi-natural broadleaved).
- 3.7. For ease of reference, habitat types have been described alphabetically, below. All the features described are shown on the **Habitat Features Plan 10468/P01,** and photographs of each habitat can be found in **Appendix 2**.

⁶ LWS Selection: Cheshire LWS selection criteria.pdf (cheshirewildlifetrust.org.uk)



Arable

- 3.8. The site comprises 5.14ha of arable land that was recently harvested for its corn crop (**Photograph**1). The field has very limited field margins, but where they are present the mosaic includes species indicative of disturbed, agricultural land including hogweed *Heracleum sphondylium*, spear thistle *Cirsium vulgare*, perennial rye grass *Lolium perenne*, ragwort *Senecio jacobaea*, great willowherb *Epilobium hirsutum*, broadleaved dock *Rumex obtusifolius* and scentless mayweed *Matricaria recutita*
- 3.9. Depending on the time of year, arable land within the site is either bare ground or under cultivation. The arable field is floristically poor and uniform in structure. The field margins are also very minimal and although they are more diverse in species composition, they comprise common and widespread species and are small in area. Although cereal crops such as corn, can provide a food resource for some animals (such as badger), the resource is limited in time and volume as it is harvested once fully grown and removed from site. Therefore, the arable land is considered to be of **negligible importance**.

Hedgerow and Mature Trees

3.10. The original site boundary, assessed in 2019, was bounded by hedgerows and tree lines to the north, south and west. However, the redline boundary now bisects the arable field and therefore the northern hedgerow identified in 2019 is outside of the redline boundary. All hedgerows currently onsite are described in **Table 3.3** below.

Table 3.3: Descriptions of tree lines and hedgerows bounding the site

Tree / Hedgerow	Description
Western tree line Photograph 3	Gappy, single tree line of immature oak, sycamore, holly, ash <i>Fraxinus excelsior</i> , lime, sweet chestnut <i>Castanea sativa</i> , with occasional cherry <i>Prunus sp.</i> , cherry laurel <i>Prunus laurocerasus</i> , Leyland cypress <i>Cupressus x leylandii</i> , rowan <i>Sorbus aucuparia</i> , poplar <i>Populus sp.</i> , elder and copper beech <i>Fagus sylvatica f. purpurea</i> . Ground flora is again sparse and dominated with nettle, bramble and field margin vegetation but with some occasional raspberry <i>Rubus idaeus</i> .
Southern hedgerow (defunct) Photograph 4	Defunct, unmanaged hedgerow on top of bank that drops off steeply to the south (and the adjacent offsite sports field of Walton sports club). Approximately 1.5m high and 1m wide. Species comprise immature turkey oak, hawthorn, elder and field maple Acer campestre with ground flora dominated by rosebay willowherb Chamerion angustifolium and bramble.
Southern hedgerow (intact) Photograph 5	The eastern half of the southern hedgerow is intact and managed as boundary hedgerows to the adjacent residential properties. Approximately 2.5m high and 1m wide. Species present comprise blackthorn <i>Prunus spinosa</i> , hazel, holly, rose <i>Rosa</i> sp, and ornamental species.

3.11. Hedgerows and tree lines provide a habitat connection around the perimeter of the site and connections to wider woodland habitats to the east and west. They comprise a mixture of species and trees of differing maturity, with the more mature specimens being well established. Due to their connectivity and species diversity, the trees and hedgerows are considered to be of **local importance**. All hedgerows over 20m in length and comprising native species are considered to be Habitats of Principal Importance.



Watercourse

- 3.12. A small brook lines the eastern site boundary within the broadleaved woodland. It flows north and has a steady to fast flow with earth and pebble substrate. The water is clean and clear with a varying depth along its length from around 5cm 30cm. The channel is approximately 1m wide with steep banks, which are reinforced at the southern end and covered with ground ivy. The brook joins the Manchester Ship Canal approximately 295m downstream from the site
- 3.13. The brook provides an important linear feature acting as a wildlife corridor and ecological resource that extends along the entire eastern site boundary and into habitats within the wider locality. It also feeds into the Manchester Ship Canal further downstream. It is therefore considered to be of **local importance**.

Woodland (Semi-natural broadleaved)

- 3.14. A belt of mature semi-natural broadleaved woodland lines along the eastern site boundary and is on the deciduous woodland Priority Habitat Inventory. There is a line of trees which extends into the middle of the arable field, from the woodland block, however, this section is not part of the priority woodland. The woodland is dominated by mature sycamore with horse chestnut, hawthorn, ash, birch *Betula sp.*, elder, common lime, oak and elm. Rowan, holly and Rhododendron *Rhododendron ponticum* are present within the understorey. Ground flora is sparse due to being over-shaded and predominately comprises nettles and ivy *Hedera helix*.
- 3.15. The line of mature trees extending from the woodland block is dominated by common lime and turkey oak. Although it is more formal in arrangement, it is connected to the woodland both in canopy and with ground flora and as such is therefore included within the woodland habitat classification from an ecological perspective.
- 3.16. The woodland is mature and provides a boundary to the otherwise open nature of the site. It also includes the brook and provides connectivity to habitats in the wider locality. The woodland is well established and would not be able to be replaced in the short to medium term. It is therefore considered to be of **local importance**

Habitats Adjacent to Site

3.17. The A56 borders the site to the north, beyond which lies a series of arable fields, bordering the Manchester Ship Canal. Residential developments border the site to the east and south-east, with playing fields associated with Warrington Sports Club to the south. There is a block of woodland to the west, containing Walton Lea Partnership walled garden.

Biodiversity Net Gain Assessment

3.18. In terms of habitat areas, the site has a total area of 5.87 hectares and comprises predominantly arable field, which is categorised in Defra 3.0 Metric as 'Cropland - Cereal Crop' (accounting for 5.14ha). The remaining habitat onsite comprises broadleaved woodland, which is categorised as 'woodland and forest - Other woodland; mixed' in Defra 3.0 Metric. **Table 3.4** below sets outs the baseline biodiversity value of the site (excluding ditches/ hedgerows/ trees, which are to be retained and are treated separately in the metric), with the BNG metric calculations provided in **Appendix 3.**



Table 3.4 – Baseline Biodiversity Summary

Habitat	Unit Value
Cropland - Cereal Crops	10.28
Woodland & Forest - Lowland mixed deciduous	0.64
Woodland & Forest - Other woodland; mixed	7.80
Total	18.72

Protected and Priority Fauna

Amphibians

- 3.19. RECORD returned no records of great crested newt (GCN) within 1km. Five records of common toad *Bufo bufo* and six common frog *Rana temporaria* records were returned, with the closest 545m northeast.
- 3.20. The site has very limited potential for GCN. There are no suitable waterbodies on site and the nearest ponds are two woodland ponds 220m and 310m south west of site. The busy A56 to the north and running brook along eastern boundary form barriers to movement of GCN and the only suitable terrestrial habitat is limited to the woodland, tree belts and hedgerow bases boundaries surrounding the site.
- 3.21. Although the brook provides some aquatic habitat for common toad and frog and the woodland may provide terrestrial habitat for amphibians, the site as a whole is considered to provide **negligible** importance for amphibians and are unlikely to be impacted by the proposals

Badger

3.22. RECORD returned 48 badger *Meles meles* records within 1km. Badger signs (latrines, digging, feeding remains) and setts were recorded on site, within the woodland block during Phase I surveys in 2016, 2019 and 2021. For confidentiality purposes, the exact sett locations are not provided in this report, however a total of eight partially-used⁷ sett entrances were recorded (have debris such as leaves or twigs in the entrance), with one active/ well-used sett entrance (clear of debris, fresh spoil heap, clear signs of occupation). The setts are considered to be subsidiary setts as they do not have an obvious path connecting with other larger/ more active setts and the overwhelming majority of entrances appear not to be continuously active⁷.

Birds

3.23. RECORD returned records of a variety of woodland, farmland and wetland bird species within 1km of the site.

⁷ Surveying Badgers; Stephen Harris, Penny Cresswell & Don Jeffries. The Mammal Society 1989



- 3.24. The site provides foraging and nesting habitat for hedgerow, woodland and farmland species such as song thrush *Turdus philomelos*, house sparrow *Passer domesticus*, tree sparrow *Passer montanus*, and yellowhammer *Emberiza citrinella*, within its boundary features.
- 3.25. The arable field may provide some opportunities for ground nesting species such as lapwing *Vanellus vanellus* and skylark *Alauda arvensis*, however there are better breeding habitats for ground nesting birds within the local area, outside of the site boundaries, such as Moore LWS. No ground nesting birds were recorded on site during the Phase I survey in April 2019, with the update Phase I being undertaken outside of the core breeding bird season in 2021.
- 3.26. The site is of limited value to barn owl *Tyto alba*, as it lacks the rough grassland habitats required for its prey

Bats

- 3.27. RECORD returned the following bat records within 2km:
 - Common pipistrelle *Pipistrellus pipistrellus* 39 records, the closest 367m south;
 - Daubenton's bat *Myotis daubentonii* Six records, the closest: 367m south;
 - Noctule Nyctalus noctula 27 records, the closest 259m southwest;
 - Pipistrelle sp. 45 records, the closest 240m southwest; and
 - Soprano pipistrelle *Pipistrellus* pygmaeus 26 records, the closest 390m north.
- 3.28. Boundary features, woodland, hedgerows, tree lines and the brook provide foraging and commuting habitat for bats. Mature trees could provide bat roosting potential; as the proposals do not necessitate the requirement for on-site trees to be removed, a detailed preliminary bat roost assessment of on-site trees was no conducted as part of the Extended Phase I survey. No buildings are present on-site which could offer bat roosting potential.

Hedgehog

3.29. RECORD returned 32 records of hedgehog within 2km of site. Hedgehog, or evidence of, were not recorded during the extended phase I survey and the arable habitat on site provides limited resting and foraging features, although the remaining habitat features onsite are suitable enough (such as the hedgerows and woodland) to support small numbers of hedgehog; the site as a whole, is therefore considered to be of **negligible** importance for hedgehog, however enhancements and sensitive working methods for hedgehog are discussed in **Section 4.**

Invertebrates

- 3.30. RECORD returned one record of grizzled skipper *Pyrgus malvae* butterfly 644m north and seven cinnabar *Tyria jacobaeae* records, the closest 437m north.
- 3.31. There is some limited habitat for grizzled skipper along the woodland edge along the eastern boundary. Ragwort (the food plant for cinnabar) is present within the limited field boundaries, but it is not in a considerable quantity.



3.32. The woodland, hedgerows, trees and brook could provide other habitat for a range of invertebrates. The arable field with its limited field margins would provide limited resource for invertebrates, therefore the site is considered to be of **negligible** importance for invertebrates.

Reptiles

3.33. RECORD returned no reptile records within the study area. The site provides negligible habitat for reptiles due to its arable nature, limited grassy field margins and heavily shaded and sparsely vegetated woodland floor, therefore the site is considered to be of **negligible** importance for invertebrates.

Otter and Water Vole

- 3.34. RECORD returned two otter *Lutra* lutra records within the Manchester Ship Canal 810m northeast. No water vole *Arvicola amphibius* records were returned.
- 3.35. The brook along eastern boundary could provide potential habitat for these species, especially as it feeds into the Manchester Ship Canal which has records of otter.



Section 4: Considerations in Respect of Future Development

Site Context

4.1. The site has a draft allocation for housing development within the Warrington Proposed Submission Local Plan (2017 - 2037) which is currently undergoing consultation. The potential consequences with respect to development of the site are set out below, with reference to relevant legislation and planning policy, which is summarised in **Appendix 1**.

Designated Sites

- 4.2. The statutory nature conservation designations identified during the desk study are all over 8km from the site, with no direct habitat connections. The brook on site does feed into the Manchester Ship Canal which in turn eventually connects to the Mersey Estuary; however, this RAMSAR and SPA is designated for its overwintering bird populations and is unlikely to be affected if there were any impacts to the brook on site. At this distance it is considered that no impacts will occur from future development of the site either to habitats or species covered by the designations.
- 4.3. Recreational impacts on the Mersey Estuary SPA may also need to be considered at the point of an application, with mitigation comprising off-site contributions for the ongoing maintenance of the estuary for public usage.

Non-Statutory Designated Sites

- 4.4. Of the two non-statutory nature conservation designations (Walton lock and Moor nature reserve LWS) which lie within 1km of the site, only Walton Lock could be described as being linked by habitat features; the brook that runs through the site does connect to the Manchester Ship Canal, however, this is downstream of Walton lock LWS and as such it is unlikely to be affected by development of the site. Moor nature reserve LWS is managed and maintained for public access. It has no direct habitat connections to the site and is separated from the site by the Manchester Ship Canal. It is therefore also considered that it is unlikely that future development of the site will have a negative impact on site LWS.
- 4.5. All remaining non-statutory sites are over 1km from the site and have no direct habitat corridors or linkages: Appleton reservoir is designated for its open water habitat and associated species, of which are not relevant to the site; Stockton Heath Quarry is separated from site by housing developments and associated roads; Latchfield Railway Sidings is separated from site by the ship canal and numerous housing developments; Dennow, Bog Rough and Row are all designated woodlands, however, due to the distance from site, the proposals are unlikely to have an adverse impact of the woodland habitat.

Habitats and Flora

- 4.6. The following habitats have been identified as a priority habitat or as having ecological importance and as such will need consideration in any future development proposals:
 - Hedgerows and Mature Trees (local importance);



- Watercourse (**local importance**); and
- Woodland (semi-natural broadleaved) (local importance).
- 4.7. Local planning authorities are required to consider the potential effects of development on these habitat types and this is reflected in both national and local planning policy (see policy QE3 and draft policy DC4). Therefore, it is recommended that development proposals seek to retain and protect these habitat types where possible, or losses mitigated through the provision of similar replacement habitats, preferably within the context of an overall 'green infrastructure' for the site.

Hedgerow and Mature Trees

- 4.8. The southern and western hedgerows on site may qualify as 'important' under the Hedgerows Regulations Act 1997 and therefore it is recommended that they are retained, protected (both during and post construction) through maintaining and/or creating green landscape buffers between built development and these features. There is opportunity for enhancement through additional planting and 'gapping up' of defunct hedgerow section in the south-west, and creating a native shrub understorey beneath the line of trees which extends east-west from the woodland block. Mature trees within the site are also recommended for retention and should also be protected during and post construction.
- 4.9. Retention of these habitats would also provide benefits to wildlife through maintaining habitat connections across the site. Enhancements to the existing hedgerows through additional planting of native species and inclusion of tree planting within public open space, green buffers and landscape areas is encouraged by local policy QE3 and draft policy DC3, and may provide enhanced nesting opportunities to Local Biodiversity Action Plan species such as yellowhammer and other farmland birds.

Watercourse

- 4.10. New development could impact upon the brook through runoff from the development both during the construction period and post construction. Human impacts such as pollution / littering and bank modification may also occur. As discussed above, these actions could all have an impact on connecting watercourses further downstream, which includes the Manchester Ship Canal. The brook is likely to be an important feature for local wildlife, providing a linkage to offsite habitats.
- 4.11. It is recommended that a buffer is retained between the brook and any development proposed which could be achieved through the retention of the surrounding broadleaf woodland. Appropriate measures will need to be included to ensure that the brook is protected from pollution throughout both the construction process and also once the development is complete.

Woodland (Semi-natural broadleaved)

4.12. The woodland along the eastern site boundary and lining the brook provides an important green link for wildlife, acting as a green corridor. It also provides an amenity function, acting to screen and enclose the site. It is not replaceable in the short to medium term and therefore it should be retained, protected and where possible enhanced in line with national policy and local policy QE3 (relating to the protection and enhancement of green infrastructure).



4.13. As with the above features, maintaining a landscape buffer between built development and the woodland would ensure that root protection areas are maintained and protected. Bringing the woodland into active management could also enhance it whilst ensuring its longevity.

Biodiversity Net Gain Assessment

- 4.14. A high-level Biodiversity Net Gain assessment has been undertaken of the proposals using the Defra Metric 3.0. It should be noted that such assessments are not mandated in existing local or national policy, but emerging national policy in the form of the forthcoming Environment Bill will mandate such assessments to be completed on all development. This exercise has, therefore, been undertaken to demonstrate the future compliance of any detailed application with policy which is likely to be in place at the time of future applications.
- 4.15. As a detailed landscape scheme/strategy is not available at this point, the indicative masterplan (**Plan 1** appended to this report) has been used to assess the likely post-development value of the site. Given the absence of such detail, the following assumptions have been made:
 - 100% of the areas designated for development in the parameters would comprise built form (houses/roads etc.). This is a worst case scenario, as associated features such as road verges, rear gardens, shrubs and amenity grassland would contribute to the overall net gain, however as discussed above, a detailed landscape strategy is not available at this point.
 - The areas to the north-west of site in **Plan 1** would comprise amenity grassland for public recreation.
 - An area outside of the redline boundary (between the site boundary and Chester Road, comprising the same arable field) is available for ecological enhancement. Again, a worst case scenario has been applied here, by enhancing approximately half of the area, as a detailed landscaping strategy is not available at this stage.
- 4.16. **Table 4.1** below summarises the post-development value of the site taking into account these assumptions, and also compares this to the pre-development value.



Table 4.1 – Post-development Biodiversity Summary

Habitat	Unit Value	Notes
Onsite Creation		
Developed land	0.0	Built form
Amenity grassland (or other equivalent low distinctiveness poor condition habi- tat)	0.41	Areas of open access land to the NW of site. Assumed amenity grassland
Grassland - Other Neutral Grassland	3.95	Areas of greenspace set aside for more diverse wildflower planting
Heathland and Shrub - Mixed Scrub	0.6	Native shrub planting in the south-west corner of site, to accompany infilling of defunct hedgerow
Onsite Enhancement		
Woodland & Forest	0.93	Enhanced with native shrub species to 'gap-up' tree line.
Offsite Creation		
Heathland and Shrub - Mixed Scrub	0.59	Native shrub planting on northern side of line of trees, to create shrub understorey.
Grassland - Other Neutral Grassland	6.47	Area of greenspace north of the redline boundary, set aside for more diverse wildflower planting
Onsite Total inc. Enhanced	4.96	
Offsite Total	7.06	
Unit Gain	0.34	
% Gain	1.84%	

4.17. Through the BNG calculation assessment, it has been shown that the site should achieve a 1.84% net gain. However, a precautionary approach was taken, whereby all developable land was assumed 100% built form, which will not be the case, and a detailed landscape strategy will increase the biodiversity units within the developable land. Furthermore, other enhancements such as additional wildflower/ neutral grassland meadows within the offsite area to the north, and further enhancing of the woodland would increase the overall biodiversity units for the site, if required, and therefore provide a higher percentage net gain.

Fauna

4.18. Habitats within the site have the potential to support several protected and/or notable species which would require mitigation if present and to be affected by future development.



Badger

- 4.19. Badgers have been recorded on site during the Phase I habitat surveys. As such, a full badger survey will be required to accompany any future planning application. Most of the activity is within the eastern woodland and as such it is recommended that this woodland is retained and that an offset landscape buffer is provided which could be used to avoid working in close proximity to any badger setts within the woodland.
- 4.20. If any setts are found within 30m of proposed development and would be affected by development, a licence from Natural England (NE) may be required to undertake works. This would need to be accompanied by a mitigation strategy outlining methods employed to minimise impacts upon this species.

Bats

- 4.21. As the proposals do not necessitate the requirement for on-site trees to be removed, a detailed preliminary bat roost assessment of on-site trees was no conducted as part of the Extended Phase I survey, and there are no buildings are present on-site which could offer bat roosting potential.
- 4.22. However, should any trees be required for removal, a preliminary bat roost assessment of those trees should be undertaken. The survey would comprise a ground level inspection to determine the potential of each tree to support roosting bats. The trees would be graded as having either 'Negligible', 'Low', 'Moderate' or 'High' bat roosting potential, as identified within the BCT Good Practice Guidelines (Collins, 2016)⁸.
- 4.23. Trees with 'Low' bat roosting potential can be sensitively felled (soft felling); whereas trees with either 'Moderate' or 'High' potential would require additional bat survey to determine the type of roost. This would include two nocturnal surveys (dusk emergence and dawn re-entry) for 'Moderate' trees and three nocturnal surveys per tree for trees with 'High' bat roosting potential. The visits would need to take place during the peak bat survey season of May and September. Following the results of the survey, further recommendations can be made regarding bat mitigation strategies and trees requiring removal.
- 4.24. With any residential development there is potential for impacts to foraging and commuting bats resulting from use of inappropriate lighting, both during construction and operation of the site. To avoid longer term impacts, it is recommended that the layout of the site should include a sensitively designed lighting scheme. The lighting scheme should avoid light spill of greater than 1 Lux at tree canopy height onto any retained, adjacent, or newly created habitat features (including hedgerows, trees and ponds).
- 4.25. To enhance the value of the site to roosting bats post-development, it is recommended that a range of bat boxes are installed in appropriate positions on retained trees.

⁸ Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd Edition. The Bat Conservation Trust, London.



Land South of Chester Road, Warrington Preliminary Ecological Appraisal

Birds

- 4.26. The arable field, accounting for the majority of the habitat on site, may provide some opportunities for ground nesting birds, such as lapwing and skylark. As the site is within 1km of Moore LWS, which supports populations of both those species, breeding bird surveys will be required to accompany a future planning application, with mitigation implemented accordingly depending on results.
- 4.27. The woodland, hedgerows and mature trees all provide breeding and foraging habitat for a range of common and widespread bird species, and shall be retained as part of the proposals.
- 4.28. During the construction phase of the proposed works, any vegetation requiring removal should be timetabled for outside 'core' nesting bird season (i.e. conducted between September and February) to avoid active nests and the legislation which is afforded to them. If this is not possible and clearance is required within the nesting bird season (i.e. between March and August inclusive), an experienced ecologist must be present at the time of any tree felling or scrub/hedgerow clearance to check for evidence of active bird nests. If an active nest is found, a sufficient buffer zone will be implemented around the nest commensurate with the species, tolerance of human activity and stage of nesting. Works can only proceed within that area once a suitably qualified ecologist (SQE) has determined the nest is no longer active.
- 4.29. It should be noted that some species of bird (i.e. doves, pigeons) can nest year-round so even if site clearance activities are conducted outside of the 'core' nesting season, site contractors must show due diligence and cease works and seek advice from a SQE if they suspect the presence of an active nest
- 4.30. To enhance the value of the site to nesting birds post-development it is recommended that a range of bird boxes targeting species of conservation concern are installed in appropriate positions on retained trees.

Hedgehog

- 4.31. Hedgehog are a priority species and therefore afforded consideration in planning policy, as they are in population decline and efforts should be made to conserve this species and enhance sites for hedgehog wherever possible, by creating 'hedgehog highways' (appropriately sized gaps under garden and boundary fencing to allow the free movement of hedgehog) and implementing safe working methods; as such the construction phase of the proposed works should be conducted following sensitive working methodologies which should comprise, but not be limited to:
 - Storing site materials in skips or off the ground in pallets;
 - Ensuring any excavations are left ramped or with an exit should any hedgehogs or other small mammals become trapped; and
 - Capping any pipework overnight



Otter and Water Vole

4.32. The brook comprising the eastern site boundary, provides the only habitat on site suitable for otter and water vole. Should the brook be affected by development (i.e. a proposed crossing to provide access to the site), further survey would be required to determine likely presence or absence of these species.

Other Species

4.33. The site is considered to be of negligible importance for all other species, as discussed in **Section 3.**

Section 5: Conclusions and Recommendations

- 5.1. The proposals for the land south of Chester Road, Warrington will require the removal of habitat that currently provide negligible ecological value within the site (arable fields). All habitat providing local ecological importance (hedgerows and mature trees, watercourse and woodland) shall be retained and therefore impacts to these locally important habitats shall be avoided.
- 5.2. The site has the potential to support species such as badgers, bats, birds and hedgehog all of which require protection and consideration. Recommendations have been made throughout **Section 4** that would mitigate the potential impacts and, in some cases, improve and enhance the ecological value of the site for those species.
- 5.3. A planting scheme that includes native UK tree and shrub species shall provide enhancements to the existing hedgerows and woodland through additional planting to infill gaps and creation of an understorey, particularly along the defunct hedgerow to the south, and creation of good quality grassland to be planted within the areas of public open space. The retention, enhancement and creation of green buffers and landscape areas is encouraged by local policy QE3 and draft policy DC3, and will compensate for any loss of arable habitat and encourage wildlife into the site post-construction.
- 5.4. A BNG calculation assessment has shown that the site should achieve a net gain, albeit through a precautionary approach. However, with the inclusion of a detailed landscape strategy, the site will provide more biodiversity units and therefore a higher net gain increase. If required, furthermore enhancements such as additional wildflower/ neutral grassland meadows within the offsite area to the north and further enhancing of the woodland would increase the overall biodiversity units for the site.
- 5.5. Sensitive working methodologies throughout the construction phase will help reduce disturbance to wildlife on site. This should include:
 - Storing materials off the ground and ensuring excavations are left ramped;
 - The use of a sensitively designed lighting scheme to reduce impacts to foraging and commuting bats;
 - Carrying out works outside of the core nesting period for birds;



Appendix 1: Legislation and Planning Policy

The Conservation of Habitats and Species Regulations 2012 (as amended).

- A1.1 The Habitat Regulations transpose EEC Council Directive 92/43 (The Habitats Directive) into UK law. The regulations place duty upon the relevant authority of the UK government to identify sites which are of importance to the habitats and species listed in Annexes I and II of the Habitats Directive. Those sites which meet the criteria are, in conjunction with the European Commission, designated as Sites of Community Importance, which are subsequently identified as Special Areas of Conservation (SAC) by the European Union member states. The regulations also place a duty upon the UK government to maintain a register of European protected sites designated as a result of EC Directive 79/409/EEC on the Conservation of Wild Birds (The Birds Directive). These sites are termed Special Protection Areas (SPA) and, in conjunction with SACs, form a network of sites known as Natura 2000.
- A1.2 The regulations also provide for the protection of individual species of fauna and flora of European conservation concern listed in Schedules 2 and 4, respectively. Schedule 2 includes species such as otter and great crested newt for which the UK population represents a significant proportion of the total European population. It is an offence to deliberately kill, injure, disturb or trade these species in the UK. Schedule 4 plant species are protected from unlawful destruction, uprooting or trade under the regulations.

Natural Environment & Rural Communities (NERC) Act 2006

A1.3 The NERC Act 2006 places a duty on authorities to have due regard for biodiversity and nature conservation during the course of their operations.

Section 41 of the Act requires the publication of a list of habitats and species publish which are of principal importance for the purpose of conserving biodiversity. The Section 41 list is used to guide authorities in implementing their duty to have regard to the conservation of biodiversity.

The Wildlife and Countryside Act (WCA) 1981

- A1.4 The WCA, as amended, consolidates and amends pre-existing national wildlife legislation in order to implement the Bern Convention and the Birds Directive. It complements the Conservation (Natural Habitats. &c.)
- A1.5 Regulations 1994 (as amended), offering protection to a wider range of species. The Act also provides for the designation and protection of national conservation sites of value for their floral, faunal or geological features, termed Sites of Special Scientific Interest (SSSIs).
- A1.6 Schedules of the act provide lists of protected species, both flora and fauna, and detail the possible offences that apply to these species.

The Countryside and Rights of Way (CRoW) Act 2000

A1.7 The CROW Act, introduced in England and Wales in 2000, amends and strengthens existing wildlife legislation detailed in the WCA. It places a duty on government departments and the



National Assembly for Wales to have regard for biodiversity and provides increased powers for the protection and maintenance of SSSIs.

A1.8 The Act also contains lists of habitats and species (Section 74) for which conservation measures should be promoted, in accordance with the recommendations of the Convention on Biological Diversity (Rio Earth Summit) 1992.

National Planning Policy

National Planning Policy Framework (NPPF), July 2019

A1.9 The updated National Planning Policy Framework (NPPF) was published in February 2019 and sets out the Government's planning policies for England and how these should be applied. It replaces the first National Planning Policy Framework published in March 2012. Paragraph 11 states that:

"Plans and decisions should apply a presumption in favour of sustainable development."

A1.10 Section 15 of the NPPF (paragraphs 170 to 177) considers the conservation and enhancement of the natural environment. Paragraph 170 states that planning and decisions should contribute to and enhance the natural and local environment by:

"Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; and minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures"

- A1.11 Paragraph 171 states that plans should distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.
- A1.12 Paragraph 174 states that in order to protect and enhance biodiversity and geodiversity, plans should:
 - a) "Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
 - b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity."



- A1.13 When determining planning applications, Paragraph 175 states that local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:
 - a) "if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
 - b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
 - c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons58 and a suitable compensation strategy exists; and
 - d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity."
- A1.14 As stated in paragraph 176 the following should be given the same protection as habitats sites:
 - a) "potential Special Protection Areas and possible Special Areas of Conservation;
 - b) listed or proposed Ramsar sites; and
 - c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites."
- A1.15 Paragraph 177 states that the presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined.

Office of the Deputy Prime Minister (ODPM) Circular 06/2005: Biodiversity and Geological Conservation - Statutory Obligations and their Impact within the Planning System

- A1.16 ODPM Circular 06/05 was prepared to accompany PPS9, however continues to be valid, and material in the consideration of planning applications since PPS9's replacement by the NPPF. ODPM Circular 06/05 provides guidance on applying legislation in relation to nature conservation and planning in England.
- A1.17 Part I considers the legal protection and conservation of internationally designated sites (namely candidate Special Areas of Conservation (cSACs), SACs, potential Special Protection Areas (pSPAs), SPAs and Ramsar sites) and Part II considers the legal protection and conservation of nationally designated sites, namely Sites of Special Scientific Interest (SSSIs). Part III considers the protection of habitats and species outside of designated areas (particularly UK Biodiversity Action Plan species and habitats, which it states are capable of



being a material consideration in the preparation of local development documents and the making of planning decisions. Part IV considers species protected by law and states that the presence of a protected species is a material consideration in the consideration of a development proposal that, if carried out, would be likely to result in harm to the species or its habitat and that it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted.

Local Planning Policy

Warrington Proposed Submission Local Plan (2017 - 2037)

- A1.18 A new draft local plan was submitted for consultation in March 2019. It contains the following draft policies which are relevant to ecology:
 - Policy DC3 relates to the protection and enhancement of green infrastructure assets;
 and
 - Policy DC4 relates to the protection and enhancement of designated sites, protected species and priority habitats.

Warrington Borough Council Local Plan Core Strategy (adopted July 2014)

- A1.19 The Warrington Borough Local Plan Core Strategy was consulted to identify relevant policies relating to ecology and nature conservation which may need to be considered in connection with a future planning application to be submitted for the site. They are summarised as follows:
 - Policy QE3 relates to the protection and enhancement of green infrastructure; and
 - Policy QE5 relates to the protection and enhancement of designated nature conservation sites.

Supplementary Planning Documents

A1.20 Relevant supplementary planning document considerations are set out below:

Environmental Protection (May 2013)

- A1.21 This SPD supports Policy QE6 Environment and Amenity Protection and details the Council's approach to dealing with environmental protection including light pollution. Development schemes which include street lighting proposals should adhere to the design principles set out in the SPD.
- A1.22 The SPD states that "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."

Open Space and Recreation Provision (September 2007)

- A1.23 This policy details a number of key objectives for open space within the borough including:
 - to create opportunities for and enhance biodiversity.

Biodiversity Action Plans

A1.24 The UK Post-2010 Biodiversity Framework succeeded the UK BAP partnership in 2011 and covers the period 2011 to 2020. However, the lists of Priority Species and Habitats agreed under the



UKBAP still form the basis of much biodiversity work in the UK. The current strategy for England is 'Biodiversity 2020: A Strategy for England's wildlife and ecosystem services' published under the UK Post-2010 UK Biodiversity Framework. Although the UK BAP has been succeeded, Species Action Plans (SAPs) developed for the UK BAP remain valuable resources for background information on priority species under the UK Post-2010 Biodiversity Framework.

A1.25 Priority Species and Habitats identified under the UKBAP are also referred to as Species and Habitats of Principal Importance for the conservation of biodiversity in England and Wales within Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006. The commitment to preserving, restoring or enhancing biodiversity is further emphasised for England and Wales in Section 40 of the NERC Act 2006.

Local Biodiversity Action Plan

A1.26 The Cheshire Biodiversity species and habitat action plans are listed below and are available on the Biodiversity Action Reporting System (BARS) website and Cheshire Wildlife Trust website (https://www.cheshirewildlifetrust.org.uk/biodiversity). Habitat Action Plans



Appendix 2: Photographs

Photograph 1 - Arable Field



Photograph 2 - Hedgerow and Mature Trees, Western Hedgerow





Photograph 3 - Hedgerow and Mature Trees, Southern Defunct Hedgerow



Photograph 4 - Hedgerow and Mature Trees, Southern Hedgerow





Photograph 5- Watercourse



Photograph 6- Woodland



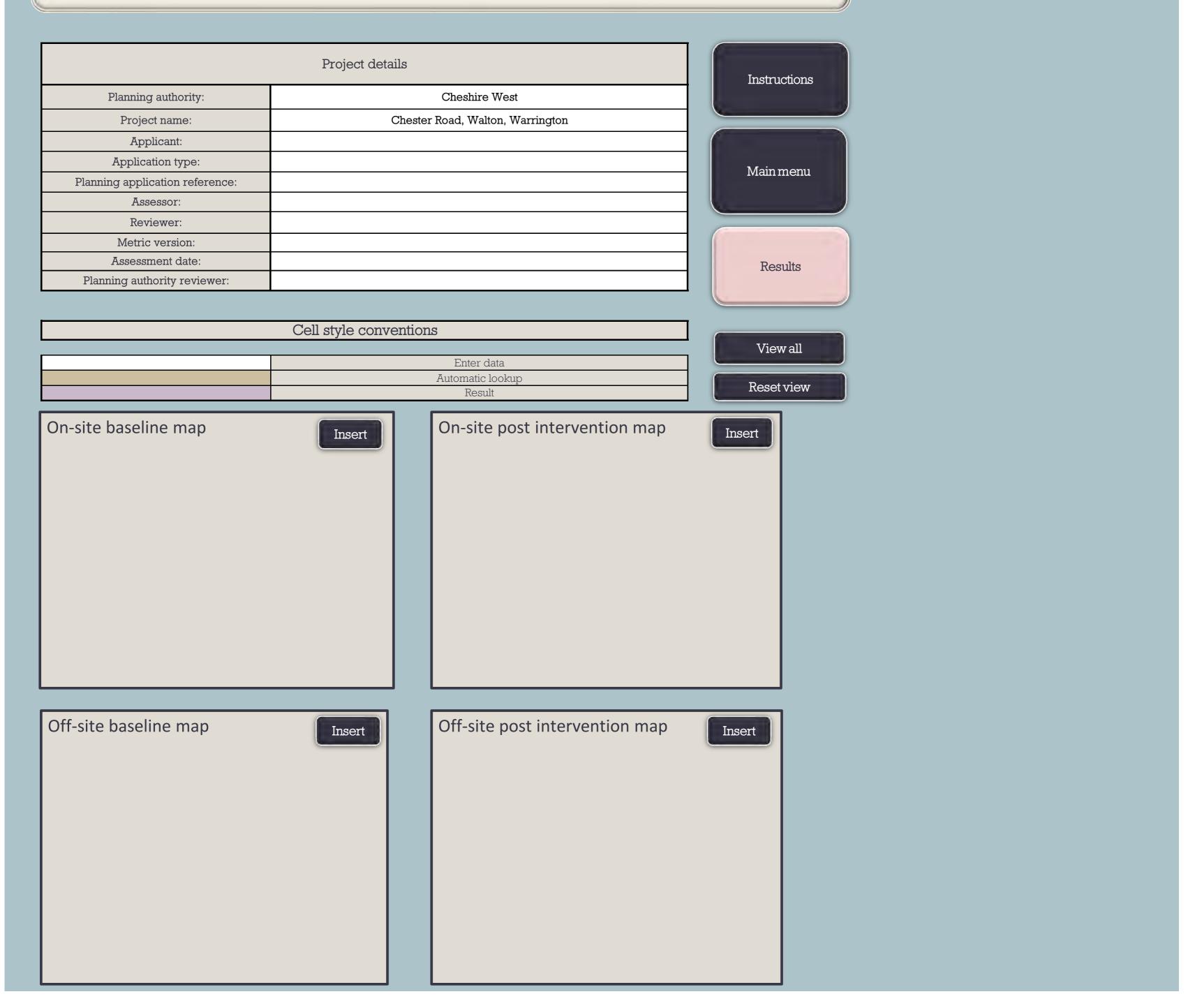


Appendix 3: Biodiversity Net Gain Assessment



The Biodiversity Metric 3.0 - Calculation Tool Start page Return to start page Detailed results Habitat trading summary

The Biodiversity Metric 3.0 - Calculation Tool Start page



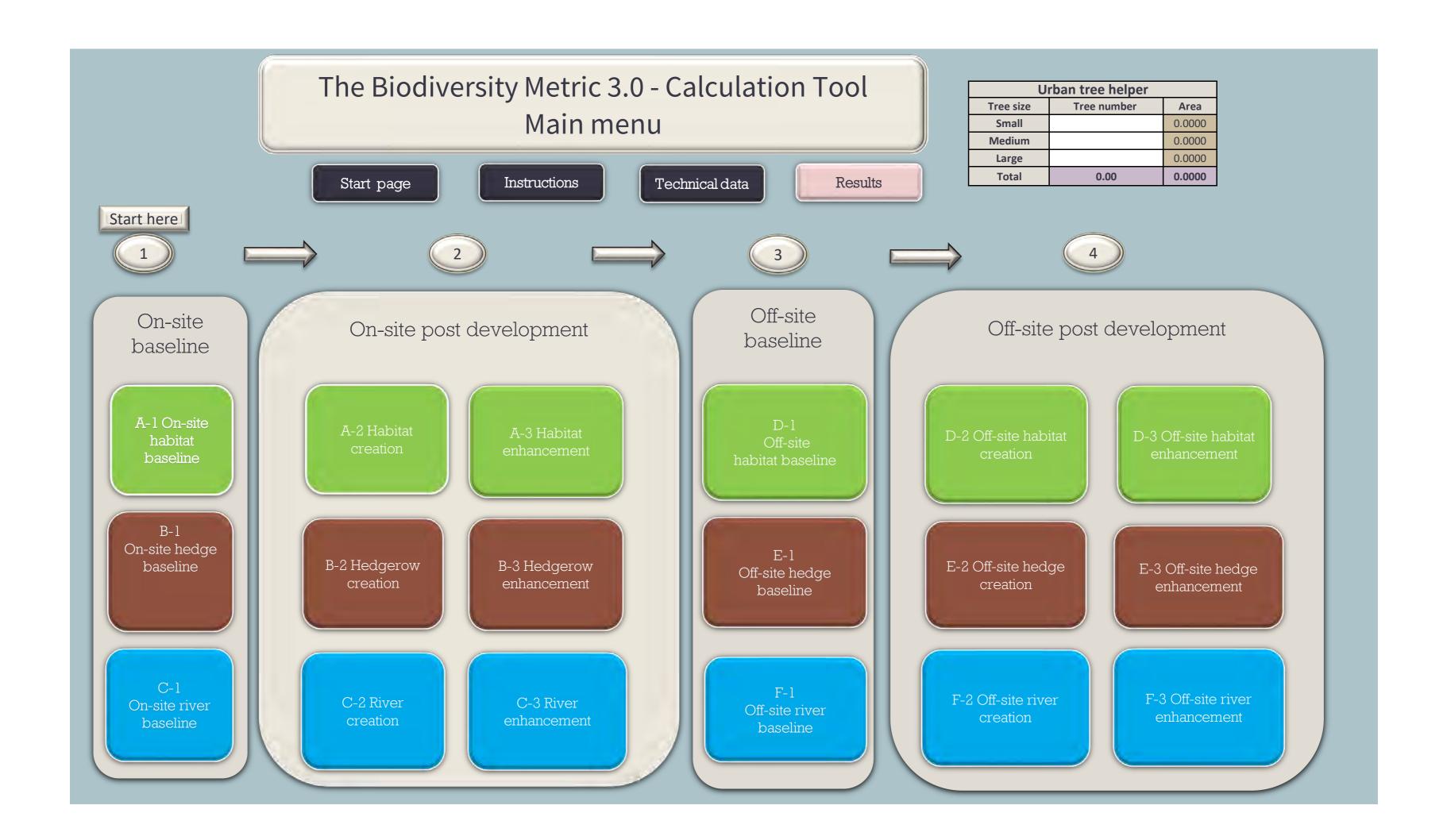
The Biodiversity Metric 3.0 - Calculation Tool Instructions



Natural England Joint Publication JP029

The Biodiversity Metric 3.0
Auditing and accounting for biodiversity

Calculation Tool:
Short Guide



Chester Road, Walton, Warrington	Return to
Headline Results	results menu

	Habitat units	18.72
On-site baseline	Hedgerow units	3.30
	River units	0.00
	Habitat units	13.69
On-site post-intervention	Hedgerow units	3.30
(Including habitat retention, creation & enhancement)	River units	0.00
	Habitat units	-26.90%
On-site net % change	Hedgerow units	0.00%
(Including habitat retention, creation & enhancement)	River units	0.00%
	Habitat units	1.68
Off-site baseline	Hedgerow units	0.00
	River units	0.00
	Habitat units	7.06
Off-site post-intervention	Hedgerow units	0.00
(Including habitat retention, creation & enhancement)	River units	0.00
	Habitat units	0.34
Total net unit change	Hedgerow units	0.00
(including all on-site & off-site habitat retention, creation & enhancement)	River units	0.00
	Habitat units	1.84%
Total on-site net % change plus off-site surplus	Hedgerow units	0.00%
(including all on-site & off-site habitat retention, creation & enhancement)	River units	0.00%
Trading rules Satisfied?	No - Check Tr	ading Summary

Chester Road, W	alton, Warrington							
A-1 Site Habitat Baseline								
Condense / Show Columns	Condense / Show Rows							
Main Menu	Instructions							

		Habitats and areas		Distinctivene	ess	Conditi	ion	Strategic signi:		Currented action to address	Ecological baseline	
Ref	Broad habitat	Habitat type	Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic Significance multiplier	Suggested action to address habitat losses	Total habitat units
1	Cropland	Cereal crops	5.14	Low	2	N/A - Agricultural	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	10.28
2	Woodland and forest	Other woodland; mixed	0.08	Medium	4	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required	0.64
3	Woodland and forest	Lowland mixed deciduous woodland	0.65	High	6	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same habitat required	7.80
4												
5												
			5.87									18.72

	R€	etention cat	egory biodi	versity value		Bespoke compensation	Comments							
Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area lost	Units lost	agreed for unacceptable losses	Assessor comments	Reviewer comments						
		0.00	0.00	5.14	10.28		Arable land							
	0.08	0.00	0.64	0.00	0.00		Retained woodland - section running east-west not part of designated woodland							
0.65		7.80	0.00	0.00	0.00		Designated lowland mixed deciduous - not enhanced							
0.65	0.08	7.80	0.64	5.14	10.28									

	Chester Road, Walton, Warrington A-2 Site Habitat Creation	\exists																		
Condense / Show	Columns Condense / Show Rows																			
Main Mer	nu Instructions																			
									Post de	evelopment/ post intervention habitate	S									
			Distinc	tiveness	Condition	Strategic signif	ïcance			•	Temporal multiplier				Difficulty multiplier	rs .		Habitat	Comments	3
Broad Habitat	Proposed habitat	Area (hectares	Distinctivenes	ss Score	Condition Score	Strategic significance	Strategic significance	position	Standard time to target condition/years	habitat	Standard or adjusted time to target condition		target	Standard difficulty of creation	Applied difficulty multiplier	of greation m	Difficulty nultiplier applied	units delivered	Assessor comments	Reviewer comments
Grassland	Other neutral grassland	0.59	Medium	4	Moderate 2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5		Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	3.95	Neutral Grassland in POS areas	
Heathland and shrub	Mixed scrub	0.09	Medium	4	Moderate 2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5		Standard time to target condition applied	5	0.837	Low	Standard difficulty applied	Low	1	0.60	Native species scrub planting, SW corner	
Grassland	Modified grassland	0.21	Low	2	Poor 1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	1		Standard time to target condition applied	1	0.965	Low	Standard difficulty applied	Low	1	0.41	Amenity grassland	
Urban	Developed land; sealed surface	4.25	V.Low	0	N/A - Other 0	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance		0		Standard time to target condition applied	0	1.000	Low	Standard difficulty applied	Medium	0.67	0.00	All developed land, no 70/30 split as going with worse case scenario	
								$\overline{}$											4	
																			1	
	Total area	5.14								•						To	otal Units	4.96		

	Site Habitat Enhancement Condense/ShowColumns Condense/ShowRows Main Menu Instructions					Po	st development/ post intervention habitats		C	hange in broad habitat type dete	cted. Check compliance with	<mark>h guidance.</mark>			
	Baseline habitats	Proposed Habitat (Pre-Populated but can be overridden)	Change in distinctiveness and con	ndition			Strategic signi			Temporal	risk multiplier		Difficulty risk multipliers Hab	Ditat	ients
Basel	Baseline habitat Total Baseline Baseline Condition Condition area band Baseline Baseline Baseline Condition Condition Score Category Baseline Strategic Significance Condition Condition Condition Score Category Baseline strategic Significance Score Significance Score Category Baseline strategic Significance Score Category	Proposed Broad Habitat Proposed habitat	Distinctiveness change Cond	lition change (hectares	Distinctiveness	Score Condition Sco	Strategic significance	Strategic significance Strategic position multiplier	Standard time to target condition/years	Habitat enhanced in advance/years Delay in starting habitat enhancement/years	Standard or adjusted time to target condition	Final time to Final time to target target multiplier	I was a later than the second of the second	rered Assessor comments	Reviewer comments
2	Woodland and forest - Other woodland; mixed 0.08 Medium 4 Moderate 2 Low Strategic Significance 1 0.64 Significance 0.64 distinctiveness habitat required	Heathland and shrub Mixed scrub	Medium - Medium Mode	derate - Good 0.08	Medium	4 Good	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	3		Standard time to target condition applied	3 0.899	Low Standard difficulty applied Low 1 0.	Enhanced with mixed scrub / native shrub species, such as hawthorn, blackthorn, hazel etc	
				0.00										02	
				0.08									0.	93	

Chester Road, Walton, Warrington					
D-1 Off Site Habitat Baseline Condense/ShowColumns Catherine Main Menu	ondense / Show Rows Instructions				
Baseline Broad habitat	Habitat distinctiveness	Habitat condition Strategic Condition Score Strategic significance	ic significance Strategic position significance Strategic position multiplier Suggested action to address habitat losses Total habitat units	Retention category biodiversity value Area retained enhanced enhanced retained enhanced Retention category biodiversity value Baseline Baseline units units Area lost Units lost unacceptations agreed for unacceptation and the second compensation agreed for units units and units units lost unacceptations.	or
ref Broad Habitat Thabitat type 1 Cropland Cereal crops 2 3		N/A - Agricultural local strategy		retained enhanced retained enhanced 0.00 0.00 0.84 1.68	Action of the first state of the
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448	0.84		Total Site baseline 1.68	0.00 0.00 0.00 0.84 1.68	

	Chester Road, Walton, Warrington D-2 Off Site Habitat Creation																					
	Show Columns Condense / Show Rows n Menu Instructions						Post develo	pment/ post inter	vention habitats													
							Strategic signific				Temporal risk	sk multiplier				Difficulty risk multipli	ers	Spatial risk multiplier		TT 1 '	Com	ments
Broad Habitat	Proposed habitat	Area ha	Distinctiveness	ss Score	Condition	Score	Strategic significance	Strategic	Strategic Standard time to position target multiplier condition/years	habitat created habit	starting stand	dard or adjusted time to	Final time to target condition/years	target	Standard difficulty of creation		Final Difficulty difficulty of multiplier creation applied		Spatial r multipli	Habitat isk units er delivered	Assessor comments	Reviewer comments
Heathland and shrub	Mixed scrub	0.07	Medium	4	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1 10			ard time to target condition applied	10	0.700	Low	Standard difficulty applied	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	1	0.59		
Grassland	Other neutral grassland	0.77	Medium	4	Good	3	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1 10		Standa	ard time to target condition applied	10	0.700	Low	Standard difficulty applied	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	1	6.47		
	Total Length	0.84																	Total Un	its 7.06		

Main Menu			Light to the	ivo	Hab'r	1 ;+:-		figange			Ecological		ion set	njodinarii			nments
seline Hedge	UK Habitats - existing habitats Hedgerow type	Length KM	Habitat distincti	Τ			Strategic signi: Strategic significance	Strategic	Strategic	Suggested action to address habitat losses	baseline Total hedgerow	Length Length retained enha		Units Length			Reviewer comments
ref number l	Native Hedgerow with trees	KM 0.18	Medium	4	Moderate		Area/compensation not in local strategy/ no local strategy	Significance	multiplier	Like for like or better	units 1.44	retained enha	nced retained		oo 0.00	Western hedgerow	Reviewer comments
2	Native Hedgerow	0.09	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy Area/compensation not in local strategy/ no	Low Strategic Significance	1	Same distinctiveness band or better	0.18	0.09	0.18	0.00 0.0		Southern defunct hedgerow	
3	Native Species Rich Hedgerow	0.14	Medium	4	Good	3	local strategy	Significance	1	Like for like or better	1.68	0.14	1.68	0.00 0.0	0.00	Southern good quality native hedgerow	
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Plans:

Plan 1: Proposed Site Layout

Plan 2: 10468_P01: Habitat Features Plan

Plan 3: 10468_P02: BNG Post Development Plan





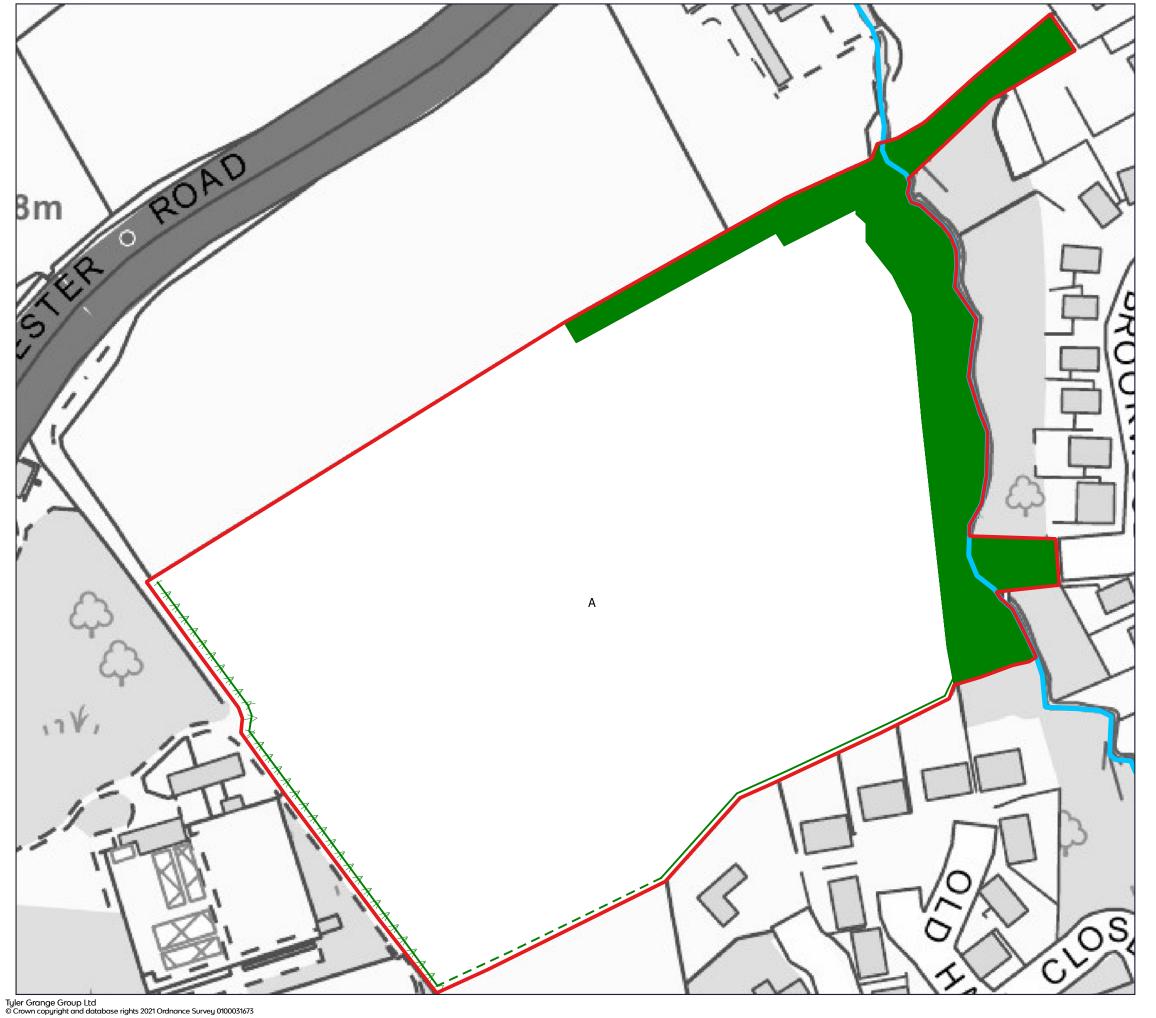
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DRAWING NAME: Sketch Site Plan 1:500 @ A0

DRAWING REFERENCE: E0949_A_PS_002

REVISION: -

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Redline Boundary **Watercourse** -- Hedgerow - defunct - Hedgerow - intact Arable Α

Broadleaved Woodland



Project

Chester Road, Walton, Warrington

Drawing Title

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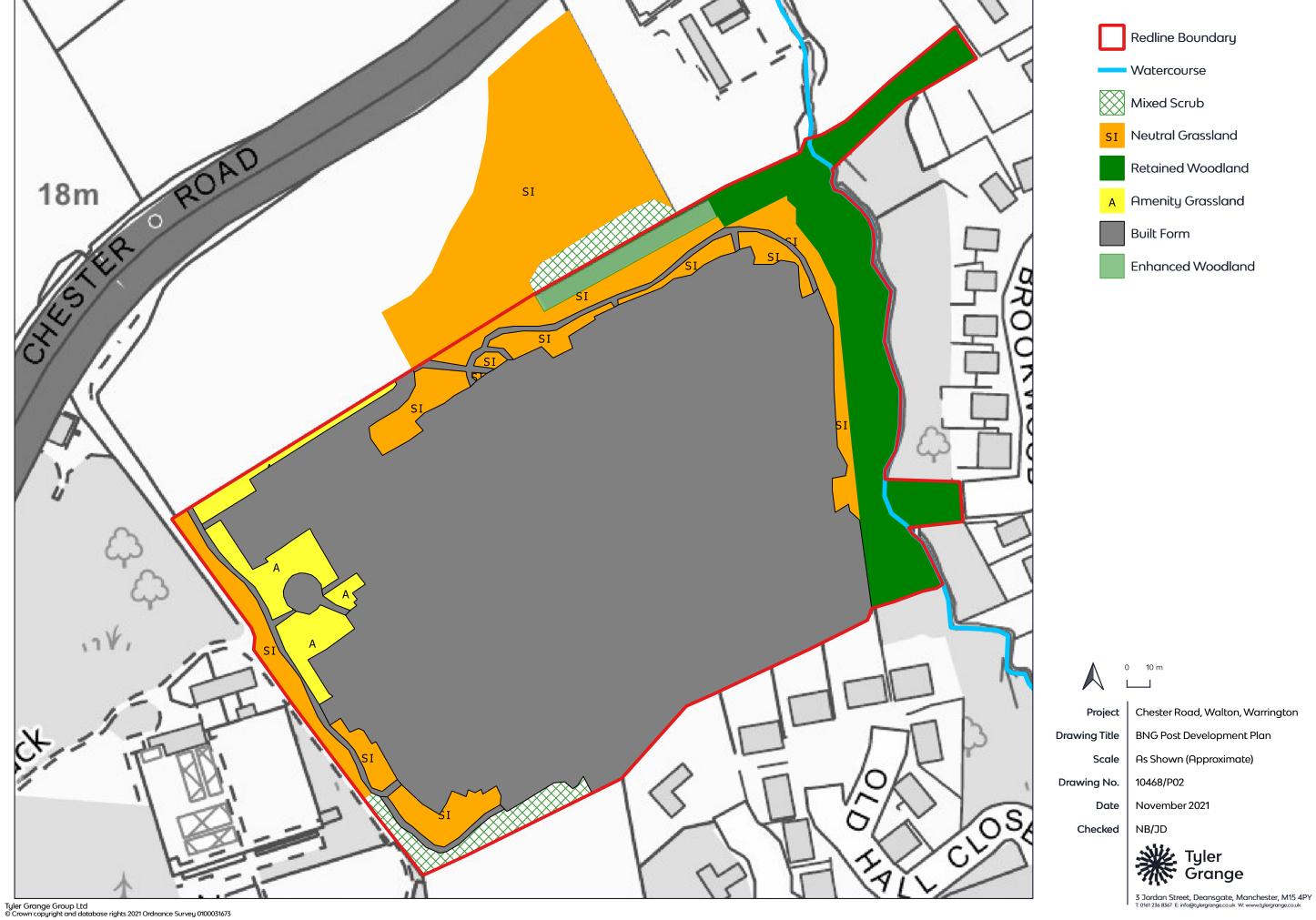
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Ashall Property Ltd

Chester Road, Walton

Air Quality Assessment

November 2021



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Document Control Sheet

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Executive Summary

Purpose of Report

Bureau Veritas UK Ltd has been commissioned by Lane End, on behalf of Ashall Property Ltd ("the Client") to undertake an air quality screening assessment for a proposed residential development at Chester Road, Walton, near Warrington("the site"). This assessment is for consideration of the proposed development of 160 residential and associated parking provisions.

An air quality assessment has been prompted due to the proximity of a nearby Air Quality Management Area (Warrington AQMA 4). Since existing air quality in the area has been identified by the council as being above or close to the air quality limit for concentrations of annual mean nitrogen dioxide (through their declaration of the AQMA), this report seeks to evaluate whether the proposed site is suitable in terms of pollutant concentrations for the proposed residential usage and whether additional detailed modelling is required.

Potential Construction Phase Effects

The assessment of dust and PM₁₀ effects from the construction phase of the development was subject to a qualitative assessment following IAQM guidance¹.

With the mitigation measures detailed in section 6.1 in place, the assessment carried out has shown that any off-site impacts from dust emissions during the construction phase would be **not significant**.

Potential Operational Phase Effects

The assessment of air quality effects in relation to the development's operational phase has been initially undertaken qualitatively in accordance with EPUK/IAQM Guidance².

The results of this screening assessment concluded that a detailed assessment **is required**, due to the predicted traffic increases from the proposed development (715 AADT) and the proximity to Warrington AQMA No.4. As such, the next step is to use dispersion modelling in order to robustly quantify potential air quality impacts from the proposed development.



1. Introduction

Bureau Veritas UK Ltd has been commissioned by Lane End, on behalf of Ashall Property Ltd ("the Client") to undertake an air quality screening assessment for a proposed residential development at Chester Road, Walton, near Warrington. This assessment is for consideration of the proposed development of 160 residential units and associated parking provisions.

The proposed site is located in Walton, a village approximately 2.8 km south of the town of Warrington. It is currently a greenfield, agricultural site, with residential areas to the east and south and Walton Hall and Gardens to the west.

In terms of existing air quality conditions in the area, the proposed site is located approximately 210 m from Warrington Air Quality Management Area (AQMA) No. 4, indicating an area of high nitrogen dioxide (NO₂) concentrations. Therefore, the purpose of this report is to determine, qualitatively, the likely air quality impacts of the proposed development on nearby sensitive receptors, and to ensure that no new sensitive receptors are being introduced into an area of poor air quality.

The Site location is illustrated in Figure 1.1 and a site layout plan is provided in Appendix 2.

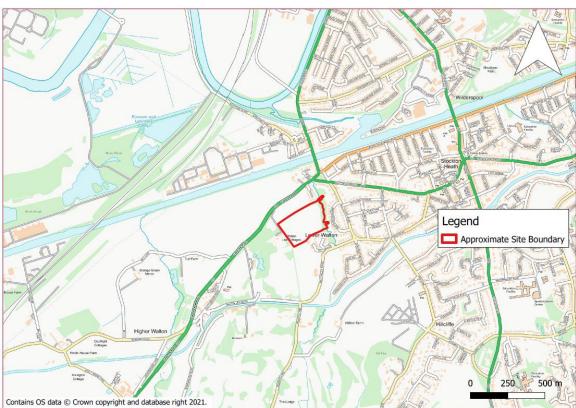


Figure 1.1 – Site Location



1.1 Scope of Assessment

The following are the main objectives of the assessment:

- To assess, qualitatively, the short-term impacts of the construction phase on residents adjacent to the proposed development site, and review mitigation measures available to reduce these impacts to an acceptable level;
- To assess, qualitatively, the air quality impacts of the proposed development during the operational phase, including the potential traffic generated from the site and the existing air quality conditions.
- To determine whether a dispersion modelling assessment is required to assess the operational air quality impacts.

The approach adopted in this assessment to assess the impact of dust and particulates during the construction phase was based on Institute of Air Quality Management (IAQM) Guidance for Construction Sites¹, and the approach adopted in this assessment to assess the impact of road traffic on air quality was based on the EPUK/IAQM Guidance for Land-Use Planning and Development².

The Environmental Health Officer (EHO) at Warrington Borough Council ("the Council") has been contacted to confirm that they are satisfied with our proposed methodology. A response has not yet been received.

The assessment covers both the impact on air quality during the construction phase of the development through the emissions of dust and PM_{10} , as well as the operational phase whereby the development may lead to changes in the existing traffic flow and consequently changes in NO_x and PM emissions to the local area. Further general information in relation to these pollutants and urban pollution is provided in Appendix 1.

In order to provide consistency with the Council's own work on air quality, the guiding principles for air quality assessments as set out in the latest guidance and tools provided by Defra (LAQM TG(16)⁴) have been used where relevant.

-

¹ Institute of Air Quality Management (IAQM) (2014) Guidance on the Assessment of Dust from Demolition and Construction (v1.1).

² Environmental Protection UK (EPUK) and Institute of Air Quality Management (IAQM) (2017). Land-Use Planning & Development Control: Planning for Air Quality (v1.2).

³ Email correspondence with Environmental Health, dated 04/11/2021.

⁴ LAQM Technical Guidance LAQM TG(16) – April 2021. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.



2. Air Quality – Legislative Context

2.1 Air Quality Strategy

The importance of existing and future pollutant concentrations can be assessed in relation to the national air quality standards and objectives established by Government. The Air Quality Strategy (AQS)⁵ provides the over-arching strategic framework for air quality management in the UK and contains national air quality standards and objectives established by the UK Government and Devolved Administrations to protect human health. The air quality objectives incorporated in the AQS and the UK Legislation are derived from Limit Values prescribed in the EU Directives transposed into national legislation by Member States.

The CAFE (Clean Air for Europe) programme was initiated in the late 1990s to draw together previous directives into a single EU Directive on air quality. The CAFE Directive⁶ has been adopted and replaces all previous air quality Directives, except the 4th Daughter Directive⁷. The Directive introduces new obligatory standards for PM_{2.5} for National Government but places no statutory duty on Local Governments to work towards achievement of these standards.

The Air Quality Standards (England) Regulations 2010⁸ came into force on the 11th June 2010 in order to align and bring together in one statutory instrument the Government's obligations to fulfil the requirements of the new CAFE Directive. Domestic objectives have been set under the Air Quality (England) Regulations 2000⁹ and subsequent updates in 2002¹⁰ and upon the UK's departure from the EU¹¹.

The objectives for ten pollutants – benzene (C₆H₆), 1,3-butadiene (C₄H₆), carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), sulphur dioxide (SO₂), particulate matter - PM₁₀ and PM_{2.5}, ozone (O₃) and Polycyclic Aromatic Hydrocarbons (PAHs), have been prescribed within the AQS⁵.

The objective limit values are considered to apply everywhere with the exception of the carriageway and central reservation of roads and any location where the public do not have access (e.g. industrial sites).

The AQS objectives apply at locations outside buildings or other natural or man-made structures above or below ground, where members of the public are regularly present and might reasonably be expected to be exposed to pollutant concentrations over the relevant averaging period. Typically these include residential properties and schools/care homes for long-term (i.e. annual mean) pollutant objectives and high streets for short-term (i.e. 1-hour) pollutant objectives. Table 2.1, taken from LAQM TG(16)⁴, provides an indication of those locations that may or may not be relevant for each averaging period.

This assessment focuses on NO_2 , PM_{10} and $PM_{2.5}$ as these are the pollutants of most concern within the Council's administrative area. Moreover, as a result of traffic pollution the UK has failed to meet the EU Limit Values for NO_2 by the 2010 target date. As a result, the Government has had to submit

⁹ Air Quality (England) Regulations 2000, available: https://www.legislation.gov.uk/uksi/2000/928/contents/made

10	Air	Quality	(Amendment)	(England)	Regulations	2002,	available:
https://	www.legisl	ation.gov.uk/uk	si/2002/3043/contents/	<u>/made</u>			

¹¹ Air Quality Standards (Amendment) (EU Exit) Regulations 2019, available: https://www.legislation.gov.uk/uksi/2019/74/contents/made

⁵ The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2007), Published by Defra in partnership with the Scottish Executive, Welsh Assembly Government and Department of the Environment Northern Ireland.

⁶ Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe.

⁷ Directive 2004/107/EC of the European Parliament and of the Council of 15 December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic hydrocarbons in ambient air.

⁸ Air Quality Standards (England) Regulations 2010, available: https://www.legislation.gov.uk/uksi/2010/1001/contents/made



time extension applications for compliance with the EU Limit Values. Continued failure to achieve these limits may lead to further fines. The AQS objectives for these pollutants are presented in Table 2.2.

Table 2.1 - Examples of where the AQS Objectives should apply

Averaging Period	Objectives should apply at:	Objectives should generally not apply at:
Annual mean	All locations where members of the public might be regularly exposed. Building facades of residential properties, schools, hospitals, care homes etc.	Building facades of offices or other places of work where members of the public do not have regular access. Hotels, unless people live there as their permanent residence. Gardens of residential properties. Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term
24-hour mean and 8-hour mean	All locations where the annual mean objectives would apply, together with hotels. Gardens or residential properties ¹ .	Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term.
1-hour mean	All locations where the annual mean and 24 and 8-hour mean objectives would apply. Kerbside sites (e.g. pavements of busy shopping streets). Those parts of car parks, bus stations and railway stations etc. which are not fully enclosed, where the public might reasonably be expected to spend one hour or more. Any outdoor locations at which the public may be expected to spend one hour or longer.	Kerbside sites where the public would not be expected to have regular access.
15-minute mean	All locations where members of the public might reasonably be expected to spend a period of 15 minutes or longer.	

Notes:

Table 2.2 - Relevant AQS Objectives for the Assessed Pollutants in the UK

Pollutant	AQS Objective	Concentration Date for Measured as: Achievemen	
Nitrogen Dioxide (NO ₂)	200 µg/m³ not to be exceeded more than 18 times per year	1-hour mean 31 December 20	
	40 μg/m³	Annual mean	31 December 2005
Particulate Matter (PM ₁₀)	50 μg/m³ not to be exceeded more than 35 times per year	24-hour mean	1 January 2005
	40 μg/m³	Annual mean	1 January 2005
Particulate Matter (PM _{2.5})	20 μg/m³	Annual Mean	2010

¹ For gardens and playgrounds, such locations should represent parts of the garden where relevant public exposure is likely, for example where there is seating or play areas. It is unlikely that relevant public exposure would occur at the extremities of the garden boundary, or in front gardens, although local judgement should always be applied.



2.2 National Planning Policy

The revised National Planning Policy Framework¹² (NPPF), published on the 20th July 2021, states that the planning system should contribute to and enhance the natural, built and historic environment, by preventing new development from contributing or being adversely affected by unacceptable concentrations of air pollution and development should, wherever possible, help to improve local environmental conditions such as air and water quality. In specific relation to the air quality policy, the document states:

"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan".

2.3 Local Air Quality Management (LAQM)

Part IV of the Environment Act 1995¹³ places a statutory duty on local authorities to periodically Review and Assess the current and future air quality within their area, and determine whether they are likely to meet the AQS objectives set down by Government for a number of pollutants – a process known a Local Air Quality Management (LAQM). The AQS objectives that apply to LAQM are defined for seven pollutants: benzene, 1,3-butadiene, carbon monoxide, lead, nitrogen dioxide, sulphur dioxide and particulate matter.

Where the results of the Review and Assessment process highlight that problems in the attainment of health-based objectives for air quality will arise, the authority is required to declare an Air Quality Management Area (AQMA) – a geographic area defined by high concentrations of pollution and exceedances of health-based standards.

Where an authority has declared an AQMA, and development is proposed to take place either within or near the declared area, further deterioration to air quality resulting from a proposed development can be a potential barrier to gaining consent for the development proposal. Similarly, where a development would lead to an increase of the population within an AQMA, the protection of residents against the adverse long-term impacts of exposure to existing poor air quality can provide the barrier to consent. As such, following an increased number of declarations across the UK, it has become standard practice for planning authorities to require an air quality assessment to be carried out for a proposed development (even where the size and nature of the development indicates that a formal Environmental Impact Assessment (EIA) is not required).

One of the objectives of the LAQM regime is for local authorities to enhance integration of air quality into the planning process. Current LAQM Policy Guidance¹⁴ clearly recognises land-use planning as having a significant role in terms of reducing population exposure to elevated pollutant concentrations. Generally, the decisions made on land-use allocation can play a major role in improving the health of the population, particularly at sensitive locations – such as schools, hospitals and dense residential areas.

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¹² National Planning Policy Framework (2021), available at: https://www.gov.uk/government/publications/national-planning-policy-framework-2

¹³ Part IV of the Environment Act 1995. Published by the UK Government, 1st February 1996. Available at: http://www.legislation.gov.uk/ukpga/1995/25/part/IV

¹⁴ LAQM Policy Guidance LAQM PG(16) – April 2016. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.



2.4 Local Planning Policy

The Council's Local Plan¹⁵ houses the statutory guidance document for future developments (2014-2027). As part of this, Policy CS 4 – Overall Spatial Strategy – Transport, states the following:

"Development will be located to reduce the need to travel, especially by car, and to enable people as far as possible to meet their needs locally.

The Council will support improvements to Warrington's Transport Network that:

reduce the impact of traffic on air quality and reduce carbon emissions to help tackle climate change"

In addition, Policy QE 6 - Environment and Amenity Protection states:

"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."

2.5 Air Quality Guidance for Construction Sites

There are a number of regulatory and legislative constraints in place to control pollution from construction and demolition activities. The Building Act 1984 and subsequent Building Regulations 2000 are in place to ensure the safety of people in and around the building during work. Part III of the Environmental Protection Act (EPA) 1990 identifies the emission of dust from construction sites as having the potential to be a statutory nuisance and requires its control under Section 80.

In December 2011, the IAQM published a guidance document to assess the impact of construction on air quality. The guidance was reviewed in January 2012 and updated in February 2014 to incorporate new evidence¹. The approach adopted in this assessment is based on adopting the methodology published in the 2014 version of the IAQM guidance.

The significance of the impact of the construction phase on air quality was determined through application of the criteria outlined in IAQM construction guidance¹.

2.6 Land-Use Planning & Development Control: Planning for Air Quality

Although no formal procedure exists for classifying the magnitude and significance of air quality effects from a new development, guidance issued by the EPUK and IAQM² suggests ways to address the issue. The EPUK/IAQM Guidance provides a decision-making process which assists with the understanding of air quality impacts and implications as a result of development proposals.

The guidance includes a method for screening the requirement for an air quality assessment, the undertaking of an air quality assessment, the determination of the air quality impact associated with a development proposal and whether this impact is significant. Details of this methodology are presented within Section 4.2.

¹⁵ https://www.warrington.gov.uk/sites/default/files/2020-09/Local_Plan_Core_Strategy_Feb_2015.pdf



3. Review and Assessment of Air Quality Undertaken by the Council

3.1 Local Air Quality Management

The Council has, under its obligations in Part IV of the Environment Act 1995¹³, maintained annual review and assessments of air quality through their statutory reporting, with details available on their website¹⁶.

The Council have declared 2 AQMAs within their jurisdiction; Warrington AQMA No. 1 and Warrington AQMA No. 4. The AQMAs have been declared due to exceedances of the NO_2 annual mean objective (40 μ g/m³).

3.2 Review of Air Quality Monitoring

Local Air Quality Monitoring

The most recent LAQM report that has been published by the Council is the 2020 Air Quality Annual Status Report (ASR) ¹⁷ which presents the 2019 monitoring data. In 2019, Warrington Borough Council undertook both automatic continuous monitoring and passive NO₂ monitoring in the local area. The 2019 monitoring results have been used for the purposes of informing this assessment.

The closest passive and automatic monitoring locations are presented in Table 3.1, and their locations are presented in Figure 3.1.

The nearby monitoring locations within the Warrington AQMA show that over the past 3 years, NO₂ concentrations have generally decreased and were reported as being below the annual mean NO₂ AQS objective of 40 µg/m³ since 2017.

Table 3.1 - Annual Average NO₂ Monitoring Locations closest to the Site

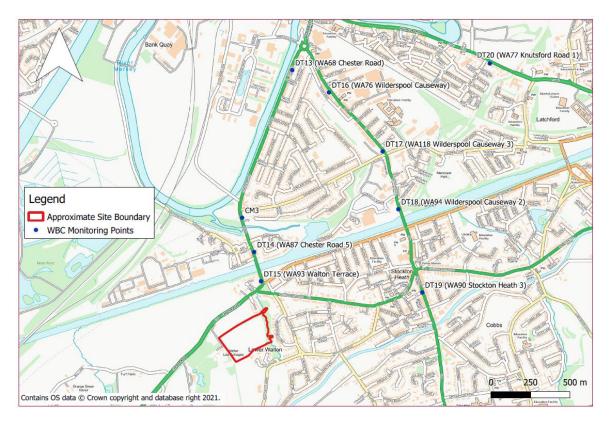
Site ID	Site Name	Site	Coord	Coordinates		NO₂ Annual Mean Concentration (µg/m³)		
		Type	X	Y	(km)	2017	2018	2019
DT13	WA68 Chester Road	Roadside	360331	386454	1.5	36.2	36.6	34.1
DT14	WA87 Chester Road 5	Roadside	360648	387388	0.3	34.5	34.1	30.7
DT15	WA93 Walton Terrace	Roadside	360407	386237	0.2	37.1	34.5	31.4
DT16	WA76 Wilderspool Causeway	Roadside	360450	386052	1.4	34.1	31.0	28.8
DT17	W118 Wilderspool Causeway 3	Roadside	360880	387247	1.2	31.8	30.1	29.7
DT18	WA94 Wilderspool Causeway 2	Roadside	361220	386874	1.1	34.8	33.7	30.6
DT19	A90 Stockton Heath 3	Roadside	361319	386508	0.9	28.5	27.5	25.1
DT20	WA77 Knutsford Road 1	Roadside	361470	385981	2.1	33.1	30.2	29.9
СМЗ	Automatic	Roadside	361898	387430	0.6	32.0	30.0	30.0

¹⁶ https://www.warrington.gov.uk/airquality

¹⁷ Warrington Borough Council Air Quality Review and Assessment: https://www.warrington.gov.uk/sites/default/files/2020-12/asr_warrington_2020.pdf







Other Air Quality Monitoring

The Automatic Urban and Rural Network 18 is used for compliance reporting against the Ambient Air Quality Directives. It includes automatic air quality monitoring stations measuring oxides of nitrogen (NO_x), sulphur dioxide (SO₂), ozone (O₃), carbon monoxide (CO) and particulates (PM₁₀ and PM_{2.5}). These sites provide high resolution hourly information, which is communicated rapidly to the public, using a wide range of electronic, media and web platforms.

The closest AURN monitoring site is in Warrington, located approximately 2.75 km northwest of the development site. Due to being located a considerable distance away from the development site, this monitoring location is unlikely to be representative of the existing air quality around the proposed development.

3.3 Background Concentrations

Defra maintains a nationwide model of existing and future background air quality concentrations at a 1 km x 1 km grid square resolution 19 . The data sets include annual average concentration estimates for NO_x , NO_2 , PM_{10} and $PM_{2.5}$, using a reference year of 2018. The model used is semi-empirical in nature; it uses the national atmospheric emissions inventory (NAEI) emissions to model-predict the concentrations of pollutants at the centroid of each 1 km x 1 km grid square, but then calibrates these concentrations in relation to actual monitoring data.

The estimated background concentrations between the baseline year (2019) and the proposed future year (2024) are outlined in Table 3.2. Background concentrations have been used from 2019 as opposed to 2021, as it is the last full year of data which has not been impacted by changes in

¹⁸ The Automatic Urban and Rural Network - https://uk-air.defra.gov.uk/networks/network-info?view=aurn

¹⁹ UK AIR Background Mapping Tool. Available at: https://uk-air.defra.gov.uk/data/lagm-background-home



traffic data due to COVID-19. Background values remain considerably lower than the annual mean AQS objectives for all pollutants for the years 2019 and 2024. There is a marginal decrease in PM_{10} and $PM_{2.5}$ concentrations, with a larger decrease seen in NO_2 concentrations.

Table 3.2 – 2019 to 2030 Background Pollutant Concentrations

Year	Background Concentration (μg/m³) (Background concentrations taken from grid square; 357500,383500)				
	NO ₂	PM ₁₀	PM _{2.5}		
2019	12.1	10.8	7.3		
2024	10.1	10.2	6.8		
AQS Objective (annual mean)	40	40	20		



4. Assessment Methodology

The approach applied to this assessment has been based on the following:

- Qualitative assessment of impacts from the proposed development's construction phase on air quality through emission of dust and particulates;
- Qualitative assessment of effect of emissions from road traffic during operational phase of the development.

4.1 Construction Effects

The assessment of potential dust/PM $_{10}$ /PM $_{2.5}$ effects in relation to the development's construction phase has been undertaken qualitatively in accordance with IAQM Guidance¹. The guidance proposes a method to assess the significance of construction dust impacts by considering the annoyance due to dust soiling, as well as harm to ecological receptors and the risk of health effects due to significant increases to dust/PM $_{10}$ /PM $_{2.5}$ concentrations.

Construction site activities are divided into four types to reflect their different potential impacts. These activities are:

- Demolition an activity involved with the removal of an existing structure or structures;
- Earthworks the processes of soil-stripping, ground-levelling, excavation and landscaping;
- Construction an activity involved in the provision of a new structure; and
- Trackout the transport of dust and dirt from the site onto the public road network. This arises when lorries leave site with dusty materials or transfer dust and dirt onto the road having travelled over muddy ground on-site.

A detailed assessment is required where a sensitive human receptor is located within 350 m from the site boundary and/or within 50 m of the routes used by vehicles on the public highway, up to 500 m from the site entrances. There are a number of residential properties (>300) located within 350 m of the development site boundary, thus a detailed assessment is required.

A detailed assessment is also required where ecologically sensitive receptors are located within 50m of the site boundary and/or 50 m of the routes used by vehicles on the public highway, up to 500m from the site entrances. In accordance with IAQM methodology¹ these are defined as legislatively protected areas such as Sites of Special Scientific Interest (SSSI) and Special Conservation Areas (SCA).

The first step of the detailed assessment is to assess the risk of dust impacts. This is undertaken separately for each of the four activities (demolition, earthworks, construction and trackout) and takes account of:

- The scale and nature of the works, which determines the potential dust emission magnitude;
 and
- The sensitivity of the area.

These factors are combined to give an estimate of the risk of dust impacts occurring. Risks are described in terms of there being a low, medium or high risk of dust impact for each of the four separate potential activities. Where there are low, medium or high risks of an impact, then site specific mitigation will be required, proportionate to the level of risk.



Based on the threshold criteria and professional judgment, one or more of the groups of activities may be assigned a 'negligible' risk. Such cases could arise, for example, because the scale is very small and there are no receptors near to the activity.

Site-specific mitigation for each of the four potential activities is then determined based on the risk of dust impacts identified. Where a local authority has issued guidance on measures to be adopted at demolition/construction sites, these should also be taken into account. Professional judgment is then employed to examine the residual dust effects assuming mitigation to determine whether or not they are significant.

Given the short-term nature of the construction phase and the comparatively low volume of vehicle movements that will likely arise, there is not considered to be any potential for significant air quality effects from development related road traffic NO₂ emissions during the construction phase. Such potential impacts have therefore been scoped out from requiring detailed assessment on the basis of their negligible impact.

4.2 Operational Effects – Road Traffic Emissions

The assessment of air quality effects in relation to the development's operational phase has been initially undertaken qualitatively in accordance with the EPUK/IAQM Guidance². The guidance makes reference to the Town and Country Planning (Development Management Procedure) (England) Order²⁰ definition of a 'major' development when scoping assessments required for the planning process. Table 4.1 provides the criterion which determines whether a development can be classified as 'major'.

Consideration of air quality impacts and approaches to reduce impacts from any 'major' developments is then recommended. The air quality impacts considered include both the impact of existing sources in the local area on the proposed development and the impacts of the proposed development on the local area.

With regards to changes in air quality or exposure to air pollution, the guidance indicates that each local authority will likely have their own view on the significance of this; these are to be described in relation to whether an air quality objective is predicted to be met, or at risk of not being met. Exceedances of these objectives are considered as significant if not mitigated.

As part of the impact of the proposed development on the local area, a two staged assessment is recommended as per EPUK/IAQM guidance:

- Stage 1: Determines the need for an air quality assessment and requires any of the criteria under (A) coupled with any of the criteria under (B) in Table 4.1 to proceed to Stage 2.
- Stage 2: Where an assessment is deemed to be required, this may take the form of a simple qualitative assessment or a more detailed dispersion modelling assessment. The level of air quality assessment required is determined by the criteria in Table 4.2.

²⁰ UK Government, The Town and Country Planning (Development Management Procedure) (England) Order 2010. Available at: https://www.legislation.gov.uk/uksi/2010/2184/contents/made



Table 4.1 - Stage 1 Criteria to Proceed to Stage 2

Criteria to Proceed to Stage 2

- 1. If any of the following apply:
 - 10 or more residential units or a site area of more than 0.5ha
 - More than 1,000m² floor space for all other uses or a site greater than 1ha
- 2. Coupled with any of the following:
 - The development has more than 10 parking space; or
 - The development will have a centralised energy facility or other centralised combustion process.

Table 4.2 - Indicative Criteria for Requiring an Air Quality Assessment

The Development Will Indicative Criteria to Proceed to an Air Quality Assessment				
Cause a significant change in Light Duty Vehicle (LDV) traffic slows on local roads with relevant receptors	A change of LDV flows of: - more than 100 Annual Average Daily Traffic (AADT) within or adjacent to an AQMA - more than 500 AADT elsewhere.			
 Cause a significant change in Heavy Duty Vehicle (HDV) flows on local roads with relevant receptors. 	A Change of HDV flows of: - more than 25 AADT within or adjacent to an AQMA - more than 100AADT elsewhere			
 Realign roads, i.e. changing the proximity of receptors to traffic lanes. 	Where the change is 5m or more and the road is within an AQMA			
 Introduce a new junction or remove an existing junction near to relevant receptors. 	Applies to junctions that cause traffic to significantly change vehicle accelerate/decelerate, e.g. traffic lights, or roundabouts.			
5. Introduce or change a bus station.	Where bus flows will change by: - more than 25 AADT within or adjacent to an AQMA - more than 100 AADT elsewhere.			
Have an underground car park with extraction system.	The ventilation extract for the car park will be within 20m of a relevant receptor. Coupled with the car park having more than 100 movements per day (total in and out).			
7. Have one or more substantial combustion processes.	Where the combustion unit is: - any centralised plant using bio fuel - any combustion plant with single or combined thermal input >300kWh - a standby emergency generator associated with a centralised energy centre (if likely to be tested/used >18 hours a year).			
8. Have a combustion process of any size.	Where the pollutants are exhausted from a vent or stack in a location and at a height that may give rise to impacts at receptors through insufficient dispersion. This criterion is intended to address those situations where a new development may be close to other buildings that could be residential and/or which could adversely affect the plume's dispersion by way or their size and/or height.			



5. Results

5.1 Construction Phase – Dust / PM₁₀ Emissions

This assessment of dust/PM₁₀/PM_{2.5} presents the effects which are likely to be relevant both prior to and following the use of the appropriate mitigation measures on-site, which would be outlined by the site contractor and detailed within a Construction Environmental Management Plan (CEMP) inclusive of a Dust Management Plan (DMP). As per the IAQM guidance¹, the risk associated with the site to potentially generate dust/PM₁₀/PM_{2.5} is identified. Potential unmitigated effects at receptor locations are determined, and site-specific recommendations are then made to ensure residual dust/PM₁₀/PM_{2.5} effects associated with the construction phase are not significant.

The assessment of construction dust will focus on dust arising from the three relevant dust producing construction activities outlined in the IAQM guidance¹ (earthworks, construction and trackout).

Demolition

No demolition works are proposed to take place as part of this development and therefore have not been considered.

Earthworks

Potential sources of impacts associated with earthworks/ground preparation activities include fugitive dust/PM₁₀/PM_{2.5} emissions resulting from disturbance of dusty materials by construction plant, the construction materials used, vehicle movements and wind action. The total net site area is approximately 43,000m², and the Site is assumed to have a sandy soil type²¹. It is expected that 5-10 heavy earth moving vehicles will be active at any one time. Due to the total site area, the dust emission magnitude for earthworks is therefore considered to be **large**.

Construction

Potential sources of impacts associated with construction activities include fugitive dust/PM₁₀/PM_{2.5} emissions resulting from disturbance of dusty materials by construction plant, the construction materials used, vehicle movements and wind action. Construction activities at the development site will include a total building volume of over than 100,000m³. The dust emission magnitude for construction is therefore considered to be **large**.

Trackout

Dust emissions during trackout from the site may occur from the transport of dust and dirt from the construction site onto the public road network, where it may be deposited and then re-suspended by vehicles using the network. The number of predicted outward HDV (i.e. >3.5 tonne) movements in any one day is likely to be around 10 - 50 the approximate unpaved on-site road length is expected to be around 100 m. This estimation is based on the fact that there is no demolition works planned to take place, meaning that the only likely outwards HDV movements will be largely from the deliveries. The dust emission magnitude for trackout is therefore considered to be **medium**.

Summary

A summary of the dust emission magnitude for the three relevant activities is detailed in Table 5.1.

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²¹ http://mapapps2.bgs.ac.uk/ukso/home.html



Table 5.1 – Construction Dust Emission Magnitude

Activity	Dust Emission Magnitude
Earthworks	Large
Construction	Large
Trackout	Medium

Sensitivity of the Area

There are less than 10 residential properties located within 50 m of the development site boundary. Under the assumption that there are approximately 3 residents within each dwelling, the sensitivity of the area with respect to dust soiling effects on people and property resulting from earthworks, construction and trackout is **medium**.

The existing background PM_{10} concentration is 10.5 μ g/m³ which is below the AQS annual mean objective of 40 μ g/m³. Given the above information regarding the number of receptors within 50 m of the site boundary, the sensitivity of the area with respect to human health impacts in relation to earthworks, construction and trackout is therefore **low**.

A summary of the sensitivity of the surrounding area is detailed Table 5.2 below. According to the Defra Magic Maps natural environment mapping tool²², the nearest ecologically sensitive receptor (Rows Wood Ancient Woodland) is approximately 1.68 km from the development site. Therefore, the sensitivity of ecological receptors has been classified as '**Not Applicable**' due to there being no nearby sensitive ecological receptors within 50 m of the Site.

Table 5.2 - Sensitivity of Surrounding Area

	Sensitivity Of The Surrounding Area			
Potential Impact	Earthworks	Construction	Trackout	
Dust Soiling	Medium	Medium	Medium	
Human Health	Low	Low	Low	
Ecological	Not Applicable	Not Applicable	Not Applicable	

Risk of Dust Impacts

The risk of dust impacts is defined using Tables 6, 7, 8 and 9 in the IAQM guidance¹ for earthworks, construction and trackout respectively. The dust emission magnitude classes in Table 5.1 combined with the sensitivity of surrounding area classes in Table 5.2, result in the site risk categories as shown in Table 5.3.

Table 5.3 – Summary of Dust Risk

Potential Impact	Risk			
Potential Impact	Earthworks	Construction	Trackout	
Dust Soiling	Medium Risk	Medium Risk	Medium Risk	
Human Health	Low Risk	Low Risk	Low Risk	

²² DEFRA Magic Maps Tool. Available at: https://magic.defra.gov.uk/

Bureau Veritas AIR12438014



Potential Impact	Risk			
Potential Impact	Earthworks	Construction	Trackout	
Ecological	Not Applicable	Not Applicable	Not Applicable	

Following the construction dust assessment, the development Site is found to be **medium risk** in relation to dust soiling and **low risk** for human health impacts, as summarised in Table 5.3. This is predominantly due to the low background PM_{10} concentrations and low number of existing receptors close to the Site.

Providing effective mitigation measures are implemented, such as those outlined in Section 6.1, construction dust impacts are considered to be **not significant**.

5.2 Operational Phase – Road Traffic Emissions

With regards to the EPUK/IAQM Guidance² and the Stage 1 criteria as shown in Table 4.1, owing to the proposed development being more than ten residential units and associated parking provisions being provided, a Stage 2 assessment of air quality impacts is required.

The transport consultants on this project, have provided an Annual Average Daily Traffic (AADT) value of 715 AADT²³ predicted to arise from the development, comprised entirely of LDVs.

Table 5.4 reproduces the guidance published by EPUK/IAQM², the criteria of which are used to determine when a further air quality assessment is likely to be required, and evaluates the proposed development in relation to each criterion.

Table 5.4 – Evaluation of the Proposed Operational Phase Impacts with Reference to EPUK/IAQM Criteria

Indicative Criteria to Proceed to an Air Quality Assessment	Evaluation of the Potential Operational Impacts of Proposed Development Site
A change of LDV* flows of: - more than 100 AADT within or adjacent to an AQMA - more than 500 AADT elsewhere.	The site is approximately 210 m from nearest AQMA. LDVs are expected to increase by 715 AADT.
A Change of HDV flows of: - more than 25 AADT within or adjacent to an AQMA - more than 100 AADT elsewhere.	No predicted increase in HDV flows.
Road realignment, where the change is 5m or more and the road is within an AQMA.	No change of road realignment expected within an AQMA.
Introduction of a new junction or the removal of an existing junction near to relevant receptors. This applies to junctions that cause traffic to significantly change vehicle accelerate/ decelerate, e.g. traffic lights, or roundabouts.	A small access junction is expected to be introduced, will provide a connection to the proposed Western Link Road planned by Warrington Borough Council.
Introduction or change of a bus station, where bus flows will change by: - more than 25 AADT within or adjacent to an AQMA - more than 100 AADT elsewhere.	The introduction or changes to a bus station are not proposed.
Have an underground car park with extraction system, where the ventilation extract for the car park will be within 20m of a relevant receptor. Coupled with the car park having more than 100 movements per day (total in and out).	No underground car park proposed.

²³ Email correspondence with Eddisons 29/10/2021

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Indicative Criteria to Proceed to an Air Quality Assessment	Evaluation of the Potential Operational Impacts of Proposed Development Site
Having one or more substantial combustion process, where the combustion unit is: - any centralised plant using bio fuel - any combustion plant with single or combined thermal input >300kWh - a standby emergency generator associated with a centralised energy centre (if likely to be tested/used >18 hours a year).	No such plant proposed.
Have a combustion process of any size, where the pollutants are exhausted from a vent or stack in a location and at a height that may give rise to impacts at receptors through insufficient dispersion. This criterion is intended to address those situations where a new development may be close to other buildings that could be residential and/or which could adversely affect the plume's dispersion by way or their size and/or height.	No such plant proposed.
*LDV – Light Duty Vehicle **HDV – Heavy Duty Vehicle	

The proposed development site is located 210 m from Warrington AQMA No.4. The number of expected additional road transport vehicles is expected to exceed the EPUK/IAQM indicative criteria of 100 AADT, with 715 AADT expected to be generated from the development.

As a result, detailed dispersion modelling is required to consider the potential air quality impacts more appropriately from the proposed development.



6. Recommended Mitigation Measures

6.1 Short-term Impacts during Construction – Dust / PM₁₀ Emissions

As discussed in Section 5.1, construction impacts associated with the proposed development would result in the generation of dust and PM_{10} . However, it is considered that employment of construction best practice should ensure that no problematic dust or PM_{10} concentrations occur during the construction process.

The IAQM guidance¹ outlines a number of site specific mitigation measures based on the assessed site risk. The measures are grouped into those which are highly recommended and those which are desirable.

As the site is classed as **medium risk** several mitigation measures are **highly recommended**, these include, but are not limited to, the below:

With respect to communications:

- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
- Display the head or regional office contact information.
- Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk, and should include as a minimum the highly recommended measures in this document. The desirable measures should be included as appropriate for the site

With respect to site management:

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to the local authority when asked.
- Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book.
- Hold regular liaison meetings with other high risk construction sites within 500m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport deliveries which might be using the same strategic road network routes.

With respect to monitoring:

- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked.
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.



Agree dust deposition, dust flux, or real-time PM10 continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction.

With respect to preparing and maintaining the site:

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
- Fully enclose site or specific operations where there is a high potential for dust production and the site is actives for an extensive period.
- Avoid site runoff of water or mud.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.
- Cover, seed or fence stockpiles to prevent wind whipping.

With respect to operating vehicle/machinery and sustainable travel:

- Ensure all vehicles switch off engines when stationary no idling vehicles.
- Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.
- Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.

With respect to operations:

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- Use enclosed chutes and conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

With respect to waste management:



Avoid bonfires and burning of waste materials.

Additionally, as the site is classed as **medium risk** the following mitigation measures are **desirable**:

With respect to monitoring:

Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100 m of site boundary, with cleaning to be provided if necessary.

With respect to operating vehicle/machinery and sustainable travel:

- Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).

6.2 Impacts during Operation – Road Traffic Emissions

Following a screening assessment, the impact of the proposed development's operational phase on local air quality needs to be considered further, using dispersion modelling of road traffic emissions within a detailed assessment.

This section of the report will be updated once the detailed assessment has been carried out, as potential air quality impacts need to be assessed more appropriately.



7. Conclusions

The following section provides the conclusions of this assessment.

7.1 Construction Effects – Dust / PM₁₀ Emissions

The assessment of dust and PM₁₀ effects from the construction phase of the development was subject to a qualitative assessment following IAQM guidance¹.

With the mitigation measures detailed in section 6.1 in place, the assessment carried out has shown that any off-site impacts from dust emissions during the construction phase would be **not significant**.

7.2 Operational Effects – Road Traffic Emissions

The assessment of air quality effects in relation to the development's operational phase has been initially undertaken qualitatively in accordance with EPUK/IAQM Guidance².

The results of this screening assessment concluded that a detailed assessment **is required**, due to the predicted traffic increases from the proposed development (715 AADT) and the proximity to Warrington AQMA No.4. As such, the next step is to use dispersion modelling in order to robustly quantify potential air quality impacts from the proposed development.



Appendices



Appendix 1 - Background to Air Quality

Emissions from road traffic contribute significantly to ambient pollutant concentrations in urban areas. The main constituents of vehicle exhaust emissions, produced by fuel combustion are carbon dioxide (CO₂) and water vapour (H₂O). However, combustion engines are not 100% efficient and partial combustion of fuel results in emissions of a number of other pollutants, including carbon monoxide (CO), particulate matter (PM), Volatile Organic Compounds (VOCs) and hydrocarbons (HC). For HC, the pollutants of most concern are 1,3 - butadiene (C₄H₆) and benzene (C₆H₆). In addition, some of the nitrogen (N) in the air is oxidised under the high temperature and pressure during combustion; resulting in emissions of oxides of nitrogen (NO_x). NO_x emissions from vehicles predominately consist of nitrogen oxide (NO), but also contain nitrogen dioxide (NO₂). Once emitted, NO can be oxidised in the atmosphere to produce further NO₂.

The quantities of each pollutant emitted depend upon a number of parameters; including the type and quantity of fuel used, the engine size, the vehicle speed, and the type of emissions abatement equipment fitted. Once emitted, these pollutants disperse in the air. Where there is no additional source of emission, pollutant concentrations generally decrease with distance from roads, until concentrations reach those of the background.

This air quality assessment focuses on NO₂ and PM₁₀ (PM of aerodynamic diameter less than 10µm) as these pollutants are least likely to meet their respective Air Quality Strategy (AQS) objectives near roads. This has been confirmed over recent years by the outcome of the Local Air Quality Management (LAQM) regime. The most recent statistics²⁴ regarding Air Quality Management Areas (AQMAs) show that approximately 650 AQMAs are declared in the UK. The majority of existing AQMAs have been declared in relation to road traffic emissions.

In line with these results, the reports produced by the Council under the LAQM regime have confirmed that road traffic within their administrative area is the main issue in relation to air quality.

An overview of these two pollutants, describing briefly the sources and processes influencing the ambient concentrations, is presented below.

Particulate Matter (PM₁₀)

Particulate matter is a mixture of solid and liquid particles suspended in the air. There are a number of ways in which airborne PM may be categorised. The most widely used categorisation is based on the size of particles such as $PM_{2.5}$, particles of aerodynamic diameter less than $2.5\mu m$ (micrometre = 10^{-6} metre), and PM_{10} , particles of aerodynamic diameter less than $10\mu m$. Generically, particulate residing in low altitude air is referred to as Total Suspended Particulate (TSP) and comprises coarse and fine material including dust.

Particulate matter comprises a wide range of materials arising from a variety of sources. Examples of anthropogenic sources are carbon (C) particles from incomplete combustion, bonfire ash, recondensed metallic vapours and secondary particles (or aerosols) formed by chemical reactions in the atmosphere. As well as being emitted directly from combustion sources, man-made particles can arise from mining, quarrying, demolition and construction operations, from brake and tyre wear in motor vehicles and from road dust resuspension from moving traffic or strong winds. Natural sources of PM include wind-blown sand and dust, forest fires, sea salt and biological particles such as pollen and fungal spores.

The health impacts from PM depend upon size and chemical composition of the particles. For the purposes of the AQS objectives, PM_{10} or $PM_{2.5}$ is solely defined on size rather than chemical composition. This enables a uniform method of measurement and comparison. The short and long-term exposure to PM has been associated with increased risk of lung and heart diseases.PM may also carry surface-absorbed carcinogenic compounds. Smaller PM have a greater likelihood of

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²⁴ Statistics from the UK AIR website available at https://uk-air.defra.gov.uk/aqma/summary - Figures as of November 2019



penetrating the respiratory tract and reaching the lung to blood interface and causing the above adverse health effects.

In the UK, emissions of PM_{10} have declined significantly since 1980, and were estimated to be 114kt (kilotonne) in 2010²⁵. Residential / public electricity and heat production and road transport are the largest sources of PM_{10} emissions. The road transport sector contributed 22% (25kt) of PM_{10} emissions in 2010. The main source within road transport is brake and tyre wear.

It is important to note that these estimates only refer to primary emissions, that is, the emissions directly resulting from sources and processes and do not include secondary particles. These secondary particles, which result from the interaction of various gaseous components in the air such as ammonia (NH₃), sulphur dioxide (SO₂) and NO_x, can come from further afield and impact on the air quality in the UK and vice versa.

Similarly to PM_{10} , emissions of $PM_{2.5}$ have declined since 1970, and were estimated to be 67kt in 2010, which makes over 58% of PM_{10} emissions. In 2010, the road transport sector emitted 28% (18kt) of the total $PM_{2.5}$ emissions in the UK.

Nitrogen Oxides (NO_x)

NO and NO₂, collectively known as NO_x, are produced during the high temperature combustion processes involving the oxidation of N. Initially, NO_x are mainly emitted as NO, which then undergoes further oxidation in the atmosphere, particularly with ozone (O₃), to produce secondary NO₂. Production of secondary NO₂ could also be favoured due to a class of compounds, VOCs, typically present in urban environments, and under certain meteorological conditions, such as hot sunny days and stagnant anti-cyclonic winter conditions.

Of NO_x , it is NO_2 that is associated with health impacts. Exposure to NO_2 can bring about reversible effects on lung function and airway responsiveness. It may also increase reactivity to natural allergens, and exposure to NO_2 puts children at increased risk of respiratory infection and may lead to poorer lung function in later life.

In the UK, emissions of NO_x have decreased by 62% between 1990 and 2010. For 2010, NO_x (as NO_2) emissions were estimated to be 1,106kt. The transport sector remained the largest source of NO_x emissions with road transport contribution 34% to NO_x emissions in 2010.

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²⁵ National Atmospheric Emissions Inventory (NAEI) Summary Emission Estimate Datasets 2010. March 2012



Appendix 2 – Site Plan





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PROPOSED RESIDENTIAL DEVELOPMENT ON LAND SOUTH OF A56 CHESTER ROAD WARRINGTON (2404)

VEHICULAR ACCESS APPRAISAL – OCTOBER 2021

Introduction

This note sets out a preliminary consideration of vehicular access options for a potential residential site on land comprising approximately 8 hectares of developable area situated south of the A56 Chester Road in south-west Warrington. It has been prepared to support Ashall Property Ltd make representations to Warrington Borough Council's updated Submission Version Local Plan (UPSVLP), which will guide development in the Borough to 2037.

The UPSVLP has undergone a number of significant changes since the previous iteration of the Plan (2019) including a reduction in the number of houses required and a reduced plan period which in turn resulted in the removal of the number of sites required to be removed from the Green Belt. The draft allocations removed include: South West Urban Extension (1,600 homes inclusive of Ashall Property Ltd landholdings south of Chester Road), Phipps Lane, Burtonwood Village (160 homes), Massey Brook Lane, Lymm (60 homes).

The Plan also seeks to move away from the Garden suburb concept in South Warrington (4,200 homes previously), and instead now includes a new proposal for the South East Warrington Urban Extension with a reduced capacity of 2,400 new homes in the Plan period. The Plan seeks to introduce one significant site into the Plan at the Former Fiddlers Ferry Power Station following its closure as a power station in March 2020. The Plan anticipates the delivery of 1,310 dwellings within the Plan period with a further 450 dwellings beyond the Plan period.



Site Location

To the immediate north of the site lies the A56 Chester Road. The site is bordered to the west by agricultural land, to the south by Warrington Rugby Union Football club and to the east by the small town of Walton. Approximately 2 kilometres to the north of the site lies Warrington town centre.

Development Proposals

The proposals will consist of the following mix:

- Retirement village (79 1 and 2 bed apartments and 60 1 bed Maisonettes),
- 37 affordable homes (policy compliant)
- 38 open market homes mix of 3/4/5 bed
- 8 self build housing plots (4 and 5 bed detached).

There are two vehicular access options which will be determined by the progress of the Warrington Western Link (WWL) scheme which is being promoted as part of the emerging Local Plan. Prior to the WWL being implemented the site can be accessed from Brookwood Close to the east of the site. Once the WWL is in place then the site can also be accessed from the new southern terminal junction of the WWL at its connection with Chester Road.

Vehicular Access

Warrington Borough Council (WBC) has now set out its preferred development option (PDO) for its local plan which will guide development to 2037.

The WWL will connect the A56/A5060 Chester Road with the A57 at Great Sankey. The WWL will pass to the north of the site and form a new bridge crossing over the Manchester Ship Canal.

Eddisons

As part of the access proposals for the site to the south of the A56, consideration was given to the extant proposals for the WWL and a number of different access design options for the southern junction of the WWL. These were submitted to the Council in March 2021 and for one reason or another were not incorporated within the updated Council designs, despite the options put forward by Ashall Property requiring less land take and each being considerably cheaper than the design current being promoted.

Notwithstanding the above, there remains two appropriate vehicular access options. The first relates to the pre-WWL scenario and includes a vehicular access from Brookwood Close to the east of the site. There is an existing adopted spur from the main Brookwood Close crescent arrangement that connects directly to the eastern boundary of the site.

The spur includes a 5.5 metre wide road and two metre wide footways on both sides of the road. This could be a temporary arrangement until the WWL is completed.

Once the southern section of the WWL is completed, the site could be accessed from a realigned Chester Road as part of the southern terminal junction of the WWL. This is shown on illustrative masterplan/indicative layout drawing 016-023-P004 REV F as a priority controlled access arrangement from the southern section of the new terminal junction of the WWL.

The ultimate vehicular arrangements could be a combination of the Brookwood Close and WWL arrangements.

Both vehicular arrangements will need to be designed in more detail and assessed as part of a formal Transport Assessment that will support any subsequent planning submission at this site.



Conclusions

In summary, this note has set out a preliminary consideration of vehicular access options for a potential residential site on land comprising approximately 8 hectares of developable area situated south of the A56 Chester Road, south-west Warrington.

It has been demonstrated that there are two potential vehicular access arrangements that can complement, and not prejudice, the progression of the Warrington Western Link and furthermore, the site can be brought forward in advance of the WWL safely and efficiently.

Encs - Drawing Number 016-023-P004 Revision F



ASHALL PROPERTY LIMITED

LAND SOUTH-WEST OF WARRINGTON

ARCHAEOLOGY AND CULTURAL HERITAGE APPRAISAL REPORT

NOVEMBER 2021



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ASHALL PROPERTY LIMITED

LAND SOUTH-WEST OF WARRINGTON

ARCHAEOLOGY AND CULTURAL HERITAGE APPRAISAL REPORT

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ASHALL PROPERTY LIMITED LAND SOUTH-WEST OF WARRINGTON ARCHAEOLOGY AND CULTURAL HERITAGE APPRAISAL REPORT



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1 INTRODUCTION

- 1.1.1 Wardell Armstrong (a Registered Archaeological Organisation with the Chartered Institute for Archaeologists) has been commissioned to produce an archaeology and cultural heritage appraisal to support a Local Plan submission in relation to the promotion of a site in south-west Warrington. The Site is located within the eastern part of the wider South West Urban Extension (SWUE), identified by Warrington Borough Council (WBC) as one of the areas of growth within the Preferred Development Option (2019). Future proposals would comprise residential development.
- 1.1.2 The Site is located to the immediate south-west of the settlement boundary of Warrington, to the west of Walton (NGR: SJ 60365 85726).
- 1.1.3 This appraisal provides an evaluation of the archaeological and built heritage sensitivity of the Site by identifying all recorded designated and non-designated heritage assets of an archaeological and built heritage nature within the Site boundary and within its vicinity that may be sensitive to future development within the Site.
- 1.1.4 This report seeks to demonstrate that forthcoming development proposals are demonstrably feasible, being compatible with legislation and national planning policy.



2 LEGISLATION AND NATIONAL PLANNING POLICY

2.1.1 A heritage asset is defined in the National Planning Policy Framework (NPPF) as 'a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions because of its heritage interest' (Ministry of Housing, Communities and Local Government 2021, Annex 2 page:67).

2.2 Legislation

- 2.2.1 Designated heritage assets protected by statutory legislation comprise Scheduled Monuments, Protected Wrecks, Listed Buildings and Conservation Areas.
- 2.2.2 Nationally significant archaeological sites, monuments and structures are protected under the Ancient Monuments and Archaeological Areas Act (1979), which provides for a schedule of nationally important monuments. It should be noted that this Act makes no provision for the setting of scheduled monument, which is a matter of planning policy only.
- 2.2.3 In relation to development proposals, The Planning (Listed Buildings and Conservation Areas) Act (1990)states that:

'in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the secretary of state shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses' (Section 66).

2.2.4 With regard to Conservation Areas, the Act states that:

'special attention shall be paid to the desirability of preserving or enhancing the character of that area' (Section 72).

2.3 National Policy

2.3.1 The National Planning Policy Framework (NPPF) supported by the National Planning Policy Guidance (PPG; Department for Communities and Local Government), which endorses the conservation and enhancement of the historic environment, defines the role of the planning system as to promote and achieve sustainable development and involves protecting and enhancing 'our natural, built and historic environment' (MHCLG 2021, page 5).



- 2.3.2 The NPPF requires that in determining applications 'great weight' should be given to the asset's conservation and that 'substantial harm to or loss of...assets of the highest significance, notably Scheduled Monuments ...should be wholly exceptional' (MHCLG 2021, para:199 & 200).
- 2.3.3 In ensuring the statutory duty of the Planning (Listed Building and Conservation Areas)
 Act, the NPPF requires that in determining applications 'great weight' should be given
 to the asset's conservation and that 'substantial harm to or loss of... grade II listed
 buildings, or grade II registered parks or gardens, should be exceptional' whilst
 'substantial harm to or loss of...assets of the highest significance, notably Scheduled
 Monuments, protected wreck sites, registered battlefields, Grade I and II* listed
 buildings, Grade I and II* Registered Parks And Gardens, and World Heritage Sites,
 should be wholly exceptional' (MHCLG 2021, para:199 & 200).
- 2.3.4 Non-statutory designated heritage assets, comprising Registered Battlefields and Registered Parks and Gardens, are protected under national and local planning policy only. This is also the case for the remainder of the archaeological resource; entries onto a historic environment record or sites and monument record as well as previously unknown features which may be recorded during the course of data collection in respect to a given development proposal.
- 2.3.5 The significance of a heritage asset (designated or non-designated) is defined within the National Planning Policy Framework (NPPF) as 'the value of a heritage asset to this and future generations because of its heritage interest. This interest may be archaeological, architectural, artistic or historic' (MHCLG 2021, Annex 2 page:71).
- 2.3.6 The setting of a heritage asset (designated or non-designated) is defined as 'the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.' (MHCLG 2021, Annex 2 page:71).
- 2.3.7 Where heritage assets (designated or non-designated) are to be affected by development, 'local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance' (MHCLG 2021, para:194).



- 2.3.8 Developments where substantial harm to or total loss of significance of a designated heritage asset occurs should be assessed against specific tests and should deliver substantial public benefits which outweigh any loss or harm (MHCLG 2021, para:201). Less than substantial harm to a designated asset would require public benefits including the securement of an optimum viable use (MHCLG 2021, para:202).
- 2.3.9 Impacts to the significance of non-designated assets will require a balanced judgement based on the level of significance and the scale of harm (MHCLG 2021, para:203), although non-designated assets which are of equivalent significance to designated assets will be considered as such (MHCLG 2021, page:57). Where heritage assets of an archaeological nature may be impacted upon by development 'local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation' (MHCLG 2021, para:194).

2.4 Local Policy

- 2.4.1 The Warrington Local Plan Core Strategy was adopted by the council on 21 July 2014.
- 2.4.2 Relevant policy is quoted below.

Policy QE 8 Historic Environment

The Council will ensure that the fabric and setting of heritage assets, as set out below, are appropriately protected and enhanced in accordance with the principles set out in National Planning Policy.

- Scheduled Monuments
- Listed Buildings
- Conservation Areas
- Areas of known or potential Archaeological Interest
- Locally Listed Heritage Assets

The Council and its partners will aim to recognise the significance and value of historic assets by identifying their positive influence on the character of the environment and an area's sense of place; their ability to contribute to economic activity and act as a catalyst for regeneration; and their ability to inspire the design of new development.

Heritage Assets such as buildings, structures and sites which are valued as good examples of local architectural styles or for their historic associations, are included on a local list produced by the Council. The buildings, structures and sites included on this list are detailed in Appendix 4.

To be included on the local list, an asset should be substantially unaltered and retain the majority of its original features and either:

- 1. be a good example of a particular local asset type, craftsmanship, architectural quality, style or detailing, or
- 2. display physical evidence of periods of local economic, technical or social significance, well-known local people or historic events



Development proposals which affect the character and setting of all heritage assets will be required to provide supporting information proportionate to the designation of the asset which;

- adopts a strong vision of what could be achieved which is rooted in an understanding of the asset's significance and value, including its setting;
- avoids the unnecessary loss of and any decay to the historic fabric which once lost cannot be restored;
- recognises and enhances the asset's contribution to the special qualities, local distinctiveness and unique physical aspects of the area;
- fully accords with the design principles outlined elsewhere within the Local Planning Framework;
- includes suitable mitigation measures, including an appropriate desk-based assessment and where necessary field evaluation and publication, for areas with known or potential archaeological interest;
- ensures the knowledge and understanding of the historic environment is available for this and future generations. The evidence arising from any investigations should be publicly accessible through the Historic Environment Record and the local museum.

Applications for new development will also be required to take all reasonable steps to retain and incorporate non-statutorily protected heritage assets contributing to the quality of the borough's broader historic environment.

- 2.4.3 Warrington Council have published a draft updated Local Plan in 2021, which is subject to consultation at the time of writing.
- 2.4.4 Relevant policy is quoted below.

Policy DC2 - Historic Environment

General Principles

- 1. The Council will, through planning decisions and in fulfilling its wider functions, proactively manage and work with developers, the local community and others to support proposals which conserve or, where appropriate, enhance the historic environment of Warrington.
- 2. Particular consideration will be given to ensure that the significance of those elements of the historic environment which contribute most to the Borough's distinctive identity and sense of place are not harmed. These include, but not exclusively:
 - a. Evidence of Roman activity such as the settlement at Wilderspool and the roads at Appleton and Stretton.
 - b. Moated sites, country houses, farmhouses and associated outbuildings in the countryside including Bradley Old Hall, Barrow Old Hall and Bewsey Old Hall.
 - c. The site of the Battle of Winwick, also known as the Battle of Red Bank, now a registered Battlefield.
 - d. The Borough's industrial heritage including the Bank Quay Transporter Bridge, Sankey Canal, Bridgewater Canal and Manchester Ship Canal, Sankey Viaduct and other associated infrastructure and buildings.
 - e. Places of worship of different denominations.



- f. The range of civic and institutional buildings, including the Town Hall, Libraries and Schools.
- g. The town's mid to late nineteenth century terraces around Palmyra Square.
- h. The buildings associated with the Borough's role as a major centre for brewing including the range and quality of its public houses.
- i. Conservation Areas and Listed Buildings across the Borough.
- Key cultural assets encompassing parklands, woodlands, landscapes, canals and riversides, museums, libraries, art galleries, public art, food and drink, customs and traditions.
- 3. As well as fulfilling its statutory obligations, the Council will:
 - a. Seek to identify, protect and enhance local heritage assets through the review and update to its Local List;
 - b. Promote heritage-led regeneration including in relation to development opportunities;
 - c. Produce new Conservation Area Appraisals and Management Plans;
 - d. Develop a positive strategy to safeguard the future of any heritage assets that are considered to be "at risk";
 - e. Adopt a proactive approach to utilising development opportunities to increase the promotion and interpretation of the Borough's rich archaeological wealth; and
 - f. Develop a positive heritage strategy for the Borough.

Assessing Development Proposals

- 4. Proposals affecting a designated heritage asset, or an archaeological site of national importance, should conserve those elements which contribute to its significance. Harm to such elements will be permitted only where this is clearly justified and outweighed by the public benefits of the proposal. Substantial harm or total loss to the significance of a designated heritage asset (or an archaeological site of national importance) will be permitted only in exceptional circumstances. Where permission is granted for a development which would result in the partial or total loss of a designated heritage asset, approval will be conditional upon the asset being fully recorded and the information deposited with the Historic Environment Record (HER).
- 5. Proposals which would remove, harm or undermine the significance of a non-designated heritage asset will only be permitted where the benefits are considered sufficient to outweigh the harm to the character of the local area.
- 6. Where the proposal affects (non-designated) archaeological sites of less than national importance it should conserve those elements which contribute to their significance in line with the importance of the remains. In those cases where development affecting such sites is acceptable in principle, mitigation of damage will be ensured through the preservation of the remains in situ as a preferred solution. When in situ preservation is not justified, the developer will be required to make adequate provision for excavation and recording before or during development, the findings of which should be deposited with the Historic Environment Record.



- 7. Proposals within or affecting the setting of a Conservation Area will only be permitted where it preserves or enhances the character and appearance of the area including those elements which have been identified within the Conservation Area appraisal as making a positive contribution to the significance of that area.
- 8. All applications which affect a heritage asset should be accompanied by a Statement of Significance which may form part of a Design and Access statement and/or a Heritage Impact Assessment. This should provide the information necessary to assess the impact of the proposals on the heritage asset and its setting including demonstrating how the proposal has taken into account the elements that contribute to its significance, including where relevant, its architectural and historic interest, character and appearance.



3 APPRAISAL METHODOLOGY

3.1 Baseline Data

- 3.1.1 In order to inform this assessment baseline data and information was obtained from the following:
 - Heritage Appraisal Warrington Local Plan South West Urban Extension (SWUE)
 produced by Turley (2018) on behalf of the SWUE Consortium (Peel L&P
 Investments (North) Limited, Story Homes Limited, Ashall Property Ltd);
 - Heritage Impact Assessment for the South West Urban Extension Allocation in the Local Plan (Warrington Borough Council 2019);
 - Land in SW Warrington: Briefing Note (BB Heritage 2019) prepared on behalf of Ashall Property Ltd to further develop the Heritage Appraisal Warrington Local Plan – South West Urban Extension (SWUE) produced by Turley;
 - Cheshire Historic Environment Record (CHER) (consulted October 2021);
 - GIS datasets (Historic England 2021):
 - Scheduled Monuments;
 - Listed Buildings;
 - Registered Parks and Gardens and
 - o Registered Battlefields.
- 3.1.2 The Cheshire Historic Environment Record (CHER) was consulted for entries within the search area (taken as an area of approximately 1km radius from the centre of the Site). Besides identifying heritage assets that may be directly or indirectly affected by future proposed developments this search boundary was expected to provide sufficient data to represent the archaeological character of the area. Information on designated heritage assets was complimented by GIS information downloaded from Historic England (Historic England 2021).

3.2 Assessing Significance

3.2.1 The significance of a heritage asset (designated or non-designated) is defined within the National Planning Policy Framework (NPPF) as 'the value of a heritage asset to this and future generations because of its heritage interest. This interest may be archaeological, architectural, artistic or historic' (MHCLG 2021, Annex 2 page:71).



- 3.2.2 The setting of a heritage asset (designated or non-designated) is defined as 'the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.' (MHCLG 2021, Annex 2 page:71).
- 3.2.3 In respect of identifying the importance of setting to the special interest of a heritage asset (whether designated or non-designated) Historic England's good practice guidance presented in the *Setting of Heritage Assets (2017)* will be utilised to assess the degree, if any, to which setting contributes towards understanding the significance of the asset.



4 BASELINE INFORMATION

4.1 **Description**

- 4.1.1 The Site is bounded to the north by Chester Road, the A56, t the east by woodland plantation to the rear gardens of residential properties on Brookwood Close and the rear gardens of residential properties on Springbrook to the north-east corner of the Site. To the western boundary is woodland and the grounds of the Walton Lea Partnership and to the south rear gardens to residential properties on Old Hall Close and a sports field.
- 4.1.2 The Site compromises a large agricultural field (viewed from Google Earth 2021).

4.2 **Geology and Topography**

- 4.2.1 The c.8.2 hectare Site is located on a slight north-east facing slope which descends in height from c.27m aOD in the south-west to 15m aOD in the north-east.
- 4.2.2 The bedrock comprises Wilmslow Sandstone Formation formed approximately 247 to 252 million years ago in the Triassic Period. This is overlain by Shirdley Hill Sand Formation formed up to 2 million years ago in the Quaternary Period (BGS 2021).

4.3 Known Constraints

- 4.3.1 There are no designated heritage assets (listed buildings, scheduled monument, conservation areas, registered parks and gardens or historic battlefields) recorded within the Site boundary.
- 4.3.2 Within 1km of the Site, there are 25 Grade II listed buildings, 1 Grade II* listed building and Walton Conservation Area.
- 4.3.3 There are 35 locally listed buildings within the search area; none are recorded within the Site boundary.
- 4.3.4 The Cheshire HER records the presence of the following non-designated heritage assets within the Site:
 - Roman finds (CHER 15363);
 - Medieval and post medieval finds (CHER 15364); and
 - Post medieval coin (CHER 15365)
- 4.3.5 These assets are shown in Figures ST19103-001 & 002 included within the appendices of this report.



4.4 General Historical Background

Previous Archaeological Fieldwork

4.4.1 The CHER does not record any previous archaeological fieldwork having been undertaken within the Site.

Prehistoric

- 4.4.2 There are no prehistoric CHER assets recorded within the Site boundary.
- 4.4.3 Possible prehistoric timber piling was found near to the entrance of Warrington Docks, 620m north-east of the Site (CHER 477/1). Two irregular lines of timbers interspersed with rows of stakes crossed in herringbone fashion were recorded. Associated were oyster shells and sticks and sedges in horizontal layers. A prehistoric flint scraper was also found (CHER 477/0/1).
- 4.4.4 A Bronze Age barrow is noted 680m north-east of the Site (CHER 484). A deep vase of red pottery containing burnt human bone was found within the mound. The mound was later re-used as a windmill mound, first mentioned in 1627 (CHER 485).
 - Iron Age and Romano-British
- 4.4.5 Roman finds are recorded within the Site boundary (CHER 15363). These are discussed below.
- 4.4.6 Cropmarks attesting to Iron Age to Romano-British ditches have been recorded 385m west of the Site (CHER 1462641). These are possibly indicative of a field system.
- 4.4.7 Extensive Romano-British activity has been recorded within the search area including two known Roman roads. The first, King Street, is recorded 850m east of the Site (CHER 436/1/0 & 436/1/18). The second road adjoining King Street and running southwest to Chester, is located 116m north of the Site, along which the modern A56 Chester Road is aligned (CHER 2417/1/0). A third possible Roman road has been identified 560m north-east of the Site (CHER 446/1).
- 4.4.8 A Roman settlement has been found at Wilderspool, 600m east of the Site, which is designated as an Area of Potential by CHER (CHER 435 & 7768) (CHER DCH12614). It was probably a civilian settlement, housing a largely industrial community. Three Roman pottery kilns have been recorded (CHER 435/4). It is thought to have been possibly occupied from the end of the first century AD to the third century AD. The settlement grew up around the area where the river Mersey was at its lowest allowing the crossing of river by ford. It would also have been the best place for ships to offload



- their cargoes and is believed to have become a port and an industrial town. A Roman temple within the settlement was found 840m north-east of the Site (CHER 435/2).
- 4.4.9 Three groups of cremation burials dating to the early to mid-second century were also found located on the west side of the Roman road (CHER 7430). Cremation group 1 comprised of three complete vessels; a black burnished ware jar, an embossed jar, and a flagon, with both the latter two of orange fabric. The vessels were placed within a circular pit cut into natural sands. The fill of the black burnished ware jar was found to contain the remains of a single adult. Cremation group 2 was 5m south-east of group 1 and comprised of one complete grey ware jar, containing the remains of an adult, set in a pit cut into natural sand. Group 3 was situated 'some distance' to the north, and contained two plough-damaged vessels, a black burnished ware jar and a small grey ware jar or beaker. The black burnished ware jar contained the remains of two individuals, an adolescent and a child.
- 4.4.10 Other Roman finds beyond Wilderspool Roman settlement are known of within the north of the Site, where cosmetic implements including a nail cleaner, and a brooch were recovered during metal detecting (CHER 15363).
- 4.4.11 Further Roman finds recovered 185m south of the Site during metal detecting include Roman coins, brooches and other metal objects (CHER 15366). These objects may represent casual loss, being in proximity to known Roman settlement and roads.
 - Early Medieval
- 4.4.12 There are no early medieval CHER assets recorded within the Site boundary.
- 4.4.13 Along the course of the river Mersey and Walton Lock, 600m north of the Site, Saxon logboats have been excavated on four separate occasions (CHER 500, 501/0/1, 501/0/2 & 504). Radiocarbon dates of the boats have provided a late early medieval to medieval use.
 - Medieval
- 4.4.14 Medieval finds are recorded within the Site boundary (CHER 15364). These are discussed below.
- 4.4.15 Medieval settlement is noted in the search area at Walton Old Hall, 70m south of the Site, which was once the seat of the manor of Walton Superior (CHER 15370/1). A hall is thought to have been located on the site since the late 12th century, although the hall demolished in the 1890s was likely to have been constructed in the 16th century.



- 4.4.16 Medieval buildings indicate the development of Walton during this period including Walton Mill located 105m north of the Site, known to have been in existence by the mid-12th century (CHER 475/1) and a possible hospital 485m east of the Site, founded before 1354-5 (CHER 462/1). A medieval ford is known of, located 405m north of the Site (HER 476).
- 4.4.17 Five carved stone heads, two of which are stylistically medieval or later, have been recorded at Walton Lea, 40m west of the Site (CHER 2970). Nearby, medieval and post medieval finds have been recorded within the Site (CHER 15364) and 140m south of the Site (CHER 15371). Those found within the Site comprise numerous cast copper alloy finger rings.

Post Medieval and Map Regression

- 4.4.18 The CHER records post medieval buildings within the search area including two mills; a watermill located 680m south-west of the Site (CHER 14266) and a windmill located 700m north-east (CHER 485). The site of a 17th century bridge is noted 485m east of the Site (CHER 451/1).
- 4.4.19 A silver groat of Elizabeth I (16th century) coin has been recovered from within the Site boundary (CHER 15365). Within the search area, other post medieval coins and metal weights have also been recorded located 140m south and 740m south-east of the Site respectively (CHER 15368 & 470).
- 4.4.20 The various navigational improvements on the River Mersey from 1730, the construction of the Bridgewater Canal (CHER 7173) in the 1770s and the construction of other subsequent canals including the Manchester Ship Canal (CHER 14208), greatly improved the bulk transport of goods, stimulating manufacturing towards the end of the period.
- 4.4.21 The earliest mapping viewed as part of this assessment was the Higher Walton Tithe map dated 1843 (see plate 1). This showed the Site comprising one field (parcel 54), which was owned by Thomas Brooke Langford and occupied by Joseph Acton. It fell under the land ownership of 'Walton Hall', later referred to as Walton Old Hall, shown to the south of the Site (CHER 15370/1). Parcel 54 is named within the accompanying apportionment as Hall Field and cultivated barley, wheat and potatoes.
- 4.4.22 The subsequent 1882 Ordnance Survey (OS) map shows the Site had been divided into two fields (see plate 2). Walton Lea estate buildings are shown to the east of the Site within woodland.



- 4.4.23 The 1899 OS map shows further internal division within the Site boundary, to create three fields (see plate 3). The Site remains undeveloped.
- 4.4.24 The subsequent mapping shows no significant changes to the Site which has remained undeveloped and in agricultural use.

Undated

4.4.25 Several undated human skulls were found during construction work on the new river diversion across Arpley Meadows in 1893, located 635m north of the Site (CHER 450).

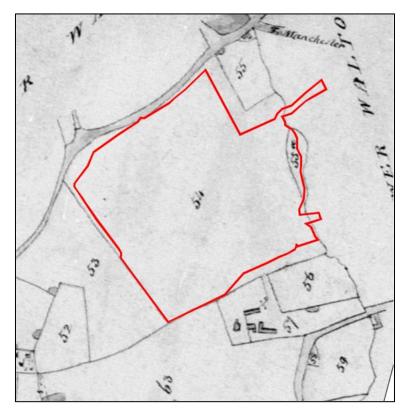


Plate 1: Extract from Higher Walton Tithe map, 1843.



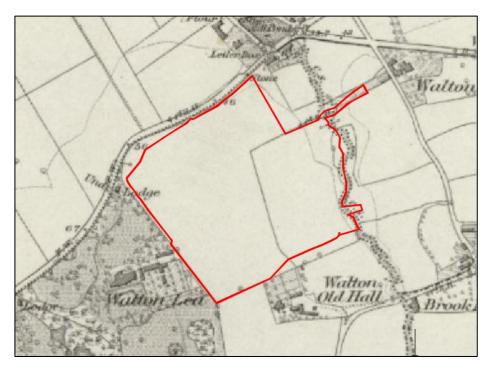


Plate 2: Extract from 1882 OS map.

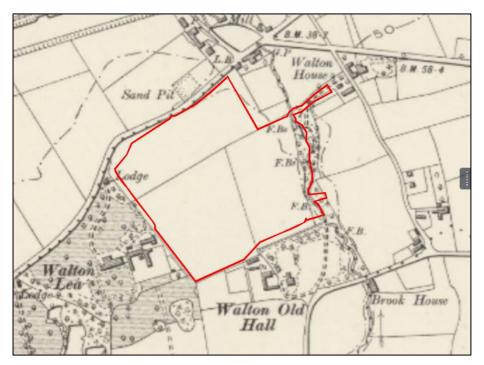


Plate 3: Extract from 1889 OS map.



5 IMPACT PREDICTION

5.1 **Likely Direct Impacts**

- 5.1.1 There are no designated heritage assets recorded within the Site boundary.
- 5.1.2 The baseline evidence does not indicate a particularly high potential for remains from any period preceding the medieval period when the Site likely fell under the agricultural land ownership to Walton Old Hall, which it remained until at least the Tithe map of 1843. Whilst findspots of Romano-British date have been recovered from within the Site, these likely represent casual loss, rather than evidence for a foci of occupation/settlement within the Site. There is no evidence for prehistoric or early medieval activity within close vicinity to the Site; evidence of such activity being located to the north and north-west edges of the search area, in close proximity to the River Mersey.
- 5.1.3 Medieval and post medieval finds recovered from the Site likely represent transient loss, rather than indicative of occupation within the Site.
- 5.1.4 Whilst there is no evidence for buried remains which would preclude development, the potential presence of remains may be further clarified through a site walkover assessment by an experienced archaeologist to elucidate on ground conditions, and through additional information from the Cheshire Archives, which would be consulted as part of the preparation of an Archaeological Desk Based Assessment to accompany a subsequent planning application.
- 5.1.5 Nevertheless, the current baseline would not be anticipated to indicate the presence of remains which would preclude future development and significant impacts are not considered likely.

5.2 **Likely Indirect Impacts**

- 5.2.1 With regards to designated heritage assets, there are no designated heritage assets recorded within the Site boundary. Within 1km of the Site, there is one Grade II* listed building, 25 Grade II listed buildings and Walton Conservation Area.
- 5.2.2 The CHER also records 35 locally listed buildings (LLB) which are non-designated heritage assets, within the 1km search area. No LLB's are recorded within the Site boundary.
- 5.2.3 The following heritage assets may be sensitive to indirect changes within their setting as an effect of future development within the Site. This has been assessed with due



regard to the previous heritage assessments of the Site and the wider SWUE, to distance, significance of the asset and utilising Historic England's setting guidance whereby an understanding of any historic associations or links with Site have been considered:

- Church of St John the Evangelist (Grade II* listed, NHLE 1139352);
- Walnut Tree Farmhouse (Grade II listed, NHLE 1135992);
- 33 Chester Road (Grade II listed, NHLE 1139348);
- Walton House (Grade II listed, NHLE 1329795);
- The Ship Public House (LLB, CHER DCH12856);
- 99 Chester Road (LLB, CHER DCH12995);
- 34 and 35 Chester Road (LLB, CHER DCH12997);
- Walton Lea Cottage 1 to 3 (LLB, CHER DCH13012);
- Walled Garden South of Walton Lea Cottage (LLB CHER DCH13697).
- 5.2.4 The above assets are shown in Figure ST19103-001 included within the appendices of this report.
- 5.2.5 It is considered that the remaining heritage assets within the search area could be scoped out of further detailed assessment within a heritage assessment prepared to accompany a future planning application with due regard to intervening distance, existing intervening infrastructure and extensive vegetation which precludes views / intervisibility with the Site, and with due regards to an understanding of the significance of the designated heritage assets whereby their significance lies wholly/predominantly within their fabric and/or the lack of change which the proposals would cause in respect to elements of setting which contribute towards their significance.
- 5.2.6 A focussed description of the significance of the built heritage assets referenced above is provided below. Where appropriate, the description will also be discussed against the conclusions drawn by Warrington Borough Council's Heritage Impact Assessment for the South West Urban Extension Allocation (WBC 2019).
 - Church of St John the Evangelist (NHLE 1139352) located 510m south-west of the Site
- 5.2.7 The significance of the church derives from its historic and architectural interests as a late-19th century building which clearly expresses its ecclesiastical function. The



- presence of the church and its architecture illustrates the ecclesiastical needs of the local population.
- 5.2.8 The church was built by Sir Gilbert Greenall and formed the principal building within the Walton Hall estate village. The church forms a landmark feature of the conservation area.
- 5.2.9 The church has historic association with the Walton Hall estate which forms its principal setting. The Heritage Statement notes that views from the estate lodge and along the driveway to the church provide for picturesque views of the Church and intervisibility with an important building within the Walton Hall Estate village. It is likely that these views were designed for their picturesque qualities to create architectural and landscape interest on arrival at the estate.
- 5.2.10 Of relevance to the Site, the mature parkland of the north-eastern boundary of the Walton Hall estate encloses the conservation area, forming a boundary to the settlement of Walton located directly to the north-east.
- 5.2.11 The Site is located 510m north-east of the church with the extensive woodland forming the north-eastern boundary of the Walton Hall estate, intervening between the Site and the Church such that if any views are possible, these would likely be limited to the upper parts of the tower of the Church only. Where the proposals within the Site may infringe on views of the tower, these views are not the only views of the tower, which is best appreciated from within the Conservation Area and Walton Hall estate grounds, as planned. The prominence of the Church and its clear ecclesiastical role would remain appreciable and understandable within the estate which forms its primary setting. The proposals would not be visible from within the Church's immediate churchyard setting, these grounds enveloping the church as a place for intimate worship and reflection and providing enclosure being unaffected.
- 5.2.12 With due regard to the intervening distance and the existing intervening vegetation, as well as the identified elements of the Church's setting which contribute to its significance, it is considered that the Site is not a feature or attribute of the Church's setting which contributes to an understanding of its significance. No indirect impacts to significance through future, proposed development within the Site are predicted. It is anticipated that there would be **no harm** to significance. This concurs with the conclusions of WBC's Heritage Impact Assessment (2019).



Walnut Tree Farmhouse (NHLE 1135992) located 52m north of the Site

- 5.2.13 Walnut Farmhouse has historic and architectural interest as a (mainly) early 19th century farmhouse, which is likely to incorporate earlier structures. Although altered, its vernacular architecture is of interest and contributes to an understanding of traditional farm buildings in this part of the country. Its central square brick chimney with sloped projecting courses suggests at a former steeped roof which was possibly thatched.
- 5.2.14 The farmhouse is situated to the north of and orientated towards the A56. There is dense coniferous and deciduous trees and planting in the farmhouse garden along its boundary with the A56. As a result it has a high degree of enclosure and is not easily seen or experienced from within the surrounding area.
- 5.2.15 There is no historic association between the farmhouse and the land within the Site.

 The A56 and the dense mature treeline along the property boundary to Walnut Tree
 Farmhouse provides, clear visual separation between the Site and the asset such that
 the Site is not considered to contribute to an understanding of its significance.
- 5.2.16 No indirect impacts to significance through future, proposed development within the Site are predicted, it is anticipated that there would be **no harm** to significance. In relation to the conclusions of WBC's Heritage Impact Assessment (2019), the report does not identify any indirect setting impacts as a result of development to the south of the asset within the Site boundary. This assessment concurs with that of WBC.
 - 33 Chester Road (NHLE 1139348) located 120m north-east of the Site
- 5.2.17 33 Chester Road has historic and architectural interest as a 19th century cottage, which was originally constructed as a 2 bay farmhouse with the shippon and hayloft on the left side. Although altered, its vernacular architecture is of interest and contributes to an understanding of traditional farm buildings and their adaption and re-use.
- 5.2.18 The cottage is situated adjacent to and orientated towards the A56, on the north-east corner of a crossroads, forming part of a residential streetscape. To its east and north it is bounded by later residential buildings; those to the north being semi-detached two storey red brick buildings.
- 5.2.19 There is no historic association between the cottage and the land within the Site. The A56 provides separation between the Site and the asset and no intervisibility is possible due to the presence of intervening buildings such that the Site is not considered to contribute to an understanding of the significance of the asset.



- 5.2.20 No indirect impacts to significance through future, proposed development are predicted, it is anticipated that there would be **no harm** to significance. This concurs with the conclusions of WBC's Heritage Impact Assessment (2019).
- 5.2.21 Walton House (NHLE 1329795) located 71m east of the Site
- 5.2.22 The significance of the building derives from its historic and architectural interests as a large late-18th century house with an adjacent coach house that was historically associated with the Daresbury Estate. The listing description notes both external and internal features of special interest including good, ornamented plasterwork and open-string dog-leg stair through both storeys with mahogany rail on square balusters.
- 5.2.23 The principal elevation of the house faces east overlooking a private, walled garden with service buildings including the former coach house located to the rear to its west. It is surrounded by residential buildings with the A56 to its north.
- 5.2.24 There is no historic association between the house and the land within the Site. The intervening buildings provide for clear separation between the Site and the asset and no views towards the asset are possible from the Site such that the Site is not considered to contribute to an understanding of its significance.
- 5.2.25 No indirect impacts to significance through the proposed development are predicted, it is anticipated that there would be **no harm** to significance. This concurs with the conclusions of WBC's Heritage Impact Assessment (2019).
 - The Ship Public House (CHER DCH12856) located 30m north-east of the Site
- 5.2.26 The interest of the public house has been substantially diminished through its complete demolition in 2015 and rebuild in 2016 with interest derived from its contribution to the local street scene.
- 5.2.27 The building was originally of likely mid-19th century date, perhaps built as a dwelling house. The building was enlarged in the early 1890s at the time of the arrival of the ship canal, to serve the needs of the village and the labourers and travellers of that period. The building was subject to further enlargement post 1960s, when it became a pub-restaurant. In 2015, the building was structurally damaged and partially collapsed, leading to its full demolition. It was rebuilt in 2016, to a similar aesthetic to the original building.
- 5.2.28 The building fronts the A56 to the north, forming part of a residential streetscape. To its rear, to the south there is a recent housing development. It is the first/last building



- on the south side of the A56 as one approaches/leaves Walton village. This interaction with the main road of the A56 is historically linked to its use as an inn and is an element of its setting which adds to its interest. During its rebuild in 2016, the building was converted to residential accommodation and apart from its scale and roadside position, there is nothing to suggest that it was formally in use as a pub.
- 5.2.29 The building does not overlook the Site with no windows present on its western elevation indicating that there is no intended visual connection between the Site and the asset. Whilst development in the Site would lead to the building no longer being the first/last building along Chester Road, this understanding of its historic function has been substantially eroded through its demolition/rebuild and conversion to residential apartments whereby the only indication of its former use is its scale and roadside position. It is considered that principle setting elements of the building is its interaction with the A56 streetscape where it contributes to the local aesthetic and ambience of the street scene; the Site is not an element of the locally listed building's setting which adds to an understanding of its local, limited interest.
- 5.2.30 No indirect impacts to significance through future, proposed development of the land within the Site are predicted, it is anticipated that there would be **no harm** to significance. This concurs with the conclusions of WBC's Heritage Impact Assessment (2019) whereby the asset was screened out of assessment due to the lack of connection with the Site.
 - 99 Chester Road (CHER DCH12995) located 13m west of the Site
- 5.2.31 The building comprises a detached one storey building constructed in stone and designed with a gable roof. Historic mapping indicates that it was originally a lodge house constructed in the late 19th century, associated with Walton Lea, a mansion house (now demolished) which was located to the south of the asset and to the west of the Site.
- 5.2.32 The property fronts on to the A56 and is enclosed by a stone wall, with gardens to the rear, woodland to the south and a band of trees to the north. The Site sits to the east of the property, separated by an access road and deciduous and evergreen planting.
- 5.2.33 Whilst views may be possible between the Site and the asset, the land within the Site is not considered to contribute to an understanding of the significance of the asset; there is no historic association between the asset and the Site, the lodge having a functional and aesthetic role in defining the entrance to the northern access road to Walton Lea.



- 5.2.34 No indirect impacts to significance through future proposed development of the land within the Site are predicted. It is anticipated that there would be **no harm** to significance. This concurs with the conclusions of WBC's Heritage Impact Assessment (2019). Retention of the existing deciduous planting to the east of the asset would be recommended as part of the masterplanning of the Site.
 - 34 and 35 Chester Road (CHER DCH12997) located 65m north-east of the Site
- 5.2.35 The asset comprises a pair of semi-detached cottages constructed in brick and designed with a gable roof and two chimney stacks. They are shown on the Tithe map for Lower Walton and therefore date to at least 1843.
- 5.2.36 The principal elevation of the cottages front the A56 to the north, forming part of an established residential streetscape. They are separated from the adjacent footpath by a low brick wall (No. 34) and iron railings (No. 54). They represent one of the first buildings on entering the settlement of Walton from the west. There is no historic connection between the Site and the cottages.
- 5.2.37 The WBC's Heritage Impact Assessment (2019) concludes that site allocation would 'result in low harm to the significance of the heritage assets and their setting due to the current open nature of the Site providing some value to the way the assets are appreciated'.
- 5.2.38 The cottages, which are prominent from the street scene, contribute to the character and aesthetic of this part of the village; their principle setting element being their interaction with the A56 streetscape. Directly to their south is the recent housing development associated with the Ship Inn such that no views are possible between the assets and the Site due to the intervening buildings and vegetation, as identified by WBC in their assessment. This development also provides a clear, physical separation between the Site and the assets and presents an urban edge to the settlement of Walton. Open space in vicinity of the assets is noted directly to their east and south-east.
- 5.2.39 Due to there being no historic, tangible or visual link between the Site and the asset, the contribution made by the land within the Site to the significance of the cottages is considered by this assessment to be negligible and it is anticipated that there would be no indirect impacts to significance through future proposed development resulting in **no harm** to the significance of the assets. However, should a Heritage Statement undertaken as part of a future planning application identify harm to the assets as a result of proposed development, this is anticipated to be well within the less than



substantial harm bracket. Any potential harm arising may be mitigated as outlined by WBC's assessment through the inclusion of a landscaping buffer at the eastern end of the Site and by ensuring that new buildings/site layout are designed sensitively with the scale, material and form of the heritage assets in mind.

Buildings associated with Walton Lea including 1-3 Walton Lea Cottages (CHER DCH13012 and the Walled Garden (CHER DCH13697) located 7m west of the Site

- 5.2.40 The cottages and walled garden originally formed part of the Crosfield Estate centred on the former mansion house of Walton Lea (now demolished), located to the southwest of the Site. The structures date to the late 19th century. In the 1920's the Walton Lea Estate was taken into the wider Walton Estate under control of Lord Daresbury. The Walton Lea Walled Garden was retained whilst a previous kitchen garden at Walton Hall was removed. Subsequently the site came into public control after WWII, and the site is owned by Warrington Borough Council alongside the wider Walton Estate.
- 5.2.41 The Walled Garden was retained as a nursery and was for horticultural and related Council use, at various levels of intensity until the Walton Lea Partnership was established in 1998. The cottages are now in a separate, private ownership to the walled garden.
- 5.2.42 The Walled Garden displays typical elements of a traditional walled garden with high stone and brick walls enclosing a space laid out in a regular pattern of planting beds some of which have been covered with glass houses and polytunnels over the period of use of the site. Potting sheds and similar buildings were integrated into the north facing wall with access to the walled area taken through this area. A small building is also integrated into the south-eastern corner of the garden wall. The Cottages share a boundary with the northern garden wall.
- 5.2.43 The assets are enclosed by surrounding woodland to the north, south and west. To the east, the property boundary is defined by a treeline. Beyond the treeline lies the Site comprising an open field, which separates Walton Lea from urban settlement in Walton. The cottages are orientated to overlook the approach from the north and the walled gardens to the south; their orientation indicating no historic or interactive association with the land within the Site. No views are possible out of the walled garden.
- 5.2.44 The Site does not expressively contribute to an understanding of the interest held by the assets; elements of their settings which are considered to expressively add to an



- understanding of their interest is their built and physical relationship which each where this reveals their shared historic ancillary association with Walton Lea as secluded estate cottages and a walled garden.
- 5.2.45 However, future, proposed development of the land within the Site would urbanise an otherwise historically rural open landscape directly adjacent to the assets and extend settlement towards the property boundary. As such, in proportion to the assets which are non-designated locally listed buildings, indirect harm to their significance in respect to the NPPF, is anticipated to be less than substantial in effect. It should be noted that the WBC's Heritage Impact Assessment (2019) only assesses Walton Lea Cottages, and does not assess the Walled Garden. The report concludes in reference to the cottages, that 'allocation of the Site for development may result in the loss of the rural setting of the site therefore it is considered to result in a considerable level of harm'. The reference to 'considerable level of harm' is defined within the Council's assessment as 'the site allocation will result in considerable but less than substantial harm to the heritage asset and its setting'. Therefore, this assessment broadly corresponds with the Council's assessment, in that both conclude impacts of less than substantial harm to the assets (the Council's report only referring to Walton Lea Cottages). However it should be noted that the Council's report refers to impacts arising from the South West Urban Extension area in its entirety whilst this appraisal is concerned with only a small area of that larger site, and therefore the scale of such change in relation to the SWUE is significantly smaller.
- 5.2.46 Furthermore, it is anticipated that the level of less than substantial harm may be substantially reduced and possibly negated through the inclusion of embedded mitigation within a forthcoming masterplan through consideration of open space provision, landscaping, and consideration of density, layout and height of buildings immediately adjacent to the assets.



6 ASSESSMENT AGAINST LEGISLATION AND POLICY

6.1 **Legislation**

- 6.1.1 In respect to the Ancient Monuments and Archaeological Areas Act (1979) there are no Scheduled Monuments within the footprint of the Site. Furthermore, there is no evidence to indicate the presence of archaeological remains within the footprint of the Site which whilst unscheduled would be regarded as being of national significance. Development would not therefore be in contravention of the 1979 Act.
- 6.1.2 With reference to Section 66 of the Planning (Listed Buildings and Conservation Areas Act) (1990) and the 'special regard' referenced as being required in respect to a Listed Building or its setting, it is anticipated that no designated heritage assets would be impacted by the proposals.
- 6.1.3 With regards to historic hedgerows, no hedgerows are present within the body of the Site which are considered to be of historic importance, such that development would not engage a consideration of the hedgerow regulations.

6.2 **National Policy**

- 6.2.1 The NPPF assists local authorities in the preparation of development plans and in the determination of planning applications.
- 6.2.2 Paragraph 194 of the NPPF requires an assessment of the significance of heritage assets potentially affected by proposals. Paragraph 194 also references the necessity for a field evaluation where necessary.
- 6.2.3 In this instance it is anticipated that the preparation of a full Archaeological Desk Based Assessment and a Heritage Statement would comply with the NPPF. With regards to the necessity for fieldwork it is anticipated that the impact prediction set out above in Section 4 could preclude the requirement for fieldwork as a predetermination requirement for a future planning application, it being considered disproportionate to request predetermination fieldwork under Paragraph 194, although this would be at the discretion of the Cheshire Planning Archaeologist.
- 6.2.4 Regarding the non-designated locally listed buildings of Walton Lea Cottages and Walled Garden, the NPPF (paragraph 203) states that 'the effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application... In weighing applications... a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset'.



6.2.5 This appraisal has identified that the proposed development within the Site may lead to indirect harm to the significance of the assets through changes within their setting. This harm is anticipated to be less than substantial in effect. The minimising or removal of potential harm through sympathetic design and planting could be explored through the design process as part the masterplanning process. An assessment of the significance held by the assets and the anticipated harm as a result of future proposals, should be set out within a Heritage Statement to accompany any future planning application.

6.3 Local Policy

- 6.3.1 In respect to the adopted local plan policy, Policy QE 8 would be engaged. This should be explored further through the preparation of a Heritage Statement and full Archaeological Desk Based Assessment (including a field evaluation if considered necessary) to support any forthcoming planning application to set out any mitigation strategies to minimise/ negate any adverse impact/harm identified.
- 6.3.2 In consideration of the merging local plan, it is anticipated that development of the Site would comply with Policy DC2.



7 DISCUSSION AND SUMMARY

7.1.1 Overall, the baseline presented does not indicate a potential for significant impacts which would preclude allocation of the Site.

7.2 Non-designated Heritage Assets

- 7.2.1 **Archaeology:** In consideration of archaeological constraints, consultation with the Cheshire HER has confirmed that non-designated assets within the Site comprise find spots dating from the Romano-British, medieval and post medieval periods. These finds likely represent casual loss/ agricultural regimes, rather than indicating a settlement or occupation activity within the Site.
- 7.2.2 Based on the known record within the Site vicinity, it is considered that any remains if present are likely to be of low to negligible importance only. As such it is unlikely that remains would be present which would preclude future development.
- 7.2.3 Any forthcoming planning application will likely be required to be informed by a full Desk Based Assessment undertaken in accordance with the Standards and Guidance of the Chartered Institute for Archaeologists (CIfA 2020). If requested by the Local Authority, this would provide further baseline evidence and a robust platform on which to negotiate the necessity of any pre-determination fieldwork although given the baseline review included here this is anticipated to be unlikely.
- 7.2.4 Built Heritage: The high level heritage appraisal has considered potential impacts to locally listed buildings as identified by BB Heritage Studio review (28th March 2019) of the Heritage Appraisal for the Warrington Local Plan South West Urban Extension (SWUE) by Turley dated March 2019 (referred to as the Heritage Assessment) within the vicinity of the Site and has provided a description of their significance in accordance with the NPPF and consistent with existing assessments. This appraisal has highlighted that indirect impacts may be limited to effects to the significance of the locally listed buildings of Walton Lea Cottages and Walton Lea Walled Garden due to changes within their setting as a result of future development. It is anticipated that development within the Site would not affect the significance of the other locally listed buildings within the vicinity of the Site through introducing changes within their setting due to their orientation and intervening distance, landscaping including intervening topography, vegetation and buildings and / or an understanding of the significance of the heritage assets whereby the lack of change which future proposals would cause in respect to elements of setting which contribute towards their significance.



- 7.2.5 Walton Lea Cottages and Walton Lea Walled Garden are included on the Warrington Borough Council's locally listed buildings (2014) and as such future development options of Site will be required to consider this local designation as a constraint; the 2014 list makes clear that status as a 'locally listed' building is an important consideration within a planning application. This is further emphasised within the adopted Local Development Plan documents specifically Policy QE 8 which seeks to preserve and enhance the historic environment and heritage assets and is further emphasised within the emerging local plan (currently out for consultation).
- 7.2.6 However it is considered that potential impacts should not preclude future allocation of the Site, and any identified harm to the significance of the locally listed buildings would be less than substantial in effect. Both the NPPF and relevant local policy make clear that the consideration of this harm would need to be balanced against the significance of the asset.
- 7.2.7 An assessment of the asset and the potential harm as a result of the proposals should be set out within a Heritage Statement to accompany any future planning application and should set out any design proposals which would minimise/ remove any adverse impact.

7.3 **Designated Heritage Assets**

- 7.3.1 The Site contains no designated heritage assets which would be a constraint to any future development i.e. future development would cause no direct/physical impact to the significance of designated heritage assets.
- 7.3.2 In respect of designated heritage assets within the vicinity of the Site it is anticipated their presence would not be a constraint to future development; i.e. they are unlikely to experience change to their setting that would cause harm to their significance and it is anticipated that impacts of 'substantial harm' through future development of the Site are extremely unlikely. This should be set out within a Heritage Statement to accompany any future planning application.

7.4 **Summary**

- A review of Historic England datasets demonstrates that there are no designated heritage assets within the boundary of the Site.
- In respect to nearby designated assets it is anticipated that they would not form a significant constraint to future development of the Site. It is expected that no harm



would likely result to their significance. This should be confirmed through a Heritage Statement to accompany any future planning application.

- The Cheshire HER records findspots within the Site associated to the Romano-British, medieval and post medieval periods.
- With regards to unknown buried archaeological remains, an archaeological deskbased assessment will be required as part of any future planning application to assess this potential further. However, there is no evidence presented within the current HER baseline to indicate the presence of remains of high importance within the Site which would preclude future development.
- There are a number of locally listed buildings within the vicinity of the Site recognised as non-designated heritage assets. It is anticipated that indirect impacts to significance as a result of development within the Site would be limited to 1-3 Walton Lea Cottages and Walton Lea Walled Garden. The assessment included within this appraisal concludes that this impact is most likely to be less than substantial harm.
- A Heritage Statement to reference the statement of significance and to include an impact assessment of the future proposals on this significance will be required to accompany a future planning application.
- Mitigation should be considered in any future design proposals with due regard to any strategies which may minimise/ negate any adverse impact/ harm to the assets.
- Anticipated impacts to built heritage assets presented within this appraisal are consistent with those presented in earlier assessment undertaken in 2019 to support the South West Urban Extension.



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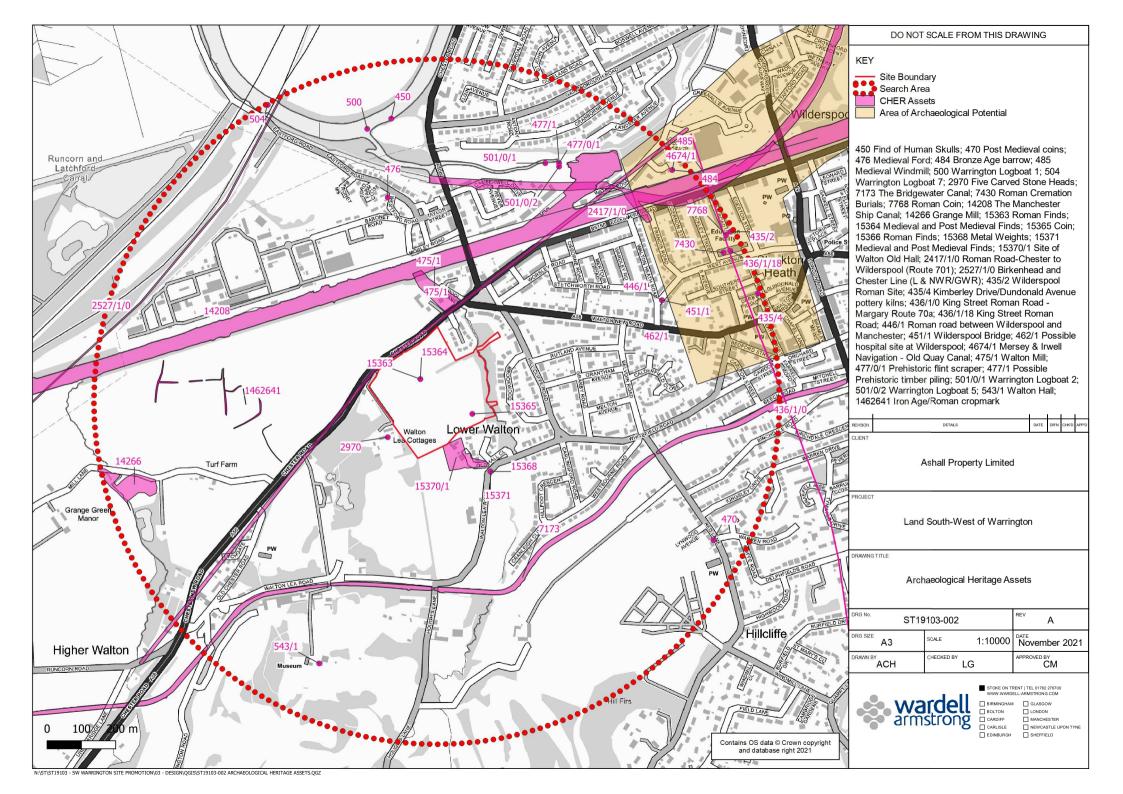
Cartographic Sources

- Higher Walton Tithe map 1843
- Lower Walton Tithe map 1843
- Ordnance Survey Map 1850 to present



FIGURES

1135992 Walnut Tree Farmhouse: 1136000 140.142.144 And 146. Chester Road: 1136025 Gates, gategiers and screens at Walton Hall Lodge (now lodge to crematorium): 1136037 Lychgate to DO NOT SCALE FROM THIS DRAWING Church of St John the Evangelist: 1136083 Retaining wall, balustrades and steps between lawns east of Walton Hall: 1136109 Walton Lea Bridge: 1139316 Walton Bridge: 1139348 33, Chester Road: 1139349 Number 134 (attached dwelling) and railing to forecourt Village Hall; 1139350 138 And 138a, Chester Road; 1139351 Walton Hall Lodge (now lodge to crematorium); 1139353 131 And 133, Chester Road: 1139355 Walton Hall; 1139356 3 And 5, Walton Lea Road: 1139429 104-128, Greenall's Avenue: 1161416 80-100, Greenall's Avenue: 1310060 2, Westford Road: 1312985 135, Chester Road: 1313019 Brook House; 1329737 Baronet Farmhouse, with attached farm buildings and cobbled yard; 1329765 Redlane Bridge; 1329771 St Thomas Vicarage; 1329774 Houghs Bridge; Site Boundary 1329775 Bridge House; 1329795 Walton House Search Area DCH12640 Hillfoot Farmhouse: DCH12641 Hill Cliffe Baptist Church: DCH12648 Birchtree House: DCH12856 The Ship Public House: DCH12950 44. Whitefield Road: DCH12956 101. Walton Road: Grade II* Listed Church of St John DCH12972 69 to 75 (odd), Walton Road: DCH12973 83 and 85, Walton Road: DCH12974 Stockton Heath Primary School: DCH12981 Stockton Heath Methodist Church: DCH12983 66 to 76 (even), Grade II Listed Building Walton Road; DCH12995 99, Chester Road; DCH12997 34 and 35, Chester Road; DCH12998 Beech Tree Cottage (New Lodge); DCH13007 7 and 9, Walton Lea Road; DCH13008 11 and 13, Walton Walton Conservation Area Lea Road: DCH13009 2, Walton Lea Road: DCH13010 1, Warrington Road: DCH13012 Walton Lea Cottage, 1 to 3: DCH13015 Grange Mill House and Barn: DCH13016 105 and 107, Walton New Locally Listed Building Road; DCH13017 The Forge House; DCH13018 Old Coach House; DCH13019 Walton Hall Estate Tool Shed, 137; DCH13022 Old Mounting Block at Junction; DCH13024 The War Memorial Cross; DCH13025 Smithy House, 136; DCH13029 The Walton Arms Public House; DCH13143 Barns at Ford House Farm; DCH13190 War Memorial; DCH13693 Chester Road Swing Bridge; DCH13694 The Stag Inn Public House and Outbuildings; DCH13695 Telephone Box; DCH13696 137, Old Chester Road; DCH13697 Walled Garden South of Walton Lea Cottage Wilderspool-Runcorn and Latchfor 113599 DCH12856 DETAILS DCH12995 Ashall Property Limited DCH13012 Lower Walton 1329765 Land South-West of Warrington DCH13697 RAWING TITLE Grange Gree Built Heritage Assets DCH13017 DCH13008 1139350 ST19103-001 Α ORG SIZE 1329774 SCALE 1:10000 November 2021 A3 CHECKED BY ACH LG DCH12998 **Higher Walton** STOKE ON TRENT | TEL 01782 276700 LONDON BOLTON armstrong ☐ MANCHESTER 100 200 m CARLISLE ☐ NEWCASTLE UPON TYNE ☐ EDINBURGH SHEFFIELD Contains OS data @ Crown copyright and database right 2021



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Chester Road, Walton
NPPF: Flood Risk Assessment

For Ashall Property Ltd KRS.0401.014.R.001.A November 2021

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Status	Final			
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EXECUTIVE SUMMARY

The proposed development would be expected to remain dry in all but the most extreme conditions. Providing the recommendations made in this FRA are instigated, flood risk from all sources would be minimised, the consequences of flooding are acceptable and the development would be in accordance with the requirements of the NPPF.

The adoption of a SuDS Strategy for the site represents an enhancement from the current conditions as the current surface water runoff from the site is uncontrolled, untreated, unmanaged and unmitigated. The SuDS Strategy will reduce the risk of flooding to the site and off-site locations.

This FRA demonstrates that the proposed development would be operated with minimal risk from flooding, would not increase flood risk elsewhere and is compliant with the requirements of the NPPF. The development should not therefore be precluded on the grounds of flood risk.



1.0 INTRODUCTION

1.1 Background

This Flood Risk Assessment (FRA) has been prepared by KRS Environmental Limited at the request of Ashall Property Ltd for the proposed development at Land south of Chester Road, Walton, Warrington, WA4 6EN. This FRA includes an assessment of the existing and proposed surface water drainage of the site.

This FRA has been carried out in accordance with guidance contained in the National Planning Policy Framework (NPPF)¹ and associated Planning Practice Guidance². This FRA identifies and assesses the risks of all forms of flooding to and from the development and demonstrates how these flood risks will be managed so that the development remains safe throughout the lifetime, taking climate change into account.

It is recognised that developments which are designed without regard to flood risk may endanger lives, damage property, cause disruption to the wider community, damage the environment, be difficult to insure and require additional expense on remedial works. The development design should be such that future users will not have difficulty obtaining insurance or mortgage finance, or in selling all or part of the development, as a result of flood risk issues.

1.2 National Planning Policy Framework (NPPF)

One of the key aims of the NPPF is to ensure that flood risk is taken into account at all stages of the planning process; to avoid inappropriate development in areas at risk of flooding and to direct development away from areas of highest risk.

It advises that where new development is exceptionally necessary in areas of higher risk, this should be safe, without increasing flood risk elsewhere, and where possible, reduce flood risk overall. A risk based approach is adopted at stages of the planning process, applying a source pathway receptor model to planning and flood risk. To demonstrate this, an FRA is required and should include:

- whether a proposed development is likely to be affected by current or future flooding from all sources;
- whether it will increase flood risk elsewhere;
- whether the measures proposed to deal with these effects and risks are appropriate;
- if necessary provide the evidence to the Local Planning Authority (LPA) that the Sequential Test can be applied; and
- whether the development will be safe and pass part c) of the Exception Test if this is appropriate.

1.3 Report Structure

This FRA has the following report structure:

Section 2 describes the location area and the existing and proposed development;

Chester Road, Walton

¹ Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework.

 $^{^{2}}$ Communities and Local Government (2014) Planning Practice Guidance - Flood Risk and Coastal Change.



- Section 3 outlines the flood risk to the existing and proposed development;
- Section 4 details the proposed surface water drainage for the site and assesses the potential impacts of the proposed development on surface water drainage;
- Section 5 outlines mitigation measures to reduce the overall level of flood risk; and
- Section 6 presents a summary and conclusions.



2.0 LOCATION & DEVELOPMENT DESCRIPTION

2.1 Site Location

The site is located at Land south of Chester Road, Walton, Warrington, WA4 6EN (see Figure 1). The 7.70 hectare (ha) development site is located at National Grid Reference: 360312, 385736.

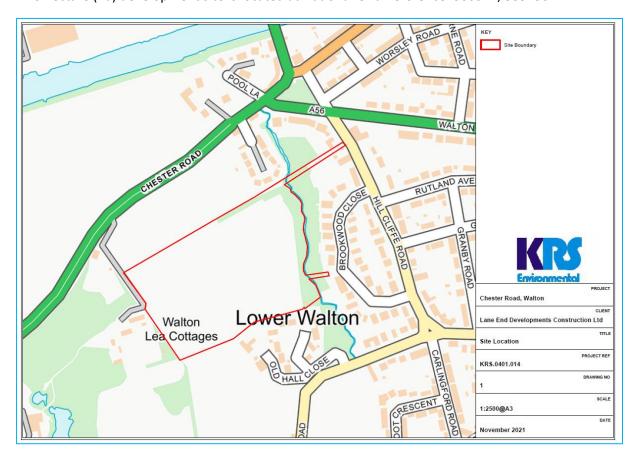


Figure 1 - Site Location

2.2 Existing Development

The site comprises undeveloped agricultural land with woodland forming the eastern extent. The site is bordered by Chester Road (A56) to the north with agricultural land, residential properties and the Manchester Ship Canal beyond. The eastern boundary of the site is formed by an unnamed watercourse with a residential conurbation beyond. Further residential properties and agricultural fields are to the south with a charity building and woodland to the west of the site. Access is provided from Chester Road to the north.

2.3 Proposed Development

It is understood that the proposals are for a residential development and associated landscaping and access (see Appendix 1).

2.4 Ground Levels

Existing topographic levels have been derived from a 2m resolution Environment Agency composite 'Light Detecting and Ranging' (LiDAR) Digital Terrain Model (DTM). The site slopes from west to east



with levels varying from a high of approximately 28 metres Above Ordnance Datum (mAOD) in the west to 12mAOD in the east, adjacent to the unnamed watercourse.

2.5 Catchment Hydrology / Drainage

The nearest watercourse is an unnamed watercourse located on the eastern boundary of the site. The unnamed watercourse flows north at this location and joins the Manchester Ship Canal. The Manchester Ship Canal is located approximately 165m to the north of the site.

Public sewer records have been obtained from United Utilities (see Appendix 2). The sewer plans identify a 150mm public surface water sewer in Chester Road to north of the site. There is a 150mm public combined sewer in Hall Gardens to the north east of the site. There is also a 225mm public surface water sewer, a 225mm private surface water sewer and a 150mm and 225mm private combined sewer in Brookwood Close to the east of the site. All of the local surface water sewers adjacent to the site are shown to flow towards and discharge to the unnamed watercourse which forms the eastern boundary of the site.

It is assumed that surface water is currently infiltrating to the ground and there is no formal drainage system serving the site.

2.6 Ground Conditions

The British Geological Survey (BGS) map shows that the superficial deposits consist of the Shirdley Hill Sand Formation and Tidal Flat Deposits (Clay, Silt and Sand). The bedrock deposits consist of the Wilmslow Sandstone Formation - sandstone. Sedimentary bedrock formed approximately 247 to 252 million years ago in the Triassic Period in a local environment previously dominated by hot deserts.

Information from the National Soil Resource Institute³ details the site area as being situated on naturally wet very acid sandy and loamy soils.

According to the Environment Agency's Groundwater Vulnerability dataset, accessed via Magic's online mapping application, the superficial Shirdley Hill Sand Formation and Tidal Flat Deposits are classified as a Secondary (undifferentiated) aquifer. These are layers which have previously been classed as minor aquifers and non-aquifers due to the variable characteristics of the rock type. The Wilmslow Sandstone Formation bedrock is classified as a Primary Aquifer. These are permeable layers capable of supporting water supplies at a local rather than strategic scale and in some cases form an important source of base flow to rivers.

The Environment Agency's online groundwater Source Protection Zone data indicates that the site is located partially within the outer zone (Zone 2) and total catchment (Zone 3) of a groundwater Source Protection Zone.

2.7 Permeability / Infiltration Rate

In determining the future surface runoff from the site, the potential of using infiltration devices has been considered. An overview of the general ground conditions may be used to gauge if there is potential for their application. The general ground conditions suggest that the permeability and infiltration rate of the site will be low and infiltration devices such as soakaways may not work at the site.

If an infiltration system is proposed, it is recommended that a series of infiltration/soakaway tests are carried out on site to BRE Digest 365 Guidelines to confirm the assumptions made in the calculations.

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³ https://www.landis.org.uk/soilscapes/



Such work is beyond the scope of this FRA but should be undertaken to inform the detailed drainage strategy for the site.



3.0 FLOOD RISK

3.1 Sources of Flooding

All sources of flooding have been considered, these are; fluvial (river) flooding, tidal (coastal) flooding, groundwater flooding, surface water (pluvial) flooding, sewer flooding and flooding from artificial drainage systems/infrastructure failure.

3.2 Environment Agency Data

Information regarding the current flood risk at the application site, local flood defences and flood risk has been obtained from the Environment Agency (see Appendix 3).

3.3 Historic Flooding

Environment Agency data shows that the site has not historically flooded. There are no records of anecdotal information of flooding at the site including within the British Hydrological Society "Chronology of British Hydrological Events". No other historical records of flooding for the site have been recorded. Therefore, it has been concluded that the site has not flooded within the recent past.

3.4 Existing and Planned Flood Defence Measures

There are no flood defences within the vicinity of the site. However, property level protection measures will be used to protect the site from flooding, these are discussed in Section 5.0.

3.5 Environment Agency Flood Zones

A review of the Environment Agency's Flood Zones indicates that the majority of the site is located within Flood Zone 1 and therefore has a 'low probability' of flooding as shown in Figure 2, with less than a 1 in 1000 annual probability of river flooding in any year (<0.1%). However, a small proportion of the site, to the east within the wooded area, is located within Flood Zone 3 and therefore has a 'high probability' of flooding with between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% - 0.1%) in any year.

The Flood Zones are the current best information on the extent of the extremes of flooding from rivers or the sea that would occur without the presence of flood defences, because these can be breached, overtopped and may not be in existence for the lifetime of the development. They show the worst-case scenario. The flood outline shown on Figure 2 would only occur if the flood defences were to be overtopped/breached.

The Environment Agency Flood Zones and acceptable development types are explained in Table 1. Table 1 shows that some development types are generally acceptable in Flood Zones 1 and 3.



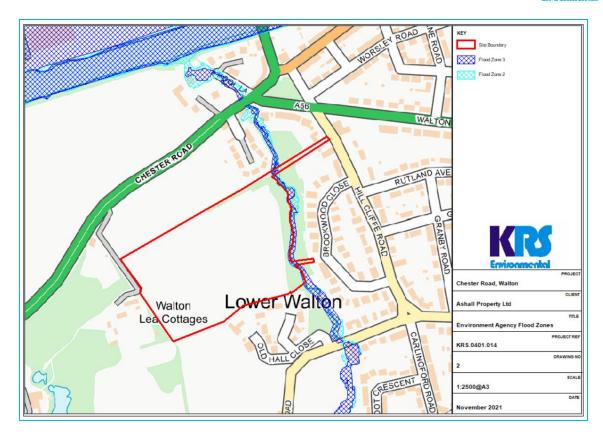


Figure 2 - Environment Agency Flood Zones

Table 1 - Environment Agency Flood Zones and Appropriate Land Use

Flood Zone	Probability	Explanation	Appropriate Land Use
Zone 1	Low	Less than 1 in 1000 annual probability of river or sea flooding in any year (<0.1%)	All development types generally acceptable
Zone 2	Medium	Between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% - 0.1%) or between a 1 in 200 and 1 in 1000 annual probability of sea flooding (0.5% 0.1%) in any year	Most development type are generally acceptable
Zone 3a	High	A 1 in 100 or greater annual probability of river flooding (>1%) or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year	Some development types not acceptable
Zone 3b	'Functional Floodplain'	Land where water has to be flow or be stored in times of flood. SFRAs should identify this zone (land which would flood with an annual probability of 1 in 20 (5%) or greater in any year or is designed to flood in an extreme (0.1% flood, or at another probability to be agreed between the LPA and the Environment Agency, including water conveyance routes)	Some development types not acceptable



3.6 Flood Vulnerability

In the Planning Practice Guidance to the NPPF, appropriate uses have been identified for the Flood Zones. Applying the Flood Risk Vulnerability Classification in the Planning Practice Guidance to the NPPF, the proposed use is classified as 'more vulnerable'.

The application is for a new, suitable flood-resilient design. The exposure of people and property will be minimised. Flood risk at the site will be further mitigated by using a number of property level protection measures to manage and reduce the overall flood risk at the site.

The Planning Practice Guidance to the NPPF state that 'more vulnerable' uses are appropriate within Flood Zones 1 and 3 after the completion of a satisfactory FRA. It should also be noted that the proposed houses will be located wholly within Flood Zone 1.

Table 2 - Flood Risk Vulnerability and Flood Zone 'Compatibility'

Flood Risk Vulnerability Classification	Essential Infrastructure	Water Compatible	Highly Vulnerable	More Vulnerable	Less Vulnerable
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	✓	Exception test required	✓	✓
Zone 3a	Exception test required	✓	×	Exception test required	✓
Zone 3b 'Functional Floodplain'	Exception test required	√	×	×	×

Key: ✓: Development is appropriate, **×**: Development should not be permitted.

3.7 Climate Change

Projections of future climate change, in the UK, indicate more frequent, short-duration, high intensity rainfall and more frequent periods of long duration rainfall. Guidance included within the NPPF recommends that the effects of climate change are incorporated into FRA. Recommended precautionary sensitivity ranges for peak rainfall intensities and peak river flows are outlined in the Flood risk assessments: climate change allowances guidance⁴.

Table 3 shows the peak river flow allowances by river basin district. The flood risk assessments: climate change allowances guidance recommends that for 'more vulnerable' uses in Flood Zones 1 and 3 that the central allowances are used. The design flood event for the site is the 1 in 100 year (+52%) year event.

Table 3 - Peak River Flow Allowances by River Basin District (use 1961 to 1990 baseline)

River Basin District	Allowance Category	2020s	2050s	2080s
Weaver Gowy Management Catchment	Upper	+36%	+64%	+106%
	Higher	+24%	+40%	+64%
	Central	+19%	+30%	+52%

 $^{^4\} https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances \# high-allowances.$



3.8 Fluvial (river) Flooding

The nearest watercourse is an unnamed watercourse located on the eastern boundary of the site, this therefore poses the primary flood risk to the site. Table 4 shows the modelled water levels for the site. The majority of the site is located outside of the 1 in 100 year (+70%) outline for the unnamed watercourse. However, areas adjacent to the unnamed watercourse are shown at risk of flooding. The flood outline is contained within the wooded area to the east of the site. Given the steepness of the catchment, the flood extent is minimal and confined to areas immediately adjacent to the watercourse.

Table 4 - Unnamed Watercourse Environment Agency Modelled Water Levels (mAOD)

Map Ref	50	75	100	100 (+30%)	100 (+35%)	100 (+70%)	200	1000
5	11.35	11.39	11.43	11.62	11.65	11.72	11.53	11.70
6	10.93	10.99	11.03	11.21	11.24	11.45	11.12	11.30
7	10.65	10.71	10.76	10.95	10.98	11.12	10.85	11.01

The likelihood of a rapid river level rise and possible rapid inundation of urban areas posing a risk to life is considered to be minimal. The Environment Agency, with its current flood warning system, to provide forewarning of two (2) days of a pending flood event. The site is located within a low risk area where the onset of flooding is very gradual (many hours) as per Flood Risk Assessment Guidance for New Development Phase 2, R&D Technical Report FD2320/TR2. The speed of inundation and rate of floodwater rise would be low.

Flood risk to the site from unnamed watercourse can be considered to be limited. Any overbank flow would follow the contours of the surrounding area and would flow directly to the west and south rather than flowing towards the site. The flood risk can also be considered to be limited due to the difference in elevations.

It can be concluded that the risk of fluvial flooding to the majority for the site is very low. Land adjacent to the unnamed watercourse to the east is shown at a risk of flooding. Therefore, the risk of fluvial flooding is considered to be of **low significance**. The risk from this source will be further mitigated by using a number of property level protection measures to manage and reduce the overall flood risk at the site (see Section 5.0).

3.9 Tidal (coastal) Flooding

The site is not located within the vicinity of tidal flooding sources and the risk of tidal flooding is considered to be **not significant.**

3.10 Groundwater Flooding

Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded. Groundwater flooding tends to occur sporadically in both location and time. When groundwater flooding does occur, it tends to mostly affect low-lying areas, below surface infrastructure and buildings (for example, tunnels, basements and car parks) underlain by permeable rocks (aquifers).

Groundwater flooding tends to occur after much longer periods of sustained high rainfall. Higher rainfall means more water will infiltrate into the ground and cause the water table to rise above normal levels. Groundwater tends to flow from areas where the ground level is high, to areas where the ground level is low. In low-lying areas, the water table is usually at shallower depths anyway, but



during very wet periods, with all the additional groundwater flowing towards these areas, the water table can rise up to the surface causing groundwater flooding.

Groundwater flooding is most likely to occur in low-lying areas underlain by permeable rocks (aquifers). These may be extensive, regional aquifers, such as chalk or sandstone, or may be localised sands or river gravels in valley bottoms underlain by less permeable rocks. Groundwater flooding takes longer to dissipate because groundwater moves much more slowly than surface water and will take time to flow away underground. The low permeability deposits are classified as unproductive strata and suggest a negligible risk of groundwater flooding.

The SFRA contains no records of groundwater flooding at the site. Borehole records publicly available on the BGS website identify a number of boreholes located north east of the site at a level of 11.50mAOD, 0.50m below the minimum site. Groundwater was encountered within the boreholes at approximately 2.80m below ground level. The risk of flooding from groundwater flooding is considered to be **not significant**.

3.11 Surface Water (pluvial) Flooding

The site is not situated near to large areas of poor permeability which may result in surface water flooding. The soil conditions at the site and within the vicinity of the site indicate that the site would not be at risk of surface water flooding. Surface water flooding tends to occur sporadically in both location and time such surface water would tend to be confined to the streets around the development.

The Environment Agency Surface Water flood map shows that the site has a very low risk of surface water flooding (see Figure 3) with a chance of flooding of less than 1 in 1000 (0.1%) years. The risk of flooding from surface water flooding to the site is considered to be of **low significance**. The risk from this source will be further mitigated by using a number of property level protection measures to manage and reduce the overall flood risk at the site (see Section 5.0).



Figure 3 - Environment Agency Surface Water Flood Map



3.12 Sewer Flooding

Sewer flooding occurs when urban drainage networks become overwhelmed and maximum capacity is reached. This can occur if there is a blockage in the network causing water to back up behind it or if the sheer volume of water draining into the system is too great to be handled. Sewer flooding tends to occur sporadically in both location and time such flood flows would tend to be confined to the streets around the development.

The public sewer located within the vicinity of the site will inevitably have a limited capacity so in extreme conditions there would be surcharges, which may in turn cause flooding. Flood flows could also be generated by burst water mains, but these would tend to be of a restricted and much lower volume than weather generated events and so can be discounted for the purposes of this assessment.

Given the design parameters normally used for drainage design in recent times and allowing for some deterioration in the performance of the installed systems, which are likely to have been in place for many years, an appropriate flood risk probability from this source could be assumed to have a return period in the order of 1 in 10 to 1 in 20 years.

The provision of adequate level difference between the ground floors and adjacent ground level would reduce the annual probability of damage to property from this source to 1 in 100 years or less. There are no sewers located within the immediate vicinity of the site. Therefore, the risk of flooding from sewer flooding is considered to be **not significant**.

3.13 Flooding from Artificial Drainage Systems/Infrastructure Failure

Reservoirs are located within the vicinity of the site. The Environment Agency Reservoir flood map shows that the site is at risk of reservoir flooding (see Figure 4). Reservoir flooding is extremely unlikely; reservoirs in the UK have a very good safety record. There has been no loss of life in the UK from reservoir flooding since 1925.

Since then reservoir safety legislation has been introduced to make sure reservoirs are well maintained. The hazard is well managed through effective legislation and it is unlikely that the impact zone downstream of the reservoirs should preclude the proposed development.





Figure 4 - Environment Agency Reservoir Flood Map

The Environment Agency modelled water levels for the Manchester Ship Canal are shown in Table 5. The site is situated at or above 12mAOD and is a minimum of 2.50m above the 1 in 100 water level of the Manchester Ship Canal. The site is therefore not at risk of flooding from the Manchester Ship Canal. Therefore, the risk of flooding from artificial drainage systems/infrastructure failure is considered to be **not significant**.

Table 5 - Manchester Ship Environment Agency Modelled Water Levels (mAOD)

Map Ref	100 (+70%)	1000
3	7.64	7.66

3.14 Effects of the Development on Flood Risk

The overall direction of the movement of water will be maintained within the developed site and surrounding area. The conveyance routes (flow paths) will not be blocked or obstructed. There will be no increase in the floodwater levels due to the proposed development.



3.15 Summary of Site Specific Flood Risk Assessment

A summary of the sources of flooding and a review of the risk posed by each source at the site is shown in Table 6.

Table 6 - Risk Posed by Flooding Sources

Sources of Flooding	Potential Flood Risk	Potential Source	Probability/Significance
Fluvial Flooding	Yes	Unnamed Watercourse	Low
Tidal Flooding	No	None Reported	Not Significant
Groundwater Flooding	No	None Reported	Not Significant
Surface Water Flooding	Yes	Low Spots	Low
Sewer Flooding	No	None Reported	Not Significant
Flooding from Artificial Drainage Systems/Infrastructure Failure	Yes	Reservoirs Manchester Ship Canal	Not Significant

The site is unlikely to flood except in extreme conditions. The primary, but unlikely, flood risk to the site is from flooding from the unnamed watercourse on the east of the site. The majority of the site is located within Flood Zone 1 and therefore has a 'low probability' of flooding, with less than a 1 in 1000 annual probability of river flooding in any year (<0.1%). However, a small proportion of the site, to the east within the wooded area, is located within Flood Zone 3 and therefore has a 'high probability' of flooding with between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% - 0.1%) in any year.

the proposed use is classified as 'more vulnerable'. The application is for a new, suitable flood-resilient design. The exposure of people and property will be minimised. Flood risk at the site will be further mitigated by using a number of property level protection measures to manage and reduce the overall flood risk at the site. 'More vulnerable' uses are appropriate within Flood Zones 1 and 3 after the completion of a satisfactory FRA. It should also be noted that the proposed houses will be located wholly within Flood Zone 1.

The majority of the site is located outside of the 1 in 100 year (+70%) outline for the unnamed watercourse. Areas adjacent to the unnamed watercourse are shown at risk of flooding. The flood extent is contained within the wooded area to the east of the site. Given the steepness of the catchment, the flood extent is minimal and confined to areas immediately adjacent to the watercourse. It can be concluded that the risk of fluvial flooding to the majority for the site is very low. Land adjacent to the unnamed watercourse to the east is shown at a risk of flooding. Therefore, the risk of fluvial flooding is considered to be of **low significance**. A secondary flooding source has been identified which may pose a **low significant** risk to the site. This is:

Surface Water Flooding

The flooding sources will only inundate the site to a relatively low water depth and water velocity, will only last a short period of time, in very extreme cases and will not have an impact on the whole of the proposed development site. The proposed development will improve the sites resilience, resistance to flooding and by using property level protection measures to protect the site from flooding the vulnerability of the site will be improved (see Section 5.0).



4.0 SURFACE WATER DRAINAGE

4.1 Surface Water Management Overview

It is recognised that consideration of flood issues should not be confined to the floodplain. The alteration of natural surface water flow patterns through developments can lead to problems elsewhere in the catchment, particularly flooding downstream. For example, replacing vegetated areas with roofs, roads and other paved areas can increase both the total and the peak flow of surface water runoff from the development site. Changes of land use on previously developed land can also have significant downstream impacts where the existing drainage system may not have sufficient capacity for the additional drainage.

A SuDS Strategy for the site proposals has been developed to manage and reduce the flood risk posed by the surface water runoff from the site. An assessment of the surface water runoff rates has been undertaken, in order to determine the surface water options and attenuation requirements for the site. The assessment considers the impact of the development compared to current conditions. Therefore, the surface water attenuation requirement for the developed site can be determined and reviewed against existing arrangements.

The requirement for managing surface water runoff from developments depends on the predeveloped nature of the site. If it is an undeveloped greenfield site, then the impact of the development will need to be mitigated so that the runoff from the site replicates the natural drainage characteristics of the pre-developed site. The surface water drainage arrangements for any development site should be such that the volumes and peak flow rates of surface water leaving a developed site are no greater than the rates prior to the proposed development unless specific offsite arrangements are made and result in the same net effect.

It should be acknowledged that the satisfactory collection, control and discharge of surface water runoff are now a principle planning and design consideration. This is reflected in recently implemented guidance as well as the new Defra non-statutory technical standards for SuDS.

4.2 Climate Change

Projections of future climate change, in the UK, indicate more frequent, short-duration, high intensity rainfall and more frequent periods of long duration rainfall. Guidance included within the NPPF recommends that the effects of climate change are incorporated into FRA's. Recommended precautionary sensitivity ranges for peak rainfall intensities and peak river flows are outlined in the associated Planning Practice Guidance to the NPPF.

The recommended national precautionary sensitivity range for peak rainfall intensity are summarised in Table 7.

Table 7 - Peak Rainfall Intensity Allowance in Small and Urban Catchment (use 1961 to 1990 baseline)

Parameter	2010 to 2039	2040 to 2059	2060 to 2115
Upper end	+10%	+20%	+40%
Central	+5%	+10%	+20%



4.3 Opportunities for Discharge of Surface Water

There are three possible options to discharge the surface water runoff in accordance with requirement H3 of the Building Regulations, this hierarchy is also promoted within the NPPF. Rainwater shall discharge to one of the following, listed in order of priority:

- an adequate soakaway or some other adequate infiltration system; or, where that is not reasonably practicable,
- a watercourse; or where that is not reasonably practicable,
- a sewer.

It is necessary to identify the most appropriate method of controlling and discharging surface water.

4.3.1 Soakaway/Infiltration System

The general ground conditions suggest that the permeability and infiltration rate of the site will be low and infiltration devices such as soakaways may not work at the site. If an infiltration system is proposed, it is recommended that a series of infiltration/soakaway tests are carried out on site to BRE Digest 365 Guidelines to confirm the assumptions made in the calculations. Such work is beyond the scope of this FRA but should be undertaken to inform the detailed drainage strategy for the site.

4.3.2 Watercourse

Should infiltration be found to be unsuitable, the next option is discharge to a watercourse. The nearest watercourse is the unnamed watercourse located at the eastern boundary of the site. A gravity connection to the unnamed watercourse should be feasible. Therefore, it would be possible to discharge surface water runoff from the site into a watercourse at a restricted runoff rate. All surface water runoff that cannot be discharged via infiltration or to a watercourse will be managed on site and then discharged to the watercourse.

4.3.3 Sewer

In the event that discharge of surface water via infiltration or discharge to a watercourse is deemed unsuitable, then discharge to a sewer would be possible. All surface water runoff that cannot be discharged via infiltration or to a watercourse will be managed on site and then discharged to the public sewers. At this stage, this option is not required.

4.4 Surface Water Runoff Rates

An estimation of surface water runoff is required to permit effective site surface water management and prevent any increase in flood risk to off-site receptors. In accordance with The SuDS Manual, the Greenfield runoff from the site has been calculated using the IoH124 method. Table 8 shows the IoH 124 method Greenfield runoff rates calculated for the proposed impermeable areas of 2.90 hectares (ha). QBAR has been calculated to be 1.40 litres/second (see Appendix 4).

Table 8 - IoH124 Method Greenfield Runoff Rates

Rainfall Event	Runoff Rate (I/s)
1	1.20
QBAR (rural)	1.40
30	2.40
100	3.00



The method used for calculating the runoff complies with the NPPF, as well as the new Defra non-statutory technical standards for SuDS, and assumes that the excess runoff associated with the proposed development (plus an allowance for future climate change) will need to be managed by the proposed SuDS scheme.

4.5 SuDS and Water Quality

Current guidance promotes sustainable water management through the use of SuDS. SuDS measures should be used to control the surface water runoff from the proposed development site therefore, managing the flood risk to the site and surrounding areas from surface water runoff.

A hierarchy of techniques is identified⁵:

- 1. **Prevention** the use of good site design and housekeeping measures on individual sites to prevent runoff and pollution (e.g. minimise areas of hard standing).
- 2. **Source Control** control of runoff at or very near its source (such as the use of rainwater harvesting, permeable paving, soakaways and/or green roofs).
- 3. **Site Control** management of water from several sub-catchments (including routing water from roofs and car parks to one/several large soakaways for the whole site, swales and/or infiltration trenches).
- 4. **Regional Control** management of runoff from several sites, typically in a detention pond, basins, tanks and/or wetland.

It is generally accepted that the implementation of SuDS as opposed to conventional drainage systems, provides several benefits by:

- reducing peak flows to watercourses or sewers and potentially reducing the risk of flooding downstream;
- reducing the volumes and frequency of water flowing directly to watercourses or sewers from developed sites;
- improving water quality over conventional surface water sewers by removing pollutants from diffuse pollutant sources;
- reducing potable water demand through rainwater harvesting;
- improving amenity through the provision of public open spaces and wildlife habitat; and
- replicating natural drainage patterns, including the recharge of groundwater so that base flows are maintained.

The most appropriate attenuation system will need to satisfy three main characteristics, firstly, provide the required volume of storage, secondly, minimise the loss of developable land and thirdly, where possible provide local amenity. The application of the SuDS Manual requires that the runoff from sites is not only restricted to meet the Greenfield runoff characteristics but also that SuDS systems are utilised to improve the quality of the runoff prior to outfall to watercourses. The SuDS

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⁵ CIRIA (2004) Report C609, Sustainable Drainage Systems – Hydraulic, Structural and Water Quality advice.



Manual and Environment Agency guidance applies a sustainability hierarchy to the various types of SuDS systems, this is summarised in Table 9.

Table 9 - Sustainability Hierarchy

Most Sustainable	SuDS Technique	Flood Reduction	Pollution Reduction	Landscape & Wildlife
	Living Roofs	✓	✓	✓
	Basins and Ponds			
+	 Constructed wetlands 			
	- Balancing ponds	✓	✓	✓
	- Detention basins			
	- Retention ponds			
	Filter Strips and Swales	✓	✓	✓
	Infiltration Devices	1	1	✓
	- Soakaways	Ť	Ť	·
	Permeable Surfaces and Filter Drains			
	- Gravelled areas	✓	✓	
\downarrow	 Solid paving blocks 	·	·	
i i	- Permeable paving			
	Tanked Systems			
Least	 Over-sized pipes/tanks 	✓		
Sustainable	- Cellular storage			

Systems at the top of the hierarchy provide a combination of attenuation, treatment and ecology and are deemed the most sustainable options. There are always specific scenarios where systems are more suitable than others and at this stage it is not possible to guide the development towards a particular strategy.

The usual approach is to consider the 'SuDS train' where each of the above options are considered in turn until a suitable solution is found. Thus, source control techniques such as soakaways, rainwater harvesting and/or infiltration trenches, if suitable on a site, are considered preferable to permeable conveyance and passive treatment systems such as tanks or ponds. The various options are considered in Table 10.



Table 10 - SuDS Techniques

SuDS Technique	Comments	Suitability for Development
Green / Living Roofs / Living Wall	Can be used on low rise buildings to provide retention, attenuation and treatment of rainwater, and promotes evaporation and local biodiversity.	Not a practical option for the proposed development. A green/living roof/living wall would not provide all of the attenuation storage requirements alone.
Bioretention Areas / Tree Pits	Good removal of urban pollutants, reduces runoff rates and volumes.	Permeable surfaces will be used to provide betterment and for conveyance.
Basins / Ponds	Provides storage of runoff and flow attenuation. Vegetated surfaces can be used to support the prevention of runoff from the site for small rainfall events (interception) and improve water quality associated with the removal of sediment and buoyant materials.	Would be suitable depending on the available space.
Filter Strips / Swales	Good removal of urban pollutants, reduces runoff rates and volumes.	Sufficient open/green space for their workable inclusion.
Infiltration Devices (e.g. soakaways)	Reduces total runoff volume from the development.	Soakaways may be suitable.
Permeable Surfaces and Filter Drains	Permeable surfaces together with their associated substructures are an efficient means of intercepting runoff, reducing the volume and frequency of runoff and providing a treatment medium.	Permeable surfaces will be used to provide betterment.
Tanked systems	Ideal for sites with insufficient space for basins etc., provide a volume of below ground storage with a high void ratio.	Tanked systems would be suitable.
Flow reduction	Manages and reduces the flood risk to the local surface water sewers and watercourses	A hydrobrake or similar can be installed to control flows to the natural Greenfield runoff rates.

4.6 Proposed SuDS Strategy

The objective of this SuDS Strategy is to ensure that a sustainable drainage solution can be achieved which reduces the peak discharge rate to manage and reduce the flood risk posed by the surface water runoff from the site. The SuDS Strategy takes into account the following principles:

- No increase in the volume or runoff rate of surface water runoff from the site.
- No increase in flooding to people or property off-site as a result of the development.
- No surface water flooding of the site.



 The proposals take into account a 40% increase in rainfall intensity due to climate change during the next 100 years which is the lifetime of the development.

In line with adopting a 'management train' it is recommended that water is managed as close to source as possible. This will reduce the size and cost of infrastructure further downstream and also shares the maintenance burden more equitably. It is therefore recommended that the site provides its own attenuation. This will be in the form of:

- Water butts for each house.
- Car parking areas drained by permeable paving connected to the drainage network.
- Soakaways, bioretention areas/tree pits.
- Underground cellular/tank/oversize pipe storage with an outfall to the watercourse restricted to 2.00 litres/second.
- Paths around the buildings drain to grassed lawns.
- For larger events in other areas such landscaped areas, provided that it will not cause damage or prevent access.

For all development, both the Building Regulations and NPPF promote a hierarchical approach to surface water management. This approach has been adopted within this SuDS Strategy. All areas drained have been designed to accommodate the 1 in 100 year (+40%) event, the pipework has been designed to discharge the 1 in 30 year event therefore, flooding will not occur on any part of the site during the 1 in 30 year event, no flooding will occur within any part of the buildings during the 1 in 100 year (+40%) event.

The paths around the buildings will be designed to drain to the grassed lawns. The remainder of the site that is not formally drained, i.e. landscaped areas, will be permeable (grass). The majority of rainwater falling on these areas will soak into the ground. Surface water runoff would be directed to the drainage system through drainage gullies located around the perimeter of the buildings and through contouring of the hardstanding areas.

These methods will reduce peak flows, the volume of runoff, and slow down flows and will provide a suitable SuDS solution for this site. The adoption of a SuDS Strategy for the site represents an enhancement from the current conditions as the current surface water runoff from the site is uncontrolled, untreated, unmanaged and unmitigated.

In adopting these principles, it has been demonstrated that a scheme can be developed that does not increase the risk of flooding to adjacent properties and development further downstream.

4.6.1 Assuming Infiltration

Infiltration device allow gradual infiltration of collected runoff from impermeable areas into the surrounding soil. They require relatively permeable strata below a site to allow percolation and the reduction in runoff is achieved by the volume of percolation and the available storage volume. An assessment of their suitability requires the characteristics of the sub-soils or the geology to confirm the infiltration rate or vertical permeability.

At this stage it is proposed that the roof drainage from the site could discharge to infiltration devices. The infiltration devices would be sized according to on the site infiltration rates obtained during infiltration/soakaway tests. Table 11 shows the volume of storage required for the proposed development estimated using MicroDrainage for the 1 in 100 year event, with a 40% allowance for



climate change (increase in peak rainfall) assuming the proposed of impermeable areas (see Appendix 5). A conservative estimate of 100% runoff from impermeable areas has been used within the calculations. This is based on an infiltration rate of 0.05m/hr.

Table 11 - Infiltration Storage Calculations

Return Period (years)	Limiting Discharge Rate (I/s)	Volume (m³)
100 +40%	2.00	990 - 2,478

4.6.2 Assuming No Infiltration

Where ground conditions prevent the use of infiltration, such as on ground that may be impermeable or contaminated, SuDS methods that are designed not to infiltrate can be considered. Passive treatment systems can include a pond, wetland, tank or a basin on the lower parts of a site. These will reduce peak flows, but not the volume of runoff, and slow down flows before disposal to a surface water drainage system.

The provision of suitable storage on site to mitigate the flood risk resulting from the development of the site will be a key factor in the evolution of the site development layout. The provision of large volumes of attenuation, as is likely in this case, can be achieved by a number of methods; however, not all systems can be assessed in direct comparison.

As a consequence of limiting the rate of discharge from the site, at times of heavy rainfall the volume of water leaving the site will be significantly less than that draining from it. In order to prevent this water backing up in the system and causing flooding, permeable paving and underground attenuation storage will be required before discharge to the watercourse. The size of the attenuation storage has been calculated such that the proposed development has the capacity to accommodate the 1 in 100 year rainfall event including a 40% increase in rainfall intensity that is predicted to occur as a result of climate change. Consequently, all areas drained have been designed to accommodate the 1 in 100 year (+40% climate change) storm event.

Table 12 shows the volume of storage required for the proposed development estimated using MicroDrainage for the 1 in 100 year event, with a 40% allowance for climate change (increase in peak rainfall) assuming the proposed of impermeable areas with 2.00 litres/second used as the limiting discharge rate (see Appendix 5). A conservative estimate of 100% runoff from impermeable areas has been used within the calculations.

Table 12 - No Infiltration Storage Calculations

Return Period (years)	Limiting Discharge Rate (I/s)	Volume (m³)
100 +40%	2.00	3,557 - 4,312

4.7 Designing for Local Drainage System Failure

When considering residual risk, it is necessary to make predictions as to the impacts of a storm event that exceeds the design event, or the impact of a failure of the local drainage system. The SuDS Strategy applies a safe and sustainable approach to discharging rainfall runoff from the site and this reduces the risk of flooding however, it is not possible to completely remove the risk. This section of the FRA is therefore associated with the way the residual risk is managed.

As part of the SuDS Strategy it must be demonstrated that the flooding of property would not occur in the event of local drainage system failure and/or design exceedance. It is not economically viable or sustainable to build a drainage system that can accommodate the most extreme events.



Consequently, the capacity of the drainage system may be exceeded on rare occasions, with excess water flowing above ground.

The size of the storage has been designed to accommodate the 1 in 100 year storm event plus climate change (+40%). The design of the site layout provides an opportunity to manage this local drainage system failure/exceedance flow and ensure that indiscriminate flooding of property does not occur.

There will not be an extensive sewerage network on the proposed development site and therefore any potential exceedance flooding would be from the sewers and lateral drains connecting the buildings to the underground storage areas. It is very unlikely that a catastrophic failure would occur. An exceedance or blockage event of the sewers would not affect the proposed buildings because the finished floor level will be raised above surrounding ground levels, ensuring any exceedance flooding would not affect the buildings. Exceedance flows would be contained within the highways adjacent to the site and within the site and would flow to the lower ground levels where the public open space is located. It is not considered that there is an increased risk to the properties on the site or located adjacent to the site.

Surface water runoff would be directed to the drainage system through drainage gullies located around the perimeter of the buildings and through contouring of the hardstanding areas. When considering the impacts of a storm event that exceeds the 1 in 100 year (+40%) event, there is safety factor, even under the design event conditions. Consequently, if this event were to be exceeded there is additional capacity with the system to accommodate this (i.e. within the manholes, pipes etc.). If this freeboard was to be exceeded the consequences would be similar, if not less than for the local drainage system failure. Consequently, the impact of an exceedance event is not considered to represent any significant flood hazard.

The above manages and mitigates the flood risk from surface water runoff to the proposed properties from surface water runoff generated by the site development and to offsite locations as well the risk from surface water runoff generated offsite.

4.8 Operation and Maintenance Requirements

The following maintenance schedules are based on The SuDS Manual, for standard maintenance regimes. However, planting and maintenance regimes may be changed to enhance bio-diversity. In order for any surface water drainage system to operate as originally intended, it is necessary to ensure that it is adequately maintained throughout its lifetime. For residential developments, this is generally taken as 100 years. Therefore, over the lifetime of a development there is strong possibility that the system could either fail or its performance be reduced if it is not correctly maintained. This is even more important when SuDS form part of the SuDS Strategy compared to traditional piped networks.

The surface water drainage scheme will be installed and fully operational before occupation of the site occurs. The surface water drainage scheme will be regularly maintained. The key maintenance requirements are regular inspection of silt traps, manholes, pipework and pre-treatment devices, with removal of sediment and debris as required.

Regular inspection and maintenance is required to ensure the effective long-term operation of below ground modular storage systems. Maintenance responsibility for the system will be placed with the owner of the dwellings who will employ responsible organisations when required. Specific maintenance needs of the system will be monitored, and maintenance schedules adjusted to suit requirements.



Preventative measures will be taken rather than corrective measures. Preventative maintenance ensures both the condition monitoring and life-extending tasks are carried out at scheduled regular intervals, ensuring failure and regular repair of the system is avoided.

The operational and maintenance requirements are shown in Table 13.

Table 13 - Operational and Maintenance Requirements

Maintenance Schedule	Required Action	Frequency				
	Underground A	ttenuation Storage				
	Inspect and identify any area that are not operating correctly	Monthly or as required				
Pogular	Remove debris from the catchment surface (where it may cause risk to performance)	Monthly or as required				
Regular Maintenance	Remove sediment from inlet structures and inspection chambers	Monthly or as required				
	Maintain vegetation to designed limits within the vicinity of the below ground tanked system to avoid damage to the system	Monthly or as required				
Remedial Actions	Inspect inlets, outlets and vents to ensure that they are in good condition and operating as designed.	Annually				
Actions	Survey inside of tanks for sediment build up and remove if necessary	Every 5 years or as required				
	Perme	able Paving				
Regular Maintenance	Brushing and vacuuming (standard cosmetic sweep over whole pavement)	Once a year, after autumn leaf fall, or reduced frequency as required, based on site specific observations of clogging or manufacturers recommendations – pay particular attention to areas where water runs onto permeable surface from adjacent impermeable areas as this area is most likely to collect most sediment				
Occasional Maintenance	Stabilise and mow contributing and adjacent areas	As required				
Maniteriance	Removal of weed	As required – once per year on less frequency used pavements				
Remedial Actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50mm of the level of the paving	As required				



	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users	As required						
	Rehabilitation of surface and upper sub-structure	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)						
	Initial inspection	Monthly for three months after installation						
	Inspect for evidence of poor operation and/or weed growth – if required take remedial action	3 monthly, 48 hours after large storms in first six months						
Monitoring	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually						
	Monitor inspection chambers	Annually						
	Bioretentio	n Area/Tree Pit						
	Remove litter and surface	Quarterly (or more frequently for tidiness or						
	debris/weeds	aesthetic reasons)						
Regular Maintenance	Replace any plants, to maintain planting density	As required						
Maintenance	Remove sediment, litter and debris build-up from around inlets or form forebays	Quarterly to biannually						
Occasional	Infill any holes or scour in the filter medium, improve erosion protection if required	As required						
Occasional Maintenance	Repair minor accumulations of silt by raking away surface mulch, scarifying surface of medium and replacing mulch	As required						
Remedial Actions	Remove and replace filter medium and vegetation As required but likely to be >20 years above							
Soakaways								
Regular Maintenance	Inspect for sediment and debris in pre-treatment components and floor of inspection tube or chamber and inside of concrete manhole rings	Annually						
	Cleaning of gutters and any filters on downpipes	Annually (or as required based on inspections)						



	Trimming any roots that may be causing blockages	Annually (or as required)
Occasional Maintenance	Remove sediment and debris from pre-treatment components and floor or inspection tube or chamber and inside of concrete manhole rings	As required, based on inspection
Remedial Actions	Reconstruct soakaway and/or replace or clean void fill if performance deterioration or failure occurs	As required
	Replacement or clogged geotextiles	As required



5.0 RISK MANAGEMENT

5.1 Introduction

The flood risk at this location is considered suitable for the proposed developments within the NPPF. In this flood zone, developers and local authorities should seek opportunities to reduce the overall level of flood risk in the area through the layout and form of the development and the use of flood mitigation measures.

The flooding sources will be mitigated on the site by using a number of techniques, and mitigation strategies to manage and reduce the overall flood risk at the site. This will ensure the development will be safe and there is:

- Minimal risk to life;
- Minimal disruption to people living and working in the area;
- Minimal potential damage to property;
- Minimal impact of the proposed development on flood risk generally; and;
- Minimal disruption to natural heritage.

5.2 Sequential Approach

The sequential approach has been applied within the site by locating the most vulnerable elements of the development in the lowest risk areas. The most vulnerable use, the buildings, will be Flood Zone 1. Locating all properties outside of the wooded area to the east of the site will mitigate the potential fluvial flood risk.

5.3 Finished Floor Level

The finished floor levels will be a minimum of 600mm above the 1 in 100 year (+70%) water level for the unnamed watercourse of 11.72mAOD at 12.32mAOD.

5.4 Flood Resilience and Resistance

The development of the layout should always consider that the site is potentially at risk from an extreme event and as such the implementation of flood resilience and resistance methods should be assessed. Relatively simple measures such as raising utility entry points, using first floor or ceiling down electrical circuits and sloping landscaping away from properties can be easily and economically incorporated into the development of the site.

5.5 Safe Access and Egress Route

The NPPF requires that, where required, safe access and escape is available to/from new developments in flood risk areas. Access routes should be such that occupants can safely access and exit their dwellings/buildings in design flood conditions. These routes must also provide the emergency services with access to the development during a flood event and enable flood defence authorities to carry out any necessary duties during the period of flood.

A safe access and egress routes, including emergency access can be maintained for vehicles and/or by foot via the site entrance/s which are located within Flood Zone 1 and has less than a 1 in 1000 year chance of flooding. Therefore, safe access and egress can be maintained for all events up to and



including the 1 in 100 year (+52%) event in accordance with the NPPF and Environment Agency Guidance.

5.6 Access Crossings

Any new access crossings over the unnamed watercourse should be designed with a soffit level above the water level of the unnamed watercourse.

5.7 Buffer Strip

A 5.00 buffer strip adjacent to the top of the unnamed watercourse will need to be retained for maintenance purposes. This will be free of built development and is required by the Lead Local Flood Authority. The buffer strip will also mitigate the impact of flooding from the unnamed watercourse should it overtop its banks.

5.8 Flooding Consequences

The property level mitigation measures detailed above show that the flood risk can be effectively managed and therefore the consequences of flooding are acceptable. The site is unlikely to flood except in extreme conditions.



6.0 SUMMARY AND CONCLUSIONS

6.1 Introduction

This report presents a FRA in accordance with the NPPF for the proposed development at and south of Chester Road, Walton, Warrington, WA4 6EN.

This FRA identifies and assesses the risks of all forms of flooding to and from the development and demonstrates how these flood risks will be managed so that the development remains safe throughout the lifetime, taking climate change into account.

6.2 Flood Risk

The site is unlikely to flood except in extreme conditions. The primary, but unlikely, flood risk to the site is from flooding from the unnamed watercourse on the east of the site. The majority of the site is located within Flood Zone 1 and therefore has a 'low probability' of flooding, with less than a 1 in 1000 annual probability of river flooding in any year (<0.1%). However, a small proportion of the site, to the east within the wooded area, is located within Flood Zone 3 and therefore has a 'high probability' of flooding with between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% - 0.1%) in any year.

the proposed use is classified as 'more vulnerable'. The application is for a new, suitable flood-resilient design. The exposure of people and property will be minimised. Flood risk at the site will be further mitigated by using a number of property level protection measures to manage and reduce the overall flood risk at the site. 'More vulnerable' uses are appropriate within Flood Zones 1 and 3 after the completion of a satisfactory FRA. It should also be noted that the proposed houses will be located wholly within Flood Zone 1.

Areas adjacent to the unnamed watercourse are shown at risk of flooding. The flood extent is contained within the wooded area to the east of the site. Given the steepness of the catchment, the flood extent is minimal and confined to areas immediately adjacent to the watercourse. It can be concluded that the risk of fluvial flooding to the majority for the site is very low. Land adjacent to the unnamed watercourse to the east is shown at a risk of flooding. Therefore, the risk of fluvial flooding is considered to be of **low significance**. A secondary flooding source has been identified which may pose a **low significant** risk to the site. This is:

Surface Water Flooding

The flooding sources will only inundate the site to a relatively low water depth and water velocity, will only last a short period of time, in very extreme cases and will not have an impact on the whole of the proposed development site. The proposed development will improve the sites resilience, resistance to flooding and by using property level protection measures to protect the site from flooding the vulnerability of the site will be improved.

6.3 SuDS Strategy

The SuDS Strategy ensures that a sustainable drainage solution can be achieved which reduces the peak discharge rate to manage and reduce the flood risk posed by the surface water runoff from the site. At this stage, a detailed surface water drainage design has not been undertaken, however it is necessary to demonstrate that the surface water from the proposed development can be discharged safety and sustainably. The SuDS Strategy takes into account the following principles:

No increase in the volume or runoff rate of surface water runoff from the site.



- No increase in flooding to people or property off-site as a result of the development.
- No surface water flooding of the site.
- The proposals take into account a 40% increase in rainfall intensity due to climate change during the next 100 years which is the lifetime of the development

In line with adopting a 'management train' it is recommended that water is managed as close to source as possible. This will reduce the size and cost of infrastructure further downstream and also shares the maintenance burden more equitably. The SuDS Strategy will take the form of:

- Permeable paving of the car parking areas.
- Bioretention areas.
- Cellular storage with a restricted outfall to the Manchester Ship Canal.
- For larger events in other areas such as car parking and landscaping, provided that it will not cause damage or prevent access.

For all development, both the Building Regulations and NPPF promote a hierarchical approach to surface water management. This approach has been adopted within this SuDS Strategy, infiltration is not possible therefore, discharge will be to the Manchester Ship Canal at a restricted runoff rate of 5.00l/s.

As a consequence of limiting the rate of discharge from the site, at times of heavy rainfall the volume of water leaving the site will be significantly less than that draining from it. In order to prevent this water backing up in the system and causing flooding, $681m^3$ of attenuation storage, will be required. Additional storage would be provided within the manholes, pipes and drainage gullies which will provide betterment over and above the 1 in 100 year (+40%) event.

The size of the attenuation storage has been calculated such that the proposed development has the capacity to accommodate the 1 in 100 year rainfall event including a 40% increase in rainfall intensity that is predicted to occur as a result of climate change. Consequently, all areas drained have been designed to accommodate a 100 year (+40% climate change) storm event.

The remainder of the site that is not formally drained, i.e. landscaped areas, will be permeable (planting). The majority of rainwater falling on these areas will soak into the ground. Surface water runoff would be directed to the drainage system through drainage gullies located around the perimeter of the buildings and through contouring of the hardstanding areas.

These methods will reduce peak flows, the volume of runoff, and slow down flows and will provide a suitable SuDS solution for this site. The adoption of a SuDS Strategy for the site represents an enhancement from the current conditions as the current surface water runoff from the site is uncontrolled, untreated, unmanaged and unmitigated. The SuDS Strategy will reduce the risk of flooding to the site and off-site locations. In adopting these principles, it has been demonstrated that a scheme can be developed that does not increase the risk of flooding to adjacent properties and development further downstream.

6.4 Risk Management

The flood risk at the site will be reduced by property level protection measures. Measures used:

Sequential Approach: The sequential approach has been applied within the site by locating the most vulnerable elements of the development in the lowest risk areas. The most vulnerable use, the



buildings, will be Flood Zone 1. Locating all properties outside of the wooded area to the east of the site will mitigate the potential fluvial flood risk.

Finished Floor Level: The finished floor levels will be a minimum of 600mm above the 1 in 100 year (+70%) water level for the unnamed watercourse of 11.72mAOD at 12.32mAOD.

Flood Resilience and Resistance: Relatively simple measures such as raising utility entry points, using first floor or ceiling down electrical circuits and sloping landscaping away from properties can be easily and economically incorporated into the development of the site.

Safe Access and Egress Route: A safe access and egress routes, including emergency access can be maintained for vehicles and/or by foot via the site entrance/s which are located within Flood Zone 1 and has less than a 1 in 1000 year chance of flooding. Therefore, safe access and egress can be maintained for all events up to and including the 1 in 100 year (+52%) event in accordance with the NPPF and Environment Agency Guidance.

Access Crossings: Any new access crossings over the unnamed watercourse should be designed with a soffit level above the water level of the unnamed watercourse.

Buffer Strip: A 5.00 buffer strip adjacent to the top of the unnamed watercourse will need to be retained for maintenance purposes. This will be free of built development and is required by the Lead Local Flood Authority. The buffer strip will also mitigate the impact of flooding from the unnamed watercourse should it overtop its banks.

6.5 Conclusion

In conclusion, the proposed development would be expected to remain dry in all but the most extreme conditions. Providing the recommendations made in this FRA are instigated, flood risk from all sources would be minimised, the consequences of flooding are acceptable and the development would be in accordance with the requirements of the NPPF.

The adoption of a SuDS Strategy for the site represents an enhancement from the current conditions as the current surface water runoff from the site is uncontrolled, untreated, unmanaged and unmitigated. The SuDS Strategy will reduce the risk of flooding to the site and off-site locations.

This FRA demonstrates that the proposed development would be operated with minimal risk from flooding, would not increase flood risk elsewhere and is compliant with the requirements of the NPPF. The development should not therefore be precluded on the grounds of flood risk.



APPENDICES

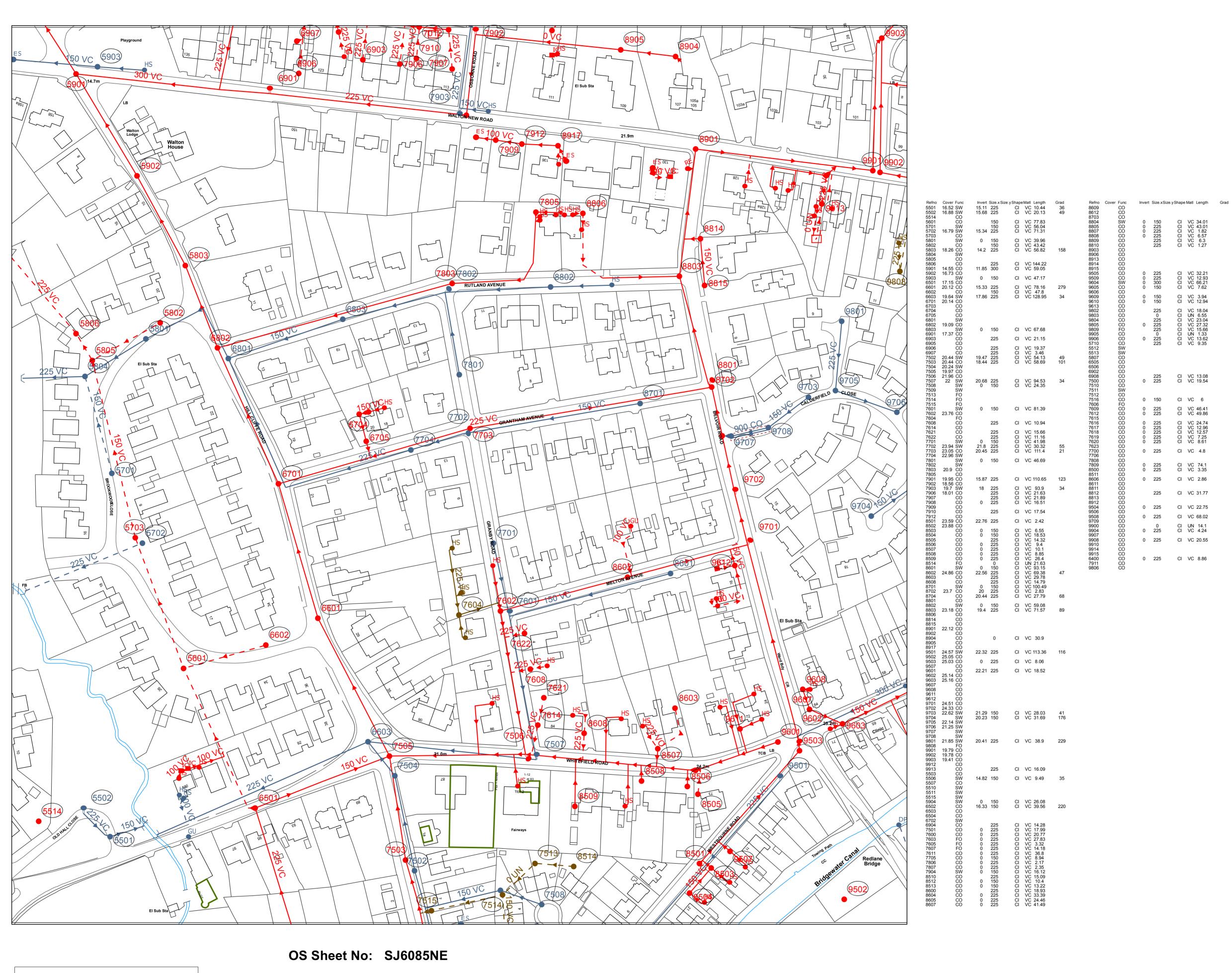


APPENDIX 1 – Proposed Site Layout





APPENDIX 2 – Public Sewer Map



Surface Combined Overflow Manhole, Side Entry Highway Drain, Private Foul Surface Combined WW Site Termination Sludge Main, Public — 느 - Sludge Main, Private — 🛰 — Sludge Main, S104 Non Return Valve **ABANDONED PIPE** Extent of Survey → MainSewer Rising Main → - - Highway Drain Sludge Main Hydrobrake / Vortex Inspection Chamber Bifurcation Contaminated Surface Water ▲ ▲ WW Pumping Station Sludge Pumping Station → Sewer Overflow T Junction/Saddle Valve Chamber Washout Chamber DropShaft WW Treatment Works ST Septic Tank Vent Column Network Storage Tank Orifice Plate Penstock Chamber Blind Manhole 0 0 0 Foul Surface Combined Overflow Screen Chamber CK Control Kiosk Point Discharge Point Unspecified → ← → Outfall **LEGEND** MANHOLE FUNCTION FO Foul SW Surface Water CO Combined OV Overflow **SEWER SHAPE** TR Trapezoidal Cl Circular EG Egg OV Oval FT Flat Top HO HorseShoe RE Rectangular SQ Square **SEWER MATERIAL** DI Ductile Iron Reinforced Plastic Matrix CO Concrete CSB Concrete Segment Bolted CSU Concrete Segment Unbolted Pitch Fibre CC Concrete Box Culverted MAC Masonry, Coursed PSC Plastic/Steel Composite GRC Glass Reinforced Concrete MAR Masonry, Random GRP Glass Reinforced Plastic U Unspecified The position of underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. The actual positions may be different from those shown on the plan and private pipes, sewers or drains may not be recorded. United Utilities will not accept any liability for any damage caused by the actual positions being different from those shown. United Utilities Water Limited 2014. The plan is based upon the Ordnance Survey Map with the sanction of the Controller of H.M. Stationery Office. Crown and United Utilities copyrights are reserved. Unauthorised reproduction will infringe these copyrights. OS Sheet No: SJ6085NE Scale: 1: 1250 Date: 08/08/2016 228 Nodes Sheet 1 of 1 **United**

Utilities

Ding life flow smoothly

SEWER RECORDS

WASTE WATER SYMBOLOGY

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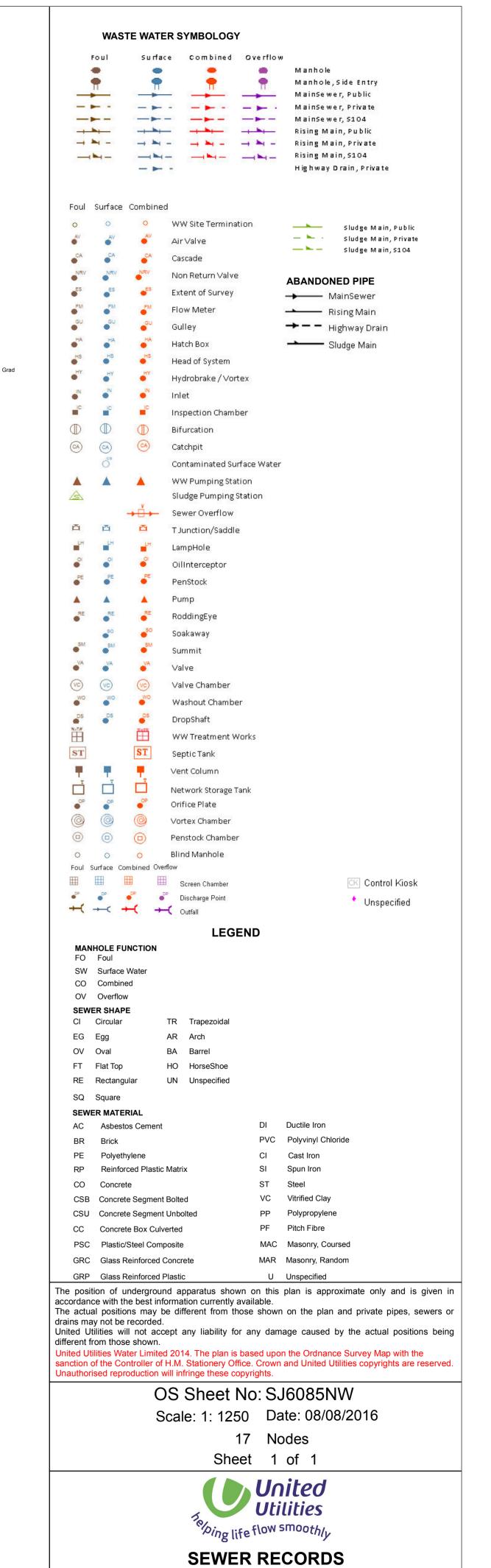
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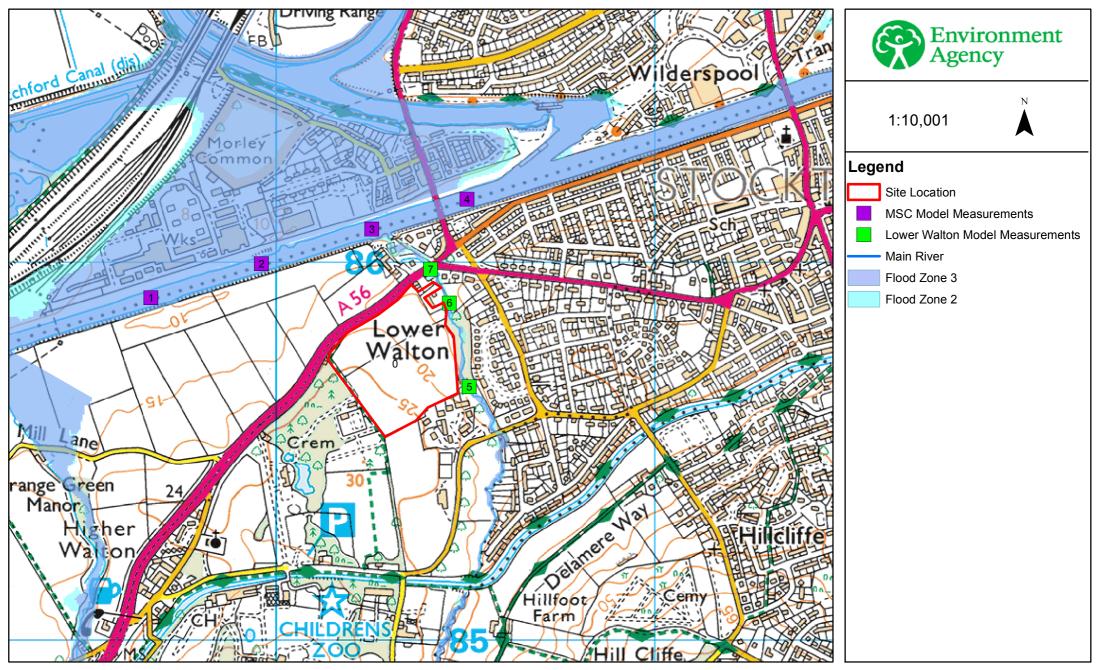
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APPENDIX 3 – Environment Agency Data

Detailed Flood Map centred on Chester Road, Walton, Warrington, WA4 6EN. Created on 02/11/2021 [GMMC238751AB]



2nd November 2021

					Latchford	1 Gate Closed	Latchford 3 Gates Closed						Undefended						
Map Reference	Model Node Reference	Easting	Northing	Data	1 % AEP (1 in 100 year)	0.1 % AEP (1 in 1000 year)	1 % AEP (1 in 100 year)	20 % AEP (1 in 5 year)	10 % AEP (1 in 10 year)	4 % AEP (1 in 25 year)	2 % AEP (1 in 50 year)	1.33 % AEP (1 in 75 year)	1 % AEP (1 in 100 year)	1 % AEP (1 in 100 year) + 30% increase in flow	1 % AEP (1 in 100 year) + 35% increase in flow	1 % AEP (1 in 100 year) + 70% increase in flow	0.5 % AEP (1 in 200 year)	0.1 % AEP (1 in 1000 year)	
1	00042 0054 FAC 20202		359667	385903	Modelled Water Level (m aodN)	6.00	7.00	6.70	6.33	6.59	6.78	6.89	6.98	7.04	7.30	7.34	7.57	7.16	7.58
l	ea013_0251_EAS_29302 35966	359667	385903	Modelled Flow (cumecs)	402.25	542.50	575.53	577.92	611.50	633.83	650.37	666.13	679.77	732.26	740.13	696.29	704.31	695.61	
2	040,0054,540,00000	250062	359963 385998	Modelled Water Level (m aodN)	6.01	7.02	6.72	6.36	6.63	6.82	6.95	7.03	7.08	7.34	7.38	7.60	7.20	7.62	
2	ea013_0231_EA3_29006	ea013_0251_EAS_29608 359963 385998		309903 300990	Modelled Flow (cumecs)	402.01	542.38	575.54	578.36	608.92	634.70	654.48	666.90	680.60	733.01	741.07	696.30	705.08	695.64
2	ea013_0251_EAS_29914	200252	360252 386085	Modelled Water Level (m aodN)	6.02	7.05	6.75	6.42	6.68	6.90	7.02	7.09	7.14	7.41	7.47	7.64	7.27	7.66	
S	eau13_0251_EA5_29914 360252	360252		Modelled Flow (cumecs)	400.66	540.69	574.49	577.73	608.58	640.02	655.75	666.54	680.38	732.71	740.85	694.79	704.63	694.09	
4	4 ea013_0251_EAS_30190	360508	386167	Modelled Water Level (m aodN)	6.04	7.09	6.80	6.45	6.75	6.95	7.06	7.15	7.21	7.48	7.55	7.70	7.33	7.72	
4		300308	300107	Modelled Flow (cumecs)	400.35	540.68	574.49	577.87	621.51	634.40	652.50	667.17	681.14	733.37	741.57	694.82	705.09	694.13	

Model data taken from Manchester Ship Canal 2018 Study

AEP - Annual Exceedence Probability

m aodN - metres above ordnance datum Newlyn

cumecs - cubic metres per second

For the Manchester Ship Canal Model, we provide the following three scenarios:

1. Normal Operation: All sluice gates operate automatically to maintain a navigable pounded water level upstream of each set of sluice gates. During times of high flow the gates are opened automatically to allow excess water pass downstream. During extreme conditions the sluice gates can be manually overridden to extend the opening heights.

2. Latchford 1 Gate Closed Scenario: This scenario represents a single operational sluice gate at Latchford Locks fixed closed. Therefore, only operational movements from 2 active sluice gates. The model setup removes the gate from PID controller setup and an IED file is used to define the sluice gate as fixed in the closed position.

3. Latchford 3 Gates Closed Scenario: This scenario has been defined as the removal of operational rules at all three sluice gates at Latchford Locks, thus, all gates are fixed in the closed position resulting in no regulation of upstream water levels. The model setup removes each of the gates from PID controller setup and an IED file is used to define sluice gates fixed in the closed position.

*Climate Change Scenario - 30%, 35% and 70% increases in flow calculated for the 2080's (2070 - 2115). Please see https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances for more information regarding the new climate change guidance. The location of the site and the type (vulnerability) of development determine the climate change allowances to consider in any flood risk assessment.

Map Reference	Model Node Reference	Easting	Northing	Data	2 % AEP (1 in 50 year)	1.33 % AEP (1 in 75 year)	1 % AEP (1 in 100 year)	1 % AEP (1 in 100 year) + 30% increase in flow	1 % AEP (1 in 100 year) + 35% increase in flow	1 % AEP (1 in 100 year) + 70% increase in flow	0.5 % AEP (1 in 200 year)	0.1 % AEP (1 in 1000 year)
5	034_ea013_0211_LWAL_002 88	360460	385892	Modelled Water Level (m aodN)	11.35	11.39	11.43	11.62	11.65	11.72	11.53	11.70
3		300400		Modelled Flow (cumecs)	2.98	3.30	3.58	5.21	5.50	7.89	4.32	6.62
6	034_ea013_0211_LWAL_002	360438	385932	Modelled Water Level (m aodN)	10.93	10.99	11.03	11.21	11.24	11.45	11.12	11.30
U	40	300430	303932	Modelled Flow (cumecs)	3.22	3.57	3.88	5.46	5.65	6.78	4.66	6.35
7	034_ea013_0211_LWAL_001	360410	385980	Modelled Water Level (m aodN)	10.65	10.71	10.76	10.95	10.98	11.12	10.85	11.01
	72	300410	303900	Modelled Flow (cumecs)	3.22	3.57	3.88	5.69	6.04	8.74	4.66	7.14

Model data taken from Lower Walton 2016 Study

AEP - Annual Exceedence Probability

m aodN - metres above ordnance datum Newly

m aodN - metres above ordnance datum Newlyn cumecs - cubic metres per second

Notes

*Climate Change Scenario - 30%, 35% and 70% increases in flow calculated for the 2080's (2070 - 2115). Please see https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances for more information regarding the new climate change guidance. The location of the site and the type (vulnerability) of development determine the climate change allowances to consider in any flood risk assessment.



APPENDIX 4 – IoH 124 Method Calculations

KRS Environmental Ltd		Page 1
3 Princes Square		
Princes Street, Montgomery		
Powys, Shrewsbury, SY15 6PZ		Micro
Date 10/11/2021 16:08	Designed by Emma	Drainage
File	Checked by	Dialilade
Innovyze	Source Control 2020.1	

ICP SUDS Mean Annual Flood

Input

Return Period (years) 100 Soil 0.150
Area (ha) 2.900 Urban 0.000
SAAR (mm) 800 Region Number Region 9

Results 1/s

QBAR Rural 1.4 QBAR Urban 1.4

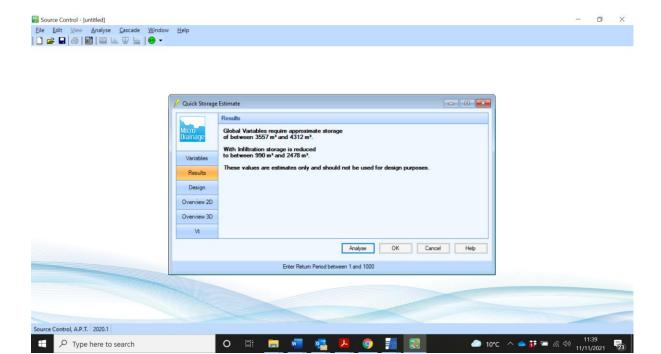
Q100 years 3.0

Q1 year 1.2 Q30 years 2.4

Q100 years 3.0



APPENDIX 5 – MicroDrainage Storage Calculations





KRS Environmental Ltd

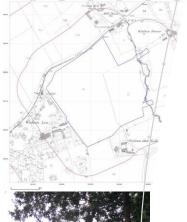
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Tel: 01686 668957

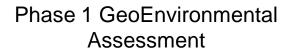
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Chester Road

Walton

September 2016

On behalf of

Ashall Residential Ltd



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CHESTER ROAD

WALTON

PHASE I ENVIRONMENTAL DESK STUDY

FOR

ASHALL RESIDENTIAL LTD

Earth Environmental & Geotechnical Ltd Houldsworth Mill Business & Arts Centre Houldsworth Street Stockport SK5 6DA 0161 975 6088

Report No. A1426/16

September 2016



Report Title:	Chester Road, Walton			
	Phase I Environmental Desk Study			
Report Reference:	A1426/16			
Client:	Ashall Residential Ltd			
Issue Date:	23 rd September 2016			
Drafted By:	J. Harris			
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1.0 INTRODUCTION

Appointment

- 1.1 Earth Environmental & Geotechnical was commissioned by Ashall Residential Ltd (the client) to undertake a Phase I Environmental Desk Study at Chester Road, Walton.
- 1.2 It is understood that the client intends to develop the site for a large residential estate end use comprising of 212 low rise houses, with access roads, car parking, private gardens and landscaped soft standing areas.
- 1.3 A proposed layout plan is shown in Figure 1 below.



Figure 1: Proposed Development Layout Plan

Objective

1.4 The purpose of the Desk Study is to collate available geological and environmental data for the site (and its environment) and provide a preliminary geotechnical and geo-environmental appraisal, with a site specific conceptual model. This enables a preliminary assessment of geo-environmental risks to be undertaken and, if necessary, provides information for the design of a Phase 2 Ground Investigation.

1



Scope

- 1.5 The Phase I Environmental Desk Study comprises of a site reconnaissance visit and a review of the following information sources some of which was provided by the client.
 - British Geological Survey online maps.
 - Google Earth imagery.
 - Environment Agency online mapping data.
 - Historical Ordnance Survey maps.
 - The site and surrounding areas environmental, geological and mining data presented in the site specific GroundSure Reports (Appendix 1).
 - Coal Authority Interactive Viewer.
 - Warrington Borough Council Planning Portal.



2.0 SITE LOCATION AND DESCRIPTION

2.1 The site is currently occupied by a single large field used for crop growing.

Site Location

- 2.2 The site is located immediately southeast of Chester Road, immediately southwest of Walton town centre and approximately 2.5km south of Warrington town centre. The approximate National Grid Reference for the centre of the site is SJ603857 (360319, 385745), at postcode WA4 6TB.
- 2.3 The site, which occupies approximately 8.04ha and comprises an approximately square parcel of land. A plant nursery and some large detached residential properties accessed via a lane runs parallel to the southwest boundary of the site. The southeast boundary is in contact with a playing field (cricket) and the rear gardens of detached residential properties. The northeast boundary is bound by a small river which flows north, with the exception of the northernmost corner of the site which is immediately bound by a newly developed housing estate. Past this river is a woodland and the rear gardens of large detached residential properties. Chester Road bounds the northwest site boundary, with fields beyond this road.
- 2.4 Trees, scrub vegetation and low-lying metal fencing mark the perimeter of the site, whilst a 3m high wooden panelled fence separates the housing estate immediately northeast of the site. The site is accessed by an unnamed lane that is oriented northwest-southeast along the southwest boundary of the site. There are two access gates along the southwest boundary and another in the centre of the northwest boundary.
- 2.5 A location plan is shown below as Figure 2.



Figure 2 Site Location Plan



2.6 The boundaries of the site and neighbouring land uses can be described as follows:

Boundary	Security/ Barrier	Adjacent Landuse		
Northwest	Mature trees and shrubs and low lying metal fence.	Chester Road running northeast-southwest and arable fields beyond this.		
Southwest	Mix of low-lying metal fencing and hedgerow with mature trees.	Large detached residential housing with gardens and a plant nursey.		
Southeast	Shrubs and hedge boundary and mature trees.	Playing fields (cricket) and rear gardens of detached residential properties.		
Northeast	Dense shrubs and tall mature trees. 3m high wooden panel fencing in north corner.	A river runs parallel to this boundary with woodland either side for 25m either side. Newly built residential property immediately off northeast corner.		

- 2.7 There is a small high in the northwest portion of the site with the land then sloping gently towards the east-northeast. The surrounding area however slopes moderately north.
- 2.8 The site is accessed directly off Chester Road and another access from an unnamed lane along the southwest site boundary.

Site Utility Services

2.9 A site service plan has been not provided by the client. The status of all services should be checked with the statutory providers prior to any development (including site investigation) commencing.



3.0 ENVIRONMENTAL SETTING

- 3.1 The geology of the site is covered by British Geological Survey (BGS) online data and the site specific GroundSure Geological Survey (BGS) online data and the site
- 3.2 Environmental conditions are covered by Environment Agency (EA) and British Geological Survey (BGS) online data, and the site specific GroundSure Envirolnsight report (Appendix 1).

Geology

- 3.3 The BGS states that the site is not underlain by artificial ground.
- The majority of the site is underlain by the Shirdley Hill Sand Formation superficial deposits which consists of moderately to well-sorted, fine-grained sand with peat layers in the lower part. A small amount of Tidal Flat superficial deposits are present at the centre of the northwest site boundary which consists of clay, silt and sand.
- 3.5 The site is underlain by the Wilmslow Sandstone Formation to the west which consists of fineto medium-grained, red-brown to brick red, generally pebble-free, cross stratified sandstone, with sporadic siltstones and the Tarporley Siltstone Formation to the east which consists of interlaminated and interbedded siltstones, mudstones and sandstones in approximately equal proportions.
- 3.6 The bedrock is separated by an inferred geological fault of unknown displacement on site which is oriented approximately northnorthwest-southsoutheast on site. There are two other inferred fault records within 250m of the site.
- 3.7 There are no records of any landslips within 500m of the site boundary.
- 3.8 There are 25 BGS borehole records identified within 250m of the site, the closest of which is SJ68NW62 Warrington Newtown Development 392, 83m northeast of the site, drilled to a total depth of 6.5m, which shows fill over gravel over sand with weathered sandstone at 6.00m.
- 3.9 The site is in an area where the hazard rating is negligible or very low with regard to shrink-swell clays, landslides, ground dissolution of rocks and collapsible deposits.
- 3.10 The site is in an area where the hazard rating is moderate with regard to compressible deposits, where the BGS states:

'Significant potential for compressibility problems. Do not drain, load or de-water ground near the property without technical advice. For new build, consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property, possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.'

3.11 The site is in an area where the hazard rating is moderate with regard to running sands, where the BGS states:



'Significant potential for running sand problems with relatively small changes in ground conditions. Avoid large amounts of water entering the ground (for example through pipe leakage or soak-aways). Do not dig (deep) holes into saturated ground near the property without technical advice. For new build, consider the consequences of soil and groundwater conditions during and after construction. For existing property, possible increase in insurance risk from running sand, for example, due to water leakage, high rainfall events or flooding.'

- 3.12 The maximum hazard rating of natural subsidence within the site has been classified as moderate by the BGS.
- 3.13 There are 23 estimated background soil chemistry records within 250m of the site, 4 of which are on site.

Ground Workings

- 3.14 There are 43 historical surface ground workings identified within 250m of the site boundary, the closest being a sand pit 15m northwest, dated 1897. Also in the vicinity are ponds, mill ponds, unspecified wharfs, unspecified pits, canals, unspecified ground workings and another sand pit.
- 3.15 There are 4 current ground workings identified within 1km of the site, the closest being the ceased Stockton Heath sand pit, 45m northwest of the site. All other records relate to ceased sand and sandstone pits.
- 3.16 There are 19 historical surface railways or tunnel features within 250m of the site, the closest being railway sidings 92m northeast of the site, dated 1992.
- 3.17 There are no current active railway lines or tunnel features within 250m of the site.

Mining and Other Underground Workings

- 3.18 There are no historical mining areas within 1km of the site.
- 3.19 There are no coal mining areas within 1km of the site.
- 3.20 There are no non-coal mining areas within 1km of the site.
- 3.21 There are no areas of gypsum extraction, brine extraction, tin mining or clay mining within 1km of the site.
- 3.22 There are no historical underground working features identified within 1km of the site.
- 3.23 There are no non-coal cavities or natural cavities identified within 1km of the site.
- 3.24 No underground railway lines or railway tunnels are identified within 250m of the site on historical mapping.



Radon Potential

- 3.25 The property is not in a Radon Affected Area as defined by the Health Protection Agency, as less than 1% of properties are above the Action Level of exposure.
- 3.26 No radon protection measures are therefore necessary.

Hydrogeology and Hydrology

3.27 The highest underlying superficial deposits permeability is classified by the Environment Agency (EA) as a Secondary A Aquifer with an intergranular flow type and high maximum and high minimum permeability. The BGS states the following:

'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.'

3.28 The underlying Wilmslow Sandstone Formation is classified by the Environment Agency (EA) as a Secondary B Aquifer with a fracture flow type and moderate maximum and low minimum permeability. The BGS states the following:

'Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.'

3.29 The underlying Tarporley Siltstone Formation is classified by the Environment Agency (EA) as a Principal Aquifer with an intergranular flow type and high maximum and high minimum permeability. The BGS states the following:

'Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers.'

3.30 The EA classifies the groundwater vulnerability and soil leaching potential on site as HU, major aquifer/high leaching potential where the BGS states:

'Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.'

3.31 The EA classifies the groundwater vulnerability and soil leaching potential on site as H2, major aquifer/high leaching potential where the BGS states:

'Deep, permeable, coarse textured soils which readily transmit a wide range of pollutants because of their rapid drainage and low attenuation potential.'

- 3.32 There are 49 groundwater abstraction licence records for 8 locations within 1km of the site. The closest being a historical borehole for evaporative and non-evaporative cooling and effluent slurry dilution, 271m northwest of the site.
- 3.33 There are 2 surface water abstraction licences within 2km of the site, both relating to an active point at Appleton, 1.35km south of the site.



- There are 2 potable water abstraction licences within 2km of the site, both relating to an active point at Appleton, 1.35km south of the site.
- 3.35 There are 3 groundwater Source Protection Zones within 500m of the site, with a Zone 2 outer catchment and a Zone 3 total catchment located on site.
- 3.36 The site is within 500m of a Source Protection Zone within a confined aquifer, an outer catchment located 471m south of the site.
- 3.37 There are 12 detailed river network records within 500m of the site with an unnamed secondary river defining the northeast site boundary. The Manchester Ship Canal is 179m north of the site, an unnamed tertiary river lies 337m southeast of the site, the Bridgewater Canal lies 380m south of the site, the Warrington Dock Entrance is located 404m northeast of the site, a secondary river lies 424m southeast of the site and a primary river is located 462m north of the site.
- 3.38 There are 7 unidentified surface water features within 250m of the site, 2 of which are located on site and most likely associated with the unnamed secondary river along the northeast site boundary.
- 3.39 There are no biological or chemical river quality records within 1.5km of the site.

Landfill and Waste Management Activity

- 3.40 There are 96 records of historical potentially infilled land identified within 500m of the site, the closest being a sand pit 15m northwest of the site dated 1897. Also in the vicinity are multiple ponds, mill ponds, unspecified wharfs, unspecified pits, canals, ship canals, unspecified ground workings, sand pits, disused canals and refuse heaps.
- 3.41 There is 1 record of a current EA landfill site within 1km of the site, a co-disposal landfill site 891m northwest of the site.
- 3.42 There are 2 records of historic EA landfill sites with 1.5km of the site, the closest being 1.04km northeast of the site, licence surrendered in 1982.
- 3.43 There are 9 records of Landfills from Local Authority and Historical Mapping Records within 1.5km of the study site, the closest being a refuse tip 705m northwest of the site, from 1966 mapping.
- 3.44 There are 10 records of waste treatment, transfer or disposal sites within 500m of the study site, the closest being a household, commercial and industrial waste station 766m northwest of the site, dated 1993.
- 3.45 There are no other landfill or waste sites within 1.5km of the site.

Industrial Land Use Information

3.46 There are 125 records of historical potentially contaminative uses identified within 500m of the site, the closest being a nursery immediately west of the site, dated 1969 to 1992. Also within the vicinity are sand pits, mill ponds, unspecified mills, unspecified commercial/industrial sites,



unspecified wharfs, unspecified pits, ship canals, unspecified groundworkings a sawmill, mineral railway sidings, railway sidings, unspecified works, sawing and planning mills, sand pits, timber yards, railway, buildings, nurseries, disused canals, refuse heaps, unspecified tanks, borate works, unspecified pumps and sand pumps.

- 3.47 There are 9 records of current potentially contaminative industrial sites identified within 250m of the site, the closest being a depot 78m north of the site. Also in the vicinity are electricity substations, bathroom fixtures, fittings and sanitary equipment, published goods, sewage works, outfall and antenna services.
- 3.48 There are 23 records of historical tanks identified within 500m of the site, the closest being settling tanks 123m north of the site dated 1966.
- There are 26 records of historical energy features identified within 500m of the site, the closest being an electricity substation 86m east, dated 1984 to 1995.
- 3.50 There are no historical petrol or fuel sites within 500m of the site.
- 3.51 There are no current petrol or fuel sites within 500m of the site.
- 3.52 There are no historical garages or motor vehicle repair sites identified within 500m of the site.
- 3.53 There are no National Grid high voltage underground electricity transmission cables, or high pressure gas transmission pipelines within 500m of the site.

Environmental Permits, Incidents and Registers

3.54 The Groundsure Report includes records of environmental permits, incidents and registers within 500m of the site, which are summarised in Table 1 below.

Table 1: Environmental Permits, Incidents and Registers within 500m of the site

Historic IPC Authorisations	3
Part A (1) and IPPC Authorised Activities	21
Red List Discharge Consents	None
List 1 Dangerous Substances Inventory Sites	1
List 2 Dangerous Substances Inventory Sites	1
Part A (2) and Part B Activities and Enforcements	3
Category 3 or 4 Radioactive Substance Authorisations	None
Licensed Discharge Consents	11
Water Industry Referrals	None
Planning Hazardous Substance Consents and Enforcements	1
Dangerous or Hazardous (COMAH and NIHHS) Sites	1
National Incidents Recording System (Pollution Incidents), List 2	9
National Incidents Recording System (Pollution Incidents), List 1	None
Sites Determined as Contaminated Land under Part 2A EPA1990	None



- 3.55 All 3 Historic IPC Authorisations relate to the Solvay Interox Ltd Baronet Works, 369m northwest of the site, for combustion processes, last dated 1998. The site permit has been revoked and the site classified as an IPPC.
- 3.56 All of the Part A (1) and IPPC Authorised Activities relate to the Solvay Interox Ltd Baronet Works, 405m northwest of the site, for a number of processes including; the disposal of > 50 t/d non-hazardous waste involving physicochemical treatment, combustion; any fuel =>50mw, organic chemicals; oxygen containing compounds e.g. alcohols, inorganic chemicals; non-metals etc. e.g. calcium carbide, inorganic chemicals; and salts e.g. ammonium chloride, last noted as effective on the 31st August 2016.
- 3.57 The List 1 Dangerous Substances Inventory Site relates to the Solvay Interox Ltd Baronet Works, 369m northwest of the site, receiving water from the Mersey Estuary with authorised substances being arsenic and zinc. This site is listed and not active.
- 3.58 The List 2 Dangerous Substances Inventory Site relates to the Solvay Interox Ltd Baronet Works, 369m northwest of the site, receiving water from the Mersey Estuary with authorised substances being mercury and cadmium. This site is listed and not active.
- 3.59 The closest Part A (2) and Part B Activities and Enforcements relates to crematoria processes, 271m southwest of the site.
- 3.60 The closest licensed discharge consent is identified 157m north of the site, and is a historic discharge consent for sewer storm overflow.
- 3.61 The Planning Hazardous Substance Consent and Enforcement relates to the application for amendment to Hazardous Substances Consent at the Solvay Interox Ltd Baronet Works, 406m northwest of the site. Application number A01/43873.
- 3.62 The Dangerous or Hazardous (COMAH and NIHHS) Sites record relates to the Solvay Interox Ltd Baronet Works which is a registered current COMAH site Top Tier Operator.
- 3.63 The closest NIRS list 2 pollution incident was recorded in 2003, 21m southwest of the site, the pollutant was inorganic chemicals or product and was recorded as having no impact to water, land or air quality. The closest most significant pollution incident was recorded in 2001, 404m north of the site, the pollutant was crude sewage and was recorded as having significant impact to water quality.

Environmentally Sensitive Sites

- 3.64 There are 4 records of Ancient Woodland within 2km of the site, the closest being unnamed woodland 1.6km southwest of the site.
- 3.65 The site is located within the Liverpool, Manchester and West Yorks, under the local authority of Warrington (B).
- 3.66 It should be noted that an ecological assessment of the site falls outside the brief of this report and that an ecological specialist should be consulted in this regard.



Archaeology

3.67 An archaeological assessment falls outside the brief of this report. Where considered necessary, advice should be sought from an archaeological specialist in this respect.

Potential Flood Risks

- 3.68 Detailed assessment of flood risks is outside the scope of this report. However, the site is within 250m of 2 Environment Agency Zone 2 (Fluvial/Tidal Models) and 2 Zone 3 (Fluvial Models) floodplains which lie onsite along the northeast site boundary and 245m north and 153m northwest respectively. The highest risk of flooding on site is high.
- 3.69 There are no flood defences, areas benefitting from flood defences or areas used for flood storage within 250m of the site.
- 3.70 According to the BGS there are areas within 50m of the site boundary that may be susceptible to clearwater flooding. The highest susceptibility to groundwater flooding is 'limited potential' and the BGS confidence rating is low. The BGS states:

'Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.'

Previous Site Investigations

3.71 We are not aware of any records of previous site investigations.



4.0 SITE HISTORY

- 4.1 The historical development of the site has been determined by reference historical plans and Google Earth imagery. The reviewed historical plans comprise only readily available records and may be limited; however, the information available to date indicates that additional searches are unlikely to add to our understanding of the site. The earliest available historical mapping covering the site dates back to 1877.
- 4.2 The site history is summarised in Table 2, below, followed by selected extracts from maps and aerial photographs.

Table 2: Summary of Site History

Date	Site	Surrounding Land Use		
1877	Site is open field similar to today.	Rural agricultural setting.		
	Access lane or pathway is located in the	Walton Flour Mill and large mill pond 100m N of the site.		
	centre of the site oriented N-S until it makes a sharp E-W change of direction	Walton old Hall 95m S of the site.		
	with a bridge crossing the unnamed secondary river along the northeast site	Walton Lea buildings and nursey 100m W of the site.		
	boundary.	Walton House 100m NE of the site.		
	Site is part of 2 fields.			
1894, 1897, 1899	Site is now part of 3 fields. Small path road along the unnamed river	Tennis ground now immediately S of the site as part of the Walton Old Hall with has expanded.		
	onsite leading to Walton Old Hall.	Sand Pit ~20m N of the site opposite Chester Road.		
		Manchester Ship Canal 160m N of the site.		
		Birkenhead Railway line 700m NW of the site oriented NESW.		
		Warrington Dock Entrance 500m NE of the site.		
		River Mersey 500m N of the site.		
1905-1908, 1907, 1905-	Site now has the linear band of wooded area as seen today oriented along the path E-W. Site split into 2 fields from 1966.	Residential buildings constructed NE of the site due to urbanisation of Walton.		
1910, 1910, 1925-1926, 1926-1929, 1927-1928, 1938, 1949-		Expansion of Walton Lea buildings 100m W of the site.		
		Mill no longer in use and mill pond infilled.		
		Bridgewater Canal 450m SE of the site.		
1954, 1966, 1965-1967,		Timber Yard 450m NE of the site.		
1969, 1967- 1970, 1975- 1980		Mineral railway along the Manchester Ship Canal.		
		Grange Mill 750m W of the site.		
1987-1990, 1992-1993,	Site is 2 fields with similar outline as seen today.	Walton Old Hall demolished and replaced with residential properties.		
1993, 2002, 2014		Works 400m N of the site.		
		Part of railway line disused.		
GoogleEarth Aerial	Site is split via a hedgerow into 3 fields in	Site immediately NE of the site is now demolished with a new housing estate replacing the commercial estate seen on		



Photograph	1945.	Google Imagery – post 2015.
1945, 2005, 2009, 2013, 2015	2005 – present, site is as seen today.	



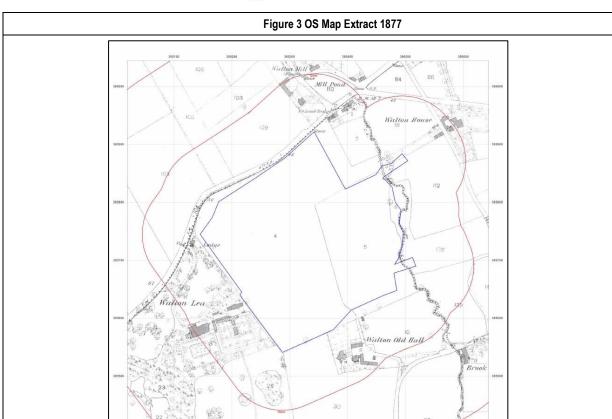
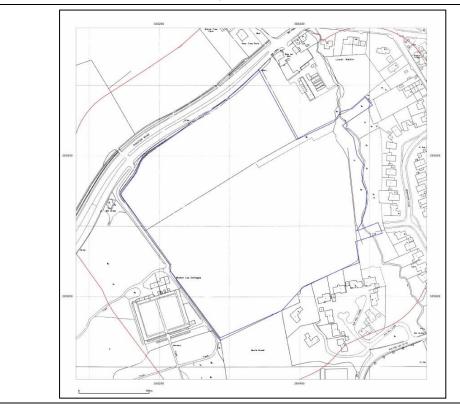


Figure 4 OS Map Extract 1993





5.0 WALKOVER SURVEY

- 5.1 A (non-intrusive) walkover survey was completed on 09 September 2016. The photographs and notes from this survey are appended to this report as Appendix 2 and Appendix 3 respectively.
- The site is currently occupied by a large open agricultural land currently used for crop growing. Mature trees, shrub vegetation and small trees are present across the site boundaries, particularly surrounding the unnamed secondary river which marks the northeast boundary of the site.
- 5.2 The centre of the field is slightly raised with the surrounding land sloping gently away in each direction.
- 5.3 A plant nursery is situated immediately southwest of the site and residential housing along the southern and eastern site boundaries.
- 5.4 The site is accessed by an unnamed lane that is oriented northwest-southeast along the southwest site boundary which leads to the nursery southwest of the site.
- Two old stockpiles were noted within the wooded area which extends into the field along the northeast site boundary and another closer to the unnamed river on site. These are overgrown and materials are unable to be identified.
- 5.6 The current site usage is considered low risk in terms of environmental pollution and ground contamination.
- 5.7 There was a strong scent of gas along the southwest boundary of the site with an unknown source.



6.0 PRELIMINARY CONTAMINATION RISK ASSESSMENT

Introduction

- The following paragraphs outline a Preliminary Risk Assessment (PRA) for the site as defined by DEFRA and the EA Model Procedures for the Management of Land Contamination, CLR11 (2004).
- Table 3 provides a Preliminary Conceptual Model (PCM) which defines the site in terms of a potential pollution linkage, that is, whether a pathway exists between a contamination source and a sensitive environmental receptor (Source-Pathway-Receptor relationship).
- Table 3 considers whether a pollution linkage is potentially present and provides a preliminary qualitative assessment of risk based on the information currently available. Where a possible linkage is identified, it does not necessarily mean that a significant risk exists, but indicates that further information is required through appropriate site investigation to substantiate the conceptual model

Table 3: Preliminary Conceptual Model

6.4 The PCM/PRA is based on residential end use.

Source	Pathway	Receptor	Linkage	Comment
The likelihood of significant ground contamination sources being present at the site, associated with historical land use and made ground, is considered LOW .	Direct contact, ingestion of soil, dermal contact, dust exposure pathways.	Current Site Users	Unlikely	The risk associated with current site users via direct exposure is considered to be LOW .
		Adjacent land users	Possible	There is limited potential for contact via wind-blown dust / debris. The current risk is considered LOW .
		Construction Workers	Unlikely	Standard industry working practices for working on sites will be sufficient to manage any potential risks. Therefore, the risk associated with construction workers via direct exposure is considered to be LOW .
		Future land users	Possible	Considering a proposed residential end use with private gardens, direct exposure is likely. The risk associated with future site users via direct exposure is considered to be LOW .



	Direct downward migration through leaching and/or mobile liquids.	Groundwater	Unlikely	Minor potential sources of mobile contamination are identified on the site and major contamination sources are identified close to the site which lies upon Principal and Secondary B Aquifers. The perceived risk to groundwater is considered MEDIUM.
The likelihood of soluble	fore s e to	Surface water	Unlikely	No significant sources of mobile contamination are identified associated with the site; however major contamination sources are identified close to the site. There is anticipated porous superficial deposits and underlying strata with several surface water courses in the vicinity. The perceived risk to surface water is considered MEDIUM.
and/or liquid and therefore mobile contaminants occurring at the site due to its past use is considered LOW.		Groundwater / surface water abstractions	Unlikely	The site is within a groundwater source protection zone and a groundwater source protection zone within a confined aquifer. An unnamed river is located on site. There are multiple water abstraction licences in the area, however, these are over 200m from the site. The risk to water abstractions is therefore considered LOW to MEDIUM.
		Adjacent Properties	Unlikely	No significant sources of mobile contamination are identified, associated with the site. Anticipated porous superficial deposits and underlying strata provides the potential for infiltration and migration of mobile contaminants, if present. The preliminary risk to adjacent properties is considered LOW .
		Ecology	Unlikely	There are no ecologically vulnerable areas in close proximity to the site. The risk to ecology is therefore considered NEGLIGIBLE .
		Current Site Users	Unlikely	The site is unoccupied; the risk associated with current site users is considered to be LOW .
The likelihood of volatile contaminants at the site due to its past use is considered LOW .	Inhalation of harmful vapours (indoor and outdoor airspaces)	Adjacent Properties	Unlikely	No significant sources of mobile contamination are identified associated with the site; however major contamination sources are identified close to the site. Underlying porous strata will provide the potential for migration, if present. The potential risk to adjoining site users is therefore considered LOW to MEDIUM.



There is a sand pit and a now infilled mill pond in close proximity to the site. The likelihood of degradable materials with the potential to generate hazardous ground gas is therefore MEDIUM.	Emissions from the ground collecting in confined spaces and excavations	Construction/ services maintenance workers	Possible	Sources of potentially degradable materials are identified in close proximity to the site. The preliminary risk is therefore considered MEDIUM .
	Migration of gases on/off site	Adjoining site users	Possible	Sources of potentially degradable materials in the vicinity of the site. Anticipated underlying porous strata provides the potential for migration of ground gases, if present. Adjacent residential properties represent sensitive receptors. The potential risk to adjoining site users is therefore considered MEDIUM .
	and collecting in confined spaces on/off site.	Current/future site users	Possible	Sources of potentially degradable materials are identified in the vicinity of the site. Anticipated underlying porous strata provides the potential for migration of ground gases, if present. The proposed residential end use represents sensitive receptors. The potential risk is therefore considered MEDIUM .
Chemicals which could prove aggressive to construction materials may be present on site.	Direct contact	Construction concrete, plastic water pipes.	Possible	Risks to construction materials can be identified via site investigation prior to the proposed construction works. The perceived risk is considered LOW .

Preliminary Risk Assessment

- The site has been an agricultural plot of land since 1877. There have historically been a sand pit, mill pond and a site with a history of potentially contaminative sources in close proximity to the site. As a result, the ground may have been impacted by potentially contaminative substances which could potentially impact upon current and future users. Therefore, a number of potential pollutant linkages exist at the site, these are considered to be low to medium risks.
- 6.6 Several significant pollutant linkages have been identified, with medium to low associated preliminary risks.
- 6.7 Considering the underlying Principal and Secondary B Aquifers, localised impact to groundwater is possible and a medium risk to groundwater is identified, should mobile contamination be present.
- 6.8 A medium risk has been identified with respect to the potential for the generation of hazardous ground gases.



7.0 CONCLUSIONS AND RECOMMENDATIONS

- 7.1 The likelihood of contamination on the site is overall low to medium.
- 7.2 Several significant pollutant linkages have been identified, with medium to low associated preliminary risks
- 7.3 Considering that the proposed residential development includes private gardens, a low preliminary risk is identified with potential risks to site users and plants.
- 7.4 The site is in an area where the hazard rating is moderate with regard to compressible deposits and running sands.
- 7.5 The site is within 250m of two Environment Agency Zone 2 (Fluvial/Tidal Models) and two Zone 3 (Fluvial Models) floodplains which lie onsite along the northeast site boundary and 245m north and 153m northwest respectively. The highest risk of flooding on site is high.

Recommendations

- 7.6 An intrusive investigation should be undertaken to establish geotechnical parameters for the design of foundations, floor slabs and pavement construction for the proposed new build and surrounding area.
- 7.7 As part of the geotechnical investigation, it is recommended that samples of soil and groundwater are recovered for analysis for contamination and to confirm whether there are any residual risks.
- 7.8 As part of the site investigation, it is recommended that ground gas and groundwater installations and monitoring are completed to confirm whether there are any residual risks.
- 7.9 A Flood Risk Assessment is recommended due to the risk of flooding of the unnamed secondary River along the northeast boundary of the site.
- 7.10 An Ecological Survey will be required for planning and design purposes.



APPENDIX 1 GROUNDSURE REPORTS



APPENDIX 2 SITE PHOTOGRAPHS



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Email: info@earthenvironmental.co.uk **Web**: www.earthenvironmental.co.uk

SITE PHOTOGRAPHS

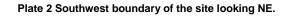


Job No.: A1426/16 Site: Chester Road, Walton

Plate A. Walkover Notes and Picture Locations.



Plate 1 Southwest boundary of the site looking N.









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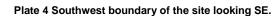
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SITE PHOTOGRAPHS



Job No.: A1426/16 Site: Chester Road, Walton

Plate 3 Southwest boundary of the site looking E.





Date: 09 September 2016



Date: 09 September 2016

Plate 5 Southwest boundary of the site looking SE.

Plate 6 Southeast boundary of the site looking N.



Date: 09 September 2016





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Job No.: A1426/16 Site: Chester Road, Walton

Plate 7 Southeast boundary of the site looking NE.

Plate 8 Southeast boundary of the site looking NE.



Date: 09 September 2016



Date: 09 September 2016

Plate 9 Southeast boundary of the site looking E.

Plate 10 Southeast boundary of the site looking SE.



Date: 09 September 2016





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SITE PHOTOGRAPHS



Job No.: A1426/16 Site: Chester Road, Walton

Plate 11 Southeast boundary of the site looking S into adjacent playing fields.

Plate 12 Flora along southeast boundary.







Plate 14 Industrial site N of the site.





Date: 09 September 2016





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Plate 15 Southeast corner of site looking W at leaning tree in boundary.

Plate 16 Northeast boundary of site looking N.

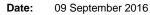






Plate 18 Stockpiled material in southeast corner of site.







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Plate 19 Northeast site boundary looking E towards unnamed secondary river.

Plate 20 Northeast site boundary looking E towards unnamed secondary river.





Plate 21 Northeast site boundary looking E towards unnamed secondary river.

Plate 22 Northeast site boundary looking S.







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Job No.: A1426/16 Site: Chester Road, Walton

Plate 23 Northeast site boundary looking SW. Plate 24 Northeast sit

Plate 24 Northeast site boundary looking W.



Date: 09 September 2016 Date:

09 September 2016





Date: 09 September 2016





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> Job No.: A1426/16 Site: Chester Road, Walton

Plate 27 Old stockpile in NE corner of site.

Plate 28 Unnamed secondary river along NE boundary flowing NW.

SITE PHOTOGRAPHS

Earth Environmental



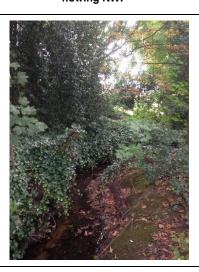
Date: 09 September 2016



09 September 2016

Plate 29 Unnamed secondary river along NE boundary flowing NW.

Plate 30 Unnamed secondary river along NE boundary flowing NW.



Date: 09 September 2016





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Date:

09 September 2016

Date:

09 September 2016



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Plate 35 Old stockpile.

Job No.: A1426/16

Plate 36 Northeast corner of site looking W.



Date: 09 September 2016 Date: 09 September 2016





Date: 09 September 2016



SITE PHOTOGRAPHS

Site: Chester Road, Walton

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Plate 38 Northeast corner of site looking S.



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SITE PHOTOGRAPHS



Job No.: A1426/16 Site: Chester Road, Walton

Plate 39 Northwest corner of site looking S.



Plate 40 Northwest corner of site looking E.



Date: 09 September 2016 Date: 09 September 2016

Plate 41 Northwest corner of site looking SE.



Plate 42 Northwest corner of site looking S.



Date: 09 September 2016



APPENDIX 3 SITE WALKOVER NOTES



WALK OVER SURVEY REPORT

Site: Chester Road, Walton Date: 09 September 2016

Job No: A1426/16 Undertaken By: Joleen Harris

Purpose of Site Walkover: 1) Provide further information for the Desk Study Report;

2) Identify potential contamination sources, pathways and receptors;

3) Identify geotechnical features and potential geohazards;

4) Determine locations for exploratory boreholes.

Desk Study features checked during site visit	Feature and Information required	Present	Description / Comments
Site Setting	Description required for: Town/Country/Suburb Setting Industrial/Residential/Retail Usage Current Site use (if undertaking security and access to the site)		Mixed: Agricultural west of the site, urban town setting east of the site. Agricultural use. Field. No security or access issues.
Evidence of Past Activities	Are there: Any relevant street names in area? Features or relics which indicate past history?	Yes /No Yes /No	N/A N/A
Geographic Setting	Description required for: Low lying flood plain/dry valley/rolling hills etc.		Valley edge gently sloping towards the north- northeast.
Ground Conditions	Is there any evidence of: Mining, Mine entries Subsidence Landslip/slope erosion Former investigation works	Yes/No Yes/No Yes/No	N/A N/A



Desk Study features checked during site visit	Feature and Information required	Present	Description / Comments
Topography	Description required for: Are there apparent differences between site and surrounding area? (If yes describe the presence of retaining walls, and slopes). Is there evidence of Made Ground / Fill on site?	Yes/No Yes/No	There is a small hillock in the NW corner of the site, with surrounding land gently-moderately sloping away towards the north and northeast. N/A
Site Boundaries and Neighbours	Description required for: Type of boundary demarcation (if any) on each side of site, usage of adjacent land and name of industrial/commercial occupiers. Note any adjacent features such as water course and other potentially environmentally sensitive uses (residential, school, infirmary, SSSI etc.).		A plant nursery and some large detached residential properties accessed via a lane runs parallel to the southwest boundary of the site. The southeast boundary is in contact with a playing field (cricket) and the rear gardens of detached residential properties. The northeast boundary is bound by a small river which flows north, with the exception of the northernmost corner of the site which is immediately bound by a newly developed housing estate. Past this river is a woodland and the rear gardens of large detached residential properties. Chester Road bounds the northwest site boundary, with fields beyond this road.
Vegetation	Are there any vegetation/trees on or close to side (if yes describe locations, type, maturity, etc.)? Is there any evidence of poor health / distress?	Yes/No Yes/No	Mix of mature trees, shrubs and flowers along all site boundaries. 1 tree leaning along southeast site boundary. All others are in good health.
Ground Surface	Are there areas of hardstanding and estimate the split between hard and soft cover? (If yes describe locations, types and conditions). Is the any evidence of any spillages or staining?	Yes/ No Yes /No	100% crop field and woodland 25m either side of the river along northeast boundary. N/A



Desk Study features checked during site visit	Feature and Information required	Present	Description / Comments
	Are there any drain covers / soakaways (if yes describe locations)?	Yes /No	N/A
Site Drainage	Are there any outfalls/water courses on site (note the condition of water courses in open water courses? discolouration, odour, eutrophication, oily sheen, gas bubbling water, clear or cloudy)	Yes/ No	Unnamed secondary river along NE site boundary flowing towards the NW.
	Where a watercourse runs alongside or crosses a site are there any differences in visible water quality upstream and downstream of the site?	¥es/No	No change.
Electrical Equipment	Are there any electricity sub stations on or adjacent to the site? Are there any electrical transformers, capacitors, pylons etc. on site?	¥es/No	N/A
	Description of Buildings, including age, state of repair, materials used in construction.		Solely occupied by a field.
Buildings	Is there any evidence of asbestos construction materials e.g. roofing, insulation materials?	Yes /No	N/A
	Do any buildings have basements?	Yes /No	N/A
	Do any buildings have a boiler room (if yes, describe fuel type and storage arrangements)?	Yes /No	N/A
Landfilling	Is there any evidence of gas protection measures (gas protection measures (gas membrane, gravel-filled trenches, venting pipes, etc.)?	Yes /No	N/A



Desk Study features checked during site visit	Feature and Information required	Present	Description / Comments
B 44.5.4.	Point Source: Are there any stacks / vents / cooling towers / abatement equipment?	Yes /No	N/A
Process Air Emissions	Fugitive Source: is there any stockpiled material / windblown dust / vapour process?	Yes/ No	2 old overgrown stockpiles and 1 stockpile of wooden crates.
	Are there any drums / containers (if yes, describe quantity, full /empty, stored on hard standing / soft landscaping, bunding)?	Yes/No	N/A
Storage of fuels & Chemicals	Are there any above ground fuel tanks (if yes, describe locations, volumes, how many, bunding, used / disused, condition?)	Yes /No	N/A
	Is there any evidence of underground fuel tanks (fuel pumps, covers, vent pipes, how many and how large, fill point, used / disused, and condition)?	¥es/No	N/A
Accidents	In the event of a large spillage would runoff affect any vulnerable watercourse/culverts?	Yes/ No	Unnamed secondary river along NE site boundary.
	Are emergency procedures / equipment in place?	Yes /No	N/A
	Are there any waste skips present on site?	Yes /No	N/A
Waste	Are waste storage facilities adequate?	Yes/ No	N/A
	Is there any litter/fly tipped material?	Yes/ No	2 old overgrown stockpiles and 1 stockpile of wooden crates.
Atmospheric	Are there any fumes, odours originating from site or affecting site from neighbouring sites?	Yes/ No	Strong smell of gas along SW site boundary. Unknown source.



Desk Study features checked during site visit	Feature and Information required	Present	Description / Comments
Access / Further Investigations	If a Phase 2 Investigation is likely to be required, describe any access problems including headroom where relevant, services, overhead cables, restricted access areas, confined spaces, trafficked areas, etc. that are likely to affect investigation scope/techniques.		Vehicular access is available from Chester Road and unnamed lane directly onto the site.
	Identify possible site office and storage locations.		No buildings on site.
	Identify possible water supply	Yes/ No	Unnamed river on site.
Site Environs	Are there any local features that could have a harmful influence e.g. landfill, industrial processes, railway land?	¥es/No	Industrial site 400m N of the site, ship canals N and S of site. Old mill pond 100m NE of the site. Sand pit 20m N of the site.
	Are there any sensitive water features/courses near to the site?	Yes/ No	Unnamed secondary river along NE site boundary flowing NW.
Local Knowledge / Anecdotal Evidence			Old removed hedgerows and footpath could provide some made ground across the site.
Site Dimensions	Describe shape of Site in plan and measure dimensions.		The site, which occupies approximately 8.04ha and comprises an approximately square parcel of land



APPENDIX 4 REPORT LIMITATIONS



LIMITATIONS

This contract was completed by Earth Environmental & Geotechnical Ltd on the basis of a defined programme and scope of works and terms and conditions agreed with the client. This report was compiled with all reasonable skill, and care, bearing in mind the project objectives, the agreed scope of works, the prevailing site conditions, the budget and staff resources allocated to the project.

Other than that expressly contained in the above paragraph, Earth Environmental & Geotechnical Ltd provides no other representation or warranty whether express or implied, is made in relation to the services. Unless otherwise agreed this report has been prepared exclusively for the use and reliance of the client in accordance with generally accepted consulting practices and for the intended purposes as stated in the agreement under which this work was completed. This report may not be relied upon, or transferred to, by any other party without the written agreement of a Director of Earth Environmental & Geotechnical Ltd.

If a third party relies on this report, it does so wholly at its own and sole risk and Earth Environmental & Geotechnical Ltd disclaims any liability to such parties.

It is Earth Environmental & Geotechnical Ltd understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was an important factor in determining the scope and level of the services. Should the purpose for which the report is used, or the proposed use of the site change, this report will no longer be valid and any further use of, or reliance upon the report in those circumstances by the client without Earth Environmental & Geotechnical Ltd review and advice shall be at the client's sole and own risk.

The report was written in 2016 and should be read in light of any subsequent changes in legislation, statutory requirements and industry best practices. Ground conditions can also change over time and further investigations or assessment should be made if there is any significant delay in acting on the findings of this report. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of Earth Environmental & Geotechnical Ltd. In the absence of such written advice of Earth Environmental & Geotechnical Ltd, reliance on the report in the future shall be at the client's own and sole risk. Should Earth Environmental & Geotechnical Ltd be requested to review the report in the future, Earth Environmental & Geotechnical Ltd shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between Earth Environmental & Geotechnical Ltd and the client.

The observations and conclusions described in this report are based solely upon the services that were provided pursuant to the agreement between the client and Earth Environmental & Geotechnical Ltd. Earth Environmental & Geotechnical Ltd has not performed any observations, investigations, studies or testing not specifically set out or mentioned within this report.



Earth Environmental & Geotechnical Ltd is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, Earth Environmental & Geotechnical Ltd did not seek to evaluate the presence on or off the site of electromagnetic fields, lead paint, radon gas or other radioactive materials.

The services are based upon Earth Environmental & Geotechnical Ltd observations of existing physical conditions at the site gained from a walkover survey of the site together with Earth Environmental & Geotechnical Ltd interpretation of information including documentation, obtained from third parties and from the client on the history and usage of the site. The findings and recommendations contained in this report are based in part upon information provided by third parties, and whilst Earth Environmental & Geotechnical Ltd have no reason to doubt the accuracy and that it has been provided in full from those it was requested from, the items relied on have not been verified.

No responsibility can be accepted for errors within third party items presented in this report. Further Earth Environmental & Geotechnical Ltd was not authorised and did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the services. Earth Environmental & Geotechnical Ltd is not liable for any inaccurate information, misrepresentation of data or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to Earth Environmental & Geotechnical Ltd and including the doing of any independent investigation of the information provided to Earth Environmental & Geotechnical Ltd save as otherwise provided in the terms of the contract between the client and Earth Environmental & Geotechnical Ltd.

Where field investigations have been carried out these have been restricted to a level of detail required to achieve the stated objectives of the work. Ground conditions can also be variable and as investigation excavations only allow examination of the ground at discrete locations. The potential exists for ground conditions to be encountered which are different to those considered in this report. The extent of the limited area depends on the soil and groundwater conditions, together with the position of any current structures and underground facilities and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters [as stipulated in the contract between the client and Earth Environmental & Geotechnical Ltd] based on an understanding of the available operational and historical information, and it should not be inferred that other chemical species are not present.

The groundwater conditions entered on the exploratory hole records are those observed at the time of investigation. The normal speed of investigation usually does not permit the recording of an equilibrium water level for any one water strike. Moreover, groundwater levels are subject to seasonal variation or changes in local drainage conditions and higher groundwater levels may occur at other times of the year than were recorded during this investigation.

Any site drawing(s) provided in this report is (are) not meant to be an accurate base plan, but is (are) used to present the general relative locations of features on, and surrounding, the site.



Headline Social Needs Report, supporting the development of further specialised accommodation for older people at Chester Road, Walton, Warrington.

Prepared for Ashall Property Ltd

Nigel Appleton with David Appleton 15th November 2021



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1 The demography of the older population of Warrington Borough

1.1 There is a projected rise of around 39% for those people aged 65 years and over within the population of Warrington up to the year 2040. Within this overall growth there is a steeper rate of increase within the oldest cohorts, the number of those ninety years of age or more projected to increase by 125% or 2,000 persons over the period to 2040.

Table One Population aged 65 and over, projected to 2040 (Warrington)

	2020	2025	2030	2035	2040
People aged 65-69	10,700	11,800	14,200	14,300	13,000
People aged 70-74	10,900	10,000	11,000	13,300	13,400
People aged 75-79	8,100	9,800	9,000	10,000	12,100
People aged 80-84	5,800	6,600	8,000	7,500	8,400
People aged 85-89	3,100	3,900	4,500	5,600	5,300
People aged 90 and over	1,600	1,900	2,300	2,800	3,600
Total population 65 and over	40,200	44,000	49,000	53,500	55,800

(Source: www.poppi.org.uk - Office of National Statistics Census Crown Copyright 2020)

1.2 In the period to 2040 the cohort aged between 65 and 69 and between 70 and 74 will increase by the smallest margin with a combined overall increase of 4,800 over the whole period. The rate of increase is higher in each succeeding cohort to peak at 125% among those 90 years of age and over. Table Two plots the percentage increase in each age band from the 2020 base.

Table Two Population aged 65 and over, projected to 2040 (Warrington) % Change

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	2020	2025	2030	2035	2040
People aged 65-69	0	10%	33%	34%	21%
People aged 70-74	0	-8%	1%	22%	23%
People aged 75-79	0	21%	11%	23%	49%
People aged 80-84	0	14%	38%	29%	45%
People aged 85-89	0	26%	45%	81%	71%
People aged 90 and over	0	19%	44%	75%	125%
Total population 65 and over	0	9%	22%	33%	39%

(Source: www.poppi.org.uk - Office of National Statistics Census Crown Copyright 2020)

- 1.3 Table Three shows the projected increase in the total population for the Warrington from 210,600 in 2020 to 217,100 in 2040, set against the increase in the numbers of people who are over 65 years of age and over 85 years of age and over. These two threshold ages are used because 65 represents the general point of exit from paid employment and 85 is, as will be shown in the next section, a significant threshold for needing specialised accommodation and services.
- 1.4 Currently the proportion of the population 65 years of age or over in Warrington is slightly above the national average for England but the margin increases by 2040. In those in advanced old age: 85 years of age and over, the current proportion of the total population is slightly below the national average but exceeds the national average by 2040. This is an elderly population overall ageing at a faster rate than the national average and it is characterised by a higher than average proportion of people in advanced old age.

Table Three

Total population, population aged 65 and over and population aged 85 and over as a number and as a percentage of the total population, projected to 2040 (Warrington)

	2020	2025	2030	2035	2040
Total population	210,600	212,700	214,000	215,200	217,100
Population aged 65 and over	40,200	44,000	49,000	53,500	55,800
Population aged 85 and over	4,700	5,800	6,800	8,400	8,900
Population aged 65 and over as a proportion of the total population	19.09%	20.69%	22.90%	24.86%	25.70%
Population aged 85 and over as a proportion of the total population	2.23%	2.73%	3.18%	3.90%	4.10%

(Source: www.poppi.org.uk - Office of National Statistics Census Crown Copyright 2020)

1.5 Table Four gives the numbers and percentages for England to provide a comparison.

Table Four Total population, population aged 65 and over and population aged 85 and over as a number and as age of the total population, projected to 2040 – England

	2020	2025	2030	2035	2040
Total population	56,678,500	58,060,200	59,181,800	60,183,900	61,157,900
Population aged 65 and over	10,505,500	11,449,400	12,696,900	13,815,400	14,527,100
Population aged 85 and over	1,417,000	1,573,300	1,810,000	2,246,200	2,411,300
Population aged 65 and over as a proportion of the total population	18.54%	19.72%	21.45%	22.96%	23.75%
Population aged 85 and over as a proportion of the total population	2.50%	2.71%	3.06%	3.73%	3.94%

(Source: www.poppi.org.uk - Office of National Statistics Census Crown Copyright 2020)

1.6 The significance of these threshold ages is to be found in the convergence of dependency and chronological age. At age 65 the lifetime risk of developing a need for care services to assist with personal care tasks is 65% for men and 85% for women¹. The incidence of need for assistance increases substantially with age and is highest for those 85 years of age and above. As the tables in the following section modelling levels of dependency and need for service demonstrate this increase in the ageing of the population has a direct impact on the need for care and support services and appropriate accommodation.

4

¹ David Behan, Director General for Adult Social Care, Department of Health, presentation to a King's Fund Seminar 21st July 2009

Section summary

- 1.7 The profile of the Warrington in relation to the age of its population is currently very slightly above the national average but those 65 years of age will make up a quarter of the total population of the borough by 2040. This will be a major factor in shaping future policy for housing, health and social care authorities.
- 1.8 Between 2020 and 2040 there will be 4,200 more people in the Borough who are 85 years of age or more and this will present a major challenge for health and social care agencies.
- 1.9 In the absence of an adequate supply of appropriate, contemporary accommodation options pressures will increase on higher-end services, such as Registered Care Homes providing Personal Care and Registered Care Homes providing Nursing Care.

2 The profile of need

2.1 Table Five shows the modelling of those older people who are likely to experience difficulty with at least one task necessary to maintain their independence. As is clearly seen the incidence of difficulty rises sharply with age and is projected to increase over time as the population of those in the highest age groups increases. Between 2020 and 2040 the number of those experiencing such difficulties is projected to increase by around 45%.

Table Five People aged 65 and over unable to manage at least one domestic task on their own, by age group projected to 2040 (Warrington)

	2020	2025	2030	2035	2040
Males aged 65-69 who need help with at least one domestic task	780	870	1,050	1,035	960
Males aged 70-74 who need help with at least one domestic task	988	912	1,026	1,216	1,216
Males aged 75-79 who need help with at least one domestic task	999	1,242	1,134	1,296	1,566
Males aged 80 and over who need help with at least one domestic task	1,419	1,683	2,112	2,244	2,508
Females aged 65-69 who need help with at least one domestic task	1,045	1,140	1,387	1,406	1,254
Females aged 70-74 who need help with at least one domestic task	1,311	1,196	1,311	1,587	1,610
Females aged 75-79 who need help with at least one domestic task	1,462	1,768	1,632	1,768	2,176
Females aged 80 and over who need help with at least one domestic task	3,465	3,905	4,675	5,005	5,335
Total population aged 65 and over who need help with at least one domestic task	11,469	12,716	14,327	15,557	16,625

(Source: www.poppi.org.uk - Office of National Statistics Census Crown Copyright 2020) Activities include: Doing routine housework or laundry, shopping for food, getting out of the house, doing paperwork or paying bills. These are Instrumental Activities of Daily Living (IADLs) are activities which, while not fundamental to functioning, are important aspects of living independently.

2.2 Table Six suggests that the number of those who will be unable to manage at least one personal care task will increase a similar percentage, approximately 44% between 2020 and 2040 to around 116,393.

Table Six

People aged 65 and over unable to manage at least one self-care task on their own, by age group projected to 2040 (Warrington)

33 23 13 (113)	3				
	2020	2025	2030	2035	2040
Males aged 65-69 who need help with at least one self-care activity	832	928	1,120	1,104	1,024
Males aged 70-74 who need help with at least one self-care activity	1,092	1,008	1,134	1,344	1,344
Males aged 75-79 who need help with at least one self-care activity	1,036	1,288	1,176	1,344	1,624
Males aged 80 and over who need help with at least one self-care activity	1,505	1,785	2,240	2,380	2,660
Females aged 65-69 who need help with at least one self-care activity	1,210	1,320	1,606	1,628	1,452
Females aged 70-74 who need help with at least one self-care activity	1,368	1,248	1,368	1,656	1,680
Females aged 75-79 who need help with at least one self-care activity	1,247	1,508	1,392	1,508	1,856
Females aged 80 and over who need help with at least one self-care activity	3,087	3,479	4,165	4,459	4,753
Total population aged 65 and over who need help with at least one self-care activity	11,377	12,564	14,201	15,423	16,393

(Source: www.poppi.org.uk - Office of National Statistics Census Crown Copyright 2020)
Activities of Daily Living (ADLs) are activities relating to personal care and mobility about the home that are basic to daily living: Having a bath or shower, using the toilet, getting up and down stairs, getting around indoors, dressing or undressing, getting in and out of bed, washing face and hands, eating, including cutting up food, taking medicine.

2.3 In the past few years social care services funded from public funds have focused on supporting those who have difficulty with tasks of personal care. The projected increase in the numbers of older people experiencing difficulty therefore impacts directly on the likely demand for services.

Table Seven People aged 65 and over with a limiting long-term illness, by age, projected to 2040 (Warrington)

	2020	2025	2030	2035	2040
People aged 65-74 whose day-to- day activities are limited a little	4,757	4,801	5,550	6,078	5,814
People aged 75-84 whose day-to- day activities are limited a little	4,058	4,788	4,963	5,109	5,984
People aged 85 and over whose day-to-day activities are limited a little	1,133	1,398	1,639	2,025	2,145
Total population aged 65 and over with a limiting long term illness whose day-to-day activities are limited a little	9,947	10,986	12,151	13,212	13,944
People aged 65-74 whose day-to- day activities are limited a lot	3,956	3,993	4,616	5,055	4,836
People aged 75-84 whose day-to- day activities are limited a lot	4,166	4,915	5,095	5,245	6,144
People aged 85 and over whose day-to-day activities are limited a lot	2,005	2,474	2,901	3,583	3,797
Total population aged 65 and over with a limiting long term illness whose day-to-day activities are limited a lot	10,127	11,383	12,612	13,884	14,776

(Source: www.poppi.org.uk - Office of National Statistics Census Crown Copyright 2020)

- 2.4 An increase in the proportion of the population living into advanced old age also impacts on the demands made upon health services. Table Seven projects an increase in the numbers of those experiencing a long-term limiting illness. This shows an overall increase for those over 65 years of age whose day-to-day activities are limited a lot as 45.9%.
- 2.5 Table Eight below highlights that in all age cohorts above 65 there will be a marked increase in those within the population that are unable to manage at least one mobility activity on their own.

Table Eight People aged 65 and over unable to manage at least one mobility activity on their own, by age, projected to 2040 – (Warrington)

	2020	2025	2030	2035	2040
People aged 65-69 unable to manage at least one activity on their own	911	1,004	1,217	1,218	1,106
People aged 70-74 unable to manage at least one activity on their own	1,432	1,312	1,452	1,744	1,760
People aged 75-79 unable to manage at least one activity on their own	1,347	1,644	1,512	1,668	2,040
People aged 80-84 unable to manage at least one activity on their own	1,407	1,566	1,942	1,801	2,007
People aged 85 and over unable to manage at least one activity on their own	2,130	2,520	2,995	3,690	3,895
Total population aged 65 and over unable to manage at least one activity on their own	7,227	8,046	9,118	10,121	10,808

(Source: www.poppi.org.uk - Office of National Statistics Census Crown Copyright 2020)
Activities include: going out of doors and walking down the road; getting up and down stairs; getting around the house on the level; getting to the toilet; getting in and out of bed

2.6 Table Nine shows that the predicted increase between 2020 and 2040 in those in Warrington over 65 years of age who will be living with dementia to be around 62%. This is well above the projected increase for England as a whole which stands at 55% and is driven by the greater than average growth in the number of those in advanced old age.

Table Nine People aged 65 and over predicted to have dementia, by age and gender, projected to 2040 (Warrington)

	2020	2025	2030	2035	2040
People aged 65-69 predicted to have dementia	177	195	236	237	215
People aged 70-74 predicted to have dementia	332	305	338	405	408
People aged 75-79 predicted to have dementia	480	587	539	598	730
People aged 80-84 predicted to have dementia	644	720	896	830	928
People aged 85-89 predicted to have dementia	545	711	797	994	958
People aged 90 and over predicted to have dementia	507	589	743	860	1,108
Total population aged 65 and over predicted to have dementia	2,684	3,107	3,550	3,924	4,347

(Source: www.poppi.org.uk - Office of National Statistics Census Crown Copyright 2020)

2.7 Table Ten shows the number projected for England for the purpose of comparison.

Table Ten People aged 65 and over predicted to have dementia, by age and gender, projected to 2040 England

	2020	2025	2030	2035	2040
People aged 65-69 predicted to have dementia	46,209	51,083	58,805	60,054	56,584
People aged 70-74 predicted to have dementia	85,935	79,817	88,517	102,195	104,697
People aged 75-79 predicted to have dementia	120,939	150,906	141,054	157,283	182,625
People aged 80-84 predicted to have dementia	161,679	182,808	229,667	216,994	244,601
People aged 85-89 predicted to have dementia	162,026	180,567	208,001	263,815	253,881
People aged 90 and over predicted to have dementia	165,088	178,967	203,045	240,536	307,066
Total population aged 65 and over predicted to have dementia	741,875	824,146	929,088	1,040,878	1,149,455

(Source: www.poppi.org.uk - Office of National Statistics Census Crown Copyright 2020)

Section summary

- 2.8 Those having difficulty with one or more domestic tasks will increase between 2020 and 2040 from 11,469 to 16,625 an increase of 45%. A failure to manage these tasks often persuades older people, or their relatives, of the need for a move to a high care setting, such as a Registered Care Home, when their needs would be better met in specialised accommodation, such as that proposed in this application.
- 2.9 Similarly those experiencing difficulty with at least one task of self-care are projected to rise from 11,337 in 2020 to 16,393 in 2040. This may contribute to additional demand for specialised accommodation but will have a direct impact on demand for care home places.
- 2.10 Those finding at least one mobility activity difficult or impossible will increase by around 49.5% between 2020 and 2040. The impact of these difficulties on the capacity for independent living can be significantly mitigated by appropriate design and flexible delivery of care and support services.
- 2.11 Those 65 years of age and over who experience a Long-term Limiting Illness that restricts their capacity for independent living a lot will increase from 10,127 in 2020 to 14,776 by 2040.
- 2.12 Throughout the period to 2040 there is predicted to be a 62% increase in the population aged 65 and above that have dementia; with around 96% increase in the 85 years of age and over cohorts. These significant rises will again place increasing demand on care and accommodation places.

3 The tenure profile of the older population

- 3.1 Next to demographic trends toward an ageing of society the most significant factor shaping the future of provision for older people is the shift in tenure pattern. Owner-occupation has become the tenure of the majority of older people.
- 3.2 Traditionally local authorities have been primarily focused on the provision of social rented housing. Although the past two decades have seen a shift away from direct provision by local authorities concerns for this sector have tended to dominate thinking and resources.
- 3.3 There has been an implicit assumption that older people who are homeowners can, through the deployment of the equity represented by their current home, make provision themselves for their accommodation in old age.
- 3.4 Table Eleven demonstrates the significant levels of owner occupation now to be found among older people in Warrington. The level of home ownership in the borough is around 5% above the national average owner-occupiers for all those between 65 and 84 years of age.
- 3.5 The fall in ownership in the older cohorts is explained principally by the limited range of options available to homeowners in these cohorts who have needed to find specialist accommodation and care have not had opportunities available to them that allowed them to maintain their tenure.

Table Eleven Proportion of population by age cohort and by tenure, year 2011 (Warrington)

	People aged 65-74	People aged 75-84	People aged 85 and over
Owned	82.08%	79.98%	70.66%
Rented from council	6.15%	6.30%	9.73%
Other social rented	8.03%	9.32%	13.79%
Private rented or living rent free	3.75%	4.40%	5.

(Source: www.poppi.org.uk - Office of National Statistics Census Crown Copyright 2011)

3.6 Table Twelve gives the average levels for England. The difference is consistent across the first two age cohorts shown.

Table Twelve

Proportion of population aged 65 and over by age and tenure, i.e., owned, rented from council, other social rented, private rented or living rent free, year 2011 – England

	People aged 65- 74	People aged 75- 84	People aged 85 and over
Owned	76.34%	74.84%	68.20%
Rented from council	9.54%	10.42%	11.99%
Other social rented	7.75%	8.79%	11.66%

(Source: www.poppi.org.uk - Office of National Statistics Census Crown Copyright 2011)

3.7 Home-ownership is the tenure of choice of a significant proportion of the older people of Warrington, a tenure the majority will wish to maintain in accommodation and care facilities are available to them in advanced old age.

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3.8 Warrington follows, but substantially exceeds the national trend toward owner-occupation as the dominant tenure for older people. Around four out of every five older people in Warrington are home-owners.

4 The current supply of specialised accommodation for older people

- 4.1 The profile of the current supply of specialised accommodation for older people within the Warrington shows a more limited supply of affordable stock than is the national average and a marginally higher than average supply of market units. Much of the affordable stock is of considerable age. In many areas much of this stock would have been re-classified as "Age Exclusive" rather than "Retirement Housing". It reflects a legacy of provision which does not necessarily reflect current need and demand.
- 4.2 In the Market sector the provision of Retirement Housing, most of it offered for purchase on a long lease, is slightly above national average levels of provision but still far short of a level that would reflect the dominance of home ownership among older people in Warrington.
- 4.3 There is a good supply of "Enhanced" Retirement Housing in the Affordable Sector and a smaller supply in the Market Sector. The number of units in each style of provision and tenure are set out in Table Thirteen².
- 4.4 The availability of Affordable Extracare units, around double the national average level of provision, reflects the vigorous promotion of this model in this sector by the Authority in the past. That level is not balanced by provision in the Market Sector, even when the assumptions are made that are set out in the footnote below, that reflects the dominance of homeownership in Warrington.
- 4.5 Taking the various forms of sheltered and retirement housing offered either to rent or to buy there appear to be currently around 1,760 units of accommodation. To achieve comparability this supply has been expressed as a ratio to the size of the population of older people in the borough.
- 4.6 Various thresholds have been used but that which is generally recognised as having the greatest relevance is that for the number of people 75 years of age or older. There are around 94.6 units of any type in any tenure per thousand of the population in this age category in Warrington.
- 4.7 This compares with benchmark figures derived from the data base of the Elderly Accommodation Counsel, which is the source relied upon by the Department for Communities and Local Government. These provide a national

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² Tabulated from the Elderly Accommodation Counsel Database. One large Extra Care scheme provided by a not-for-profit provider offers units at social rent, shared ownership and leasehold purchase but the number on each tenure are not differentiated. On our knowledge of the scheme we have made the assumption that 93 of these units should be regarded as affordable and 150 as Market.

average ratio of provision of 125.5 per thousand of those 75 years of age and over.

Table Thirteen Provision of place for older people in (Warrington)³ 2020

(Warringto	,			
	Number	Per 1,000 of the		
	of units/	population 75		
	places	years and over		
		(18,600)		
Affordable Age Exclusive	140	7.5		
Housing				
Affordable Age Exclusive and	587	31.6		
Retirement Housing	367	31.0		
Affordable Enhanced	1.10	7.7		
Retirement Housing	143	1.1		
Affordable Extra Care Housing	220	40.0		
	239	12.8		
Total Affordable specialised	1 100	59.6		
housing - all types	1,109	59.6		
Market Age Exclusive Housing	87	4.7		
	07	4.7		
Market Retirement Housing	396	21.3		
	390	21.5		
Market Enhanced Retirement	18	0.9		
Housing	10	0.9		
Market Extra Care Housing	150	8.1		
	130	0.1		
Total Market Specialised	651	35.0		
Housing - all types	031	33.0		
Total Specialised				
accommodation for older	1,760	94.6		
people - all types, all tenures				
Registered Care places	622	33.4		
offering personal care	022	JJ.4		
Registered Care places	1,234	66.3		
offering nursing care	1,204	00.0		

(Source: Contact Consulting from EAC database – extracted 1.10.2021)

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³ In this Table "Affordable" relates to specialised housing offered on the basis of Licence (as in the case of Almshouses), Social Rent or Shared Ownership from a charitable provider, such as a housing association. "Market" relates to specialised housing offered on the basis of Market Rent or Shared Ownership by a commercial provider or on the basis of Leasehold or Freehold purchase.

- 4.8 A less comfortable picture emerges when we compare the available accommodation in Affordable or Market categories with the population of older people in each main category of tenure. With just 651 units of retirement housing of all types for sale for a population of homeowners of 75 years of age or more of approximately 14,438 the ratio of provision for retirement housing for sale per thousand is 45.09.⁴
- 4.9 The comparative figure for those 75 years of age or more who are in rented tenures the ratio per thousand is 266.5 (1,109 units for approximately 4,162 persons 75 years of age or more in tenures other than home ownership.)
- 4.10 It is clear from the levels of home ownership in succeeding cohorts that the level of those in old age who are homeowners will be maintained. The majority of those entering old age as homeowners will wish to maintain that tenure and there are sound economic arguments for the individual and for the public purse to support that.
- 4.11 To enable older people to exercise that choice, to meet the needs of older people for specialist accommodation in their tenure of choice, and to encourage older people to make a capital investment in their accommodation in old age the local authority needs to facilitate increased leasehold provision of suitable accommodation.
- 4.12 Places in Registered Care Homes offering personal care per thousand in Warrington are slightly below average levels of provision for England, with 622 beds, or 33.4 per thousand of the population seventy-five years of age and over, compared with the average for England of 35.3. This reflects the deliberate and vigorous policy of the Welfare Authority to reduce dependency on Residential Care beds and to divert those who might otherwise occupy them to other option, predominantly Extra Care.
- 4.13 By contrast in Registered Care Homes offering nursing care the ratio of places to population is substantially above the average for England (66.3 per thousand 75 years of age or over compared with the national average of 38.7). This again is reflective of commissioning policy: that commissioning of registered care beds should be focused on those with the highest levels of need for care.
- 4.14 Table Fourteen provides the reference ratios for England drawn from a new analysis of the Elderly Accommodation Database, the source used by the Ministry for Housing, Communities and Local Government and the Department of Health and Social Care⁵.

⁵ Contact Consulting tabulated the entries for all English local authorities using the categorisation used by EAC. As this is a self-reported database there some inconsistencies but at the macro level this tabulation provides a reliable overview of the current national supply.

⁴ Among persons 75-84: 13,900 persons, 79.98% are home owners + persons 85+: 4,700 persons, 70.66% are home owners = 14,438 home owners 75+.

Table Fourteen Provision of places for older people in England 2020

Table Fourteell Frovision (or praces for oraci p	eopie ili Eligialiu 20
	Number of units/	Per 1,000 of the
	places	population 75
		years and over
		$(5,122,000^6)$
Affordable Age Exclusive	104,458	20.4
Housing	,	
Affordable Retirement Housing	0.4.0.000	24.2
	313,382	61.2
Affordable Enhanced	7.040	4 =
Retirement Housing	7,648	1.5
Affordable Extra Care Housing	45.704	0.0
	45,764	8.9
Total Affordable specialised	474 050	02.0
housing - all types	471,252	92.0
Market Age Exclusive Housing	20.102	3.9
	20,192	ა.ყ
Market Retirement Housing	122,351	23.9
	122,331	23.3
Market Enhanced Retirement	10,895	2.1
Housing	10,035	۷.۱
Market Extra Care Housing	17,960	3.5
	17,300	0.0
Total Market Specialised	171,398	33.5
Housing - all types	171,000	55.5
Total Sheltered - all types,	642,650	125.5
all tenures	0-12,000	12010
Registered Care Home	180,998	35.3
Personal Care Beds	100,000	00.0
Registered Care Home	198,400	38.7
Nursing Beds	100,400	55.1

(Source: EAC Database, Re-formatted by Contact Consulting)

- 4.15 The national supply figures illustrate a number of noteworthy trends. The supply of Affordable Retirement Housing has declined over the past five years as older stock has been decommissioned or re-designated as "Age Exclusive" with reduced levels of on-site service.
- 4.16 Whilst the supply of Affordable Extra Care has continued to increase the growing population of those 75 years of age or more means that, as a ratio to

⁶ ONS Estimate of 75+ age group in England in 2020, 2018 Estimates.

that population, the level of supply has decreased.

- 4.17 The same effect is observed in relation to Market Retirement Housing where supply has increased but the ratio of 75+ population has decreased.
- 4.18 The supply of Market Extra Care units has increased by almost 50% over the past five years but the ratio to 75+ population is still modest when compared with the supply available to those qualifying for Affordable Extra Care.
- 4.19 Also of note is the continuing reduction in the number of beds in Registered Care Homes registered for Personal Care. This form of provision, formerly known as Residential Care, continues to decline suggesting a need for further growth in the provision of Extra Care, which many commissioners identify as a preferred alternative.
- 4.20 Although the number of beds in Registered Care Homes registered for Nursing Care have increased the ratio to the 75+ population has reduced significantly.

Section summary

- 4.21 Taking tenures together and comparing with the whole population it would appear that levels of provision of specialised housing for older people are below national averages but this broad brush disguises a number of variations between styles of provision and the tenure in which they are offered,
- 4.22 The supply of Market retirement housing is above the national average, reflecting demand in an area in which levels of home ownership among older people are well above national averages. However, the current supply comes nowhere near reflecting the dominance of owner-occupation among the older population of Warrington.
- 4.23 There is a consequent shortfall in the level of provision needed achieve an adequate supply for older homeowners wishing to maintain their tenure when transferring to specialised accommodation. For those older people who are owner-occupiers the ratio of provision for retirement housing for sale per thousand is 45.09. Whilst for those older people who are renters the comparable ratio per thousand is 266.5.
- 4.24 The current level of provision of Extra Care Housing comes nowhere near reflecting the need for such accommodation in all tenures but especially for that overwhelming majority of older people who will wish to maintain their tenure of choice when moving to a setting providing the care and support services that meet their needs.
- 4.25 Places in Registered Care Homes offering personal care per thousand in Warrington are slightly below average levels of provision for England, with 622 beds, or 33.4 per thousand of the population seventy-five years of age and over, compared with the average for England of 35.3. Registered Care Homes offering nursing care the ratio of places to population is substantially above the average for England (66.3 per thousand 75 years of age or over compared with the national average of 38.7).
- 4.26 A review of the data emerging from our new analysis of supply at a national level it seems that whilst supply of Affordable Extra Care and Market provision of both Retirement Housing and Extra Care are increasing the expansion of supply is not keeping pace with the increasing numbers of those in the population who are 75 years of age or over.
- 4.27 The provision of a more adequate supply of retirement accommodation of all kinds for homeowners will provide an environment of choice in which independence can be sustained and transfer to expensive registered nursing care postponed or avoided.

5 Why might the needs of older people require special consideration?

- 5.1 The purpose of this section is to set out the range of considerations that should be taken into account when planning to respond to the housing and care needs of older people.
- 5.2 Older people do not constitute a homogeneous group and their accommodation and care needs are diverse. The majority of those in early old age will be physically fit with their capacity for independent living uncompromised by their health status or functional capacity. In contrast a high proportion of those in advanced old age will be coping with reduced mobility, with chronic health conditions and a significant minority among them will be experiencing difficulties in coping with the tasks of self-care.
- 5.3 There is no one pathway through this experience: some will arrive at the end of life fit and independent to their last few days, others will have spent two or three decades coping with chronic health conditions, yet others will have been entirely independent until some traumatic event precipitates a sudden decline.
- 5.4 This variety of health and functional capacity status is overlaid on an equally diverse pattern of economic status, social and familial relationships, household composition, and tenure. All these factors influence not just what an individual may need in the way of accommodation and care but also what they can, in practical and economic terms, access when they need it.
- 5.6 Whilst the choices and compromises that older people make in navigating their way through the years of their old age will be influenced by their personal needs and circumstances, and by the practicality of what is available to them, they are also conditioned by their perceptions of old age and level of knowledge of the options available to them.
- 5.7 In the public perception old age generally carries negative connotations of inevitable decline, to be resisted or denied for as long as possible. This leads to a reluctance to identify future or emerging needs and to proactively make choices that will place individuals in accommodation, some of whose facilities they do not need immediately but which will become appropriate as their needs change. At present the majority of moves to specialised accommodation among older people are triggered by some form of trauma: a disabling illness, a fall, a period as a hospital in-patient, a bereavement, the anxiety or reality of being a victim of crime, and so on. In such circumstances moves may be influenced by the need for an immediate solution and what is available in a very tight timescale. The advantages of a more considered pre-emptive move are obvious.
- 5.8 Added to these inhibitions may be a relatively restricted knowledge of what is available, especially in relation to newer and emerging models of

provision. For many their point of reference will be conventional Category Two Sheltered Housing provided by a local authority or a Registered Social Landlord and the role of the Sheltered Housing "Warden", a title that is loaded with cultural implications that belong to an earlier age. For others, whilst they may not fully understand the Extra Care model the word "Care" in the title conjures up negative images of traditional Care Homes.

- 5.9 Limited knowledge and psychological inhibitions of the kind described limit the value of questioning those approaching old age, or those already passing through it, about their options and preferences for accommodation in old age. The commonly reported outcome of surveys seeking to establish the needs and wishes of older people and those approaching old age is that they want to stay where they are for as long as possible and accept, reluctantly that when they can no longer do that they may need to move to institutional care.
- 5.10 This provides no sound basis for a progressive strategic approach to ensuring that an appropriate and diverse range of options are available to older people so that through their accommodation they may have a context for a good old age as they move through changing health and personal circumstances.
- 5.11 The range of housing and care responses through which their needs and aspirations can be met is inter-active: capacity or scarcity in one part of the range of provision will impact on availability and access in other areas of the range. This is also a dynamic situation in which expectations among older people, the evolution of new offers from providers and the imperatives of public policy are driving change.
- 5.12 Public policy has had a focus on responding to those with higher levels of need for care and support. The reasons for this are obvious, both in relieving the pressures on the individuals themselves and upon their carers, but also in the public interest of constraining the burgeoning cost to the public purse of providing care by conventional means. This has been a driver of the encouragement of Extra Care provision in the Affordable or Social Rented sector and the focusing of commissioning of beds in Registered Care Homes on the higher end of care.
- 5.13 We project the levels of need across the whole range of models of specialised accommodation to offer a strategic context for consideration of the particular proposal which is to augment the inadequate supply of Market Extra Care in Warrington Borough.

The future pattern of provision to which this development contributes

- 6.1 The current pattern of provision in Warrington, as in the rest of the country, developed not in response to assessed need but rather in response to short-term demand and provider perceptions of what will be popular and fundable.
- 6.2 Moving to a pattern with a more rational base that seeks to place all elements of provision within a wider context inevitably appears threatening to some. In seeking to look forward and to encourage a shift from the current pattern to one which offers a range of options to older people and is reflective of key characteristics of the older population it will be important to take into account a number of factors:
 - Demand for older examples of rented conventional sheltered housing is likely to decline.
 - The potential for leasehold retirement housing will continue to grow.
 - Some existing schemes will lend themselves to refurbishment and remodelling to provide enhanced sheltered housing to support rising levels of frailty.
 - Extra Care housing will need to be provided for sale and rent.
 - Provision of Registered Care both for Personal and Nursing Care will need to be distributed so that it is more nearly matched to need, with nursing care beds allocated to those with the highest levels of physical and mental frailty.
 - The challenges of maintaining viability in smaller Registered Care Homes will continue to drive change in provision with an increase in larger, purpose-built developments.

The clear consequence is that there will be more of some styles of provision and less of others.

6.3 In the publication "Housing in Later Life" I updated the guidance that I originally prepared for the publication "More Choice Greater Voice" for the Department for Communities and Local Government and the Care Services Partnership (CSIP) at the Department of Health. That model assumed that a "norm" for conventional sheltered housing to rent would be around 50 units per 1,000 of the population over 75 years of age and around 75 units per 1,000 of leasehold retirement housing. This deliberately inverted the current levels of provision in most places but in doing so sought to reflect the rapidly changing tenure balance.

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⁷ Housing in later life – planning ahead for specialist housing for older people, December 2012, National Housing Federation and the Housing Learning and Improvement Network.

- 6.4 Although I believe in most places the stock of rented sheltered housing will continue to decline as the older stock becomes increasingly hard to let, the rate of its reduction may be rather slower than predicted as a consequence of the scarcity of capital funding to carry out re-provision. The same factors will inhibit the development of the general rented stock and the desire to release under-occupied housing by transfer into sheltered housing will have a greater priority, sustaining demand for the rented sheltered stock.
- 6.5 Demand for leasehold retirement housing has continued to grow strongly and I therefore revised upward the targets for leasehold retirement housing, especially in areas where owner-occupation levels among older people are high and property values facilitate the move to such accommodation.
- 6.6 When I framed the targets in late 2007/ early 2008 Extra Care Housing was still little known, in many areas there were no developments at all and the initial targets reflected the difficulty of bringing forward developments on a model that was unfamiliar to many professionals and virtually unknown to the general public. The Department of Health and the Homes and Communities Agency capital investment programme accelerated the rate of Extra Care Housing developments and the increasing number of commercially developed Retirement Villages and Continuing Care Retirement Communities, especially across the South of England have made the concept much better known.
- 6.7 The targets offered for Extra Care provision in the 2008 publication were very much a "toe in the water" at a time when it was still difficult to judge the acceptability of the model to older people or to those who advised them. By 2012 that situation had changed and I proposed not only an increased target overall but a shift in the tenure balance to reflect the increasing recognition of the needs of older home owners for Extra Care style options.
- 6.8 The continuing drive among Adult Social Care authorities to shift from policies that rely heavily on Registered Care homes toward Extra Care Housing solutions also shifts the balance and supports a modification of targets either side of this divide with more Extra Care and proportionately less Registered Care beds.
- 6.9 When analysed in relation to the proportion of older people in the borough who are owner-occupiers there is an under-supply of retirement housing offered on a leasehold basis. The borough council has a role in encouraging the identification of sites, in influencing the style of provision and through the Local Development planning process to facilitate an increase in this provision.
- 6.10 Extra Care Housing offers the possibility of housing a balanced community of people with relatively limited care needs through to those who might otherwise be living in residential care. Our modelling suggests provision of around 594 units of Extra Care in total, divided between rented (about one third) and leasehold

and shared ownership tenures (about two thirds) will be required in the short to medium term.

- 6.11 Tables Fifteen and Sixteen summarise the current levels of provision and the adjustments that may be indicated to bring them to the levels that some would see as a benchmark for the future. How much specialised accommodation may be needed in total? Previous estimates of the requirements for sheltered housing tended to look mainly at the need for social rented provision, rather than at the overall potential demand.
- 6.12 The emergence of owner-occupation as a significant factor in old age has shifted the balance between estimates of need and response to demand. The benefits of providing more leasehold retirement housing, for example, may be seen in its effect in releasing family sized accommodation into the market, alongside its more significant impact in meeting the particular needs of those who move into it.
- 6.13 The "norms" reflect national patterns and priorities and will necessarily need to be moderated to take account of the rate of change that would be required to meet them. The pattern projected in Table Fifteen shows a pattern of provision to meet the needs of the current population of older people.

Table Fifteen Indicative levels of provision of various forms of accommodation for older people in Warrington 2020

		Current provision	Current provision per 1,000 of Population 75+	Increase or decrease	Resulting number of units	Provision per 1,000 of Population 75+ (18,600)
Affordable Age and Retirement		727	39.1	+389	1,116	60
Market Age Exclusive and Retirement Housing		483	26.0	+1,749	2,232	120
Affordable Retirement Hou	Enhanced sing	143	7.7	+43	186	10
Market Retirement Hou	Enhanced sing	18	0.9	+168	186	10
Extra Care A Housing	Affordable	239	12.8	+40	279	15
	Market	150	8.1	+408	558	30

6.14 Table Sixteen projects forward to reflect the requirements of the older population of Warrington in 2040 The number of those 75 years of age or more

will have greatly increased and without substantial provision in the intervening period the deficit in all categories of provision will have widened.

- 6.15 Judged against these norms there are marked deficits in provision in all categories. The most substantial deficits are in the provision of Retirement Housing and Extra Care available to those who are homeowners and wish to maintain their tenure of choice when moving to specialised accommodation.
- 6.16 Difficulties in accessing public funds that may inhibit increased provision in the social rented sector do not curb the ability to increase supply for the majority of older people who are homeowners and will invest their own equity into the funding of leasehold Extra care schemes.

Table Sixteen Indicative levels of provision of various forms of accommodation for older people in Warrington 2040

		Current	Current	Increase	Resulting	Provision
		provision	provision	or	number of	per 1,000
			per 1,000	decrease	units	of
			of			Population
			Population			75+
			75+			(29,400)
Affordable Agand Retirement	•	727	24.7	+1,037	1,764	60
Market Age Exclusive and		483	16.4	+3,045	3,528	120
Retirement Housing		403	10.4	+3,045	3,526	120
Affordable	Enhanced	143	4.9	+151	294	10
Retirement Housing		143	4.9	+151	234	10
Market	Enhanced	18	0.6	+276	294	10
Retirement Ho	ousing	10	0.0	+210	234	10
Extra Care	Affordable	239	8.1	+202	441	15
Housing		239	0.1	TZUZ	441	10
	Market	150	5.1	+732	882	30
		100	0.1	7702	002	30

Section Summary

- 6.17 There are deficits in all categories of provision of specialised accommodation for older people in Warrington across tenures when measured against our model of a balanced range of provision. The greatest deficits, currently and over the period to 2040, are in market provision.
- 6.18 The benefits to individuals and to the Public Good of facilitating a balanced pattern of provision are well documented in benefits to the Health and Social Care economy and the more effective and efficient use of the stock of general housing. Whilst the majority of older people will continue to live in general housing for the minority identified in our model specialised accommodation will provide a better quality of life and a better match to their needs.
- 6.19 The most pressing priority, driven by demography, need, tenure, and policy imperatives is to increase the availability of all categories of specialised accommodation for older homeowners.

7 Contrasting these projections of need with those proposed by the local authority

- 7.1 The projections of current and future need for the various models of specialised accommodation for older people set out in the preceding section propose higher levels of provision than those suggested in the various documents provided by, or relied upon, by the local authority.
- 7.2 The principal reason for this variance lies in the rates of provision adopted in relation to the various forms of provision, differentiated by tenure. Those adopted in this report have been tested and endorsed at Appeal on a number of occasions, most recently in relation to a proposal for a retirement community at Sonning Common in South Oxfordshire⁸. In his Decision Letter of 25th June 2021 Inspector Stephens endorses the approach and even suggests that in relation to Market Extra Care it may not be sufficiently ambitious.
- 7.3 The approach taken by Warrington Council is more conservative and provides less analysis of the requirement for particular models of provision that respond to differing circumstances of need among older people and by tenure.
- 7.4 The Warrington Borough Council Local Plan, Updated Proposed Submission Version of September 2021⁹, refers in various places to the current and future needs of an ageing population but we find their intentions generally to be underdefined and lacking a coherent vision of what they aspire to provide as a range of options relevant to the characteristics of their ageing population.
- 7.5 That the ageing of the local population presents the Authority with challenges across a range of domains and areas of responsibility is undisputed and is acknowledged at paragraph 4.1.60. There is some confusion of terminology at 4.1.61 where the need for Extra care is expressed in terms of "bedspaces" when the defining feature of Extra Care is that it provides independence enhancing whole units of accommodation rather than mere bedspaces.
- 7.6 In paragraph 4.1.62 the policy requirements in relation to the application of M4(2) and M4(3) accessibility standards to new dwellings are set out and this is to be welcomed but improving the accessibility of dwellings in the general housing stock, in which it is agreed the majority of older people will live, does nothing to reduce the needs of that minority who will benefit from the provision of specialised accommodation.

⁸ Appeal Ref: APP/Q3115/W/20/3265861 Little Sparrows, Sonning Common, Oxfordshire RG4 9NY

⁹ https://www.warrington.gov.uk/sites/default/files/2021-

^{09/}warrington_updated_proposed_submission_version_local_plan_upsvlp_2021-2038_-_september_2021.pdf

- 7.7 Whilst paragraph 4.1.63 provides some insight into the Authority's understanding of the operational and viability issues that dictate the scale of development in some models of specialised accommodation for older people there is nothing here to suggest that there is a view of the proportions of provision of these different models. For the reasons we have set out above "one size does not fit all" and there is a lack of any strategic vision that will respond to the needs of older people in Warrington through the Plan Period.
- 7.8 This is all the more worrying when we consider that this section provides commentary and amplifrication of the scant attention given to the needs of older people as set out in Policy DEV2 on page 44 of the Draft Plan. At Point 18 it specifies that in all developments of more than ten new dwellings housing for older people must be provided; but provision of what, and how does this relate to the commentary regarding viable scale set out at 4.1.63?
- 7.9 Point 19 asserts that Supported and Extra Care Housing in accessible locations will receive a positive response but a contribution for Affordable Homes will be required. There is no engagement with the different viability issues that arise in relation to different models of Supported and Extra Care Housing nor how the provision of a wide range of facilities within larger retirement developments may impact the understanding of what constitutes an accessible location.
- 7.10 The Draft Plan relies upon the Warrington Local Housing Needs Assessment, prepared by consultants GL Hearn and delivered in August 2021. 10 Their report has an extensive section (pages 163 to 198) dealing with the needs of older people. Much of the material, for example in relation to population, and tenure. The approach reflects an industry wide pattern and the guidance set out in the NPPG of June 2019.
- 7.11 On page 180 the report adopts the condensed set of definitions of the models of provision set out in NPPG June 2019 which slightly conflates what is a diverse and nuanced range. For that reason we set out a slightly extended set of definitions in Appendix One to this Report.
- 7.12 The GL Hearn Report rightly says that there are no definitive rates for the provision of Specialised Accommodation for older people generally and for Extra Care Housing in particular. They go on to rely upon their use of the "SHOP@ Tool", a methodology recommended in NPPG of June 2019. The Housing Learning and Improvement Network, who are the authors of the SHOP@ Tool, withdrew it from general use in July 2019, less than a month after it had been commended in the NPPG. The reason for this embarrassing development was the Housing LIN's concern about the misuse of the Tool to produce artificially low target figures for Extra Care Housing.

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https://www.warrington.gov.uk/sites/default/files/2021-09/local_housing_needs_assessment_august_2021.pdf

- 7.13 At 10.53 the GL Hearn Report asserts that they have relied upon the "SHOP rates" of provision. In reality there is no such thing. The Tool, before it was withdrawn opened with a "default" rate of provision for the purposes of demonstrating how the tool worked. The Housing LIN have, on a number of occasions, explicitly stated that thy do not endorse any particular rate of provision.
- 7.14 There are a number of minor errors in the information presented in the GL Hearn Report. For example, in Table 6 they identify the rates of provision in the first column as derived from "SHOP", in fact the first iteration of the SHOP Tool was in 2011. The rates to which they refer are taken from the 2018 publication "More Choice: Greater Voice" published by the Department for Communities and Local Government and the Care Services Improvement Partnership at the Department of Health. Although later re-considered on a number of occasions the first iteration of the SHOP methodology adopted the rates of the provision set out in the later publication "Housing in Later Life"¹¹, the rates upon which I rely in the preceding section.
- 7.15 Whilst there is a great deal of useful material in the GL Hearn report it lacks a coherent view of its own about the balance between the provision of accessible general housing and across the range of models of specialised housing for older people. This is reflected in the Draft Local Plan submission which, whilst reflecting the concerns of Social Care colleagues to mitigate increasing reliance upon Registered Care Home beds does not set this within a strategic vision of future provision to appropriately meet the needs of older people in Warrington.

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¹¹ For the avoidance of doubt: Nigel Appleton, the author of this report, was the author of "More Choice: Greater Voice" and contributed the relevant sections of "Housing in Later Life".

8 Findings in summary and conclusions

- 8.1 The profile of the Warrington in relation to the age of its population is currently very slightly above the national average but those 65 years of age will make up a quarter of the total population of the boroughby 2040. This will be a major factor in shaping future policy for housing, health and social care authorities.
- 8.2 Between 2020 and 2040 there will be 4,200 more people in the borough who are 85 years of age or more and this will present a major challenge for health and social care agencies.
- 8.3 Those having difficulty with one or more domestic tasks will increase between 2020 and 2040 from 11,469 to 16,625 an increase of 45%. A failure to manage these tasks often persuades older people, or their relatives, of the need for a move to a high care setting, such as a Registered Care Home, when their needs would be better met in specialised accommodation, such as that proposed in this application.
- 8.4 Similarly those experiencing difficulty with at least one task of self-care are projected to rise from 11,337 in 2020 to 16,393 in 2040. This may contribute to additional demand for specialised accommodation but will have a direct impact on demand for care home places.
- 8.5 Those finding at least one mobility activity difficult or impossible will increase by around 49.5% between 2020 and 2040. The impact of these difficulties on the capacity for independent living can be significantly mitigated by appropriate design and flexible delivery of care and support services.
- 8.6 Those 65 years of age and over who experience a Long-term Limiting Illness that restricts their capacity for independent living a lot will increase from 10,127 in 2020 to 14,776 by 2040.
- 8.7 Throughout the period to 2040 there is predicted to be a 62% increase in the population aged 65 and above that have dementia; with around 96% increase in the 85 years of age and over cohorts. These significant rises will again place increasing demand on care and accommodation places.
- 8.8 Warrington follows, but substantially exceeds the national trend toward owner-occupation as the dominant tenure for older people. Around four out of every five older people in Warrington are home-owners.
- 8.9 Taking tenures together and comparing with the whole population it would appear that levels of provision of specialised housing for older people are below national averages but this broad brush disguises a number of variations between styles of provision and the tenure in which they are offered,

- 8.10 The supply of Market retirement housing is above the national average, reflecting demand in an area in which levels of home ownership among older people are well above national averages. However, the current supply comes nowhere near reflecting the dominance of owner-occupation among the older population of Warrington.
- 8.11 There is a consequent shortfall in the level of provision needed achieve an adequate supply for older homeowners wishing to maintain their tenure when transferring to specialised accommodation. For those older people who are owner-occupiers the ratio of provision for retirement housing for sale per thousand is 45.09. Whilst for those older people who are renters the comparable ratio per thousand is 266.5.
- 8.12 The current level of provision of Extra Care Housing comes nowhere near reflecting the need for such accommodation in all tenures but especially for that overwhelming majority of older people who will wish to maintain their tenure of choice when moving to a setting providing the care and support services that meet their needs.
- 8.13 Places in Registered Care Homes offering personal care per thousand in Warrington are slightly below average levels of provision for England, with 622 beds, or 33.4 per thousand of the population seventy-five years of age and over, compared with the average for England of 35.3. Registered Care Homes offering nursing care the ratio of places to population is substantially above the average for England (66.3 per thousand 75 years of age or over compared with the national average of 38.7).
- 8.14 A review of the data emerging from our new analysis of supply at a national level it seems that whilst supply of Affordable Extra Care and Market provision of both Retirement Housing and Extra Care are increasing the expansion of supply is not keeping pace with the increasing numbers of those in the population who are 75 years of age or over.
- 8.15 The Draft Local Plan submission whilst reflecting the concerns of Social Care colleagues to mitigate increasing reliance upon Registered Care Home beds does not set this within a strategic vision of future provision to appropriately meet the needs of older people in Warrington.
- 8.16 This is largely a consequence of its reliance upon the relevant section of the Local Housing Need Report which offers a great deal of useful material but lacks a coherent view of its own about the balance between the provision of accessible general housing and across the range of models of specialised housing for older people.

Conclusions

- 8.15 The benefits to individuals and to the Public Good of facilitating a pattern of provision in which ever increasing dependence on Registered Care Home beds is mitigated by an expansion of housing-based care units, such as Extra care, are well documented.
- 8.16 Gains are principally found in benefits to the Health and Social Care economy and the more effective and efficient use of the stock of general housing. Whilst the majority of older people will continue to live in general housing for the minority identified in our model specialised accommodation will provide a better quality of life and a better match to their needs.
- 8.17 Whilst we identify deficits in all tenures the requirement to more adequately address the needs of older homeowners is the most acute, they make up more than 80% of the 75+ population of the Authority administrative area.
- 8.18 The provision of a more adequate supply of Extra Care for homeowners will provide an environment of choice in which independence can be sustained and transfer to scarce Registered Personal Care Home beds and expensive Registered Nursing Care Home beds postponed or avoided. The proposed development will help create a more adequate level of provision for older homeowners and contribute to a more equitable pattern of provision overall.

Appendix One: Explanation of terms used in this report

This report uses terms which are commonly understood among those working in the field of housing and care for older people but may not be so readily comprehensible by those working in other disciplines. Understanding has not been helped by an historic absence of commonly agreed titles and typology for the range of models of accommodation and care for older people. In some cases confusion has arisen as models have evolved over time. In others former titles have been superseded. In some cases distinctions have been deliberately blurred for commercial reasons.

A convenient starting point is to be found in the government's 'Housing for Older and Disabled People Guidance (2019)' which set out four types of specialist housing to meet the diverse needs of older people (Paragraph: 010 Reference ID: 63-010-20190626, revision date 26 June 2019):

Age-restricted general market housing: This type of housing is generally for people aged 55 and over and the active elderly. It may include some shared amenities such as communal gardens, but does not include support or care services.

Retirement living or sheltered housing: This usually consists of purpose-built flats or bungalows with limited communal facilities such as a lounge, laundry room and guest room. It does not generally provide care services, but provides some support to enable residents to live independently. This can include 24 hour on-site assistance (alarm) and a warden or house manager.

Extra care housing or housing-with-care: This usually consists of purpose-built or adapted flats or bungalows with a medium to high level of care available if required, through an onsite care agency registered through the Care Quality Commission (CQC). Residents are able to live independently with 24 hour access to support services and staff, and meals are also available. There are often extensive communal areas, such as space to socialise or a wellbeing centre. In some cases, these developments are known as retirement communities or villages - the intention is for residents to benefit from varying levels of care as time progresses.

Residential care homes and nursing homes: These have individual rooms within a residential building and provide a high level of care meeting all activities of daily living. They do not usually include support services for independent living. This type of housing can also include dementia care homes.

For most purposes these categories and descriptions serve well enough, although they tend to ignore the nuances within and between some of these categories. In this report we distinguish between the main categories set out in "Housing for Older and Disabled People Guidance" (2019) to reflect the diversity of provision required to meet the diversity of circumstances and aspirations to be found within the population of older people and those approaching old age. The following paragraphs seek to elaborate the conflated categories of "Housing for Older and Disabled People" and to provide some further explanation and context to aid understanding.

Age Exclusive of Age Restricted housing in the rented sector commonly comprises properties that were originally built at "Category One Sheltered Housing" (see next paragraph) or former Sheltered Housing schemes from which dedicated staff support has been withdrawn. The most numerous built form is that formerly known as "Older People's Dwellings", typically one bedroom bungalows, to be found in clusters in both urban and rural settings. Provision in the Market Sector is much more limited and generally of more recent construction.

Sheltered housing is a form of housing intended for older people that first emerged in the 1950s and was developed in volume through the 1960s and 1970s. In this period it was developed in one of two styles: "Category Two" Sheltered Housing consisted of flats and/or bungalows with enclosed access, a communal lounge and some other limited communal facilities such as a shared laundry and a guest room. Support was provided by one or more "wardens" who were normally resident on site. "Category One" Sheltered Housing has many of the same features but might not have enclosed access, might have more limited communal facilities and would not normally have a resident warden. In current practice these models have merged and the service models for delivery of support are in flux. This provision has generally been made by Housing Associations/ Registered Providers and Local Authorities.

Retirement Housing is a term widely adopted to describe Sheltered Housing, similar in built form and service pattern to Category Two Sheltered Housing described above but offered for sale, generally on a long lease, typically ninetynine or one hundred and twenty-five years. This provision has generally been made both by Housing Associations / Registered Providers (often through specialist subsidiaries) and commercial organisations.

Very sheltered housing is a term now largely disappearing from use that was used first in the mid to late 1980s to describe sheltered schemes that sought to offer some access to care services and some additional social and care facilities.

Enhanced sheltered housing is the term that has largely succeeded to Very Sheltered Housing to describe sheltered housing that provides more in facilities and services than traditional sheltered housing but does not offer the full range of

facilities, services and activities to be found in an Extra Care Housing Scheme. It is important to distinguish this model from Extra Care as it will not generally be so robust in supporting those with significant care needs and will not generally be an appropriate alternative to Registered Care providing Personal Care.

Close Care is a term principally associated with a limited number of providers and generally falls within the same category as Enhanced Sheltered Housing.

Extra Care Housing is the term used for a complex of specialised housing for older people that provides a range of "lifestyle" facilities for social, cultural, educational and recreational activities, in addition to services that provide care in a style that can respond flexibly to increasing need whilst helping the individual to retain their place within their existing community. In most Extra Care Housing schemes people enter their unit of accommodation and the care services they receive are delivered into that unit as their needs increase. This is generally referred to as the "integrated model" of Extra Care.

Continuing Care Retirement Community is a variant of the Extra Care Housing model but one in which higher levels of care are generally delivered by transfer within the scheme from an independent living unit in which low to moderate care is delivered into a specialist unit or care home.

Retirement Villages will generally provide accommodation and care that fits the definitions of Extra Care with the benefits of scale that allow a more diverse social and dependency mix whilst sustaining an extended range of social and cultural facilities and activities.

Registered Care Home is the form of institutional provision that in the past would have been referred to as either a "Residential Care Home" or a "Nursing Home". All are now referred to as "Registered Care Homes" and differentiated as either "Registered Care Home providing personal care" or as a "Registered Care Home providing nursing care".

Appendix Two: The authors of this report

Nigel J W Appleton MA (Cantab)

Nigel Appleton is Executive Chairman of Contact Consulting (Oxford) Ltd, a consultancy and research practice specialising in issues of health, housing and social care as they affect older people and people with particular needs. Nigel's particular area of interest and expertise is in relation to the accommodation and care needs of older people.

Nigel Appleton has a nationally established reputation in the field of estimating the requirement for particular styles of accommodation for older people, having been the author of publications supported by the Department of Communities and Local Government and the Department of Health that provide guidance in this area.¹²

In recent years he has developed a substantial practice in the demonstration of need for older people's accommodation and the documentation of that need to form part of a planning case. His work has also been tested at Appeal where he has contributed to the applicant's case as an Expert Witness. Notable cases include Sidmouth for Pegasus Life, West Malling, Lower Shiplake and Albourne for Retirement Villages, Reigate and Canterbury for McCarthy & Stone.

He contributed the section "Preparing the Evidence Base" to "Housing in later life – planning ahead for specialist housing for older people" (National Housing federation and the Housing LIN, December 2012). This updated the comparable sections of his: "More Choice: Greater Voice – a toolkit for producing a strategy for accommodation with care for older people" (February 2008 for Communities and Local Government and the Care Services Improvement Partnership). He is also the author of "Connecting Housing to the Health and Social Care Agenda – a person centred approach" (September 2007 for CSIP).

Nigel also wrote "Planning for the Needs of the Majority – the needs and aspirations of older people in general housing" and "Ready Steady, but not quite go – older homeowners and equity release", both for the Joseph Rowntree Foundation.

For the Change Agent Team at the Department of Health he wrote "An introduction to Extracare housing for commissioners" and "Achieving Success in Developing Extra Care housing" together with a number of briefing papers and studies in the area of sheltered housing and its variants.

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[&]quot;More Choice, Greater Voice, a toolkit for producing a strategy for accommodation with care for older people", Nigel Appleton, CLG & CSIP, 2008 & "Housing in later life – planning ahead for specialist housing for older people", December 2012, National Housing Federation and the Housing Learning and Improvement Network.

Other publications include three Board Assurance Prompts on the deployment of Assistive Technology/ telecare in both specialised and general housing for older people; "Housing and housing support in mental health and learning disabilities – its role in QIPP", National Mental Health Development Unit, with Steve Appleton (2011) and "The impact of Choice Based Lettings on the access of vulnerable adults to social housing" (2009) for the Housing LIN at the Department of Health.

Nigel led the team that prepared the material for the Good Practice Guidance for local authorities on delivering adaptations to housing for people with disabilities issued by the Office of the Deputy Prime Minister, Department of Health & Department for Education and Skills.

His expertise covers the full spectrum of issues in the field of housing and social care for older people. He has supported more than thirty local authorities in preparing their strategies for accommodation and care in response to the needs of an ageing population. With his team he has conducted a number of detailed reviews of existing sheltered housing schemes for both local authority and not for profit providers.

Nigel also brings expertise in relation to the various models of accommodation for older people and the operational issues that may arise in relation to staffing numbers and profile, operational viability and related matters.¹³

He has worked with housing and adult social care officers and members in a wider range of local authorities, and with various commissioning and provider bodies within the NHS. Nigel works to support development, operation and evaluation of specialised accommodation for providers in statutory, commercial and third sectors.

Nigel served as Expert Advisor to the Social Justice and Regeneration Committee of the Welsh Assembly in its review of housing and care policies in relation to older people in Wales.

Prior to establishing his consultancy in 1995 Nigel was Director of Anchor Housing Trust. Until December 2017 he served as a Governor and Chair of the Management Committee of Westminster College, Cambridge. Nigel formerly served as Vice Chair of the Centre for Policy on Ageing and as a trustee of Help & Care, Bournemouth, and has been an honorary research fellow at the Centre for Urban and Regional Studies, Birmingham University. In the more distant past he was a member of the Governing Body of Age Concern England and a Board Member of Fold Housing Group, Northern Ireland.

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¹³ For example, for the Joseph Rowntree Foundation: "Planning for the Needs of the Majority – the needs and aspirations of older people in general housing", and for the Change Agent Team at the Department of Health: "An introduction to Extracare housing for commissioners" and "Achieving Success in Developing Extra Care housing"

David Appleton

David Appleton is the Consultancy Support and Development Manager for Contact Consulting (Oxford) Limited. David joined the staff of Contact Consulting in 2014 after a two-year period in which he had undertaken specific assignments on a sub-contracted basis.

After securing his HND in Health, Welfare and Social Policy from Anglia Ruskin University David worked in residential care settings, initially with Cambridgeshire County Council, and subsequently with Northamptonshire County Council. During his time in Northamptonshire David was responsible for the oversight and delivery of their Physical Intervention training, and investigation. At the time of leaving Northamptonshire CC, in December 2011, David's role was that of Assistant Manager in one of the Authority's residential units.

Since joining Contact Consulting David has undertaken a variety projects and his current responsibilities within the company include research, policy and data analysis, policy and report writing. He is also involved in delivering training, in service evaluation, and supporting investigations in a number of statutory and non-statutory settings.

In addition to his HND in Health, Welfare and Social Policy David continued his professional development, undertaking NVQ3 in Children and Young People, NVQ4 in Leadership and Management, and accreditation as an instructor in Physical Intervention. Since joining Contact Consulting he has secured accreditation in Prince2 project management and provides that input to company assignments as required.





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Utilities Review Report

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Limitations

The assessments and interpretation have been made in line with legislation and guidelines in force at the time of writing, representing best practice at that time.

All of the comments and opinions contained in this report, including any conclusions, are based on the information obtained by BWB during our investigations.

There may be other conditions prevailing on the site which have not been disclosed by this investigation and which have not been taken into account by this report. Responsibility cannot be accepted for conditions not revealed by the investigation.

Any diagram or opinion of the possible configuration of the findings is conjectural and given for guidance only and confirmation of intermediate ground conditions should be considered if deemed necessary.

Except as otherwise requested by the Client, BWB is not obliged and disclaims any obligation to update the report for events taking place after:

- a) The date on which this assessment was undertaken; and
- b) The date on which the final report is delivered.

BWB makes no representation whatsoever concerning the legal significance of its findings or to other legal matters referred to in the following report.

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EXECUTIVE SUMMARY

This Foul Water & Utilities Assessment has been prepared by BWB Consulting Limited (BWB) on behalf of Cushman and Wakefield. Its purpose is to describe the locations of existing utilities apparatus in the vicinity of the site and to provide an account of the viability of servicing the proposed development with suitable mains services infrastructure. The assessment also considers whether any services diversions are likely to be required as a consequence of the development proposals.

BWB carried out a comprehensive services search to establish the approximate location of existing recorded services. The site and its surrounds are well served by the existing utilities infrastructure.

Having made initial enquiries with the relevant statutory undertakers, the responses received indicate that minor diversionary works to the existing; electricity, water, foul water and telecommunications apparatus may be required to accommodate the development however, it is not anticipated that the works will be prohibitive to the development.

It is recommended that further consultation with the relevant statutory undertakers is undertaken once the development proposals are reasonably fixed, in order to finalise the availability and cost of strategic services supplies to serve the proposed development and to confirm the extents and cost of any localised services diversions required.



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FIGURES

Figure 1 SITE LOCATION PLAN

APPENDICES

Appendix A SITE DEVELOPMENT MASTERPLAN Appendix B EXISTING UTILITY RECORD PLANS



1.0 INTRODUCTION

Instruction

- 1.1 BWB Consulting (BWB) was instructed by Cushman and Wakefield to carry out a Utilities Review report.
- 1.2 It is anticipated that the land at Chester Road, Walton, Warrington, will be utilised for a development opportunity.
- 1.3 A site development masterplan is included as **Appendix A.**

Objectives

- 1.4 The objectives of the report are:-
 - To describe the location of existing services on and immediately adjacent to the site.
 - To determine whether there is likely to be any difficulty in providing strategic utility services to serve the proposed development.
 - To consider the impact of the development itself, on the existing services infrastructure and the likelihood of any necessary diversions.

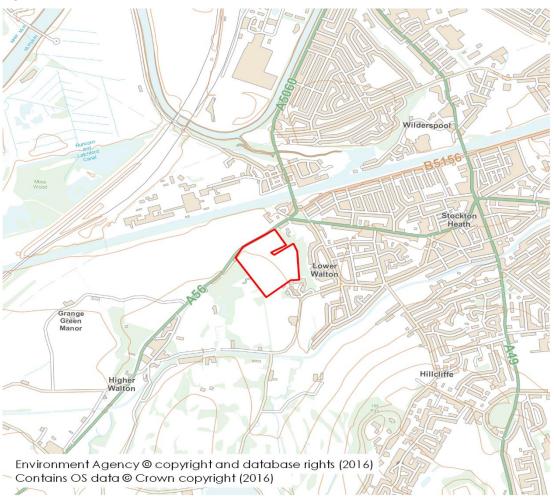


2.0 THE SITE

Site Location

2.1 The existing site is located approximately 0.5 miles to the west of Walton village and approximately 3 miles to the south of the town of Warrington. **Figure 1.**





Site Description

2.2 The promoted site is located on a parcel of land off the A56, Chester Road, Warrington and comprises of arable/agricultural land. The site is bound to the north by a mix of both arable/agricultural land, industrial space and residential dwellings. The site is bound to the east by residential dwellings, and to the south and west by Warrington Sports Club and existing wooded land, respectively.



3.0 EXISTING SERVICES APPARATUS

3.1 BWB requested copies of existing services records from the utility companies operating within the vicinity of the site. The following provides a summary of the responses received.

Electricity Apparatus

- 3.2 The Scottish Power (SP) electricity record plan shows an existing network of both high voltage (HV) and low voltage (LV) electricity cables supplying the existing residential dwellings surrounding the site.
- 3.3 Of note, the SP electricity record plan shows a disused HV cable, running along the western boundary of the site, to the north, where it crosses the A56, Chester Road.
- 3.4 Most notably, there is an LV cable running within the A56, Chester Road. The SP electricity record plan shows the cable running from west to east, where it connects into the existing electricity network and provides a supply to the residential dwellings within the surrounding area.
- 3.5 The SP electricity record plan confirms that there is no existing electricity apparatus present within the site itself.

Gas Apparatus

- 3.6 The National Grid (NG) gas record plan shows an existing network of low pressure (LP) gas mains supplying the existing residential dwellings surrounding the site.
- 3.7 Of note, the NG gas record plan shows an existing LP gas main running within the A56, Chester Road. The record plan shows the gas main running from west to east, where it connects into the existing gas infrastructure surrounding the site at the east.
- 3.8 Most notably, the NG gas record plan shows a medium pressure (MP) gas main present, beyond the eastern boundary of the site, within Walton New Road. The medium pressure main is shown running centrally through the existing residential suburb of Walton.
- 3.9 The NG gas record plan confirms that there is no existing gas apparatus present within the site itself.

Water Apparatus

3.10 The United Utilities (UU) clean water record plan shows a network of clean anticipated to be of varying sizes, supplying the existing residential dwellings surrounding the site.



- 3.11 Of note, there is a Trunk main running from the B5156, Ellesmere Road to the A56, Chester Road, where it heads north into the arable/agricultural land adjacent to the proposed site.
- 3.12 Most notably, the UU clean water record plan shows a water main running within the A56, Chester Road, from the west to east. The UU water record plan shows the water main running within close proximity to the northern boundary of the site, at the north eastern corner.
- 3.13 The UU clean water record plan confirms that there is no clean water apparatus present within the site itself.

Public Sewer Apparatus

- 3.14 The United Utilities (UU) sewer record plan confirms that there is an existing network of both foul and surface water sewers, serving the existing residential dwellings, surrounding the site beyond the eastern boundary.
- 3.15 Most notably, the UU sewer record plan shows an existing 150mm surface water sewer running within the A56, Chester Road, from the existing sewerage infrastructure, located east of the site.
- 3.16 The UU sewer record plan confirms that there is no existing foul drainage apparatus present within the site itself.

Telecommunication Apparatus

BT/Openreach

- 3.17 The BT/Openreach record plan BWB obtained, shows an existing network of underground apparatus surrounding the site.
- 3.18 Of note, the BT/Openreach record plan shows underground apparatus present within the A56, Chester Road. The BT/Openreach record plan shows the existing apparatus providing telecoms services to the existing residential dwellings within the surrounding area.
- 3.19 The BT/Openreach record plans confirms that there is no existing BT apparatus present within the site itself.

<u>Virgin Media</u>

- 3.20 The Virgin Media (VM) record plan obtained, shows an existing network of underground apparatus surrounding the site.
- 3.21 Most notably, the VM record plan shows underground apparatus present within the A56, Chester Road, within the northerly footway, adjacent to the northern boundary of the site.



3.22 The VM record plans confirms that there is no existing apparatus present within the site itself.

Vodafone

- 3.23 The Vodafone record plan BWB obtained, shows apparatus now owned and operated by Vodafone and that which is not.
- 3.24 Of note, the Vodafone record plan confirms that there is no existing apparatus within the site itself.
- 3.25 Furthermore, the Vodafone record plan shows apparatus present, belonging to another licensed operator, running within the A56, Chester Road.

BWB contacted several other communications companies including; Interoute, KCOM, Verizon, Telent and Colt, none of whom have any apparatus in the vicinity of the site.

Linesearch Apparatus

3.26 BWB contacted several other utility companies through Linesearch. The response received confirms the site does not lie within the zone of interest of a number of companies, most notably:

Main Pipelines Ltd

Government Pipeline Storage Systems (GPSS)

Shell Pipelines

Croyton Energy Con Ltd (Gas Pipeline)

ES Pipeline Ltd



4.0 DIVERSIONS/DISCONNECTIONS

Electricity Apparatus

4.1 Following a review of the existing Scottish Power (SP) electricity record plans, it is confirmed that the promoted site is not affected by existing electricity infrastructure. As such, any development opportunity within the proposed site will not require the need to undertake diversionary works.

Gas Apparatus

4.2 The National Grid (NG) gas record plan confirmed that there was no apparatus present within the site itself. However, it was highlighted that there is an existing low pressure main within the A56, Chester Road and running within proximity to the northern boundary, at the north east. Whilst the gas main is not anticipated to affect any proposed plans to develop, it is recommended that consideration is made towards its location, when devising a site masterplan.

Water Apparatus

4.3 Upon review of the existing United Utilities (UU) clean water record plan, it is confirmed that there was no apparatus present within the site itself. However, it was highlighted that there is an existing clean water main within the A56, Chester Road and running within proximity to the northern boundary, at the north east. Whilst the clean water main is not anticipated to affect any proposed plans to develop, it is recommended that consideration be made to its location, when devising a site masterplan.

Public Sewer Apparatus

The United Utilities (UU) foul sewer record plan confirmed that there was no apparatus present within the site itself. However, it was highlighted that there is an existing 150mm surface water sewer within the A56, Chester Road and running within proximity to the northern boundary, at the north east. Whilst the gas main is not anticipated to affect any proposed plans to develop, it is recommended that any iterations of a site masterplan consider its location to the site.

Telecommunications Apparatus

BT/Openreach

4.5 Upon review of the existing BT/Openreach plans provided, it is confirmed that the existing underground apparatus serving the surrounding area does not impact upon the promoted site. As such, any development opportunity within the proposed site will not require diversionary works.



4.6 <u>Virgin Media</u>

4.7 Upon review of the existing Virgin Media (VM) record plans provided, it is confirmed that the existing underground apparatus serving the surrounding area does not impact upon the promoted site. As such, diversionary works will not be required.

4.8 <u>Vodafone</u>

4.9 The Vodafone record plans obtained confirmed that there is no existing apparatus present within the site itself. As such, any development opportunity within the proposed site will not require diversionary works.



Diversion / Disconnection Summary

	Affected	Easement	Cost	Comments
Electricity	No	N/A	-	No diversionary works required
Gas	No	N/A	-	No diversionary works required
Water	No	N/A	-	No diversionary works required
Foul Water	No	N/A	-	No diversionary works required
BT	No	N/A	-	No diversionary works required
Virgin Media	No	N/A	-	No diversionary works required
Vodafone	No	N/A	-	No diversionary works required



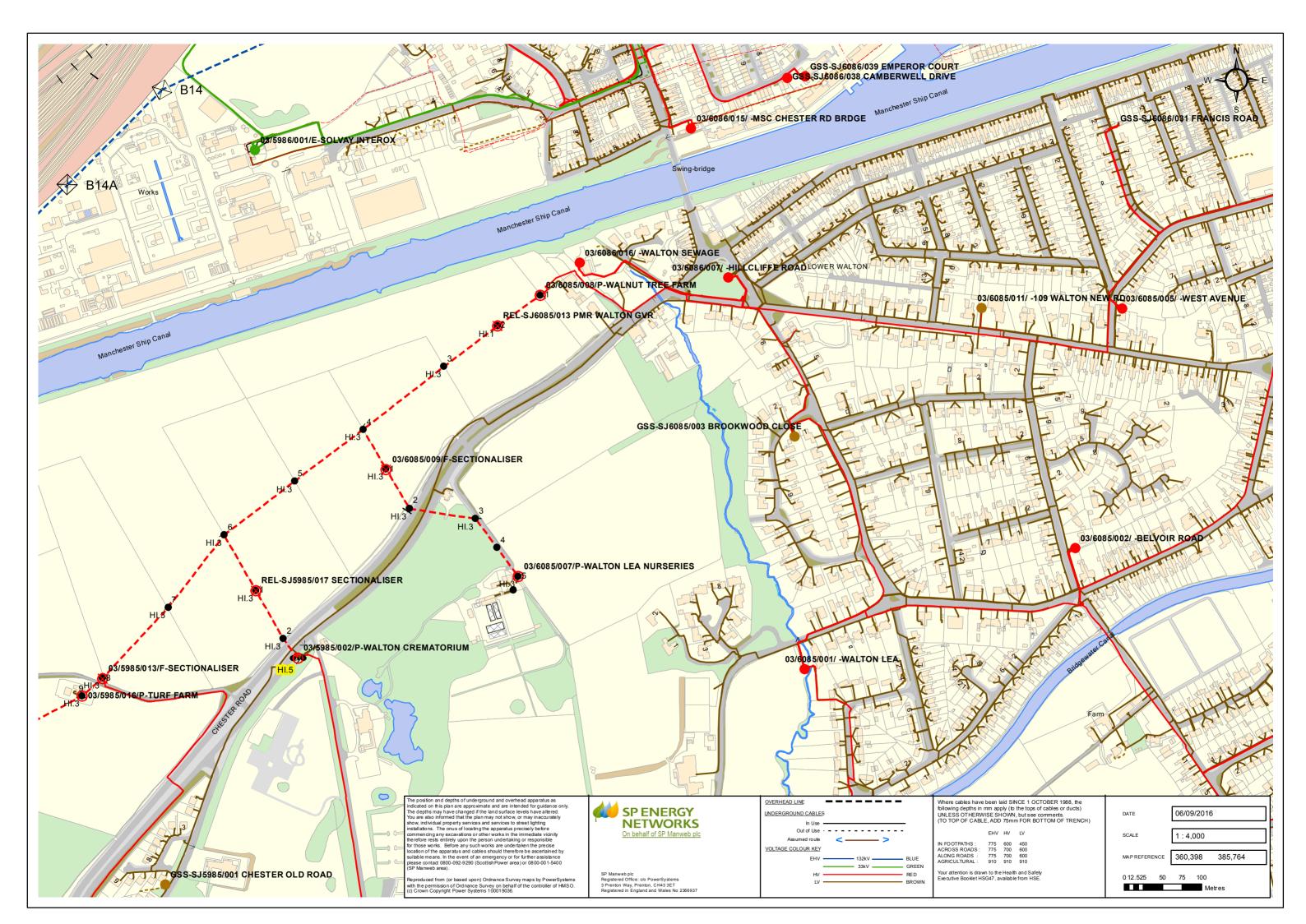
5.0 CONCLUSIONS/RECOMMENDATIONS

- 5.1 The main conclusions and recommendations that can be drawn from this utilities investigation are as follows;
 - The existing site surrounds appear to be well served by the main utility services.
 - Following a review of the existing utility record plans obtained, it is clear that the surrounding network is reasonably well established, with suitable infrastructure present within the immediate vicinity of the site and its surrounding areas.
 - Following a further review of the existing utility record plans obtained, it
 is confirmed that the site is free of any existing infrastructure services and
 therefore, will not be constrained by potential diversionary work
 considerations.
 - It is recommended that further consultation with the relevant companies is undertaken closer to the time when works on the relevant parts of the development are due to commence and the proposals are reasonably fixed in order to confirm the availability and cost of strategic services supplies.

APPENDICES

APPENDIX A SITE DEVELOPMENT MASTERPLAN

APPENDIX B EXISTING UTILITY RECORD PLANS





Carmen Jaimez
BWB Consulting Ltd
Livery Place
35 Livery Street
Colmore Business District
Birmingham
Birmingham
B3 2PB

Date: 02/09/2016

Our Ref: NW_TW_Z1_3SWX_263807

Your Ref: LDT2612

RE: Proposed Works, chester road, walton, warrington

Thank you for your enquiry which was received on 02/09/2016.

Please note this response and any attached map(s) are valid for 28 days.

An assessment has been carried out with respect to National Grid Electricity Transmission plc's and National Grid Gas plc's apparatus. Please note it does not cover the items listed in the section "Your Responsibilities and Obligations", including gas service pipes and related apparatus.

For details of National Grid's network areas please see the National Grid website (http://www.nationalgrid.com/uk/Gas/Safety/work/) or the enclosed documentation.

As your works are at a "proposed" stage, any maps and guidance provided are for information purposes only. This is not approval to commence work. You must submit a "Scheduled Works" enquiry at the earliest opportunity and failure to do this may lead to disruption to your plans and works. National Grid will endeavour to provide an <u>initial</u> assessment within 14 days of receipt of a Scheduled Works enquiry and dependent on the outcome of this, further consultation may be required.

In any event, for safety and legal reasons, works must not be carried out until a Scheduled Works enquiry has been completed and final response received.

National Grid Block 1; Floor 1 Brick Kiln Street Hinckley LE10 0NA E-mail: plantprotection@nationalgrid.com Telephone: +44 (0)800 688588

National Grid Electricity Emergency Number: 0800 40 40 90*

National Gas Emergency Number: 0800 111 999*

* Available 24 hours, 7 days/week. Calls may be recorded and monitored.

www.nationalgrid.com

Plant Protection

Your Responsibilities and Obligations

The "Assessment" Section below outlines the detailed requirements that must be followed when planning or undertaking your scheduled activities at this location.

It is your responsibility to ensure that the information you have submitted is accurate and that all relevant documents including links are provided to all persons (either direct labour or contractors) working for you near National Grid's apparatus, e.g. as contained within the Construction (Design and Management) Regulations.

This assessment solely relates to National Grid Electricity Transmission plc (NGET) and National Grid Gas plc (NGG) apparatus. This assessment does **NOT** include:

- National Grid's legal interest (easements or wayleaves) in the land which restricts activity in proximity to National Grid's assets in private land. You must obtain details of any such restrictions from the landowner in the first instance and if in doubt contact National Grid.
- Gas service pipes and related apparatus
- Recently installed apparatus
- Apparatus owned by other organisations, e.g. other gas distribution operators, local electricity companies, other utilities, etc.

It is **YOUR** responsibility to take into account whether the items listed above may be present and if they could be affected by your proposed activities. Further "Essential Guidance" in respect of these items can be found on the National Grid Website (http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=8589934982).

This communication does not constitute any formal agreement or consent for any proposed development work; either generally or with regard to National Grid's easements or wayleaves nor any planning or building regulations applications.

NGG and NGET or their agents, servants or contractors do not accept any liability for any losses arising under or in connection with this information. This limit on liability applies to all and any claims in contract, tort (including negligence), misrepresentation (excluding fraudulent misrepresentation), breach of statutory duty or otherwise. This limit on liability does not exclude or restrict liability where prohibited by the law nor does it supersede the express terms of any related agreements.

If you require further assistance please contact the National Grid Plant Protection team via e-mail (<u>click here</u>) or via the contact details at the top of this response.

Yours faithfully

National Grid Plant Protection Team

ASSESSMENT

Affected Apparatus

The National Grid apparatus that has been identified as being in the vicinity of your proposed works is:

- High or Intermediate pressure (above 2 bar) Gas Pipelines and associated equipment
- Low or Medium pressure (below 2 bar) gas pipes and associated equipment. (As a result it is highly likely that there are gas services and associated apparatus in the vicinity)

Requirements

BEFORE carrying out any work you must:

- Carefully read these requirements including the attached guidance documents and maps showing the location of National Grid apparatus.
- Contact the landowner and ensure any proposed works in private land do not infringe National Grid's legal rights (i.e. easements or wayleaves). If the works are in the road or footpath the relevant local authority should be contacted.
- Ensure that all persons, including direct labour and contractors, working for you on or near National Grid's apparatus follow the requirements of the HSE Guidance Notes HSG47 'Avoiding Danger from Underground Services' and GS6 'Avoidance of danger from overhead electric power lines'. This guidance can be downloaded free of charge at http://www.hse.gov.uk
- In line with the above guidance, verify and establish the actual position of mains, pipes, cables, services and other apparatus on site before any activities are undertaken.

GUIDANCE

High Pressure Gas Pipelines Guidance:

If working in the vicinity of a high pressure gas pipeline the following document must be followed: 'Specification for Safe Working in the Vicinity of National Grid High Pressure Gas Pipelines and Associated Installations - Requirements for Third Parties' (SSW22). This can be obtained from: http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=33968

Dial Before You Dig Pipelines Guidance:

http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=33969

Excavating Safely - Avoiding injury when working near gas pipes:

http://www.nationalgrid.com/NR/rdonlyres/2D2EEA97-B213-459C-9A26-18361C6E0B0D/25249/Digsafe_leaflet3e2finalamends061207.pdf

Standard Guidance

Essential Guidance document:

http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=8589934982

General Guidance document:

http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=35103

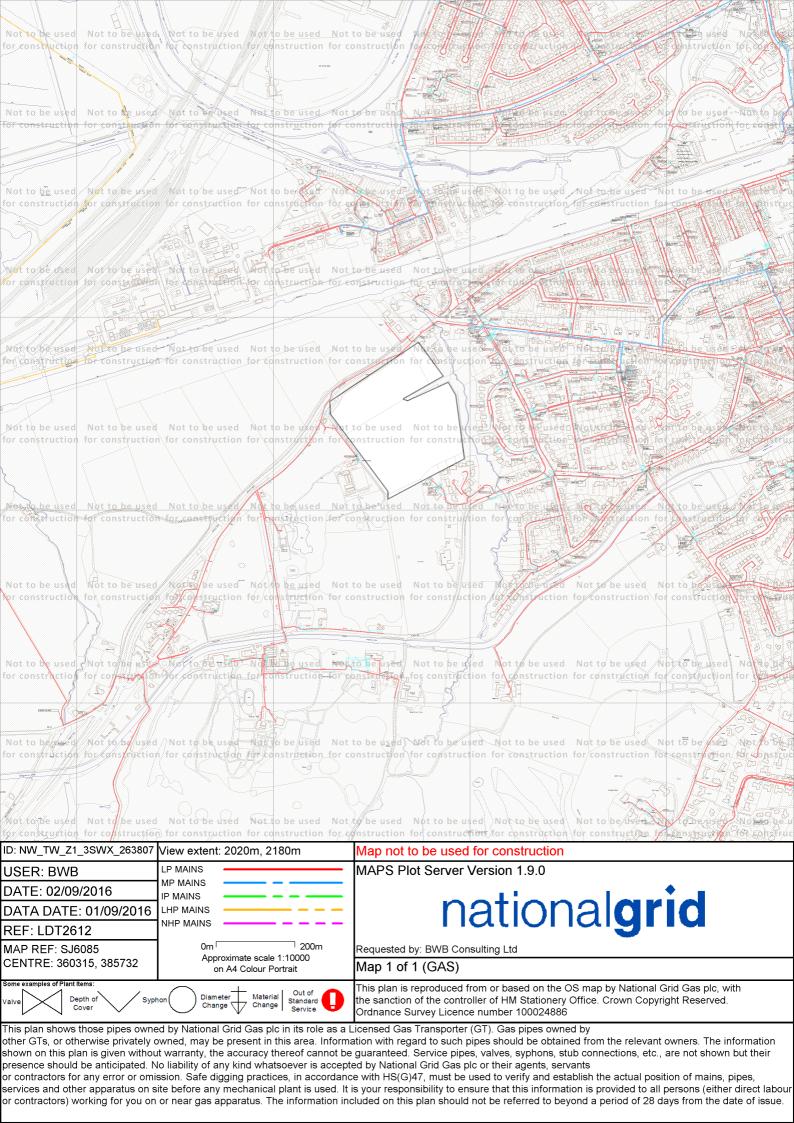
Excavating Safely in the vicinity of gas pipes guidance (Credit card):

http://www.nationalgrid.com/NR/rdonlyres/A3D37677-6641-476C-9DDA-E89949052829/44257/ExcavatingSafelyCreditCard.pdf

Excavating Safely in the vicinity of electricity cables guidance (Credit card):

http://www.nationalgrid.com/NR/rdonlyres/35DDEC6D-D754-4BA5-AF3C-D607D05A25C2/44858/ExcavatingSafelyCreditCardelectricitycables.pdf

Copies of all the Guidance Documents can also be downloaded from the National Grid Website: http://www.nationalgrid.com/uk/Gas/Safety/work/downloads/



ENQUIRY SUMMARY

Received Date

02/09/2016

Your Reference

LDT2612

Location

Centre Point: 360315, 385732

X Extent: 345 Y Extent: 411

Postcode: WA4 6ER

Location Description: chester road, walton, warrington

Map Options

Paper Size: A4

Orientation: PORTRAIT Requested Scale: 2500 Actual Scale: 1:10000 (GAS)

Real World Extents: 2020m x 2180m (GAS)

Recipients

utilities@bwbconsulting.com

Enquirer Details

Organisation Name: BWB Consulting Ltd

Contact Name: Carmen Jaimez

Email Address: utilities@bwbconsulting.com Telephone: 01212333322 (01212333322)

Address: Livery Place, 35 Livery Street, Colmore Business District, Birmingham, Birmingham, B3 2PB

Description of Works

proposed residential scheme. Desktop study only. plans required to undertake a feasibility assessment regarding potential provision of supplies.

Enquiry Type

Proposed Works

Activity Type

Development Project

Work Types

Work Type: Plans Only



BWB Consulting Limited Livery Place 35 Livery Street Colmore Business District Birmingham B3 2PB

FAO: Armani Akbar-Roy

Dear Sirs

United Utilites Water Limited

Property Searches Ground Floor Grasmere House Lingley Mere Business Park Great Sankey Warrington WA5 3LP

DX 715568 Warrington Telephone 0370 751 0101

Property.searches@uuplc.co.uk

Your Ref: LDT2162 Our Ref: 16/ 1230095 Date: 5/9/2016

Location: LEA LODGE 99 CHESTER ROAD HIGHER WALTON WARRINGTON WA4 6TD

I acknowledge with thanks your request dated 02/09/16 for information on the location of our services.

Please find enclosed plans showing the approximate position of our apparatus known to be in the vicinity of this site.

The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read our access statement before you start work to check how it will affect our network. http://www.unitedutilities.com/work-near-asset.aspx.

I trust the above meets with you requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please telephone us on 0370 7510101.

Yours Faithfully,

Amanda Simmonds Property Searches Manager

immonds.



TERMS AND CONDITIONS - WASTERWATER & WATER DISTRIBUTION PLANS

These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self-construction of water mains) (UUWL apparatus) of United Utilities Water Limited "(UUWL)".

TERMS AND CONDITIONS:

- This Map and any information supplied with it is issued subject to the provisions contained below, to the exclusion of all others and no party relies upon any representation, warranty, collateral contract or other assurance of any person (whether party to this agreement or not) that is not set out in this agreement or the documents referred to in it.
- 2. This Map and any information supplied with it is provided for general guidance only and no representation, undertaking or warranty as to its accuracy, completeness or being up to date is given or implied.
- In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only and given in accordance with the best information available. The nature of the relevant system and/or its actual position may be different from that shown on the plan and UUWL is not liable for any damage caused by incorrect information provided save as stated in section 199 of the Water Industry Act 1991. UUWL strongly recommends that a comprehensive survey is undertaken in addition to reviewing this Map to determine and ensure the precise location of any UUWL apparatus. The exact location, positions and depths should be obtained by excavation trial holes.
- 4. The location and position of private drains, private sewers and service pipes to properties are not normally shown on this Map but their presence must be anticipated and accounted for and you are strongly advised to carry out your own further enquiries and investigations in order to locate the same.
- 5. The position and depth of UUWL apparatus is subject to change and therefore this Map is issued subject to any removal or change in location of the same. The onus is entirely upon you to confirm whether any changes to the Map have been made subsequent to issue and prior to any works being carried out.
- 6. This Map and any information shown on it or provided with it must not be relied upon in the event of any development, construction or other works (including but not limited to any excavations) in the vicinity of UUWL apparatus or for the purpose of determining the suitability of a point of connection to the sewerage or other distribution systems.
- No person or legal entity, including any company shall be relieved from any liability howsoever and whensoever arising for any damage caused to UUWL apparatus by reason of the actual position and/or depths of UUWL apparatus being different from those shown on the Map and any information supplied with it.
- 8. If any provision contained herein is or becomes legally invalid or unenforceable, it will be taken to be severed from the remaining provisions which shall be unaffected and continue in full force and affect.
- 9. This agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts, save that nothing will prevent UUWL from bringing proceedings in any other competent jurisdiction, whether concurrently or otherwise.

Cleanwater Symbology

Live	Proposed	
		Distribution Main - Pressurised Main
		LDTM Treated Water Distribution - Pressurised main
		LDTM Treated Water Distribution - Gravity main
		Trunk Main - Pressurised main
		Raw Water Aqueduct - Pressurised Main
		Raw Water Aqueduct - Gravity Main
		LDTM Raw Water Distribution - Pressurised main
		LDTM Raw Water Distribution - Gravity main
		Private Pipe
		Comms Pipe
		Concessionary Service
	Raw Water Aque	
	Trunk Main	
	LDTM Raw Wate	r Distribution
	Distribution main	
	Private Pipe	
	Comms Pipe	
	Concessionary S	ervice
Property Types		
Live	Proposed	
***		Condition Report
Δ		Pumping Station
		Water Treatment Works
VH	VH	Valve House
		Water Tower
<u> </u>		Service Reservoir
(R) (R)	(S) (<u>#</u>)	Service Reservoir Supply Reservoir

Matertial Types		Lining Ty	/pes
AC	Asbestos Cement	CL	Cement Lining
CI	Cast Iron	TB	Tar or Bitumen
CU	Copper	ERL	Epoxy Resin
со	Concrete		
DI	Ductile Iron	Insertion	Types
GI	Galvanised Iron		
GR	Grey Iron	DD	Die Drawn
ОТ	Others	DR	Directional Drilling
PB	Lead	MO	Moling
PV	uPVC	PI	Pipeline
SI	Spun Iron	SL	Slip Lined
ST	Steel		
UN	Unknown		
PE	Ployethelene		

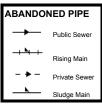
Nodes Proposed Live End Cap CC Valve open T CC Valve closed \mathbf{I} AC Valve open AC Valve closed \bigcirc Air Valve X X Sluice Valve Non Return Valve Pressure Management Valve Change of Characterisitcs 1 P Anode Chlorination Point De Chlorination Point Inlet Bore Hole Inlet Inlet Point Bulk Supply Point Fire Hydrant Hydrant Pump Site Termination ©M SP AP HB Service Start Service End Commercial Meter Domestic Meter Strainer Point Access Point Hatch Box IP Point Sampling Station LB LB Logger Box Stop Tap

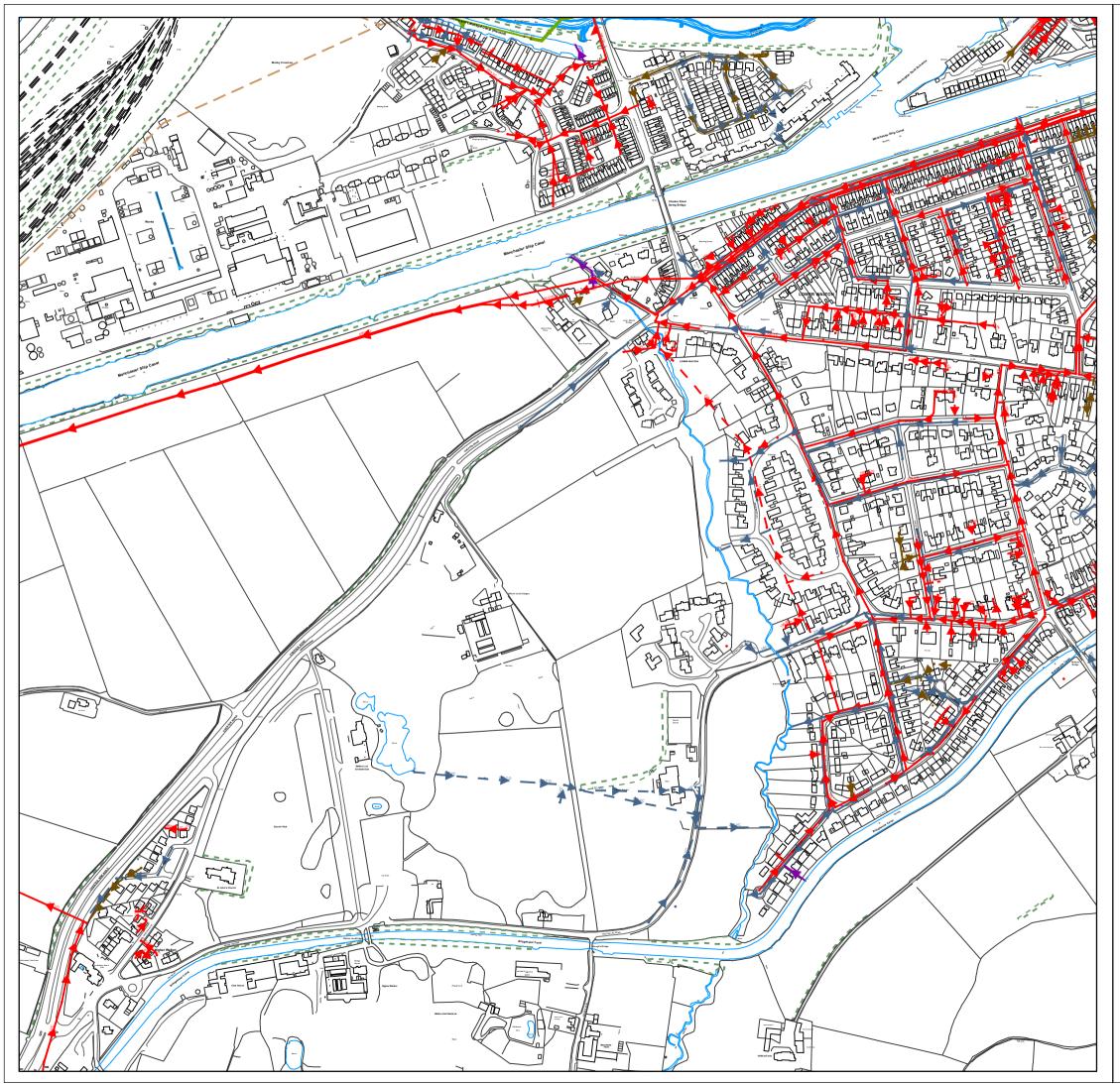
WASTE WATER SYMBOLOGY



MANHO	LE FUNCTION	SEWE	R SHAPE		
FO	Foul	CI	Circular	SQ	Square
SW	Surface Water	EG	Egg	TR	Trapezoidal
СО	Combined	OV	Oval	AR	Arch
OV	Overflow	FT	Flat Top	BA	Barrel
		RE	Rectangular	НО	Horse Shoe
SEWER	MATERIAL		l		Unspecified
AC	Asbestos Cement	DI	Ductile Iron		
BR	Brick	VC	Vitrified Clay		
CO	Concrete	PP	Polypropylene		
CSB	Concrete Segment	PF	Pitched Fibre		
CSU	Concrete Segment	MA	Masonary, Course	d	
CC	Concrete Box Culverted	MA	Masonary, Randon	n	
PSC	Plastic	RP	Reinforced Plastic		
GR	Glass Reinforced	CI	Cast Iron		
GRP	Glass Reinforced	SI	Spun Iron		
PVC	Polyvinyl Chloride	ST	Steel		
PE	Polyethtlene	U	Unspecified		







Extract from Map of Public Sewers

The position of underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available.

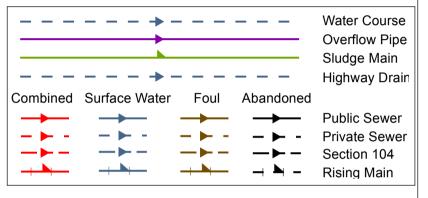
The actual positions may be different from those shown on the plan and private pipes, sewers or drains may not be recorded.

United Utilities will not accept any liability for any damage caused by the actual positions being different from those shown.

United Utilities Water Limited 2014

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LEGEND



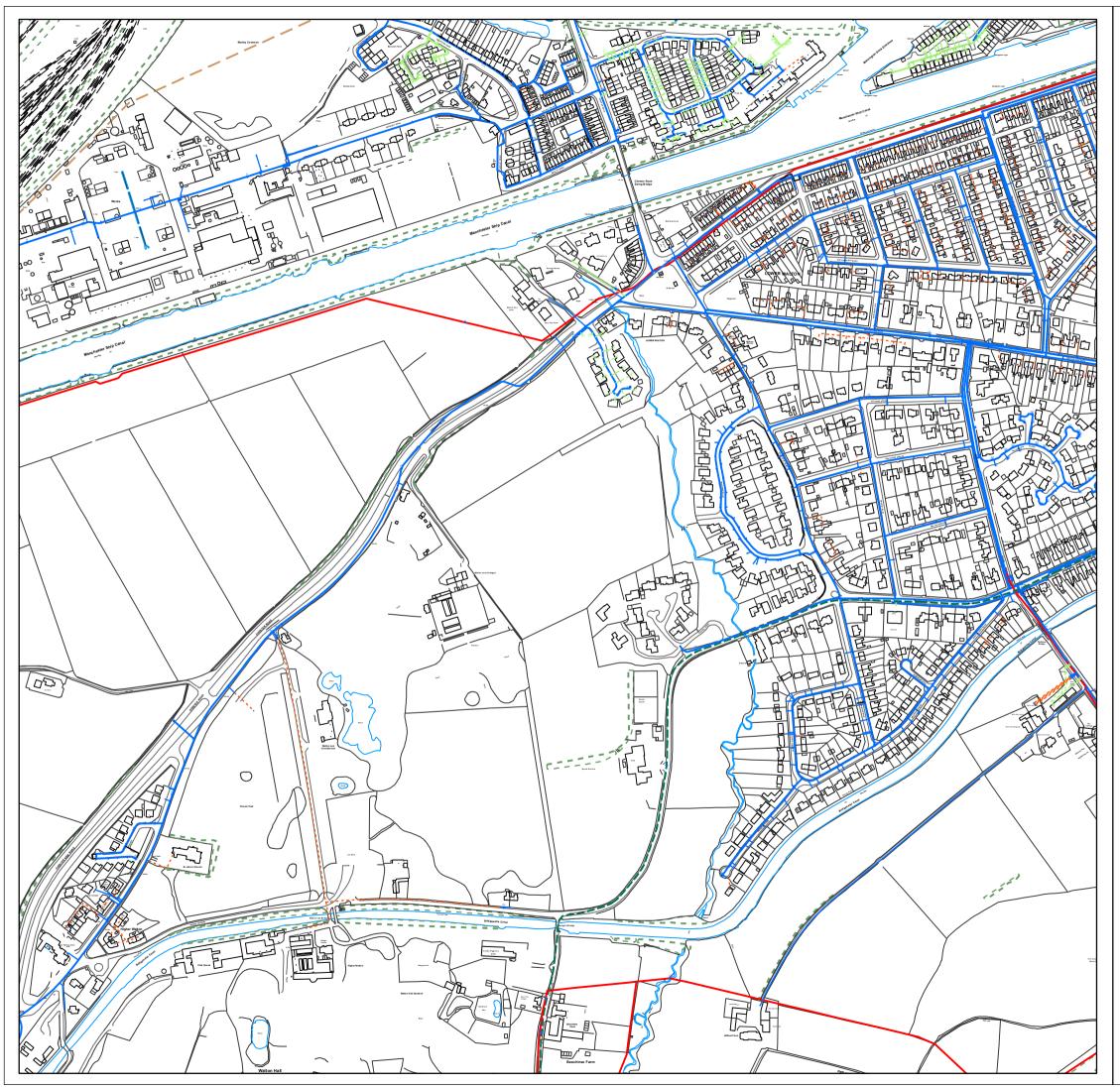
Lea Lodge 99 Chester Road Higher Walton Warrington WA4 6TD

Printed By: Property Searches Date: 05/09/2016

DO NOT SCALE

Approximate Scale: 1:5000





Extract from Map of Water Mains

The position of underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available.

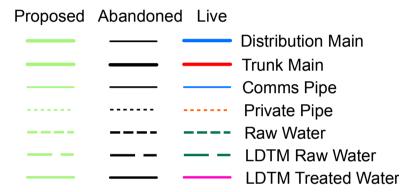
The actual positions may be different from those shown on the plan private service pipes may be shown by a broken blue line.

United Utilities will not accept any liability for any damage caused by the actual positions being different from those shown.

United Utilities Water Limited 2014

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LEGEND



Lea Lodge 99 Chester Road Higher **Walton Warrington WA4 6TD**

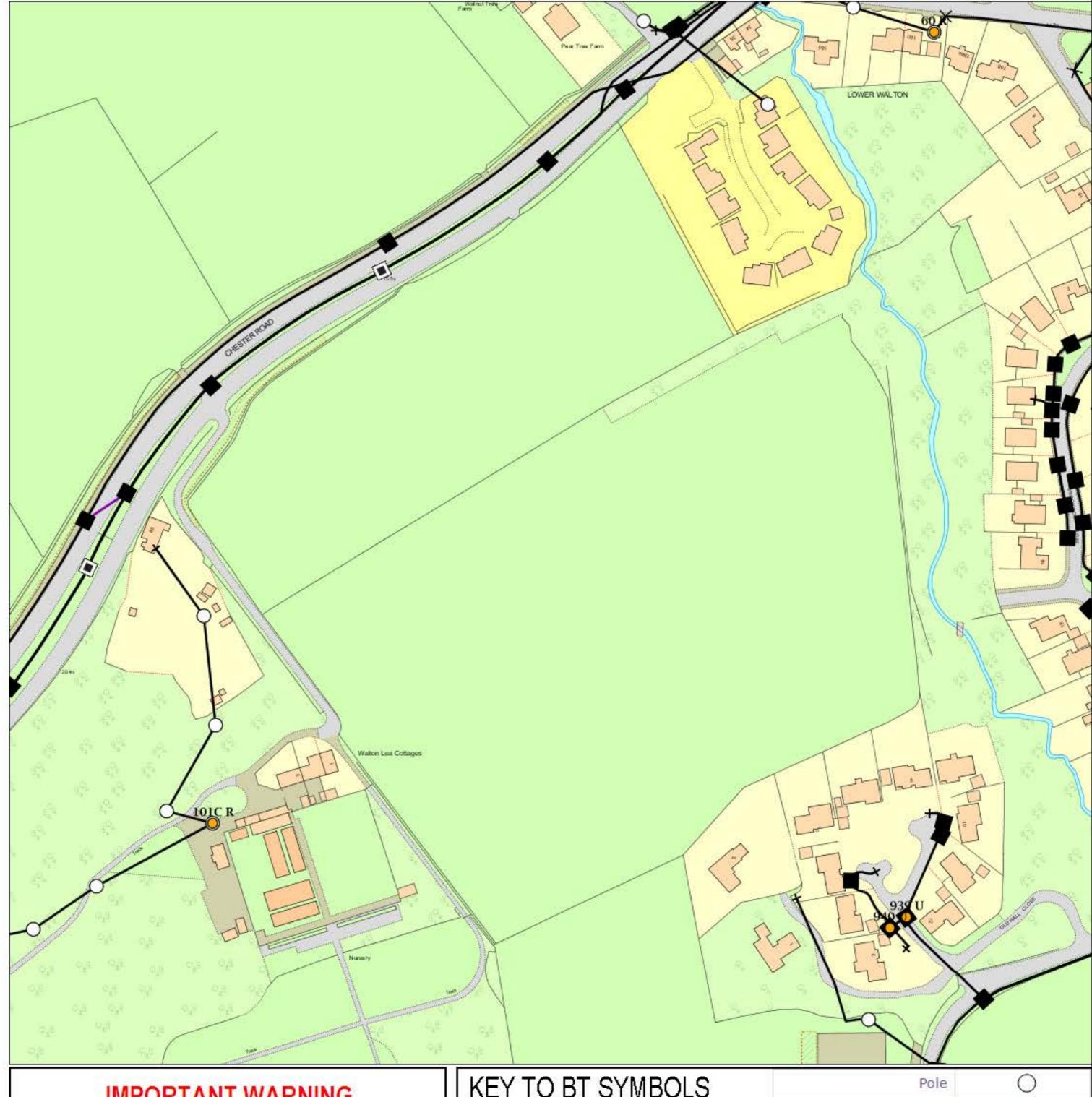
Printed By: Property Searches Date: 05/09/2016

DO NOT SCALE

Approximate Scale: 1:5000



Maps by email Plant Information Reply



IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy. It should not be relied upon in the event of excavations or

other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.





CLICK BEFORE YOU DIG
FOR PROFESSIONAL FREE ON SITE ASSISTANCE PRIOR
TO COMMENCEMENT OF EXCAVATION WORKS
INCLUDING LOCATE AND MARKING SERVICE

email cbyd@openreach.co.uk

ADVANCE NOTICE REQUIRED (Office hours: Monday - Friday 08.00 to 17.00) www.openreach.co.uk/cbyd

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LOTO: N		
KEY TO BT SYMBOLS	Pole	0
	Planned Pole	0
Planned DP	Joint Box	
PCP	Change Of State	+
Planned PCP	Split Coupling	×
Built	Duct Tee	A
Planned	Planned Box	
Inferred	Manhole	
Building	Planned Manhole	
Kiosk ((Cabinet	Û
Hatchings	Planned Cabinet	Û
	Other proposed plant is shown usi	ng dashed lines.

BT Symbols not listed above maybe disregarded. Existing BT Plant may not be recorded. Information valid at time of preparation

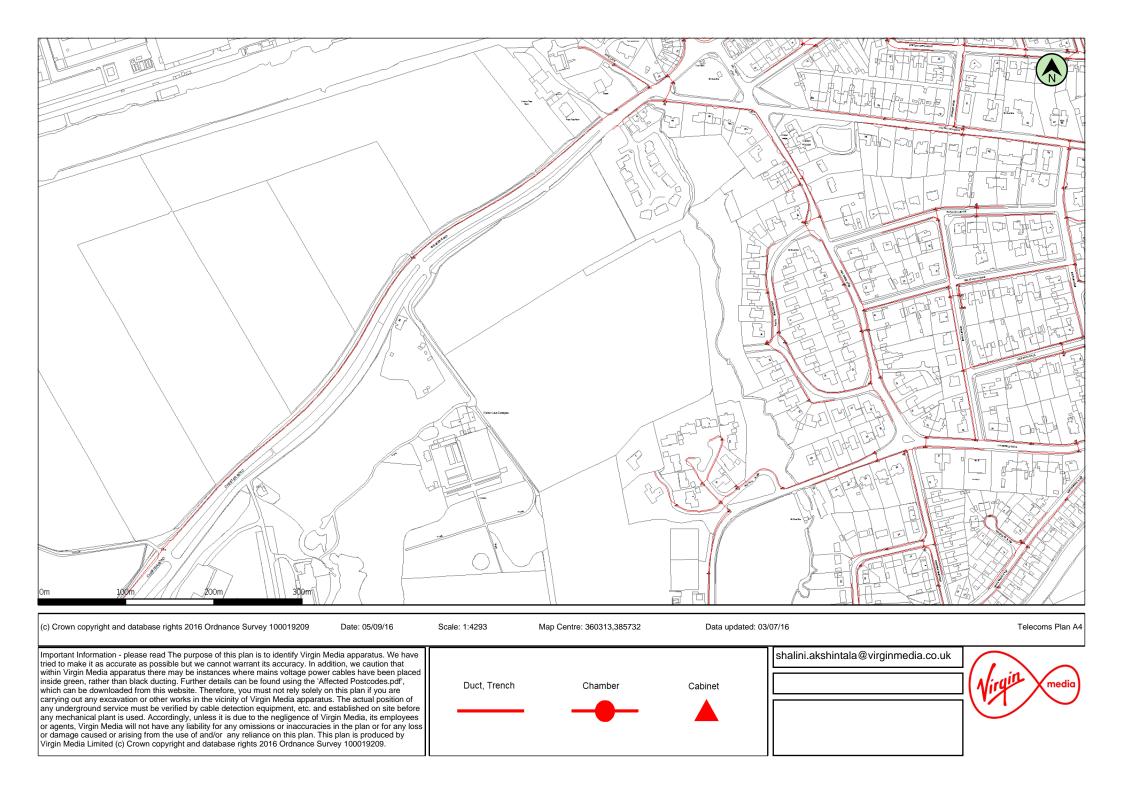
a BT Group business

BT Ref: PTT04007T

Map Reference: (centre) SJ6031385732 Easting/Northing : (centre) 360313,3857

Issued: 06/09/2016 16:00:50

WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: nnhc@openreach.co.uk





Vodafone Network Colour:	
	Ex-Cable&Wireless UK Network (now Vodafone)
	Planned & Approved Route
	Planned Route – Awaiting Approval
	Other Licensed Operator (OLO)
	Ex-Thus Network (now Vodafone)
	Ex-Energis Network (now Vodafone)
	OLO
Other:	
	Overhead Electricity Line (non Vodafone)
	Network Rail

Other Licensed Operator (OLO).

= Ex-Cable&Wireless UK, Energis and Thus fibre-optic cable within an OLO duct. Please contact all other operators for further details of their apparatus within that area.

Fibre Services Special Requirements relating to the External Plant Network of Vodafone

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1. Introduction

This document sets out the procedure that will apply when Other Parties intend or are undertaking works in the vicinity of Vodafone apparatus.

2. Purpose of document

This document provides a means by which the Vodafone specific special requirements relating to their apparatus, regardless of it being situated in the public highway / road, private street, land or any other areas, is made aware to Other Parties.



3. Scope

This document will be presented to Other Parties or Contractors to encourage those undertaking works within the vicinity of Vodafone apparatus to refer to and comply with. This is in order to protect where necessary the Vodafone apparatus and to avoid damage to the apparatus and loss of service.

A National Joint Utilities Group (NJUG) document NJUG 9 titled "Recommendations for the Exchange of Records of Apparatus between Utilities" provides useful reference material.

It should be noted that, where appropriate, additional information on avoiding danger from underground apparatus is contained within the HSG47 guidance book titled "Avoiding Danger from Underground Services."

4. Vodafone Network and Apparatus

Damage to Vodafone apparatus is extremely disruptive and can be expensive to repair, especially where long lengths of cable have to be replaced.

In order to maintain the network integrity and minimise disruption to service, it is essential that disturbances are absolutely minimal. When working within the vicinity of Vodafone apparatus, extreme care is necessary in order to avoid costly repairs. The Other Parties / Contractor shall make every effort to ensure that disturbance of Vodafone apparatus is no more than is absolutely necessary for the completion of the works in accordance with their contract.

5. Plant records

It is the responsibility of the Other Parties undertaking works which may affect Vodafone apparatus to obtain all relevant Vodafone plant records from our agent Atkins Global prior to works commencing. This may be done by contacting the Atkins Global Plant Enquiries Team listed in Appendix B.

Plant records for such enquiries will generally be provided within 10 working days of receipt and in compliance with the New Roads and Street Works Act 1991 [NRSWA] requirements. If Vodafone plant is affected, the response will contain reference to this document. Other Parties and Contractors are advised to refer to the National Joint Utilities Group [NJUG] 9 Document which outlines recommendations for the exchange of records of apparatus between utilities.

6. Definitions

The following definitions are applicable in this document:

- a) Apparatus means all electronic communications apparatus above surface, at the surface or sub-surface apparatus, Cable, Jointing Chamber and plant formerly being apparatus owned or used by the Code Operators Cable & Wireless UK, Energis Communications Limited, Thus Group Holdings Plc and Your Communications Limited including any associated cables or ducts owned, leased or rented by the said Code Operators now owned and used by the Code Operator Vodafone Limited ("Vodafone").
- b) Cable means any polythene or other sheath containing optical fibres or metallic conductors.
- c) **Depth of cover** means the depth from the surface to the topmost barrel of the duct nest, in the case of ducts encased in concrete, to the top of the concrete, and in the case of directly buried cable, the top of the cable.
- d) **Jointing chamber** means any manhole, surface box or other chamber giving access to Vodafone apparatus or their network.
- e) **Utility** means an organisation licensed to provide gas, water, electricity, Cable TV or telecommunications services.
- f) **Developer** means an organisation licensed to develop industrial/residential premises or given license to connect to utility apparatus.



- g) Contractor means the individual, firm or company contracted to undertake the work for a Utility or Other Parties.
- Other Parties means the Utilities, Highway Authorities, Developers, Street Authority (Roads Authority -Scotland).
- i) Site means the location of, or in the vicinity of, the various works.

7. Requirements

Prior to commencing any work or moving heavy plant or equipment over any portion of the site, the Other Parties or Contractor shall notify Vodafone of their intentions. This may be done by contacting Atkins Global, contact listed in Appendix B.

Upon receipt of this notification, Atkins Global will identify if Vodafone apparatus is affected. If any Vodafone apparatus is affected by the works then Atkins Global will provide necessary records and confirm details of Vodafone apparatus and network operated within the affected area or adjacent to the proposed work site.

7.1 Location of Plant

It is the responsibility of the Other Parties or Contractors to undertake adequate plant location procedures. These may include searches for metallic cables which must be performed by actively inducing a signal in a cable conductor via a transmitter. A passive search is not considered sufficient.

Before applying a tracing signal to the Vodafone apparatus, the Other Parties or Contractors shall seek confirmation from Atkins Global that the Vodafone apparatus will not suffer any disruption to its networks normal workings as a result of the nature of the signal being induced.

7.2 Trial excavations

Optic fibre cables are very susceptible to damage from excavation tools. They are not electrically conductive and cannot be located by radio induction methods. Once an approximate location is known, the exact location must be ascertained by means of hand dug pilot holes. Where the work to be carried out by the Other Party or Contractor involves excavation in the vicinity of our apparatus, the Other Party or Contractor shall, by trial excavation at his own expense, determine the exact location and depth of the Cable Wireless Worldwide apparatus. All excavations adjacent to the Vodafone apparatus are to be carried out by hand until the extent and /or location of the apparatus is known.

All excavation work shall be executed in accordance with the current issue of Health and Safety series booklet HSG47, Avoiding danger from underground services.

8. Depths of cover

The Other Party or Contractor should note that the minimum depths of cover for Vodafone apparatus shall be maintained together with specified separation requirements. Where the minimum depths of cover specified by Vodafone cannot be maintained, the Other Party or Contractor shall at their own expense, carry out the instructions of Vodafone requirements for the protection or diversion of their apparatus.

The Other Party or Contractor should have particular regard to the possibility of encountering Vodafone apparatus (including ducts and cables), at depths of cover other than that reported.

Surface cables (such as cables on bridges or walls) which are liable to be placed in danger from the Other Parties or Contractors works shall be protected, at the Other Parties expense, as directed by the Vodafone representative.

9. Separation

Reference should be made to HSG47 to ensure that adequate separation is achieved. The following details outline the specific requirements of Vodafone and capture the HSG47 requirements.



Fibre Services

Special Requirements relating to the External Plant Network of Vodafone

9.1 High voltage cables

High voltage single core cables of 1000 V and above shall have a minimum clearance from Company Apparatus of 500 mm.

High voltage multi-core cables of 1000 V and above shall have a minimum clearance from Company Apparatus of 350 mm

In exceptional circumstances where the above clearances cannot be maintained, the separating distance may be reduced to a minimum of 175 mm. In such circumstances, concrete, of a quality as directed by the Company Representative, must be inserted to completely fill the space between the High Voltage cable and the Company Apparatus, in accordance with the requirements of the Company Representative. Any further services must have a minimum clearance of 250 mm from the concrete.

9.2 Low voltage cables

Low voltage cables of less than 1000 V shall have a minimum clearance from Company Apparatus of 180 mm. In exceptional circumstances where the above clearance cannot be maintained, the separating distance may be reduced to a minimum of 75 mm. In such circumstances, concrete, of a quality as directed by the Company Representative, must be inserted to completely fill the space between the services, in accordance with the requirements of the Company Representative. Any further services must have a minimum clearance of 250 mm from the concrete.

9.3 Ancillary electrical apparatus

Lamp posts, traffic posts and other such ancillary electrical apparatus shall have a minimum clearance of 150 mm from underground Company Apparatus and 600mm clearance from above ground Company Apparatus.

9.4 High pressure gas mains and other Undertakers plant/equipment

High pressure gas mains shall have a minimum clearance of 450 mm from Company Apparatus. All other undertakers' plant and equipment, when running in parallel with Company Apparatus, shall have a minimum clearance of 200mm. Where gas mains cross Company Apparatus, the minimum clearance shall be 200mm. All other undertakers' plant and equipment, when running across Company Apparatus, shall have a minimum clearance of 100 mm.

9.5 Other Undertakers plant

Other undertakers' plant and equipment which runs in parallel with Company Apparatus shall have a minimum clearance of 200mm. All other undertakers' plant and equipment when running across Company Apparatus shall have a minimum clearance of 100mm.

9.6 Tramways

Each separating distance shall be individually agreed with the Company Representative.



10. Jointing chambers

10.1 Protection

Footway type jointing chambers are not designed to withstand carriageway loadings.

Where such chambers are liable to be placed at risk, either temporarily or permanently, from vehicular traffic or from the movement of plant and/or equipment, they will need to be adequately protected. Alternatively, they may have to be demolished and rebuilt to carriageway standards, at the Other Parties or Contractors expense under supervision of Vodafone representative.

All Vodafone jointing chambers and / or other access points shall be kept clear and unobstructed. Access for vehicles, winches, cable drums and / or any further equipment required by Vodafone for the maintenance of its apparatus, must be maintained at all reasonable times.

10.2 Access

The covers to Vodafone jointing chambers and / or apparatus shall only be lifted by means of the appropriate keys and under the direct supervision of a Cable& Wireless Worldwide representative. Other Parties or Contractors shall not enter any Vodafone jointing chamber and / or apparatus unless under the supervision of a Vodafone representative and in any case not before the mandatory gas test has been carried out in the presence of Vodafone representative and such checks have shown it to be safe to enter the Vodafone chamber and / or apparatus. The Other Parties or Contractors shall be given reasonable access to Vodafone apparatus and chambers when required.

11. Notification periods

Where the Other Parties or Contractors works or the movement of plant or equipment may endanger Vodafone apparatus, the Other Party or Contractor shall give the Vodafone agent Atkins Global [as indicated at Appendix B] **at** least 7 working days notice in writing of the intended date to commence operations.

No excavation should be made without first consulting the relevant Vodafone apparatus layout drawings, which will be made available from the Vodafone agent Atkins Global on request and allowing 28 working days for processing the relevant drawings. However, should this not be possible, direct contact should be made to the Atkins Global Bristol Plant Enquiries Team as soon as possible to assess the situation.

When excavating, moving or backfilling (including use of Foamed Concrete for Reinstatements – FCR) around Vodafone apparatus, Atkins Global (as agent for Vodafone) shall be given adequate prior written notice of the Other Parties or Contractors intentions, in order that the works may be adequately supervised. Such notice shall not be less than 3 working days.

12. Excavation and backfill

All excavations adjacent to Vodafone apparatus are to be carried out by hand until the extent and or location of the Vodafone apparatus is known.

Use of mechanical borers and / or excavators shall not be used without the supervisory presence of a Vodafone representative or a given exemption.

Shuttering of the excavation or support to Vodafone apparatus, at the Other Parties or Contractors expense, shall be used as directed by the Vodafone representative.

At least 7 working days notice must be given to Vodafone in order that any special protective measures which may be required to protect Vodafone apparatus, at the Other Parties or Contractors expense, when equipment such as pile driving, explosives, laser cutting high powered RF equipment or RF test gear, is to be used in conjunction with the works.

Other Parties or Contractors are advised to refer to the National Joint Utilities Group [NJUG] 4 Document which outlines the identification of small buried mains and services.



13. Foam concrete

If foam concrete is being used as the backfill material, it shall not be used either above or within 500 mm of any Company Apparatus. A suitable material in accordance with the specification for the Reinstatement of Openings in Highways shall be substituted.

14. Attendance of Company Representative

If a situation requires the attendance on site of a Vodafone representative for a continuous period of more than 6 hours, suitable facilities shall be provided by the Other Party or Contractor, at their expense, to meet the office and ablution requirements.

15. Damage reports

In the event of any damage whatsoever occurring to Vodafone apparatus, the Other Party or Contractor shall immediately inform Vodafone by contacting Julia Burgoyne, (for contact details please refer to Appendix B).

All relevant costs of any subsequent repair and / or removal of the Vodafone apparatus shall be charged to the Other Party or Contractor, irrespective of who affects the repair.

The above requirements do not relieve the Other Party or Contractor of any of their obligations under their contract.



Appendix A - office address details

Glasgow Office

Vodafone
Pavillion 1
1 - 2 Berkeley Square
99 Berkeley Street
Glasgow
G3 7HR

Bristol Office

Vodafone Unit 1, Tamar Road St Philips Bristol BS2 OTY

Manchester Office

Vodafone Unit M Atlas Business Park Wythenshawe Manchester M22 5RR



Appendix B – Street Works Team Contacts for Vodafone

Function	Name	Job Title	Address	Phone	Mobile	Fax	Email Address
Co-ordination	Sandra Semple	National Street Works Manager	Glasgow Office (see above)	0141 303 2857	07775 792133	0141 300 9611	sandra.semple@cw.com
Customer Complaints	СМС	Customer Management Centre	n/a	08456 021585	n/a	n/a	n/a
Liability Claims	Julia Burgoyne	Major Incident Resolution Coordinator	Bristol Office (see above)	01454 895114	07803 259857	n/a	julia.burgoyne@cw.com
Diversionary Works	Samantha Wilkinson	C3 Diversionary Works Project Controller	Manchester Office (see above)	0161 423 2740	n/a	n/a	samantha.wilkinson@cw.com
Emergencies (24 Hour)	СМС	Customer Management Centre	n/a	08456 021585	n/a	n/a	n/a
Plant Enquiries- Including Thus Plc, (formerly Scottish Telecom), Your Comms (formerly Norweb), Energis & Mercury Communications	Plant Enquiries Team	n/a	Atkins Global PO Box 290 500 Aztec West, Almondsbury, Bristol, BS32 4RZ	01454 662881	n/a	01454 663330	Osm.Enquiries@atkinsglobal.com



16. About this Document

Content Owner

Price, David J

Changes since last version

Reformatted using the current Vodafone template.

End of Document

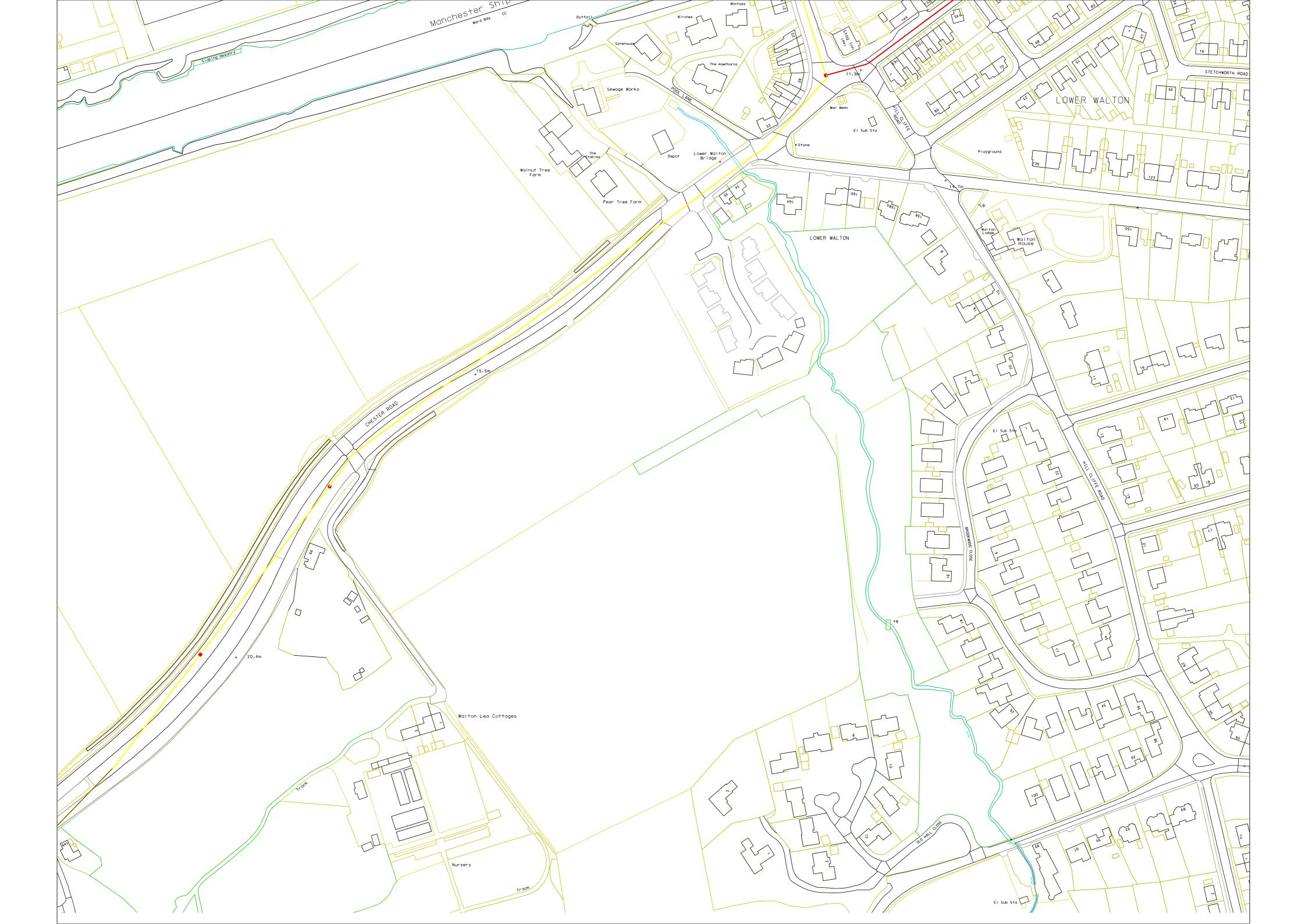
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C2 - Vodafone Restricted







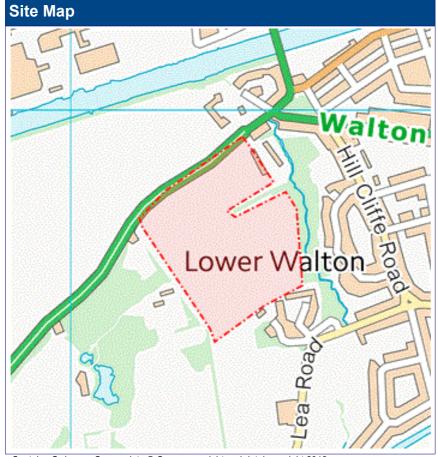
Enquiry Confirmation LSBUD Ref: 9023389

Date of enquiry: 02/09/2016 Time of enquiry: 12:27

Enquirer				
Name	Mr Simon Hilditch	Phone	0115 924 1100	
Company	BWB Consulting Limited	Mobile	Not Supplied	
		Fax	Not Supplied	
Address	Waterfront House Station Street			
	Nottingham Nottinghamshire NG2 3DQ			
Email	Utilities@bwbconsulting.com			
Notes	Please ensure your contact details are correct and up to date on the system in case the LSBUD Members need to contact you.			

Enquiry Details			
Scheme/Reference	LDT2162		
Enquiry type	Planned Works	Work category	Development Projects
Start date	05/07/2017	Work type	Housing
End date	23/10/2018	Site size	81910 metres square
Searched location	XY= 360313, 385732 Easting/Northing	Work type buffer*	25 metres
Confirmed location	360333 385695	•	

^{*} The WORK TYPE BUFFER is a distance added to your search area based on the Work type you have chosen



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Enquiry Confirmation LSBUD Ref: 9023389

Date of enquiry: 02/09/2016
Time of enquiry: 12:27

Asset Owners

Terms and Conditions. Please note that this enquiry is subject always to our standard terms and conditions available at www.linesearchbeforeudig.co.uk ("Terms of Use") and the disclaimer at the end of this document. Please note that in the event of any conflict or ambiguity between the terms of this Enquiry Confirmation and the Terms of Use, the Terms of Use shall take precedence.

Validity and search criteria. The results of this enquiry are based on the confirmed information you entered and are valid only as at the date of the enquiry. It is your responsibility to ensure that the Enquiry Details are correct, and LinesearchbeforeUdig accepts no responsibility for any errors or omissions in the Enquiry Details or any consequences thereof. LSBUD Members update their asset information on a regular basis so you are advised to consider this when undertaking any works. It is your responsibility to choose the period of time after which you need to resubmit any enquiry but the maximum time (after which your enquiry will no longer be dealt with by the LSBUD Helpdesk and LSBUD Members) is 28 days. If any details of the enquiry change, particularly including, but not limited to, the location of the work, then a further enquiry must be made.

Asset Owners & Responses. Please note the enquiry results include the following:

- 1. "LSBUD Members" who are asset owners who have registered their assets on the LSBUD service.
- 2. "Non LSBUD Members" are asset owners who have not registered their assets on the LSBUD service but LSBUD is aware of their existence. Please note that there could be other asset owners within your search area.

Below are three lists of asset owners:

- 1. LSBUD Members who have assets registered within your search area. ("Affected")
 - a. These LSBUD Members will either:
 - i. Ask for further information ("Email Additional Info" noted in status). The additional information includes: Site contact name and number, Location plan, Detailed plan (minimum scale 1:2500), Cross sectional drawings (if available), Work Specification.
 - ii. Respond directly to you ("Await Response"). In this response they may either send plans directly to you or ask for further information before being able to do so, particularly if any payments or authorisations are required.
- 2. LSBUD Members who do not have assets registered within your search area. ("Not Affected")
- 3. Non LSBUD Members who may have assets within your search area. Please note that this list is not exhaustive and all details are provided as a guide only. It is your responsibility to identify and consult with all asset owners before proceeding.

National Grid. Please note that the LSBUD service only contains information on National Grid's Gas above 2 bar asset and all National Grid Electricity Transmission asset. For National Grid Gas below 2 bar asset information please go to www.beforeyoudig.nationalgrid.com



Enquiry Confirmation LSBUD Ref: 9023389

Date of enquiry: 02/09/2016 Time of enquiry: 12:27

LSBUD Members who have assets registered on the LSBUD service within the vicinity of your search area.

List of affected LSBUD members

No LinesearchbeforeUdig Asset Owners within the Zone of Interest

LSBUD members who do not have assets registered on the LSBUD service within the vicinity of your search area. Please be aware that LSBUD members make regular changes to their assets.

	List of not affected LSBUD member	'S
AWE Pipeline	ESSAR	Perenco UK Limited (Purbeck Southampton Pipeline)
BOC Limited (A Member of the Linde Group)	Esso Petroleum Company Limited	Petroineos
BP Midstream Pipelines	FibreSpeed Limited	Phillips 66
вра	Fulcrum Pipelines Limited	Premier Transmission Ltd (SNIP)
Carrington Gas Pipeline	Gamma	Redundant Pipelines - LPDA
CATS Pipeline c/o Wood Group PSN	Humbly Grove Energy	RWEnpower (Little Barford and South Haven)
Cemex	IGas Energy	SABIC UK Petrochemicals
Centrica Energy	Ineos Enterprises Limited	Scottish Power Generation
Centrica Storage Ltd	INEOS Manufacturing (Scotland and TSEP)	Seabank Power Ltd
CLH Pipeline System Ltd	Lark Energy	Shell (St Fergus to Mossmorran)
ConocoPhillips (UK) Ltd	Lightsource SPV Limited	Shell Pipelines
Coryton Energy Co Ltd (Gas Pipeline)	Mainline Pipelines Limited	Total (Finaline, Colnbrook & Colwick Pipelines)
CSP Fibre c/o Centara	Manchester Jetline Limited	Transmission Capital
Dong Energy (UK) Ltd	Manx Cable Company	Uniper UK Ltd
E.ON UK CHP Limited	Marchwood Power Ltd (Gas Pipeline)	Vattenfall
EirGrid	National Grid Gas (above2 bar) and National Grid Electricity Transmission	Western Power Distribution
Electricity North West Limited	Northumbrian Water Group	Wingas Storage UK Ltd
ENI & Himor c/o Penspen Ltd	NPower CHP Pipelines	Zayo Group UK Ltd c/o JSM Group Ltd
ESP Utilities Group	Oikos Storage Limited	



Enquiry Confirmation LSBUD Ref: 9023389

Date of enquiry: 02/09/2016 Time of enquiry: 12:27

The following non-LSBUD members may have assets in your search area. It is YOUR RESPONSIBILITY to contact them before proceeding. Please be aware this list is not exhaustive and it is your responsibility to identify and contact all asset owners within your search area.

Non-LSBUD members (Asset owners not registered on LSBUD)				
Asset Owner	Preferred contact method	Phone	Status	
ВТ	https://www.swns.bt.com/pls/mbe/welcome.home	08009173993	Not Notified	
CityFibre	asset.team@cityfibre.com	033 3150 7282	Not Notified	
Colt	plantenquiries@catelecomuk.com	01227768427	Not Notified	
Energetics Electricity	plantenquiries@energetics-uk.com	01698404646	Not Notified	
ENGIE	nrswa@cofely-gdfsuez.com	01293 549944	Not Notified	
GTC	https://pe.gtc-uk.co.uk/PlantEnqMembership	01359240363	Not Notified	
Hibernia Networks	info@hibernianetworks.com	01704 322 300	Not Notified	
Instalcom	plantenquiries@instalcom.co.uk	02087314613	Not Notified	
Interoute	interoute.enquiries@plancast.co.uk	02070259000	Not Notified	
Mobile Broadband Network Limited	mbnl.plant.enquires@turntown.com	01212 621 100	Not Notified	
National Grid Gas Distribution (below 2 bar)	plantprotection@nationalgrid.com	0800688588	Not Notified	
Redcentric plc	plant-enquiries@redcentricplc.com	0845 200 2200	Not Notified	
Scottish Power (South)	requestforplansmanweb@sppowersystems.com	01516092373	Not Notified	
Sky UK Limited	nrswa@sky.uk	02070323234	Not Notified	
Tata, KPN (c/- McNicholas)	plantenquiries@mcnicholas.co.uk	03300558469	Not Notified	
United Utilities	property.searches@uuplc.co.uk	08707510101	Not Notified	
Utility assets Ltd	assetrecords@utilityassets.co.uk		Not Notified	
Verizon Business	osp-team@uk.verizonbusiness.com	01293611736	Not Notified	
Virgin Media	http://www.digdat.co.uk	08708883116	Not Notified	
Vodafone	osm.enquiries@atkinsglobal.com	01454662881	Not Notified	
Vtesse Networks	https://vtplant.vtesse.com	01992532100	Not Notified	

Disclaimer

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South Warrington Social and Community Infrastructure Analysis

A Draft Report by Hatch 3 November 2021

Ashall Property Ltd

South Warrington Social and Community Infrastructure Analysis

3 November 2021

www.hatch.co.uk

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1. Purpose of Note

- 1.1 Ashall Property Ltd is currently promoting a greenbelt site in Walton, close to Stockton Heath in Warrington for a new housing development of 187 homes (hereafter referred to as 'the development') including 75 homes in a retirement village.
- 1.2 As part of the greenbelt assessment they require evidence on the accessibility of key services from the site (including education, health and employment areas), and the potential impact of the development on the capacity of local education and health facilities.

Scope of assessment

- 1.3 The note focuses on the following facilities:
 - Primary schools within two mile walking distance of the site
 - Secondary schools within three miles walking distance
 - GP surgeries within three miles walking distance
- 1.4 Nursery provision (ages 3 and 4) has not been included in the assessment since a large proportion of this is provided by the private sector.
- 1.5 The distances have been informed by the statutory walking distance for different age groups (two miles for children between the age of five and eight and three miles for children between the age of eight and 16). Walking distance to facilities has been calculated based on the shortest pedestrian route in Google maps. As such, this reflects the existing pedestrian infrastructure and does not take in to account any planned improvements to footpaths etc.

Key assumptions

- 1.6 The development will deliver 187 dwellings. It is estimated that a fully occupied development will accommodate **352 people**, based on an average household size of 1.88 in Warrington in 2018.
- 1.7 The school age population has been estimated by applying Warrington Borough Council's assumptions about the number of children that will live in different sizes of dwelling (the child-yield)¹:
 - Primary school child yield: 0.30 pupils per family home (2 bed dwellings and above)
 - Secondary school child yield: 0.18 pupils per family home (2 bed dwellings and above)
- 1.8 Based on the proposed mix of housing it is expected that the development will generate demand for an additional **28 primary school places** and **17 secondary school places** (based on there being 92 dwellings with a minimum of two bedrooms).

HATCH

1

¹ This does not include the 75 dwellings proposed for the retirement village since it is assumed all residents will be of retirement age

Education Facilities 2.

Primary Schools

- 2.1 Warrington Borough Council does not define catchment areas for its primary schools. The 2017 Planning Obligations Supplementary Planning Document (SPD) states that the assessment of the supply and demand should consider all schools "within a reasonable distance of the proposed development" but does not define what represents a reasonable distance. We have therefore used the statutory walking distance for different age groups (2 miles in the case of primary school age children).
- 2.2 The map in Figure 2.1 shows there are 14 primary schools within a two-mile radius of the site. Only five of these are within a two-mile walking distance according to the best route in Google Maps. The closest schools to the site are Stockton Heath primary school and St Thomas' CofE school.

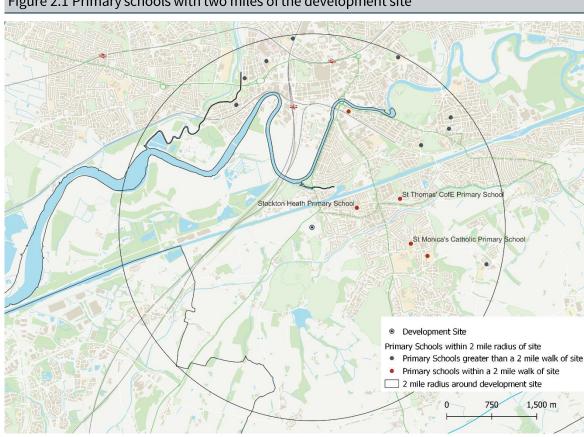


Figure 2.1 Primary schools with two miles of the development site

- 2.3 The table below shows the following information on all schools within a two-mile walking distance of the site:
 - The capacity of the primary school in 2018/19. This shows the number of primary school age children (reception through to year 6) that can be accommodated in each

- school. This is from a national Department for Education dataset but the capacity of each school is based on the local authority's judgement².
- The pupil roll in January 2020 according to the schools census including all pupils in reception to year 6. This is a national survey run by DfE which relies on data being provided by schools and local authorities and is the latest data available.
- **Spare places**, which is calculated by subtracting the pupil roll from the capacity of each primary school. A positive figure denotes a school as having some spare capacity.
- 2.4 It shows that these schools had 80 spare places in 2020, including 41 at the closest school. On this basis we conclude there is sufficient capacity to accommodate the increased demand for school places from the development.

Table 2.1 Capacity at schools within two mile walking distance of the site					
	Straight line distance (miles)	Walking distance (miles)	Capacity 2018/19	Pupil roll 2020	Spare Places
Stockton Heath PS	0.7	0.9	420	379	41
St Thomas' CofE PS	1	1.1	210	233	-23
St Monica's Catholic PS	0.9	1.3	210	186	24
Broomfields Junior School	1.1	1.6	360	348	12
Latchford St James CofE PS	1.5	2	210	184	26
Total			1,410	1,330	80

Source; DfE

Secondary Schools

- 2.5 The 2017 SPD states that the balance of supply and demand for secondary school places should be based on those schools "where the educational needs of any secondary pupils are likely to be met". This does not provide any clarity or guidance on how these schools should be identified. A separate guidance document titled 'Secondary Education First Admission to Year 7, Information for Parents, 2022/23' shows that Warrington Borough Council operates an application process in which parents express first, second and third preferences to decide on the allocation of school places. Where preferences cannot be met it notes that the Local Authority has a statutory duty to ensure that an alternative school is offered to children which is "within a reasonable distance (3 miles, walking distance) from (their) home address".
- 2.6 The map in Figure 2.2 shows there are five secondary schools within a three-mile radius of the site, of which three are within a two-mile walking distance (Bridgewater High School, Sir Thomas Boteler CofE school and Cardinal Newman Catholic High School).

² Data is not available for 2019/20 because the survey was cancelled due to the coronavirus pandemic. From a desk based review of each of the schools closest to the site we have not been able to identify any reason why the capacity might have changed in 2019/20.



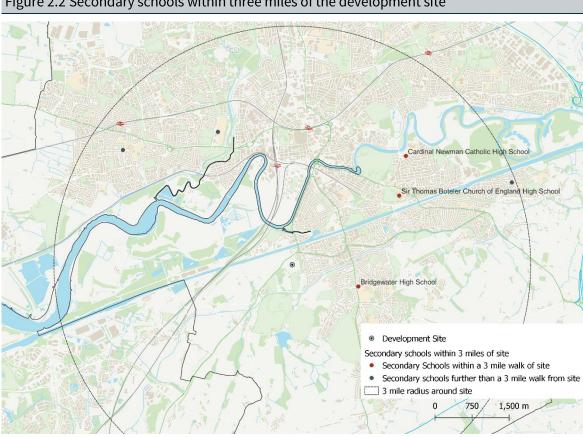


Figure 2.2 Secondary schools within three miles of the development site

Source DfE

2.7 Table 2.2 shows that two of these schools are oversubscribed but the other has 210 spare places. Cumulatively the two schools had 185 spare places as of 2020. On this basis we conclude that the secondary schools could accommodate the increased demand for 17 school places from the development.

Table 2.2 Capacity at secondary schools within three miles of the site					
	Straight line distance (miles)	Walking distance (miles)	Capacity 2018/19	Pupil roll 2020	Spare places
Bridgewater High School	0.9	1.5	1,522	1544	-22
Sir Thomas Boteler Church of England High School	1.67	2.2	825	615	210
Cardinal Newman Catholic High School	2.2	2.6	360	795	-3
Total			2,707	2,954	185

Source: dfE

3. General Practice Surgeries

3.1 There are seven GP surgeries within a two mile radius of the development site, only two of which are with a two mile walking distance (Stockton Heath Medical Centre and Causeway Medical Centre)

© Development Site

CAUSEWAY MEDICAL CENTRE

O Practice within a 2 mile valik of site

O GPs within a 2 mile valik of site

O GPs further than a 2 mile valik from site

1 2 mile radius around site

0 750 1,500 m

Source www.digital.nhs.uk

3.2 Table 3.1 shows there were 1,305 patients for every full time equivalent (FTE) GP in August 2021. This is above the ratio of 1,800 patients per FTE GP recommended by the Department of Health (DoH). If the development gave rise to an additional 352 patients this would increase the patient to FTE GP ratio to 1,323 which is still comfortably within the DoH benchmark. We therefore conclude there is adequate capacity in existing GP surgeries to meet demand from the development.

Table 3.1 Capacity at GP surgeries in August 2021 within two mile walking distance					
Name	Walking	Number	Number	Patients	
	distance	of	of FTE	per FTE	
	site	patients	GPs	GP	
Stockton Heath Medical Centre	1	16,318	13	1,255	
Causeway Medical Centre	1.7	8,475	6	1,413	
Total		24,793	19	1,305	

Source: www.digital.nhs.uk

4. Accessibility of Employment Areas

4.1 The development site is on the southern edge of Warrington and is therefore in a highly accessible position. Table 4.1 shows DfT's journey time statistics for the lower super outout area³ (LSOA) in which the development site is located. It shows that residents will be able to access a number of different employment areas by public transport or walking within 15 minutes. This includes Warrington town centre.

Table 4.1 Employment accessibility indicators for the development				
Accessibility indicator	Result for			
	Walton			
	LSOA			
Travel time in minutes to nearest employment centre with 100 to 499 jobs by public transport/walk	6			
Travel time in minutes to nearest employment centre with 500 to 4999 jobs by PT/walk	10			
Travel time in minutes to nearest employment centre with at least 5000 jobs by PT/walk	12			
Number of employment centres with at least 5000 jobs available by PT/walk within 15 minutes	4			
Number of employment centres with at least 5000 jobs available by PT/walk within 30 minutes	10			

Source: DfT

³ Lower super output areas are geographical units used for local data collection and analysis below the level of local authorities. LSOAs have an average population of around 1,500 people.



5. Summary of findings

- 5.1 Based on the current development profile for the development, we estimate the development will give rise to:
 - demand for 28 additional primary school places
 - demand for 17 additional secondary school places
 - an increase of 352 people on local GP patient registers
- 5.2 We conclude there is adequate capacity in local health and education facilities to accommodate this increased demand. This is based on the following:
 - The five primary schools within two mile walking distance have 80 spare places
 - The three secondary schools within three mile walking distance cumulatively have 185 spare places
 - The two GP surgeries within two miles of the site have around 1,305 registered patients per FTE GP. The increased demand from the development will increase this to 1,323 which is below the ratio advised by the Department of Health.
- 5.3 We also find that residents will be able to access a choice of large employment centres within 15 minutes using sustainable modes of transport.



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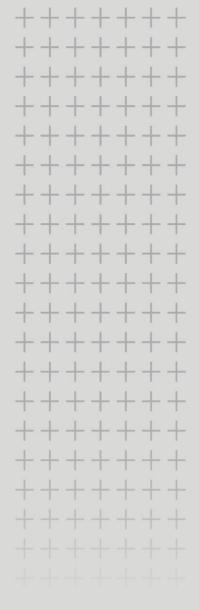
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SOILS AND AGRICULTURAL USE & QUALITY OF LAND SOUTH OF CHESTER ROAD WALTON, WARRINGTON

Report 1245/1

30th August, 2016



SOILS AND AGRICULTURAL USE & QUALITY OF LAND SOUTH OF CHESTER ROAD WALTON, WARRINGTON

M W Palmer, MSc, PhD, MISoilSci

Report 1245/1
Land Research Associates Ltd
Lockington Hall,
Lockington,
Derby
DE74 2RH

30th August, 2016

SUMMARY

A survey has been undertaken of 8.2 ha of land south of Chester Road, Walton, Warrington.

The land comprises two fields, in use for arable cropping at the time of survey.

The soils at the site were found to be sandy, with land quality limited to subgrade 3a by droughtiness and wetness over most of the site, with loamier soils in the south-west of grade 2 quality.

Were the site to be developed, the topsoils are a high quality resource for reuse in gardens and landscaping.

1.0 Introduction

1.1 This report provides information on the soils and agricultural quality and use of 8.2 ha of land south of Chester Road, Walton, Warrington. The report is based on a survey of the land in August 2016.

SITE ENVIRONMENT

1.2 The land investigated comprises two fields operated as a single unit. The land is bordered to the north by Chester Road, to the east by residential development and riparian woodland, to the south by residential development and adjoining agricultural land, and to the west by woodland. The land is level to very gently sloping, at an average elevation of approximately 20 m AOD.

AGRICULTURAL USE

1.3 The land was under a barley crop at the time of survey. It is not registered under any agri-environment schemes.

PUBLISHED INFORMATION

- 1.4 1:50,000 scale BGS information shows the geology of the site as sandstone of the Wilmslow Formation mainly overlain by wind-blown sand of the Shirdley Hill Sand Formation.
- 1.5 The national soil map (published at 1:250,000 scale) shows the land as Blackwood Association, comprising mainly sandy and coarse loamy soils formed in sand and gravel deposits¹.
- 1.6 Provisional Agricultural Land Classification of the site shows the land as grade 3. No detailed survey of the site has been published.

Land Research Associates

¹ Jarvis, R.A., 1984. *Soils and their use in Northern England*. Soil Survey of England and Wales Bulletin No. 10, Harpenden.

2.0 Soils

- 2.1 The National Planning Practice Guidance states that the planning system should protect and enhance valued soils and prevent the adverse effects of unacceptable levels of pollution. This is because soil is an essential finite resource that provides important ecosystem services, for example as a growing medium for food, timber and other crops, as a store for carbon and water, as a reservoir of biodiversity and as a buffer against pollution.
- A detailed soil resource and agricultural quality survey was carried out in August 2016. It was based on observations at intersects of a 100 m grid, giving a sampling density of one observation per hectare. During the survey, soils were examined by a combination of pits and augerings to a maximum depth of 1.1 m. A log of the sampling points and a map (Map 1) showing their location is in an appendix to this report.
- 2.3 Soils were found to comprise medium sandy loam or loamy sand topsoil, grading to medium sand at depth. Variation occurred from east to west, with soils in the east predominantly sandy throughout, and soils in the west mainly coarse loamy over sandy. An area in the north-west had finer textured slowly permeable subsoil at a depth of approximately 65-75 cm depth, causing waterlogging (evidenced by grey mottled colour) in the subsoil layers above.
- 2.4 An average profile is described below from observation 6 (Map 1).

0-26 cm Dark brown (7.5Y 3/2) loamy medium sand; very slightly stony (small hard quartz pebbles); weakly developed fine sub-angular blocky structure; very friable; clear smooth boundary to:
 26-51 cm Brown (7.5Y 5/8) loamy medium sand; stoneless; single grain; loose; diffuse

smooth boundary to:

Strong brown (7.5Y 5/8) medium sand; stoneless; single grain; loose.

2.5 The soils are mainly freely-draining (Soil Wetness Class I) and have a high capacity to absorb excess winter rainfall. In the north-west there are moderate drainage restrictions (Soil Wetness Class III).

51-110+ cm

3.0 Agricultural quality

- 3.1 To assist in assessing land quality, the Ministry of Agriculture, Fisheries and Food (MAFF) developed a method for classifying agricultural land by grade according to the extent to which physical or chemical characteristics impose long-term limitations on agricultural use for food production. The MAFF Agricultural Land Classification (ALC) system classifies land into five grades numbered 1 to 5, with grade 3 divided into two subgrades (3a and 3b). The system was devised and introduced in the 1960s and revised in 1988.
- 3.2 The agricultural climate is an important factor in assessing the agricultural quality of land and has been calculated using the Climatological Data for Agricultural Land Classification². The relevant site data for an average elevation of 20 m is given below.

• Average annual rainfall: 801 mm

January-June accumulated temperature >0°C
 1432 day°

• Field capacity period 190 days

(when the soils are fully replete with water) mid Oct – late Apr

• Summer moisture deficits for: wheat: 92 mm

potatoes: 80 mm

3.3 The survey described in the previous section was used in conjunction with the agro-climatic data above to classify the site using the revised guidelines for Agricultural Land Classification issued in 1988 by the Ministry of Agriculture, Fisheries and Food³. There are no climatic limitations to land quality in this locality.

SURVEY RESULTS

The agricultural quality of the land is limited by droughtiness and soil wetness. Land of grades 2 and 3 has been identified.

Grade 2

3.5 This land is found in the south-west of the site. The soils in this area are mainly coarse loamy with sandy lower layers. Under the local climate this results in

² Climatological Data for Agricultural Land Classification. Meteorological Office, 1989

³ Agricultural Land Classification for England and Wales: Guidelines and Criteria for Grading the Quality of Agricultural Land. MAFF, 1988.

slight droughtiness which will affect yields in very dry summers, but the land is capable of supporting good yields of a wind range of crops.

Subgrade 3a

- 3.6 The soils in the east have sandy subsoils and limited moisture reserves. This results in moderate droughtiness which is likely to affect yields of cereals in most years.
- 3.7 The soils in the north have slowly permeable lower subsoil resulting in impeded drainage. Under the moist local climate this results in wetness limitations which are likely to affect flexibility of cropping in winter and early spring.

Non Agricultural

3.8 This comprises a wooded area in the east.

Grade areas

3.9 The boundaries between the different grades of land are shown on Map 2 and the areas occupied by each are shown below.

Table 1. Areas occupied by the different land grades

Grade/subgrade	Area (ha)	% of the land
Grade 2	2.5	30
Subgrade 3a	5.0	61
Non Agricultural	0.7	9
Total	8.2	100

4.0 Soil resources and their use

4.1. As part of the Government's 'Safeguarding our Soils' Strategy, Defra published a code of practice on the sustainable use of soils on construction sites, which can be helpful in design of developments and setting planning conditions. An Environment Agency strategy Soil a Precious Resource: Our strategy for protecting, managing and restoring soil (Environment Agency, 2007) has complementary aims.

Topsoil

4.2. Were the site to be developed, the topsoils represent a high quality resource for reuse in landscaping and gardens. Care should be taken to strip to correct depth in order to avoid diluting with sandy subsoil.

Subsoil

4.3. The upper subsoils at the site are freely-draining. Compaction during construction activities could result in restricted rooting depth, increased droughtiness and risk of localised flooding. If compacted during construction, subsoils should be loosened before any topsoil is spread on them.

Soil Handling

- 4.4. Areas not being built over (e.g. environmental buffers and landscape areas) should not be trafficked by construction vehicles as this will render the soils impermeable, preventing percolation of rainfall beyond the base of the topsoil, which will quickly become saturated.
- 4.5. Stripped topsoil should be stored in separate resource bunds no more than 3 m high, and kept grassed and free from construction traffic until required for re-use. The Construction Code of Practice for Sustainable Use of Soils on Construction Sites (Defra 2009) provides guidance on good practice in soil handling.

APPENDIX

MAPS AND DETAILS OF OBSERVATIONS

Land at Walton: ALC and soil resources survey - Details of observations at each sampling point

Obs	Topsoil	Upper subsoil			Lower subsoil			Slope	pe Wetness Agricultural quali		ural quality		
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
1	0-28	LMS	<5	28-90+	MS(r)	0	(0)			3	I	3a	D
2	0-25	MSL	<5	25-50	LMS	XX	50-63 <u>63</u> -100+	MSL SCL	XXX	2	III	3a	W
3	0-26	MSL	<5	26-62	LMS	0	62-74 <u>74</u> -110+	MS HCL/SCL	xx xxx	1	III	3a	W
4	0-25	MSL	<5	25-51	LMS	0	51-110+	MS	0	1	I	2/3a	D
5	0-26	MSL	<5	26-61	LMS	XXX	61-100+	MS	XXX	1	I	2	D
6	0-27	LMS	<5	27-53	LMS	0	53-100+	MS	0	1	I	3a	D
7	0-30	MSL	<5	30-110+	MS	0				2	I	3a	D
8	0-25	MSL	<5	25-78	LMS	0	78-100+	MS(r)	0	1	I	2	D

Key to table

Mottle intensity:

o unmottled

x few to common rusty root mottles (topsoils) or a few ochreous mottles (subsoils)

xx common to many ochreous mottles and/or dull structure faces

xxx common to many greyish or pale mottles (gleyed horizon)

xxxx dominantly grey, often with some ochreous mottles (gleyed horizon)

a depth underlined (e.g. <u>50</u>) indicates the top of a slowly permeable layer (a wavy underline indicates the top of a layer borderline to slowly permeable)

Texture:

C - clay ZC - silty clay SC - sandy clay

CL - clay loam (H-heavy, M-medium)

ZCL - silty clay loam (H-heavy, M-medium)

SCL - sandy clay loam

SZL - sandy silt loam (F-fine, M-medium, C-coarse)

SL - sandy loam (F-fine, M-medium, C-coarse) LS - loamy sand (F-fine, M-medium, C-coarse)

S - sand (F-fine, M-medium, C-coarse)

P - peat (H-humified, SF-semi-fibrous, F-fibrous)

LP - loamy peat; PL - peaty loam

R - bedrock

Limitations:

W - wetness/workability

D - droughtiness

De - depth

St – stoniness

SI – slope

F - flooding

T - topography/microrelief

Texture suffixes & prefixes:

ca - calcareous: x-extremely, v-very, sl-slightly

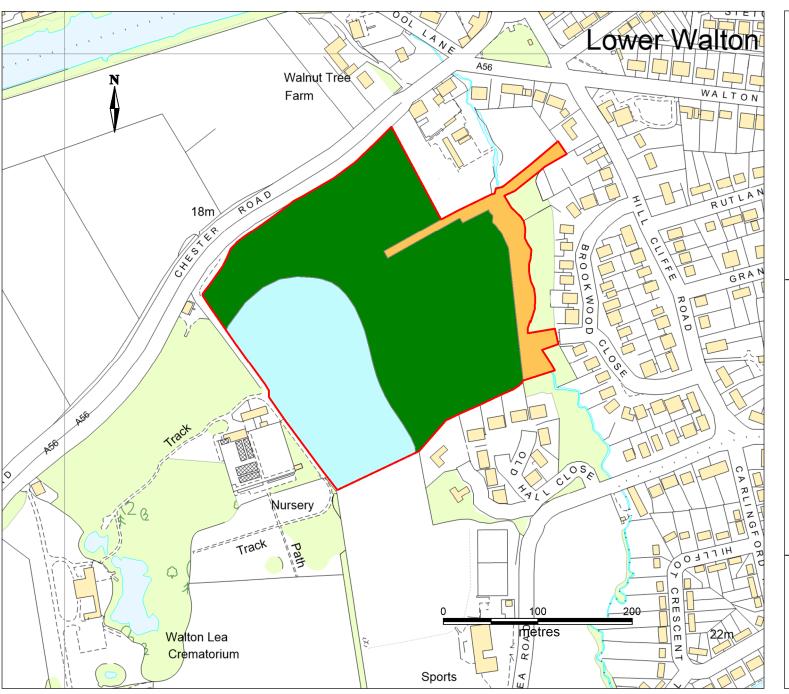
(ca) marginally calcareous

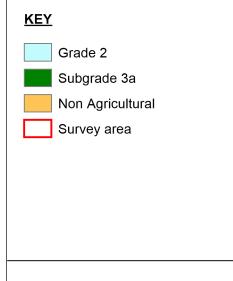
mn - ferrimanganiferous concentrations

gn – greenish, yb – yellowish brown, rb – reddish brown

r – reddish; (v)st – (very) stony; sdst – sandstone lst - limestone

dist - disturbed soil layer; mdst - mudstone





Client:



Site:

Land south of Chester Road, Walton

Map title:

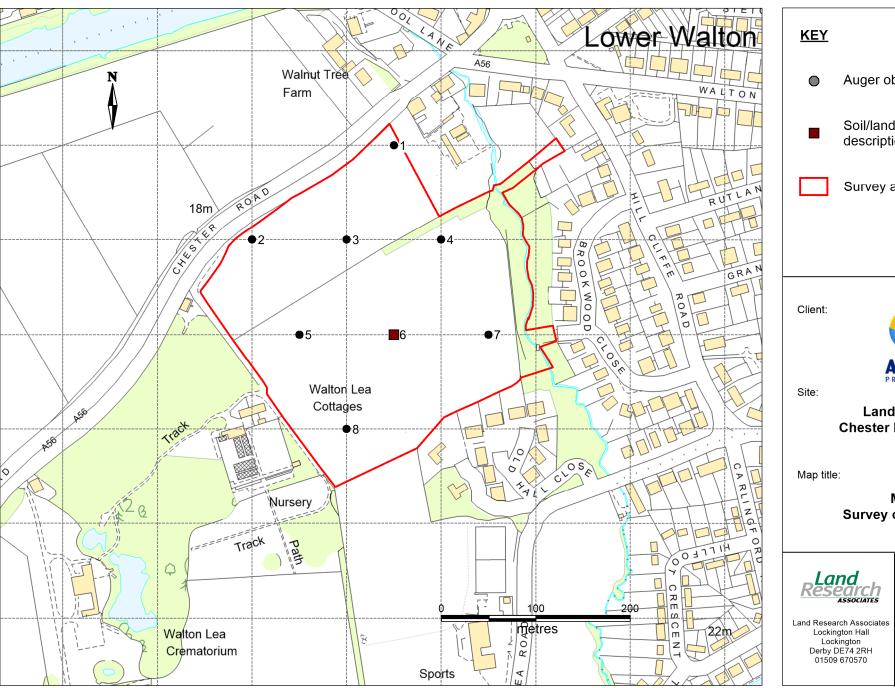
Map 2 Agricultural Land Classification



Scale: 1:4,000

Land Research Associates Lockington Hall Lockington Derby DE74 2RH 01509 670570

Date: 30/08/2016



- Auger observation
- Soil/land grade description point
- Survey area



Land south of **Chester Road, Walton**

Map 1 **Survey observations**

Scale: 1:4,000

Date: 30/08/2016



Land South of Chester Road, Walton, Warrington Viability Statement



INTRODUCTION

This statement outlines the overall viability and deliverability of a site located to the south of Chester Road in Walton, Warrington. It is produced in support of representations to the Warrington Updated Proposed Submission Version Local Plan made on behalf of the site owners Ashall Property Limited.

Given that the subject site is in a single ownership this statement concentrates on the financial viability of the proposal and in particular examines whether the site is considered deliverable.

The statement considers the following matters

- a) The Site
- b) The Scheme
- c) Site Infrastructure Requirements
- d) Ownership
- e) Financial Viability

THE SITE

The subject site totals 5.8 hectares (14.3 acres) and comprises existing previously undeveloped land situated immediately to the south of the A56 close to where it crosses the Manchester Ship Canal immediately to the west of Walton. A plan outlining the extent of the subject site (and showing the proposed route of the new Western Link Road) is reproduced at Fig.1.



Fig 1: Site Boundary



Broadly regular in shape the site is level and generally flat.

The site is bounded to the east with existing housing, to the north by agricultural land in the ownership of Ashall Property Limited leading onto the A56, to the south by sports pitches and housing and to the west by woodland and a supported learning centre.

THE SCHEME

A residential focussed scheme for the site is proposed offering a range of types of accommodation to meet the identified local need. The site is situated in a strong market location.



Fig 2: Indicative Masterplan

The outline scheme, a plan of which is reproduced at Fig.2 and at Appendix 1, is detailed in Table 1 and comprises the following components

- C2 Care Village Apartments with supporting facilities (both for open market sale and affordable housing)
- Self Build Plots
- Houses (both for open market sale and affordable housing)

A total of 50% of the houses and 30% of the C2 Care Village apartments are proposed as affordable housing and in line with policy the tenure is split 65% Affordable Rent and 35% Shared Ownership.



Element	Unit Type	No. Units
C2 Care Village – Open Market	1B2P (592 sq.ft)	78
	2B3P (807 sq.ft)	19
	Sub-total	97
C2 Care Village – Affordable Housing	1B2P (592 sq.ft)	26
	2B3P (807 sq.ft)	16
	Sub-total	42
Houses - Open Market	Self-build Plots (4/5 bed)	8
	Sub-total	8
	3 Bed Semi-detached (904 sq.ft)	4
	4 Bed Semi-detached (1,140 sq.ft)	8
	4 Bed Detached (1,329 sq.ft)	21
	5 Bed Detached (1,657 sq.ft)	4
	Sub-total	37
Houses – Affordable	3 Bed Semi-detached (904	38
Housing	sq.ft)	
	Sub-total	38
Total		222 units

Table 1: Scheme Accommodation

A layout plan illustrating the component parts is reproduced at Appendix I. This illustrates two main access points for the scheme: the first, onto public highway along the eastern boundary of the site onto Brookwood Close; the second, to the north to connect with the new proposed Western Link Road (or alternatively to the existing A56).

The access onto Brookwood Close is intended to service the C2 Care Village with the remainder of the development being predominantly serviced off the new access off the existing A56/new Link Road.

This scheme delivers 9.64 net developable acres.

SITE INFRASTRUCTURE REQUIREMENTS

The site can be delivered with minimal site infrastructure requirements over and above that required for a typical housing site. The main considerations are:

- a) Access
- b) Drainage
- c) Remediation
- d) Utilities

These matters are addressed further below.



OWNERSHIP

The site is in the freehold ownership of Ashall Property Limited and no additional third party ownerships are required to access the site either from the existing public highway or from any new proposed access point from the existing A56/ new Link road.

Land in the ownership of Ashall Property Limited is required to deliver the proposed alignment of the link road to the north of the site.

FINANCIAL VIABILITY

We have undertaken a residual appraisal of the site to demonstrate the site's ability to come forward in current and likely future market conditions. This appraisal utilises site specific information where available and market norms in terms of base costs, finance rates and profit levels.

The appraisal comprises the following:

Gross Development Value

This is an estimate of the end value of the completed scheme based on today's market conditions.

Costs of Development

The costs of delivering the scheme to include:

- Land value
- Base construction costs
- Abnormal costs
- Structural Infrastructure
- Fees and other on-costs
- Sales and marketing costs
- Section 106 Costs
- Finance costs
- Profit

Phasing/Timing

The way in which the site is brought forward and the timing of the development and realisation of value.



Gross Development Value

The following values have been adopted for the individual elements:

Element	Average Values Adopted	Resultant Open Market Unit		
		Value		
C2 Care Village	£385 per sq.ft	£231,000 - £303,000		
Self Build Plots (4 Bed and 5	£175,000 - £225,000 per plot	£175,000 - £225,000		
Bed)				
Houses	£315 per sq.ft	£296,000 - £475,000		

Table 2: Value Assumptions

In respect of the affordable housing elements which equate to 50% of the houses and 30% of the C2 Care Village units an appropriate discount has been applied to the open market value in the following amounts:

Affordable Rent 45% discount

Shared Ownership 30% discount

Overall a Gross Development Value of £52,947,246 has been determined for the subject scheme.

Costs of Development

Land Value

A land value based on a multiplier of the site's existing use value has been adopted. The existing use value of £10,000 per acre has been multiplied by 25x to result on the basis of 9.64 acres in a land value of £2,410,000.

Base Construction Costs

Costs relating to the construction the C2 Care Village accommodation and facilities and the market/affordable housing have been based on data published by BCIS (rebased to Cheshire).

Care Homes £1,509 psm (£140.18 psf) (Lower Quartile)

Houses £1,139 psm (£105.81 psf) (Lower Quartile)

To this base rate which covers the base construction cost plus preliminaries is added external works at a rate of 15% which includes connection to all mains services (electricity, gas and water) gardens, driveways, internal roads, street lighting, general estate landscaping.

The additional cost of detached garages associated with the housing have been applied as follows:

18no. single detached garages £7,000

19no. double detached garages £15,000



Abnormal Costs

We are not aware of any intrusive ground investigation having been undertaken to establish grounds conditions and likely abnormal works. Based on our experience of greenfield sites such as this we have assumed an abnormal costs of £210,000 per net acre. This will cover any abnormal foundation requirements, cut and fill, abnormal service connections / diversions, drainage, attenuation etc. that are anticipated for this particular site.

Within this figure is included an allowance for the landscaping of land outside of the red line boundary, but in common ownership, that will lie between the site and the route of the Western Link Road.

In addition costs relating to Part L (energy measures) have been applied at a rate of £6,500 per unit.

Contingency

We have adopted a 3% contingency which we consider to be appropriate for a scheme of this nature using benchmark data as the base source of construction cost. This is applied only to base build costs and externals works.

Professional Fees

An allowance of 6% has been adopted across the different elements.

Sales and Marketing Costs

A rate of 3.5% of GDV has been adopted which covers both marketing and sales agent and legal costs for the open market sales units.

Section 106 Costs

An allowance of £6,000 per unit has been adopted to cover off planning obligations in addition to affordable housing.

Finance Costs

The cost of finance has been applied at a rate of 7%.

Profit

In this case an overall profit level of 20% has been adopted.

Phasing and Timing

The phasing and timing of the delivery of this scheme will depend on two main factors:

- Securing access to the site
- Market demand/take-up

It is proposed that the C2 Care Village is accessed via Brookwood Close which lies directly to the east of the site. This access links directly to the public highway requiring no third party land.



The remainder of the scheme will be accessed via a new link to the existing A56 or the proposed Western Link Road to the north. Again no third party land is required to secure this access.

The scheme has the potential to be delivered within 3 years given current rates of take-up in the market.

Results of the Appraisal

A copy of the financial appraisal is attached at Appendix II. Based on the inputs outlined above the financial appraisal of the site demonstrates a return which is above the benchmark profit of 20%.

Overall Conclusions

In conclusion this statement demonstrates that the subject site is deliverable in terms of:

- Ownership the site is in the ownership of a pro-development single party
- Financial Viability the site is located in a strong market location and the nature of the site is such that the anticipated development costs do not render the site unviable or reduce the anticipated site value to a level that would compromise its development.

Appendix I



Appendix II

Land to South A56 Walton Viability Appraisal

Development Pro Forma Prepared by TDC ARGUS Software November 13, 2021

PROJECT PRO FORMA

ARGUS SOFTWARE

Land to South A56 Walton Viability Appraisal

Project Pro Forma for Merged Phases 123

Currency in £

REVENUE

Sales Valuation	Units	ft ²	Sales Rate ft ²	Unit Price	Gross Sales	Adjustment	Net Sales
3B Semi-detached OMS (904 sq.ft)	4	3,616	328.00	296,512	1,186,048	0	1,186,048
3B Semi-detached AR (904 sq.ft)	25	22,600	328.00	296,512	7,412,800	(3,335,760)	4,077,040
3B Semi-detached SO (904 sq.ft)	13	11,752	328.00	296,512	3,854,656	(1,156,397)	2,698,259
4B Semi-detached OMS (1,108 sq.ft)	8	8,864	303.00	335,724	2,685,792	0	2,685,792
4B Detached OMS (1,329 sq.ft)	21	27,909	307.00	408,003	8,568,063	0	8,568,063
5B Detached OMS (1,657 sq.ft)	4	6,628	287.00	475,559	1,902,236	0	1,902,236
Care Village - 1B Apartments OMS (592 sq.ft)	78	46,176	390.00	230,880	18,008,640	0	18,008,640
Care Village - 1B Apartments AR (592 sq.ft)	17	10,057	390.00	230,724	3,922,308	(1,765,039)	2,157,269
Care Village - 1B Apartments SO (592 sq.ft)	9	5,324	390.00	230,724	2,076,516	(622,955)	1,453,561
Care Village - 2B Apartments OMS (807 sq.ft)	19	15,333	375.00	302,625	5,749,875	0	5,749,875
Care Village - 2B Apartments AR (807 sq.ft)	10	8,070	375.00	302,625	3,026,250	(1,361,813)	1,664,438
Care Village - 2B Apartments SO (807 sq.ft)	6	4,842	375.00	302,625	1,815,750	(544,725)	1,271,025
4B Self Build Plots (1,140 sq.ft)	5	0	0.00	175,000	875,000	0	875,000
4B Self Build Plots (1,427 sq.ft)	1	0	0.00	200,000	200,000	0	200,000
5B Self Build Plots (1,818 sq.ft)	<u>2</u>	<u>0</u>	0.00	225,000	450,000	<u>0</u>	450,000
Totals	$22\overline{2}$	$171,17\overline{2}$			61,733,934	(8,786,688)	52,947,246

TOTAL PROJECT REVENUE

DEVELOPMENT COSTS

ACQUISITION COSTS

Fixed Price 10 ac 250,000 /ac 2,410,000 Fixed Price (14.30 Acres @ 168,531.47 /Acre) 250,000 /ac 2,410,000

2,410,000

52,947,246

Project: \Client\C\$\Users\TimCl\OneDrive\Documents\TCP Limited\Lane End Construction Limited\Walton\DRAFT Walton Appraisal v5 FULL AH.wcfx ARGUS Developer Version: 8.30.000

Date: 11/13/2021

PROJECT PRO FORMA					ARGUS SOFTWARE
Land to South A56 Walton					
Viability Appraisal					
Agent Fee		1.00%	24,100		
Legal Fee		0.80%	19,280		
Town Planning			200,000		
Survey			50,000		
				293,380	
CONSTRUCTION COSTS					
Construction	Units	Unit Amount	Cost		
Double External Garages	19 un	15,000	285,000		
Single External Garages	<u>18 un</u>	7,000	126,000		
Totals			411,000		
	ft ²	Build Rate ft ²	Cost		
3B Semi-detached OMS (904 sq.ft)	3,616	105.81	382,609		
3B Semi-detached AR (904 sq.ft)	22,600	105.81	2,391,306		
3B Semi-detached SO (904 sq.ft)	11,752	105.81	1,243,479		
4B Semi-detached OMS (1,108 sq.ft)	8,864	105.81	937,900		
4B Detached OMS (1,329 sq.ft)	27,909	105.81	2,953,051		
5B Detached OMS (1,657 sq.ft)	6,628	105.81	701,309		
Care Village - 1B Apartments OMS (592 sq.ft)	54,325	140.18	7,615,237		
Care Village - 1B Apartments AR (592 sq.ft)	11,832	140.18	1,658,610		
Care Village - 1B Apartments SO (592 sq.ft)	6,264	140.18	878,088		
Care Village - 2B Apartments OMS (807 sq.ft)	18,039	140.18	2,528,682		
Care Village - 2B Apartments AR (807 sq.ft)	9,490	140.18	1,330,308		
Care Village - 2B Apartments SO (807 sq.ft)	5,694	140.18	798,185		
Care Village - Gnd Floor Ancillary (14,288 sq.ft)	14,288	140.18	2,002,892		
Totals	201,301 ft ²		25,421,656		
Contingency		3.00%	889,377		
				26,722,033	
Other Construction Costs					
Abnormals	10 ac	210,000 /ac	2,024,400		
Residential Externals		15.00%	1,291,448		
Part L Costs	75 un	6,500.00 /un	487,500		

Project: \Client\C\$\Users\TimCl\OneDrive\Documents\TCP Limited\Lane End Construction Limited\Walton\DRAFT Walton Appraisal v5 FULL AH.wcfx ARGUS Developer Version: 8.30.000

Date: 11/13/2021

PROJECT PRO FORMA					
Land to South A56 Walton					
Viability Appraisal					
Care Village Externals		15.00%	2,521,800		
Part L Costs	139 un	6,500.00 /un	903,500	5.00 0 540	
Municipal Costs				7,228,648	
Municipal Costs Housing S.106 Costs	75 un	6,000.00 /un	450,000		
Care Village S.106 Costs	123 un	6,000.00 /un	738,000		
Care vinage 5.100 Costs	123 un	0,000.00 /uii	738,000	1,188,000	
				1,100,000	
PROFESSIONAL FEES					
Housing Fees		6.00%	666,538		
Care Village Fees		6.00%	1,249,039		
				1,915,577	
MARKETING & LEASING					
Marketing		3.50%	1,333,523		
				1,333,523	
TOTAL COSTS BEFORE FINANCE				41,091,161	
TOTAL COSTS BEFORE THANKEE				41,071,101	
FINANCE					
Debit Rate 7.00%, Credit Rate 0.00% (Nominal)					
Total Finance Cost				1,045,885	
TOTAL COSTS				42,137,046	
PROFIT					
				10,810,200	
Performance Measures		0.00			
Profit on Cost%		25.65%			
Profit on GDV%		20.42%			
Profit on NDV%		20.42%			

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Date: 11/13/2021

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PROJECT PRO FORMA

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Land to South A56 Walton Viability Appraisal IRR% (without Interest)

47.00%