

Environmental Statement: Volume 2 - Main Text

For Wain Estates (Land) Limited | 23-657

Outline application for up to 275 dwellings and associated open space and infrastructure - Land off Church Street/Scobell Street, Walshaw, Bury

Project: 23-657
Site Address: Land off Church Street/Scobell Street, Walshaw, Bury
Client: Wain Estates (Land) Limited
Date: February 2025
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1. Introduction

- 1.1 This Environmental Statement (ES) has been prepared on behalf of Wain Estates (Land) Ltd (hereafter referred to as the Applicant) to accompany an outline planning application for residential development up to 275 dwellings and associated open space and Infrastructure. Emery Planning and the consultant team of appropriately qualified and competent professionals have been commissioned by the Applicant to carry out an Environmental Impact Assessment (EIA) for the Proposed Development based on the above quantum of built form.
- 1.2 The application is submitted to Bury Council and all detailed matters, save for access, are reserved for future consideration. The proposals are described in more detail in **Chapter 4** of this ES and in the Design and Access Statement prepared by FPCR Environmental and Design and accompanying the application.
- 1.3 The ES considers whether there is likely to be significant environmental effects during the construction and operation of the development and proposes methods of mitigating any Adverse effects which are likely to arise.
- 1.4 The planning application can be viewed on the website of Bury Council.

Legal Framework for the ES

- 1.5 All developments which fall within Schedule 1 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations 2017') requires an Environmental Impact Assessment (EIA). Development identified in Column 1 of the Table in Schedule 2 of the Regulations, which is either to be carried out in a sensitive area or satisfies a threshold or criterion in Column 2 of the Table (Schedule 2 development), requires EIA if it is likely to have significant effects on the environment. Development that requires EIA is referred to as EIA development.
- 1.6 The development subject to this EIA falls within Schedule 2, 10(a) of the EIA Regulations 2017 as 'Infrastructure Projects' development, constituting '*Urban development projects ...*'. The applicable threshold and criteria in respect of dwellinghouse projects is where the development exceeds 150 dwellings. It is at the discretion of the local planning authority as to whether the Proposed Development is considered EIA development and an ES is required to be submitted in support of the planning application.
- 1.7 For the purposes of this ES Schedule 3 of the EIA Regulations 2017 sets out the criteria that should be considered in determining whether a Schedule 2 development requires an EIA. These criteria are:
 - the characteristics of the development (e.g. its size, use of natural resources, quantities of pollution waste generated);
 - the environmental sensitivity of the location; and
 - the types and characteristics of the potential impact and likely significant effects (e.g. its extent, magnitude, probability and duration).
- 1.8 The Site is located to the south of Scobell Road and extends to 11.3 hectares forming the northern part of the housing allocation JPA9 in the recently adopted Places for Everyone (PfE, 2024). The site location is shown in the context of the wider allocation in Figure 1.1 below.



Figure 1.1: Application Site in the context of the wider Walshaw Masterplan Area



- 1.9 An EIA Screening Request was sent to the Local Planning Authority (LPA) in July 2024 and a Screening Opinion was provided in August 2024. The Screening Opinion suggested that the ES for this Site needed to include the entirety of the allocation. The applicant team, including leading Kings Counsel, Jonathan Easton KC, disagreed with this conclusion and formally requested the LPA reconsider their Screening Opinion. No formal response has been received to this request, however the LPA, having taken their own legal advice, have advised that the ES must consider the cumulative effects associated with the delivery of the whole of the allocation. Copies of the Screening Request, Screening Opinion and Emery Planning's request for the Opinion to be reconsidered are provided within Volume 3 of this ES at **Volume 3: Technical Appendix 1.1, 1.2 and 1.3.**
- 1.10 Prior to completion of the ES the Applicant team also sought pre-application advice from the LPA and a number of meetings were held to discuss the project (LPA ref: 03003E). Copies of the pre-application request and advice are provided within Volume 3 of this ES at **Volume 3: Technical Appendix 1.4 and 1.5.**
- 1.11 In light of the above an EIA has been undertaken centered upon the application Site, but with appropriate due regard to the potential cumulative impacts of development on the wider allocation. This ES provides a robust assessment of the likely 'significant environmental impact' for the purposes of the EIA Regulations 2017.

- 1.12 This ES has been prepared in accordance with the EIA Regulations 2017 and the guidance provided in the National Planning Policy Guidance (ID04). An overview of the methodology adopted for each technical study is provided in the respective Chapters of this ES.
- 1.13 The consultant team, made up of suitably qualified competent experts, is familiar with the issues which relate to the Site and the pre-application advice provided by the LPA. Should the Local Authority require any additional information to that contained within the ES this can be required in accordance with the provisions of Regulation 25 of the Act.

Structure of the ES

- 1.14 The ES is divided into three volumes and the contents outlined below:

Volume 1: Non-Technical Summary – A document providing a synopsis of the ES without utilising technical language. The summary includes a description of the development, the potential environmental effects associated with the development and the measures proposed to mitigate these effects.

Volume 2: Environmental Statement Main Text - This Volume contains the main body of text of the ES, split into Chapters and illustrated with a series of Figures. It provides an introduction, the approach to assessment, the assessment of alternatives, a description of the Proposed Development, a review of relevant planning policy, a series of technical assessments relating to specific environmental topics including cumulative and combined effects and a summary of residual effects.

Volume 3: Technical Appendices – This Volume contains supporting information and a collection of technical reports upon which the conclusions of the ES are based.

- 1.15 **Table 1.1** below shows the information which is required to be provided in an ES by Schedule 4 of the EIA Regulations and where this information is located in this ES.

Table 1.1: Environmental Statement Required Information Schedule

Required Information		Location Within This ES
1.	Description of the development, including in particular: (a) Description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases. (b) Description of the main characteristics of the production processes, for instance, nature and quantity of materials used. (c) An estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed development.	Volume 2: Chapter 4 Technical Chapters Technical Chapters Technical Chapters
2.	An outline of the main alternative sites considered and an indication of the main reasons for this choice.	Volume 2: Chapter 5
3.	A description of the aspects of the environment likely to be significantly affected by the development, including in particular, population, fauna, flora, soil, water, air, climate factors, material assets including the	Volume 2: Technical Chapters



Required Information		Location Within This ES
	architectural and archaeological heritage, landscape and inter-relationship between the above factors.	
4.	A description of the likely significant effects of the development on the environment which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development resulting from: (a) the existence of the development. (b) The use of natural resources. (c) The emissions of pollutants, the creation of nuisances and the elimination of waste.	Volume 2: Summary Chapter 16
5.	A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.	Volume 2: Technical Chapters
6.	A Non-Technical Summary of the information provided.	Volume 1

The EIA Team

- 1.16 A consultant team of appropriately qualified and competent professionals has been assembled to prepare this Environmental Statement. Each consultants' responsibilities are as follows:

Table 1.2: Consultant Team

Team Member	Role
Wain Estates Ltd	Applicant
Emery Planning	Co-ordination, editing and preparation of the ES; Introductory ES Chapters; Consideration of alternative sites/development options; Summary and Conclusions; Non-Technical Summary
FPCR Environmental and Design	Architects
FPCR Environmental and Design	Ecology/Biodiversity & Arboriculture
SLR	Transport and Movement
Lees Roxburgh	Water Resources, Drainage and Flood Risk
Redmore Environmental	Air Quality
Wardell Armstrong	Noise
Smith Grant	Ground Conditions
FPCR Environmental and Design	Landscape and Visual Impact
LANPRO	Archaeology and Cultural Heritage



2. EIA Methodology

- 2.1 This Chapter sets out the approach used to assess the environmental effects of the proposals. An Environmental Impact Assessment (EIA) has been undertaken to facilitate the assessment of the Proposed Development by identifying existing baseline conditions and comparing the environmental effects of the proposals against appropriate legislation and guidelines.

The Regulatory Framework

- 2.2 The EC Directive 85/337/EC requires Environmental Impact Assessment (EIA) of certain types of major projects that are likely to have significant environmental effects.
- 2.3 The initial EC Directive was amended three times in 1997, 2003 and 2009. The initial Directive and its amendments were codified by Directive 2011/92/EU in 2011 and further amended in 2014 by Directive 2014/52/EU.
- 2.4 The amended Directive is given legal effect in England through the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (SI 2017 No. 571).
- 2.5 The Regulations define both “Schedule 1” and “Schedule 2” development. Schedule 1 development always requires an EIA. Development listed in Schedule 2 will not always require an EIA. Only development likely to have significant environmental effects due to size, location or nature will require EIA.

The Need for an EIA

- 2.6 The development falls within Schedule 2, 10(b) of the EIA Regulations 2017 as ‘*Infrastructure Projects*’ development, constituting ‘*Urban development projects ...*’. Such development may require an Environmental Impact Assessment (EIA) if development exceeds 150 dwellings or 5 hectares.
- 2.7 The Site area subject of the application which this ES accompanies extends to approximately 11.3 hectares and the development proposes up to 275 dwellings with associated open space and Infrastructure.
- 2.8 The development may therefore be referred to as Schedule 2 development by virtue of its nature and size.
- 2.9 On the assumption that the application can be referred to as Schedule 2 development, we have applied the appropriate tests laid down in the National Planning Practice Guide (NPPG). As such, the tests as set out in Schedule 3 of the EIA Regulations require examination to ensure that the likelihood of significant effects warranting an EIA is considered.
- 2.10 As set out at paragraph 1.9 of this document, an EIA Screening Request was sent to the Local Planning Authority (LPA) in July 2024 and a Screening Opinion was provided in August 2024 advising that the proposals were considered to be EIA Development.



- 2.11 The LPA conclusion was based on the fact the Site forms part of the wider PfE allocation (JPA9) and the Screening Opinion stated:
- “Given the requirement for the allocation as a whole to provide a strategic through road and the other infrastructure listed, the proposed development of 300 dwellings would be functionally interdependent upon the wider site from which it cannot be divorced. The proposal is an integral part of a more substantial development and could not proceed independently as a stand-alone project due to the need for an integrated approach to the delivery of a range of infrastructure. The JPA 9 allocation should be considered as a single project for the purposes of the EIA Regulations.”
- 2.12 The applicant team, including leading Kings Counsel, Jonathan Easton KC, disagreed with this conclusion and formally requested the LPA reconsider their Screening Opinion.
- 2.13 Copies of the Screening Request, Screening Opinion and Emery Planning’s request for the Opinion to be reconsidered (to which a formal response was not received) are provided within Volume 3 of this ES at **Volume 3: Technical Appendix 1.1, 1.2 and 1.3.**
- 2.14 The LPA have not formally responded to the Applicant’s request for the Screening Opinion to be reconsidered, but have, having taken their own legal advice, advised that the ES must consider the cumulative effects associated with the delivery of the whole of the allocation. As such, this EIA has been undertaken centered upon the application Site, but with appropriate due regard to the potential cumulative impacts of development on the wider allocation.
- 2.15 This ES provides a robust assessment of the likely ‘significant environmental impact’ for the purposes of the EIA Regulations 2017.
- 2.16 The Environmental Statement (ES) comprises:
- a project description and consideration of alternatives;
 - a planning policy context; and,
 - assessment of environmental effects.
- 2.17 The main environmental issues have been considered in a series of technical papers which have been prepared by suitably qualified and competent professionals and form the Technical Chapters of the ES. The topics and their scope are summarised below. These cover the following disciplines.
- Ecology and Biodiversity (FPCR)
 - Transport and Movement (SLR)
 - Water Resources, Flood Risk and Drainage (Lees Roxburgh)
 - Air Quality (Redmore Environmental)
 - Noise (Wardell Armstrong)
 - Ground Conditions (Smith Grant)
 - Landscaping and Visual Impact Assessment (FPCR)



- Archaeology and Cultural Heritage (LANPRO)

2.18 Other technical reports relating to subjects scoped out of the EIA/supporting documents are provided as standalone documents to accompany the planning application for the Proposed Development and include:

- Planning Statement (Emery Planning)
- Design and Access Statement (FPCR)
- Arboricultural Impact Assessment (FPCR)

Approach and Methodology

2.19 The EIA Consultant Team is aware of the legislative and guidance framework discussed above. The team has undertaken the approach outlined in Schedule 4 of the 2017 Regulations for the assessment of the environmental effects of the proposal.

2.20 This comprises:

- A description of the development comprising information on the site, design and size of the development;
- The data required to identify and assess the main effects which the development is likely to have on the environment;
- A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects;
- An outline of the alternatives and an indication of the main reasons for this choice, taking into account the environmental effect; and
- A Non-Technical Summary.

2.21 A methodology was used by each consultant in preparing their respective Chapters in order to define the scale of impact, the importance of the receptor, the significance of effects and any necessary mitigation measures. Due to their respective guidelines the methodology may alter from Chapter to Chapter, which are explained accordingly. However, the Impact Summary Table in **Volume 2: Main Text – Chapter 16 (Table 16.1)** uses a common methodology for comparison purposes.

Table 2.1: Impact Significance Matrix

Sensitivity			
Magnitude	High	Moderate	Low
Major	Major Adverse/Beneficial	Major – Moderate Adverse/Beneficial	Moderate – Minor Adverse/Beneficial
Moderate	Major – Moderate Adverse/Beneficial	Moderate - Minor Adverse/Beneficial	Minor Adverse/Beneficial
Minor	Moderate – Minor Adverse/Beneficial	Minor Adverse/Beneficial	Minor - Negligible



Sensitivity			
Magnitude	High	Moderate	Low
Negligible	Negligible	Negligible	Negligible

2.22 The data needed to identify and assess any significant effects was obtained by a combination of original data collection, analysis and desk top study.

2.23 Each consultant has based their Chapter on the following structure:

- Introduction
- Legislation and Policy
- Assessment Methodology
- Baseline Conditions
- Evaluation
- Assessment of Impact and Significance
- Mitigation
- Residual Effects
- Cumulative Effects (where relevant)
- Summary and Conclusions

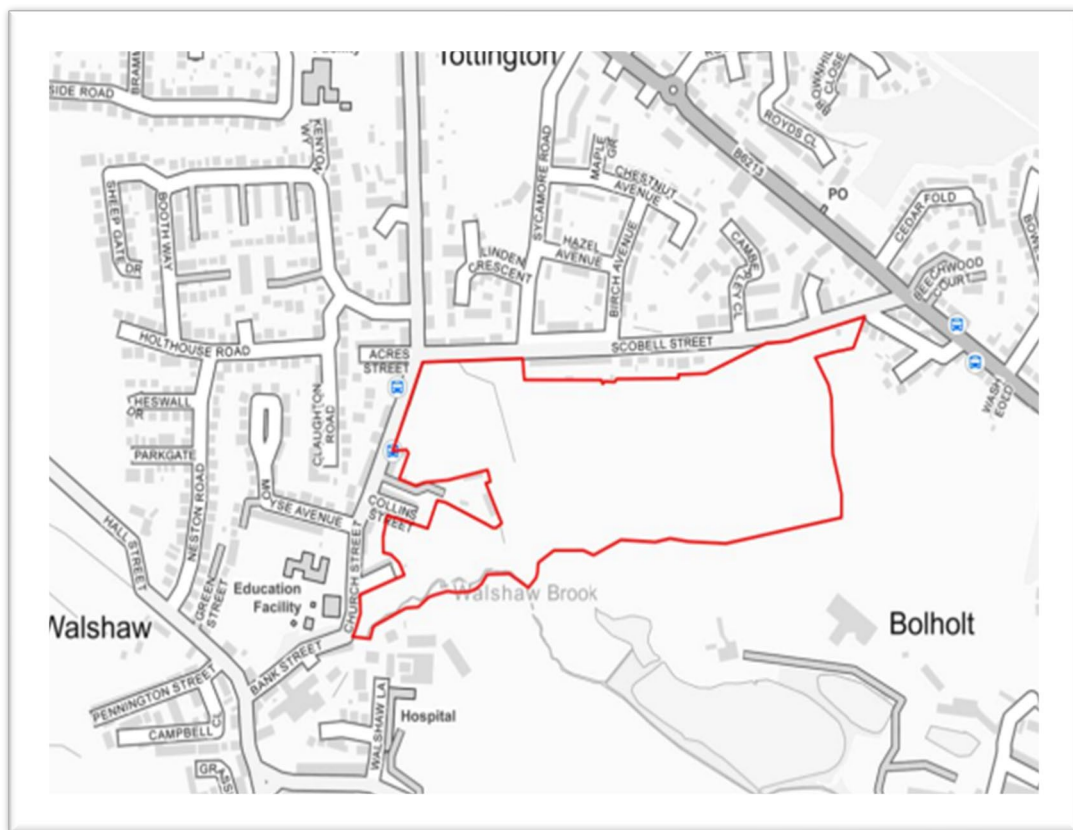


3. The Site and its Surroundings

Introduction

- 3.1 The assessment Site is located to the south of Scobell Road and extends to 11.3 hectares. It is approximately 1.9m to the northwest of Bury City Centre and bounded to the north and west by Walshaw. To the south is an area of parkland with lakes and woodland associated with the Stables Country Club.
- 3.2 The location and red edge Site boundary the subject of this assessment is shown below in **Figure 3.1**.

Figure 3.1: Site location plan



- 3.3 The Site forms parts of a wider allocation for residential development in the Places for Everyone Joint Development Plan (PFE).
- 3.4 Policy JP Allocation 9 (Walshaw JPA9) is an allocation for the delivery of around 1,250 dwellings in the Walshaw area of Bury. The wider allocation area is enclosed by Scobell Street and residential properties to the north; Tottington Road and residential properties to the north-east; woodland to the east; the Best Western Bury Bolholt Country Park and Stables Country Club to the south-east, Walshaw Brook and agricultural fields to the south-west and Church Street, residential properties, garaging and a cattery to the west.

3.5 An extract of the masterplan is shown in **Figure 3.2**.

Figure 3.2: Allocation JPA 9 Walshaw Masterplan Area



3.6 The Site primarily comprised open grassland with small areas of mixed scrub and is made up of several irregular shaped field parcels which form a wider network of fields divided by fragmented hedgerows and lines of trees. A small area of woodland provides a buffer between an industrial area located to the south of the Site.

Figure 3.3: Aerial image of Site location



- 3.7 There are a number of public rights of way running through the Site which connect up to the wider network. There is strong potential to enhance the existing footpath network within the Site, creating better pedestrian permeability.
- 3.8 The nearest public transport interchange is located in Bury town centre which is approximately a 15 minute bus or 12 minute cycle ride away. From here, regular trams provide easy access to Manchester City centre and beyond.
- 3.9 Bus route 469 runs along Tottington Road to the east of the Site with a bus stop located with close proximity providing regular services to Bury town centre. The 480-bus route runs along Church Road and provides transport between Tottington and Bolton.
- 3.10 The Site provides convenient access to a variety of amenities and infrastructure which serve key day-to-day needs. These include a secondary school (1.5km), primary school (1.4km), public houses, community centres, library, park, place of worship, supermarkets, a sports centre, gym and a pharmacy.
- 3.11 Further information on the locational sustainability of the site can be found the Transport Assessment within **ES Volume 3: Technical Appendix (Technical Appendix 12.1)** and the Design and Access Statement which accompanies the planning application.
- 3.12 An access road enters the Site from Church Street and leads to Copthorne Cattery and other associated buildings.
- 3.13 Two watercourses are present within the Site including Walshaw Brook which crosses north to south through the Site.

- 3.14 Immediately to the north and west is the settlement of Tottington with several properties backing directly onto the Site. Properties on the opposite side of the roads face the Site. Additional fields extend to the south and east. Stables Country Club is located to the south next to several ponds and an area of woodland.
- 3.15 There are no designated heritage assets within the Site boundary. However, there are a number of Grade II and Grade II* listed buildings located within the adjacent settlements of Tottington and Walshaw immediately to the north-west and south-west of the Site.
- 3.16 The Grade II* Listed Christ Church is located to the southwest of the Site with views across the majority of the surrounding landscape. Christ Church spire can be seen from localised high points within the Site.
- 3.17 The Site is gently undulating with an overall fall from north to south and west to east with the highest point at 131m AOD at northwest corner and its lowest point at 117m AOD at the south-east corner of the Site.



4. Project Description

- 4.1 This ES considers the Proposed Development of the Site for up to 275 dwellings with associated open space and Infrastructure. The planning application is made in outline with all matters, save for access, reserved for future consideration.
- 4.2 It is proposed to provide vehicular access to the development at two locations from Scobell Street to the north of the Site, and a single location on Church Street, each comprising priority junctions. The proposals also include the access for the northern end of the internal link, with associated modifications to the Church Street/Scobell Street junction.
- 4.3 As the proposals are outline, beyond the points of access, the internal road layout, the strategic through road and non-vehicular access points will be resolved through future reserved matters applications.
- 4.4 The Site will provide the first section of a Link Road that will eventually run throughout the wider JPA9 allocation and provide a gateway street to the wider Walshaw Masterplan area to the south. This link road will function as the higher order street providing access into the development from Church Street and follow the key design principles:
- 6.5m wide carriageway;
 - Verge to either side of road with trees;
 - 2.5m footways to either side of street set back behind trees and verge;
 - Changes of highway surface at key junctions and pedestrian crossings;
 - Car parking is expected to be either to the sides or to the rear of dwellings. There is to be no frontage parking directly from the Link Road.
- 4.5 The access strategy allows for the delivery of housing on the Site, whilst also then being able to integrate with the wider infrastructure proposed as part of the wider Walshaw site allocation; namely the internal link and associated junction infrastructure. Further details of access arrangements and accessibility are set out in Chapter 6 of the TA (**Volume 3: Technical Appendix 9.1**).
- 4.6 The Framework Masterplan shows how existing landscape features will become focal points within the new neighbourhood and the proposals will support an extended and enhanced movement network that incorporates active travel.
- 4.7 The Proposed Development would provide a range of dwelling types and sizes, appropriate for modern living and for a wide demographic, including linked terrace dwellings and semi-detached properties. Properties will be predominantly 2 and 2.5 storey dwellings, with the occasional 3 storey building.
- 4.8 It is envisaged that dwellings will be set within an attractive network of connected streets and surrounding green space. Character streets will create variety and a sense of identity within the layout. Landmark buildings will be provided at key junctions and terminating vistas.



- 4.9 The development will also include the provision of 25% affordable housing to meet the identified needs of families within the borough in accord with the requirements of Policy JPA9. A definitive housing mix will be determined at the detailed design stage.
- 4.10 Generally, lower densities will occur along the green edges of the development. Higher densities will be primarily located along the main vehicular routes and along the main north / south Link Road.
- 4.11 Further details on the proposals can be found within the Design and Access Statement which accompanies the planning application.



5. Reasonable Alternatives

- 5.1 This Chapter considers the rationale behind the Proposed Development and the method by which the application Site was selected. It examines the need for additional housing as well as alternative locations for such provision and a description of the alternatives that were considered in arriving at the final set of proposals.

Need

- 5.2 The Site forms part of a strategic site allocation for development in the Places for Everyone (PfE) Plan, which was adopted on 21 March 2024. The Site has consequently been removed from the Green Belt and is identified for housing development in the PfE.
- 5.3 Policy JP Allocation 9 (Walshaw) (JPA9) requires the delivery of around 1,250 homes on the allocated site. This policy states that development shall be in accordance with a masterplan approved by the LPA and criteria are set out to guide individual planning applications. The Site forms part of this wider allocation, and Wain Estates formed part of the consortium with VHW and Redrow that promoted the allocation through the plan-making process.
- 5.4 Of the potential housing land supply identified within the PfE for Bury of 9,660 dwellings, some 4,900 dwellings (51% of the supply) are to be delivered from the PfE allocations, and 1,250 dwellings (13% of the supply) are to be delivered from Walshaw. The delivery of the allocation including this Site is critical to the delivery of the plan.
- 5.5 The evidence presented to the PfE examination stated that first completions on Walshaw would be achieved in 2025/26 (i.e. from April 2025)¹. This is reflected in the housing requirement for Bury in the PfE, which ramps up significantly from 246 dwellings per annum for the period 2022 – 2025, to 452 dwellings per annum for the period 2025 – 2030, and then 520 dwellings per annum from 2030 onwards.
- 5.6 It is also notable that the December 2024 introduction of the new standard method² for calculation housing numbers has significantly increased the requirement for the Greater Manchester Combined Authority from 11,543 to 13,684 and increase of 18.5%. for Bury specifically the Local Housing Need under the new standard method is 979, a net annual increase of 271.
- 5.7 Therefore, achieving delivery on the Site from 2025/26 is critical to the Council being able to demonstrate a 5 year housing land supply.

¹ Examination document M8.1 – GMCA response to IN9: Matters, Issues and Questions [Matter 8 Places for Homes]

² Standard method in national planning practice guidance, published on 12 December 2024



Affordable housing

- 5.8 The Council does not currently have an up-to-date local development plan policy on housing mix. Paragraph 11.142 of the PfE states that the wider allocation has the potential to provide a diverse mix of house types and affordable housing provision for the local area.
- 5.9 PfE Policy JP Allocation 9: Walshaw, requires that the allocation make provision for affordable housing in accordance with local planning policy requirements, equivalent to at least 25% of the dwellings proposed across a range of housing types and sizes (with an affordable housing tenure split of 60% social or affordable rented and 40% affordable home ownership).
- 5.10 Based on a development of 275 dwellings, the Proposed Development would deliver up to 69 affordable units which accords with Policy JPA9. A definitive housing mix will be determined at the detailed design stage.

Alternative Development Sites and Alternative Development Options at the Site Level

- 5.11 The EIA process should consider alternative development sites and is designed to iteratively test a series of development options at the Site level in order to identify and mitigate significant environmental impacts with the aim of eliminating or reducing all residual Adverse impacts to an acceptable level.
- 5.12 In this instance, the Site is allocated in the adopted PfE and has been subject to rigorous assessment through the Local Plan Examination process, including Sustainability Appraisal, Strategic Environmental Assessment (SEA), Equality Impact Assessment and Health Impact Assessments (which are brought together in the Integrated Assessment Adoption Statement³).
- 5.13 The delivery of the subject Site and the wider allocation for housing is essential for the Council being able to demonstrate a 5 year housing land supply. As such, in this instance it is not necessary to examine these points in further detail here.

Conclusions

- 5.14 The Proposed Development is in accordance with national and local planning policy and the development of the Site to provide much needed sustainably located housing would have substantial benefits which outweigh any perceived harm. The proposals would provide social, environmental and economic benefits to the local area and all reasonable alternatives, in terms of the principle of development of the Site and Site layout, have been appropriately considered.
- 5.15 It is concluded that the Proposed Development would provide an opportunity to meet the aims of the PfE and assist the LPA in meeting its housing, social and economic requirements in a sustainable manner.

³ Places for Everyone Joint Development Plan Document - Integrated Assessment Adoption Statement, March 2024



6. Socio-economic development

- 6.1 This Chapter considers the socio-economic benefits that the Proposed Development would bring to the economy of Bury, delivering jobs, economic growth and community facilities within a sustainable location which would not otherwise be achieved.
- 6.2 In this instance the social and economic benefits of the development will be derived at both the construction and operation stages of development through:
- Delivery of up to 275 new homes
 - Delivery of 25% Affordable Housing Provision (69 units)
 - Construction jobs during the build out period
 - Opportunities to introduce a younger demographic into an aging population in the local area
 - Open Space provision
 - Equipped Play Space provision

Population make up

- 6.3 The site is located within the Tottington ward area. **Figure 6.1** below shows the population of the ward according to the 2021 ONS Census returns.

Figure 6.1: Population

Year	Tottington	Bury	North West	England
2011	9,786	185,060	7,052,177	53,012,456
2021	10,073	193,851	7,417,393	56,490,045

Source: NOMIS: 2011 and 2021 Census: Age by Single Year

- 6.4 Figure 6.2 below shows the broad age groups of Tottington ward according to the 2021 ONS Census returns. Generally, the ward appears to have an older age profile than the district, regional and national levels, with a greater proportion 65 years and above.



Figure 6.2: Age Structure

Age	Tottington	Bury	North West	England
0-19	21.4%	24.6%	23.4%	23.1%
20-64	56.7%	57.1%	57.9%	58.5%
65+	22.0%	18.3%	18.7%	18.4%

Source: NOMIS, 2021 Census, Age by Single Year

- 6.5 According to the 2021 Census, there are 4,232 total households within Tottington ward. The ethnicity of the ward is predominantly white (95.8%). This is above the district and North West, with averages of 82.9% and 85.6% respectively. These levels are above the England average of 81%. The Asian, Asian British or Asian Welsh groups make up the second larger ethnic category within the ward with 1.7%, compared to an average of 10.6% in the district, 8.4% in the North West and 9.6% in England.
- 6.6 The Indices of Multiple Deprivation measures deprivation in local authority areas in England. According to ONS figures (2019) Bury is ranked 110th out of the 317 local authorities in England. With rank 1 being the most deprived and rank 317 being the least deprived, this indicates that the district is within the top 35% in terms of overall deprivation levels, compared to all other authorities in England. It is the least deprived of all its neighbouring LPAs (Manchester – 2nd; Blackburn with Darwen – 14th; Rochdale – 17th; Salford – 20th; Bolton – 47th; and Rossendale – 91st).
- 6.7 Of the 120 different neighbourhoods within Bury Council area, 30 were among the 20 percent most income deprived in England.
- 6.8 It is envisaged that the residents of the proposed scheme will be typical of the existing population.

Social and economic benefits

- 6.9 Paragraph 8 of the Framework notes that sustainable development has three roles relating to the economic, social and environmental dimensions.
- 6.10 With regard to the economic role, the Proposed Development would result in both direct and indirect benefits that include the creation of construction jobs and additional household spending within the wider economy (e.g. on household goods and services).
- 6.11 Turning to the social role, the Proposed Development would add much-needed quality and quantity to the local housing market. The provision of open market and affordable housing attracts particularly substantial positive weight in the decision-making process and would fully accord with the PfE allocation and the the emphasis through the Framework on boosting housing land supply and the substantial affordable housing needs.



Conclusion

- 6.12 The Site is allocated for residential development and the Applicants intention is to provide high quality open market and affordable housing which would be a significant social benefit.
- 6.13 It would further meet the economic objective of sustainable development required by paragraph 8 of the Framework creating significant job opportunities during construction and economic spend during occupation.



7. Planning Policy

Introduction

- 7.1 This Chapter of the ES assesses the relevant national, regional and local planning policy applicable to the Application Site and the proposal. A detailed assessment of the proposal's compliance with planning policy is provided in the Planning Statement which accompanies the application.

Policy, Legislation and Relevant Agencies

- 7.2 Examples of relevant policy and legislation referred to in this ES include the following:
- Town and Country Planning Act (1990);
 - Planning and Compulsory Purchase Act (2004);
 - Town and Country Planning (Environmental Impact Assessment) (2017);
 - National Planning Policy Framework (2024);
 - National Planning Practice Guide;
 - Places for Everyone (PfE) (2024);
 - Bury Unitary Development Plan (UDP) (saved policies) (1997);
 - The Greater Manchester Joint Waste Development Plan Document (2012) and,
 - The Greater Manchester Minerals Plan (2013).
- 7.3 Each Chapter provides details of the applicable laws, standards and guidance relevant to each environmental issue. Details of statutory and non-statutory consultees are provided in each Chapter as relevant.
- 7.4 The EIA team has drawn upon the above guidance and legislation as well as the Department of the Environment Publication "Preparation of Environmental Statements for Planning Projects that require Environmental Assessment - a Good Practice Guide". Reference has also been had to the National Planning Practice Guide, which includes a section on EIA.
- 7.5 This Chapter considers the planning and land use legislation and guidance. Other consultants in the EIA team have drawn upon this guidance as appropriate. The relevant planning guidance and policies are considered below.

Planning Policy and Guidance

- 7.6 Section 38(6) of the Planning & Compulsory Purchase Act 2004 states that all planning applications must be determined in accordance with the development plan, unless material considerations indicate otherwise.



- 7.7 The Statutory Development Plan comprises the saved policies of the Bury Core Strategy and Places for Everyone.
- 7.8 At the heart of the Framework (2024) is a presumption in favour of sustainable development. For decision-taking this means:

“... c) approving development proposals that accord with an up-to-date development plan without delay; or

d) where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date⁸, granting permission unless:

i. the application of policies in this Framework that protect areas or assets of particular importance provides a strong reason for refusing the development proposed; or

ii. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole, having particular regard to key policies for directing development to sustainable locations, making effective use of land, securing well-designed places and providing affordable homes, individually or in combination⁹”. (paragraph 11)

- 7.9 The Framework sets out at paragraph 8 that achieving sustainable development means pursuing three overarching objectives:

a) an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;

b) a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities’ health, social and cultural well-being; and

c) an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

National Planning Practice Guide (NPPG)

- 7.10 The NPPG was first published by the Department for Communities and Local Government (DCLG) on 6 March 2014 and is regularly updated. The purpose of the NPPG is to provide guidance on how the policies of the Framework and the principles of the planning system should be applied in practice.
- 7.11 Sections of relevance to Proposed Development include, amongst others: Design (ID26), Use of Planning Conditions (ID21a), Natural Environment (ID08), and Environmental Impact Assessments (ID04).



- 7.12 Whilst guidance on the implementation of the EIA Regulations was previously provided by Circular 02/99 this is cancelled by the NPPG which now provides guidance on EIA matters.

Development Plan Context

Adopted Development Plan

- 7.13 The development plan comprises Places for Everyone (PfE) (2024); saved policies of the Bury Unitary Development Plan (UDP) (1997); The Greater Manchester Joint Waste Development Plan Document (2012) and Greater Manchester Minerals Plan (2013). The policies of relevance for the proposal are as follows:

UDP Policies:

- H1/2 Further Housing Development
- H2/1 The Form of New Residential Development
- H2/2 The Layout of New Residential Development
- H4/1 Affordable Housing
- EN1/2 Townscape and Built Design
- EN1/5 Crime Prevention
- EN1/7 Through routes and Gateways
- EN3 Archaeology
- EN3/1 Impact of Development on Archaeological Sites
- EN3/2 Development Affecting Archaeological Sites
- EN6/3 Features of Ecological Value
- EN7/2 Noise Pollution
- EN7/3 Water Pollution
- EN7/4 Groundwater Protection
- EN7/5 Waste Water Management
- EN8/2 Woodland and Tree Planting
- RT2/2 Recreation Provision in New Housing Development
- RT3/4 Recreational Routes
- HT2/1 The Strategic Route Network
- HT2/2 Improvements to the Strategic Route Network
- HT2/3 Improvements to Other Roads
- HT3/1 Schemes to Assist Bus Movement
- HT5/1 Access for those with Special Needs
- HT6/1 Pedestrian and Cyclist Movement
- HT2/4 Car Parking and New Development
- HT6/3 Cycle Routes
- CF1/1 Location of New Community Facilities

PfE Policies:

- JP-S1 Sustainable Development
- JP-S2 Carbon and Energy
- JP-S4 Flood Risk and the Water Environment
- JP-S5 Clean Air
- JP-H1 Scale of New Housing Development
- JP-H2 Affordability of New Housing



- JP-H3 Type, Size and Design of New Housing
- JP-H4 Density of New Housing
- JP-G1 Landscape Character
- JP-G2 Green Infrastructure Network
- JP-G3 River Valleys and Waterways
- JP-G5 Uplands
- JP-G7 Trees and Woodland
- JP-G8 A Net Enhancement of Biodiversity and Geodiversity
- JP-P1 Sustainable Places
- JP-P2 Heritage
- JP-P3 Cultural Facilities
- JP-P5 Education, Skills and Knowledge
- JP-P6 Health
- JP-P7 Sport and Recreation
- JP-C1 Our Integrated Network
- JP-C2 Digital Connectivity
- JP-C3 Our Public Transport
- JP-C4 Strategic Road Network
- JP-C5 Streets for All
- JP-C6 Walking and Cycling
- JP-C8 Transport Requirements of New Development
- JPA9 Walshaw

Material considerations

7.14 The following documents are considered to be material considerations:

- SPD1 - Open Space, Sport and Recreation Provision
- SPD5 - Affordable Housing
- SPD11 - Parking Standards in Bury
- SPD16 - Design and Layout of New Development in Bury
- SPD 17 - Developer Contributions for Education Draft

7.15 These policies are assessed in this ES or the supporting environmental and technical documents where relevant.



8. Ecology

Introduction

Context

- 8.1 This Chapter of the ES has been prepared by FPCR and assesses the effects and the consequential effects (level of significance) on biodiversity as a result of the Proposed Development.
- 8.2 In particular, it:
- sets out the existing and future environmental baseline conditions, established from desk studies and site visits;
 - presents the likely direct, indirect and cumulative effects arising from the project, based on the information gathered and the analysis and assessments undertaken;
 - identifies any assumptions and limitations encountered in compiling the baseline information; and
 - highlights any necessary monitoring and/or mitigation measures that could prevent, minimise, reduce or offset the likely effects identified in the EIA process.
- 8.3 Biodiversity enhancements are described, and residual effects following mitigation and compensation are noted.
- 8.4 An Ecological Appraisal and Biodiversity Net Gain Strategy Report (FPCR, 2024. 2025), have been produced and provide detailed methodologies, results and discussion relating to the ecological survey works and assessments that have been undertaken (see **Volume 3: Technical Appendix 8.1 and 8.2**). Due to the quantity of baseline ecological information collated during the assessment, the detailed methods, results and a full set of associated drawings are provided in the Ecological Appraisal. These findings have been summarised and utilised in the preparation of this ES chapter and therefore the Ecological Appraisal and the Biodiversity Report should be read alongside this Chapter.

Competency

- 8.5 This Chapter has been prepared by an experienced senior FPCR Ecologists and reviewed by a Director Level Ecologist who is full members of CIEEM.
- 8.6 FPCR is a multi-disciplinary environmental and design consultancy established over 60 years, with expertise in architecture, landscape, ecology, arboriculture, urban design, masterplanning and environmental impact assessment. The practice is a member of the Landscape Institute and Institute of Environmental Management and Assessment and are frequently called upon to provide expert evidence on landscape and visual issues at Public and Local Plan Inquiries.



- 8.7 The Chapter has been prepared in accordance with Regulation 18(5) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, as amended, and with reference to The Chartered Institute of Ecology and Environmental Management's (CIEEM) Ecological Impact Assessment (EclA) Guidelines (CIEEM, 2018).

Legislation and Policy

The Environment Act 2021

- 8.8 Relevant elements in the Act include:

- All new developments to deliver 10% increase in biodiversity (biodiversity net gains), to be managed for at least 30 years (reviewable by the Secretary of State).
- Biodiversity Gain Site Register to be implemented and maintained for at least 30 years after the Site scheme has completed, subject to review.
- Introduction of Local Nature Recovery Strategies (LNRs) – new spatial strategies to cover the entirety of England – led by a “responsible authority” in each area. Statutory guidance to be given to Local Planning Authorities (LPAs) explaining how they should take account of the LNRs.
- Introduction of a new Species Conservation Strategy – which places a duty on LPAs to cooperate with Natural England and other LPAs etc to safeguard the future of ‘at risk’ species.
- Introduction of the 5 Principles to which organisations must have regard: (i) Integration (environmental protection should be integrated into the making of policies); (ii) Prevention (preventative action should be taken to avert environmental damage); (iii) Precautionary (a precautionary approach should be taken to the possibility of environmental harm); (iv) Rectification At Source (where possible any environmental harm should be rectified at source); and (v) Polluter Pays (the person(s) who causes the harm must suffer the financial penalty both in terms of mitigation and compensation).
- Long-term (at least 15 years, starting in 2022) legally binding targets on air quality, biodiversity, water, resource efficiency and waste reduction.

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

- 8.9 The Regulations ensure that the habitat and species protection and standards derived from EU law as per “The Habitat Regulations” Amendment will continue to apply after Brexit.

The Conservation of Habitats and Species Regulations 2017 (as amended)

Sites on the National Network

- 8.10 The Habitats Regulations ratifies into UK law the “Habitats Directive” (92/43/EEC) and the “Birds Directive” (79/409/EEC). It places a duty on the Secretary of State to propose a list of Sites which are important for



species listed in Annex I and II of the Habitats Directive respectively to the European Commission. Once the Commission and EU Member States have agreed that the Sites submitted are worthy of designation, they are identified as Sites of Community Importance (SCIs). The EU Member States must then designate these Sites as Special Areas of Conservation (SACs) within six years.

- 8.11 The Regulations require the compilation and maintenance of a register of European Sites to include SACs as well as Special Protection Areas (SPAs) designated for birds and Sites designated as internationally important wetlands under the Ramsar Convention known as “Ramsar Sites”. These three designations form a collective network of internationally protected Sites. Those within Europe are collectively known as Natura 2000 Sites and those in the UK are collectively termed ‘Sites on the National Site Network’. All Sites on the National Site Network are also designated under UK law as Sites of Special Scientific Interest (SSSIs; please see below).

[Habitats Regulation Assessment](#)

- 8.12 The Conservation of Species and Habitats Regulations 2017 (as amended) requires that appropriate steps are taken to avoid deterioration of habitats and species, for which Sites on the national network are designated. A plan or project not directly connected with or necessary for the management of a Site, but likely to have a significant effect upon it, either individually or in combination with other projects, must be subject to an Appropriate Assessment (AA). This is based on an assessment against the Site’s Conservation Objectives. The process is commonly known as a Habitats Regulations Assessment (HRA).

- 8.13 The HRA process has developed into a four-stage process summarised as follows:

- Stage One: Screening – also known as the Test of Likely Significant Effect (TOLSE). If the Competent Authority cannot screen out a *likely significant effect*, an Appropriate Assessment is required.
- Stage Two: Appropriate Assessment – the Competent Authority will only agree to plans or projects that will not affect the integrity of a European Site also known as the “Integrity Test”.
- Stage Three: Alternative Solutions – assesses any alternative solutions of a potentially damaging plan or project that failed the Integrity Test, and if it is determined there are no alternative solutions, the project cannot be agreed to, and it will either need to be changed or refused.
- Stage Four: The final stage may allow a plan or project to proceed if after failing stage three if it is for Imperative Reasons of Overriding Public Interest, and only if suitable compensatory measures are secured.

- 8.14 Any plan or project that may have a potentially damaging effect on a transient species or the habitat on which it relies (for example bats or birds), that is both a Qualifying Features of a European Protected Site and considered functionally linked with a European Protected Site, are required under law to be considered as part of any HRA process.



European Protected Species

- 8.15 The Habitats Regulations includes a list of animals and plant species taken from the Annex IV of the Habitats Directive that have a natural range which includes any area in Great Britain. These are collectively known as European Protected Species (EPS). The regulations make it an offence to deliberately capture, kill, disturb, take or destroy eggs of, or damage or destroy a breeding or resting place of animals listed in Schedule 2 of the Regulations, and to pick, collect, cut, uproot or destroy wild plants listed in Schedule 5 of the Regulations. listed EPS relevant to the Site are shown in **Table 8.1** below. The Regulations also protect these species alive or dead and parts thereof from various forms of possession and trade.

Table 8.1: The Habitats Regulations Schedule 2 and Schedule 5 species

The Habitats Regulations Schedule 2 species		The Habitats Regulations Schedule 5 species	
Common name	Scientific name	Common name	Scientific name
Bats – all species	Vespertilionidae	N/A	
Great crested newt	Triturus cristatus		

- 8.16 These actions may be made lawful in certain circumstances through the granting of licences by the appropriate authority (Natural England). Licences must only be granted after the appropriate authority is satisfied that no satisfactory alternatives are available. In most circumstances, licences are only applied for and granted following full planning permission.
- 8.17 In determining whether or not to grant a licence Natural England must apply the requirements of The Conservation of Habitats and Species Regulations 2012 (amendment) and, in particular, the three derogation tests:
- Test 1: A licence can be granted for the purposes of “preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment”.
 - Test 2: The appropriate authority shall not grant a licence unless they are satisfied “that there is no satisfactory alternative”.
 - Test 3: The appropriate authority shall not grant a licence unless they are satisfied “that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Wildlife and Countryside Act 1981 (as amended)

- 8.18 The Wildlife and Countryside Act 1981 (WCA) (as amended) is the principal legislation providing protection for wildlife in the UK. It prescribes legislation for wild birds, other animals, wild plants and non-native species. In addition, it provides for the designation of Sites of Special Scientific Interest (SSSI) in England.



Wild birds

8.19 The WCA as amended by Schedule 12 of the Countryside and Rights of Way Act 2000 makes it an offence (with exception to species listed in Schedule 2) to intentionally or recklessly:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built (also [take, damage or destroy the nest of a wild bird included in Schedule ZA1] under the Natural Environment and Rural Communities Act 2006); or
- take or destroy an egg of any wild bird.
- For birds listed on Schedule 1 of the WCA, protection extends to offences relating to the intentional or reckless disturbance of these birds while at their nests or their dependent young.

Other animals

8.20 The WCA (as amended) makes it an offence to (subject to exceptions) intentionally or recklessly kill, injure or take wild animals listed on Schedule 5 of the Act. For some species, the protection extends to interference with places used for shelter or protection, or disturbing animals occupying or obstructing access to such places. These species are regarded as “fully protected” and as well as the EPS species listed above include the mammal species water vole *Arvicola terrestris*, pine marten *Martes martes* and red squirrel *Sciurus vulgaris* as well as selected others from a range of species groups including, fish, butterflies, hemipteran bugs, beetles, crickets, dragonflies, moths, spiders, crustaceans, sea-mats, molluscs, Annelid worms and sea anemones (and allies).

8.21 There are seven species on Schedule 5 of the Act that not fully protected but are still protected against killing and injuring these include the common reptile species slow worm *Anguis fragilis*, viviparous lizard *Lacerta vivipara*, grass snake *Natrix helvetica* and adder *Vipera berus*.

8.22 The Act prohibits certain methods of killing, injuring, or taking wild animals, and numerous species are protected against sale only as well as other variations for example Atlantic stream (white-clawed) crayfish *Austropotamobius pallipes* are protected against taking and sale.

Vascular plants, bryophytes, lichens and fungi

8.23 With regards to native flora the Act makes it an offence to (subject to exceptions) intentionally or recklessly pick, uproot or destroy any wild plant listed in Schedule 8. Similarly, the Act prevents the sale, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Non-native species

8.24 The Act contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9 in England and Wales.



Sites of Special Scientific Interest

- 8.25 The Act provides for the notification and confirmation of Sites of Special Scientific Interest (SSSIs). These Sites can be identified for their flora, fauna, geological or physiological interest. In England, the power to confirm an SSSI lies with Natural England.
- 8.26 Laws protecting areas designated as SSSIs are described in Sections 28 to 33 of Part 2 of the Wildlife and Countryside Act 1981 (as amended). SSSIs are the principle statutory designation of Sites in the UK and offences are enforced through Natural England. Offences include the following:

SSSI owners and occupiers

- carrying out, causing or allowing operations likely to damage an SSSI without Natural England consent.
- failing to keep to a management notice.
- failing to let us know about a change in ownership or occupation of land in an SSSI.

Public bodies

- carrying out or authorising operations likely to damage an SSSI without meeting the requirements to notify Natural England.
- failing to minimise any damage to an SSSI and if there is any damage, failing to restore it to its former state so far as is reasonably practical and possible.

Any person

- intentionally or recklessly damaging, destroying or disturbing any of the habitats or features of an SSSI.
- intentionally or recklessly damaging, destroying, obscuring or taking down a Site notice put up on land within an SSSI.
- preventing a Natural England officer lawfully accessing an SSSI.

Protection of Badgers Act 1992

- 8.27 Badgers and their setts are protected under the Protection of Badgers Act 1992. This act is based on the need to protect badgers from persecution by baiting and deliberate harm or injury.
- The act makes it an offence to:
 - intentionally capture, kill or injure a badger;
 - damage, destroy or block access to their setts;
 - disturb badgers in setts;
 - treat a badger cruelly;
 - deliberately send or intentionally allow a dog into a sett; and



- bait or dig for badgers.

8.28 A sett is defined as: “Any structure or place that displays signs indicating current use by a badger”.

Natural Environmental and Rural Communities (NERC) Act 2006

8.29 Section 40 of the NERC Act 2006 imposes a duty on every public authority to conserve biodiversity in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat.

8.30 Section 41 (S41) of the NERC Act 2006 requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The list (including 56 habitats and 943 species) has been drawn up in consultation with Natural England and draws upon the UK BAP List of Priority Species and Habitats. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006.

8.31 The Habitats of Principal Importance (HPI) and Species of Principal Importance (SPI) of relevance to the Site are detailed in **Table 8.2** below.

Table 8.2: Relevant HPI and SPI

Relevant Habitats of Principal Importance	Relevant Species of Principal Importance
• Boundary: Hedgerows • Freshwater: Rivers • Woodland: Lowland mixed deciduous woodland	• House sparrow <i>Passer domesticus</i> • Dunnock <i>Prunella modularis</i> subsp. <i>Occidentalis</i> • Starling <i>Sturnus vulgaris</i> subsp. <i>Vulgaris</i> • Song thrush <i>Turdus philomelos</i> subsp. <i>clarkei</i> • Great crested newt <i>Triturus cristatus</i> • Noctule <i>Nyctalus noctula</i> • Soprano pipistrelle <i>Pipistrellus pygmaeus</i> • Brown long-eared bat <i>Plecotus auritus</i>

Local Nature Reserves

8.32 Local Nature Reserve (LNR) is a statutory designation made under Section 21 of the National Parks and Access to the Countryside Act 1949 and amended by Schedule 11 of the Natural Environment and Rural Communities Act 2006, by principal local authorities.

8.33 Local authorities have the powers to acquire, declare and manage LNRs. Parish and town councils can declare LNRs providing power is given by the district or county council. LNRs may or may not have other statutory designations such as SSSI status. LNRs must be controlled by the local authority through



ownership, lease or agreement with the owner. The main aim must be to care for the natural features which make the Site special. LNRs are of local, but not necessarily national, importance.

- 8.34 LNRs are usually owned by local authorities, with management often passed onto other organisations such as County Wildlife Trusts etc. They often have good public access and facilities. There is no legal necessity to manage an LNR to any set standard but management agreements and plans often exist. Protection of LNRs is usually provided through local planning policy and through local bylaws.

Non-Statutory Protected Local Sites

- 8.35 Non-statutory Designated Sites are Sites designated by local authorities which fall outside the statutory criteria for designation. They are policy protected and included in the National Planning Policy Framework (the Framework) as “Local Sites”. Local Planning Authorities should set criteria-based policies against which proposals for developments on or affecting protected wildlife Sites should be judged. Non-statutory Sites are given various names including County Wildlife Sites (CWS), Sites of Importance for Nature Conservation (SINC) and Local Wildlife Sites (LWS). to this end Ancient Woodland Inventory (AWI) Sites are also considered non-statutory Sites.

Local Biodiversity Action Plan (LBAP)

- 8.36 Although the UK Biodiversity Action Plan (BAP) has now been superseded by the UK Post-2010 Biodiversity Framework¹ and Biodiversity 2020² the former UK Biodiversity Action Plan (BAP) lists of priority habitats and species continue to be regarded as conservation priorities under the Framework, and they have been used to compile the statutory lists of priority species and habitats as required under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (also referred to as Habitats and Species of Principal Importance). Whilst different planning authorities across the country are likely to take differing approaches with regard to delivery of biodiversity within their areas, Local BAPs remain a key element for securing the requirements of the Framework at a local level, consequently this assessment has taken due consideration of the priority habitats and species within the Greater Manchester Biodiversity Action Plan BAP³.
- 8.37 The aim of the LBAP is to highlight habitats and species of key importance in order to ensure their continued to survival and where possible increase their range and population size. Each key habitat and species is included within individual action plans. The plans set out the importance of the habitat and species at a District level; identify their local status; threats to them and opportunities to assist in their recovery. The Action Programme draws together the targets and actions which the partners are committed to undertake to help to reverse these declines locally. The Habitat and Species Action Plans of relevance to the Site are

¹ JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012) UK Post-2010 Biodiversity Framework. July 2012

² DEFRA (2011) Biodiversity 2020: A strategy for England's wildlife and ecosystem services.

³ Greater Manchester Biodiversity Action Plan (https://gmllrc.org/projects/gm_bap/)



detailed in **Table 8.3** below. Some species are incorporated with habitat action plans and others have a dedicated species action plan.

Table 8.3: Habitat and Species Action Plans of relevance to the Site

Relevant Habitat Action Plans (HAP)	Relevant Priority Species included within HAP	
Hedgerows	Song Thrush	Bats Small Mammals
Native Woodlands	Bats	
Urban managed greenspace	Song thrush House sparrow	Hedgehog Pipistrelle Bat
Species with individual Action plans		
• Pipistrelle Bat • Daubenton's Bat • Whiskered Bat • Natterer's Bat • Brown long-eared Bat		

Birds of Conservation Concern (BoCC)

- 8.38 The Birds of Conservation Concern (BoCC) is jointly prepared by the British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC) and The Royal Society for the Protection of Birds (RSPB).
- 8.39 The report classifies birds according to the extent that they are known to be declining. The classifications are split into groups, Red, Amber and Green, with species classified as Red being those with the greatest declines. The criteria for classifications are presented in **Table 8.4**.



Table 8.4: BoCC species classification criteria.

Red List Criteria	Amber List Criteria	Green List Criteria
Global Conservation Status - Species listed by BirdLife International as being Globally Threatened using IUCN criteria.	European Conservation status - Categorised as a Species of European Conservation Concern.	All regularly occurring species that do not qualify under any of the red or amber criteria are green listed.
Historical Decline - A severe decline in the UK between 1800 and 1995, without substantial recent recovery.	Historical Decline – Recovery - Red listed for Historical Decline in a previous review but with substantial recent recovery (more than doubled in the last 25 years).	Includes those species listed as recovering from Historical Decline in the last review that have continued to recover and do not qualify under any of the other criteria.
Breeding Population Decline - Severe decline in the UK breeding population size, of more than 50%, over 25 years or the entire period used for assessments since the first BoCC review, starting in 1969 (“longer-term”).	Breeding Population Decline - As for red list criteria and, but with moderate decline (by more than 25% but less than 50%).	
Non-breeding Population Decline - Severe decline in the UK non-breeding population size, of more than 50%, over 25 years or the longer-term.	Non-breeding Population Decline - As for red list criteria and, but with moderate decline (by more than 25% but less than 50%).	
Breeding Range Decline - Severe decline in the UK range, of more than 50%, as measured by number of 10 km squares occupied by breeding birds, over 25 years or the longer-term.	Breeding Range Decline - As for red list criteria and, but with moderate decline (by more than 25% but less than 50%).	
	Rarity - UK breeding population of less than 300 pairs, or non-breeding population of less than 900 individuals.	
	Localisation - At least 50% of the UK breeding or non-breeding population found in 10 or fewer Sites.	
	International Importance - At least 20% of the European breeding or non-breeding population found in the UK.	



Wild Mammals (Protection) Act 1996

- 8.40 Under the Wild Mammals (Protection) Act 1996, it is an offence to kill or injure any wild mammals by various means, including crushing and suffocating; therefore, consideration must be given to the humane exclusion or destruction of foxes and rabbits before work starts.

National Planning Policy Framework (the Framework)

- 8.41 The latest version of the Framework was published in December 2024 and sets out the Government's planning policies for England and how these should be applied.
- 8.42 The premise of 'presumption in favour of sustainable development' embedded within the previous versions of the Framework has been carried forward to the current version. The Framework considers that to achieve this, the planning system has three overarching objectives: economic, social and environmental.
- 8.43 When determining planning applications, local planning authorities should apply the following principles:

"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;

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;

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 reasons⁷⁰ and a suitable compensation strategy exists; and

development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate." [paragraph 193]."

- 8.44 In terms of 'environmental objects' (one of the three core planning objectives), the Framework states that:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

- a) *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.

maintaining the character of the undeveloped coast, while improving public access to it where appropriate.

minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehog.

preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate". [paragraph 187].

Local Planning Policy

8.45 Places for Everyone is a joint development plan for the Greater Manchester area, it covers jobs, new homes and sustainable growth. It was adopted on 21st March 2024. Within the Plan the Site is part of a wider allocation (Allocation Policy JP9: Walshaw) which aims to deliver the following relevant points;

- Make provision for new, high quality, publicly accessible, multifunctional green and blue infrastructure within the allocation including the integration and enhancement of the existing green infrastructure corridors and assets at Walshaw and Elton Brooks.

8.46 Other policies relevant to this Chapter are:

- Policy JP-G2 Green Infrastructure Network
- Policy JP-G6: Urban Green Space
- Policy JP-G7: Trees and Woodland
- Policy JP-G8: A Net Enhancement of Biodiversity and Geodiversity

8.47 This Chapter also takes into account the Local Nature Recovery Strategy (LNRS) pilot study for Greater Manchester when valuing IEFs and designing mitigation. This strategy helped to prioritise habitats and species on Site in the context of their distribution and abundance within the area.

Assessment Methodology



Baseline Assessment

Desk Study

8.48 To support the field surveys and further compile existing baseline information relevant to the Site, ecological information was sought from third parties, including records of protected or notable species and sites designated for nature conservation interest. Organisations contacted included:

- Greater Manchester Ecology Unit

8.49 In addition, the following resources were checked for additional information and context:

- Multi Agency Geographic Information for the Countryside (MAGIC) website;
- Colour 1:25,000 OS base maps;
- Aerial photographs from Google Earth.

8.50 The search area for biodiversity information was related to the significance of sites and species and potential zones of influence, as follows:

- A minimum of a 10km radius around the Site was searched for sites with an international statutory designation; Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar sites;
- A minimum of a 2km radius around the Site for sites of national/regional importance with a statutory designation of Site of Special Scientific Importance (SSSI) or National Nature Reserve (NNR);
- Up to a 1km radius around the Site for sites of local importance with statutory designation of Local Nature Reserve (LNR), or non-statutory designation of Site of Importance for Nature Conservation (SINC) or the equivalent Local Wildlife Site (LWS); and
- A 1km radius around the Site for records of notable / protected species (i.e., including Species of Principal Importance [SPI] under S41 of the Natural Environment and Rural Communities [NERC] Act (2006) and local biodiversity action plan species).

8.51 Aerial imagery from satellite imagery and government websites 'MAGIC' were used to search for ponds within 500m of the Site.

8.52 When reporting consultation data, records were filtered to include only those from the previous twenty years (since 2004).

8.53 Further consideration of potential zones of influence in relation to statutory designated sites of International and National importance was made using Natural England's SSSI Impact Risk Zone Tool which outlines the likely zone of influence from impacts for a range of development types.



Field Survey

Baseline Habitats and River Corridor Assessment

- 8.54 A UKHab survey and River Corridor Assessment was undertaken on 7th May 2024. The survey was undertaken by Francesca Sykes, a suitably experienced Ecologist with four years' experience working in the environmental sector. Francesca is experienced and accredited in conducting MoRPh surveys and personal level 1 (CL17) survey licences for bats and is accredited to undertake MoRPh field surveys.
- 8.55 Survey methods followed UKHab methodology (Butcher et al., 2020) and comprised a systematic walk over the Site to classify the broad habitat types and identify any Habitats of Principal Importance (HPI) for the conservation of biodiversity as listed within Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act (2006) and identify a representative species list and condition assessment for each habitat. Habitats were mapped in the field using Qfield.
- 8.56 The field survey was undertaken during low / normal flow conditions with weather conditions being cloudy but dry throughout the survey. All surveys were undertaken working downstream. The desk top survey to determine river type (involving measuring the sinuosity and elevation of the watercourse) was undertaken on.
- 8.57 The hedgerows were assessed against the Wildlife and Landscape criteria contained within Statutory Instrument No: 1160 – The Hedgerow Regulations 1997 to determine whether they qualified as 'Important Hedgerows' under the Regulations.
- 8.58 A Biodiversity Net Gain Assessment was undertaken using the statutory metric. This was done to assess whether the development met the requirements for a 10% gain in biodiversity. A copy of the Biodiversity Net Gain Strategy is provided in ES **Volume 3: Technical Appendix 8.2**.

Fauna

- 8.59 In tandem with the UKHab surveys, a Preliminary Protected Species Scoping survey was undertaken. During the survey, any habitats suitable for, or features with the potential to support, protected or notable species were assessed and recorded.
- 8.60 In addition to the Preliminary Protected Species Scoping survey, the following surveys were conducted, methodologies for these can be found in the Ecological Appraisal (ES **Volume 3: Technical Appendix 8.1**):
- Breeding Bird Surveys
 - Winter Bird Scoping Survey
 - GCN Surveys
 - Bat Activity Surveys
 - Reptile Surveys



- 8.61 Consideration was given as to the presence of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (WCA 1981).

Limitations

- 8.62 Any limitations arising in respect of the various ecological surveys and assessments are outlined in the Ecological Appraisal (ES **Volume 3: Technical Appendix 8.1**).
- 8.63 This assessment aims to provide baseline ecological data for the Site and as such presents an overview of the habitats and features present. Due to the transient and complex nature of ecosystems, no investigation can provide a complete representation or prediction of the natural environment present, however every effort has been made to ensure an accurate description of the Site in presented following best practice guidance, experience, and professional judgement.
- 8.64 The UKHab map (**Figure 8.2** at the end of this Chapter) has been reproduced from detailed field notes and informed by aerial imagery, OS mapping and site maps provided by the Applicant. The accuracy of this Figure is therefore ultimately guided by the accuracy of these sources and can only be relied upon to a certain degree of resolution.
- 8.65 Data provided by third party sources collated during the desktop study is generally made up from a wide range of sources including (but not limited to) those submitted by ecological consultancies, wildlife conservation organisations and volunteers. As such, these data are typically focused on areas of known nature conservation, are reliant upon formal surveys having been undertaken within an area or the presence of an expert within the locality (particularly for invertebrate records) and as such these data can never be fully relied upon as a complete ecological dataset for any given area. Rather, these data are used as a guide to likely presence of notable ecological features and can never be relied upon for likely absence.
- 8.66 During the spring static detector survey, one of the detectors only recorded for 4 nights, possibly due to interference. During the July survey one of the detectors was vandalised meaning that it didn't record for the full five nights. Another detector was deployed to get five consecutive nights of data. During this period some light rain occurred during the night, so the detectors were left out for 3 extra nights. During the autumn survey vandalism again occurred, given the persistent nature of the vandalism it was decided that further detectors would not be deployed. However, given the level of survey effort this is not considered a constraint.
- 8.67 Where calls could not be identified to species level, for example due to the lower quality of those recordings or where there are similarities between species echolocation calls (particularly for *Myotis* and *Pipistrellus* genus bats) making a definitive identification difficult, a likely species identification is provided. This is based on the features displayed by the calls when analyses using the Kaleidoscope© data analysis software package and considering the geographical location of the Site and the habitats present. It was therefore considered that:



- Pipistrelle species bats were either common or soprano pipistrelle;
- Nyctalus species bats were most likely to be noctule; and
- Given the known species distributions of Myotis species locally, Myotis species bats were likely to be whiskered/ Brandt's, Natterer's or Daubenton's.

8.68 No other specific limitations influenced this assessment

Scope of Assessment

Assessment Approach

8.69 The assessment has been prepared by FPCR and has been undertaken in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland. These guidelines are widely used nationally for the production of ecological impact assessments.

Significance Criteria

Geographical Scope

8.70 The Ecological Zone of Influence (EZOI) is an area defined by the assessment in which there may be receptors subject to effects as part of the Proposed Development, both those which may occur as a result of land-take and habitat loss and those which may occur through disturbance such as noise, pollution or increases in recreational pressures. Such receptors are likely to include designated sites, notable habitats and protected species, and these could be affected directly, e.g. works affecting a receptor within the Site such as removal of a building occupied or indirectly, e.g. pollution entering a designated site that is downstream of the Proposed Development.

Sensitive Receptors

8.71 The initial step in any assessment of effects is to determine which features should be subject to detailed assessment. The Important Ecological Features (IEF) to be the subject of more detailed assessment should be of sufficient value that effects upon them may be significant in terms of either legislation or policy. To qualify for assessment, the receptors should also be vulnerable to potentially significant effects arising from the Proposed Development.

8.72 As there are rarely comprehensive quantitative data on the wider habitat or species population resource, particularly below the international and national level, the nature conservation evaluation of receptors necessarily also involves a qualitative component. This requires a suitably trained and experienced Ecologist to make a professional judgement based upon a combination of published sources, consultation responses and knowledge of both the Site and the wider area. The categories of ecological value used in this Chapter are taken from the CIEEM guidelines (Table 5.1). Using professional judgement and experience, the IEF's taken forward for assessment in this Chapter are those of Local value or above.



Table 8.5 - Important Ecological Features (IEF) taken forward for assessment

Value	Criteria	Examples
International	Site, habitat or populations of species, of international importance. Includes designated sites but may also include off-site ecological receptors on which the qualifying population(s) or habitat(s) of designated site are considered, from the best available evidence, to depend.	International designated Sites: SPAs and SACs; Potential (p)SPAs and candidate (c)SACs; and Ramsar wetlands. Significant numbers of a designated population outside the designated site.
National (i.e. England)	Site, habitat or populations of species, of national importance. Includes designated sites but may also include off-Site ecological receptors on which the qualifying population(s) or habitat(s) of designated sites are considered, from the best available evidence, to depend.	NNRs and SSSIs (designated for biological features); and Nationally important population/ assemblage of an EPS, Schedule 1 and/or Schedule 5 species.
Regional (North West)	Site, habitat or population of species, of regional importance. Includes high quality undesignated and designated sites, e.g. where a County-designated site is below SSSI standard but still recognised as being significant in the context of the wider region.	Regionally important population/area of a species and habitat of Principal Importance; Regionally important population/assemblage of an EPS, or species listed on Schedules 1, 5 and/or 8 of the WCA; and Regionally important assemblages of other species.
County (Greater Manchester)	Site, habitat or species, of importance in the context of old County/Vice-County scale areas.	Local Nature Reserves (LNRs); SBIs; County important population/area of a priority species and habitat or LBAP habitat and species; County-important population/assemblage of an EPS, Schedule 1 and/or Schedule 5 species; and County-important assemblages of other species.
Local (Bury)	Site, habitat or species, of importance in the context of the local, district or borough Council or Unitary Authority administrative area.	A breeding population of a species or a viable area of a habitat that is listed in a Local BAP because of its rarity in the locality; All breeding populations of an EPS, Schedule 1 and/or Schedule 5 species that have not been captured in higher categories; and Assemblages of other species of importance in the context of the local authority area.
Less than local (sometimes)	Unremarkable habitat/common species that is of little/no intrinsic nature conservation value.	Common, widespread, modified and/or impoverished habitats; and



Value	Criteria	Examples
referred to as Site level)		Species of Least Concern which are widespread and/or common locally.

8.73 In accordance with the CIEEM guidelines, when determining effects on IEF's, reference is made to the following;

- Beneficial or Adverse – i.e. whether the effect has a Beneficial or Adverse effect in accordance with nature conservation objectives and policy;
- Magnitude – i.e. the size of an effect in quantitative terms where possible;
- Extent – i.e. the area over which an effect occurs;
- Duration – i.e. the time for which an effect is expected to last;
- Timing and frequency – i.e. whether effects occur during critical life stages or seasons; and
- Reversibility – i.e. a permanent effect is one that is irreversible within a reasonable timescale or for which there is no reasonable chance of action being taken to reverse it. A temporary effect is one from which a spontaneous recovery is possible.

8.74 For the purposes of this assessment, the predicted effects on an ecological receptor are described as either Significant or Not Significant, and a combination of the following:

- Either Adverse or Beneficial or Negligible;
- Either Direct or Indirect;
- Either Permanent or Temporary; and
- Where relevant, either 'Short', 'Medium' or 'Long-term' (short – up to 1 year, medium – 1 to 10 years, or long-term – over 10 years) of effect.

Assessment of Significance

8.75 An EclA is undertaken in relation to the baseline conditions that would be expected to occur in the absence of a proposed development and, therefore, may include possible predictions of future changes to baseline conditions, such as environmental trends and other completed or planned development. Both Adverse and Beneficial effects are possible.

8.76 In accordance with the CIEEM guidelines, a Significant effect, in ecological terms, is defined as:

“an effect (whether Adverse or Beneficial) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographical area, including cumulative and in-combination effects”.

8.77 The approach adopted in this Chapter aims to determine an effect to be Significant or Not Significant on the basis of a discussion of the factors that characterise it, i.e. the ecological significance of an effect is not dependent on the value of the feature in question. The value of a feature that will be significantly affected is used to determine the geographical scale at which the effect is Significant, e.g. an ecologically Significant



effect on a feature of County level value would be considered to represent a Significant effect at a County scale. This in turn is used to determine the implications in terms of legislation, policy and /or development control.

- 8.78 Any Significant effects remaining after mitigation (the Residual Effects), together with an assessment of the likelihood of success of the mitigation, are the factors to be considered against legislation, policy and development control in determining the application.
- 8.79 In addition to determining the Significance of an effect on any ecological features, this Chapter also identifies any legal requirements in relation to wildlife.

Temporal Scope

- 8.80 Potential effects on ecological features have been assessed in the context of how the predicted baseline conditions within the ecological zone of influence might change between the surveys and the start of construction. It is anticipated that construction will be carried out in one phase beginning as soon as possible following granting of planning permission and once pre-commencement conditions have been discharged. It is anticipated that the construction period will last for approximately 5 years, with around 50-60 units constructed per year.

Cumulative Assessment

- 8.81 Cumulative effects have been considered against the wider development covered under the policy 'JP Allocation 9: Walshaw', with respect to the potential for in-combination effects to arise upon the IEFs pertinent to the development proposals.

Baseline Conditions and Evaluation

- 8.82 Details of the consultation responses and field survey results are provided in the Ecological Appraisal for this site (FPCR, 2024)(see ES **Volume 3: Technical Appendix 8.1**).

Desk Study

Statutory Sites

- 8.83 There are no statutory sites of international nature conservation importance (SACs, SPAs and Ramsar Sites) present within the 10km search area.
- 8.84 There are no statutory sites of national nature conservation importance (SSSIs and NNRs) present within the Site or within 2km of the Site boundary. The nearest Site of Special Scientific Interest (SSSI) West Pennine Moors is located approximately 3.8km north and west of the Site. The West Pennine Moors SSSI is designated for the following;

- blanket bogs;



- wet and dry heathlands;
- acid and lime-rich flushes;
- rush pastures and mire grasslands;
- acid grasslands;
- neutral hay meadows and pastures;
- wet and dry broadleaved woodlands and scrub;
- diverse assemblages of upland moorland, in-bye and woodland breeding birds;
- breeding black-headed gulls *Chroicocephalus ridibundus*, Mediterranean gulls *Larus melanocephalus* and grey herons *Ardea cinerea*; and
- populations of starry lady's-mantle *Alchemilla acutiloba*, large-toothed lady's-mantle *A. subcrenata* and floating water-plantain *Luronium natans*.

8.85 Given the location and distance from the Site it is considered that there will be no direct impacts to the SSSI. The pressures on the West Pennine Moors SSSI have been identified for recreation as a 'Medium' risk with a 'Potential' status, it is not identified as an active pressure⁴. However, the Impact Risk Zone⁵ indicates that the only development activities at the Site location which are likely to impact the SSSI are aviation infrastructure projects and air pollution from livestock and poultry units above a specific size. As there are no impact pathways identified impacts on the West Pennine Moors SSSI are **Scoped out** of further assessment.

8.86 A single statutorily designated site of local importance was recorded within 1km of the Site. The Kirklees Valley Local Nature Reserve is located c. 280m north of the Site (see **Figure 8.1** at the end of this Chapter). Habitats present include woodland, grassland, heathland, ponds, lodges and streams. Protected species within the LNR include great crested newts *Triturus cristatus*, six species of bats, and kingfisher *Alcedo atthis*. The LNR is separated from the Site by residential development.

8.87 There is potential for an increase in visitor pressure from up to 275 new dwellings, therefore the LNR is considered to be an Important Ecological Feature at a **Local** scale

Non-statutory Sites

8.88 Three non-statutorily designated sites for nature conservation interest were identified within the 1km search area. Cockey Moor Wood Pasture and Marsh Site of Biological Importance (SBI) is located approximately 850m southwest of the Site and is designated for its wood pasture and grassland. Cyrus Ainsworth's Nurseries and Parkers Lodges SBI is located approximately 700m south of the Site. Kirklees Brook SBI is located approximately 300m northeast of the Site and is designated for its small lodges, bats

⁴ SSSI Site Pressure available at <https://designatedsites.naturalengland.org.uk/SitePressures.aspx?SiteGuid=7cb995e3-5a50-e411-a6ba-000d3a2004ef&SiteCode=S2000830&SiteName=West%20Pennine%20Moors%20SSSI> last accessed 23.10.24

⁵ Impact Risk Zones for Sites of Special Scientific Interest, Natural England, available at Impact Risk Zones - Threshold check, last access 23.10.24



and aquatic in vertebrates. There is a lot of overlap between the Kirklees Brook SBI and the Kirklees Valley LNR.

- 8.89 The Kirklees Brook SBI is located c.300m north of the Site. It is separated from the Site by residential development and no direct impacts from the construction phase are anticipated. There is potential for an increase in visitor pressure from up to 275 new dwellings, therefore the SBI is considered to be an Important Ecological Feature at a **Local** scale.
- 8.90 The Cyrus Ainsworth's Nurseries and Parkers Lodges SBI is located approximately 700m south of the Site. Standalone effects from development of this Site are not expected given the distance from it however there may be a cumulative effect from visitor pressure when the whole allocation site is taken into account. Therefore, the SBI is considered to be an Important Ecological Feature at a **Local** scale.
- 8.91 The Cockey Moor Wood Pasture and Marsh SBI is located approximately 850m southwest of the Site. Standalone effects from development of this site are not expected given the distance from it however there may be an cumulative effect from visitor pressure when the whole allocation site is taken into account. Therefore, the SBI is considered to be an Important Ecological Feature at a **Local** scale.

Protected and Notable Species

- 8.92 No protected or notable species records were returned for the Site from the data search.

Habitats

- 8.93 The habitats present on Site comprised (see **Figure 8.2** at the end of this Chapter);

- Other neutral grassland (Site importance)
- Hedgerows
- Line of Trees
- Trees
- Bramble scrub
- Mixed scrub
- Watercourses
- River Corridors
- Invasive species

Fauna

- 8.94 The following species/species groups were surveyed for on Site;

- Breeding Birds



- Winter Birds (Scoping only)
- Reptiles
- Great Crested Newts
- Commuting and Foraging Bats
- Badgers
- Hedgehogs *Erinaceus europaeus*- Given the habitats on Site hedgehogs are assumed to be present.

Important Ecological Features

- 8.95 Ecological features of value at the Local level and above are considered to be sufficiently valuable for significant effects upon them to be material in decision making. Only ecological features equivalent to or greater than 'Local' value and/or those that are protected or have other legal implications have therefore been included within the detailed assessment as IEFs.
- 8.96 Based on the baseline investigations which are documented in the appended Ecological Appraisal, the IEFs which are to be considered further within this ES are summarised in **Table 8.6**.

Table 8.6: Summary of Important Ecological Features

Important Ecological Feature	Comments	Nature Conservation Value
Designated Sites		
Kirklees Valley Local Nature Reserve	There is potential for an increase in visitor pressure from up to 275 new dwellings.	Local
Kirklees Brook SBI	There is potential for an increase in visitor pressure from up to 275 new dwellings.	Local
Cyrus Ainsworth's Nurseries and Parkers Lodges SBI	There is potential for an increase in visitor pressure from up to 275 new dwellings.	Local
Cockey Moor Wood Pasture and Marsh SBI	There is potential for an increase in visitor pressure from up to 275 new dwellings.	Local
Habitats		
Hedgerows	All hedgerows supported at least 80% native canopy species and therefore meet the criteria as a Habitat of Principal Importance under the NERC Act 2006. Hedgerows are a local and national BAP habitat. Despite this status, hedgerows are a common habitat type both nationally and locally. Hedgerows on site are not important hedgerows in terms of ecology under the Hedgerow Regulations 1997.	Local
Lines of trees	The Presence of lines of native species trees increase the structural and habitat diversity of the Site and are likely	Local



Important Ecological Feature	Comments	Nature Conservation Value
	to be of value to local wildlife including bats for foraging, birds and invertebrates.	
Individual trees	The mature trees present increase the structural and habitat diversity of the Site and are likely to be of value to local wildlife including bats for foraging, birds and invertebrates. As such they are considered to be an important ecological feature.	Local
Walshaw brook	The brook increases the habitat diversity on Site and is likely to be of value to local wildlife. It provides a corridor of movement for a range of species.	Local
Invasive non native		
Himalayan balsam Impatiens glandulifera	Himalayan balsam is listed on Schedule 9 Part 2 of the Wildlife and Countryside Act 1981 (as amended) (WCA) as invasive weeds. As such, they are banned from sale and release. Section 14 of the WCA 1981 (as amended) prohibits the establishment of non – native plant species, in particular those species listed on Schedule 9 Part 2. Under provisions made within the Wildlife and Countryside Act 1981, it is an offence to spread this species and liability may also be extended to situations where a landowner has knowingly permitted the spread of these invasive, non-native species onto neighbouring land. Failure to manage and dispose of Himalayan balsam in accordance with current guidelines and legislation can lead to prosecution.	N/A – included due to legislation
Fauna		
Breeding Birds	A total of 28 bird species were recorded across all breeding bird surveys (for a complete list see Appendix A and Figures 5-7 of the Ecological Appraisal, FPCR 2024). Of these, 11 met the criteria of at least one of the following pieces of legislation/classifications discussed above; Section 41 of the NERC Act 2006; and BoCC Red or Amber lists. These species are referred to as ‘notable’ species.	Local
Commuting and Foraging Bats	The activity surveys recorded a minimum of five species (listed in order of abundance) common pipistrelle, pipistrelle species, myotis species, Nathusius’ pipistrelle, soprano pipistrelle and brown long-eared bat. All species recorded are known to be resident in the Manchester area.	Local

Biodiversity Net Gain (BNG)

8.97 A Biodiversity Net Gain Assessment was undertaken using the statutory metric. This was done to assess whether the development met the requirements for the statutory 10% gain in biodiversity. The Biodiversity Net Gain Strategy provided at ES **Volume 3: Technical Appendix 8.2** should be read in conjunction with this Chapter. The headline results indicate that the development is capable of delivering a 14.44% gain in



habitat units, 24.09% hedgerow gain and 19.98% watercourse gain. To replace the loss of trees a total of 87 new trees will require planting.

Future Baseline

- 8.98 In the absence of the Proposed Development, it is considered likely that the habitats on the Site will remain in the same condition as set out above and that the current use and management of the Site will continue. Without significant changes in habitats, the Site is likely to continue to support low numbers of common / widespread bats and breeding birds, as hedgehogs. It is unlikely that reptiles and great crested newts will colonise the Site, given the lack of previous evidence and without changes in the habitat on the Site and the connecting habitats in the wider area.

Assessment of Impact and Significance

Embedded Mitigation

- 8.99 The Proposed Development has been designed to, where possible, avoid, reduce or compensate for likely significant effects. A summary of the inherent mitigation pertinent to the identified IEF's and shown in the proposed landscaping (see Framework Masterplan Figure 12221-FPCR-XX-XX-XX-DR-A-0001 P06) is provided below;
- The riparian zone of the Walshaw Brook and its adjacent habitat will be retained and buffered from the residential development. Within the area the planting of additional trees and vegetation is proposed. This will provide a buffer from potential noise, lighting and recreational disturbance impacts.
 - All existing woodland and the majority of the hedgerows, trees and lines for trees will be retained. Sufficient buffer zones have been included around the retained trees to provide root protection areas and they will not be included within garden boundaries. In addition, the proposed roads and footpaths have been located to avoid compaction issues. Hedgerow 3, 5 and 6, trees 2, 9, 11, 12, 13, 14 and 18, and line of trees 4 and a section of 2 are within development parcels and will therefore require removal.
 - Approximately 40% of the Site will comprise green space post-construction, which will provide alternative recreational opportunities within the Site to minimise the potential for Significant Adverse effects on Kirklees Valley Local Nature Reserve.
 - The retention of watercourses, woodland, hedgerows and lines of trees and the high proportion of greenspace will ensure that a wildlife corridor is present both north/south and east/west across the Site. This provides mitigation for birds, bats and hedgehogs.
 - A SUDS design is to be implemented which creates a number temporary attenuation features.



Assessment of Likely Significant Effects on Important Ecological Features

8.100 The status of the important ecological features (IEFs) identified on Site have been reviewed against the proposals and intrinsic mitigation to determine whether there are any impact pathways to IEFs and whether any of these will lead to a likely Significant effects. The requirement for additional mitigation measures above the intrinsic mitigation has been considered for each of the IEFs where they can reduce the scale of negative effects or encourage a positive effect.

Kirklees Valley Local Nature Reserve

Assessment of Impacts

8.101 Given the distance and separation by residential development of the Site from the Kirklees Valley LNR no construction effects are anticipated. There is no direct aquatic link from the Site to the LNR therefore impact on the LNR from sediment and contaminated runoff are not anticipated.

8.102 Given the distance and location of the Site from the Kirklees Valley LNR there will be no operational effects from the development in terms of light and noise.

8.103 Typically, the effects on local wildlife sites and nature reserves which are accessible to the public arise as a result of erosion or physical damage such as trampling of habitats or increased effects of nutrient enrichment of soils and resulting habitat degradation of sensitive habitats resulting from dog waste. Where local sites are already managed to accommodate visitors there is typically included provision to control the effects of these impacts. There is therefore the potential for increased recreational effects to have an Adverse effect on the LNR through increased visitor pressure. Kirklees Valley LNR has a number of advertised walks which clearly manage visitors to appropriate areas, along designed footpath network.

8.104 It is not easy to identify or quantify the current pressures of the LNR, but despite it clearly being covered under a current visitor management regime, in the absence of mitigation it would be expected that the Proposed Development would result in an increase in visitor numbers and therefore effects as outlined above.

Mitigation

8.105 Areas of greenspace are proposed within the scheme, encompassing approximately 40% of the Site. This will provide significant alternative recreation opportunities; it is recommended that final layouts include desirable and usable greenspace. The provision of a dedicated dog exercise area (for example) in final plans would be a desirable facility, that would likely be utilised by current and potential users of the LNR offsetting any potential increases in visitor numbers.

Residual Effect

8.106 Given the above and with appropriate greenspace as mitigation, the impacts on the LNR would be considered **Not Significant Adverse** impact at a **Local level**.



Compensation/Enhancement

8.107 Not required.

Kirklees Brook SBI

Assessment of Impacts

8.108 Given the distance of the Site from the SBI no construction effects are anticipated. There is no direct aquatic link from the Site to the SBI therefore impact on the SBI from sediment and contaminated runoff are not anticipated.

8.109 Given the distance and location of the Site from SBI there will be no operational effects from the development in terms of light and noise.

8.110 Given the distance from the Site and its connectivity via public footpaths, there is the potential for increased recreational effects to have an Adverse effects on the SBI through increased visitor pressure. However, the area of Kirklees Valley which extends beyond the Site is managed for visitors with a number of access routes and the designated main trail 'Kirklees Trial' running through it. Therefore, the impacts from the development are considered to be a **Not Significant adverse** impact at a **Local level**.

Mitigation

8.111 Areas of greenspace are proposed within the scheme, encompassing approximately 40% of the Site. This will provide alternative recreation opportunities, to minimise impacts to the SBI.

Residual Effect

8.112 Given the above, the impacts on the SBI are still considered **Not Significant Adverse** impact at a **Local level**.

Compensation/Enhancement

8.113 None proposed.

Cyrus Ainsworth's Nurseries and Parkers Lodges and Cockey Moor Wood Pasture and Marsh SBIs

Assessment of Impacts

8.114 Given the distance of the Site from the SBIs no construction effects are anticipated. There is no direct aquatic link from the Site to the SBIs therefore impact on the SBIs from sediment and contaminated runoff are not anticipated.

8.115 Given the distance and location of the Site from SBIs there will be no operational effects from the development in terms of light and noise.



8.116 There is the potential for increased recreational activity to have an Adverse effect on the SBIs through increased visitor pressure. Given the distance from the Site to the Cyrus Ainsworth's Nurseries and Parkers Lodges Cockey Moor Wood Pasture and Marsh SBIs this is considered **Negligible**.

Mitigation

8.117 Not required.

Residual Effect

8.118 Given the above, the impacts on the SBI are still considered **Negligible**.

Compensation/Enhancement

8.119 Not required.

Hedgerows

Assessment of Impacts

8.120 There will be a loss of 4.65 units of native hedgerows due to the development resulting from the loss of hedgerows H3, H5 and H6 being removed to facilitate development, all other hedges will be retained.

8.121 Impacts during construction, such as accidental damage and pollution, have the potential to negatively affect the health of retained hedges. Therefore, there is a **Not Significant Adverse** effect at a **Local level**.

Mitigation

8.122 During works, all hedgerows will be protected through the implementation of appropriate measures including Root Protection Areas (RPA) and protective fencing in accordance with BS 5837 (2012) Trees in Relation to Design, Demolition and Construction and as indicated by the Arboricultural Impact Assessment.

8.123 Measures to prevent pollution during construction will be outlined in the CEMP, as detailed above, and will include protective fencing. This should be secured by means of a planning condition.

Compensation/Enhancement

8.124 Within indicative proposals, the enhancement of retained hedges and provision of additional hedgerow planting will achieve over 20% net gain in hedgerow biodiversity units on Site. This would largely be delivered through the enhancement of existing hedgerows to species rich.

Residual Effect

8.125 Given the above the mitigation, impacts on hedgerows would be considered to be **Not Significant Adverse** at a **Local level**.



Trees

Assessment of Impacts

- 8.126 Proposals have sought to retain existing trees within the scheme. To facilitate the development line of trees LT4 and a section of LT12 will be removed. Individual trees 9, 11, 12, 13, 14 and 18 are also being removed. All other trees and lines of trees will be retained.
- 8.127 Impacts during construction, such as accidental damage, pollution have the potential to negatively affect the health of trees.
- 8.128 In the absence of mitigation construction and operational impacts on trees are predicted to be a **Not Significant Adverse** effect at a **Local level**.

Mitigation

- 8.129 During works, all lines of trees will be protected through the implementation of appropriate measures including Root Protection Areas (RPA) and protective fencing in accordance with BS 5837 (2012) Trees in Relation to Design, Demolition and Construction and as indicated by the Arboricultural Impact Assessment submitted with the planning application.
- 8.130 Measures to prevent pollution during construction will be outlined in the CEMP, as detailed above, and will include protective fencing. This should be secured by means of a planning condition.

Compensation

- 8.131 Within indicative proposals, the enhancement of retained lines of trees and individual trees by supplementary planting which will compensate for any tree losses and achieve over a 20% net gain in hedgerow/ linear and an increase in tree units.

Residual Effects

- 8.132 Given the above the impacts on trees would be considered negative on account of the losses however this is not considered to be Significant at more than a Site level. Therefore, at a local level the impacts to lines of trees is expected to be **Negligible**.

Walshaw Brook

Assessment of Impacts

- 8.133 During the construction phase, there will be the potential for disturbed soil to enter the river, and/or accidental fuel and other pollutant spillages to enter the river resulting in a potential Adverse effect on aquatic and riparian flora and fauna. Depending on the nature and scale of the pollution spillage, this has the potential to have a Significant Adverse impact at a Local level.



8.134 The Brook and the surrounding habitat will be retained. During the operational phase the proposed SuDS pond will discharge into the watercourse. This will necessitate the construction of a headwall. Any loss of vegetation as a result of the installation and operation of the outfall will be permanent but sufficiently small in scale to be **Negligible**.

8.135 During the operational phase there is a risk of pollution and sedimentation discharge into the Walshaw Brook. This has the potential to course a **Significant Adverse** impact at a **Local level**.

Mitigation

8.136 The Site has been designed so that the stream is buffered from built development by the large expanse of greenspace as shown on the Framework Masterplan (12221-FPCR-XX-XX-DR-A-0001-P06), thereby minimising impacts during operation.

8.137 The adoption of standard pollution methods within the CEMP for the construction phase will mitigate any potential pollution issues.

8.138 The proposed SuDS drainage strategy/maintenance and management plan as integral to the scheme, will prevent silt, sediment, and pollutants entering the watercourse during the operational phase.

8.139 During operation, the discharge rate will be as green field from the Site, so the discharge into the stream won't be any greater than the current discharge from the Site.

Compensation/Enhancement

8.140 Within indicative proposals, the enhancement of Walshaw Brook including vegetation structure and reducing invasive species cover will achieve over 26% net gain in water course units on Site.

Residual Effects

8.141 With due consideration to Site design and the mitigation set out above, it is considered that the residual effect on the stream will be **Negligible**.

Invasive Non-Natives

Assessment of Impacts

8.142 The invasive plant Himalayan balsam was present over much of the Site. Left untreated, this has formed large stands and has out-competed native species. This process will continue unless management/treatment is put in place. It is listed on schedule 9 of the Wildlife and Countryside Act 1981 (as amended), which imparts a legal obligation for no action to take place that might result in this species being caused to grow in the wild. In the absence of mitigation, it is possible that an offence could be committed if contaminated material is transported offsite. An Invasive Species Report has been undertaken and submitted with the planning application.



Mitigation

- 8.143 An eradication and monitoring strategy will outline management, treatment and monitoring of this species. This can be secured by way of planning conditions.
- 8.144 As the plant spreads by exploding seed pods and the developer will have no control over any Himalayan balsam offsite, then future habitat management prescriptions will include an element of monitoring for the species spreading back into the Site and reestablishing.
- 8.145 Further information can be gained from the Environment Agency information booklet, Guidance for the Control of Invasive Species in or near Fresh Water and Guidance on Japanese Knotweed, Giant Hogweed and Other Invasive Species produced by DEFRA.

Compensation

- 8.146 None.

Residual Effect

- 8.147 Removal/control of this species will be a **Not Significant, Beneficial effect**.

Breeding Birds

Assessment of Impacts

- 8.148 The indicative layout of the development includes the loss of the majority of area based habitat within the Site, and the loss of three internal hedgerow. Given the limited suitability of the grassland habitat, and the availability of hedgerow habitat within the wider site, this loss is anticipated to have a Negative impact on these species at the Local level.
- 8.149 Following construction, the development has the potential to impact upon local populations of breeding birds in the following ways:
- Disturbance of breeding birds due to increased presence of people and dogs (Negative); and
 - Disturbance of breeding birds as a result of increased presence of domestic cats (Negative) impact of up to local significance).

Mitigation

- 8.150 The inclusion of green infrastructure planting and the maturation of gardens will lead to a more diverse range of habitats providing opportunities for a range of species found on Site compensating for the loss of habitat resulting from the development.
- 8.151 Vegetation removal will be avoided during breeding bird season (March to August, inclusive) or will be carried out immediately following a nesting bird check by a suitably qualified ecologist.



8.152 New hedgerow, tree and shrub planting will include thorny species to provide some protection against cats, and berry-bearing species to provide additional foraging opportunities for birds.

Compensation

8.153 Inclusion of nest box on the buildings, this is to include:

- A mixture of small hole (26mm and 32mm boxes) placed on the buildings away from directed artificial light will provide nesting opportunities for species such as blue tit and great tit. These boxes generally have a high uptake rate;
- The inclusion of house sparrow terrace nest boxes on the buildings to encourage this species which are able to take advantage of urban sites to breed. Optimum positions are under eaves, with several in close proximity since this species are gregarious.

Residual Effects

8.154 With due consideration to appropriate mitigation set out above, it is considered that the residual effect on breeding birds would be **Neutral**.

Commuting and Foraging Bats

Assessment of Impacts

8.155 Proposals have sought to retain and buffer suitable bat foraging and commuting habitat where possible. There will be a loss of hedgerow H3, H5 and H6, and line of trees 4 will be removed in its entirety along with a section of 2. A number of individual trees will also be removed.

8.156 In the absence of specific mitigation, there will be a **Not Significant** loss of foraging and commuting habitat, used by low numbers of common and widespread species as a result of hedgerow and tree loss and also localised lighting effects.

8.157 Mitigation by design has included habitat enhancements and creation of additional habitats of higher value to foraging, roosting and commuting bats.

8.158 There is potential for disturbance impacts during operations, via lighting, and noise/vibration. It is unlikely that any bat roosts will be impacted. It should be noted that the overall percentage of bat species that are known to be light sensitive (Myotis Sp. and brown long-eared bat) represented less than 0.4% of the bats registered over the year on the static bat detectors. Therefore, the increase in lighting is unlikely to be significant at a population level).

8.159 Impacts during both the construction and operational impacts are considered **Not Significant Adverse** impact at a **Local level**.



Mitigation

- 8.160 A lighting strategy should be produced to ensure that retained and new habitat features that are suitable for foraging and commuting bats are not degraded by new lighting.
- 8.161 It is recommended that the lighting design strategy is reviewed (and if necessary updated) for any new development proposals as part of future Reserved Matters applications, to ensure there are no negative impacts to wildlife from lighting. This can be secured via a planning condition.
- 8.162 Any required works to mature trees or existing structures must be preceded by an updated assessment of their bat roost potential by a suitably qualified ecologist, in order to prevent potential harm to roosting bats. This can be secured via a planning condition.

Compensation

- 8.163 A range of bat boxes suitable for a variety of species should be secured via a planning condition.

Residual Effect

- 8.164 Given the above impacts on bats would be considered **Negligible**.

Cumulative Effects

- 8.165 Cumulative Effects are any additional existing or approved developments that are either within the vicinity of the Site or considered to share the same environmental resource that are required to be assessed by the LPA as part of the Cumulative Effects section of the EIA.
- 8.166 This includes the wider development covered by the Policy JP Allocation 9: Walshaw, and the PfE Allocation Elton Reservoir, a search of the Bury planning portal was also undertaken.
- 8.167 PfE Allocation JP9: Walshaw is required to provide a broad mix of 1,250 homes as an appropriate mix of types and sizes, including custom self builds and affordable. It will include a new strategic through road with a network of a safe cycling and walking routes. A new primary school and local centre will also be included.
- 8.168 PfE Allocation JP7: Elton Reservoir, is anticipated to deliver a broad mix of around 3,500 homes to diversify the type of accommodation in the Bury and Radcliffe areas. It will include A north-south strategic spine road connecting Bury and Bolton Road (A58) to Bury Road and Other new and improved sustainable transport and highways infrastructure. Structural upgrades to the reservoir will also be required.
- 8.169 Below is an assessment of the ecologically important features on Site which have the potential to have cumulative effects with the wider Allocation 9: Walshaw development. The indicative Masterplans prepared for the PfE Examination (Ind11 options 1 and 2) have been used to assess the cumulative effects.



8.170 The following have been reviewed in relation to Allocation 7: Elton Reservoir, Bury Places For Everyone Proposed Allocation JPA7 Ecological Overview (The Environment Partnership, 2021). This document provides a review of the following ecology reports;

- Results of Desktop Study and Scope of Ecological Survey (ERAP, March 2019);
- Phase 1 Habitat Survey (ERAP, March 2019);
- Great Crested Newt Surveys 2017 (ERAP, March 2019);
- Confidential badger Survey (ERAP, March 2019);
- Wintering and Breeding Bird Surveys 2017 (ERAP, March 2019);
- Water Vole and Otter Survey 2017 (ERAP, March 2019);
- Bat Activity Surveys and Assessment (ERAP, March 2019);
- Elton Reservoir Outlined Ecological Mitigation and Enhancement Strategy (ERAP, March 2019).

Designated Sites

8.171 The cumulative effects of the wider development on the nearby designated site of Kirklees Valley Local Nature Reserve, Cockey Moor Wood Pasture and Marsh, Cyrus Ainsworth's Nurseries and Parkers Lodges and Kirklees Brook SBI are limited to effect resulting from a potential increase in visitor pressure.

8.172 The Kirklees Valley LNR and Kirklees Brook SBI are actively managed for public access. Aerial imagery available from Google indicates that the Cockey Moor Wood Pasture and Marsh, Cyrus Ainsworth's Nurseries and Parkers Lodges SBIs also have a number of public footpaths and permissive rights of way around/through the sites.

8.173 It is therefore inevitable that each phase of development will increase the number of users/ visitors of each of the designated sites with public access that have been outlined above.

8.174 The wider allocations aims to;

"Make provision for new, high quality, publicly accessible, multifunctional green and blue infrastructure within the allocation including the integration and enhancement of the existing green infrastructure corridors and assets at Walshaw and Elton Brooks"

8.175 The proposed scheme is dedicating 40% of the area to greenspace and the emphasis of the allocation suggests that this should be a common theme throughout.

8.176 The ecological review of the allocation site JPA7 states that there is;

"unlikely to be significantly impacted by the proposals, due to a lack of impact pathway. This assumption will be tested in the final Ecological Impact Assessment, and if necessary, mitigation measures can be developed to avoid emissions."

8.177 There is a high proportion of retained Green Belt within the JPA7 allocation which is likely to be utilised by residents within the allocation site (Illustrative masterplan, September 2020).



8.178 Therefore, it would be expected that the cumulative impacts of increased visitor pressure on the listed Local Nature Reserve and SBIs should be largely offset as the various stages of the allocation processes and the resulting impacts would not be considered to be **Not Significant** at a **Local level**.

Hedgerows, Line of Trees and Trees

8.179 At present there is no detailed baseline information on the extent of hedgerows, line of trees and trees across the wider allocation site. From aerial imagery hedgerows and trees appear to be better represented across the wider allocated site than on the Site, while lines of tree appear to be proportionally similar.

8.180 Hedgerows within the JPA 7 site are all species poor and in medium or low condition, all consist of native species so are considered priority habitats, trees were considered to be in medium condition and covered 0.23% of the total allocation Site area. No lines of trees were recorded at the time of surveying.

8.181 It is likely that where possible these hedgerows, lines of tree and trees will be retained and/or enhanced. Given the statutory requirement for Biodiversity Net Gain any loss will be compensated for to a minimum of a 10% increase. Therefore, providing an overall **Significant Beneficial effect** at a **Local level** following compensation.

Walshaw Brook

8.182 At this stage, it is not known if construction of the wider allocation parcels will run concurrently with development of the Site. However, it is anticipated that all developments will mitigate potential pollution impacts through the adoption of standard pollution methods within a CEMP.

8.183 Current proposals suggest that other developments within the catchment of Walshaw brook will discharge surface water into this water course. This includes other schemes to the north of Walshaw Brook and those to the south up to Walshaw Road.

8.184 All developments within the wider allocation site will have SuDS drainage strategy/maintenance and management plan as integral to the schemes. This will prevent silt, sediment, and pollutants entering the watercourse during the operational phase.

8.185 The JPA 7 allocation site is not hydrologically linked to the Walshaw Brook and is considered to be at a sufficient distance that no impact paths would be present to have any cumulative effect.

8.186 Therefore, the cumulative impacts are considered to be **Negligible**.

Breeding Birds

8.187 Baseline information for breeding birds across the wider allocation was not available at the time of writing. The assessment is therefore based upon habitats present on aerial imagery, consultation data and professional judgement.



- 8.188 Habitats present appear to be broadly similar to those on the proposed Site with grassland making up the majority of the habitats present, with hedgerows, trees and small areas of woodland. Two potential ditches were also present along with the Elton Brook which runs along the southern boundary.
- 8.189 The results of the desk study showed that the bird species present in the wider area are similar to those found on Site. All species returned as part of the desk study with the exception of kingfisher *Alcedo atthis* and bullfinch *Pyrrhula pyrrhula* were recorded during the breeding bird surveys.
- 8.190 The emerging Walshaw Masterplan for the wider allocation site indicates that the level of green space and gardens provided will be proportionate to that of the proposed Site. The principles behind the Elton Reservoir JPA7 site aim to retained extensive areas of nesting and foraging breeding bird habitat within the green infrastructure.
- 8.191 Given the above and with due consideration to appropriate mitigation it is considered that cumulative impacts on breeding birds would be **Neutral**.

Commuting and Foraging Bats

- 8.192 Baseline information for commuting and foraging across the wider allocation was not available at the time of writing. The assessment is therefore based upon habitats present on aerial imagery, consultation data and professional judgement.
- 8.193 Habitats present appear to be broadly similar to those on the proposed Site with grassland making up the majority of the habitats present, with hedgerows, trees and small areas of woodland. Two potential ditches were also present along with the Elton Brook which runs along the southern boundary.
- 8.194 The results of the desk study showed that the bat species present in the wider area are similar to those found on Site. All species returned as part of the desk study with the exception of noctule *Nyctalus noctula* were recorded during the activity surveys. Common pipistrelles were the most commonly recorded species both in the desk study and the activity surveys.
- 8.195 The emerging Walshaw Masterplan for the wider allocation site indicates that the level of green space and gardens provided will be proportionate to that of the proposed Site.
- 8.196 The Ecological Review of the Elton Reservoir allocation site states that;

“Key foraging and commuting habitat, particularly aquatic and wetland habitats, as well as trees and hedgerows, will largely be retained within proposals”.

- 8.197 Given the above and with due consideration to appropriate mitigation it is considered that cumulative impacts on commuting and foraging bats would be **Neutral**.



Summary and Conclusions

- 8.198 This Chapter provides an assessment of the significance of potential ecological effects upon identified Important Ecological Features (IEFs) arising from the proposed development.
- 8.199 Avoidance, mitigation and compensation measures have been prepared as part of a holistic ecology strategy to address any likely significant effects that may arise during construction and after completion (operation) of the Proposed Development. Additional measures to further ensure all residual effects are avoided, mitigated and compensated for, in addition to further enhancements recommended to enable the Proposed Development to deliver **Beneficial** ecological gain are also discussed.
- 8.200 Further baseline information in support of this Chapter is included within the Ecological Appraisal (**Volume 3: Technical Appendix 8.1**) and is referred to throughout this assessment. The approach taken in this assessment is made with reference to the guidelines published in 2018 by the Chartered Institute of Ecology and Environmental Management (CIEEM).
- 8.201 The impact assessment has identified that certain actions could result in **Adverse** effects on some of the identified IEFs without mitigation. Inherent avoidance, mitigation and compensation measures and the implementation of a Construction Environmental Method Plan (CEMP), and Landscape and Ecology Management Plan (LEMP) are considered to ameliorate those Significant effects identified to a residual level where **No Significant Adverse** effects are likely. Furthermore, such measures can potentially deliver considerable **Beneficial** effects with respect to biodiversity gain.
- 8.202 Based on the impact assessment and consideration of the IEFs, it is concluded that the Proposed Development will conform to the legislative protection afforded to these IEFs and with national, regional and local planning policy. A summary of any residual effects is provided within **Table 8.7** below.

Table 8.7: Summary of Residual Effects of the Proposed Development

Receptor	Residual Effect and Significance
Kirklees Valley LNR	Not Significant Adverse impact at a local level
Kirklees Brook SBI	Not Significant Adverse impact at a local level
Cyrus Ainsworth's Nurseries and Parkers Lodges SBI	Negligible
Cockey Moor Wood Pasture and Marsh SBI	Negligible
Hedgerows	Not Significant Adverse impact at a local level
Lines of Trees	Negligible
Individual trees	Negligible
Walshaw Brook	Negligible
Himalayan balsam	Not Significant Beneficial effect
Breeding Birds	Neutral
Commuting and foraging Bats	Negligible



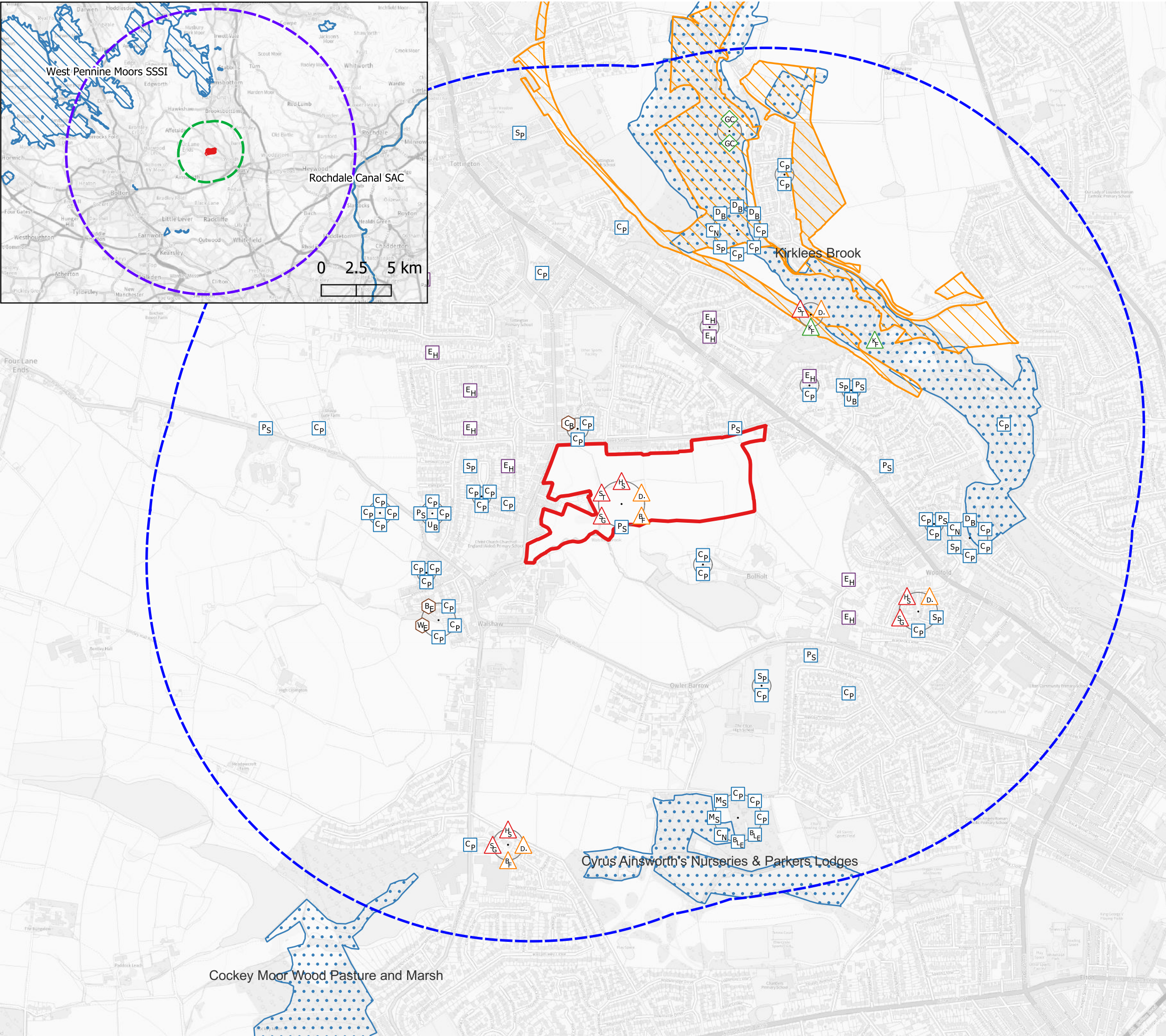
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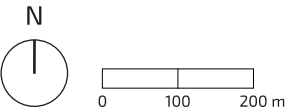
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- Wild Mammals (Protection) Act 1996, c3, available at <https://www.legislation.gov.uk/ukpga/1996/3/contents>, last accessed 05.11.24.
- The Wildlife and Countryside act 1981 (as amended), c.69 Available at <https://www.legislation.gov.uk/ukpga/1981/69/contents>. Last accessed 05.11.24.





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- Key:**
- Red Line Boundary
 - 10km buffer
 - 1km Site Buffer
 - Local Nature Reserve (LNR)
 - Common pipistrelle
 - Soprano pipistrelle
 - Pipstrelle species
 - Common noctule
 - Brown long-eared
 - Myotis species
 - Daubenton's bat
 - Unknown bat species
 - Western European hedgehog
 - Great crested newt
 - Starling
 - Song thrush
 - Kingfisher
 - Dunnock
 - Bullfinch
 - House Sparrow
 - Cinnabar Moth
 - White Ermine
 - Buff Ermine
 - Special Area of Conservation
 - Sites of Special Scientific Interest

date
23/10/24

drwn/chkd
SH/AJB

client
Wain Estates

project
**Scobell Street,
Bury**

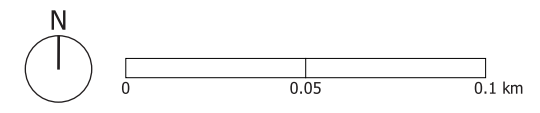
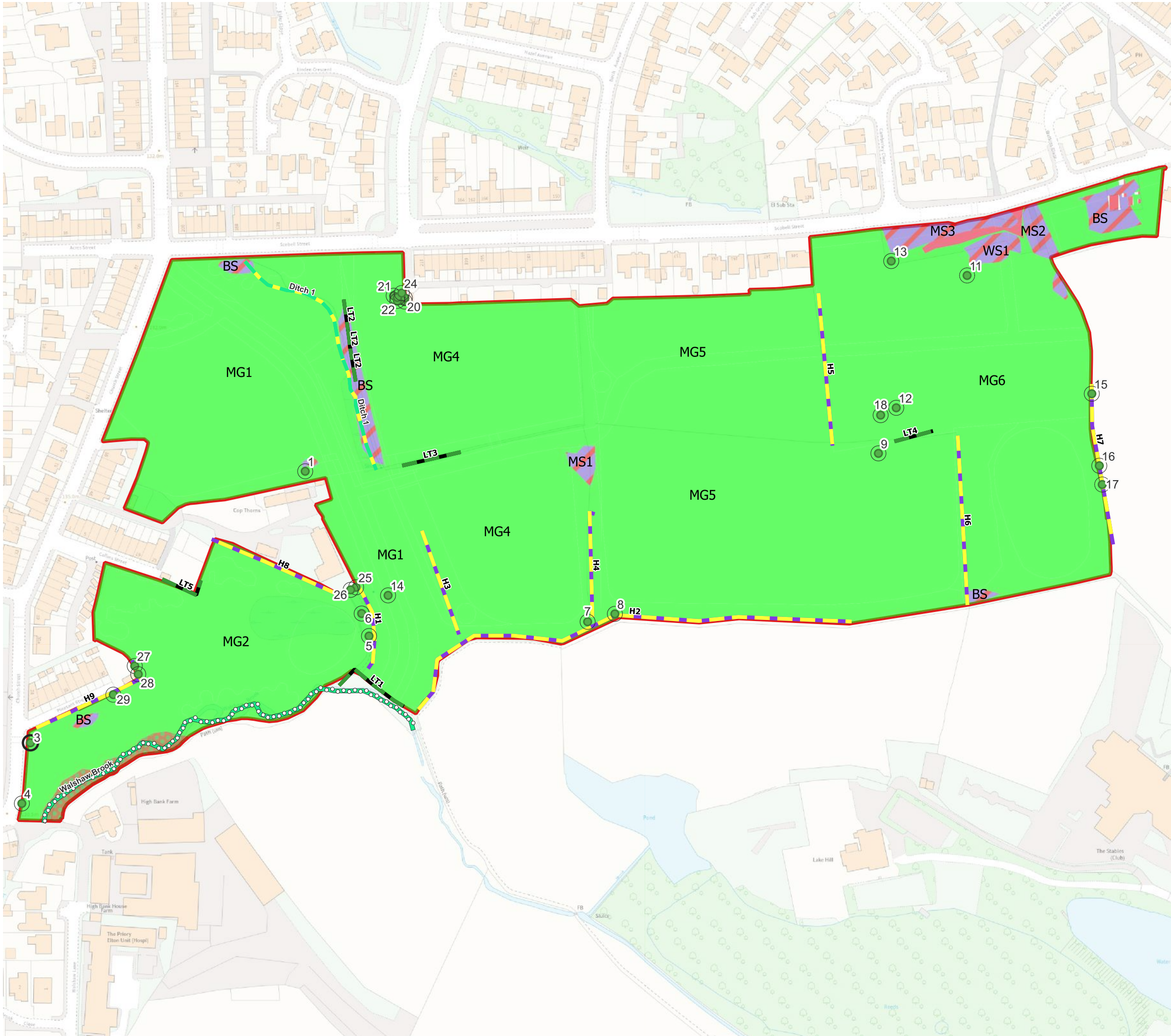
title
**SITE LOCATION AND
CONSULTATION PLAN**

scale
1:10,000 @ A3

number
-

rev
-

FIGURE 8.1



Key

- Site Boundary
- Existing Large Rural Tree
- Existing Medium Rural Tree
- Existing Small Rural Tree
- Bramble scrub
- Developed land; sealed surface
- Mixed scrub
- Modified grassland
- Other woodland; mixed
- Willow scrub
- Bare ground
- Line of trees
- Native hedgerow
- Ditches
- Other rivers and streams

date	09/12/24	drwn/chkd	HK / SH
client	Wain Estates		
project	Scobell Street, Bury		
title	UK HABITAT PLAN	scale	1:2,100 @ A3
number	FIGURE 8.2	rev	

9. Transport and Movement

Introduction

- 9.1 This Chapter has been prepared by SLR Consulting (SLR), as competent experts in accordance with Regulation 18(5) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, as amended.
- 9.2 It considers the environmental impacts of a residential development at Land off Church Street / Scobell Street, Walshaw, Bury. This application refers to the northern parcel that makes up part of the wider Walshaw allocation in Places for Everyone (PfE) (Policy JPA9).
- 9.3 This Chapter follows the scope and methodology of the assessment from the latest 2023 guidance from the Institute of Environmental Management and Assessment (IEMA) 'Environmental Assessment of Traffic and Movement'.
- 9.4 The structure of the Chapter is as follows:
- Summary of relevant national, regional and local transport policies;
 - Summary of assessment methodology followed;
 - Assessment of baseline accessibility and transportation conditions;
 - Assessment of the impact of the Proposed Development on baseline conditions;
 - Identification of appropriate mitigation measures to offset potential Adverse impacts and any residual effects; and
 - Assessment of potential additional cumulative effects and interactions associated with wider Walshaw allocation development.
- 9.5 SLR has also prepared a Transport Assessment (TA) in support of the outline planning application. This is provided within Volume 3 of this ES at **Technical Appendix 9.1**. This ES Chapter draws upon, and makes reference to that TA document which contains additional detailed active travel and traffic impact analysis.
- 9.6 SLR is an environmental consultancy providing specialist development planning and infrastructure services to the property industry.

Site Description, Background and Proposals

- 9.7 The Site comprises approximately 11.3 ha of land on the eastern edge of Bury. It is currently in use for pastoral farming. The fields are divided by hedgerows interspersed with trees.



- 9.8 The proposals seek outline planning permission for up to 275 dwellings within the Site with all matters reserved other than access. An extract of the indicative Masterplan for the proposed development (northern parcel) is shown in **Figure 9.1**.

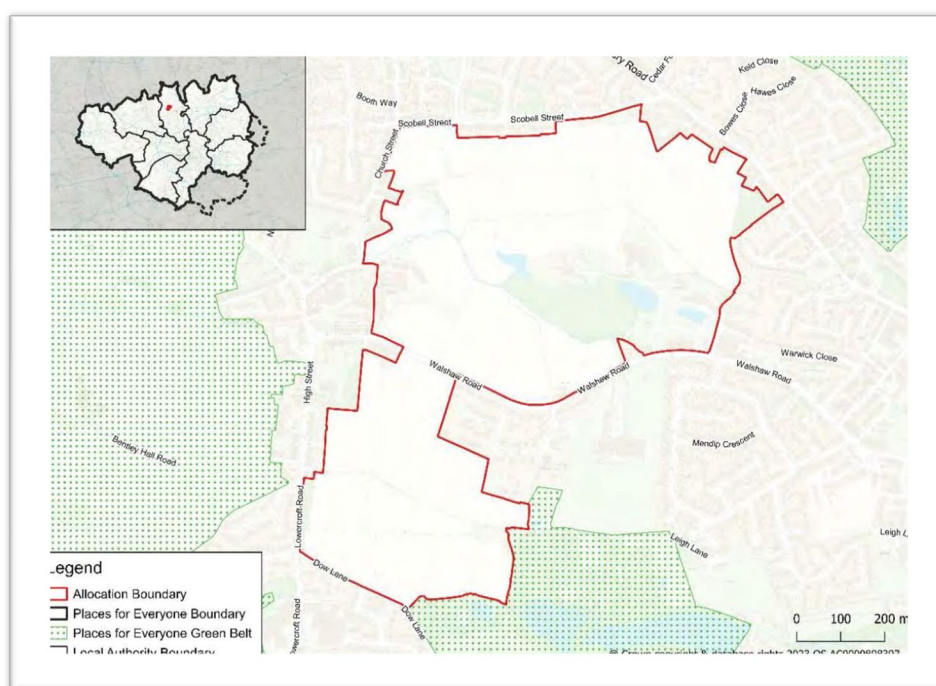
Figure 9.1: Indicative Development Site Masterplan



- 9.9 It is proposed to provide access to the proposed development at locations from Scobell Street to the north of the site, and Church Street to the west of the site, in the form of new priority junctions plus separate pedestrian/cycle only access points.
- 9.10 The access strategy allows for the delivery of housing on the site, whilst also then being able to integrate with the wider infrastructure proposed as part of the wider Walshaw site allocation; namely the internal link and associated junction infrastructure.
- 9.11 The proposals also allow for the construction of a new junction at Scobell Street/Church Street which will ultimately serve as a new access for the internal link that will run through the wider Walshaw allocation and will be delivered as part of future phases.
- 9.12 The aim of the Proposed Development is to provide improvements to pedestrian / cycle connectivity between the Site and existing residential areas within Walshaw, but also the rest of Bury.
- 9.13 As shown within the indicative Masterplan there are a number of existing Public Right of Way (PRoW) connections from Scobell Street and Church Street that will be retained and improved.

- 9.14 These PRow connections are discussed in detail within Chapter 6 of the TA (**Volume 3: Technical Appendix 9.1**).
- 9.15 The internal road network will provide a suitable hierarchy acknowledging national design criteria to promote enhanced streets, informal streets and pedestrian-priority streets with appropriate active frontage in parts to reinforce a low-speed residential environment.
- 9.16 The overarching concept which underpins the access and movement strategy is that planning for people creates places for people, in contrast to planning for cars which has always historically resulted in places dominated by cars.
- 9.17 Further details regarding the internal road layout, the link road and non-vehicular access points within the wider Masterplan site will be resolved through a future reserved matters application.
- 9.18 As stated, the Proposed Development site forms a part of the wider Walshaw allocation. The wider allocation is enclosed by Scobell Street and residential properties to the north; Tottington Road and residential properties to the north-east; woodland to the east; the Best Western Bury, Bolholt Country Park and Stables Country Club to the south-east, Walshaw Brook and agricultural fields to the south-west and Church Street, residential properties, garaging and a cattery to the west. An extract of the allocation area is shown in **Figure 9.2** below.
- 9.19 The Masterplan for the wider allocation has been devised to create a new vision for living, where people want and have the option to live locally, building a close relationship with their community, whilst also remaining connected to key regional centres through attractive and direct active travel and shared travel links.

Figure 9.2: JP Allocation 9 Walshaw



- 9.20 In addition to residential development, land for a school and other community facilities was also allowed for acknowledging the importance of positioning facilities and services within easy walking, cycling and scooting distances from residents in the local community, which the allocation area forms part of.
- 9.21 The allocation site and associated Masterplan has previously been subject to an overarching assessment presented as part of the PfE evidence base, which considered a development scale of up to 1,250 dwellings on the site.
- 9.22 The PfE document indicated that the development of residential dwellings on the site could be accommodated on the local network with an appropriate mitigation strategy outlined consisting of infrastructure improvements and/or contributions towards wider infrastructure identified by Bury Council (BC).
- 9.23 Since the adoption of the PfE, the wider Walshaw allocation has been undergoing a further comprehensive masterplanning process which has informed the development of the northern parcel. This includes correspondence and liaison with key stakeholders, including the Council and Transport for Greater Manchester (TfGM).
- 9.24 A full Transport Assessment and Environmental Statement is accompanying the masterplanning process for the allocation, building upon the PfE assessment.
- 9.25 These latest assessments for the northern parcel and wider Walshaw allocation are aligned and entirely consistent such that judgements can be made about infrastructure needed for the wider allocation, but also specifically how the northern parcel assists with the delivery of this.

Legislation and Policy

National Policy

- 9.26 The most recent iteration of the National Planning Policy Framework (The Framework) was published in December 2024 and sets out the Government's planning policies for England and how they are expected to be applied. The original Framework was published to replace, amongst others, PPG13 Transport and provides the single national transport planning policy.
- 9.27 Section 9 of the Framework specifically looks at transport and is entitled Promoting Sustainable Transport. It states at paragraph 109 that:
- ‘Transport issues should be considered from the earliest stages of plan-making and development proposals’.
- 9.28 It goes on at paragraph 110 to say that:

‘The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable,



through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.'

9.29 The document states at paragraph 111 that:

'Planning Policies should:

- a) support an appropriate mix of uses across an area, and within larger scale sites, to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities;
- b) be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned;
- c) identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development;
- d) provide for attractive and well-designed walking and cycling networks with supporting facilities such as secure cycle parking (drawing on Local Cycling and Walking Infrastructure Plans)...'

9.30 The Framework makes clear at paragraph 116 that:

'Development should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios'.

9.31 It then further states at paragraph 117, in reference to the above, that:

'Within this context, applications for development should:

- a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
- b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
- c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;
- d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and
- e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations'.



Regional Policy

Bury Council Unitary Development Plan

- 9.32 The Bury Unitary Development Plan (UDP) acts as a guide for the future development or protection of land in the Borough and together with other adopted Development Plan Documents its policies and proposals form the basis for the Council's decisions on planning applications.
- 9.33 Chapter 10 of the UDP relates to highways and transportation with policies, many of which have been replaced by policies of the PfE. The following policies remain relevant for consideration:
- HT2/1 The Strategic Route Network
 - HT2/2 Improvements to the Strategic Route Network
 - HT2/3 Improvements to Other Roads
 - HT3/1 Schemes to Assist Bus Movement
 - HT5/1 Access for those with Special Needs
 - HT6/1 Pedestrian and Cyclist Movement
 - HT2/4 Car Parking and New Development
 - HT6/3 Cycle Routes

Greater Manchester Places for Everyone (PfE)

- 9.34 The Site forms part of a strategic site allocation for development in the Places for Everyone (PfE) Plan, which was adopted on 21 March 2024. Policy JP Allocation 9 (Walshaw) (JPA9) allocates the land for the delivery of around 1,250 dwellings and associated facilities and infrastructure.
- 9.35 Other PfE policies relevant to transport matters include:
- JP-C1 Our Integrated Network
 - JP-C2 Digital Connectivity
 - JP-C3 Our Public Transport
 - JP-C4 Strategic Road Network
 - JP-C5 Streets for All
 - JP-C6 Walking and Cycling
 - JP-C8 Transport Requirements of New Development

Greater Manchester Transport Strategy 2040

- 9.36 Transport for Greater Manchester (TfGM) has developed a 2040 Transport Strategy that sets out ambitions for a radical new approach to planning Manchester's transport system in support of long-term needs and aspirations.
- 9.37 The vision is for Greater Manchester to have:

“World class connections that support long-term, sustainable economic growth and access to opportunity for all”. The Transport Vision aims are as follows:

- f) Supporting Sustainable Economic growth;



- g) Protecting Our Environment;
- h) Improving Quality of Life for All; and
- i) Developing an Innovative City Region.”

9.38 The 2040 Vision is supported by policies and proposals for improving the transport network in the medium term up to 2025 structured around spatial themes.

9.39 The development proposals aspire to conform to the vision and goals as set out within the 2040 Vision Document by ensuring that the site is accessible by a variety of sustainable transport modes in order to deliver a quality development that enhances the environment.

Additional Relevant Guidance

Environmental Assessment of Traffic and Movement – IEMA Guidelines, 2023

9.40 The Institute of Environmental Management and Assessment (IEMA) publishes guidelines on the Environmental Assessment of Traffic and Movement, and the 2023 guidelines used in this Chapter replaces the previous 1993 ‘Guidelines for the Environmental Assessment of Road Traffic’. The 2023 guidelines set out the framework criteria that should be used to assess the potential environmental effects of a scheme on a number of affected parties.

9.41 The affected groups and special interests that are identified within the guidance are:

- People at home;
- People in work places;
- Sensitive groups (including young age; older age; income; health status; social disadvantage; and access and geographic factors);
- Locations with concentrations of vulnerable users (e.g. hospitals, places of worship, schools);
- Retail areas;
- Recreational areas;
- Tourist attractions;
- Collision clusters and routes with road safety concerns; and
- Junctions and highway links at (or over) capacity.

9.42 The guidance sets out two broad criteria to determine the road links to be included in the assessment, which are:

- Include highway links where traffic flows will increase by more than 30%, or the number of HGV’s will increase by 30% or,
- Include any other highly sensitive links where traffic flows have increased by 10% or more.



[Manual for Streets](#)

- 9.43 Manual for Streets was published in 2007 by the Department for Transport with the purpose of being a:
- ‘common reference point for all those involved in the design of residential neighbourhoods’ and represents ‘a strong Government commitment to the creation of sustainable and inclusive public spaces.’
- 9.44 This latest design guidance, seeks to demonstrate the:
- ‘benefits that flow from good design and assigns a higher priority to pedestrians and cyclists, setting out an approach to residential streets that recognises their role in creating places that work for all members of the community.’
- 9.45 Manual for Streets sets out the following key objectives of the design of new residential neighbourhoods:
- Encouragement of low vehicle speeds;
 - Creation of an environment in which pedestrians can walk, or stop to chat, without feeling intimidated by motor traffic;
 - Make it easier for people to move around;
 - Promote social interaction.

[Manual for Streets 2](#)

- 9.46 Manual for Streets 2 – “Wider Application of the Principles, a companion guide to Manual for Streets”, was published by the Chartered Institution of Highways and Transportation in September 2010. Manual for Streets 2 builds on the philosophies originally set out in Manual for Streets and aims to fill the perceived gap in design advice that lies between Manual for Streets and the Design Manual for Roads and Bridges.
- 9.47 The document sets out additional guidance and case studies showing how the Manual for Streets principles can be extended beyond residential streets to encompass both urban and rural situations. This includes guidance on the typical characteristics and movement/place function of rural/village roads and lanes.

Assessment Methodology

- 9.48 The assessment methodology has considered relevant transport policy, the means and location of access for pedestrians, cyclists and vehicles, the estimated levels of vehicular traffic generated by the development, the sensitivity of the road network to changes in traffic demand and any consequent environmental issues.
- 9.49 A three-stage process has been adopted for the assessment of the environmental impact of the development in transport terms, considering firstly the sensitivity of receptors, secondly the magnitude of the transport impacts and then finally the significance of the transport impacts.



- 9.50 The key potential impacts of the scheme are set out in **Table 9.1** below. The Table indicates which impacts are dealt with in this Chapter and which are dealt with in other Chapters within this Environmental Statement (ES).

Table 9.1: Potential Traffic and Transport Impacts

Impact	Section of the Environmental Statement
Noise	Chapter 12
Vibration	Not included in scope of ES
Visual Effects	Chapter 14
Severance	This Chapter
Driver Delay	This Chapter
Pedestrian Delay	This Chapter
Pedestrian Amenity	This Chapter
Fear and Intimidation	This Chapter
Accidents and Safety	This Chapter
Hazardous Loads	This Chapter
Air Quality	Chapter 11
Ecological Effects	Chapter 8
Heritage and Conservation Areas	Chapter 15

- 9.51 The IEMA methodology for assessing the magnitude of impacts is summarised below.
- 9.52 Sensitive receptors are identified and the sensitivity of a receptor is then judged based on the relative importance of the receptor using the scale set out in **Table 9.2** over page:



Table 9.2: IEMA Sensitivity of Receptor

Sensitivity	Receptor Type
High	Receptor has little ability to absorb change without fundamentally altering its present character e.g. Fear and Intimidation, Accidents & Safety and Hazardous Loads are considered to be of high sensitivity because of their potentially serious implications for the wellbeing of individual people.
Medium	Receptors has moderate capacity to absorb change without significantly altering its present character, e.g. Pedestrian Amenity and Severance are considered to be of medium significance.
Low	Receptor is tolerant of change without detriment to its character or is of low or local importance, e.g. Driver Delay and Pedestrian Delay are considered to be of low significance because while there is some increase in travel time this is less important, relatively, than other impacts.
Negligible	Receptor is not sensitive to change in impact criteria.

- 9.53 Having identified the receptors and their corresponding sensitivity, the impact magnitude criteria differs per receptor, and is determined using IEMA guidance and with some professional judgement applied.
- 9.54 In most instances the change in traffic level is used as a measure of the impact magnitude. However, it should be noted that on lightly trafficked roads these thresholds may not be appropriate due to the very low level of existing traffic.
- 9.55 The significance of the impact is then determined by the interaction of magnitude and sensitivity. The impact significance matrix is set out in **Table 9.3** below:

Table 9.3: Impact Significance Matrix

Magnitude	Sensitivity			
	High	Medium	Low	Negligible
Major	Major	Major	Moderate	Negligible
Moderate	Major	Moderate	Minor	Negligible
Minor	Moderate	Minor	Negligible	Negligible
Negligible or No Effect	Negligible	Negligible	Negligible	Negligible



9.56 The overall assessment of significance is then translated using **Table 9.4**.

Table 9.4: IEMA Assessment Methodology

Level of Effect		Criteria
Significant	Substantial	These effects are assigned this level of significance as they represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites and features of national or regional importance. A change at a borough scale site or feature may also enter this category.
	Major	These effects are likely to be important considerations at a local scale and may become key factors in the decision-making process.
	Moderate	These effects, while important at a local scale, are not likely to be key decision-making issues. Nevertheless, the cumulative effect of such issues may lead to an increase in the overall effects on a particular area or on a particular resource.
Not Significant	Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision-making process. Nevertheless, they are of relevance in enhancing the subsequent design of the project and consideration of mitigation or compensation measures.
	Negligible or No Effect	Either no effect or effect which is beneath the level of perception, within normal bounds of variation or within the margin of forecasting error. Such effects should not be considered by the decision-maker.

Baseline Conditions

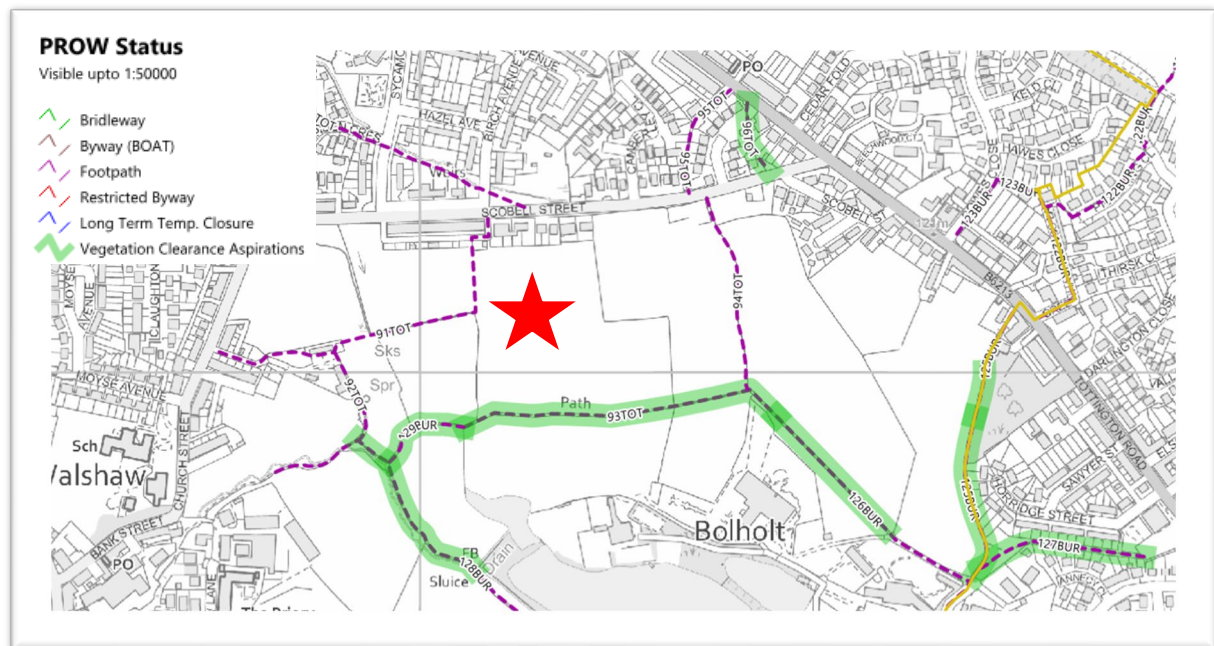
Active Travel Links

Walking

- 9.57 An analysis of the pedestrian routes to the eastern and western end of the Site have been completed to identify areas where residents can reach on foot within a 1-kilometre and 2-kilometre catchment.
- 9.58 Within a 2-kilometre walking catchment they encompass the entirety of Tottington, Walshaw, Elton and the northwestern fringe of Bury town centre.
- 9.59 The 2-kilometre catchment also benefits from a wide range of local facilities being in its vicinity making it a very well-connected development, with good access to employment, retail and leisure opportunities.
- 9.60 Pedestrian movements around the Site are supported by footways with dropped crossings throughout the surrounding residential streets. A more detailed discussion of these routes is provided in the Active Travel Routing Assessment in the TA (see **Volume 3: Technical Appendix 9.1**).
- 9.61 Furthermore, it can be seen that there are a number of Public Rights of Way (PRoW) within and surrounding the site boundary. The Council have provided a detailed PRoW Map which summarises the nearest routes. An extract of this map in the vicinity of the site is shown in **Figure 9.3** over page.



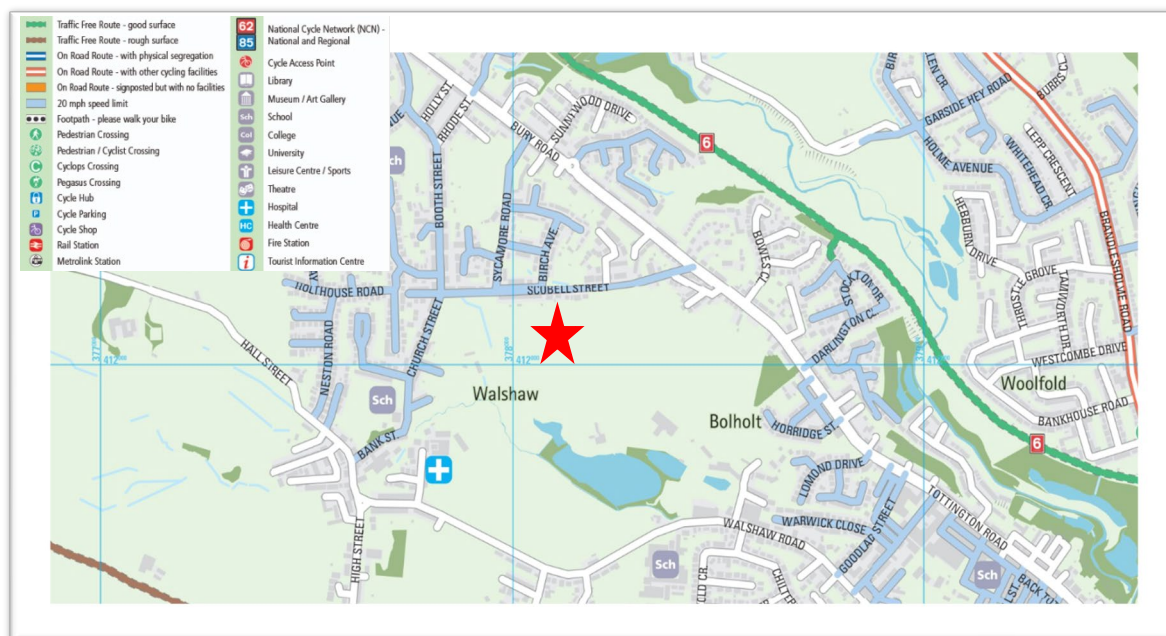
Figure 9.3: Bury Council PRoW Definitive Map



Cycling

- 9.62 Cycling is an effective mode for short trips up to three to five miles (8 kilometres) and a catchment of 8-kilometres represents a journey time of 30 minutes using a leisurely cycle speed of 10mph (16kph).
- 9.63 An 8-kilometres cycle catchment includes the entirety of Tootingham, Walshaw, Bury and other local areas such as Radcliffe, Ramsbottom and suburb areas of Bolton.
- 9.64 Furthermore, the National Cycle Network (NCN) 6 runs in close proximity to the Site.
- 9.65 TfGM have provided an online active travel map for the Bury area. An excerpt of this map is displayed on the next page in **Figure 9.4** which highlights the cycle infrastructure nearby as well as the location of NCN Route 6. The Site location is marked with a red star.

Figure 9.4: Cycle Infrastructure in Vicinity of Site

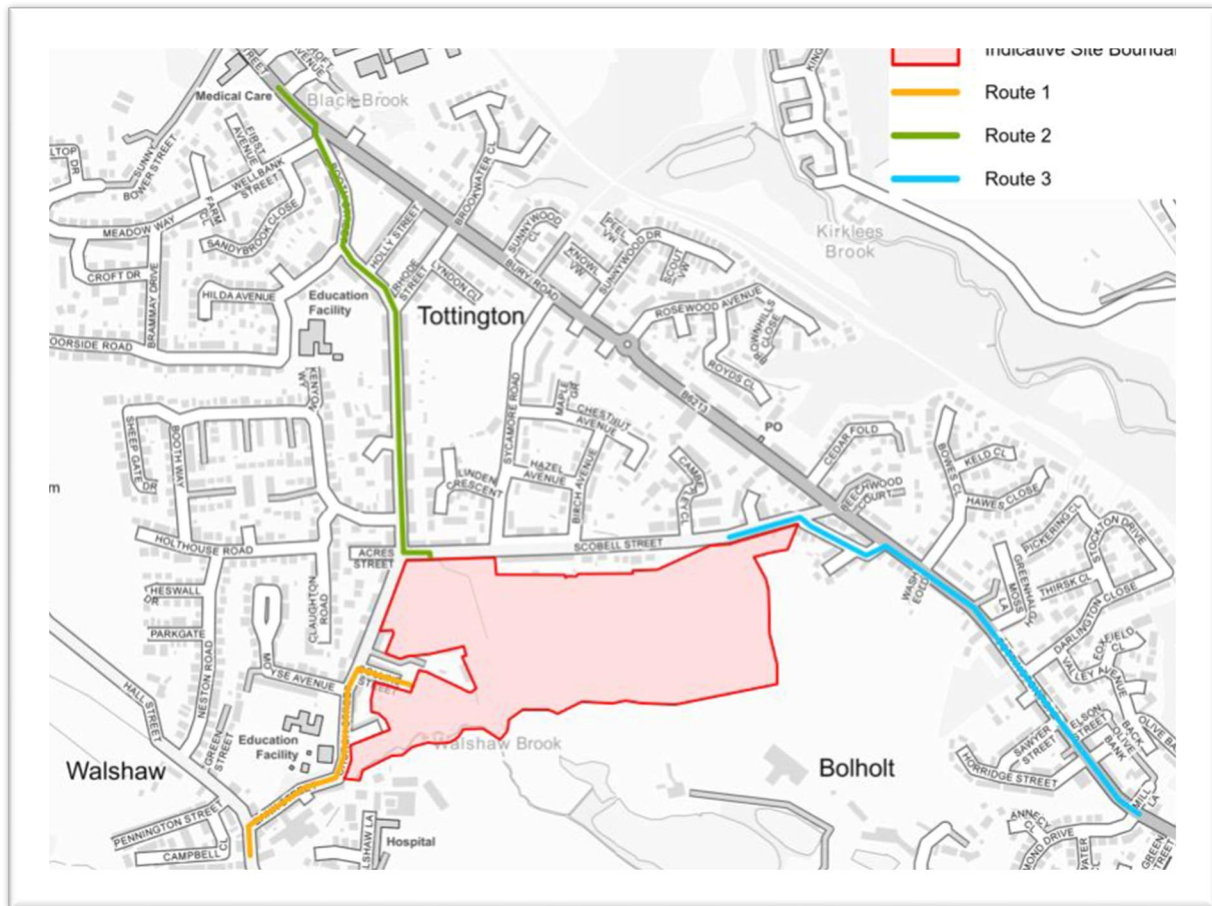


- 9.66 **Figure 9.4** shows that the Site is surrounded by 20mph speed limits, creating a safer environment for cyclists. The local area also includes an on-road route to the east of the Site along Brandlesholme Road features cycling facilities that connect to both Bury town centre and Bolton town centre.

Active Travel Routing Assessment

- 9.67 In addition to the active travel options surrounding the Site, the key active travel routes that future residents can utilise has also been assessed.
- 9.68 This assessment considers how people of all abilities will make the journeys that are essential to supporting car-free lifestyles whilst connecting the Site to the local area.
- 9.69 The aim of the assessment is to better understand the characteristics of the local area that are required to encourage active travel.
- 9.70 **Figure 9.5** on the next page, illustrates what are considered to be the key routes that can be taken from the development Site to access a variety of key local services and facilities.

Figure 9.5: Key Routes



9.71 The following active travel destinations are key to both existing users and the future users of the development:

- Public transport interchanges: Bury Tram Stop, Bury Interchange and on street bus stops;
- Local amenities: Convenience stores, supermarket, sports centre, country club, restaurants and public houses;
- Green spaces: Whitehead Park and Old Kay's Park;
- Education facilities: Tottington Primary School, Christ Church Primary School, Elton Primary School, Tottington High School Academy; and
- Medical care: Tottington Medical Practice.

9.72 The main walking / cycling routes to what are considered the main destinations for the future residents of the Proposed Development have been identified as:

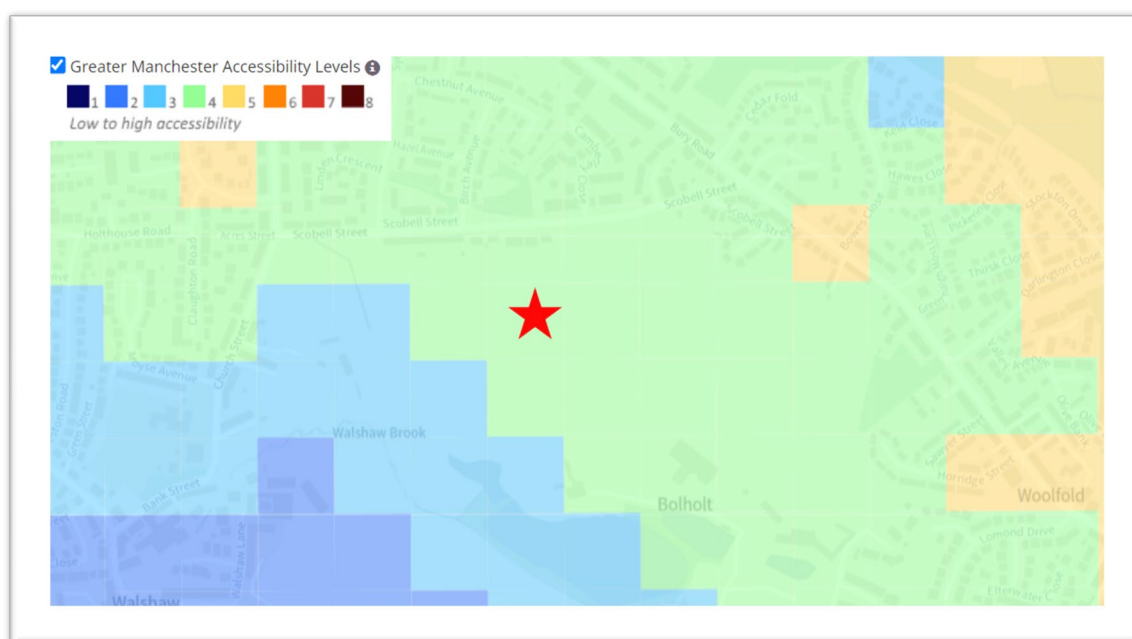
- Route 1: Church Street (westbound from the Site)
- Route 2: Booth Street (north-west bound from the Site)
- Route 3: B6213 Bury Road (eastbound from the Site)

- 9.73 Each of the routes identified include / pass multiple key destinations that are within an acceptable active travel distance from the Site.
- 9.74 Additional details are provided with in the Transport Assessment (see **Volume 3: Technical Appendix 9.1**).

Greater Manchester Accessibility Level (GMAL)

- 9.75 A Greater Manchester Accessibility Level (GMAL) calculation has been undertaken for the Site. A GMAL is calculated using the interactive tool managed and maintained by TfGM. This tool measures accessibility by public transport of a point of interest and provides a score between 1 and 8, where 1 is a low level of accessibility and 8 is the highest level of accessibility.
- 9.76 The GMAL plan in the vicinity of the site is shown in **Figure 9.6**.

Figure 9.6: GMAL level



- 9.77 **Figure 9.6** demonstrates that the Site is located in an area with accessibility level of 3 to 4. This translates to an area with a good level of public transport accessibility. With convenient access to the B6213 Bury Road to the east of the Site, this provides the opportunity to reach an accessibility level of 5 with the access to the nearest frequent bus service.
- 9.78 Additionally, the area includes well connected footways and a number of PRow routes where it would be expected that residents will likely choose to walk to their destination.

Bus Accessibility

- 9.79 The nearest bus stops to the Site are located approximately 120 metres from the western point of the Site along Church Street. This equates to a 2-minute journey on foot. Both the northbound and southbound bus stops comprise a flag post.
- 9.80 The eastern point of the Site has two additional bus stops along the B6213 Bury Road, which is an approximate 280m distance. This is around a 4-minute journey on foot. The southbound stop comprises of a flagpole stand and the northbound stop is sheltered with timetable information.
- 9.81 The frequency of services operated from both roads are shown below in **Table 9.5**.

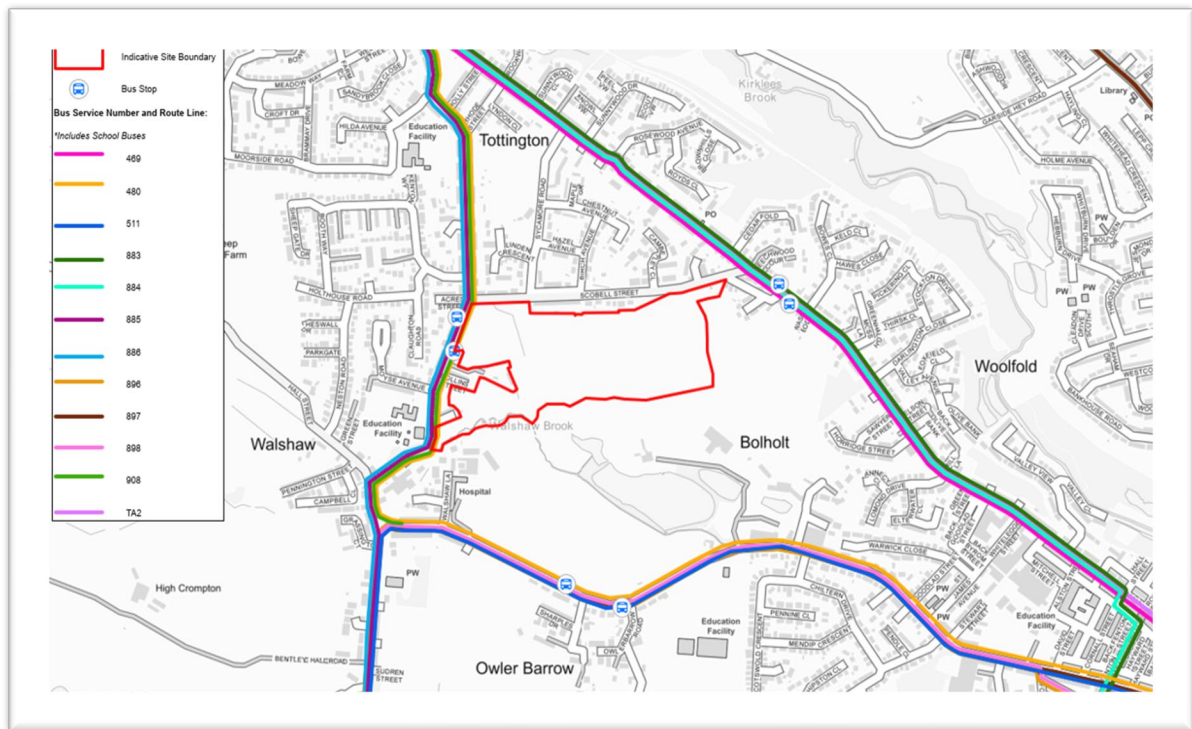
Table 9.5: Frequency of bus services in the vicinity of the site

Route	Destination	Frequency per Hour					
		Monday – Friday				Sat	Sun
		AM Peak	Daytime	PM Peak	Evening		
469	Tottington - Bury	4	4	4	2	4	2
480	Bolton - Bury	1	1	1	-	1	-

- 9.82 As seen in **Table 9.5**, the No 469 runs frequently Monday to Friday, Saturday and Sunday. The No. 480 runs hourly Monday to Saturday, with a reduced service to every 2 hours on a between 09:43am till 19:43pm.
- 9.83 There are also additional services via a Travel Assist bus, which provides transport for those with mobility impairments. This is known as the No. TA02 which operates twice a day at 10:08 and 12:32. There are also school buses running once in morning and late afternoon towards Tottington High School (Nos. 883/884 /885 /886).
- 9.84 The bus routing plan of each service provided is shown below in **Figure 9.7**.

Figure 9.7: Bus Service and Routing Plan





9.85 The Site is therefore accessible for residents by bus.

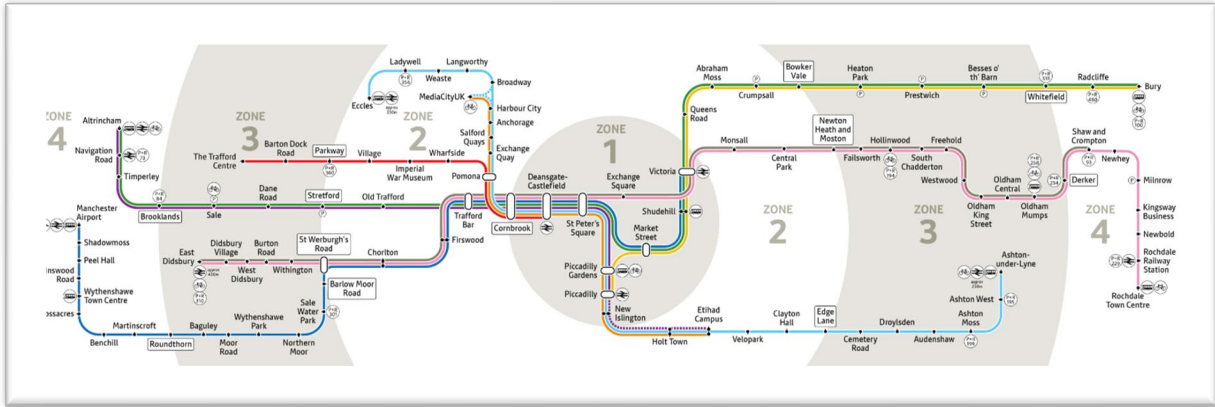
Metrolink Tram Accessibility

9.86 The nearest tram stops are located within Bury town centre. This can be reached using the No. 469 bus service that stops directly at Bury Interchange. This stop provides access towards major interchange stations with services operating to a number of key destinations, including Rochdale, Eccles, Ashton-under-Lyne, Altrincham and Manchester Airport.

9.87 All services operate on a 12-minute frequency Monday to Sunday with combined frequency of 6 minutes Monday to Saturday during the day. All lines operate between approximately 06:00 and 00:00. All Metrolink stops provide shelters, seating and real-time journey information and are accessible for disabled access with step-free access, tactile paving and dropped kerbs. The Metrolink Network across the conurbation is given in **Figure 9.8.** below.

Figure 9.8: Manchester Metrolink Network





9.88 The Site is therefore accessible for residents by tram.

60-Minute Travel Time Assessment (TRACC)

- 9.89 Taking into account the aforementioned bus, rail and tram services, the public transport accessibility has been considered using TRACC software which considers journey time, timetabling and interchange times.
- 9.90 The assessment highlights that from the centre of the Site, residents can easily reach areas such as Manchester City Centre, Bolton, and Rochdale within 60 minutes.

Description of Key Highways

Scobell Street

- 9.91 Scobell Street runs along the northern boundary of the Site and is predominantly residential in nature.
- 9.92 Scobell Street is subject to a speed limit of 20mph and is flanked by street lit footways on both sides of the carriageway. Parking bays are intermittently marked along Scobell Street, allowing residents and visitors to park their vehicles. There are no formal parking restrictions within these bays, with parking generally unregulated at present except where double yellow lines exist close to the junctions along its length.

Church Street

- 9.93 Church Street forms the western boundary of the Site, running in a north to south direction and serving as the main route through the village centre of Walshaw.
- 9.94 Church Street is subject to a 20mph speed limit, reflecting its residential nature and the need for safety in a village / community setting. Church Street includes street lit footways on both sides of the road and provides access to both local amenities to the south of the Site and other residential areas towards both Bury and Bolton.



[B6213 Bury Road](#)

- 9.95 Scobell Street runs eastbound along the northern Site boundary where it forms a priority junction with the B6213 Bury Road.
- 9.96 The B6213 Bury Road is approximately 6.5m in width and is subject to a speed limit of 30mph. The B6213 Bury Road connects Tottington with Bury through the A58 ring road, a vital arterial route throughout Bury town centre. The B6213 Bury Road is equipped with street lit footways on both sides of the road and parking restrictions along its length in the form of double yellow lines close to key junctions.

Road Safety

- 9.97 The TA reviews the accident data for the vicinity of the Site for the preceding five years at the time of production (January 2019 to December 2023), using the TfGM accident database for this purpose (see **Volume 3: Technical Appendix 9.1**).
- 9.98 It was noted that two incidents had occurred during this timeframe, as two collisions were recorded along Scobell Street during the assessed five-year period, both of which are classed as slight in terms of severity.
- 9.99 In the wider area, there are small clusters of accidents at junctions but the available data does not suggest a more than normal concern given the nature of the network and the traffic movements that currently use the network.
- 9.100 The TA concludes that there was no observable pattern of incidents which suggested that the highway infrastructure was inherently unsafe in the vicinity of the links assessed.
- 9.101 Further details of the recorded accident data are set out in Chapter 5 of the TA (**Volume 3: Technical Appendix 9.1**).

Assessment Links and Receptors

- 9.102 Links where the majority of the development traffic is estimated to travel have been surveyed to inform different reports for the Proposed Development. These locations are as follows:
- Market Street;
 - Bradshaw Road;
 - Scobell Street;
 - Walshaw Road;
 - High Street;
 - Ainsworth Road;
 - Cockey Moor Road;
 - A58 Bolton & Bury Road;
 - A58 Bolton Road;



- Brandleshome Road;
- Walmersley Road;
- Rochdale Old Road;
- Rochdale Road;
- Manchester Road;
- Peel Way.

9.103 These 15 links have been considered within this ES Chapter as they may experience changes in traffic due to the Development Proposals. These locations have been informed in part by the study area previously defined through the PfE assessment work.

9.104 Automatic Traffic Counters (ATCs) were commissioned at these locations (as identified in **Figure 9.9** over page) to record traffic data volumes across a full week. The ATC surveys recorded data between Tuesday 25th June – Monday 1st July 2024.



Figure 9.9: ATC Locations



9.105 As set out within IEMA guidance, in addition to traffic at the sites identified above, the defined affected parties within the Proposed Development will also be assessed at the sites identified above. The affected groups can be categorised as the following:

- Non-motorised users;
- Public right of way users;
- Motorists and freight vehicles;
- Public transport; and
- Emergency services.

9.106 It is considered that pedestrians and other active travel users have a high degree of sensitivity as these active travel users would experience the greatest level of change due to their level of interaction with vehicles and the built environment.

9.107 Vehicles are considered to have a low degree of sensitivity due to their ability to choose routes and change routes with relative ease, and they are also protected from the built environment by their vehicle.

9.108 As set out above in **Table 9.4**, the impacts of the likely effects on the various affected parties and areas with special interests shows that different effects will generate a different level of impact upon the affected parties and therefore should be judged accordingly.

AADT Figures

9.109 Table 9.6 below shows the surveyed 2024 AADT Baseline Traffic Flows:

Table 9.6: 2024 Surveyed AADT Data

Link Ref	Link Description	Speed Limit	Direction	AADT (7 Day) (24 Hour)		
				Total Vehicles	HDV	HDV (%)
s1	Market Street	30mph	NB	6187	351	6%
			SB	6024	332	6%
			2-Way	12211	684	6%
2	Bradshaw Road	30mph	EB	1181	86	7%
			WB	1123	77	7%
			2-Way	2304	163	7%
3	Scobell Street	20mph	EB	1274	69	5%
			WB	1392	60	4%
			2-Way	2666	129	5%
4	Walshaw Road	30mph	EB	2707	161	6%
			WB	2818	188	7%
			2-Way	5525	349	6%
5	High Street	30mph	NB	3417	210	6%
			SB	3477	239	7%
			2-Way	6895	449	7%
6	Ainsworth Road	30mph	EB	5392	364	7%
			WB	5439	310	6%
			2-Way	10831	674	6%
7	Cockey Moor Road	30mph	EB	4933	311	6%
			WB	5114	350	7%
			2-Way	10047	661	7%
8	A58 Bolton & Bury Road	40mph	EB	6732	646	10%
			WB	5114	677	13%
			2-Way	11846	1323	11%
9	A58 Bolton Road	30moh	EB	8428	674	8%
			WB	9389	737	8%
			2-Way	17817	1410	8%
10	Brandleshome Road	30mph	NB	8972	526	6%
			SB	8884	521	6%
			2-Way	17856	1047	6%
11	Walmersley Road	30mph	NB	11200	502	4%
			SB	8884	427	5%
			2-Way	20084	929	5%
12	Rochdale Old Road	30mph	EB	8719	549	6%
			WB	8982	559	6%
			2-Way	17701	1108	6%
13	Rochdale Road	30mph	EB	10174	600	6%
			WB	12630	1014	8%
			2-Way	22804	1614	7%
14	Manchester Road	30mph	NB	8856	471	5%
			SB	8809	493	6%



Link Ref	Link Description	Speed Limit	Direction	AADT (7 Day) (24 Hour)		
				Total Vehicles	HDV	HDV (%)
			2-Way	17665	964	5%
15	Peel Way	30mph	EB	17898	1776	10%
			WB	16025	1463	9%
			2-Way	33923	3240	10%

Assessment of Impact and Significance

9.110 As stated previously, a number of different IEMA based criteria are used to assess the potential environmental impacts of the Proposed Development on transport infrastructure. The criteria used includes the following, items, and reflects the 2023 IEMA guidance:

- Driver Delay;
- Pedestrian/Cycle Delay and Severance,
- Non Motorised User Amenity and Fear and Intimidation;
- Accidents & Safety; and
- Hazardous Loads.

9.111 In order to determine the geographical boundaries of the assessment (the 'study area'), professional judgement has been applied based on the extent of previous assessment study areas, local knowledge and the 2023 IEMA guidance which has two rules:

- **Rule 1:** Include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%). The 2023 IEMA guidance states that it could be assumed that projected changes below 10% do not create discernible environmental impacts.
- **Rule 2:** Include links or locations where it is felt that specific environmental or population sensitivities may occur.

Construction Phase

9.112 The volume of construction traffic will depend on the rate of build and materials used in the construction of the development, which in turn will depend on the economic climate at the time.

9.113 There are a number of construction phases associated with the Proposed Development that have the potential to generate traffic and HGV movements in particular.

9.114 Prior to the main construction phase where buildings will be built, material may need to be imported to the Site to raise ground levels. This importation of material would be by road.

9.115 Construction traffic will also be generated during construction of the proposed residential development, but this will not occur until all fill has been imported to Site.



- 9.116 Measures to define construction traffic routing are expected to be included in a Construction Traffic Management Plan to be secured by planning condition in the usual manner.
- 9.117 The estimated construction trips would be spread throughout the day, occurring at times allocated through a Delivery Management Procedure. This proposed delivery procedure would provide adequate controls, sometimes contractually, to enable the Site Manager to effectively schedule deliveries to/from the Site to minimise the impact on the local and wider road network.
- 9.118 The corresponding journeys during the construction phase will be significantly less than the impacts associated with the operational phase, which are summarised in the following section.
- 9.119 The impact of construction traffic is therefore expected to short term, temporary, **Moderate Adverse**. Through the implementation of a Construction Traffic Management Plan and Delivery Management Procedure it is anticipated that the impact could be mitigated to be **Negligible**.

Operational Phase

Committed Development and Development Vehicular Trip Generation

- 9.120 The effects of operational traffic on the local network have been assessed in the TA at Chapter 9 (**Volume 3: Technical Appendix 9.1**).
- 9.121 These figures are based upon the 2024 traffic flows obtained from the ATC surveys, and with the inclusion of all known committed developments. The calculated trip generation for the Proposed Development has also been included.
- 9.122 It is acknowledged that the wider Walshaw allocation is a committed development. Consideration of the wider allocation is considered later in this Chapter. In addition to the wider Walshaw allocation, there are three other allocations in the PfE that lie within 5km of the development site. These sites are as follows:
- JPA7 Elton Reservoir (1.5km to the south): The draft allocation is for around 3,500 dwellings.
 - JPA8 Seedfield (2km to the east): The draft allocation is for 140 dwellings.
 - JPA1.1 Heywood / Pilsworth (Northern Gateway) (5km to the south-east): The draft allocation is for 1,200,000 sqm of industrial and warehousing floorspace and 1,200 dwellings.
- 9.123 Aside from the schemes listed above, it is considered that there are no other significant developments planned in the surrounding area which would generate any significant cumulative impacts in relation to the Proposed Development. Based on the geographic location and scale of development, the committed development flows associated with the JPA7 Elton Reservoir allocation are the only flows considered as part of this assessment.
- 9.124 **Table 9.7** over page sets out the impact of operational development traffic on the assessed links.



Table 9.7: Percentage impact of operational development traffic on all links

Link Ref	Link Description	Direction	AADT (7 Day) (24 Hour) Total Vehicles			
			Committed Development	Baseline + Committed Development	Proposed Development	Impact (%)
1	Market Street	NB	91	6278	77	1.2%
		SB	92	6117	74	1.2%
		2-Way	184	12395	151	1.2%
2	Bradshaw Road	EB	11	1192	89	7.5%
		WB	11	1134	88	7.7%
		2-Way	22	2325	177	7.6%
3	Scobell Street	EB	0	1274	0	0.0%
		WB	0	1392	0	0.0%
		2-Way	0	2666	0	0.0%
4	Walshaw Road	EB	5	2712	2	0.1%
		WB	5	2823	2	0.1%
		2-Way	11	5536	5	0.1%
5	High Street	NB	108	3525	162	4.6%
		SB	109	3586	163	4.5%
		2-Way	216	7111	325	4.6%
6	Ainsworth Road	EB	0	5392	11	0.2%
		WB	0	5439	10	0.2%
		2-Way	0	10831	21	0.2%
7	Cockey Moor Road	EB	54	4987	40	0.8%
		WB	54	5168	41	0.8%
		2-Way	109	10156	80	0.8%
8	A58 Bolton & Bury Road	EB	422	7154	79	1.1%
		WB	419	5533	77	1.4%
		2-Way	841	12687	156	1.2%
9	A58 Bolton Road	EB	201	8629	0	0.0%
		WB	200	9588	0	0.0%
		2-Way	401	18217	0	0.0%
10	Brandleshome Road	NB	20	8992	7	0.1%
		SB	20	8903	7	0.1%
		2-Way	40	17895	15	0.1%
11	Walmersley Road	NB	16	11216	16	0.1%
		SB	16	8900	16	0.2%
		2-Way	32	20116	32	0.2%
12	Rochdale Old Road	EB	16	8735	16	0.2%
		WB	16	8998	16	0.2%
		2-Way	32	17733	32	0.2%
13	Rochdale Road	EB	16	10190	16	0.2%
		WB	16	12646	16	0.1%
		2-Way	32	22836	32	0.1%
14	Manchester Road	NB	129	8985	110	1.2%
		SB	127	8937	112	1.3%
		2-Way	256	17921	222	1.2%
15	Peel Way	EB	48	17946	48	0.3%
		WB	48	16073	47	0.3%
		2-Way	96	34019	95	0.3%



- 9.125 **Table 9.7** shows that with the addition of the development, flows on the assessed links are likely to increase by 0% to 8%.
- 9.126 This means that the development traffic is unlikely to result in a discernible environmental impact on any of the links likely to be used by that traffic, as traffic increases are projected to be below 10%.

Driver Delay

- 9.127 The IEMA guidelines (2023) state that:

“Traffic delays to non-development traffic can occur at several points on the network surrounding a development site including:

- At the site entrance where there will be additional turning movements
- On the highways passing the development site where there is likely to be additional traffic and the flow might be affected by additional parked cars
- At other key intersections along the highway which might be affected by increased traffic
- At side roads where the ability to find gaps in the traffic may be reduced, thereby lengthening delay”

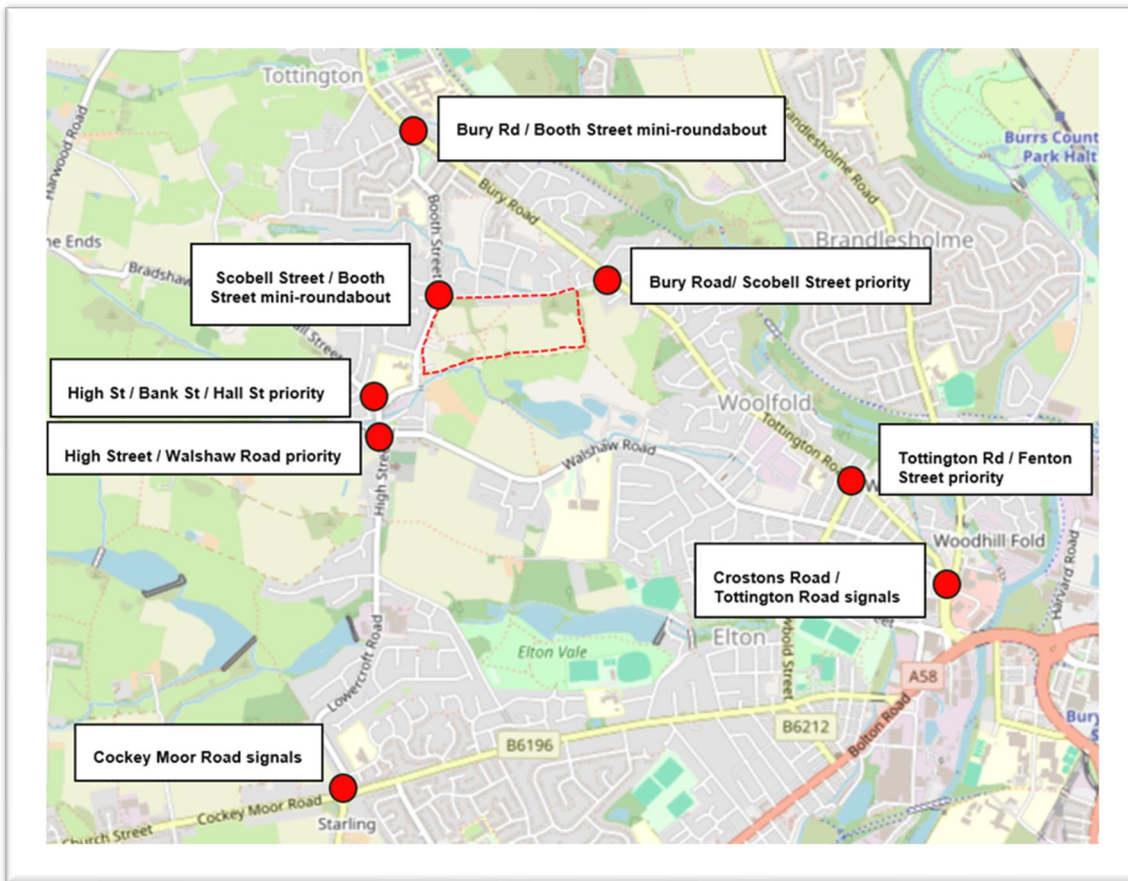
- 9.128 The guidance continues to state that:

“...these delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system.”

- 9.129 In order to establish the operation of the highway network in the vicinity of the Proposed Development, a number of key junctions have been subject to detailed capacity assessments.
- 9.130 These junctions were identified based on the traffic routing assumptions of the Proposed Development as set out in this Chapter and the TA. A plan of the key junctions that have been included in the scope of assessment have been shown in **Figure 9.10** on the next page.



Figure 9.10: Scope of Junctions



9.131 As illustrated within **Figure 9.10**, the junctions assessed as part of this assessment have been identified as the following:

- Bury Rd / Booth Street mini-roundabout junction
- Scobell Street / Booth Street mini-roundabout junction
- Bury Road/ Scobell Street priority junction;
- Tottington Road / Fenton Street priority junction;
- Crostons Road / Tottington Road signalised junction
- Cockey Moor Road signalised junction
- High St / Bank St / Hall St priority junction
- High Street / Walshaw Road priority junction

9.132 It should be noted that this assessment does not account for the new link road being constructed, as it is not envisaged that the new connection will be constructed by the time the Proposed Development is occupied.

9.133 The full traffic impact assessment methodology and analysis of results is set out in Chapter 9 of the TA (Volume 3: Technical Appendix 9.1).

- 9.134 Based on the above junction capacity assessments presented in Chapter 9 of the TA (**Volume 3: Technical Appendix 9.1**), it can be seen that the characteristics of the junctions in the vicinity of the Proposed Development are unlikely to significantly, adversely change as a result of the development traffic.
- 9.135 In overall conclusion, it is considered that the direct impacts of the Proposed Development on driver delay will be **Minor Adverse** or **Negligible** for the surrounding network.

Pedestrian and Cycle Delay & Severance

- 9.136 The 2023 IEMA Guidance acknowledges that pedestrian and cycle delay and severance are closely related effects and for the purposes of this assessment have been grouped together.
- 9.137 Changes in the volume, composition or speed of traffic may affect the ability of people to cross roads. In general, increases in traffic levels are likely to lead to greater increases in delay. Delays will also depend on the general level of pedestrian activity, visibility and general physical conditions of the development Site.
- 9.138 As set out in the 2023 IEMA Guidance, the measurement and prediction of severance is difficult. The correlation between the extent of severance and the physical barrier of a road is not clear and there are no predicative formulae that give simple relationships between traffic factors and levels of severance.
- 9.139 Factors that need to be considered in determining whether severance is likely to be an important issue include road width, traffic flow and composition, traffic speeds, the availability of crossing facilities and the number of movements that are likely to cross the affected route.
- 9.140 The guidance acknowledges that the construction of new road links has the potential to cause an increase in severance within the development parcels if they are not designed to a high standard. However, the traffic flows expected within the secondary and tertiary streets of the development would not be dissimilar to those found within any normal residential development, and therefore would not cause a high level of severance for future residents.
- 9.141 The Department for Transport has historically set out a range of indicators for determining the significance of severance. Changes in traffic flow of 30%, 60% and 90% are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance respectively.
- 9.142 Although these thresholds no longer appear in Department for Transport guidance, they have not been superseded by subsequent changes to guidance and are established through planning case law. If these thresholds were to be applied on this assessment, all links would be subject to a **Negligible** impact on severance.
- 9.143 The 2023 IEMA guidelines also highlight other assessment methodologies for consideration with reference to DfT TAG Unit A4-1 and BMRB LA 112. However, it also recommends that *"the competent traffic and movement expert use their judgement to determine whether pedestrian delay constitutes a significant effect."*



- 9.144 The Department for Transport TAG Unit A4-1 Social Impact Appraisal (2021) includes guidance on assessing the hindrance of pedestrian movements and DMRB LA 112 'Population and Human Health' contains sensitivity values for walkers, cyclists and horse riders based on traffic flow thresholds. These documents have been used as a point of reference when assessing the severity and significance of pedestrian and cyclist delay for the Proposed Development.
- 9.145 At present, there are pedestrian footways along Scobell Street and given the previously described network of active travel links these footways provide routes to the local communities to the north, west, and east.
- 9.146 Vehicular access is proposed on Scobell Street and Church Street. The junctions have been designed in accordance with standards with 2m-wide footways on both sides.
- 9.147 This will tie into further infrastructure within the internal Site layout which will be set out in detail during the Reserved Matters phases, as well as with a future internal link to facilitate development traffic and existing through traffic currently passing through Walshaw Village Centre, reducing volumes of traffic passing through this area.
- 9.148 At this stage, it is confirmed that the internal movement network will provide a suitable hierarchy acknowledging national design criteria to promote enhanced streets, informal streets and pedestrian-priority streets with appropriate active frontage in parts to reinforce a low-speed residential environment.
- 9.149 The overarching concept which underpins the access and movement strategy is that planning for people creates places for people, in contrast to planning for cars which has always historically resulted in places dominated by cars.
- 9.150 It is therefore concluded that the direct impact on severance and pedestrian/cyclist delay would be **Negligible** on the assessed links.

Non-Motorised User Amenity and Fear and Intimidation

- 9.151 The 2023 IEMA guidance states that pedestrian amenity is broadly defined as the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic.
- 9.152 This definition also includes pedestrian fear and intimidation, and can be considered to be a much broader category including consideration of the exposure to noise and air pollution, and the overall relationship between pedestrians and traffic.
- 9.153 The extent of fear and intimidation is dependent on:
- The total volume of traffic;
 - The heavy vehicle composition;
 - The speed these vehicles are passing; and,



- The proximity of traffic to people – and/or the feeling of the inherent lack of protection created by factors such as a narrow pavement median, a narrow path or a constraint (such as a wall or fence) preventing people stepping further away from moving vehicles.

9.154 There are no commonly agreed thresholds for estimating these levels of danger – hence of fear and intimidation – from known traffic and physical conditions. In the absence of commonly agreed thresholds, the IEMA guidance states that previous work that put forward thresholds for fear and intimidation can be useful. These thresholds define the degree of hazard to pedestrians by average traffic flow, 18-hour heavy vehicle flow and average speed over an 18-hour day in miles/hour.

9.155 The 2023 IEMA Guideline states that: “While most of these factors can be quantified, there will be a need for judgement to be exercised in determining the degree of fear and intimidation.”

9.156 The 2023 IEMA Guidance has devised a weighting system to provide assessors with a first approximation of the likelihood of pedestrian fear and intimidation. The degree of hazard is assessed with reference to the established thresholds, and a score provided for each combination on a highway link under consideration.

9.157 Tables 3.1 to 3.3 in the 2023 IEMA Guidance set out the degree of hazard and level of fear and intimidation, the combined score of which provides an approximation of the magnitude of impact with reference to the changes from baseline conditions.

9.158 **Table 9.8** over page sets out the Total Hazard Score, along with the resulting Magnitude of Impact of Fear and Intimidation for each link.



Table 9.8: Fear and Intimidation Magnitude of Impact

Link Ref	Link Description	Total Hazard Score				Magnitude of Impact with Development
		Without Development		With Development		
1	Market Street	Moderate	30	Moderate	30	Negligible
2	Bradshaw Road	Small	20	Small	20	Negligible
3	Scobell Street	Small	10	Small	10	Negligible
4	Walshaw Road	Small	20	Small	20	Negligible
5	High Street	Small	20	Small	20	Negligible
6	Ainsworth Road	Moderate	30	Moderate	30	Negligible
7	Cockey Moor Road	Small	20	Small	20	Negligible
8	A58 Bolton & Bury Road	Great	50	Great	50	Negligible
9	A58 Bolton Road	Moderate	40	Moderate	40	Negligible
10	Brandleshome Road	Moderate	40	Moderate	40	Negligible
11	Walmersley Road	Moderate	40	Moderate	40	Negligible
12	Rochdale Old Road	Moderate	40	Moderate	40	Negligible
13	Rochdale Road	Moderate	40	Moderate	40	Negligible
14	Manchester Road	Moderate	40	Moderate	40	Negligible
15	Peel Way	Great	60	Great	60	Negligible

9.159 Based on the weighted scoring applied to each of the links, it is concluded that the impact on fear and intimidation would be **Negligible**.

Accidents and Safety

9.160 The TA (**Volume 3: Technical Appendix 9.1**) includes a highway safety analysis using Personal Injury Accident (PIA) data for the local highway network surrounding the site. The analysis was undertaken for the most recent five-year period of data available as previously discussed and showed no patterns that suggest any deficiency in highway safety within the locality.

9.161 The proposed Site access arrangements can be designed to be compliant with all required design standards.

9.162 Given the above, the direct impact of the proposed development on road safety is considered to be **Minor Adverse** or **Negligible**.



Hazardous Loads

- 9.163 The IEMA guidelines acknowledge that most developments will not result in an increase in the quantum of hazardous/dangerous loads. The publication *“The Carriage of Dangerous Goods in the UK”* lists materials which can represent a hazard when in transit and provides guidance in relation to the safe carriage of these goods.
- 9.164 No movements of materials listed in *“The Carriage of Dangerous Goods in the UK”* are anticipated during the construction or operational phases of the Proposed Development.
- 9.165 It is therefore concluded that the effect of Hazardous loads will be **Negligible**.

Mitigation

- 9.166 It is worth highlighting that although the development traffic will not create discernible environmental impacts on any of the links likely to be used by that traffic, as traffic increases are projected to be below 10%, there is still mitigation built into the Proposed Development through infrastructure and a Travel Plan.
- 9.167 The Travel Plan for the Proposed Development will build on the proposed Framework Travel Plan Strategy set out in Chapter 7 of the TA (**Volume 3: Technical Appendix 9.1**) and will be designed to encourage residents to use a means of sustainable transport including walking, cycling and public transport wherever possible. The proposed Travel Plan will therefore provide further reductions in traffic from the Site reducing traffic impact on the local highway network.
- 9.168 The Travel Plan will include a series of soft and hard measures to promote the use of sustainable modes of travel and minimise the number of residual car trips and their associated impact on the local highway network.
- 9.169 Inherent within the Travel Plan is a monitor and manage approach, delivered through the establishment of a steering group and with a flexible travel fund.
- 9.170 The aim is to monitor all aspects of mobility, transport and travel behaviour at specified intervals.
- 9.171 A steering group set up by the Travel Plan Coordinator, which can include BC, TfGM, and the wider allocation developers, allows for the analysis of the results of the monitoring and to make decisions within the framework set out in advance.
- 9.172 A flexible transport fund can be explored to allow for investment in those measures performing well, other measures that may as yet not be part of the scheme, or to change the effectiveness of those measures that aren’t doing so well and in the view of the steering group will be effective with that investment, noting that the trends may change over time.



- 9.173 In addition, elements of a mobility hub network can be incorporated into the Proposed Development providing improved opportunities for the community to access alternative travel modes and information. This will then be compatible with the wider Walshaw allocation in due course.

Residual Effects

- 9.174 Following the delivery of the proposed Site access proposals, it is expected that the residual impacts of the development with regards to driver delay will be **Negligible**.
- 9.175 In light of the proposals as explained above, it is expected that the residual impacts of the Proposed Development with regards to pedestrians/cyclists delay, severance, amenity, and fear and intimidation, safety and hazardous loads will be **Negligible**.
- 9.176 The proposed Site access arrangements have been designed in accordance with appropriate highway design standards. The arrangements will provide a safe highway layout for all users and therefore the impacts on accidents and safety are considered to be **Negligible** in an already suitably safe network.
- 9.177 In light of the above reasoning, it is concluded that the Proposed Development would deliver an overall **Negligible** impact. The impacts overall are **Not Significant**.

Additional Cumulative Effects and Interactions

- 9.178 Having established that the development proposals for the northern parcel will not lead to there being any significant residual Adverse impacts, the following section considers the future development of the remainder of the Walshaw allocation which could deliver up to 1,250 dwellings in total.
- 9.179 The trip generation methodology previously outlined has been utilised, but with an uplift to account for the full residential development, and an allowance for greater trip internalisation as a result of additional community facilities and a school within the site.
- 9.180 Consideration has been given to the implementation of the full proposed link road works in place, running through the allocation between Lowercroft Road and Scobell Steet, via Walshaw Road.
- 9.181 In addition, consideration has been given to the potential additional site access points proposed as part of the wider masterplan from Tottington Road and Walshaw Road.
- 9.182 The distribution of trips around the local area utilises the same methodology as previously used, but with a reassignment as a result of the proposed delivery of the new internal link.
- 9.183 The purpose of the additional cumulative assessment is to explore how sensitive the network is to changes in flow associated with additional development from the wider site allocation. The wider Walshaw site allocation and associated Masterplan is being supported by its own detailed Transport Assessment which this assessment has been coordinated with.



9.184 In addition to the full Walshaw allocation, as part of this sensitivity assessment, the traffic associated with the full build out of 3,500 dwellings at the Elton Reservoir allocation site during the peak hour periods has also been accounted for and distributed in line with the vehicle routing assumptions utilised within the PfE document for this allocation.

Table 9.9: Percentage impact of operational development traffic on all links

Link Ref	Link Description	Direction	AADT (7 Day) (24 Hour) Total Vehicles			
			Additional Committed Development (Full Elton Reservoir)	Baseline + Additional Committed Development	Additional Proposed Development (Full Walshaw Allocation)	Impact (%)
1	Market Street	NB	325	6512	355	5.4%
		SB	329	6353	343	5.4%
		2-Way	654	12865	698	5.4%
2	Bradshaw Road	EB	39	1220	412	33.8%
		WB	38	1161	406	35.0%
		2-Way	77	2381	818	34.4%
3	Scobell Street	EB	0	1274	0	0.0%
		WB	0	1392	0	0.0%
		2-Way	0	2666	0	0.0%
4	Walshaw Road	EB	19	2726	389	14.30%
		WB	19	2837	383	12.50%
		2-Way	38	5563	772	13.90%
5	High Street	NB	39	3456	0	0.0%
		SB	38	3515	0	0.0%
		2-Way	77	6971	0	0.0%
6	Ainsworth Road	EB	0	5392	51	1.0%
		WB	0	5439	46	0.8%
		2-Way	0	10831	97	0.9%
7	Cockey Moor Road	EB	193	5126	183	3.6%
		WB	193	5307	189	3.6%
		2-Way	387	10434	372	3.6%
8	A58 Bolton & Bury Road	EB	1501	8233	364	4.4%
		WB	1491	6605	356	5.4%
		2-Way	2993	14838	721	4.9%
9	A58 Bolton Road	EB	715	9143	0	0.0%
		WB	710	10099	0	0.0%
		2-Way	1425	19242	0	0.0%
10	Brandleshome Road	NB	70	9042	34	0.4%
		SB	70	8954	34	0.4%
		2-Way	141	17997	69	0.4%
11	Walmersley Road	NB	57	11257	74	0.7%
		SB	57	8941	73	0.8%
		2-Way	114	20198	147	0.7%
12	Rochdale Old Road	EB	57	8776	74	0.8%
		WB	57	9039	73	0.8%



Link Ref	Link Description	Direction	AADT (7 Day) (24 Hour) Total Vehicles			
			Additional Committed Development (Full Elton Reservoir)	Baseline + Additional Committed Development	Additional Proposed Development (Full Walshaw Allocation)	Impact (%)
		2-Way	114	17815	147	0.8%
13	Rochdale Road	EB	57	10231	74	0.7%
		WB	57	12687	73	0.6%
		2-Way	114	22918	147	0.6%
14	Manchester Road	NB	457	9313	509	5.5%
		SB	453	9262	521	5.6%
		2-Way	910	18575	1029	5.5%
15	Peel Way	EB	171	18069	223	1.2%
		WB	171	16197	218	1.3%
		2-Way	343	34266	441	1.3%

- 9.185 Following the delivery of the wider Walshaw allocation, this sensitivity test leads to the judgement that the residual impacts of the development with regards to driver delay will be **Minor Adverse** or **Negligible**.
- 9.186 It is expected that the residual impacts with regards to pedestrians/cyclists delay, severance, amenity, and fear and intimidation, safety and hazardous loads can all be managed through appropriate Masterplan design and internal infrastructure provision such that the potential impacts could be **Moderate Adverse**, but with mitigation would be **Negligible**.
- 9.187 The arrangement of access for all users and assignment of trips to an already suitably safe network leads to the conclusion that the impacts on accidents and safety would be **Minor Adverse** or **Negligible**.
- 9.188 Assuming that the other components of the wider Walshaw allocation, which includes a new internal link and further improvements to connectivity and community infrastructure to enable local living, it can be expected that there would be no Major Adverse residual impacts in relation to the identified transportation receptors.
- 9.189 It can be concluded therefore that the impacts associated with this sensitivity assessment of the wider Walshaw allocation in this Chapter are **Not Significant**.

Summary and Conclusions

- 9.190 This Chapter has been prepared by SLR, and has:

- Summarised the relevant legislation, policy and guidance;
- Detailed the assessment methodology which follows the IEMA guidelines;
- Evaluated the baseline highway and transportation conditions;



- Assessed the impact and significance of increased traffic flow due to the proposed development; and
- Identified suitable mitigation measures.

- 9.191 This Chapter has considered the development proposals reflecting the 2023 IEMA guidance.
- 9.192 The Proposed Development is considered to be accessible to local pedestrian/cycle infrastructure and public transport services, and therefore opportunities for travel to/from the Site can be undertaken by sustainable modes.
- 9.193 The local impacts of the Proposed Development have been assessed at key locations in the local transport network.
- 9.194 The cumulative effects of the development have been considered with regards to the other committed developments in the area. The assessment of traffic flows in the area therefore appreciates the cumulative traffic impacts.
- 9.195 The cumulative impacts of the construction traffic would be **Negligible** in terms of overall impact on the local highway network and can reasonably be controlled through a Construction Management Plan.
- 9.196 The cumulative impacts of the operation of the Site would also be **Negligible** in terms of overall impact on sensitive receptors and can reasonably be controlled through a well-designed Masterplan which enables local living and facilitates connectivity, supplemented with a comprehensive Travel Plan.
- 9.197 Consideration has also been given to any additional cumulative effects associated with the delivery of the wider Walshaw allocation for up to 1,250 dwellings in total.
- 9.198 Given the scope of mitigation proposed, including comprehensive Masterplan design, complementary land uses, a mobility hub network and the successful implementation of a site-wide Travel Plan in the long-term, it is expected that the residual impact of the development on driver delay, pedestrian amenity, fear and intimidation and severance would be **Minor Adverse** or **Negligible**.
- 9.199 On all issues, the assessment and sensitivity assessment leads to the conclusion that, following mitigation, the residual impacts are **Not Significant**.



10. Water Resources and Flood Risk

Introduction

- 10.1 This Chapter of the Environmental Statement, prepared by Lees Roxburgh Ltd a civil engineering consultancy, considers the environmental impacts which affect the hydrology and drainage of the Proposed Development. It has been authored by John Lees who has over 40 years' experience in the construction industry built on well over 1,000 projects from initial appraisal stage through to construction completion.
- 10.2 His work has covered the preparation of numerous Flood Risk Assessments and drainage strategies in support of outline and detailed planning applications and the delivery of SUDs, Section 38, Section 104 and private works designs for housing developers in the North and Midlands. John is a Chartered Member of the Institution of Civil Engineers and the Institution of Water and Environmental Management and leads a team of technical staff specialising on residential projects at all stages of design.
- 10.3 This Chapter is not intended to be read as a stand-alone assessment, and reference should be made to the Lees Roxburgh Flood Risk Assessment provided within **Volume 3: Technical Appendix 10.1** which provides full details of the technical assessments that have been undertaken.

Legislation and Policy

Legislative Framework

- 10.4 The applicable legislative framework is summarised as follows:
- Water Industry Act, 1991 – This Act consolidates enactments relating to the supply of water and the provision of sewerage services.
 - Land Drainage Act 1991 – This Act consolidates enactments relating to internal drainage boards and the functions of these boards and of local authorities in relation to land drainage. Internal Drainage Boards (IDB) exercise a general supervision over all matters relating to the drainage of land within their district and they have powers to perform duties imposed on them within the Act.
 - Land Drainage Act 1994 – This Act adds new environmental duties to the Land Drainage Act 1991. It places a duty on the IDB and local authorities to further the conservation and enhancement of natural beauty and the conservation of flora, fauna and geological or physiographical features of special interest; and to take into account any effect which the proposals would have on the beauty or amenity of any rural or urban area or on any such flora, fauna or features.
 - Environment Act 1995 – This Act established basic terms of reference for the Environment Agency (EA). The principal aim of the EA is to protect or enhance the environment. The EA also exercises a general supervision over all matters relating to flood defence. The Act provides the EA with a duty to take action as it considers necessary to conserve, redistribute or otherwise augment water resources in England and Wales and to secure the proper use of water resources in England and Wales.



- Building Regulations (Part G), March 2016 – These regulations include targets for reducing water consumption.

National Planning Policy

- 10.5 The National Planning Policy Framework (the Framework) was first published by the Department for Communities and Local Government in March 2012 and was most recently updated in December 2024. The Framework sets out the Government’s planning policies for England and how they are expected to be applied all Planning Policy Statements and Planning Policy Guidance Notes, as well as selected circulars and other correspondence as listed in Annex 3 of the Framework.
- 10.6 The Framework must be taken into account in the preparation of local and neighbourhood plans and is a material consideration in planning decisions. At the heart of the Framework is a presumption in favour of sustainable development.
- 10.7 Section 14 of the Framework – ‘Meeting the challenge of climate change, flooding and coastal change’ includes the following related to drainage and flood risk:
- Paragraph 162 states that, “Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes....”.
 - Paragraph 170 highlights that, “Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk”. Whether existing or future. Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.
 - Paragraph 171 states that, “Strategic policies should be informed by a strategic flood risk assessment and should manage flood risk from all sources. They should consider cumulative impacts in, or affecting, local areas susceptible to flooding, and take account of advice from the Environment Agency and other relevant flood risk management authorities, such as lead local flood authorities and internal drainage boards”.
 - Paragraph 172 requires that, “All plans should apply a sequential, risk-based approach to the location of development – taking into account all sources of flood risk and the current and future impacts of climate change – so as to avoid, where possible, flood risk to people and property”.

Regional / Local Planning Policy

- 10.8 The following Local Planning Policy documents contain Planning Policy to be used in considering determination of planning applications.

Places for Everyone (PfE)(March 2024)

- 10.9 PfE Policy JP-S4 ‘Flood risk and the water environment’ states an integrated catchment-based approach will be taken to protect the quantity and quality of water bodies with reference to the North West River Basin Management Plan and managing flood risk, by:
- 1) Returning rivers to a more natural state, where practicable;
 - 2) Working with natural processes and adopting a natural flood management approach to slow the speed of water drainage and intercept water pollutants;



- 3) Locating and designing development so as to minimise the impacts of current and future flood risk, including retrofitting or relocating existing developments, infrastructure and places to increase resilience to flooding;
- 4) Expecting developments to manage surface water runoff through sustainable drainage systems and as close to source as possible. Development should achieve greenfield run-off rates unless it is demonstrated to be impracticable. District local plans should consider setting more detailed surface water drainage policies to reflect local circumstances, including alternative surface water discharge rates, such as in areas with critical drainage issues;
- 5) Ensuring that sustainable drainage systems:
 - (i) Are designed to provide multifunctional benefits wherever possible, including for water quality, nature conservation and recreation;
 - (ii) Avoid adverse impacts on water quality and any possibility of discharging hazardous substances to ground;
 - (iii) Are delivered in a holistic and integrated manner, including on larger sites split into different phases; and
 - (iv) Are managed and maintained appropriately to ensure their proper functioning over the lifetime of the development.

10.10 Housing allocation Policy JP Allocation 9: Walshaw, which includes the assessment Site, seeks to:

“...9 Make provision for new, high quality, publicly accessible, multifunctional green and blue infrastructure within the allocation including the integration and enhancement of the existing green infrastructure corridors and assets at Walshaw and Elton Brooks;”

10.11 The reasoned justification to the Policy states at Paragraph 11.150:

“To reduce the risk of flooding, the development should minimise the risk associated with inadequate sewer capacity and minimise and control the rate of surface water run-off through an appropriate drainage strategy in accordance with Policy JP-S4 and, where possible, safeguard land within the allocation for flood storage. Measures such as rainwater recycling, green roofs, water butts and permeable driveway surfaces should be considered to mitigate the impact of potential flood risk both within and beyond the site boundaries. As a green and blue infrastructure network will provide more sustainable options discharge surface water, only foul flows should connect with the public sewer”.

Additional Policy Guidance

10.12 Other guidance documents considered to be relevant to this assessment include the following:

- CIRIA 753, 2016: The SuDS Manual. This document provides best practice guidance on the planning, design, construction, operation and maintenance of Sustainable Drainage Systems (SUDS) to facilitate their effective implementation within developments;
- EA, 2012. Flood Risk Standing Advice for England. This advice reflects the policy contained in PPS25 and provides standard information on whether a development is suitable with regards to flood risk; and
- CIRIA, 2001. Guidance ‘C532 – Control of Pollution from Construction Sites’.



Assessment Methodology

Scope of the Assessment

- 10.13 The scope of this drainage and flood risk Chapter includes the following:
- Identification of any local policies regarding hydrology and drainage;
 - Review of available information on existing surface and groundwater quality in the local area;
 - Summary of the key findings of the supporting documents (i.e. Flood Risk Assessment which has been undertaken as a separate study to inform the planning application see **Volume 3: Technical Appendix 10.1**);
 - Identification of the main impacts on the proposed scheme during the construction and operation phases; and
 - Where necessary, recommend appropriate mitigation measures to minimise potential impact on hydrology and drainage.
- 10.14 The assessment of the potential impact of the Proposed Development on hydrology and drainage comprises the following;

Construction Phase

- Potential risk of contamination of surface and groundwater; and,
- Effect of increased surface water run-off.

Operation Phase

- Potential risk of contamination of surface and groundwater;
- Effect of increased surface water run-off;
- Reduced groundwater recharge;
- Increased Foul Drainage.

Extent of the Study Area

- 10.15 A Phase 1 Desk Study report has been undertaken by Clancy Consulting (ref 10/2399/001 Rev.00) and establishes the hydrology, geology, hydrogeology and other relevant features (i.e. licensed abstractions, discharges, pollution incidents etc) up to 1km from the Site (see **Volume 3: Technical Appendix 13.1**).

Consultations

- 10.16 Bury Council Lead Local Flood Authority (LLFA) and United Utilities (UU) have been consulted and their comments addressed within the Flood Risk Assessment (see **Volume 3: Technical Appendix 10.1**) including those related to recorded flooding of the UU combined sewer network within Scobell Street to the north east of the Site.



Method of Baseline Data Collection

- 10.17 The sources of information reviewed as part of a desk study include:
- Envirocheck Report 25th March 2024 contained in the Phase 1 Desk Study.
 - Topographical Survey.
- 10.18 The desk study review was supplemented by a site visit undertaken on 7th August 2024.

Significance Criteria

- 10.19 The assessment of potential impacts as a result of the Proposed Development has taken both the construction and operational phases into account. The significance level attributed to each impact has been assessed based on the magnitude of change due to the development proposals, and the sensitivity of the affected receptor/receiving environment to change.
- 10.20 The significance of potential impacts has been determined by considering the magnitude of the impact, in terms of a change in existing baseline conditions, against the following factors:
- The number and activities of the human population affected;
 - The type and sensitivity (e.g. potable water supply, existing quality of receiving water body, designation of receiving water, presence of protected species) of the receiving water;
 - National, regional and local water quality policies and objectives; and,
 - The nature of the impact.

Impact Significance

- 10.21 The terms outlined within **Table 10.1** have been used to define the significance of the impacts identified.

Table 10.1: Magnitude of Change

Magnitude	Criteria
Major	Significant deterioration/improvement in conditions or circumstances
Moderate	Readily Apparent change in conditions or circumstances
Minor	Perceptible change in conditions or circumstances
Negligible	Insignificant change in conditions or circumstances

- 10.22 The sensitivity of the receptors / receiving environment has been determined using professional judgement, and where possible consideration of existing designations and quantifiable data. The scale used to determine the significance of effects is shown as **Table 10.2**.



Table 10.2: Matrix for determining the significance of effects

		Sensitivity of Receptor			
		High	Medium	Low	Negligible
Magnitude of Change	Major	Major	Moderate to Major	Minor to Moderate	Negligible
	Moderate	Moderate to Major	Moderate	Minor	Negligible
	Minor	Minor to Moderate	Minor	Negligible to Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

Baseline Conditions

Site Review

- 10.23 A desktop review of the topographical survey has been undertaken supported by a site visit undertaken on 7th August 2024.
- 10.24 The Site comprises an approximately rectangular shape located to the southern outskirts of Tottington and is 1km to the north west of Bury Town centre.
- 10.25 The north west boundary of the Site fronts onto Church Street to the west and Scobell Street to the north with a section of north east boundary fronting onto Scobell Street as it continues east.
- 10.26 A short section of the south west boundary fronts onto Church Street to the west.
- 10.27 To the north and west is predominantly residential development. To the east, south and south west is open land which forms part of the wider area allocated for development.
- 10.28 Beyond the land immediately to the south is the Stables Country Club and grounds which include some large water features with trees and woodland.
- 10.29 A hospital, the Priory Elton Unit, is located close by to the south west.
- 10.30 Walshaw Brook, a non-main river, forms the south west boundary of the Site and continues south easterly to the south of the large lake within the Country Club grounds before disappearing into a culvert in the area of Walshaw Road some 300m to the south of the Site. About 1km to the south is Elton Brook which again flows easterly. Both systems lie within the catchment of the River Irwell.
- 10.31 The Site itself comprises scrubby open undulating ground characterised by a minor tributary to Walshaw Brook which cuts north to south across the western part of the Site. This runs in an open valley for a section before disappearing below ground and is assumed as connecting into Walshaw Brook either direct or via the lake area.
- 10.32 Reference to 1960's historical mapping does identify a potential upstream route for this system but this has disappeared on subsequent mapping and it is assumed may have been incorporated into the public surface water sewer network.



- 10.33 There is also a short section of ditch to the west of this tributary close to Walshaw Brook which is associated with a spring identified on historical mapping.
- 10.34 Reference to the topographical survey identifies ground levels falling from the west boundary towards the tributary. From the main area of the Site levels fall generally to the tributary and south towards Walshaw Brook with an area to the east of the Site falling in an east south easterly direction.
- 10.35 Within this main area however there are high points which result in levels also falling north and north east.
- 10.36 The ground levels to the Scobell Street boundary vary from 132.5m AOD at the north west corner to 119.0m AOD at the north east corner. Levels to the south west boundary at Church Street sit at about 131.0m AOD and at Walshaw Brook at the point it turns south easterly at about 122.0m AOD. Ground levels along the south boundary vary from about 20.5m/21.0m AOD then falling into the south east corner to about 117.7m AOD.

Geology and Hydrogeology

- 10.37 Geological mapping indicates that the Site is underlain to the west, centrally and to the south east by clay deposits of Devensian Till, with an area of Devensian Glaciofluvial deposits of sand and gravel extending south into the Site to the north east and more centrally approximately along the line of the tributary, and continuing into the area of the lakes beyond. Underlying these deposits is sandstone of the Cannel Rock (South Lancashire) faulted with mudstone, siltstone and sandstone of the Pennine Lower Coal Measures Formation.
- 10.38 The till deposits underlying the Site are classified by the Environment Agency as a Secondary Aquifer with the underlying bedrock as Secondary Aquifer - B.
- 10.39 The Phase 1 Desk Study provides details of groundwater abstraction licenses within 1km of the Site (see **Volume 3: Technical Appendix 13.1**). The findings are presented in **Table 10.3** below.

Table 10.3: Summary of Groundwater Abstraction

Use	Details	Distance	Direction
Boiler feed	Reservoir fed by unnamed tributary Kirklees Brook, Tottington. Operator - Swish Products Limited. No date supplied.	31m	NE
General agriculture. General use (medium loss)	Well at Bolholt Farm, Walshaw. Borehole. Operator - PR Heys. No date supplied.	55m	SE
Cooling	Reservoir fed by Walshaw Brook. Operator – Dussek Campbell. Lapsed or cancelled.	207m	SW
Process water	At surface. Operator - Active Craft Limited paper makers. No end date.	434m	NE
Process water	Borehole.	645m	E



Use	Details	Distance	Direction
	Operator - Active Craft Limited paper makers. No end date.		
Process water	At surface. Operator - Active Craft Limited paper makers. No end date.	653m	E
Manufacturing	Surface abstraction Kirklees Brook. Operator – Whitefield Systems (Holdings) Limited.	912m	N
Process water	Abstraction from reservoirs fed by Elton Brook. Operator – The Elton Cop Dyeing Limited. No end date.	977m	SW

- 10.40 The Phase 1 Desk Study indicates that the Site is not located within a designated Source Protection Zone (SPZ).

Hydrology

- 10.41 The principal surface water features potentially impacted by the Site are the detailed in **Table 10.4**. The Phase 1 Desk Study identifies other features in the area including a watercourse which approaches Scobell Street from the north west and continues to the north in an easterly direction and connecting into Kirklees Brook which runs in valley beyond Tottington Road to the east of the Site. This system will not be impacted by the Proposed Development.
- 10.42 Walshaw Brook is also fed by networks to the west.

Table 10.4: Surface Water Features

Surface Water Feature	Distance	Direction
Walshaw Brook.	0m	South west
Tributary of Walshaw Brook.	0m	Within site
Water bodies.	150m	South

Discharge Consents

- 10.43 Data presented in the Phase 1 Desk Top Report highlights that there are 2 No. licensed discharge consents within 500m of the Site. The findings are summarised in **Table 10.5**.

Table 10.5: Summary of Discharge Consents

Status	Receiving Water	Details	Distance	Direction
Revoked.	Walshaw Brook.	Trade discharges – cooling water. Chemical works. Revoked February 1991.	286m	SW
Unknown.	Freshwater stream/river.	Sewer discharge – final/treated effluent – not water company. Domestic property. Status not known.	361m	NW



Pollution Incidents

- 10.44 Data presented in the Phase 1 Desk Study identifies 5 No. pollution incidents within 500m of the Site.
- 10.45 The findings are summarised in **Table 10.6**.

Table 10.6: Pollution Incidents to Controlled Waters

Severity of Incidence Status	Receiving Water	Details	Distance	Direction
Category 2 Significant.	Not known.	Oils. July 1995.	0m	NW
Category 3 Minor.	Not known.	Not found. January 1996.	43m	NW
Category 3 Minor.	Walshaw Brook.	Tracing – Dye. August 1994.	65m	SW
Category 3 Minor.	Walshaw Brook.	Not found. July 1995.	153m	SW
Category 3 Minor.	Watercourse.	Heating oil. May 1998.	411m	NE

Flood Risk and Surface Water Drainage

- 10.46 The EA's flood maps indicate that the Site is located within Flood Zone 1, designated as Low Risk from river flooding up to the 1 in 1000 year return period flood.
- 10.47 The EA's surface water flood mapping indicates the Site is impacted by an area of low to medium risk flooding within the lower areas of the Site merging into an area of high risk to the south beyond the Site which extends south easterly into the adjacent lakes.
- 10.48 There is also a ribbon of risk which correlates with the line of the tributary within the valley in the Site and some small, isolated areas within the main area of the Site which correlate with low features in the topography.
- 10.49 A ribbon of risk also runs along the east boundary of the Site again continuing south and merging with areas of higher risk beyond the site boundary.
- 10.50 The existing UU records indicate that there are no public sewers within the Site but with extensive surface water, foul and combined infrastructure serving the surrounding development including a 375mm diameter combined sewer running north within Church Street and which turns east and continues along Scobell Street. UU have advised of recorded flooding of the combined sewer system within Scobell Street to the north east.
- 10.51 Full details addressing flood risk and drainage matters including all the relevant plans are presented within the Flood Risk Assessment prepared by Lees Roxburgh within **Volume 3: Technical Appendix 10.1**.

Foul Drainage

- 10.52 The existing UU records identify no adopted sewers within the Site.



Future Baseline

- 10.53 It is anticipated that, should the Proposed Development not take place at the Site, the baseline water quality, flood risk and drainage conditions described above would remain largely unchanged. However, considering the potential effects of climate change, it is anticipated that uncontrolled surface run-off from the Site will increase in the future.

Sensitive Receptors

- 10.54 A number of sensitive receptors have been identified within the vicinity. Based on the available baseline data the sensitivity of these receptors is outlined below:
- Surface water – considered to be ‘high’ sensitivity receptors due to the proximity of these features to the Proposed Development, and the Walshaw Brook and the water bodies within the downstream catchment.
 - Groundwater resources beneath the Site and in the local area – given the underlying Secondary (B) Aquifer, this receptor is considered to be of a ‘medium’ sensitivity.
 - Residential properties – considered to be a ‘low’ sensitivity receptor.
 - Sewerage infrastructure – considered to be ‘low’ sensitivity given that UU have identified a suitable point of connectivity within the existing sewerage network.

Assessment of Impact and Significance

Construction Phase

Potential Contamination / Damage to Walshaw Brook, the water bodies and groundwater.

- 10.55 There is the potential for contamination of surface water runoff from construction activities, which could subsequently enter Walshaw Brook and other water bodies, as well as the underlying secondary (B) Aquifer and other surrounding surface water features. Such activities that could give rise to the potential for run-off at the Site to be contaminated with heavy metals, hydrocarbons, suspended solids and construction materials include:
- The operation of construction vehicles;
 - General construction / demolition activities and the storage of associated fuels and chemicals; and,
 - The siting and operation of Site construction compound and the construction of proposed roads.
- 10.56 If untreated surface water runoff is discharged from the Site, this could impact on the chemical and biological quality of the Walshaw Brook and the water bodies. The movement of plant and machinery has the potential to damage soil stability, e.g. creating ‘water logged’ conditions during wet weather and dust during dry periods. This, as well as the stockpiling of spoil and other construction materials, has the potential to increase sedimentation on-site and in downstream watercourses. Such movements can be expected across the Site, but can be controlled by the provision of designated haulage routes and tracks for use by construction vehicles, and appropriate phasing of the development.



- 10.57 The storage of the construction materials and hazardous substances (e.g. diesel) has the potential to impact on surface and groundwater quality if appropriate control / mitigation measures are not adopted.
- 10.58 The Proposed Development will require earthworks to be undertaken including: top soil stripping and stockpiling; trench excavations (including for the installation of gas supply, water supply, surface water and foul water sewerage infrastructure), and installation of building foundations. These activities have the potential to increase the quantity of suspended solids (dusts and particulates) in surface water run-off on the Site.
- 10.59 It should be noted that under powers given to the Environment Agency in the Anti-Pollution Regulations 1999, the Agency is able to stop construction activities at any time, should a significant risk be posed to the environment.
- 10.60 The sensitivity of surface water is **High** and the magnitude of change, prior to mitigation, is **Major**. Therefore, as a result of construction there is likely to be a direct effect on groundwater of **Major Negative** significance prior to the implementation of mitigation measures.
- 10.61 The sensitivity of groundwater is **Medium** and the magnitude of change, prior to mitigation, is **Moderate**. Therefore, as a result of construction there is likely to be a direct effect on groundwater of **Moderate Negative** significance prior to the implementation of mitigation measures.

Effect of Increased Surface Water Runoff

- 10.62 Construction activities such as top soil stripping, the clearance of vegetation and vehicular movements are likely to result in soil compaction and ultimately less water being attenuated on site by vegetation and within the unsaturated soil matrix. Therefore the volume and rate of surface water run-off may increase posing a localised flood risk on Site.
- 10.63 The sensitivity of the Site is **High** and the magnitude of change, prior to mitigation, is **Major**. Therefore, as a result of construction activities on site there is likely to be a direct effect on runoff of **Major Negative** significance prior to the implementation of mitigation measures.
- 10.64 The EA's flood plain maps indicate that the Site is located within Flood Zone 1, designated as Low Risk of river flooding. The sensitivity of the downstream receptors is **High** and the magnitude of change, prior to mitigation, is **Minor**. Therefore, there is likely to be a temporary, short-term effect on surface water run-off of **Minor** to **Moderate Negative** significance prior to the implementation of mitigation measures.

Operation Phase

Potential Contamination / Damage to Walshaw Brook, the Water Bodies and Groundwater

- 10.65 Contamination of surface water run-off and groundwater may lead to a deterioration of water quality in water receptors beneath and in the vicinity of the Proposed Development. Potential sources of surface and groundwater contamination during operation are anticipated to be minimal and limited to the following:



- Oil residues and sediments from vehicles using internal / access roads and car parking areas within the Site; and
- Wastewater (sewage effluent, water from sinks, showers and other domestic uses) from occupation of the residential and commercial premises.

10.66 It is considered that the nature of the proposed residential development represents a moderate risk in terms of the potential for water pollution.

10.67 The sensitivity of the receiving surface water is considered to be **Medium** and the magnitude of change, prior to mitigation, is **Major**. Therefore, there is likely to be a direct, permanent, long-term effect on surface water of **Major Negative** significance prior to the implementation of mitigation measures.

10.68 The sensitivity of the receiving groundwater is considered to be **High** and the magnitude of change, prior to mitigation, is **Moderate**. Therefore, there is likely to be a direct, permanent, long-term effect on groundwater of **Moderate Negative** significance prior to the implementation of mitigation measures.

Effect of Increased Surface Water Runoff

10.69 The change of land use to accommodate the development and the associated increase in impermeable areas will, without mitigation, result in an increase in the volume and rate of surface water runoff. In addition, loss of surface water flood volume as a result of development within areas mapped as potentially at risk of surface water flooding may result in an increase in the volume and rate of surface water run-off downstream of the Site.

10.70 The sensitivity of the downstream receptors, post-development, is **High** and the magnitude of change is considered to be **Major** prior to mitigation. Therefore, there is likely to be a direct, permanent, long-term effect on downstream receptors of **Major Negative** significance prior to the implementation of mitigation measures.

Reduced Groundwater Recharge

10.71 The Site is underlain by a Secondary Aquifer. The development of the Site will result in an increase in hardstanding across the Site. It is therefore considered possible that the Proposed Development could impact on groundwater recharge rate in the area.

10.72 The sensitivity of groundwater is **Medium** and the magnitude of change, prior to mitigation, is **Moderate**. Therefore, there is likely to be a direct, temporary, short-term effect on groundwater of **Moderate Negative** significance prior to the implementation of mitigation measures.

Increased Foul Drainage

10.73 The Proposed Development will increase the foul sewage output in the area. It is understood there have been instances of sewer flooding in the Scobell Street area which UU are working on to resolve irrespective of this application. Meanwhile, the proposed pumping station and rising main will transfer foul flows from this development to a point of connection to the combined sewer in Church Street to the north west of the Site, which UU have confirmed as acceptable to serve the development.



Mitigation

Construction Phase

Potential Contamination / Damage to Walshaw Brook, the Water Bodies and Groundwater

- 10.74 A Construction Environmental Management Plan (CEMP) for the Proposed Development will contain measures to manage and control all ground works, including management of wastewater and the storage of fuel and chemicals. The CEMP will detail the procedures and methods that are to be followed by the construction workforce in order to minimise the potential effects of construction on the Site on Walshaw Brook. The CEMP will be developed and agreed with Bury Council, the Environment Agency and other regulators/consultees, as required, prior to the commencement of the construction activities. Contractors working on the Site will be then be required to comply with the CEMP.
- 10.75 The CEMP for the Proposed Development will also contain measures outlining the management of wastewater and the storage of fuel and chemicals. The CEMP will detail the procedures and methods that are to be followed by the construction workforce in order to minimise the potential effects of construction on the Site on groundwater and surface water features.
- 10.76 All construction activities will be undertaken in accordance with the Governments Pollution Prevention Guidelines.
- 10.77 Fuel, oil and chemicals will be stored in secondary containment and located a minimum of 10m from a watercourse. The secondary containment system must provide storage of at least 110% of the tank's maximum capacity and ensure that any valves, filters, sight gauges, vent pipes or other ancillary equipment are also situated within the secondary containment system and arranged so that any discharges are contained.
- 10.78 Construction vehicles will be regularly maintained to reduce the risk of hydrocarbon contamination and will only be active when required. Other activities associated with the use of construction vehicles (such as washdown facilities) will be appropriately managed to contain contaminants and regulate the release of water back into the natural environment. In addition, designated haul routes around the Site should be implemented to minimise disturbance of soil and the subsequent effects of sedimentation on ground and surface waters within the vicinity of the Site.
- 10.79 Surface runoff from the various points of construction within the Site will be managed by the appropriate use of temporary bunding and detention basins, where necessary, to ensure the protection of water quality and the underlying Secondary Aquifer from sediment load and contaminants. Detention basins are beneficial in that they allow for isolation and on-site treatment of sediment laden or chemically contaminated surface runoff before it is released to the natural aquatic environment / sewerage network.
- 10.80 The careful management of pollutant sources, (e.g. storage of fuel from construction vehicles), the construction of the temporary surface water drainage network and adherence to best practice guidelines as part of the CEMP will enable the potential impact of contamination on surface and groundwater to be effectively managed, reduced and / or eliminated.



- 10.81 To mitigate potential impacts associated with the dewatering of excavations consideration should be given CIRIA 515: Groundwater Control – Design and Practice.
- 10.82 The water pumped or abstracted during a groundwater control operation (i.e. dewatering of excavations) is legally classified as ‘trade effluent’ and as such, a discharge consent will be required from the Environment Agency if the water is to be discharged to the Walshaw Brook and other water bodies. Discharge consents set maximum limits for suspended solids within discharged water and as such control measures may need to be in place to ensure that these limits are not exceeded.
- 10.83 It is anticipated that any groundwater encountered during excavation works will be pumped to a temporary surface water drainage network with provision made to allow sediment to settle out prior to discharge.
- 10.84 Further detailed measures will be outlined within the CEMP that will be developed and agreed with Bury Council, the Environment Agency and other regulators/consultees, as required, prior to the commencement of the construction activities. Contractors working on the Site will be then required to comply with the CEMP.
- 10.85 The sensitivity of surface water is **High** and the magnitude of change, following mitigation, is **Negligible**. Therefore, there is likely to be a **Negligible** effect on surface water following the implementation of mitigation measures.
- 10.86 The sensitivity of groundwater is **Medium** and the magnitude of change, following mitigation, is **Negligible**. Therefore, there is likely to be a **Negligible** effect on groundwater following the implementation of mitigation measures.

Effect of Increased Surface Water Runoff

- 10.87 Temporary provision including on-site attenuation will be made for surface water flows during construction activities, thereby reducing on Site and downstream flood risk during construction.
- 10.88 The sensitivity of the downstream receptors is considered to be **High** and the magnitude of change, following mitigation, is **Negligible**. Therefore, there is likely to be a **Negligible** effect on downstream residential receptors following the implementation of mitigation measures.

Operation Phase

Potential Contamination / Damage to Walshaw Brook, the Water Bodies and Groundwater

- 10.89 Any surface water discharges from private and communal car parking areas and high risk areas (i.e. major highway junctions) should incorporate appropriate pollution control measures (i.e. trapped gullies, manholes with catch pits etc) to minimise the risk of polluted surface water runoff entering the watercourse network and underlying aquifer. The Proposed Development will utilise SuDS in the form of grass lined attenuation/ponds. The use of these features will help to reduce the potential impact of point source pollution incidents and can help improve the quality of surface water discharges by allowing the removal of suspended matter prior to discharge.



- 10.90 SuDS features that cater for surface runoff solely from adopted highway areas will become the responsibility of the adopting authority and would be expected to be covered as part of a S38 agreement. SuDS features within non-adopted areas will remain private and where located on plot would become the responsibility of the individual homeowner, or otherwise a management company would be appointed for the maintenance of communal features.
- 10.91 The incorporation of the aforementioned mitigation measures will serve to attenuate and improve the quality of surface water runoff from the Site minimising the risk of contaminants such as hydrocarbons and silts entering surrounding surface water courses and underlying groundwater.
- 10.92 The sensitivity of surface water is considered to be **Medium** and the magnitude of change, following mitigation, is **Negligible**. Therefore, there is likely to be a **Negligible** effect on surface water following the implementation of mitigation measures.
- 10.93 The sensitivity of groundwater beneath the Site is considered to be **High** and the magnitude of change, following mitigation, is **Negligible**. Therefore, there is likely to be a **Negligible** effect on groundwater following the implementation of mitigation measures.

Effect of Increased Surface Water Runoff

- 10.94 A surface water strategy has been developed to ensure that surface water runoff can be attenuated on Site for up to the 1 in 100 year + 45% (climate change) rainfall event including an allowance for urban creep with flows restricted to the existing greenfield Qbar rate. The surface water drainage strategy will comprise a network of:
- Adoptable and non-adoptable underground pipes;
 - Attenuation basins/ponds; and
 - Hydraulic controls.
- 10.95 Roof water from houses will be collected from downpipes and gutters and transferred to a new private surface water network which in turn will route flows to a new adoptable network.
- 10.96 Runoff from the adopted highway will be intercepted by trapped gullies and transferred to the new adoptable surface water network, which will route all storm water flows through the development, prior to discharging to the attenuation features.
- 10.97 The proposed attenuation features will be sized based on the proposed restriction of flows. The restriction and attenuation of runoff will provide significant betterment to the pre-development situation.
- 10.98 The sensitivity of the downstream receptors is considered to be **High** and the magnitude of change, following mitigation, is **Negligible**. Therefore, there is likely to be a **Major Beneficial** effect from surface water runoff following the implementation of mitigation measures.

Reduced Groundwater Recharge

- 10.99 The baseline conditions reflect a greenfield site, partially underlain by granular deposits on which basis it is considered that the development could have some impact on groundwater.



10.100 If feasible, opportunities for use of soakaways on Site will be prioritised. However, it is expected that ground conditions will prohibit soakaways due to the presence of slowly permeable strata. The Proposed Development therefore is unlikely to result in a significant change in the ability of water to infiltrate into the ground and the introduction of impermeable surfaces are likely to have a **Minor** effect on groundwater recharge. Furthermore, the development will continue to discharge all surface water to the existing surface water watercourse network and beyond this point discharged surface water would maintain its existing access to the water environment and be available as a source for any recharge that occurs naturally from this watercourse.

10.101 The sensitivity of the groundwater resource is considered to be **Medium** and the magnitude of change, following mitigation, is **Minor** to **Negligible**. Therefore, there is likely to be a direct, permanent, long term **Minor Negative** to **Negligible** effect on the groundwater resource following the implementation of mitigation measures.

[Increased Foul Drainage](#)

10.102 Following consultations with UU, an agreed point of connection for the discharge of foul flows from the development has been agreed to the combined sewer network in Church Street. The Site will incorporate an adoptable foul pumping station to transfer flows to this point of connection. Meanwhile UU will be working on mitigation of existing sewer capacity problems.

10.103 The sensitivity of the foul drainage sewerage network to increases in foul drainage from the Site is **Medium** to **Low** and the magnitude of change, following mitigation, is **Negligible**. Therefore, there is likely to be a **Minor Negative** to **Negligible** effect on the foul drainage and sewerage network.

Monitoring and Follow Up

10.104 A CEMP will be developed and implemented by the Principal Contractor for the preparatory and construction phases of the Proposed Development. The CEMP will incorporate the mitigation measures recommended above to reduce the significance and, where possible, eliminate the identified impacts.

10.105 The CEMP will be a 'live' document setting out the management system to be adopted on-site. Detailed risk assessments for all operations from which a safe system of work shall be developed. The Principal Contractor will be required to monitor this process and develop assessments and working methods appropriate to changes in work activities.

10.106 It is anticipated that no monitoring or follow up work will be required in respect of flood risk, drainage and water quality once the Proposed Development is complete.

10.107 SuDS features will become the responsibility of the adopting authority and would be expected to be covered as part of a S104 agreement¹. Otherwise, a management company would be appointed for the maintenance of any communal none adopted features.

¹ Section 104 of the Water Industry Act (1991) - a legal agreement between a developer and a water company.



- 10.108 The main on-site sewerage networks will be designed in accordance with the Design and Construction Guidance and will be offered for adoption with any in-plot networks designated to Building Regulations Standards and becoming the responsibility of the residents.

Cumulative Effects

- 10.109 This cumulative assessment considers the identified sensitive receptors within the vicinity of the Site boundary.
- 10.110 Prior to the commencement of the construction phase, suitable measures will be in place to mitigate any adverse impacts which would otherwise arise from the development; including pollution to groundwater and surface water. These measures will ensure the scheme does not present any cumulative effects on water quality, drainage and flood risk, and that it remains compliant with all relevant Planning Policies and Legislation. Such measures will address the proposed culverted crossing of Walshaw Brook to accommodate the road link south into the wider allocation.
- 10.111 During the operational phase there is the potential for a cumulative impact to arise in relation to an increase in foul drainage from the Site. However, UU have confirmed that the existing foul sewerage network has sufficient capacity to accommodate the projected foul only flows from the development.
- 10.112 In relation to increased surface water run-off and flood risk and in order to comply with the Framework, the development must demonstrate that it does not increase flood risk downstream. Surface water runoff generated by the development will be attenuated prior to being discharged off-site. On this basis the proposals will have a **Major Beneficial** effect on surface water runoff, given the existing site discharges uncontrolled into the watercourse network.
- 10.113 Based on the above it is considered that the cumulative effect of foul drainage will be managed by UU and that there will be no cumulative effects during the construction phases of the development and there will be betterment during the operational phases of the development with respect to surface water runoff and flood risk. The developers of the adjacent land within the allocation will similarly have to follow the SUDS hierarchy for their respective drainage strategies so as to ensure no cumulative effects during construction and to deliver betterment during the operation phases of their development.

Residual Effects

- 10.114 With the indicated mitigations in the construction and operational phases and taking into account resilience measures such as inclusion of freeboard and exceedance design it is considered unlikely there will be any significant residual effects during the construction and operational phases of the development.

Summary and Conclusions

- 10.115 This assessment has been undertaken to determine the potential impacts of the Proposed Development on flood risk and drainage. The potential impacts that were assessed included the potential risk of contamination of the adjacent Walshaw Brook and other water bodies, the potential risk of



contamination of surface and groundwater; the effect of increased surface water run-off; reduced groundwater recharge; and increased foul water discharge.

10.116 The Site reflects the following characteristics;

- The Site is underlain by clay, sand and gravel deposits, classified as a Secondary Aquifer,
- The EA flood data indicates that the Site is located within Flood Zone 1, designated as at Low Risk of river flooding.

10.117 During the construction phase of the development a CEMP will be prepared that will outline standard best practice techniques to mitigate the potential impacts of physical (e.g. sediments) and chemical (e.g. hydrocarbons) contamination on surface and groundwater receptors.

10.118 The implementation of a Sustainable Drainage System (SuDS) in the form of attenuation basins/ponds will mitigate the potential impact associated with increased surface water run-off. The use of SuDS will also ensure that **No Significant** residual or cumulative impacts, in terms of deterioration in water quality, groundwater recharge, and impacts associated with an alteration to the drainage regime, will affect any sensitive water resource receptors, during either the construction or operational phase.

10.119 On all issues the assessment demonstrates that, following mitigation, the residual adverse impacts are, at worst, **Minor Adverse** to **Negligible**. However, some **Beneficial** impacts could be expected in terms surface water runoff once the development has been completed.

10.120 It is considered that the development proposals are acceptable in flood risk and drainage terms, and that there are no flood risk or drainage related reasons that should prevent planning permission being granted.



Reference List

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- DEFRA/EA Flood Risk Assessment Guidance for New Development (Phase 2) R&D Technical Report FD2320/TR2. Available at: <https://www.thenbs.com/PublicationIndex/documents/details?Pub=DEFRA&DocID=275717>
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- Planning Practice Guidance (PPG). Available at: <https://www.gov.uk/government/collections/planning-practice-guidance>
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- National Planning Policy Framework (NPPF). Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- Water Act 2003. Available at: <https://www.legislation.gov.uk/ukpga/2003/37/contents>
- Water Industry Act, 1991. Available at: <https://www.legislation.gov.uk/ukpga/1991/56/contents>



11. Air Quality

Introduction

- 11.1 This Chapter assesses the likely significant effects of the Proposed Development on local air quality. In particular, it considers the potential effects of construction dust and road traffic exhaust emissions on air quality at identified existing receptor locations and is supported by Air Quality Dispersion Modelling and relevant Figures at **Volume 3: Technical Appendix 11.1 and 11.2**.
- 11.2 The Chapter describes the methods used to assess the likely significant effects, the baseline conditions currently existing at the Site and surroundings, the potential effects of the Proposed Development arising from atmospheric emissions, the mitigation measures required to prevent, reduce or offset the identified significant effects and the residual effects. It also gives consideration to potential cumulative effects.
- 11.3 The Air Quality work has been prepared by technical specialists Redmore Environmental Ltd. The author was Emily Macey BSc (Hons) MSc MIAQM MEnvSc who is an Air Quality Consultant with over five years' experience in the air quality sector. She has been responsible for conducting air quality studies for a range of projects, including residential, commercial, employment and industrial schemes. Emily has experience in a range of air quality impact assessments for standalone planning applications and EIA. The reviewer was Jethro Redmore BEng (Hons) MSc CEnv PIEMA MIAQM MEnvSc who is an Air Quality Consultant and has worked as a professional environmental scientist for approximately 18 years. He has been responsible for conducting environmental studies for major road improvement and construction schemes, power stations, oil refineries and other major industrial complexes. In addition, he has undertaken air quality assessments for a wide variety of residential schemes, from individual properties to large scale 'eco-towns'. As such, Jethro has experience in a range of air quality impact assessments for standalone assessments required to support a planning application and EIAs in accordance with relevant industry guidance produced by the Department for Environment, Food and Rural Affairs (DEFRA) and the Institute of Air Quality Management (IAQM), amongst others.

Legislation and Policy

- 11.4 The Air Quality Standards Regulations (2010) (UK Government, 2010) and subsequent amendments include Air Quality Limit Values (AQLVs) for the following pollutants:
- Nitrogen dioxide (NO₂);
 - Sulphur dioxide;
 - Lead;
 - Particulate matter with an aerodynamic diameter of less than 10µm (PM₁₀);



- Particulate matter with an aerodynamic diameter of less than 2.5µm (PM_{2.5});
- Benzene; and,
- Carbon monoxide.

- 11.5 Air Quality Target Values have also been provided. It should be noted that the AQLV for PM_{2.5} stated in the Air Quality Standards Regulations (UK Government, 2010) was amended in the Environment (Miscellaneous Amendments) (EU Exit) Regulations (UK Government, 2020).
- 11.6 The Air Quality Strategy (AQS) was produced by the Department for Food, Environment and Rural Affairs (DEFRA) and published on 28th April 2023 (DEFRA, 2023). The document contains standards, objectives and measures for improving ambient air quality, including a number of Air Quality Objectives (AQOs). These are maximum ambient pollutant concentrations that are not to be exceeded either without exception or with a permitted number of exceedances over a specific timescale. These are generally in line with the AQLVs, although the requirements for the determination of compliance vary.
- 11.7 The Environmental Improvement Plan 2023 (UK Government, 2023) was published in January 2023, providing long term and Interim Targets in order to reduce population exposure to PM_{2.5}. The concentration target for 2040 was subsequently adopted in the Environmental Targets (Fine Particulate Matter) (England) Regulations (2023) (UK Government, 2023).
- 11.8 **Table 11.1** presents the AQOs, Interim Target and Concentration Target for pollutants considered within this assessment.

Table 11.1: Air Quality Objectives/Interim Target/Concentration Target

Pollutant	Air Quality Objective/Interim Target/Concentration Target	
	Concentration (µg/m ³)	Averaging Period
NO ₂	40	Annual mean
	200	1-hour mean, not to be exceeded on more than 18 occasions per annum
PM ₁₀	40	Annual mean
	50	24-hour mean, not to be exceeded on more than 35 occasions per annum
PM _{2.5}	12	Annual mean Interim Target to be achieved by the end of January 2028
	10	Annual mean Concentration Target to be achieved by 2040



Local Air Quality Management

- 11.9 Local Authorities (LAs) are required to periodically review and assess air quality within their area of jurisdiction under the system of Local Air Quality Management (LAQM). This review and assessment of air quality involves comparing present and likely future pollutant concentrations against the AQOs. If it is predicted that levels at locations of relevant exposure are likely to be exceeded, the LA is required to declare an Air Quality Management Area (AQMA). For each AQMA the LA is required to produce an Air Quality Action Plan (AQAP), the objective of which is to reduce pollutant concentrations in pursuit of the AQOs.

Dust Legislation

- 11.10 The main requirements with respect to dust from industrial sites not regulated under the Environmental Permitting (England and Wales) Regulations (2016) (UK Government, 2016) and subsequent amendments, such as construction sites, is that provided in Section 79 of Part III of the Environmental Protection Act (1990) (UK Government, 1990). The Act defines nuisance as:

"any dust, steam or smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance."

- 11.11 Enforcement of the Act, in regard to nuisance, is currently under the jurisdiction of the local Environmental Health Department, whose officers are deemed to provide an independent evaluation of nuisance. If the LA is satisfied that a statutory nuisance exists, or is likely to occur or happen again, it must serve an Abatement Notice under Part III of the Environmental Protection Act (1990). The only defense is to show that the process to which the nuisance has been attributed and its operation are being controlled according to best practicable means.

National Planning Policy

- 11.12 The revised National Planning Policy Framework (The Framework) (UK Government, 2024) was published in December 2024 and sets out the Government's planning policies for England and how these are expected to be applied.
- 11.13 The purpose of the planning system is to contribute to the achievement of sustainable development. In order to ensure this, the Framework recognises three overarching objectives (paragraph 8), including the following of relevance to air quality:

"c) an environmental objective - to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."



11.14 Chapter 15 of the Framework details objectives in relation to conserving and enhancing the natural environment. At Paragraph 187 it states that:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

[...]

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality [...]"

11.15 The Framework specifically recognises air quality at Paragraph 199 as part of delivering sustainable development and states that:

"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."

11.16 The implications of the Framework have been considered throughout this assessment.

Planning Practice Guidance

11.17 The National Planning Practice Guidance (NPPG) (UK Government, 2019) web-based resource was launched by the Department for Communities and Local Government on 6th March 2014 to support the Framework and make it more accessible. The air quality pages were updated on 1st November 2019 and are summarised under the following headings:

- 1) What air quality considerations does planning need to address?
- 2) What is the role of plan-making with regard to air quality?
- 3) Are air quality concerns relevant to neighbourhood planning?
- 4) What information is available about air quality?
- 5) When could air quality considerations be relevant to the development management process?
- 6) What specific issues may need to be considered when assessing air quality impacts?
- 7) How detailed does an air quality assessment need to be?



8) How can an impact on air quality be mitigated?

11.18 These were reviewed and the relevant guidance considered as necessary throughout the undertaking of this assessment.

Regional Planning Policy

11.19 The 'Places for Everyone Joint Development Plan Document' (Greater Manchester Combined Authority (GMCA), 2024) was adopted by the GMCA on 21st March 2024. Review of the document indicated the following policies of relevance to the assessment:

"Policy JP-P1: Sustainable Places

We aim to become one of the most liveable city regions in the world, consisting of a series of beautiful, healthy and varied places, each having the following key attributes that all development, wherever appropriate, should be consistent with:

1. Distinctive, with a clear identity that:
 - A. Conserves and enhances the natural environment, landscape features, historic environment and local history and culture;
 - B. Enables a clear understanding of how the place has developed; and
 - C. Respects and acknowledges the character and identity of the locality in terms of design, siting size, scale and materials used.
2. Visually stimulating, creating interesting and imaginative environments which raise the human spirit through the use of green space, public art and quality design
3. Socially inclusive:
 - A. Responding to the needs of all parts of society;
 - B. Enabling everyone to participate equally and independently;
 - C. Providing opportunities for social contact and support; and
 - D. Promoting a sense of community
4. Resilient, capable of dealing with major environmental events
5. Adaptable, able to respond easily to varied and changing needs and technologies
6. Durable, being built to last and using robust materials that reflect local character, weather well and are easily maintained
7. Resource-efficient with:
 - A. A low carbon footprint;
 - B. Efficient use of land;
 - C. Minimise use of new materials;
 - D. High levels of recycling



8. Safe, including by designing out crime and terrorism, reducing opportunities for anti-social behavior and by ensuring that development make appropriate provision for response and evacuation in the case of emergency or disaster
9. Supported by critical infrastructure, such as energy, water and drainage and green spaces
10. Functional and convenient, enabling people and uses to act efficiently with minimal effort, and responding to needs relating to servicing, recycling facilities, refuse collection and storage
11. Incorporating inclusive design within all spaces with support for tackling inequality and poverty to form part of creating sustainable places
12. Legible, being easy to understand and navigate with the protection and enhancement of key views and new development well-integrated into the place
13. Easy to move around for those of all mobility levels, particularly walking and cycling, with enjoyable routes free from obstacles and disorienting stimuli and with places to rest
14. Well-connected to other places, particularly by public transport and digital infrastructure enabling everyone to take advantage of the employment, cultural and leisure opportunities across Greater Manchester and beyond
15. Comfortable and inviting, with indoor and outdoor environments:
 - A. Offering a high level of amenity that minimizes exposure to pollution; and
 - B. Addressing microclimate issues such as sunlight, indoor air quality, overheating, shade, wind and shelter
16. Incorporating high quality and well managed green infrastructure and quality public realm, with:
 - A. Opportunities for recreation and outdoor play for children, and interaction between the generations;
 - B. Public and private spaces clearly distinguished;
 - C. Development clearly defining, and promoting activity within, public spaces;
 - D. High quality landscaping with schemes
17. Well-served by local shops, services and amenities, including education and health facilities."

"Policy JP-S5: Clean Air

A comprehensive range of measures will be taken to support improvements in air quality, focusing particularly on locations where people live, where children learn and play, where there are impacts on the green infrastructure network and where air quality targets are not being met, including:

1. Locating and designing development, and focusing transport investment, so as to reduce reliance on forms of transport that generate air pollution;
2. Determining planning applications having regard to the most recent development and planning control guidance published jointly by the Institute of Air Quality



Management (IAQM) and Environmental Protection UK (EPUK), and the most recent IAQM Guidance on the Assessment of Dust from Demolition and Construction, or relevant successor guidance, including the requirement for developers to submit construction management plans as appropriate;

3. Requiring applications for developments that could have an adverse impact on air quality to submit relevant air pollution data so that adverse impacts on air quality can be fully assessed and development only permitted where they are acceptable and/or suitable mitigation can be provided;
4. Restricting developments that would generate significant point source pollution such as some types of industrial activity and energy generation;
5. Significantly expanding the existing commercial network of electric vehicle charging points, both for public and private use, including as part of new developments;
6. Implementing the Clean Air Plan and associated measures;
7. Facilitating the more sustainable distribution of goods within the urban area, including through accommodating urban consolidation centres and urban distribution centres that use ultra-low-emission vehicles, and local delivery facilities to reduce repeat delivery attempts;
8. Designing streets to avoid trapping air pollution at ground level, including through the appropriate location and scale of buildings and trees;
9. Controlling traffic and parking within and around schools, early years sites and other locations that are particularly sensitive to air quality;
10. Promoting actions that help remove pollutants from the air, such as enhancing the green infrastructure network and using innovative building materials that capture air pollutants; and
11. Development should be located in areas that maximise the use of sustainable travel modes and be designed to minimise exposure to high levels of air pollution, particularly for vulnerable users."

"Policy JP Allocation 9: Walshaw

Any proposals for this allocation must be in accordance with a comprehensive masterplan that has been approved by the LPA. It shall include a clear phasing strategy as part of an integral approach to delivery of infrastructure to support the scale of the whole development in line with Policy JP-D1 'Infrastructure Implementation'.

Development in this allocation will be required to:

1. Deliver a broad mix of around 1,250 homes to diversify the type of accommodation in the Walshaw area. This includes an appropriate mix of house types and sizes, accommodation for older people, and provision of plots for custom and self-build housing (Subject to local demand as set out in the Council's self-build register);
2. Make provision of a new strategic through road to enable an alternative to Church Street, Bank Street and High Street that is designed to be suitable for buses and incorporates active travel and is in line with local design standards;



3. Make provision for a network of safe cycling and walking routes through the allocation linking neighborhoods with key destinations, incorporating Leigh Lane and Dow Lane;
4. Make provision for other new and improved sustainable transport and highways infrastructure having regard to the indicative transport interventions set out in Appendix D in accordance with Policy JP-C8;
5. Make provision for affordable housing in accordance with local planning policy requirements, equivalent to at least 25% of the dwellings proposed on the site and across a range of housing types and sizes (with an affordable housing tenure split of 70% social or affordable rented and 40% affordable home ownership);
6. Make provision of a new one-form entry primary school and make financial contributions for off-site additional secondary school provision to meet needs generated by the development in accordance with Policy JP-P5;
7. Make provision for a new local centre in an accessible location which includes a range of appropriate retail, health and community facilities required to serve purely local needs and ensure that it is integrated within existing communities;
8. Ensure the design and layout allows for effective integration with surrounding communities, including active travel links and connections to the recreation areas at Dow Lane, Elton Vale, Whitehead Lodes as well as Walshaw Village and Bury Town Centre;
9. Make provision for new, high quality, publicly accessible, multifunctional green and blue infrastructure within the allocation including the integration and enhancement of existing green infrastructure corridors and assets at Walshaw and Elton Brooks;
10. Make provision for compensatory improvements to the environmental quality and accessibility of remaining Green Belt in the vicinity of the site in accordance with Policy GP-G2;
11. Define and/or strengthen the boundaries of the Green Belt to the south-east of the site such that it will comprise physical features that are readily recognisable and likely to be permanent;
12. Take appropriate account of relevant heritage assets, and their setting, including the Christ Church Grade II* Listed Building, in accordance with Policy JP-P2; and
13. Consider the extraction of any viable mineral resources within Mineral Safeguarding Areas, in accordance with Policy 8 of the Greater Manchester Joint Minerals Development Plan (or any relevant policies in subsequent minerals plans)."

11.20 The above policies have been considered as necessary throughout the assessment.

Local Planning Policy

11.21 The Bury Unitary Development Plan (UDP) (Bury Council (BC), 1997) was adopted by BC on 29th August 1997. A review of the document indicated that the policies of relevance to the assessment have been replaced by JP-P1 and JP-S5 in the Places for Everyone Joint Development Plan Document' (GMCA, 2024) as outlined above.



Greater Manchester Clean Air Plan

- 11.22 The UK Government has instructed a number of LAs to take rapid action to reduce harmful roadside levels of NO₂ within their areas of jurisdiction in the quickest possible timeframe. The GMCA and Transport for Greater Manchester (TfGM) have collaborated to develop a Clean Air Plan (CAP) to ensure Greater Manchester achieves compliance with the relevant AQOs for NO₂ by 2026 at the latest. The
- 11.23 initial CAP proposal included implementation of a Class C charging Clean Air Zone. The GMCA has subsequently updated the CAP proposals (GMCA and TfGM, 2022) to comprise an investment-led, non-charging approach. This is currently under review by the UK Government. The implications of the CAP were taken into account during the undertaking of this assessment.

Assessment Methodology

- 11.24 The Proposed Development has the potential to cause air quality effects during the construction and operational phases. These were assessed in accordance with the following methodology.

Construction Phase Fugitive Dust Emissions

- 11.25 There is the potential for fugitive dust emissions to occur as a result of construction activities. These have been assessed in accordance with the methodology outlined within the IAQM document 'Guidance on the Assessment of Dust from Demolition and Construction V2.2' (IAQM, 2024).
- 11.26 Activities to be undertaken as part of the Proposed Development have been divided into three types to reflect their different potential impacts. These are:
- Earthworks;
 - Construction; and,
 - Trackout.
- 11.27 The potential for dust emissions was assessed for each activity that is likely to take place and considered three separate dust effects:
- Annoyance due to dust soiling (dust deposition, resulting in the soiling of surfaces);
 - Harm to ecological receptors; and,
 - The risk of health effects due to a significant increase in exposure to PM₁₀.
- 11.28 The first stage screens the requirement for a more detailed assessment. Should human receptors be identified within 250m from the Site boundary or 50m from the construction vehicle route up to 250m from the Site entrance, then the assessment proceeds to the next step. Additionally, should ecological receptors be identified within 50m of the Site or the construction vehicle route up to 250m from the Site entrance, then the assessment also proceeds to the next stage.



- 11.29 The second stage of the assessment screens the risk of potential dust impacts. The risk category was defined based on two factors:
- The sensitivity of the area to dust impacts, which can be defined as low, medium or high sensitivity; and,
 - The scale and nature of the works, which determines the magnitude of dust arising (impact) as: low, medium or high.
- 11.30 The two factors are combined in order to determine the impact risk without mitigation applied.
- 11.31 The influencing factors that define the sensitivity of specific receptors are shown in **Table 11.2**.

Table 11.2: Construction Dust - Sensitivities of People and Ecological Receptors

Receptor Sensitivity	Example	
	Human Receptors	Ecological Receptors
High	Users expect high levels of amenity High aesthetic or value property People expected to be present continuously for extended periods of time Locations where members of the public are exposed over a time period relevant to the Air Quality Objective (AQO) for PM₁₀ e.g. residential properties, hospitals, schools and residential care homes	Internationally or nationally designated site e.g. Special Area of Conservation
Medium	Users would expect to enjoy a reasonable level of amenity Aesthetics or value of their property could be diminished by soiling People or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land e.g. parks and places of work	Nationally designated site e.g. Sites of Special Scientific Interest
Low	Enjoyment of amenity would not reasonably be expected Property would not be expected to be diminished in appearance Transient exposure, where people would only be expected to be present for limited periods e.g. public footpaths, playing fields, shopping streets,	Locally designated site e.g. Local Nature Reserve



Receptor Sensitivity	Example	
	Human Receptors	Ecological Receptors
	farmland, short term car parks and roads	

- 11.32 The criteria for determining the sensitivity of the area to dust soiling effects on people and property is summarised in **Table 11.3**.

Table 11.3: Construction Dust - Sensitivity of the Area to Dust Soiling Effects on People and Property

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		Less than 20	Less than 50	Less than 100	Less than 250
High	More than 100	High	High	Medium	Low
	10 - 100	High	Medium	Low	Low
	1 - 10	Medium	Low	Low	Low
Medium	More than 1	Medium	Low	Low	Low
Low	More than 1	Low	Low	Low	Low

Table 11.4: outlines the criteria for determining the sensitivity of the area to human health impacts.

Receptor Sensitivity	Background Annual Mean PM10 Concentration	Number of Receptors	Distance from the Source (m)			
			Less than 20	Less than 50	Less than 100	Less than 250
High	Greater than 32µg/m³	More than 100	High	High	High	Medium
		10 - 100	High	High	Medium	Low
		1 - 10	High	Medium	Low	Low
	28 - 32µg/m³	More than 100	High	High	Medium	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	High	Medium	Low	Low
	24 - 28µg/m³	More than 100	High	Medium	Low	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low



Receptor Sensitivity	Background Annual Mean PM10 Concentration	Number of Receptors	Distance from the Source (m)			
			Less than 20	Less than 50	Less than 100	Less than 250
	Less than 24µg/m³	More than 100	Medium	Low	Low	Low
		10 - 100	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Medium	Greater than 32µg/m³	More than 10	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	28 - 32µg/m³	More than 10	Medium	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	24 - 28µg/m³	More than 10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	Less than 24µg/m³	More than 10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	-	Greater than 1	Low	Low	Low	Low

Table 11.5: Outlines the criteria for determining the sensitivity of the area to ecological impacts

Receptor Sensitivity	Distance from the Source (m)	
	Less than 20	Less than 50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

11.33 The scale and nature of the construction works determine the magnitude of dust impacts arising from each activity. The relevant criteria are summarised in **Table 11.6**.



Table 11.6: Construction Dust - Magnitude of Emission

Magnitude	Activity	Criteria
Large	Earthworks	Total site area more than 110,000m ² Potentially dusty soil type (e.g. clay) More than 10 heavy earth moving vehicles active at any one time Formation of bunds greater than 6m in height
	Construction	Total building volume more than 75,000m ³ On site concrete batching, sand blasting
	Trackout	More than 50 Heavy Duty Vehicles (HDV) movements per day Potentially dusty surface material (e.g. high clay content) Unpaved road length more than 100m
Medium	Earthworks	Total site area between 18,000m ² and 110,000m ² Moderately dusty soil type (e.g. silt) Between 5 and 10 heavy earth moving vehicles active at any one time Formation of bunds between 3m and 6m in height
	Construction	Total building volume between 12,000m ³ and 75,000m ³ Potentially dusty construction material (e.g. concrete)
	Trackout	Between 20 and 50 HDV movements per day Moderately dusty surface material (e.g. high clay content) Unpaved road length between 50m and 100m
Small	Earthworks	Total site area less than 18,000m ² Soil type with large grain size (e.g. sand) Less than 5 heavy earth moving vehicles active at any one time Formation of bunds less than 3m in height
	Construction	Total building volume less than 12,000m ³ Construction material with low potential for dust release (e.g. metal cladding or timber)
	Trackout	Less than 20 HDV movements per day Surface material with low potential for dust release Unpaved road length less than 50m



- 11.34 The dust emission magnitude was combined with the sensitivity of the area to determine the risk of unmitigated impacts.

Table 11.7: Outlines the dust risk category from earthworks, construction and trackout

Sensitivity of the Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High	Medium	Low
Medium	Medium	Medium	Low
Low	Low	Low	Negligible

- 11.35 It should be noted that predicted effects from construction phase fugitive dust emissions are considered to be Adverse but temporary in nature.
- 11.36 Site-specific mitigation measures were identified from the IAQM guidance (IAQM, 2024) in order to reduce potential dust impacts.
- 11.37 The significance of residual impacts was then determined based on the professional judgement. For almost all construction activity, the aim should be to control effects through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be Negligible. This is regarded as Not Significant with respect to the Town and Country Planning (Environmental Impact Assessment) Regulations (2017) (UK Government, 2017).

Operational Phase Road Vehicle Exhaust Emissions

- 11.38 The Proposed Development has the potential to impact on existing air quality as a result of road traffic exhaust emissions associated with vehicles travelling to and from the Site during the operational phase. Potential effects were defined by predicting pollutant levels at sensitive human receptor locations using dispersion modelling for the following scenarios:
- 2023 - Model Verification (comparison of predicted and measured pollutant concentrations allowing a verification factor to be made to adjust results accordingly);
 - Opening year Do-Minimum (DM) (predicted flows in 2030 should the Proposed Development not proceed); and,
 - Opening year Do-Something (DS) (predicted flows in 2030 should the Proposed Development be completed).
- 11.39 The DM scenario (i.e. without the Proposed Development) included baseline traffic data, inclusive of anticipated growth and committed developments for 2030. The DS scenario (i.e. with the Proposed Development) included baseline traffic data, inclusive of anticipated growth and committed



developments for 2030, in addition to predicted vehicle trips associated with the Proposed Development.

- 11.40 Reference should be made to **Volume 3: Technical Appendix 11.1** for a description of the dispersion modelling inputs.
- 11.41 Locations sensitive to potential changes in off-site pollutant concentrations were identified within 200m of the highway network in accordance with the guidance provided by Highways England (Highways England, 2019) on the likely limits of pollutant dispersion from road sources. The criteria provided within DEFRA guidance (DEFRA, 2022) on where the AQOs apply was utilised to determine worst-case receptor positions in the vicinity of links likely to be affected by changes in traffic flows as a result of the Proposed Development.
- 11.42 The significance of predicted air quality impacts was determined in accordance with the guidance provided within the IAQM document 'Land-Use Planning & Development Control: Planning for Air Quality' (IAQM, 2017). Using this methodology, impacts were defined based on the interaction between the predicted pollutant concentration from the DS scenario and the magnitude of change between the DM and DS scenarios, as outlined in **Table 11.8**.

Table 11.8: Operational Phase Road Vehicle Exhaust Emissions - Significance of Operational Phase Road Vehicle Exhaust Emissions Impact

Pollutant Concentration at Receptor in Assessment Year	Predicted Concentration Change as Proportion of AQO/Interim Target (%)			
	1	2 - 5	6 - 10	> 10
75% or less of AQO or Interim Target	Negligible	Negligible	Slight	Moderate
76 - 94% of AQO or Interim Target	Negligible	Slight	Moderate	Moderate
95 - 102% of AQO or Interim Target	Slight	Moderate	Moderate	Substantial
103 - 109% of AQO or Interim Target	Moderate	Moderate	Substantial	Substantial
110% or more of AQO or Interim Target	Moderate	Substantial	Substantial	Substantial

- 11.43 It should be noted that the categories outlined in **Table 11.8** are intended to be used by rounding the change in percentage pollutant concentration to whole numbers.
- 11.44 Following the prediction of impacts at discrete receptor locations, the IAQM document (IAQM, 2017) provides guidance on determining the overall air quality impact significance of the operation of a development. The following factors are identified for consideration by the assessor:



- The existing and future air quality in the absence of the development;
- The extent of current and future population exposure to the impacts; and,
- The influence and validity of any assumptions adopted when undertaking the prediction of impacts.

11.45 The IAQM guidance states that an assessment must reach a conclusion on the likely significance of the predicted impact. Where the overall effect is Moderate or Substantial, the effect is likely to be considered Significant, whilst if the impact is Slight or Negligible, the impact is likely to be considered Not Significant. It should be noted that this is a binary judgement of either it is Significant or it is Not Significant.

11.46 Predicted air quality effects from operational phase road vehicle exhaust emissions are considered to be Adverse and permanent in nature.

Baseline Conditions

Local Air Quality Management

11.47 As required by the Environment Act (1995), as amended by the Environment Act (2021), BC has undertaken Review and Assessment of air quality within their area of jurisdiction. This process has indicated that annual mean concentrations of NO₂ are above the AQO within the Borough. As such, a number of roads within Bury have been included within the GMCA AQMA. This is described as follows:

"This is the part of the Greater Manchester Combined Authority AQMA located within the Bury Council area."

11.48 The Site is located approximately 1.5km north-west of the AQMA. As such, there is the potential for vehicles travelling to and from the Proposed Development to increase pollution levels in this sensitive area. This has been considered throughout the assessment.

11.49 BC has concluded that concentrations of all other pollutants considered within the AQS are currently below the relevant AQOs. As such, no further AQMA's have been designated.

Background Concentrations

11.50 Predictions of background pollutant concentrations on a 1km-by-1km grid basis have been produced for the UK by DEFRA to assist LAs in their Review and Assessment of air quality. The Site is partially located in four grid squares. Data for these locations was downloaded from the DEFRA website (DEFRA, 2021) for the purpose of the assessment and is summarised in **Table 11.9**.



Table 11.9: Background Pollutant Concentration Predictions

National Grid Reference (NGR)	Predicted Background Pollutant Concentration (µg/m³)								
	NO2			PM10			PM2.5		
	2023	2024	2030	2023	2024	2030	2023	2024	2030
377500, 411500	10.55	10.15	8.09	10.50	10.45	10.13	6.39	6.33	6.03
377500, 412500	10.38	9.99	7.83	10.67	10.62	10.30	6.48	6.43	6.12
378500, 411500	11.18	10.76	8.48	11.03	10.98	10.67	6.65	6.60	6.29
378500, 412500	10.64	10.24	8.07	11.13	11.09	10.78	6.57	6.52	6.21

- 11.51 As shown in **Table 11.9**, predicted background NO₂, PM₁₀ and PM_{2.5} concentrations are below the relevant AQOs, Interim Target and Concentration Target at the Site.

Local Air Quality Monitoring Data

- 11.52 Monitoring of pollutant concentrations is undertaken by BC throughout their area of jurisdiction. Data has also been collected by the GMCA to inform the CAP. Recent NO₂ concentrations recorded in the vicinity of the Site, as provided in the 'Greater Manchester LAQM and CAP NO₂ Diffusion Tube Results 2011-2023' spreadsheet (GMCA, 2024), are shown in Table 11.10. Exceedences of the AQO are shown in **bold**.

Table 11.10: Monitoring Results - NO₂

Monitoring Site		Monitored NO ₂ Concentrations (µg/m³)			
		2020	2021	2022	2023
BUR03 ^(a)	Bury Bridge	-	-	22.6	22.0
BU6NO	Bulton Road, Bury	37.5	30.4	30.7	27.3
BU9NO	Crostones Road	27.7	26.9	30.2	25.0
BU10NO	Bury Bridge	27.3	27.9	30.7	26.9
BU14NO	Angouleme Way	26.9	26.8	30.7	29.6



Monitoring Site		Monitored NO ₂ Concentrations (µg/m ³)			
		2020	2021	2022	2023
CAP_BURY_014	B6214 (Brandlesholme Road)	29.4	29	33.1	-
CAP_BURY_013	B6213 (Tottingham Road)	24.2	27	31.2	-
CAP_BURY_012	B6213 (Crostons Road)	23.7	27.8	26.6	-
CAP_BURY_037 ^(a)	Crostons Road	-	-	28.8	-
CAP_BURY_038 ^(a)	Bury Bridge	-	-	29.2	-
CAP_BURY_039 ^(a)	Bury Bridge	-	-	30.9	-
CAP_BURY_018	A58 (Bolton Road)	23.5	29.3	27.3	-
CAP_BURY_019	A58 (Bolton Road)	24.9	27.8	28.5	-
CAP_BURY_016	A58 (Bolton Road)	34.7	35	42.7	36.4
CAP_BURY_020	A58 (Bolton Road)	36.3	38.3	39.9	41.0
CAP_BURY_017	A58 (Bolton Road)	23.4	25.7	26.4	-
CAP_BURY_042 ^(b)	A58 (Bolton Road)	-	-	-	23.0

Note: (a) Monitor commissioned in 2022; (b) Monitor commissioned for 2023.

- 11.53 As shown in **Table 11.10**, annual mean NO₂ concentrations were above the AQO of 40µg/m³ at the CAP_BURY_020 monitor in 2023 and the CAP_BURY_016 monitor in 2022 and 2023. As the survey sites are adjacent to an A-road within an AQMA, elevated concentrations would be expected. Levels were below the AQO at all other positions in recent years.
- 11.54 Pollutant concentrations during 2020 and 2021 were affected by changes to travel patterns associated with the COVID-19 pandemic. The results should therefore be viewed with caution. However, data for 2022 and beyond is now considered representative of post-pandemic conditions. This is supported by the IAQM (IAQM, 2023), who have adopted the following position:



"ambient air quality monitoring data for the year 2022 and beyond is generally considered to represent the current post-pandemic baseline."

11.55 BC do not undertake monitoring of PM₁₀ or PM_{2.5} concentrations within the vicinity of the Site.

11.56 Reference should be made to Figure 11.1 in **Volume 3: Technical Appendix 11.2** for a map of the survey positions.

Sensitive Receptors

11.57 A sensitive receptor is defined as any location which may be affected by changes in air quality as a result of a development. These have been defined for construction dust and road vehicle exhaust emission impacts in the following sections.

Construction Phase Fugitive Dust Emissions Sensitive Receptors

11.58 Receptors sensitive to potential dust impacts during earthworks and construction were identified from a desk-top study of the area up to 250m from the Site boundary. These are summarised in **Table 11.11**.

Table 11.11: Construction Dust - Earthworks and Construction Dust Sensitive Receptors

Distance from Site Boundary (m)	Approximate Number of Human Receptors
Up to 20	More than 100
Up to 50	More than 100
Up to 100	More than 100
Up to 250	More than 100

11.59 Receptors sensitive to potential dust impacts from trackout were identified from a desk-top study of the area up to 50m from the road network within 250m of the Site access. These are summarised in **Table 11.12**.

Table 11.12: Construction Dust - Trackout Dust Sensitive Receptors

Distance from Site Access Route (m)	Approximate Number of Human Receptors
Up to 20	More than 100
Up to 50	More than 100



11.60 Based on the criteria shown in **Table 11.2**, the sensitivity of the receiving environment to potential dust soiling and health impacts is classified as High. This was because identified receptors included residential properties and Christ Church C.E. Primary School.

11.61 The sensitivity of the receiving environment to dust soiling and human health impacts has been derived from **Table 11.3** and **11.4**, respectively. These are shown in **Table 11.13**.

Table 11.13: Construction Dust - Sensitivity of the Surrounding Area to Specific Dust Impacts

Potential Impact	Sensitivity of the Surrounding Area		
	Earthworks	Construction	Trackout
Dust Soiling	High	High	High
Human Health	Medium	Medium	Medium

Operational Phase Road Vehicle Exhaust Emissions Sensitive Receptors

11.62 Receptors sensitive to potential construction and operational phase road vehicle exhaust emissions were identified from a desk top study and are summarised in **Table 11.14**. Receptor heights were selected based on the location of residential units to allow for less sensitive land uses, such as retail, at ground level.

Table 11.14: Road Vehicle Exhaust Emissions Sensitive Receptor Locations

Receptor		NGR (m)		Height (m)
		X	Y	
R1	Residential - B6213 Market Street	377682.4	412773.0	1.5
R2	Residential - Booth Street	377711.0	412720.9	1.5
R3	Residential - Booth Street	377734.4	412604.1	1.5
R4	Residential - Booth Street	377801.3	412516.7	1.5
R5	Residential - Scobell Street	377836.7	412173.4	1.5
R6	Residential - Church Street	377810.6	412147.5	1.5
R7	Residential - Bank Street	377700.7	411823.4	1.5
R8	Residential - Hall Street	377594.2	411821.1	1.5
R9	Residential - High Stret	377602.4	411741.7	1.5
R10	Residential - Lowercroft Road	377611.0	411240.9	1.5



Receptor		NGR (m)		Height (m)
		X	Y	
R11	Residential - Lowercroft Road	377513.4	410443.1	1.5
R12	Residential - B6196 Church Street	377443.8	410414.9	1.5
R13	Residential - B6292 Sterling Road	377458.7	410310.1	1.5
R14	Residential - B6196 Ainsworth Road	378285.0	410592.2	1.5
R15	Residential - B6196 Ainsworth Road	379405.7	410731.3	1.5
R16	Residential - A58 Bolton Road	378441.6	409909.3	1.5
R17	Residential - A58 Bolton Road	379189.9	410486.0	1.5
R18	Residential - A58 Bolton Road	379541.1	410792.3	3.5
R19	Residential - A58 Bolton Road	379582.9	410832.1	3.5
R20	Residential - A58 Bolton Road	379658.5	410887.1	3.5
R21	Residential - B6216 Millett Street	379825.2	410876.1	1.5
R22	Residential - Peel Way	380067.2	410931.3	1.5
R23	Residential - Sankey Street	379923.1	410788.8	1.5
R24	Dream Big Little One Nursery	379934.0	410741.2	1.5
R25	Residential - Jubilee Way	379974.2	410670.6	1.5
R26	Spring Lane School	380176.1	410552.2	1.5
R27	Townside Primary Care Centre	380425.9	410459.0	3.5
R28	Residential - A56 Manchester Road	380135.5	410302.4	1.5
R29	Residential - A56 Manchester Road	380165.2	410205.1	1.5
R30	Residential - A56 Manchester Road	380226.9	409987.9	1.5
R31	Residential - B6214 Brandlesholme Road	379637.7	411186.5	1.5
R32	Residential - B6214 Brandlesholme Road	379656.5	411262.3	1.5
R33	Residential - B6214 Brandlesholme Road	379679.3	411273.3	1.5
R34	Woodbank Primary School	379549.1	411902.8	1.5
R35	Residential - B6214 Brandlesholme Road	379186.4	412676.1	1.5
R36	Residential - B6213 Tottington Road	379613.4	411192.0	1.5



Receptor		NGR (m)		Height (m)
		X	Y	
R37	Farraday House	379450.8	411379.9	1.5
R38	Residential - B6213 Bury Road	378527.5	412149.0	1.5
R39	Residential - B6213 Bury Road	378413.5	412234.5	1.5
R40	Residential - B6213 Bury Road	378162.9	412458.7	1.5
R41	Residential - B6213 Bury Road	377841.1	412660.3	1.5
R42	Residential - Scobell Street	378069.6	412160.1	1.5
R43	Residential - Scobell Street	378384.8	412200.1	1.5
R44	Residential - Walshaw Street	377657.5	411669.2	1.5
R45	Residential - Walshaw Street	378445.1	411624.8	1.5
R46	Residential - Walshaw Street	379208.6	411360.4	1.5
R47	Residential - Walshaw Street	379584.7	411173.3	1.5

- 11.63 Reference should be made to Figure 11.2 in **Volume 3: Technical Appendix 11.2** for a map of road vehicle exhaust emission sensitive receptor locations.

Evaluation

Construction Phase Fugitive Dust Emissions

- 11.64 Any increase in deposited dust and PM₁₀ levels above baseline as a result of earthworks, construction and trackout activities during the construction phase may generate impacts from dust soiling and increases in pollutant levels at human health receptors within 250m of the Site boundary and within 50m of the Site access route up to 250m from the Site entrance for trackout activities.

Operational Phase Road Vehicle Exhaust Emissions

- 11.65 Any increase in concentrations of NO₂, PM₁₀ and PM_{2.5} above baseline as a result of road vehicle exhaust emissions during the operational phase may generate an effect at existing human receptor locations within 200m from roads where there are change of flows from the Proposed Development.



Assessment of Impact and Significance

Construction Phase Fugitive Dust Emissions

- 11.66 Activities such as excavation, ground works, cutting, construction, concrete batching and storage of materials have the potential to result in fugitive dust emissions throughout the construction phase. Vehicle movements both on-Site and on the local road network also have the potential to result in the re-suspension of dust from haul roads and highway surfaces.
- 11.67 The potential for effects at sensitive locations depends significantly on local meteorology during the undertaking of dust generating activities, with the most significant effects likely to occur during dry and windy conditions.
- 11.68 The desk-top study undertaken to inform the baseline identified a number of sensitive receptors within 250m of the Site boundary. As such, a detailed assessment of potential dust effects has been undertaken.

Earthworks

- 11.69 Earthworks will primarily involve excavating material, haulage, tipping and stockpiling, as well as Site levelling and landscaping. The area of the Site is greater than 110,000m². In accordance with the criteria outlined in **Table 11.6**, the magnitude of potential dust emissions from earthworks is therefore Large.
- 11.70 As indicated in **Table 11.13**, the sensitivity of the study area to dust soiling effects on people and property is high. In accordance with the criteria outlined in **Table 11.7**, the Proposed Development is considered to be a High risk for dust soiling as a result of earthworks.
- 11.71 As indicated in **Table 11.13**, the sensitivity of the study area to human health impacts is Medium. In accordance with the criteria outlined in **Table 11.7**, the Proposed Development is considered to be a Medium risk site for human health receptors as a result of earthworks.

Construction

- 11.72 Due to the size of the Proposed Development, the total building volume is likely to be greater than 75,000m³. In accordance with the criteria outlined in **Table 11.6**, the magnitude of potential dust emissions from construction is therefore Large.
- 11.73 As indicated in **Table 11.13**, the sensitivity of the study area to dust soiling effects on people and property is High. In accordance with the criteria outlined in **Table 11.7**, the Proposed Development is considered to be a High risk for dust soiling as a result of construction activities.



- 11.74 As indicated in **Table 11.13**, the sensitivity of the study area to human health impacts is Medium. In accordance with the criteria outlined in **Table 11.7**, the Proposed Development is considered to be a Medium risk site for human health receptors as a result of construction activities.

Trackout

- 11.75 Based on the Site area, it is anticipated that the unpaved road length may be greater than 100m during certain stages of construction. In accordance with the criteria outlined in **Table 11.6**, the magnitude of potential dust emissions from trackout is therefore Large.
- 11.76 As indicated in **Table 11.13**, the sensitivity of the study area to dust soiling effects on people and property is High. In accordance with the criteria outlined in **Table 11.7**, the Proposed Development is considered to be a High risk site for dust soiling as a result of trackout activities.
- 11.77 As indicated in **Table 11.13**, the sensitivity of the study area to human health impacts is Medium. In accordance with the criteria outlined in **Table 11.7**, the Proposed Development is considered to be a Medium risk site for human health receptors as a result of trackout activities.

Summary of Predicted Dust Risk

- 11.78 A summary of the potential risk from each dust generating activity is provided in **Table 11.15**.

Table 11.15: Summary of Potential Unmitigated Construction Dust Risk

Potential Impact	Potential Unmitigated Dust Risk		
	Earthworks	Construction	Trackout
Dust Soiling	High	High	High
Human Health	Medium	Medium	Medium

Operational Phase Road Vehicle Exhaust Emissions

- 11.79 Vehicle movements associated with the operation of the Proposed Development will generate exhaust emissions on the local and regional road networks. An assessment was therefore undertaken using dispersion modelling in order to quantify potential changes in pollutant concentrations at sensitive locations in the vicinity of the Site. The results are summarised below.
- 11.80 Reference should be made to **Volume 3: Technical Appendix 11.1** for the assessment inputs.

Predicted Concentrations

- 11.81 Annual mean NO₂ concentrations were predicted at the sensitive receptor locations for the DM and DS scenarios. The results are summarised in **Table 11.16**.



Table 11.16: Operational Phase Road Vehicle Exhaust Emissions - Predicted Annual Mean NO₂ Concentrations

Receptor		Predicted Annual Mean NO ₂ Concentration (µg/m ³)		
		DM	DS	Change
R1	Residential - B6213 Market Street	23.81	24.40	0.59
R2	Residential - Booth Street	23.67	24.32	0.65
R3	Residential - Booth Street	28.53	29.50	0.97
R4	Residential - Booth Street	26.78	27.65	0.87
R5	Residential - Scobell Street	26.88	28.01	1.13
R6	Residential - Church Street	26.95	28.35	1.40
R7	Residential - Bank Street	20.73	21.43	0.70
R8	Residential - Hall Street	19.97	20.53	0.56
R9	Residential - High Stret	21.02	21.67	0.65
R10	Residential - Lowercroft Road	20.41	21.06	0.65
R11	Residential - Lowercroft Road	26.05	26.92	0.87
R12	Residential - B6196 Church Street	23.88	24.46	0.58
R13	Residential - B6292 Sterling Road	23.63	24.22	0.59
R14	Residential - B6196 Ainsworth Road	19.97	20.19	0.22
R15	Residential - B6196 Ainsworth Road	28.60	29.30	0.70
R16	Residential - A58 Bolton Road	30.83	31.74	0.91
R17	Residential - A58 Bolton Road	33.68	34.73	1.05
R18	Residential - A58 Bolton Road	26.15	26.82	0.67
R19	Residential - A58 Bolton Road	26.06	26.73	0.67
R20	Residential - A58 Bolton Road	25.71	26.34	0.63
R21	Residential - B6216 Millett Street	20.04	20.31	0.27
R22	Residential - Peel Way	25.68	26.21	0.53
R23	Residential - Sankey Street	21.87	22.23	0.36
R24	Dream Big Little One Nursery	21.66	22.01	0.35



Receptor		Predicted Annual Mean NO ₂ Concentration (µg/m ³)		
		DM	DS	Change
R25	Residential - Jubilee Way	22.26	22.64	0.38
R26	Spring Lane School	27.96	28.62	0.66
R27	Townside Primary Care Centre	22.26	22.59	0.33
R28	Residential - A56 Manchester Road	25.32	25.97	0.65
R29	Residential - A56 Manchester Road	24.95	25.59	0.64
R30	Residential - A56 Manchester Road	25.10	25.75	0.65
R31	Residential - B6214 Brandlesholme Road	34.69	35.62	0.93
R32	Residential - B6214 Brandlesholme Road	29.90	30.59	0.69
R33	Residential - B6214 Brandlesholme Road	30.28	30.98	0.70
R34	Woodbank Primary School	23.50	23.90	0.40
R35	Residential - B6214 Brandlesholme Road	22.46	22.81	0.35
R36	Residential - B6213 Tottington Road	32.18	33.22	1.04
R37	Farraday House	27.98	28.91	0.93
R38	Residential - B6213 Bury Road	20.95	21.45	0.50
R39	Residential - B6213 Bury Road	24.20	25.12	0.92
R40	Residential - B6213 Bury Road	33.64	34.67	1.03
R41	Residential - B6213 Bury Road	22.75	23.25	0.50
R42	Residential - Scobell Street	18.02	18.17	0.15
R43	Residential - Scobell Street	18.54	18.90	0.36
R44	Residential - Walshaw Street	20.16	20.66	0.50
R45	Residential - Walshaw Street	18.41	18.57	0.16
R46	Residential - Walshaw Street	27.54	28.10	0.56
R47	Residential - Walshaw Street	24.88	25.47	0.59

11.82 As shown in **Table 11.16**, predicted annual mean NO₂ concentrations were below the relevant AQO of 40µg/m³ at all sensitive receptors in both the DM and DS scenarios.



11.83 Annual mean PM₁₀ concentrations were predicted at the sensitive receptor locations for the DM and DS scenarios. The results are summarised in **Table 11.17**.

Table 11.17: Operational Phase Road Vehicle Exhaust Emissions - Predicted Annual Mean PM₁₀ Concentrations

Receptor		Predicted Annual Mean PM ₁₀ Concentration (µg/m ³)		
		DM	DS	Change
R1	Residential - B6213 Market Street	14.54	14.72	0.18
R2	Residential - Booth Street	14.32	14.50	0.18
R3	Residential - Booth Street	15.64	15.93	0.30
R4	Residential - Booth Street	15.12	15.38	0.26
R5	Residential - Scobell Street	15.15	15.48	0.33
R6	Residential - Church Street	15.15	15.56	0.41
R7	Residential - Bank Street	13.54	13.72	0.19
R8	Residential - Hall Street	13.53	13.71	0.18
R9	Residential - High Stret	13.97	14.20	0.22
R10	Residential - Lowercroft Road	13.82	14.05	0.23
R11	Residential - Lowercroft Road	15.02	15.28	0.26
R12	Residential - B6196 Church Street	14.81	15.01	0.20
R13	Residential - B6292 Sterling Road	14.96	15.18	0.22
R14	Residential - B6196 Ainsworth Road	13.64	13.72	0.08
R15	Residential - B6196 Ainsworth Road	15.83	16.06	0.22
R16	Residential - A58 Bolton Road	17.05	17.39	0.34
R17	Residential - A58 Bolton Road	18.12	18.53	0.41
R18	Residential - A58 Bolton Road	14.65	14.82	0.17
R19	Residential - A58 Bolton Road	14.60	14.77	0.17
R20	Residential - A58 Bolton Road	14.58	14.74	0.17
R21	Residential - B6216 Millett Street	13.42	13.49	0.08
R22	Residential - Peel Way	15.14	15.31	0.17



Receptor		Predicted Annual Mean PM ₁₀ Concentration (µg/m ³)		
		DM	DS	Change
R23	Residential - Sankey Street	14.20	14.33	0.12
R24	Dream Big Little One Nursery	14.18	14.30	0.12
R25	Residential - Jubilee Way	14.42	14.56	0.14
R26	Spring Lane School	15.98	16.20	0.23
R27	Townside Primary Care Centre	14.16	14.27	0.10
R28	Residential - A56 Manchester Road	15.64	15.89	0.26
R29	Residential - A56 Manchester Road	15.52	15.77	0.25
R30	Residential - A56 Manchester Road	15.60	15.85	0.26
R31	Residential - B6214 Brandlesholme Road	18.16	18.52	0.36
R32	Residential - B6214 Brandlesholme Road	16.73	16.99	0.26
R33	Residential - B6214 Brandlesholme Road	17.19	17.46	0.28
R34	Woodbank Primary School	14.93	15.08	0.15
R35	Residential - B6214 Brandlesholme Road	14.57	14.70	0.13
R36	Residential - B6213 Tottington Road	17.60	18.01	0.41
R37	Farraday House	16.59	16.97	0.38
R38	Residential - B6213 Bury Road	14.01	14.19	0.18
R39	Residential - B6213 Bury Road	14.98	15.29	0.31
R40	Residential - B6213 Bury Road	17.38	17.74	0.36
R41	Residential - B6213 Bury Road	14.55	14.72	0.18
R42	Residential - Scobell Street	12.83	12.87	0.04
R43	Residential - Scobell Street	13.05	13.16	0.10
R44	Residential - Walshaw Street	13.62	13.78	0.16
R45	Residential - Walshaw Street	13.11	13.16	0.05
R46	Residential - Walshaw Street	15.39	15.56	0.17
R47	Residential - Walshaw Street	14.95	15.15	0.20



- 11.84 As shown in **Table 11.17**, predicted annual mean PM₁₀ concentrations were below the relevant AQO of 40µg/m³ at all sensitive receptors in both the DM and DS scenarios.
- 11.85 Annual mean PM_{2.5} concentrations were predicted at the sensitive receptor locations for the DM and DS scenarios. The results are summarised in **Table 11.18**.

Table 11.18: Operational Phase Road Vehicle Exhaust Emissions - Predicted Annual Mean PM_{2.5} Concentrations

Receptor		Predicted Annual Mean PM _{2.5} Concentration (µg/m ³)		
		DM	DS	Change
R1	Residential - B6213 Market Street	8.46	8.55	0.10
R2	Residential - Booth Street	8.34	8.44	0.10
R3	Residential - Booth Street	9.05	9.21	0.16
R4	Residential - Booth Street	8.77	8.91	0.14
R5	Residential - Scobell Street	8.79	8.96	0.18
R6	Residential - Church Street	8.79	9.01	0.22
R7	Residential - Bank Street	7.92	8.02	0.10
R8	Residential - Hall Street	7.92	8.01	0.09
R9	Residential - High Stret	8.15	8.27	0.12
R10	Residential - Lowercroft Road	8.07	8.20	0.13
R11	Residential - Lowercroft Road	8.72	8.86	0.14
R12	Residential - B6196 Church Street	8.60	8.71	0.11
R13	Residential - B6292 Sterling Road	8.68	8.80	0.12
R14	Residential - B6196 Ainsworth Road	7.98	8.02	0.04
R15	Residential - B6196 Ainsworth Road	9.16	9.28	0.12
R16	Residential - A58 Bolton Road	9.80	9.98	0.18
R17	Residential - A58 Bolton Road	10.37	10.60	0.22
R18	Residential - A58 Bolton Road	8.53	8.62	0.09
R19	Residential - A58 Bolton Road	8.50	8.59	0.09
R20	Residential - A58 Bolton Road	8.49	8.58	0.09



R21	Residential - B6216 Millett Street	7.86	7.90	0.04
R22	Residential - Peel Way	8.79	8.88	0.09
R23	Residential - Sankey Street	8.28	8.34	0.07
R24	Dream Big Little One Nursery	8.26	8.33	0.07
R25	Residential - Jubilee Way	8.40	8.47	0.07
R26	Spring Lane School	9.23	9.35	0.12
R27	Townside Primary Care Centre	8.26	8.31	0.06
R28	Residential - A56 Manchester Road	9.04	9.18	0.14
R29	Residential - A56 Manchester Road	8.98	9.11	0.13
R30	Residential - A56 Manchester Road	9.02	9.15	0.14
R31	Residential - B6214 Brandlesholme Road	10.40	10.59	0.19
R32	Residential - B6214 Brandlesholme Road	9.63	9.77	0.14
R33	Residential - B6214 Brandlesholme Road	9.87	10.02	0.15
R34	Woodbank Primary School	8.67	8.74	0.08
R35	Residential - B6214 Brandlesholme Road	8.47	8.54	0.07
R36	Residential - B6213 Tottington Road	10.09	10.31	0.22
R37	Farraday House	9.55	9.76	0.20
R38	Residential - B6213 Bury Road	8.17	8.27	0.09
R39	Residential - B6213 Bury Road	8.69	8.86	0.16
R40	Residential - B6213 Bury Road	9.98	10.17	0.19
R41	Residential - B6213 Bury Road	8.46	8.55	0.09
R42	Residential - Scobell Street	7.54	7.56	0.02
R43	Residential - Scobell Street	7.66	7.72	0.06
R44	Residential - Walshaw Street	7.97	8.05	0.09
R45	Residential - Walshaw Street	7.69	7.72	0.03
R46	Residential - Walshaw Street	8.92	9.01	0.09
R47	Residential - Walshaw Street	8.68	8.78	0.11



- 11.86 As shown in **Table 11.18**, predicted annual mean PM_{2.5} concentrations were below the Interim Target of 12µg/m³ at all sensitive receptors in both the DM and DS scenarios.

Predicted Impacts

- 11.87 Predicted impacts on annual mean NO₂ concentrations at sensitive receptor locations as a result of operational phase road vehicle exhaust emissions are summarised in **Table 11.19**.

Table 11.19: Operational Phase Road Vehicle Exhaust Emissions - Predicted Impacts NO₂

Receptor		Predicted Annual Mean NO ₂ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R1	Residential - B6213 Market Street	Below 75% of AQO	1	Negligible
R2	Residential - Booth Street	Below 75% of AQO	2 - 5	Negligible
R3	Residential - Booth Street	Below 75% of AQO	2 - 5	Negligible
R4	Residential - Booth Street	Below 75% of AQO	2 - 5	Negligible
R5	Residential - Scobell Street	Below 75% of AQO	2 - 5	Negligible
R6	Residential - Church Street	Below 75% of AQO	2 - 5	Negligible
R7	Residential - Bank Street	Below 75% of AQO	2 - 5	Negligible
R8	Residential - Hall Street	Below 75% of AQO	1	Negligible
R9	Residential - High Stret	Below 75% of AQO	2 - 5	Negligible
R10	Residential - Lowercroft Road	Below 75% of AQO	2 - 5	Negligible
R11	Residential - Lowercroft Road	Below 75% of AQO	2 - 5	Negligible
R12	Residential - B6196 Church Street	Below 75% of AQO	1	Negligible
R13	Residential - B6292 Sterling Road	Below 75% of AQO	1	Negligible
R14	Residential - B6196 Ainsworth Road	Below 75% of AQO	1	Negligible
R15	Residential - B6196 Ainsworth Road	Below 75% of AQO	2 - 5	Negligible



R16	Residential - A58 Bolton Road	76 - 94% of AQO	2 - 5	Slight
R17	Residential - A58 Bolton Road	76 - 94% of AQO	2 - 5	Slight
R18	Residential - A58 Bolton Road	Below 75% of AQO	2 - 5	Negligible
R19	Residential - A58 Bolton Road	Below 75% of AQO	2 - 5	Negligible
R20	Residential - A58 Bolton Road	Below 75% of AQO	2 - 5	Negligible
R21	Residential - B6216 Millett Street	Below 75% of AQO	1	Negligible
R22	Residential - Peel Way	Below 75% of AQO	1	Negligible
R23	Residential - Sankey Street	Below 75% of AQO	1	Negligible
R24	Dream Big Little One Nursery	Below 75% of AQO	1	Negligible
R25	Residential - Jubilee Way	Below 75% of AQO	1	Negligible
R26	Spring Lane School	Below 75% of AQO	2 - 5	Negligible
R27	Townside Primary Care Centre	Below 75% of AQO	1	Negligible
R28	Residential - A56 Manchester Road	Below 75% of AQO	2 - 5	Negligible
R29	Residential - A56 Manchester Road	Below 75% of AQO	2 - 5	Negligible
R30	Residential - A56 Manchester Road	Below 75% of AQO	2 - 5	Negligible
R31	Residential - B6214 Brandlesholme Road	76 - 94% of AQO	2 - 5	Slight
R32	Residential - B6214 Brandlesholme Road	76 - 94% of AQO	2 - 5	Slight
R33	Residential - B6214 Brandlesholme Road	76 - 94% of AQO	2 - 5	Slight
R34	Woodbank Primary School	Below 75% of AQO	1	Negligible
R35	Residential - B6214 Brandlesholme Road	Below 75% of AQO	1	Negligible
R36	Residential - B6213 Tottington Road	76 - 94% of AQO	2 - 5	Slight
R37	Farraday House	Below 75% of AQO	2 - 5	Negligible



R38	Residential - B6213 Bury Road	Below 75% of AQO	1	Negligible
R39	Residential - B6213 Bury Road	Below 75% of AQO	2 - 5	Negligible
R40	Residential - B6213 Bury Road	76 - 94% of AQO	2 - 5	Slight
R41	Residential - B6213 Bury Road	Below 75% of AQO	1	Negligible
R42	Residential - Scobell Street	Below 75% of AQO	0	Negligible
R43	Residential - Scobell Street	Below 75% of AQO	1	Negligible
R44	Residential - Walshaw Street	Below 75% of AQO	1	Negligible
R45	Residential - Walshaw Street	Below 75% of AQO	0	Negligible
R46	Residential - Walshaw Street	Below 75% of AQO	1	Negligible
R47	Residential - Walshaw Street	Below 75% of AQO	1	Negligible

11.88 As shown in **Table 11.19**, impacts on annual mean NO₂ concentrations as a result of operational phase road vehicle exhaust emissions were predicted to be **Slight (Not Significant)** at seven locations and **Negligible (Not Significant)** at 40 receptors.

11.89 Predicted impacts on annual mean PM₁₀ concentrations at sensitive receptor locations as a result of operational phase road vehicle exhaust emissions are summarised in **Table 11.20**.

Table 11.20: Operational Phase Road Vehicle Exhaust Emissions - Predicted Impacts PM₁₀

Receptor		Predicted Annual Mean PM ₁₀ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R1	Residential - B6213 Market Street	Below 75% of AQO	0	Negligible
R2	Residential - Booth Street	Below 75% of AQO	0	Negligible
R3	Residential - Booth Street	Below 75% of AQO	1	Negligible
R4	Residential - Booth Street	Below 75% of AQO	1	Negligible
R5	Residential - Scobell Street	Below 75% of AQO	1	Negligible



Receptor		Predicted Annual Mean PM ₁₀ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R6	Residential - Church Street	Below 75% of AQO	1	Negligible
R7	Residential - Bank Street	Below 75% of AQO	0	Negligible
R8	Residential - Hall Street	Below 75% of AQO	0	Negligible
R9	Residential - High Stret	Below 75% of AQO	1	Negligible
R10	Residential - Lowercroft Road	Below 75% of AQO	1	Negligible
R11	Residential - Lowercroft Road	Below 75% of AQO	1	Negligible
R12	Residential - B6196 Church Street	Below 75% of AQO	0	Negligible
R13	Residential - B6292 Sterling Road	Below 75% of AQO	1	Negligible
R14	Residential - B6196 Ainsworth Road	Below 75% of AQO	0	Negligible
R15	Residential - B6196 Ainsworth Road	Below 75% of AQO	1	Negligible
R16	Residential - A58 Bolton Road	Below 75% of AQO	1	Negligible
R17	Residential - A58 Bolton Road	Below 75% of AQO	1	Negligible
R18	Residential - A58 Bolton Road	Below 75% of AQO	0	Negligible
R19	Residential - A58 Bolton Road	Below 75% of AQO	0	Negligible
R20	Residential - A58 Bolton Road	Below 75% of AQO	0	Negligible
R21	Residential - B6216 Millett Street	Below 75% of AQO	0	Negligible
R22	Residential - Peel Way	Below 75% of AQO	0	Negligible
R23	Residential - Sankey Street	Below 75% of AQO	0	Negligible
R24	Dream Big Little One Nursery	Below 75% of AQO	0	Negligible
R25	Residential - Jubilee Way	Below 75% of AQO	0	Negligible
R26	Spring Lane School	Below 75% of AQO	1	Negligible



Receptor		Predicted Annual Mean PM ₁₀ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R27	Townside Primary Care Centre	Below 75% of AQO	0	Negligible
R28	Residential - A56 Manchester Road	Below 75% of AQO	1	Negligible
R29	Residential - A56 Manchester Road	Below 75% of AQO	1	Negligible
R30	Residential - A56 Manchester Road	Below 75% of AQO	1	Negligible
R31	Residential - B6214 Brandlesholme Road	Below 75% of AQO	1	Negligible
R32	Residential - B6214 Brandlesholme Road	Below 75% of AQO	1	Negligible
R33	Residential - B6214 Brandlesholme Road	Below 75% of AQO	1	Negligible
R34	Woodbank Primary School	Below 75% of AQO	0	Negligible
R35	Residential - B6214 Brandlesholme Road	Below 75% of AQO	0	Negligible
R36	Residential - B6213 Tottington Road	Below 75% of AQO	1	Negligible
R37	Farraday House	Below 75% of AQO	1	Negligible
R38	Residential - B6213 Bury Road	Below 75% of AQO	0	Negligible
R39	Residential - B6213 Bury Road	Below 75% of AQO	1	Negligible
R40	Residential - B6213 Bury Road	Below 75% of AQO	1	Negligible
R41	Residential - B6213 Bury Road	Below 75% of AQO	0	Negligible
R42	Residential - Scobell Street	Below 75% of AQO	0	Negligible
R43	Residential - Scobell Street	Below 75% of AQO	0	Negligible
R44	Residential - Walshaw Street	Below 75% of AQO	0	Negligible
R45	Residential - Walshaw Street	Below 75% of AQO	0	Negligible
R46	Residential - Walshaw Street	Below 75% of AQO	0	Negligible



Receptor		Predicted Annual Mean PM ₁₀ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R47	Residential - Walshaw Street	Below 75% of AQO	0	Negligible

11.90 As shown in **Table 11.20**, impacts on annual mean PM₁₀ concentrations as a result of operational phase road vehicle exhaust emissions were predicted to be **Negligible (Not Significant)** at all receptors.

11.91 Predicted impacts on annual mean PM_{2.5} concentrations at sensitive receptor locations as a result of operational phase road vehicle exhaust emissions are summarised in **Table 11.21**.

Table 11.21: Operational Phase Road Vehicle Exhaust Emissions - Predicted Impacts PM_{2.5}

Receptor		Predicted Annual Mean PM _{2.5} Concentration	Predicted Concentration Change as Proportion of Interim Target (%)	Impact Significance
R1	Residential - B6213 Market Street	Below 75% of Interim Target	1	Negligible
R2	Residential - Booth Street	Below 75% of Interim Target	1	Negligible
R3	Residential - Booth Street	76 - 94% of Interim Target	1	Negligible
R4	Residential - Booth Street	Below 75% of Interim Target	1	Negligible
R5	Residential - Scobell Street	Below 75% of Interim Target	1	Negligible
R6	Residential - Church Street	76 - 94% of Interim Target	2 - 5	Slight
R7	Residential - Bank Street	Below 75% of Interim Target	1	Negligible
R8	Residential - Hall Street	Below 75% of Interim Target	1	Negligible
R9	Residential - High Stret	Below 75% of Interim Target	1	Negligible



Receptor		Predicted Annual Mean PM _{2.5} Concentration	Predicted Concentration Change as Proportion of Interim Target (%)	Impact Significance
R10	Residential - Lowercroft Road	Below 75% of Interim Target	1	Negligible
R11	Residential - Lowercroft Road	Below 75% of Interim Target	1	Negligible
R12	Residential - B6196 Church Street	Below 75% of Interim Target	1	Negligible
R13	Residential - B6292 Sterling Road	Below 75% of Interim Target	1	Negligible
R14	Residential - B6196 Ainsworth Road	Below 75% of Interim Target	0	Negligible
R15	Residential - B6196 Ainsworth Road	76 - 94% of Interim Target	1	Negligible
R16	Residential - A58 Bolton Road	76 - 94% of Interim Target	2 - 5	Slight
R17	Residential - A58 Bolton Road	76 - 94% of Interim Target	2 - 5	Slight
R18	Residential - A58 Bolton Road	Below 75% of Interim Target	1	Negligible
R19	Residential - A58 Bolton Road	Below 75% of Interim Target	1	Negligible
R20	Residential - A58 Bolton Road	Below 75% of Interim Target	1	Negligible
R21	Residential - B6216 Millett Street	Below 75% of Interim Target	0	Negligible
R22	Residential - Peel Way	Below 75% of Interim Target	1	Negligible
R23	Residential - Sankey Street	Below 75% of Interim Target	1	Negligible
R24	Dream Big Little One Nursery	Below 75% of Interim Target	1	Negligible



Receptor		Predicted Annual Mean PM _{2.5} Concentration	Predicted Concentration Change as Proportion of Interim Target (%)	Impact Significance
R25	Residential - Jubilee Way	Below 75% of Interim Target	1	Negligible
R26	Spring Lane School	76 - 94% of Interim Target	1	Negligible
R27	Townside Primary Care Centre	Below 75% of Interim Target	0	Negligible
R28	Residential - A56 Manchester Road	76 - 94% of Interim Target	1	Negligible
R29	Residential - A56 Manchester Road	76 - 94% of Interim Target	1	Negligible
R30	Residential - A56 Manchester Road	76 - 94% of Interim Target	1	Negligible
R31	Residential - B6214 Brandlesholme Road	76 - 94% of Interim Target	2 - 5	Slight
R32	Residential - B6214 Brandlesholme Road	76 - 94% of Interim Target	1	Negligible
R33	Residential - B6214 Brandlesholme Road	76 - 94% of Interim Target	1	Negligible
R34	Woodbank Primary School	Below 75% of Interim Target	1	Negligible
R35	Residential - B6214 Brandlesholme Road	Below 75% of Interim Target	1	Negligible
R36	Residential - B6213 Tottington Road	76 - 94% of Interim Target	2 - 5	Slight
R37	Farraday House	76 - 94% of Interim Target	2 - 5	Slight
R38	Residential - B6213 Bury Road	Below 75% of Interim Target	1	Negligible
R39	Residential - B6213 Bury Road	Below 75% of Interim Target	1	Negligible



Receptor		Predicted Annual Mean PM _{2.5} Concentration	Predicted Concentration Change as Proportion of Interim Target (%)	Impact Significance
R40	Residential - B6213 Bury Road	76 - 94% of Interim Target	2 - 5	Slight
R41	Residential - B6213 Bury Road	Below 75% of Interim Target	1	Negligible
R42	Residential - Scobell Street	Below 75% of Interim Target	0	Negligible
R43	Residential - Scobell Street	Below 75% of Interim Target	0	Negligible
R44	Residential - Walshaw Street	Below 75% of Interim Target	1	Negligible
R45	Residential - Walshaw Street	Below 75% of Interim Target	0	Negligible
R46	Residential - Walshaw Street	76 - 94% of Interim Target	1	Negligible
R47	Residential - Walshaw Street	Below 75% of Interim Target	1	Negligible

11.92 As shown in **Table 11.21**, impacts on annual mean PM_{2.5} concentrations as a result of operational phase road vehicle exhaust emissions were predicted to be **Slight (Not Significant)** at seven positions and **Negligible (Not Significant)** at 40 receptors.

Interim Planning Guidance for PM_{2.5}

11.93 Interim Planning Guidance (DEFRA, 2024) on the consideration of the PM_{2.5} targets identified in the Environment Act (2021) in planning decisions has been produced by DEFRA. This requires evidence that the key sources of air pollution within a development have been identified and appropriate action to minimise PM_{2.5} and its precursors as far as is reasonably practicable be provided in support of planning applications. To assist the process, two questions and associated considerations are provided. These are summarised in **Table 11.22**, along with the development response.



Table 11.22: Interim Planning Guidance Questions

Question	Response
How has exposure to PM_{2.5} been considered when selecting the development site? • Site proximity to people (particularly large populations and/or vulnerable groups, e.g. schools, hospitals, care homes, areas of deprivation) and the impact of the development on these • Site proximity to pollution sources and the impact of these on users of the development • Exposure and emissions during both construction and in-use	The Proposed Development is located in a predominantly residential area. The Elton High School is located approximately 400m south of the Site boundary. This has been considered within the assessment (R45) and concentrations are predicted to be below the Concentration Target with the Proposed Development in place The Site is distanced from major roads and AQMAs. It is therefore unlikely that future residents will be exposed to elevated pollutant concentrations As outlined in Table 11.23 below, a number of mitigation measures will be used throughout the construction phase in order to reduce fugitive dust emissions as far as practicable. This will control potential exposure at off-Site locations
What actions and/or mitigations have been considered to reduce PM_{2.5} exposure for development users and nearby receptors (houses, hospitals, schools etc.) and to reduce emissions of PM_{2.5} and its precursors? • Site layout • The development's design • Technology used in the construction or installed for use in the development • Construction and future use of the development	A number of mitigation measures have been incorporated into the design of the Proposed Development in order to reduce PM_{2.5} exposure for future residents. These include the following: • Trees will be planted along the Site boundary. This will provide screening from potential vehicle exhaust emissions In order to reduce emissions of PM_{2.5} with associated impacts at nearby receptors, the following measures have also been included: • Installation of Electric Vehicle Charging points for each dwelling; and • Provision of secure cycle storage to encourage the use of sustainable transport modes Further to the above, in order to reduce emissions during the construction phase, a number of mitigation measures will be used to minimise dust generation from associated activities

Mitigation

Construction Phase Fugitive Dust Emissions

- 11.94 Due to the size and nature of the Proposed Development, a Construction Environmental Management Plan (CEMP) will be produced to control potential air quality effects during the construction phase. The



measures outlined in **Table 11.23** will be included within the CEMP to mitigate fugitive dust emissions during construction. These are based on the advice provided within the IAQM guidance (IAQM, 2024) and are therefore considered suitable for the Site.

Table 11.23: Construction Phase Fugitive Dust Emissions - Mitigation Measures

Issue	Control Measure
Communications	Develop and implement a stakeholder communications plan that includes community engagement before work commences on Site Display the name and contact details of person(s) accountable for air quality and dust issues on the Site boundary 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 BC
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 BC when requested Record any exceptional incidents that cause dust and / or air emissions, either on- or off-Site, and the action taken to resolve the situation in the log book Hold regular liaison meetings with other high risk construction sites within 250m of the Site boundary, to ensure plans are co-ordinated and particulate matter emissions are minimised
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 LA when asked Carry out regular Site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to BC when requested Increase the frequency of Site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions
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 active for an extensive period Avoid Site runoff of water or mud Keep Site fencing, barriers and scaffolding clean using wet methods

Issue	Control Measure
	Remove materials that have a potential to produce dust from Site as soon as possible Cover, seed or fence stockpiles to prevent wind whipping
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.
Operations	Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques Ensure an adequate water supply on the Site for effective dust suppression, using non-potable water where possible and appropriate Use enclosed chutes and conveyors and covered skips Minimise drop heights and use fine water sprays wherever appropriate Ensure equipment is available to clean any dry spillages, and clean up spillages as soon as reasonably practicable using wet cleaning methods
Waste Management	Avoid bonfires and burning of waste materials
Earthworks	Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable
Construction	Avoid scabbling (roughening of concrete surfaces) if possible Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust
Trackout	Use water-assisted dust sweepers on the access and local roads, to remove, as necessary, any material tracked out of the Site Avoid dry sweeping of large areas Ensure vehicles entering and leaving Sites are covered to prevent escape of materials during transport Implement a wheel washing system, if necessary

Operational Phase Road Vehicle Exhaust Emissions

- 11.95 Air quality effects as a result of operational phase road vehicle exhaust emissions were predicted to be **Slight (Not Significant)**. As such, additional mitigation was not considered necessary.



Residual Effects

- 11.96 Following the effective implementation of the mitigation measures, there residual effects are predicted to be **Not Significant** during the construction and operational phases.

Cumulative Effects

Construction Phase Fugitive Dust Emissions

- 11.97 Should construction phase activities such as earthworks, construction and trackout take place at any other developments within 500m of the Site boundary, it is possible that cumulative dust impacts may occur. Consideration has also been given to the JPA 9 Walshaw Allocation Site, should this be constructed concurrently to the Proposed Development. However, a similar level of control would be expected for any other scheme. Therefore, residual cumulative effects are predicted to be **Not Significant** in accordance with the EIA Regulations.

Operational Phase Road Vehicle Exhaust Emissions

- 11.98 There is the potential for cumulative operational phase road vehicle exhaust emission impacts should other developments generate traffic which utilise the same routes as movements generated by the Proposed Development.
- 11.99 Several planning applications have been submitted within the vicinity of the Site. As such, traffic generation associated with these schemes was provided by the Transport Consultants for the project. This was utilised in the dispersion model detailed previously in order to ensure consideration of cumulative impacts from exhaust emissions associated with development in the local area. This included the JPA 7 Elton Reservoir allocation, located approximately 1.4km south of the Proposed Development. Reference should be made to **Volume 3: Technical Appendix 11.1** for the assessment inputs.
- 11.100 The Proposed Development is located within the wider JPA 9 Walshaw Allocation. A separate cumulative assessment was therefore undertaken to quantify potential changes in pollutant concentrations at sensitive receptor locations should the whole Allocation come forward. The results are summarised below and Reference should be made to **Volume 3: Technical Appendix 11.1** for the assessment inputs.

Predicted Concentrations

- 11.101 Annual mean NO₂ concentrations were predicted at the sensitive receptor locations for the DM and Cumulative DS scenarios. The results are summarised in **Table 11.24**.



Table 11.24: Cumulative Effects - Operational Phase Road Vehicle Exhaust Emissions - Predicted Annual Mean NO₂ Concentrations

Receptor		Predicted Annual Mean NO ₂ Concentration (µg/m ³)		
		DM	Cumulative DS	Change
R1	Residential - B6213 Market Street	23.81	24.88	1.07
R2	Residential - Booth Street	23.67	24.60	0.93
R3	Residential - Booth Street	28.53	29.69	1.16
R4	Residential - Booth Street	26.78	27.85	1.07
R5	Residential - Scobell Street	26.88	27.82	0.94
R6	Residential - Church Street	26.95	27.67	0.72
R7	Residential - Bank Street	20.73	21.18	0.45
R8	Residential - Hall Street	19.97	20.99	1.02
R9	Residential - High Stret	21.02	21.90	0.88
R10	Residential - Lowercroft Road	20.41	21.47	1.06
R11	Residential - Lowercroft Road	26.05	26.99	0.94
R12	Residential - B6196 Church Street	23.88	24.97	1.09
R13	Residential - B6292 Sterling Road	23.63	24.95	1.32
R14	Residential - B6196 Ainsworth Road	19.97	20.25	0.28
R15	Residential - B6196 Ainsworth Road	28.60	29.70	1.10
R16	Residential - A58 Bolton Road	30.83	32.48	1.65
R17	Residential - A58 Bolton Road	33.68	35.56	1.88
R18	Residential - A58 Bolton Road	26.15	27.37	1.22
R19	Residential - A58 Bolton Road	26.06	27.28	1.22
R20	Residential - A58 Bolton Road	25.71	26.86	1.15
R21	Residential - B6216 Millett Street	20.04	20.49	0.45
R22	Residential - Peel Way	25.68	26.44	0.76
R23	Residential - Sankey Street	21.87	22.46	0.59
R24	Dream Big Little One Nursery	21.66	22.23	0.57



Receptor		Predicted Annual Mean NO2 Concentration (µg/m3)		
		DM	Cumulative DS	Change
R25	Residential - Jubilee Way	22.26	22.89	0.63
R26	Spring Lane School	27.96	29.02	1.06
R27	Townside Primary Care Centre	22.26	22.65	0.39
R28	Residential - A56 Manchester Road	25.32	26.65	1.33
R29	Residential - A56 Manchester Road	24.95	26.27	1.32
R30	Residential - A56 Manchester Road	25.10	26.45	1.35
R31	Residential - B6214 Brandlesholme Road	34.69	36.17	1.48
R32	Residential - B6214 Brandlesholme Road	29.90	30.89	0.99
R33	Residential - B6214 Brandlesholme Road	30.28	31.24	0.96
R34	Woodbank Primary School	23.50	24.01	0.51
R35	Residential - B6214 Brandlesholme Road	22.46	22.89	0.43
R36	Residential - B6213 Tottington Road	32.18	34.30	2.12
R37	Farraday House	27.98	29.69	1.71
R38	Residential - B6213 Bury Road	20.95	21.50	0.55
R39	Residential - B6213 Bury Road	24.20	25.23	1.03
R40	Residential - B6213 Bury Road	33.64	35.40	1.76
R41	Residential - B6213 Bury Road	22.75	23.58	0.83
R42	Residential - Scobell Street	18.02	18.21	0.19
R43	Residential - Scobell Street	18.54	18.91	0.37
R44	Residential - Walshaw Street	20.16	20.95	0.79
R45	Residential - Walshaw Street	18.41	18.88	0.47
R46	Residential - Walshaw Street	27.54	29.04	1.50
R47	Residential - Walshaw Street	24.88	26.14	1.26



- 11.102 As shown in **Table 11.24**, predicted annual mean NO₂ concentrations were below the relevant AQO of 40µg/m³ at all sensitive receptors in both the DM and Cumulative DS scenarios.
- 11.103 Annual mean PM₁₀ concentrations were predicted at the sensitive receptor locations for the DM and Cumulative DS scenarios. The results are summarised in **Table 11.25**.

Table 11.25: Cumulative Effects - Operational Phase Road Vehicle Exhaust Emissions - Predicted Annual Mean PM₁₀ Concentrations

Receptor		Predicted Annual Mean PM10 Concentration (µg/m3)		
		DM	Cumulative DS	Change
R1	Residential - B6213 Market Street	14.54	14.87	0.34
R2	Residential - Booth Street	14.32	14.58	0.27
R3	Residential - Booth Street	15.64	15.99	0.35
R4	Residential - Booth Street	15.12	15.44	0.32
R5	Residential - Scobell Street	15.15	15.42	0.28
R6	Residential - Church Street	15.15	15.37	0.22
R7	Residential - Bank Street	13.54	13.67	0.13
R8	Residential - Hall Street	13.53	13.89	0.36
R9	Residential - High Stret	13.97	14.28	0.31
R10	Residential - Lowercroft Road	13.82	14.20	0.38
R11	Residential - Lowercroft Road	15.02	15.30	0.29
R12	Residential - B6196 Church Street	14.81	15.18	0.37
R13	Residential - B6292 Sterling Road	14.96	15.46	0.50
R14	Residential - B6196 Ainsworth Road	13.64	13.74	0.10
R15	Residential - B6196 Ainsworth Road	15.83	16.18	0.35
R16	Residential - A58 Bolton Road	17.05	17.67	0.62
R17	Residential - A58 Bolton Road	18.12	18.87	0.75
R18	Residential - A58 Bolton Road	14.65	14.96	0.32
R19	Residential - A58 Bolton Road	14.60	14.91	0.31
R20	Residential - A58 Bolton Road	14.58	14.88	0.30
R21	Residential - B6216 Millett Street	13.42	13.55	0.13



Receptor		Predicted Annual Mean PM10 Concentration (µg/m3)		
		DM	Cumulative DS	Change
R22	Residential - Peel Way	15.14	15.38	0.24
R23	Residential - Sankey Street	14.20	14.41	0.20
R24	Dream Big Little One Nursery	14.18	14.38	0.20
R25	Residential - Jubilee Way	14.42	14.65	0.22
R26	Spring Lane School	15.98	16.35	0.37
R27	Townside Primary Care Centre	14.16	14.29	0.13
R28	Residential - A56 Manchester Road	15.64	16.17	0.53
R29	Residential - A56 Manchester Road	15.52	16.04	0.52
R30	Residential - A56 Manchester Road	15.60	16.13	0.53
R31	Residential - B6214 Brandlesholme Road	18.16	18.74	0.58
R32	Residential - B6214 Brandlesholme Road	16.73	17.10	0.37
R33	Residential - B6214 Brandlesholme Road	17.19	17.56	0.38
R34	Woodbank Primary School	14.93	15.12	0.19
R35	Residential - B6214 Brandlesholme Road	14.57	14.73	0.16
R36	Residential - B6213 Tottington Road	17.60	18.43	0.83
R37	Farraday House	16.59	17.29	0.70
R38	Residential - B6213 Bury Road	14.01	14.21	0.20
R39	Residential - B6213 Bury Road	14.98	15.35	0.36
R40	Residential - B6213 Bury Road	17.38	17.99	0.61
R41	Residential - B6213 Bury Road	14.55	14.84	0.30
R42	Residential - Scobell Street	12.83	12.88	0.06
R43	Residential - Scobell Street	13.05	13.17	0.11
R44	Residential - Walshaw Street	13.62	13.89	0.27
R45	Residential - Walshaw Street	13.11	13.27	0.16



Receptor		Predicted Annual Mean PM10 Concentration (µg/m3)		
		DM	Cumulative DS	Change
R46	Residential - Walshaw Street	15.39	15.84	0.45
R47	Residential - Walshaw Street	14.95	15.36	0.41

11.104 As shown in **Table 11.25**, predicted annual mean PM₁₀ concentrations were below the relevant AQO of 40µg/m³ at all sensitive receptors in both the DM and Cumulative DS scenarios.

11.105 Annual mean PM_{2.5} concentrations were predicted at the sensitive receptor locations for the DM and Cumulative DS scenarios. The results are summarised in **Table 11.26**.

Table 11.26: Cumulative Effects - Operational Phase Road Vehicle Exhaust Emissions - Predicted Annual Mean PM_{2.5} Concentrations

Receptor		Predicted Annual Mean PM2.5 Concentration (µg/m3)		
		DM	Cumulative DS	Change
R1	Residential - B6213 Market Street	8.46	8.64	0.18
R2	Residential - Booth Street	8.34	8.48	0.14
R3	Residential - Booth Street	9.05	9.24	0.19
R4	Residential - Booth Street	8.77	8.95	0.17
R5	Residential - Scobell Street	8.79	8.94	0.15
R6	Residential - Church Street	8.79	8.91	0.12
R7	Residential - Bank Street	7.92	7.99	0.07
R8	Residential - Hall Street	7.92	8.11	0.19
R9	Residential - High Stret	8.15	8.32	0.17
R10	Residential - Lowercroft Road	8.07	8.28	0.20
R11	Residential - Lowercroft Road	8.72	8.87	0.15
R12	Residential - B6196 Church Street	8.60	8.80	0.20
R13	Residential - B6292 Sterling Road	8.68	8.95	0.27
R14	Residential - B6196 Ainsworth Road	7.98	8.03	0.05
R15	Residential - B6196 Ainsworth Road	9.16	9.34	0.19
R16	Residential - A58 Bolton Road	9.80	10.13	0.33



Receptor		Predicted Annual Mean PM2.5 Concentration (µg/m3)		
		DM	Cumulative DS	Change
R17	Residential - A58 Bolton Road	10.37	10.78	0.40
R18	Residential - A58 Bolton Road	8.53	8.70	0.17
R19	Residential - A58 Bolton Road	8.50	8.67	0.17
R20	Residential - A58 Bolton Road	8.49	8.65	0.16
R21	Residential - B6216 Millett Street	7.86	7.93	0.07
R22	Residential - Peel Way	8.79	8.92	0.13
R23	Residential - Sankey Street	8.28	8.39	0.11
R24	Dream Big Little One Nursery	8.26	8.37	0.11
R25	Residential - Jubilee Way	8.40	8.52	0.12
R26	Spring Lane School	9.23	9.43	0.20
R27	Townside Primary Care Centre	8.26	8.32	0.07
R28	Residential - A56 Manchester Road	9.04	9.32	0.28
R29	Residential - A56 Manchester Road	8.98	9.25	0.28
R30	Residential - A56 Manchester Road	9.02	9.30	0.29
R31	Residential - B6214 Brandlesholme Road	10.40	10.71	0.31
R32	Residential - B6214 Brandlesholme Road	9.63	9.83	0.20
R33	Residential - B6214 Brandlesholme Road	9.87	10.07	0.20
R34	Woodbank Primary School	8.67	8.77	0.10
R35	Residential - B6214 Brandlesholme Road	8.47	8.56	0.08
R36	Residential - B6213 Tottington Road	10.09	10.54	0.45
R37	Farraday House	9.55	9.92	0.37
R38	Residential - B6213 Bury Road	8.17	8.28	0.11
R39	Residential - B6213 Bury Road	8.69	8.89	0.19
R40	Residential - B6213 Bury Road	9.98	10.31	0.33



Receptor		Predicted Annual Mean PM _{2.5} Concentration (µg/m ³)		
		DM	Cumulative DS	Change
R41	Residential - B6213 Bury Road	8.46	8.62	0.16
R42	Residential - Scobell Street	7.54	7.57	0.03
R43	Residential - Scobell Street	7.66	7.72	0.06
R44	Residential - Walshaw Street	7.97	8.11	0.14
R45	Residential - Walshaw Street	7.69	7.78	0.09
R46	Residential - Walshaw Street	8.92	9.16	0.24
R47	Residential - Walshaw Street	8.68	8.90	0.22

11.106 As shown in Table 11.26, predicted annual mean PM_{2.5} concentrations were below the Interim Target of 12µg/m³ at all sensitive receptors in both the DM and Cumulative DS scenarios.

Predicted Impacts

11.107 Predicted cumulative impacts on annual mean NO₂ concentrations at sensitive receptor locations as a result of operational phase road vehicle exhaust emissions are summarised in **Table 11.27**.

Table 11.27: Cumulative Effects - Operational Phase Road Vehicle Exhaust Emissions - Predicted Impacts NO₂

Receptor		Predicted Annual Mean NO ₂ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R1	Residential - B6213 Market Street	Below 75% of AQO	2 - 5	Negligible
R2	Residential - Booth Street	Below 75% of AQO	2 - 5	Negligible
R3	Residential - Booth Street	Below 75% of AQO	2 - 5	Negligible
R4	Residential - Booth Street	Below 75% of AQO	2 - 5	Negligible
R5	Residential - Scobell Street	Below 75% of AQO	2 - 5	Negligible
R6	Residential - Church Street	Below 75% of AQO	2 - 5	Negligible



Receptor		Predicted Annual Mean NO2 Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R7	Residential - Bank Street	Below 75% of AQO	1	Negligible
R8	Residential - Hall Street	Below 75% of AQO	2 - 5	Negligible
R9	Residential - High Stret	Below 75% of AQO	2 - 5	Negligible
R10	Residential - Lowercroft Road	Below 75% of AQO	2 - 5	Negligible
R11	Residential - Lowercroft Road	Below 75% of AQO	2 - 5	Negligible
R12	Residential - B6196 Church Street	Below 75% of AQO	2 - 5	Negligible
R13	Residential - B6292 Sterling Road	Below 75% of AQO	2 - 5	Negligible
R14	Residential - B6196 Ainsworth Road	Below 75% of AQO	1	Negligible
R15	Residential - B6196 Ainsworth Road	Below 75% of AQO	2 - 5	Negligible
R16	Residential - A58 Bolton Road	76 - 94% of AQO	2 - 5	Slight
R17	Residential - A58 Bolton Road	76 - 94% of AQO	2 - 5	Slight
R18	Residential - A58 Bolton Road	Below 75% of AQO	2 - 5	Negligible
R19	Residential - A58 Bolton Road	Below 75% of AQO	2 - 5	Negligible
R20	Residential - A58 Bolton Road	Below 75% of AQO	2 - 5	Negligible
R21	Residential - B6216 Millett Street	Below 75% of AQO	1	Negligible
R22	Residential - Peel Way	Below 75% of AQO	2 - 5	Negligible
R23	Residential - Sankey Street	Below 75% of AQO	1	Negligible



Receptor		Predicted Annual Mean NO2 Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R24	Dream Big Little One Nursery	Below 75% of AQO	1	Negligible
R25	Residential - Jubilee Way	Below 75% of AQO	2 - 5	Negligible
R26	Spring Lane School	Below 75% of AQO	2 - 5	Negligible
R27	Townside Primary Care Centre	Below 75% of AQO	1	Negligible
R28	Residential - A56 Manchester Road	Below 75% of AQO	2 - 5	Negligible
R29	Residential - A56 Manchester Road	Below 75% of AQO	2 - 5	Negligible
R30	Residential - A56 Manchester Road	Below 75% of AQO	2 - 5	Negligible
R31	Residential - B6214 Brandlesholme Road	76 - 94% of AQO	2 - 5	Slight
R32	Residential - B6214 Brandlesholme Road	76 - 94% of AQO	2 - 5	Slight
R33	Residential - B6214 Brandlesholme Road	76 - 94% of AQO	2 - 5	Slight
R34	Woodbank Primary School	Below 75% of AQO	1	Negligible
R35	Residential - B6214 Brandlesholme Road	Below 75% of AQO	1	Negligible
R36	Residential - B6213 Tottington Road	76 - 94% of AQO	2 - 5	Slight
R37	Farraday House	Below 75% of AQO	2 - 5	Negligible
R38	Residential - B6213 Bury Road	Below 75% of AQO	1	Negligible
R39	Residential - B6213 Bury Road	Below 75% of AQO	2 - 5	Negligible
R40	Residential - B6213 Bury Road	76 - 94% of AQO	2 - 5	Slight



Receptor		Predicted Annual Mean NO ₂ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R41	Residential - B6213 Bury Road	Below 75% of AQO	2 - 5	Negligible
R42	Residential - Scobell Street	Below 75% of AQO	0	Negligible
R43	Residential - Scobell Street	Below 75% of AQO	1	Negligible
R44	Residential - Walshaw Street	Below 75% of AQO	2 - 5	Negligible
R45	Residential - Walshaw Street	Below 75% of AQO	1	Negligible
R46	Residential - Walshaw Street	Below 75% of AQO	2 - 5	Negligible
R47	Residential - Walshaw Street	Below 75% of AQO	2 - 5	Negligible

11.108 As shown in Table 11.27, cumulative impacts on annual mean NO₂ concentrations as a result of operational phase road vehicle exhaust emissions were predicted to be **Slight (Not Significant)** at seven locations and **Negligible (Not Significant)** at 40 receptors.

11.109 Predicted cumulative impacts on annual mean PM₁₀ concentrations at sensitive receptor locations as a result of operational phase road vehicle exhaust emissions are summarised in **Table 11.28**.

Table 11.28: Cumulative Effects - Operational Phase Road Vehicle Exhaust Emissions - Predicted Impacts PM₁₀

Receptor		Predicted Annual Mean PM ₁₀ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R1	Residential - B6213 Market Street	Below 75% of AQO	1	Negligible
R2	Residential - Booth Street	Below 75% of AQO	1	Negligible
R3	Residential - Booth Street	Below 75% of AQO	1	Negligible
R4	Residential - Booth Street	Below 75% of AQO	1	Negligible



Receptor		Predicted Annual Mean PM10 Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R5	Residential - Scobell Street	Below 75% of AQO	1	Negligible
R6	Residential - Church Street	Below 75% of AQO	1	Negligible
R7	Residential - Bank Street	Below 75% of AQO	0	Negligible
R8	Residential - Hall Street	Below 75% of AQO	1	Negligible
R9	Residential - High Stret	Below 75% of AQO	1	Negligible
R10	Residential - Lowercroft Road	Below 75% of AQO	1	Negligible
R11	Residential - Lowercroft Road	Below 75% of AQO	1	Negligible
R12	Residential - B6196 Church Street	Below 75% of AQO	1	Negligible
R13	Residential - B6292 Sterling Road	Below 75% of AQO	1	Negligible
R14	Residential - B6196 Ainsworth Road	Below 75% of AQO	0	Negligible
R15	Residential - B6196 Ainsworth Road	Below 75% of AQO	1	Negligible
R16	Residential - A58 Bolton Road	Below 75% of AQO	2 - 5	Negligible
R17	Residential - A58 Bolton Road	Below 75% of AQO	2 - 5	Negligible
R18	Residential - A58 Bolton Road	Below 75% of AQO	1	Negligible
R19	Residential - A58 Bolton Road	Below 75% of AQO	1	Negligible
R20	Residential - A58 Bolton Road	Below 75% of AQO	1	Negligible



Receptor		Predicted Annual Mean PM10 Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R21	Residential - B6216 Millett Street	Below 75% of AQO	0	Negligible
R22	Residential - Peel Way	Below 75% of AQO	1	Negligible
R23	Residential - Sankey Street	Below 75% of AQO	1	Negligible
R24	Dream Big Little One Nursery	Below 75% of AQO	1	Negligible
R25	Residential - Jubilee Way	Below 75% of AQO	1	Negligible
R26	Spring Lane School	Below 75% of AQO	1	Negligible
R27	Townside Primary Care Centre	Below 75% of AQO	0	Negligible
R28	Residential - A56 Manchester Road	Below 75% of AQO	1	Negligible
R29	Residential - A56 Manchester Road	Below 75% of AQO	1	Negligible
R30	Residential - A56 Manchester Road	Below 75% of AQO	1	Negligible
R31	Residential - B6214 Brandlesholme Road	Below 75% of AQO	1	Negligible
R32	Residential - B6214 Brandlesholme Road	Below 75% of AQO	1	Negligible
R33	Residential - B6214 Brandlesholme Road	Below 75% of AQO	1	Negligible
R34	Woodbank Primary School	Below 75% of AQO	0	Negligible
R35	Residential - B6214 Brandlesholme Road	Below 75% of AQO	0	Negligible
R36	Residential - B6213 Tottington Road	Below 75% of AQO	2 - 5	Negligible
R37	Farraday House	Below 75% of AQO	2 - 5	Negligible



Receptor		Predicted Annual Mean PM ₁₀ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R38	Residential - B6213 Bury Road	Below 75% of AQO	0	Negligible
R39	Residential - B6213 Bury Road	Below 75% of AQO	1	Negligible
R40	Residential - B6213 Bury Road	Below 75% of AQO	2 - 5	Negligible
R41	Residential - B6213 Bury Road	Below 75% of AQO	1	Negligible
R42	Residential - Scobell Street	Below 75% of AQO	0	Negligible
R43	Residential - Scobell Street	Below 75% of AQO	0	Negligible
R44	Residential - Walshaw Street	Below 75% of AQO	1	Negligible
R45	Residential - Walshaw Street	Below 75% of AQO	0	Negligible
R46	Residential - Walshaw Street	Below 75% of AQO	1	Negligible
R47	Residential - Walshaw Street	Below 75% of AQO	1	Negligible

11.110 As shown in **Table 11.28**, cumulative impacts on annual mean PM₁₀ concentrations as a result of operational phase road vehicle exhaust emissions were predicted to be **Negligible (Not Significant)** at all receptors.

11.111 Predicted cumulative impacts on annual mean PM_{2.5} concentrations at sensitive receptor locations as a result of operational phase road vehicle exhaust emissions are summarised in **Table 11.29**.



Table 11.29 Cumulative Effects - Operational Phase Road Vehicle Exhaust Emissions - Predicted Impacts PM_{2.5}

Receptor		Predicted Annual Mean PM _{2.5} Concentration	Predicted Concentration Change as Proportion of Interim Target (%)	Impact Significance
R1	Residential - B6213 Market Street	Below 75% of Interim Target	2 - 5	Negligible
R2	Residential - Booth Street	Below 75% of Interim Target	1	Negligible
R3	Residential - Booth Street	76 - 94% of Interim Target	2 - 5	Slight
R4	Residential - Booth Street	Below 75% of Interim Target	1	Negligible
R5	Residential - Scobell Street	Below 75% of Interim Target	1	Negligible
R6	Residential - Church Street	Below 75% of Interim Target	1	Negligible
R7	Residential - Bank Street	Below 75% of Interim Target	1	Negligible
R8	Residential - Hall Street	Below 75% of Interim Target	2 - 5	Negligible
R9	Residential - High Stret	Below 75% of Interim Target	1	Negligible
R10	Residential - Lowercroft Road	Below 75% of Interim Target	2 - 5	Negligible
R11	Residential - Lowercroft Road	Below 75% of Interim Target	1	Negligible
R12	Residential - B6196 Church Street	Below 75% of Interim Target	2 - 5	Negligible
R13	Residential - B6292 Sterling Road	Below 75% of Interim Target	2 - 5	Slight
R14	Residential - B6196 Ainsworth Road	Below 75% of Interim Target	0	Negligible
R15	Residential - B6196 Ainsworth Road	76 - 94% of Interim Target	2 - 5	Slight
R16	Residential - A58 Bolton Road	76 - 94% of Interim Target	2 - 5	Slight



Receptor		Predicted Annual Mean PM2.5 Concentration	Predicted Concentration Change as Proportion of Interim Target (%)	Impact Significance
R17	Residential - A58 Bolton Road	76 - 94% of Interim Target	2 - 5	Slight
R18	Residential - A58 Bolton Road	Below 75% of Interim Target	1	Negligible
R19	Residential - A58 Bolton Road	Below 75% of Interim Target	1	Negligible
R20	Residential - A58 Bolton Road	Below 75% of Interim Target	1	Negligible
R21	Residential - B6216 Millett Street	Below 75% of Interim Target	1	Negligible
R22	Residential - Peel Way	Below 75% of Interim Target	1	Negligible
R23	Residential - Sankey Street	Below 75% of Interim Target	1	Negligible
R24	Dream Big Little One Nursery	Below 75% of Interim Target	1	Negligible
R25	Residential - Jubilee Way	Below 75% of Interim Target	1	Negligible
R26	Spring Lane School	76 - 94% of Interim Target	2 - 5	Slight
R27	Townside Primary Care Centre	Below 75% of Interim Target	1	Negligible
R28	Residential - A56 Manchester Road	76 - 94% of Interim Target	2 - 5	Slight
R29	Residential - A56 Manchester Road	76 - 94% of Interim Target	2 - 5	Slight
R30	Residential - A56 Manchester Road	76 - 94% of Interim Target	2 - 5	Slight
R31	Residential - B6214 Brandlesholme Road	76 - 94% of Interim Target	2 - 5	Slight
R32	Residential - B6214 Brandlesholme Road	76 - 94% of Interim Target	2 - 5	Slight



Receptor		Predicted Annual Mean PM2.5 Concentration	Predicted Concentration Change as Proportion of Interim Target (%)	Impact Significance
R33	Residential - B6214 Brandlesholme Road	76 - 94% of Interim Target	2 - 5	Slight
R34	Woodbank Primary School	Below 75% of Interim Target	1	Negligible
R35	Residential - B6214 Brandlesholme Road	Below 75% of Interim Target	1	Negligible
R36	Residential - B6213 Tottington Road	76 - 94% of Interim Target	2 - 5	Slight
R37	Farraday House	76 - 94% of Interim Target	2 - 5	Slight
R38	Residential - B6213 Bury Road	Below 75% of Interim Target	1	Negligible
R39	Residential - B6213 Bury Road	Below 75% of Interim Target	2 - 5	Slight
R40	Residential - B6213 Bury Road	76 - 94% of Interim Target	2 - 5	Slight
R41	Residential - B6213 Bury Road	Below 75% of Interim Target	1	Negligible
R42	Residential - Scobell Street	Below 75% of Interim Target	0	Negligible
R43	Residential - Scobell Street	Below 75% of Interim Target	1	Negligible
R44	Residential - Walshaw Street	Below 75% of Interim Target	1	Negligible
R45	Residential - Walshaw Street	Below 75% of Interim Target	1	Negligible
R46	Residential - Walshaw Street	76 - 94% of Interim Target	2 - 5	Slight
R47	Residential - Walshaw Street	Below 75% of Interim Target	2 - 5	Slight



11.112 As shown in **Table 11.29**, cumulative impacts on annual mean PM_{2.5} concentrations as a result of operational phase road vehicle exhaust emissions were predicted to be **Slight (Not Significant)** at 18 positions and **Negligible (Not Significant)** at 29 receptors.

11.113 Cumulative air quality effects as a result of operational phase road vehicle exhaust emissions were predicted to be **Slight (Not Significant)**. As such, additional mitigation was not considered necessary.

Summary and Conclusions

11.114 The Proposed Development has the potential to cause air quality effects as a result of dust and road traffic exhaust emissions. As such, an assessment was undertaken in order to determine baseline conditions and assess the significance of predicted effects.

11.115 The Site is located approximately 1.5km north-west of the GMCA AQMA for Bury which has been declared due to high pollutant levels. Local monitoring results indicate that pollutant levels were below the relevant AQOs and Interim Target at the majority of monitors in the vicinity of the Site. Background pollutant concentrations were also below the relevant AQOs and Interim Target.

11.116 During the construction phase of the Proposed Development there is the potential for air quality impacts as a result of fugitive dust emissions. These were assessed in accordance with the IAQM methodology (IAQM, 2024). This indicated the potential risk of dust generated by earthworks, construction and trackout activities ranged from High to Medium.

11.117 During the operational phase of the Proposed Development, there is the potential for air quality impacts as a result of road traffic exhaust emissions associated with vehicles travelling to and from the Site. These were assessed using dispersion modelling and best practice guidance. Review of the results indicated that worst-case effects were predicted to be **Slight (Not Significant)**.

11.118 A CEMP will be produced in support of the Proposed Development. Measures outlined within the document will be reviewed and updated as necessary. They will then continue to be implemented in order to reduce potential effects associated with fugitive dust emissions as far as practicable. Based on the inclusion of these measures, residual air quality effects associated with dust emissions during construction were predicted to be **Negligible (Not Significant)**.

11.119 The results of the assessment indicated that air quality effects associated with road vehicle exhaust emissions were **Slight (Not Significant)** as such, additional mitigation is not considered necessary.

11.120 Based on the results of the assessment, impacts associated with the Proposed Development are considered to be **Negligible (Not Significant)**.



Reference List

- The Air Quality Standards Regulations, UK Government, 2010.
- The Environment (Miscellaneous Amendments) (EU Exit) Regulations, UK Government, 2020.
- The Air Quality Strategy, DEFRA, 2023.
- Environmental Improvement Plan, UK Government, 2023.
- Environmental Targets (Fine Particulate Matter) (England) Regulations, UK Government, 2023.
- The Environmental Permitting (England and Wales) Regulations (2016), UK Government, 2016.
- Environmental Protection Act (1990), UK Government, 1990.
- NPPF, Ministry of Housing, Communities & Local Government, UK Government, 2024.
- PPG, Ministry of Housing, Communities & Local Government, UK Government, 2019.
- Bury UDP, BC, 1997.
- Places for Everyone Joint Development Plan Document, GMCA, 2024.
- Case for a New GM Clean Air Plan, GMCA and TfGM, 2022.
- Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.
- Town and Country Planning (Environmental Impact Assessment) Regulations, UK Government, 2017.
- LA 105: Air Quality, Highways England, 2019.
- Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.
- Greater Manchester LAQM and CAP NO₂ Diffusion Tube Results 2011-2023, GMCA, 2024.
- Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.
- Background Mapping data for local authorities UK Air Information Resource, 2021.
- Use of 2020 and 2021 Monitoring Data Sets – IAQM Position Statement V1.1, IAQM, 2023.
- PM_{2.5} Targets: Interim Planning Guidance, DEFRA, 2024.



12. Noise & Vibration

Introduction

- 12.1 This Chapter of the Environmental Statement ('ES') and has been prepared by Wardell Armstrong LLP (WA) on behalf of the Applicant, Wain Estates Ltd ('the Applicant'). It assesses the likely direct and indirect significant effects from noise and vibration attributable to the development on the environment.
- 12.2 Wardell Armstrong is an Environmental, Engineering and Mining consultancy with over 185 years of international service and experience. This Noise and Vibration Chapter has been prepared by Jack Rostron (Principal Acoustic Consultant). Jack is a Member of the Institute of Acoustics with a Bachelor of Engineering degree and has 10 years practical experience of undertaking noise and vibration assessments, including EIA developments.
- 12.3 Paul Bentley (Technical Director) is a Member of the Institute of Acoustics with a Master of Science degree in Environmental Management and Institute of Acoustics Diploma in Acoustics and Noise Control Engineering. Paul has undertaken the final review, approved the report and reviewed the noise and vibration assessment.
- 12.4 Significant effects are based on a comparison of a 'with the development scenario' against the 'baseline scenario'. The baseline conditions are considered before the likely environmental effects of the Development are identified during its construction and operational phases.
- 12.5 The assessment has been undertaken taking into account the embedded mitigation in the scheme. Where significant effects are identified with the presence of the embedded mitigation, secondary mitigation is recommended to reduce the residual impact as much as practical to remove or reduce significant effects.
- 12.6 The Noise Impact Assessment provided at **Volume 3: Technical Appendix 12.1** presents an assessment of the suitability of the development for housing in terms of noise impacts. This considers the impact of the noise generating activity such as road traffic on the Proposed Development.

Legislation and Policy

National Planning Policy Framework¹

- 12.7 The 'National Planning Policy Framework' ('The Framework') 2024 states at paragraph 187:

¹ Ministry of Housing, Communities & Local Government (2024). National Planning Policy Framework. [online] Available at: <https://www.gov.uk/guidance/national-planning-policy-framework> [Accessed 18/12/2024].



‘Planning policies and decisions should contribute to and enhance the natural and local environment by:

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability....

12.8 Paragraph 198 makes clear that:

‘Planning policies and decisions should also ensure that new development is appropriate for its location taking in account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impact that could arise from the development. In doing so they should:

Mitigate and reduce to a minimum potential adverse impact resulting from noise from new development - and avoid noise giving rise to significant adverse impact on health and the quality of life;

Identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason’...

12.9 Paragraph 200 states:

‘Planning policies and decisions should ensure that new development can be integrated with existing business and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or ‘agent of change’) should be required to provide suitable mitigation before the development has been completed.’

Noise Policy Statement for England² (NPSE) 2010 and Planning Practice Guidance – Noise (PPG-N) 2019

12.10 The first aim of the Noise Policy Statement for England states that significant adverse effects on health and quality of life should be avoided. The second aim refers to the situation where the impact lies somewhere between Lowest Observed Adverse Effect Level (LOAEL) and Significant Observed Adverse Effect. Level (SOAEL), and it requires that all reasonable steps are taken to mitigate and minimise the adverse effects of noise. However, this does not mean that such adverse effects cannot occur.

12.11 The Planning Practice Guidance (‘PPG’) provides further detail about how the effect of noise levels can be recognised. Below the LOAEL noise can become noticeable, however it has no adverse effect as it does not cause any change in behaviour or attitude. Once noise crosses the LOAEL threshold it begins

2 Department for Environment, Food and Rural Affairs (2010). Noise Policy Statement for England (NPSE). [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69533/pb13750-noise-policy.pdf [Accessed 01/07/2024].



to have an adverse effect and consideration needs to be given to mitigating and minimising those effects, taking account of the economic and social benefits being derived from the activity causing the noise. Increasing noise exposure further might cause the SOAEL threshold to be crossed. If the exposure is above this level the planning process should be used to avoid the effect occurring by use of appropriate mitigation such as, altering design and layout. Such decisions must be made taking account of the economic and social benefit of the activity causing the noise, but it is undesirable for such exposure to be caused. At the highest extreme the situation should be prevented from occurring regardless of the benefits which might arise. **Table 12.1** summarises the noise exposure hierarchy.

Table 12.1: Noise Exposure Hierarchy

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



Perception	Examples of Outcomes	Increasing Effect Level	Action
	noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory		

- 12.12 The PPG summarises the approach to be taken when assessing noise. It accepts that noise can override other planning concerns, but states:

“Neither the Noise Policy Statement for England nor the National Planning Policy Framework (which reflects the Noise Policy Statement) expects noise to be considered in isolation, separate from the economic, social and other environmental dimensions of proposed development”.

Local Planning Policy

Places for Everyone³ (2024)

- 12.13 Policy JP-C5 states:

“Streets will be designed and managed to make a significant positive contribution to the quality of place and support high levels of walking, cycling and public transport” ...” we will seek to ensure:

1. The design and management of streets will follow a Streets for All approach, including by:
 - k. Mitigating the impacts of air and noise pollution and carbon emissions from road transport”

- 12.14 Policy JP-C8 states:

“we will require new development to be located and designed to enable and encourage walking, cycling, and public transport use, to reduce the negative effects of car dependency and help deliver high quality, attractive, livable and sustainable environments. We will do this by:..

Construction management:

Ensuring construction management plans are produced for developments where appropriate, to mitigate construction logistics and environmental impacts including air quality and noise on the surrounding area and encourage sustainable deliveries.”

- 12.15 There are no specific policy requirements in relation to noise for the Walshaw Allocation JPA9.

³ Places for everyone joint development plan document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan, 2022 to 2039. Adopted 21 March 2024.



Bury Council Unitary Development Plan Policy EN/2 – Noise Pollution⁴

12.16 The Bury Council Unitary Development Plan Policy EN/2 – Noise Pollution states:

In seeking to limit noise pollution the Council will not permit:

- development which could lead to an unacceptable noise nuisance to nearby occupiers and/or amenity users;
- development close to a permanent source of noise.

12.17 The justification for this policy sets out that noise is an environmental problem which can cause damage to people's health as well as the amenity of an area. This policy seeks to control the location of development in relation to noise pollution in order to reduce the impact of this form of pollution. Proposals for noisy developments likely to generate an unacceptable noise nuisance will not be permitted. Similarly, proposals for development close to permanent noise sources, such as motorways will not be permitted where it would lead to unacceptable noise nuisance for the occupiers or users of the proposed development. In certain cases, there may be opportunities to prescribe forms of screening, mounding and landscaping to reduce the impact of noise, which will benefit the quality of life for people living and working close to areas where there is noise generation or a noise pollution problem. For proposals involving recreational pursuits which generate noise or nuisance, see Recreation and Tourism Policy RT3/5. Guidance on noise pollution is provided in PPG24 "Planning and Noise".

Noise and Vibration Guidance and Standards

12.18 This Section provides a brief introduction to the guidance and standards that have been referred to in this Chapter. The details on how these were applied for the assessment are included in the Assessment Methodology of this Chapter.

Guidance

[British Standard 5228-1:2009 +A1:2014 \(BS5228\), Code of Practice for Noise and Vibration Control on Construction and Open Sites⁵](#)

12.19 The document provides guidance on the prediction and assessment of noise from construction sites.

[Professional Practice Guidance on Planning & Noise⁶ \(ProPG 2017\)](#)

12.20 ProPG 2017 provides guidance in relation to new residential development exposed to noise from transport sources. It recommends a consistent approach to the management of noise within the planning system in England and a two-stage process is suggested:

⁴ Bury Council, 1997. Unitary Development Plan. Adopted 29th August 1997.

⁵ British Standards Institution, 2014. BS 5228-1:2009 + A1:2014 Code of construction practice for noise and vibration control on construction and open sites – Part 1: Noise. BSI, London.

⁶ Association of noise consultants (ANC), Institute of Acoustics (IOA) & Chartered Institute of Environmental Health (CIEH), 2017. Professional Practice Guidance on Planning & Noise, New Residential Development. May 2017.



- ProPG 2017 Stage 1 - Initial Noise Risk Assessment; and
- ProPG 2017 Stage 2 - Detailed assessment (Acoustic Design Statement), required where the Stage 1 risk is identified above Negligible.

12.21 The guidance reflects the Government's overarching Framework, the NPSE, and PPG (including PPG-Noise) and draws on other authoritative sources of guidance such as WHO noise guidelines and BS8233. It provides advice for Local Planning Authorities and developers, and their professional advisors, on achieving good acoustic design in and around new residential developments.

[Highways England \(2018\) Design Manual for Roads and Bridges: LA111 - Noise and Vibration⁷ \(DMRB\);](#)

12.22 LA111 - Noise and Vibration, sets out the requirements for assessing and reporting the effects of highways noise and vibration from construction, operation and maintenance projects.

[British Standard 8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings⁸ \(BS8233\).](#)

12.23 BS8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings (BS8233) provides detailed guidance on recommended external and internal noise levels to be achieved for residents of proposed developments, to ensure they are protected from external noise.

[Department for Transport \(1988\) Calculation of Road Traffic Noise⁹ \(CRTN\)](#)

12.24 CRTN provides a calculation methodology for road traffic noise, which will be used if any increase in HGV numbers is likely to result in an increase of more than 1 dB(A) in road traffic noise.

[World Health Organization \(WHO\) \(1999\) Guidelines for Community Noise¹⁰](#)

12.25 The WHO guidelines present guideline noise levels for community noise in specific residential environments, e.g., outdoor living areas.

[Institute of Environmental Management and Assessment \(IEMA\) \(2014\) Guidelines for Environmental Noise Impact Assessment¹¹](#)

12.26 Presents guidelines on how the assessment of noise effects should be presented within the Environmental Impact Assessment (EIA) process. The IEMA guidelines cover aspects such as: scoping, baseline, prediction and example definitions of significance criteria.

7 Highways England (2019). Design Manual for Roads and Bridges, LA 111 – Noise and Vibration (Revision 2) [online]. Available at: <https://www.standardsforhighways.co.uk/dmrB/search/cc8cfc7-c235-4052-8d32-d5398796b364> [Accessed 01/07/ 2024].

8 British Standards Organisation, 2014. BS 8233:2014 'Guidance on sound insulation and noise reduction for buildings'. BSI, London.

9 Department for Transport (DfT) (1988). Calculation of Road Traffic Noise. HMSO, London.

10 World Health Organization (1999). Guidelines for community noise. WHO, Geneva.

11 Institute of Environmental Management and Assessment (2014). Guidelines for Environmental Noise Impact Assessment. IEMA, London.



Assessment Methodology

- 12.27 Noise emissions from the Proposed Development will occur during the construction and operational phases. The Development will also be impacted by existing/future noise levels in the surrounding area.
- 12.28 This Section presents the methodology for the assessment of significance from the impacts associated with the Proposed Development.

Consultation

- 12.29 Consultation has been undertaken with Bury Council (BC) regarding the proposed methodology. A response from Rob Hall was received on 25/01/2024 confirming the approach of the assessment is acceptable. A copy of correspondence with BC is presented in **Volume 3: Technical Appendix 12.2**.

Impacts from the Development

- 12.30 This Section presents the methodology that has been used to assess the impact and determine significance for the following:
- Determination of the extent of the study area;
 - Establishment of the baseline during the construction and operational phases for the Development; and,
 - Determination of significance.

Establishing the Baseline for the Site

- 12.31 The baseline has been established by predicting the operational road traffic for the baseline/do-nothing opening year period.
- 12.32 For operational road traffic the baseline has been predicted using traffic flow data using the methodology presented in CRTN. The change from the baseline in terms of $L_{A10,18hr}$ sound levels has been used and compared against the guidance in DMRB LA111 for both short term and long-term noise level change.
- 12.33 Measurements of the existing baseline have also been made to validate calculated baseline sound levels and used as part of the site suitability assessment. The survey has been undertaken in accordance with BS 7445-1:2003 *Description and measurement of environmental noise. Guide to quantities and procedures*¹² with results of the baseline survey presented in Section 4.0.

12 British Standards Institution (2003). BS 7445-1:2003 Description and measurement of environmental noise. Guide to quantities and procedures. BSI, London.



Determination of Significance

- 12.34 The potential noise effects associated with the development have been assessed in accordance with the guidance to determine whether any significant noise impacts occur at existing and future noise sensitive properties. Where likely significant impacts are identified, appropriate mitigation measures are proposed to avoid, reduce or mitigate the impact.
- 12.35 The significance of an environmental effect for noise will be determined not only by the magnitude of the impact but also by the sensitivity of the receptor. **Table 12.2** describes the characterisation of the sensitivity magnitude of an environmental impact whilst **Table 12.3** describes the magnitude used for this noise impact assessment.

Table 12.2: Sensitivity of Noise Receptor

Sensitivity	Description
High	Receptor/resource has little ability to absorb change without fundamentally altering its present character or is of international or national importance. For example, hospitals, residential care homes, and internationally and nationally designated nature conservation sites which are also known to contain noise sensitive species (i.e. noise may change breeding habits or threaten species in some other way).
Moderate	Receptors/resource has moderate capacity to absorb change without significantly altering its present character. For example, residential dwellings, offices, schools, and play areas. Locally designated nature conservation Sites which are also known to contain noise sensitive species (i.e. noise may change breeding habits or threaten species in some other way).
Low	Receptor/resource is tolerant of change without detriment to its character or is of low or local importance. For example, industrial estates.
Negligible	Receptor/ resource is not sensitive to noise.

Table 12.3: Magnitude of Environmental Effect

Magnitude of Change	Description
Large	Impact resulting in a considerable change in baseline environmental conditions predicted either to cause statutory objectives to be significantly exceeded or to result in severe undesirable/desirable consequences on the receiving environment.
Medium	Impact resulting in a discernible change in baseline environmental conditions predicted either to cause statutory objectives to be marginally exceeded or to result in undesirable/desirable consequences on the receiving environment.
Small	Impact resulting in a discernible change in baseline environmental conditions with undesirable/desirable conditions that can be tolerated.
Negligible	No discernible change in the baseline environmental conditions, within margins of error of measurement.



- 12.36 A Significance Matrix has been used in this assessment, to define the interaction of magnitude and sensitivity, as shown in **Table 12.4**. The Table also shows the planning impact, but this is limited to Adverse effects only (i.e. increases in noise levels larger changes in noise levels from the baseline).

Table 12.4: Significance Rating Matrix

Magnitude	Sensitivity			
	High	Moderate	Low	Negligible
Large	Major (UOAEI)	Moderate-Major (SOAEI)	Moderate (LOAEI)	Minor (NOAEI)
Medium	Moderate-Major (SOAEI)	Moderate (LOAEI)	Minor (NOAEI)	Negligible (NOEL)
Small	Moderate (LOAEI)	Minor (NOAEI)	Negligible (NOEL)	Negligible (NOEL)
Negligible	Minor (NOAEI)	Negligible (NOEL)	Negligible (NOEL)	Negligible (NOEL)

- 12.37 Significant effects can be both Beneficial and Adverse. For effects that are identified as Major and Moderate-Major these will be considered to be Significant (Adverse or Beneficial).
- 12.38 For Moderate effects the significance is Potentially Significant and the final determination for Significant or Not Significant will be determined by professional judgement considering any relevant contextual factors.
- 12.39 Effects that are Minor and Negligible are determined to be Not Significant.
- 12.40 For traffic, relevant contextual factors include the advice in DMRB LA111 which states that LOAEIs and SOAEIs should be set out in accordance with **Table 12.5**. The guidance also provides scope for the application of professional judgment in modifying these values where it is appropriate to do so. However, in this instance these values have been adopted without modification.

Table 12.5: Summary of road traffic noise threshold levels

Noise sources	Receptor	Period	NOAEI	LOAEI	SOAEI
Operational noise - road traffic	Residential	Daytime	<55dB LA10,18hr (façade)	55-68dB LA10,18hr (façade)	>68 dB LA10,18hr (façade)
		Night-time	<40dB Lnight, outside (free-field)	40-55 dB Lnight, outside (free-field)	>55 dB Lnight, outside (free-field)

Construction Phase

Construction noise

- 12.41 At this stage, given the outline nature of the Proposed Development, detailed information on the construction activities, programme or number and type of construction plant is unavailable. It is



therefore not possible to undertake any detailed calculations. Accordingly, a qualitative assessment has been adopted and has been undertaken using the guidance in BS 5228-1, considering the proximity of receptors to the works, the potential works involved, potential working hours/duration, existing noise levels from the baseline measurement survey, and best practice mitigation measures.

- 12.42 To identify the threshold of potential significant construction noise the 'ABC' methods provided in Annex E of BS5228-1 have been used to inform the assessment.
- 12.43 The 'ABC' method sets threshold limits for the onset of potentially significant Adverse effects (i.e. the SOAEL) depending on the existing ambient noise level.
- 12.44 Adverse noise effects may arise where construction noise levels are between LOAEL and SOAEL, however, this would not normally result in a significant Adverse effect at a receptor. Noise mitigation is still to be considered to reduce noise levels from construction activity as far as practically possible and keep noise effects to a minimum.
- 12.45 Construction traffic has been assessed in accordance with IEMA guidance
- 12.46 For construction traffic the magnitude of change is compared against the sensitivity of the receptor to determine the significance of effect. The significance of effect is used to determine the final significance in-line with **Table 12.4**. **Table 12.6** presents the magnitude of change matrix for the change in sound level assessment. Thresholds are based on guideline thresholds presented in Table 7.14 in the IEMA guidelines for noise.

Table 12.6: Magnitude of Change Scale (short-term construction traffic)

Magnitude Level	Sound Level Change
Large	≥5.0 dB
Medium	3.0-4.9 dB
Small	1.0-2.9 dB
Negligible	<1.0 dB

Operational Phase

Changes to Road Traffic Noise

- 12.47 Predictions of road traffic noise are based on traffic flows provided by the transport consultant, for opening and future year (2030 and 2045) scenarios.
- 12.48 The current and future traffic noise levels have been predicted using the Basic Noise Level (BNL) calculation procedure, this will inform the assessment of changes to Road Traffic Noise.
- 12.49 The procedures outlined in CRTN assumes typical traffic and noise propagation conditions that are consistent with Moderately Adverse wind velocities and directions during specified periods.



- 12.50 The data used in the road traffic noise assessment has been provided as 18-hour Annual Average Weekday Traffic (AAWT) flows and HGV percentages. Furthermore, when considering the future year effects, a cumulative assessment has been undertaken which considers the delivery of the wider masterplan scheme and committed developments namely 3,500 dwellings as part of the Elton Reservoir allocation.
- 12.51 For this assessment, the operational years are compared to the existing baseline, as such, providing a worst-case robust assessment when considering change in noise level.
- 12.52 In summary, CRTN has been used to determine the noise levels for four scenarios for the daytime and night-time periods:
- Scenario 1: 2024 Base Year
 - Scenario 2: Do Something Opening Year (DSOY) (2030)
 - Scenario 3: Do Something Future Year (DSFY) (2045)
 - Scenario 4: Do Something Future Year + Committed Development (DSFY + Committed Development)
- 12.53 Three comparisons have been undertaken for the daytime and night-time periods and are as follows;
- Scenario 1: 2024 Base Year vs DSOY (2030) - Short Term
 - Scenario 2: 2024 Base Year vs DSFY (2045) - Long Term
 - Scenario 3: 2024 Base Year vs DSFY + Committed Development – Long Term
- 12.54 Daytime noise levels are reported as $L_{A10,18hr}$ based on traffic flow data. Night-time levels have been determined using the TRL document '*converting the UK traffic noise index $L_{A10,18h}$ to EU noise indices for noise mapping*'¹³ for converting to $L_{Aeq,8hr}$ from $L_{A10,18hr}$.
- 12.55 For both the daytime and night-time levels comparison of the change from one scenario to the other have been made. These are based on the short term and long-term noise level change. **Table 12.7** presents the change in noise levels from road traffic along with the associated magnitude of change.

Table 12.7: Change in Road Traffic Noise Levels

Magnitude of Change	Short Term Change in $L_{A10,18hr}$ and $L_{Aeq,8hr}$	Long Term Change in $L_{A10,18hr}$ and $L_{Aeq,8hr}$
Large	≥5.0 dB	≥10.0 dB
Medium	3.0-4.9 dB	5.0-9.9 dB
Small	1.0-2.9 dB	3.0-4.9 dB
Negligible	<1.0 dB	<3.0 dB

¹³ TRL Limited, 2002. Converting the UK traffic noise index $L_{A10,18h}$ to EU noise indices for noise mapping' [online] available at: <https://programmeofficers.co.uk/Aylesbury/CD/CD%209.11.pdf>



- 12.56 The following potential impacts have been scoped out of the assessment. Justification for the scoping out of the potential impacts are also included:

Construction Phase

- Noise from change in road traffic noise levels due to construction traffic on existing sensitive receptors (ESR) - Road traffic noise due to construction traffic has been scoped out as the Annual Average Weekday Traffic (AAWT) 18hr flows associated with construction traffic are not anticipated to double the total flow. A doubling of the total flow will result in 3dB change in the $L_{A10,18hr}$ sound level. This is a medium magnitude of change and when compared against moderate sensitivity receptors (such as residential) the impact is considered to be significant. However, it is assumed that traffic increase associated with construction against the existing baseline flows will be less than a doubling of the original baseline flow and therefore effects will be Not Significant.
- Vibration from on-site construction works on existing sensitive receptors (ESR) - Construction related vibration will be controlled through management plans and would only occur during specific site activity such as piling and road compaction with a rotary drum. These specific activities will be short in duration and will be highly controlled through working method statements (which will include monitoring and plant selection). The Construction Environmental Management Plan (CEMP) will control all on-site construction related impacts that may result in vibration offsite (either at existing sensitive receptors or receptors in the development).

Operational Phase

- Vibration from operational road traffic on existing sensitive receptors (ESR) - Operational vibration from road traffic will not be significant as existing and new roads are constructed and maintained to high standards as required by the Highway Authority. Design Manual for Roads and Bridges¹⁴ (DMRB) *LA111 Noise and Vibration* specifically scopes operational vibration out of any assessments. Based on this justification, operational vibration is not considered significant.

- 12.57 The following activities have been considered as potentially significant and are scoped into the assessment:

Construction Phase

- Noise from site construction activity on existing sensitive receptors (ESRs).

Operational Phase

- Change in road traffic on existing sensitive receptors (ESRs).

14 Highways England (2019). Design Manual for Roads and Bridges, LA 111 – Noise and Vibration (Revision 2) [online]. Available at: <https://www.standardsforhighways.co.uk/dmrB/search/cc8cfcf7-c235-4052-8d32-d5398796b364> [Accessed 29/08/2024].



Baseline Conditions

- 12.58
- WA undertook an attended noise survey during the daytime on the 29th August 2024 at two locations at the Proposed Development site. Corresponding measurements were undertaken during the night-time on the 4th September 2024.
- 12.59
- The noise measurements have been undertaken using Type 1 integrating sound level meters. The sound level meters were mounted vertically on tripods 1.5 m above the ground and more than 3.5 m from any other reflecting surfaces. All noise monitoring took place during dry conditions with wind speeds of less than 5 m/s.
- 12.60
- The sound level meters were calibrated to a reference level of 94 dB at 1kHz both before, and on completion of, the noise survey. No drift in the calibration during the survey was noted. A-weighted L_{eq} sound levels were measured to comply with the requirements of BS 8233:2014, WHO 1999 and ProPG.
- 12.61
- Other noise indexes including maximum and minimum sound pressure levels were also measured to provide additional information.
- 12.62
- Table 12.8** below summarises the monitoring locations and shown on **Figure 12.1**.

Table 12.8: Monitoring Locations			
Monitoring Location	Description	Co-ordinates	
		x	y
ML1	Located on the northern boundary of the Site adjacent to Scobell St	378300	412180
ML2	Located on the northern boundary of the Site adjacent to Church St	377818	412109

Observations

- 12.63
- Based on observations during the survey, the main contributor to the acoustic environment is traffic movements on Scobell St and Church St. Other observations included bird song, pedestrians and wind in the flora.



Figure 12.1: Monitoring Locations



Summary of Monitoring Results

12.64 **Table 12.9** presents the summary of measured results during the daytime.

Table 12.9: Summary of Monitored Sound Levels - daytime

	Background Sound Level, dB $L_{A90,T}$		Ambient Sound Level, dB $L_{Aeq,T}$		Maximum Sound Level, dB $L_{Afm\max,T}$	
	ML1	ML2	ML1	ML2	ML1	ML2
Range	39 - 44	42 - 50	54 - 57	53 - 59	68 - 73	64 - 76
25th %ile	41	43	54	54	69	68
Median	42	44	56	56	69	72
75th %ile	42	45	57	57	71	74
Arithmetic Avg	41	44	55	56	70	71
Log Avg	-	-	56	56	-	-

12.65 **Table 12.10** presents the summary of measured results during the daytime.

Table 12.10: Summary of Monitored Sound Levels – night-time

	Background Sound Level, dB		Ambient Sound Level, dB		Maximum Sound Level, dB	
	LA90,T		LAeq,T		LAfmax,T	
	ML1	ML2	ML1	ML2	ML1	ML2
Range	29-52	30-52	32-67	41-65	35-76	48-78
25th %ile	31	35	35	35	40	61
Median	34	39	45	58	54	69
75th %ile	38	44	59	60	71	71
Arithmetic Avg	36	39	47	55	56	65
Log Avg	-	-	57	58	-	-

12.66 **Table 12.11** details the weather on site during the noise survey.

Table 12.11: Details of Onsite Weather Conditions During Noise Survey

Period	Temperature (°C)	Wind Speed (m/s)	Precipitation (mm)
29/08/2024	9-12	1-5	0
04/09/2024	12	<5	0

Future Baseline

12.67 The future baseline would be subject to an increase in road traffic noise due to natural traffic growth. This is accounted for in the use of traffic data for future years in the assessment.

Assessment of Impact and Significance

Embedded Mitigation

Construction Phase

12.68 Prior to construction of the Proposed Development detailed Construction Environmental Management Plans and Construction Traffic Management Plans (CEMPs and CTMPs) will be produced and implemented.

12.69 These will ensure that Site construction activity is carried out to minimise impact to existing and future residents and the environment in terms of noise.

12.70 Details of noise measures to reduce Site construction noise include the following:

- Construction works will only take place Monday - Friday 07:00-19:00 and Saturday 07:00-13:00 Saturday with no working on Sundays or Bank Holidays;



- All plant onsite will comply with the noise limits quoted in the Directive 2000/14/EC/United Kingdom Statutory Instruments (S) 2001/1701;
- Adopt recommendations of BS 5228-1:2009+A1:2014 'Code of practice for noise and vibration control on construction and open sites';
- Adopt guidance in BRE Controlling particles, vapour and noise pollution from construction sites, Parts 1 to 5, 2003;
- As far as reasonably practicable, plant or equipment liable to create noise and/or vibration will be located away from sensitive receptors. Temporary screens or barriers may be employed;
- Plant and equipment will be maintained in good working order, including noise control measures;
- Electrically powered plant, equipment and tools will be preferred over diesel or petrol-driven;
- Machines not in use will be shut down or throttled down to a minimum;
- Receptors will be given 24-hours notification in advance of works with high levels of noise and/or vibration giving details of duration and likely impacts. The Contractor will most likely complete this via a letter drop;
- Toolbox talks will be carried out to make staff aware of nearby sensitivity receptor locations and avoid all unnecessary noise due to misuse of tools and equipment, unnecessary shouting, and radios;
- A further measure to reduce noise levels at the sensitive receptors would include, as far as possible, the avoidance of two noisy operations occurring simultaneously in close proximity to the same sensitive receptor;
- Adequate lubrication to all plant including cranes and working platforms will be provided to control unnecessary noise and integrity of silencers will be reviewed;
- Materials will be carefully handled to minimise noise and vibration;
- All vehicles and mechanical plant used for the works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order;
- Lorries shall enter and exit work sites in a forward direction, except where space restriction does not permit this. This will assist in the minimisation of noise from reversing alarms;
- All compressors shall be "sound reduced" models fitted with properly lined and sealed acoustic covers which shall be kept closed whenever the machines are in use, and all pneumatic percussive tools shall be fitted with mufflers or silencers of the type recommended by the manufacturers;
- All machines in intermittent use shall be shut down in the intervening periods between the proposed works or throttled down to a minimum; and
- Items of plant shall be maintained in good working condition so that extraneous noises from mechanical vibration, creaking and squeaking are reduced to a minimum.

Operational Phase

12.71 The following embedded mitigation measures are included in the design for existing and future receptors:

- The parameters plan for the Proposed Development as part of an outline planning application.



- Existing off-site topography and screening from buildings.
- Existing speed limits on existing local roads.

Potential Effects During Construction

- 12.72 Due to the outline nature of the Proposed Development, the details of activities, plant and equipment required during construction were not available at the time of issue. However, it is considered that there is the potential for ambient noise levels to increase and lead to potential Adverse noise impacts at the closest noise sensitive receptors.
- 12.73 Despite the lack of detailed construction activity, professional judgment has been used to identify likely activities that will be undertaken in the construction of the Development. The following activities have been identified:
- Earthworks and drainage; and,
 - Landscaping.
- 12.74 The potential impact from the likely construction activities will vary depending on temporal and spatial considerations. Predominantly the works will be transitory in nature, for example, earthworks and drainage works will present a high level of noise at the nearest receptors, but this will be for a limited amount of time.
- 12.75 Significant Adverse effects due to construction noise are likely to occur where Moderate / Major impacts are predicted to be above the threshold levels for prolonged periods of time as defined in Table E.1 of BS 5228-1 as summarised below:
- Category A daytime 65 dBA;
 - 10 days out of 15 consecutive days; or
 - 40 days in a consecutive 6-month period; or
 - where very high noise levels prevail for short periods.
- 12.76 Based on professional judgement and anticipated plant items and activities, indicative calculations have been undertaken focusing on an average noise from the works. These calculations provide an indication of the likely severity of impact at the nearest NSRs.
- 12.77 Two general scenarios have been used to calculate an indicative noise level at the nearest NSRs, below:
- Based on the noise level of a tracked excavator being 81 dB at 10 m, receptors within 50 m of the works are likely to experience Significant effects;
 - Based on the noise level of a vibratory roller being 72 dB at 10 m, receptors within 20 m of the works are likely to experience Significant effects.
- 12.78 During construction receptors are Moderate sensitivity.



- 12.79 The indicative calculation for construction works show activity would be Negligible where works are further than 50 m away from the receptor. Where this occurs, it will be **Not Significant** at the nearest receptors assuming normal working day hours (07:00 - 19:00 Monday to Friday and Saturday 07:00 to 13:00).
- 12.80 For dwellings within 50 m of construction activity the embedded CEMP mitigation will control the impact. With the CEMP the significance of effect from construction activity will be **Minor Adverse** which is **Not Significant**.

Potential Effects During Operation

Changes to Road Traffic Noise

- 12.81 Calculations have been undertaken in accordance with CRTN. The calculations allow the determination of road traffic noise emissions from the Baseline Year, Opening Year in the short-term, 2030 and long-term, 2045 on the surrounding road network.
- 12.82 Change in noise levels due to traffic flows have been determined at ESRs. The change in noise has been assessed for the following:
- Scenario 1: 2024 Base Year Vs Development Traffic 2030 - Short Term;
 - Scenario 2: 2024 Base Year Vs Development Traffic 2036 - Long Term.
- 12.83 The change in road traffic noise levels has been calculated using the BNL for the surrounding road network, as shown in **Table 12.12** and **Table 12.13** for daytime and night-time periods in the short term.

Table 12.12: Predicted change in road traffic noise levels dB $L_{A10,18hr}$ (free-field), daytime -short term effect

Receptor ID	Baseline 2024 predicted noise level $L_{A10,18hr}$ dB	DS2030 predicted noise level $L_{A10,18hr}$ dB	DS2030 - Baseline 2024, dB	Receptor Sensitivity	Magnitude of Change	Significance of effect (Adverse unless otherwise identified)
Market Street	69.4	69.5	0.1	Moderate	Negligible	Negligible
Bradshaw Road	62.5	62.7	0.2	Moderate	Negligible	Negligible
Scobell Street	61.4	61.4	0.0	Moderate	Negligible	Negligible
Walshaw Road	66.2	66.2	0.0	Moderate	Negligible	Negligible
High Street	67.2	67.4	0.2	Moderate	Negligible	Negligible
Ainsworth Road	69.0	69.0	0.0	Moderate	Negligible	Negligible
Cockey Moor Road	68.6	68.7	0.0	Moderate	Negligible	Negligible
A58 Bolton & Bury Road	71.8	72.0	0.2	Moderate	Negligible	Negligible



Receptor ID	Baseline 2024 predicted noise level $L_{A10,18hr}$ dB	DS2030 predicted noise level $L_{A10,18hr}$ dB	DS2030 - Baseline 2024, dB	Receptor Sensitivity	Magnitude of Change	Significance of effect (Adverse unless otherwise identified)
A58 Bolton Road	71.6	71.7	0.0	Moderate	Negligible	Negligible
Brandleshome Road	70.9	70.9	0.0	Moderate	Negligible	Negligible
Walmersley Road	71.0	71.0	0.0	Moderate	Negligible	Negligible
Rochdale Old Road	71.0	71.0	0.0	Moderate	Negligible	Negligible
Rochdale Road	72.0	72.0	0.0	Moderate	Negligible	Negligible
Manchester Road	70.8	70.8	0.1	Moderate	Negligible	Negligible
Peel Way	74.7	74.8	0.0	Moderate	Negligible	Negligible

Table 12.13: Predicted change in road traffic noise levels dBA L_{night} (free-field), night-time -short term

Receptor ID	Baseline 2024 predicted noise level $L_{A10,18hr}$ dB	DS2030 predicted noise level $L_{A10,18hr}$ dB	DS2030 - Baseline 2024, dB	Receptor Sensitivity	Magnitude of Change	Significance of effect (Adverse unless otherwise identified)
Market Street	58.7	58.7	0.1	Moderate	Negligible	Negligible
Bradshaw Road	52.4	52.6	0.2	Moderate	Negligible	Negligible
Scobell Street	51.5	51.5	0.0	Moderate	Negligible	Negligible
Walshaw Road	55.8	55.8	0.0	Moderate	Negligible	Negligible
High Street	56.7	56.9	0.2	Moderate	Negligible	Negligible
Ainsworth Road	58.3	58.3	0.0	Moderate	Negligible	Negligible
Cockey Moor Road	58.0	58.0	0.0	Moderate	Negligible	Negligible
A58 Bolton & Bury Road	60.8	61.0	0.2	Moderate	Negligible	Negligible
A58 Bolton Road	60.7	60.8	0.0	Moderate	Negligible	Negligible
Brandleshome Road	60.1	60.1	0.0	Moderate	Negligible	Negligible
Walmersley Road	60.1	60.1	0.0	Moderate	Negligible	Negligible
Rochdale Old Road	60.1	60.1	0.0	Moderate	Negligible	Negligible



Receptor ID	Baseline 2024 predicted noise level $L_{A10,18hr}$ dB	DS2030 predicted noise level $L_{A10,18hr}$ dB	DS2030 - Baseline 2024, dB	Receptor Sensitivity	Magnitude of Change	Significance of effect (Adverse unless otherwise identified)
Rochdale Road	61.0	61.0	0.0	Moderate	Negligible	Negligible
Manchester Road	59.9	60.0	0.1	Moderate	Negligible	Negligible
Peel Way	63.5	63.5	0.0	Moderate	Negligible	Negligible

12.84 The change in road traffic noise levels has been calculated for the surrounding road network and is informed by traffic flow data for 2045. **Table 12.14** and **Table 12.15** present the assessment for daytime and night-time periods in the long term.

Table 12.14: Predicted change in road traffic noise levels dB $L_{A10,18hr}$ (free-field), daytime - long term effect

Receptor ID	Baseline 2024 predicted noise level $L_{A10,18hr}$ dB	DS2045 predicted noise level $L_{A10,18hr}$ dB	DS2045 - Baseline 2024, dB	Receptor Sensitivity	Magnitude of Change	Significance of effect (Adverse unless otherwise identified)
Market Street	69.4	70.1	0.7	Moderate	Negligible	Negligible
Bradshaw Road	62.5	63.0	0.6	Moderate	Negligible	Negligible
Scobell Street	61.4	61.7	0.4	Moderate	Negligible	Negligible
Walshaw Road	66.2	66.8	0.6	Moderate	Negligible	Negligible
High Street	67.2	68.0	0.8	Moderate	Negligible	Negligible
Ainsworth Road	69.0	69.6	0.6	Moderate	Negligible	Negligible
Cockey Moor Road	68.6	69.3	0.6	Moderate	Negligible	Negligible
A58 Bolton & Bury Road	71.8	72.6	0.8	Moderate	Negligible	Negligible
A58 Bolton Road	71.6	72.3	0.6	Moderate	Negligible	Negligible
Brandleshome Road	70.9	71.5	0.6	Moderate	Negligible	Negligible
Walmersley Road	71.0	71.6	0.6	Moderate	Negligible	Negligible
Rochdale Old Road	71.0	71.6	0.6	Moderate	Negligible	Negligible
Rochdale Road	72.0	72.6	0.6	Moderate	Negligible	Negligible
Manchester Road	70.8	71.4	0.7	Moderate	Negligible	Negligible



Receptor ID	Baseline 2024 predicted noise level $L_{A10,18hr}$ dB	DS2045 predicted noise level $L_{A10,18hr}$ dB	DS2045 - Baseline 2024, dB	Receptor Sensitivity	Magnitude of Change	Significance of effect (Adverse unless otherwise identified)
Peel Way	74.7	75.4	0.6	Moderate	Negligible	Negligible

Table 12.15: Predicted change in road traffic noise levels dBA L_{night} (free-field), night-time - long term effect

Receptor ID	Baseline 2024 predicted noise level $L_{A10,18hr}$ dB	DS2045 predicted noise level $L_{A10,18hr}$ dB	DS2045 - Baseline 2024, dB	Receptor Sensitivity	Magnitude of Change	Significance of effect (Adverse unless otherwise identified)
Market Street	58.7	59.3	0.6	Moderate	Negligible	Negligible
Bradshaw Road	52.4	52.9	0.5	Moderate	Negligible	Negligible
Scobell Street	51.5	51.8	0.3	Moderate	Negligible	Negligible
Walshaw Road	55.8	56.3	0.5	Moderate	Negligible	Negligible
High Street	56.7	57.4	0.7	Moderate	Negligible	Negligible
Ainsworth Road	58.3	58.8	0.5	Moderate	Negligible	Negligible
Cockey Moor Road	58.0	58.6	0.6	Moderate	Negligible	Negligible
A58 Bolton & Bury Road	60.8	61.5	0.7	Moderate	Negligible	Negligible
A58 Bolton Road	60.7	61.3	0.6	Moderate	Negligible	Negligible
Brandleshome Road	60.1	60.6	0.5	Moderate	Negligible	Negligible
Walmersley Road	60.1	60.6	0.5	Moderate	Negligible	Negligible
Rochdale Old Road	60.1	60.7	0.5	Moderate	Negligible	Negligible
Rochdale Road	61.0	61.6	0.5	Moderate	Negligible	Negligible
Manchester Road	59.9	60.5	0.6	Moderate	Negligible	Negligible
Peel Way	63.5	64.0	0.5	Moderate	Negligible	Negligible



Short Term Effect

Daytime

- 12.85 The sensitivity of all receptors is **Moderate** and the magnitude of change for all receptors is **Negligible Adverse**. The resultant significance of effect is **Negligible** which is **Not Significant** during the daytime in the short-term.

Night-time

- 12.86 The sensitivity of all receptors is **Moderate** and the magnitude of change for all receptors is **Negligible Adverse**. The resultant significance of effect is **Negligible** which is **Not Significant** during the night-time in the short-term.

Long Term Effect

Daytime

- 12.87 The sensitivity of all receptors is **Moderate** and the magnitude of change for all receptors is **Negligible Adverse**. The resultant significance of effect is **Negligible** which is **Not Significant** during the daytime in the long-term.

Night-time

- 12.88 The sensitivity of all receptors is **Moderate** and the magnitude of change for all receptors is **Negligible Adverse**. The resultant significance of effect is **Negligible** which is **Not Significant** during the night-time in the long-term.

Mitigation

During Construction

- 12.89 No additional mitigation is required above the embedded mitigation measures which will be controlled through the CEMP.

During Operation

- 12.90 No additional mitigation is required above embedded measures included within the site development.

Residual Effects

- 12.91 No additional mitigation is required to reduce sound levels at existing receptors. As such, the residual effects are the same as those presented in the initial assessment in **Tables 12.12 to 12.15**.



Cumulative Effects

12.92 Cumulative traffic effects have been considered for the growth in traffic due to the full Walshaw allocation, totaling 1,250 dwellings, including the proposed development. Additionally, the cumulative assessment also includes committed development for 3,500 dwellings as part of the Elton Reservoir development. An assessment of cumulative noise is presented in Table 12.16.

Table 12.16: Predicted change in road traffic noise levels dB LA10,18hr (free-field), Daytime – cumulative long term effect

Road	Baseline 2024 predicted noise level LA10,18hr dB	DS2045 predicted noise level + Cumulative Developments LA10,18hr dB	Change in noise Level between DS2045 + Cumulative Development and Baseline 2024	Receptor Sensitivity	Magnitude of Change	Significance of effect (Adverse unless otherwise identified)
Market Street	69.4	70.4	1.0	Moderate	Negligible	Negligible
Bradshaw Road	62.5	64.2	1.8	Moderate	Negligible	Negligible
Scobell Street	61.4	62.0	0.6	Moderate	Negligible	Negligible
Walshaw Road	66.2	66.8	0.6	Moderate	Negligible	Negligible
High Street	67.2	67.9	0.6	Moderate	Negligible	Negligible
Ainsworth Road	69.0	69.6	0.6	Moderate	Negligible	Negligible
Cockey Moor Road	68.6	69.5	0.9	Moderate	Negligible	Negligible
A58 Bolton & Bury Road	71.8	73.4	1.6	Moderate	Negligible	Negligible
A58 Bolton Road	71.6	72.5	0.9	Moderate	Negligible	Negligible
Brandleshome Road	70.9	71.6	0.6	Moderate	Negligible	Negligible
Walmersley Road	71	72	0.6	Moderate	Negligible	Negligible
Rochdale Old Road	71.0	71.7	0.6	Moderate	Negligible	Negligible
Rochdale Road	72.0	72.6	0.6	Moderate	Negligible	Negligible
Manchester Road	70.8	71.7	1.0	Moderate	Negligible	Negligible
Peel Way	74.7	75.4	0.7	Moderate	Negligible	Negligible



Table 12.17: Predicted change in road traffic noise levels dBA L_{night} (free-field), Night-time – cumulative long-term effect

Road	Baseline 2024 predicted noise level L_{night} , dB	DS2045 predicted noise level + Cumulative Developments $L_{A10,18hr}$ dB	Change in noise Level between DS2045 + Cumulative Development and Baseline 2024	Receptor Sensitivity	Magnitude of Change	Significance of effect (Adverse unless otherwise identified)
Market Street	58.7	59.6	0.9	Moderate	Negligible	Negligible
Bradshaw Road	52.4	54.0	1.6	Moderate	Negligible	Negligible
Scobell Street	51.5	52.0	0.5	Moderate	Negligible	Negligible
Walshaw Road	55.8	56.3	0.5	Moderate	Negligible	Negligible
High Street	56.7	57.3	0.6	Moderate	Negligible	Negligible
Ainsworth Road	58.3	58.9	0.6	Moderate	Negligible	Negligible
Cockey Moor Road	58.0	58.8	0.8	Moderate	Negligible	Negligible
A58 Bolton & Bury Road	60.8	62.3	1.4	Moderate	Negligible	Negligible
A58 Bolton Road	60.7	61.5	0.8	Moderate	Negligible	Negligible
Brandleshome Road	60.1	60.6	0.6	Moderate	Negligible	Negligible
Walmersley Road	60.1	60.7	0.6	Moderate	Negligible	Negligible
Rochdale Old Road	60.1	60.7	0.6	Moderate	Negligible	Negligible
Rochdale Road	61.0	61.6	0.6	Moderate	Negligible	Negligible
Manchester Road	59.9	60.8	0.9	Moderate	Negligible	Negligible
Peel Way	63.5	64.1	0.6	Moderate	Negligible	Negligible

Cumulative Effect

Daytime

- 12.93 The sensitivity of all receptors is **Moderate** and the magnitude of change for all receptors is **Negligible Adverse**. The resultant significance of effect is **Negligible** which is **Not Significant** during the daytime in the long-term.

Night-time

- 12.94 The sensitivity of all receptors is **Moderate** and the magnitude of change for all receptors is **Negligible Adverse**. The resultant significance of effect is **Negligible** which is **Not Significant** during the night-time in the long-term.



Summary and Conclusions

- 12.95 A noise assessment has been undertaken for the operational and construction phases. Furthermore, an assessment of the suitability for residential purposes has been undertaken. A noise survey has been undertaken to establish existing noise levels at the Site and make Site observations on the likely noise sources which may impact the Site.
- 12.96 For the construction phase, construction of the development has been considered. The indicative calculation for construction works show activity would be Negligible where works are further than 50 m away from the receptor. Where this occurs, it will be **Not Significant** at the nearest receptors assuming normal working day hours (07:00 - 19:00 Monday to Friday and Saturday 07:00 to 13:00). For dwellings within 50 m of construction activity the embedded CEMP mitigation will control the impact. With the CEMP the significance of effect from construction activity will be Minor Adverse which is **Not Significant**.
- 12.97 For the operational phase future road traffic have been considered.
- 12.98 The baseline 2024 and years 2030 and 2045 with the development in place, have been predicted using traffic data provided by the transport consultant.
- 12.99 During the operational phase, changes in road traffic noise levels at existing receptors is predicted to be **Not Significant**.



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13. Ground Conditions

Introduction

- 13.1 This Chapter assesses the likely Significant impacts and effects of the Proposed Development in the context of ground conditions, and any contamination impacts and effects the Proposed Development may have on the surrounding area.
- 13.2 The Chapter describes the existing baseline conditions at the Site and surroundings, the potential magnitude of direct and indirect land impacts of the Proposed Development, and the mitigation measures required to prevent, reduce or offset the impacts and the significance of residual effects.
- 13.3 The Chapter is supported by the following Baseline Studies which are included as Technical Appendices in **Volume 3** of this ES:
- **Technical Appendix 13.1:** Phase 1 Desk Study Report, Clancy Consulting Limited 2024.
 - **Technical Appendix 13.2:** Coal Mining Risk Assessment, Clancy Consulting Limited 2024.
 - **Technical Appendix 13.3:** Site Visit Photographic Record, Smith Grant LLP 2024.
 - **Technical Appendix 13.4:** Site Features Plan, Smith Grant LLP 2024.
 - **Technical Appendix 13.5:** Mine Shafts Investigation, EAL 2024.
 - **Technical Appendix 13.6:** Mineral Assessment Report, Betts Geo Consulting Engineers May 2024.
- 13.4 The Proposed Development is as detailed within **Chapter 4, Project Description**, and shown on accompanying Drawings which show the masterplan / Development Parameters and Development Framework. Aspects of particular relevance in respect to ground conditions are:
- Construction of a temporary construction compound area which will include the storage of fuels.
 - The Proposed Development is to include up to 275 low rise (two to three storey) dwellings with associated roads and infrastructure;
 - The dwellings are anticipated to have private gardens and areas of soft landscaping and public open space will be present around the Site;
 - Foul drainage is to be connected with mains sewerage and surface water is to be directed to three drainage ponds which will drain to the Walshaw Brook via a designated outfall;
 - The current Public Rights of Way (PRoW) as footpaths will remain in-situ post development although may need to be temporarily diverted to facilitate development construction; and,
 - Green corridors located either side of existing surface watercourses will be created which will comprise areas of green space and ecological enhancement.



Statement of Competence

- 13.5 The Chapter has been prepared by Smith Grant LLP (SGP), an environmental consultancy specialising in ground conditions and contaminated land consultancy.
- 13.6 The author is an environmental scientist with over 20 years' experience in the field of environmental risk management. The author regularly provides contaminated land consultancy input to planning applications for a wide range of developments including housing, light and heavy industrial development, waste management and treatment facilities and energy infrastructure. The author is a Chartered Scientist and a full Member of the Institute of Environmental Sciences (IES).
- 13.7 The lead technical author is a Chartered Member of the Chartered Institute of Water and Environmental Management and is an associate member of the Chartered Institution of Wastes Management.

Legislation and Policy

National Planning Policy and Guidance

- 13.8 The assessment has been prepared with reference to the Planning Practice Guidance provided in relation to land affected by contamination and land stability under the National Planning Policy Framework (The Framework) 2023ⁱ.
- 13.9 The Framework 2023 sets out the Government's planning policies for England and how these are expected to be applied. The Framework provides some general guidance to Local Authorities on taking land condition into account in planning policies and decisions. Paragraph 180 of the Framework states:

"Planning policies and decisions should contribute to and enhance the natural and local environment by [...]

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality; and,

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."

- 13.10 The Framework further states in paragraph 189 in relation to Ground Conditions and Pollution that:

"Planning policies and decisions should ensure that:

a) a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation measures including land remediation (as well as potential impacts on the natural environment arising from that remediation);

b) after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and,



c) adequate site investigation information, prepared by a competent person, is available to inform these assessments.”

13.11 Paragraph 190 is also applicable which states:

“Where a site is affected by land contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner”

13.12 Further guidance is provided in the Planning Practice Guidance on Land Affected by Contaminationⁱⁱ (NPPG) which provides guiding principles on how planning can deal with land affected by contamination. The guidance sets out when contamination may be present, the role of planning when dealing with land which may be contaminated, what a contamination risk assessment may contain and how to determine unacceptable risk. The guidance states that where there is a reason to believe contamination could be an issue, proportionate but sufficient site investigation information should be prepared by a competent person to determine the existing or otherwise of contamination.

13.13 Guidance on land stability is also provided in the Planning Practice Guidance which provides guiding principles on how planning can deal with land stability. The effects of land instability may result in landslides, subsidence or ground heave. Failing to deal with this issue could cause harm to human health, local property and associated infrastructure, and the wider environment. They occur in different circumstances for different reasons and vary in their predictability and in their effect on development. The guidance sets out steps to be taken when land stability is suspected to be an issue for a planning application, what a land stability risk assessment should be contained and measures to be taken to mitigate the risk of subsidence. The guidance also sets out the role of the Coal Authority in the planning system to prevent land instability.

Local Planning Policy and Guidance

13.14 Bury Council is the determining authority. The Bury Local Plan is currently being updated and is under consultation following the adoption of ‘The Places for Everyone (PfE)’ joint development plan on 21.03.24. This document sets out the long-term plan for nine Greater Manchester districts (Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan).

13.15 The assessment Site is allocated in the PfE as part of a wider allocation for residential development of around 1,250 houses (allocation JPA9 – Walshaw). Criteria 13 of the allocation policies requires development proposals to

“Consider the extraction of any viable mineral resources within Mineral Safeguarding Areas, in accordance with Policy 8 of the Greater Manchester Joint Minerals Development Plan (or any relevant policies in subsequent minerals plans).”

13.16 There are no specific contaminated land policies; however, Policy JP-S4 (Flood Risk and the Water Environment) does state the following:



“Securing the remediation of contaminated land and the careful design of developments to minimise the potential for urban diffuse pollution to affect the water environment”.

Legislation

- 13.17 Land contamination can harm human health, groundwaters, surface waters, soils, ecosystems and property. As such it is controlled, either directly or indirectly, through a range of legislation, including, but not limited to:
- Part IIA of the Environmental Protection Act 1990: establishes a system for identifying and remediating statutorily defined ‘contaminated land’; and focuses on addressing contaminated land that meets the specific legal definition and cannot be dealt with via other means, including planning;
 - Water Environment Regulations 2017: replaces previous legislation and outlines duties of regulators in relation to characterisation and classification of water bodies, environmental permitting, abstraction and impoundment of water;
 - Environmental Permitting Regulations 2016: impose provisions to prevent ground and water contamination from operations requiring an Environmental Permit to operate and implement controls for operations relating to the treatment or handling of contaminated soils.
- 13.18 Similarly, when dealing with land that may be unstable, the planning system works alongside several other regimes including Building Regulations and the Coal Authority’s responsibility for public safety risks arising from past coal mining activities.

National Best Practice and Guidance

- 13.19 The Environment Agency (EA) Land Contamination: Risk Management Guidanceⁱⁱⁱ (LCRM) provides an overarching framework for the assessment and investigation of land contamination. It replaces the previous Contaminated Land Report 11: Model Procedures for the Management of Contaminated Land 2004.
- 13.20 It is designed to be used in a range of regulatory and management contexts such as voluntary remediation, planning, assessing liabilities or under the Part 2A contaminated land regime. The guidance sets out a phased approach to the assessment of land contamination and specifies requirements for reports produced as part of the process, including Preliminary Risk Assessments (PRAs) and Generic and Detailed Quantitative Risk Assessments (GQRAs and DQRAs).
- 13.21 The EA Guidance is supported by, and cross-refers to, an extensive range of additional statutory and non-statutory guidance relating to aspects such as site investigations, protection of groundwater, understanding and managing asbestos, definition of waste and the specific investigation and assessment procedures under Part IIA. Where necessary, such guidance is referred to in the following Chapter and supporting appendices.



Assessment Methodology

- 13.22 The assessment has been undertaken in accordance with the framework outlined for a Preliminary Risk Assessment in the EA Land Contamination: Risk Management guidance (LCRM). The full assessment is presented in the supporting Phase 1 Desk Study Report and the Coal Mining Risk Assessment, both prepared by Clancy Consulting Limited (provided in **Volume 3: Technical Appendices 13.1 and 13.2**, respectively).
- 13.23 In undertaking the assessment, Clancy Consulting Limited (CCL) carried out the following activities:
- A review of comprehensive historical mapping and aerial photography information;
 - A review of comprehensive environmental setting information (geology, hydrology, hydrogeology, industrial land uses, mineral excavation / extraction, landfilling / waste management activities);
 - A review of information relating to potential unexploded ordnance;
 - A review of development proposals;
 - Development of preliminary conceptual site model (CSM) with regards to ground contamination and qualitative risk assessment; and,
 - Provision of recommendations for further investigations and mitigation appropriate to the proposed future use of the Site, where deemed necessary.
- 13.24 Further to the works undertaken by CCL, SGP has also undertaken an inspection of the Site and immediate surrounding area. These supporting works were undertaken by an experienced Geo-Environmental Consultant on 22 August 2024. A photographic record of salient features is provided in **Volume 3: Technical Appendix 13.3**.
- 13.25 A review of information available on the Local Authority Planning Portal^{iv} has also been undertaken.
- 13.26 The Baseline data has been gathered through desktop studies and a site visit. Adequate background information is deemed available to enable the likely significant effects of the Proposed Development to be determined in relation to Ground Conditions.

Assessment Approach

- 13.27 The available information has been used to inform the expected Baseline Conditions at the Site with regards to ground and contamination status. The assessment considers the potential for impacts on receptors as a consequence of encountering contaminated land during the Construction and Operation of the Proposed Development.
- 13.28 The assessment uses the source-pathway-receptor concept and considers all potential sources of contamination, all environmentally sensitive receptors that exist now and would exist following the Proposed Development, and all potential pathways between the sources and receptors (referred to as 'contaminant linkages').



- 13.29 The approach to the risk assessment and CSM follows the methodology presented within CIRIA C552 'Contaminated Land Risk Assessment A Guide to Good Practice', further details of which, are provided below.

Source Potential

- 13.30 The Source Potential considers the likely nature, type and extent of contamination that may be present within the underlying and surface soils and groundwater. Potential off-Site sources that may impact the Scheme are also considered.

Receptor Identification

- 13.31 The principal Receptors considered in this assessment are:
- Human Health – construction workers, site users, maintenance workers, nearby land occupiers / users;
 - Controlled Waters – surface waters and groundwater;
 - Ecology – designated nature conservation sites, sensitive habitats and features; and,
 - Building / Structures – future buildings, foundations and sub-structures and utility services.

Potential Pathways

- 13.32 Potential pathways for exposure of identified receptors to contamination are identified in Table 13.1.

Table 13.1: Potential Pathways

Receptor	Potential Pathways
Human Health	Ingestion, dermal, inhalation, asphyxiation.
Ecology / Ecosystems	Plant uptake from soils, groundwater, toxic impacts on fauna (ingestion/inhalation), indirect via contamination of water resources.
Controlled Waters	Leaching, direct discharge, surface water run-off.
Buildings / Property	Direct contact / attack on buried structures, permeation of water supplies, explosion from build-up of flammable gases and vapour, and encountering Unexploded Ordnance 'UXO'.

- 13.33 The effectiveness of each contaminant pathway will be dependent on the nature and likelihood of the potential linkage and will be influenced by factors such as the distance of receptors from the source, the local topography and terrain, the nature of release and dilution and dispersion, and the presence of any barriers to exposure. Where a contaminant pathway is not present then no further assessment is undertaken.
- 13.34 The assessment takes account of any embedded mitigation measures to be incorporated within the design of the development.



Assessment of Significance / Assessment Criteria

- 13.35 The resulting effects are the consequences of the potential impacts, i.e. changes in environmental status of receptors arising for example from changes in pollutant concentrations. The potential effects are determined through the assessment of the potential magnitude, or severity, of impacts and the sensitivity of the receptors.
- 13.36 The sensitivity of a receptor is determined through consideration factors such as human health exposure and the designation and legal status of controlled waters and ecological sites. Examples of receptor sensitivity are summarised in Table 13.2.

Table 13.2: Examples of Receptor Sensitivity

Sensitivity	Type	Criteria
High	Human Health	Construction workers: extensive earthworks e.g. extensive ground disturbance and soils movement, deep excavations Future end use of a Site: Residential, allotments, Children's play areas
	Controlled Waters	Groundwater: Principal Aquifer, Zone I Source Protection Zones, drinking water abstractions located within zone of influence of the Site Surface Waters: River Quality – High to Good
	Ecology	Internationally / nationally Designated Nature Conservation Sites
	Buildings / Property	High historical value or other sensitivity (Listed Buildings), World Heritage Sites, Proposed piling and significant excavations
Medium	Human Health	Construction workers: limited earthworks, ground disturbance and movement of Site won soils, shallow excavations only Future end use: Public Open Space, landscaping
	Controlled Waters	Groundwaters: Secondary aquifers, Zone II & III SPZ, industrial water abstractions located within zone of influence of the Site
	Ecology	Nature conservation sites of local importance
	Buildings / Property	No buildings of historical value or importance. Belowground excavations and/or piling
Low	Human Health	Construction workers: minimal / no ground disturbance Future End use: Industrial/commercial, hardscaping (e.g. significant areas of hardstanding/buildings)
	Controlled Waters	Groundwater: Unproductive aquifers, outside of SPZ, no water abstraction nearby.
	Ecology	Soft landscaping and other areas of green space that do not have any habitat designation and are not of local importance.



Sensitivity	Type	Criteria
	Buildings / Property	Aboveground infrastructure only.

- 13.37 Determination of the potential magnitude of an impact takes into account several factors such as nature and type of potential contamination, duration, spatial extent and the likelihood of a potential pollutant-linkages being present.
- 13.38 The likelihood of a contaminant linkages being present is classified as follows:

Table 13.3: Likelihood of Contaminant Linkage

Classification	Definition
High Likelihood	Contaminant linkage may be present that appears very likely in the short term and almost inevitable in the long-term or there is evidence of harm or pollution at the receptor
Likely	Contaminant linkage may be present, likely event will occur in the short-term or likely in the long-term
Low Likelihood	Contaminant linkage may be present, possibility that event may occur but there is no certainty it will occur in the long-term and less likely in the short-term
Unlikely	Contaminant linkage is possible but improbable that event would occur even in the long-term

- 13.39 Example criteria for the determination of the magnitude of impacts are set out below:

Table 13.4: Examples of impact Magnitude

Classification	Definition
Large	Qualitative risk assessment identifies one or more relevant contaminant linkages of high-likelihood. Contamination levels encountered in excess of assessment criteria (for human health / environment / property) Total loss of, or alteration of baseline resource such that post-development characteristics or quality would be fundamentally and irreversibly changed.
Medium	Qualitative risk assessment identifies one or more relevant contaminant linkages of probably likelihood Contamination levels encountered marginally in excess of assessment criteria (for human health / environment / property) Loss of, or alteration to, the baseline resources such that post-development characteristics or quality would be partially changed



Small	Qualitative risk assessment identifies one or more relevant contaminant linkages of low likelihood Contamination levels encountered below, but potentially approaching assessment criteria (for human health, environment / property) Small changes to the baseline resource, which are detectable but the underlying characteristics or quality of the baseline situation would be similar to pre-development conditions
Negligible	Qualitative risk assessment identified contaminant linkages unlikely Contamination levels encountered well below assessment criteria (for human health / environment / property) A very slight change to the baseline conditions, which is barely distinguishable, and approximates to the 'no change' situation.

- 13.40 The resulting scale of effect is determined in relation to the sensitivity of the receptor and potential magnitude of the impacts as per Table 13.5:

Table 13.5: Effects Assessment Matrix

Magnitude of Impact	Receptor Sensitivity		
	High	Medium	Low
Large	Major	Moderate	Minor
Medium	Moderate	Moderate	Minor
Small	Minor	Minor	Negligible
Negligible	Minor	Negligible	Negligible

- 13.41 In general, Negligible or minor effects are considered Not Significant and Moderate and Major effects are considered Significant, although this is subject to professional judgement. Some moderate levels of effect may be deemed Not Significant depending on the specific circumstances.
- 13.42 The significance of the effect for each contaminant linkage is ultimately subject to professional judgement whereby it is possible that some Moderate levels of effect may be deemed Not Significant depending upon the specific circumstances.



13.43 Examples of resulting effects are presented in Table 13.6 below.

Table 13.6: Examples of Contaminant Linkage Risk Ratings

Effect on the Receptor	Definition
Major	Short-term (acute) damage to human health. Significant water pollution incident caused by uncontrolled release of contaminants e.g. major spillage or leak. Damage to a particular eco-system as a result of acute exposure. Catastrophic damage to crops, buildings or property.
Moderate	Long-term (chronic) damage to human health e.g., contaminants present above appropriate threshold values. Pollution of sensitive water resources such as through slow release of contaminants through leaching into an aquifer. A significant change in a particular ecosystem. Significant damage to crops, buildings, structures and services potentially rendering unsafe or impairing function.
Minor	Pollution of low or non-sensitive water resources, e.g. non-classified groundwater Long-term (chronic) damage unlikely to human health e.g. contaminants present but close to but below appropriate threshold values Significant damage to buildings, foundations and services but no rendering unsafe or impairing function
Negligible	Built up over the long-term (chronic) damage to human health is improbable e.g. contaminants well below appropriate threshold values. Appreciable pollution of a low or non-sensitive water resource, e.g. non-classified groundwater is unlikely. Easily repairable damage to sensitive buildings / structures / services or the environment.

Limitations

13.44 Baseline ground condition data has been obtained through a review of existing information which includes the CCL Desk Study (**Volume 3: Technical Appendix 13.1**) and Coal Mining Risk Assessment (**Volume 3: Technical Appendix 13.2**). Additional intrusive investigations have not been undertaken to confirm the existing conditions and / or inform this assessment. The possibility exists that conditions may exist at the Site that have not been identified to date.



Baseline Conditions

Current Condition and Land Use

- 13.45 The Site is located 2.4km to the northwest of the centre of Bury and is largely undeveloped fields frequently used by the public for walking. Public Rights of Way (PRoW) cross the Site along the southern and eastern boundaries and a further PRoW is located within the northwestern quadrant of the Site. An abandoned allotment area is present in the northeast with glass greenhouses and some abandoned sheds. Copthorne Cattery outside but adjacent to the west of the Site. This is therefore not referenced any further within this assessment.
- 13.46 The Main Site Access is from Scobell Street to the north. Various pedestrian access points are located around the Site.
- 13.47 The Site is currently located at an approximate elevation of between 126m and rising to 130m in the northwest Above Ordnance Datum 'AOD' according to spot heights on OS mapping.

Development History

- 13.48 A 'Site Features Plan' has been provided in **Volume 3: Technical Appendix 13.4**. This shows the historical features identified on mapping together with features identified during a Site walkover and CMRA.
- 13.49 A summary of significant changes to each Site and the surrounding area is detailed below. Full details are provided within the Phase 1 Desk Study in **Volume 3: Technical Appendix 13.1**.
- The majority of the Site has been largely undeveloped though several small buildings have been constructed and demolished in the central and western parts of the Site over time and an abandoned allotment is present in the northeast with derelict sheds and greenhouses.
 - A sand pit and brick field were historically located in the northeast of the Site which has since been infilled.
 - A well was located in the southwest of the Site before later being shown as a spring, which is still present. Another well was historically present on the northeastern boundary of the Site.
 - A potentially culverted watercourse was identified by Clancy Consulting within the north-central area with a west to northeast alignment.
 - A historical mineshaft was identified in the south by the Coal Authority.
 - The surrounding area has had a varied development history including industrial and residential uses. Mills, works, a laundry, reservoirs, pits, quarries and landfills / refuse heaps have all historically been present within close proximity to the Site.

Geology & Ground Conditions

- 13.50 British Geological Survey (BGS) maps report that the Site is underlain by natural Superficial deposits of Glaciofluvial Deposits or Devensian Till of Diamicton. These are underlain with bedrock of Pennine Lower Coal Measures, Cannel Rock, and Old Lawrence Rock present, as set out below in Table 13.7.



Table 13.7: Underlying Geology

Geology	Location	Superficial Deposits
Superficial Deposits	Majority of Site	Devensian Till of Diamicton
	Northeast, west, and southwest	Glaciofluvial Deposits of Devensian Sands and Gravels
Bedrock	Majority of Site	Pennine Lower Coal Measure Formation of Mudstone, Siltstone, and Sandstone
	Northwest and southern boundary	Cannel Rock (South Lancashire) of Sandstone
	Northeast	Old Lawrence Rock of Sandstone

- 13.51 BGS mapping reports the absence of Made Ground or Artificial Deposits on Site and no such deposits were observed during the Site walkover, however several potential areas where made ground may be present have been identified in the historical review of the site. These are limited to the northeast where a former sand pit and brickfield were located. A single coal shaft is also reportedly present in the southwest, it is possible that mine spoil associated with the excavation of the shaft may be present locally to this area.
- 13.52 The BGS National Geoscience Information Service reports that background soil concentrations are not considered to be elevated, with the exception of lead which may range between 200-600 mg/kg.
- 13.53 Fault lines trending north to south or northwest to southeast are present along the western boundary, travelling through the centre and the northeast of the Site (as detailed on Site features Plan within **Volume 3: Technical Appendix 13.4**).

Natural Ground Stability

- 13.54 According to the environmental data report for the Site, included in **Volume 3: Technical Appendix 13.1**, the following land stability risks are apparent:
- Risk of collapsible ground, landslides, and running sand is very low; and,
 - There is a Negligible hazard risk from ground dissolution, compressible ground, and shrinking and swelling clays.

Excavation / Mining

- 13.55 The Site is within a 'Coal Mining Reporting area and a Development High Risk Area' with one former mineshaft located on Site in the southwest (ref: 377441-003), plus one other (ref: 377441-001), located on or close to the southern site boundary and a third located 77m to the south (ref: 377441-002). The



southern and eastern half of the Site is indicated to be at risk from probable unrecorded shallow mine workings with two coal seams being indicated to sub-crop beneath this area of the Site.

- 13.56 A BGS mineral Site is recorded in the northeast of the Site, associated with a historic sand pit identified on historic mapping of the Site. This is recorded as 'Leemans Hill' and listed as 'open cast extraction of sandstone of the Pennine Lower Coal Measures Formation'. The status is 'ceased'. A Coal Mining Risk Assessment (CMRA) has been undertaken (**Volume 3: Technical Appendix 13.2**).
- 13.57 The Coal Authority holds no records on the condition of the mineworkings and whether any treatment/capping of the mineshafts has been undertaken. Colliery spoil could be located on Site in association with the construction and historical usage of these shafts and the associated workings.
- 13.58 The CMRA concluded the following:
- Risks to the development from known underground mineworkings is low;
 - Risks to the development from recorded mine entries is medium to high;
 - Risks to the development relating to unrecorded workings is considered as high; and,
 - Risks to the development from known and unknown surface mining is low
- 13.59 Due to the presence of recorded mine entries, the Coal Mining Risk Assessment (CMRA) recommended that an investigation should be undertaken in due course to prove the location of the Cannel Mine and Half Yard coal seams and assess the potential for shallow mine workings and whether mining has been undertaken to the south of these seams. Similarly, an investigation into the presence and treatment of the mineshafts on and within proximity to the Site boundary has additionally been recommended. If shallow mine workings and/ or uncapped mine workings are identified, then ground treatment of these workings will be required to ensure land stability to enable redevelopment.
- 13.60 An intrusive investigation to physically locate the mineshaft mapped within the southwestern area (Coal Authority mineshaft reference: 377411-003) of the Site together with two mineshafts (Coal Authority mineshaft reference: 377411-001 and 002) mapped within proximity to the southern Site boundary was undertaken in September 2024 and is reported by Eccles Associates Limited (and is contained within **Volume 3: Technical Appendix 13.5**). The investigation undertaken involving a series of trial trenches using a tracked excavator did not find evidence of any of the three mineshafts investigated at the ground surface. The report recommended a further investigation using Ground Penetrating Radar (GPR) Techniques. It is proposed that these detailed assessments will be undertaken as part of any future Reserved Matters planning submission.
- 13.61 According to the Greater Manchester Joint Minerals Plan (GMJMP)^{vi} and associated minerals safeguarding mapping (Map no. 21, Bury), the Site is located within a Minerals Safeguarding Area for the following minerals:
- Glacio-fluvial Sand and Gravel (NW),
 - Carboniferous Millstone Grit (Sandstone_ (NE – already extracted as part of Leeman's Hill opencast site); and,



- Brick Clay (site-wide).

13.62 Criteria 13 of Places for Everyone Joint Development Plan Document^{vii} Policy JPA9 (Walshaw) requires proposals within the allocation to consider the extraction of any viable mineral resources within Mineral Safeguarding Areas, in accordance with Policy 8 of the Greater Manchester Joint Minerals Plan.

13.63 As such, a minerals assessment has been undertaken. The assessment concludes that the Site has a number of constraints that make mineral extract of the underlying sand & gravels and shallow coal either environmentally unacceptable or uneconomically viable. The Site is bounded by residential properties to the north and west, is likely to contain shallow groundwater, and has previously been used as an extraction site for a neighbouring brickworks. The majority of Site is anticipated to be covered by glacial till, with only localised areas anticipated to contain the sands & gravels covered by the Greater Manchester Joint Minerals Plan. It is also anticipated that due to development levels, any significant change in levels for removal of the remaining sand & gravels and shallow coal would not be viable. A copy of the assessment is provided at **Volume 3: Technical Appendix 13.6**.

[Hydrogeology / Groundwater](#)

13.64 The aquifer designations of the underlying geological units are detailed in **Table 13.8**:

Table 13.8: Hydrogeology of Site

Geological unit	Geology	Location	Aquifer Designation	Groundwater Vulnerability
Superficial Deposits	Devensian Till of Diamicton	Majority of Site	Secondary undifferentiated aquifer	Low
	Glaciofluvial Deposits of Devensian Sands and Gravels	Northeast, west, and southwest	Secondary A aquifer	Low
Bedrock	Pennine Lower Coal Measure Formation of Mudstone, Siltstone, and Sandstone	Majority of Site	Secondary A aquifer	Low
	Cannel Rock (South Lancashire) of Sandstone	Northwest and southern boundary	Secondary A aquifer	Low



Geological unit	Geology	Location	Aquifer Designation	Groundwater Vulnerability
	Old Lawrence Rock of Sandstone	Northeast	Secondary A aquifer	Low

- 13.65 The Site is not located within a groundwater Source Protection Zone (SPZ) and no licenced groundwater abstractions for potable supply are recorded within 1km of the Site. Two groundwater abstraction licences are present within 1km, the closest located 55m to the southeast associated with Bolholt Farm for general agricultural use. The second is approximately 645m to the east, at Activecraft Ltd, in relation to process water, although there remains some uncertainty whether this abstraction licence remains active.

Hydrology / Surface Water Conditions

- 13.66 Surface infiltration of rainwater will occur site-wide, however during periods of heavy or extensive rainfall then surface runoff into ditches or surface watercourses on the Site is likely to occur.
- 13.67 An unnamed stream is present in the west of the Site, running north to south, connecting to Walshaw Brook which runs along the southwest boundary. Neither of the watercourses have been classified by the Environment Agency (EA).
- 13.68 A second unnamed stream is located off-site to the north before entering a sink, whilst the direction of the watercourse beyond this point is uncertain, it is reported that it may run through part of the northeast of the Site, possibly culverted.

Landfill / Waste Disposal

- 13.69 Five historical landfills have been identified within 500m of the Site:
- Leemans Hill Works (85m northeast) – It is unknown what type of waste this accepted but it is present on mapping between 1930 and 1988 and appeared to be associated with a historic laundry and works building. Planning application reference: 55683 located on the Bury Council planning portal website, which sought approval of reserved matters for 14 no. dwellings (following outline planning permission 53170) shows that a phased investigation (desk study, site investigation, and remediation strategy) was undertaken on this area between 2011 and 2013. The site investigation concluded that gas protection measures were required in residential properties and the validation completion report completed in 2015 confirms that protection measures in accordance with CIRIA CS2 were installed in all plots.
 - Bury Road (92m northeast) – accepted industrial waste between 1875 and 1977 and is present on mapping from 1910 to 1988. The area has remained open land since then. Information on the planning portal shows a planning application to redevelop the Site into residential housing (67243) was approved in 2023 and required further contaminated land investigation. In light of the age and type of this landfill as recorded, it is considered unlikely that any ground gassing would be significant to migrate onto and affect the Site.



- Boholt Works (248m southeast) – accepted inert and industrial waste between 1980 and 1984. This is not indicated on historical mapping as a landfill, but several small reservoirs were infilled at this location during that time period. No investigation information is available on the planning portal.
- Newhive Works (278m southeast) – no details regarding the type of waste it accepted, or dates have been provided. Historic mapping indicates this location to be part of a reservoir associated with the Newhive Works until the late 1990s when the area was redeveloped as residential housing. No investigation information is available on the planning portal.
- Tottington (430m east) – accepted inert waste between 1981 and 1986. Noted as a reservoir on historic OS mapping prior to its infill and noted as open land on mapping since the 1990s.

[Radon](#)

- 13.70 The Site lies within an area where <1-3% of homes are estimated to be at or above the Radon Action Level. No radon protection measures are required in new buildings on the Site.

[UXO Risk](#)

- 13.71 The UXO risk map identifies the Site as located within an area of Low Risk.

[Nature Conservation](#)

- 13.72 No environmental designations have been identified either on, or within 500m of the Site.

Evaluation

Contamination Sources

[On Site](#)

- 13.73 The following potential contaminant sources have been identified within the Site Boundary:
- Potential for localised deposits of Made Ground of unknown chemistry associated with demolition debris and foundations still in-situ of historic buildings;
 - Potential for localised deposits of colliery spoil around area of former shaft in the west;
Potential for deeper deposits of Made Ground of unknown chemistry in the northeast associated with former sand pit and brick field; and
 - The presence of shallow mine workings and / or mine shafts could give rise to ground gases.

[Off Site](#)

- 13.74 The following potential off-site contaminant sources have been identified as follows:
- Potential hazardous ground gas and vapours from Made Ground, landfill, infilled land and mine workings.



Potential Receptors

13.75 Potential receptors of Adverse impacts from potential ground contamination during both the construction and operation phases includes:

- Construction workers and Site visitors (Construction Phase only);
- Future Site Residents, visitors and maintenance workers (Operation Phase only);
- Nearby users of the adjacent residential and commercial premises;
- Groundwater underlying the Site (Secondary Aquifers);
- Well / spring located in the southwestern Site area;
- Two surface watercourses crossing the Site;
- On Site buildings (including temporary buildings for construction compound), and nearby off-site buildings including housing fronting onto Scobbell St, Church St, Collins, St, Pleasant St and Deacons Close, the Copthorne Cattery, Woolfold Stables and Country Club and Farm located off Walshaw Lane (Construction Phase Only);
- Future Site dwellings and supporting infrastructure (Operation Phase Only).

Assessment of Impact and Significance

Incorporated Mitigation

13.76 Mitigation measures can take the form of changes to the development design and spatial layout, investigation and/or remedial elements or physical changes / protocols to be applied during the construction phase. Mitigation can be ‘incorporated (or embedded)’ whereby this is to mitigate known issues or is a project requirement as standard and hence there is the intention that this is incorporated during the early stages of the project. Other forms of mitigation known as ‘additional mitigation’ may be added following detailed design, investigation and assessments. The incorporated mitigation include the provision of:

- Requirement to investigate and locate the mineshafts which will be subject to treatment works including grouting and capping with appropriate development sterile area around the shafts.
- Requirement to investigate and the treatment / stabilisation of shallow mine workings if identified.
- Use of bunded fuel tanks with 110% volume capacity to refuel plan during construction works.
- Bunding around surface watercourses with appropriate silt traps.

13.77 Construction of the Site and the foundation design would be informed by appropriate geotechnical investigation and assessment. These investigations would encompass site-wide investigations to confirm the ground, groundwater and contamination status and inform the overall design and construction requirements.



Construction Phase

13.78 The Sensitivity of the receptors during the construction phase, are as summarised in **Table 13.9**.

Table 13.9: Sensitivity of Identified Receptors During Construction Phase

Receptor	Sensitivity	Comment
Groundworkers / Construction workers	High	Excavation of foundations and service trenches, possible mine stabilisation works, capping mine shaft.
Existing Users of Adjacent Land	Low / High	High – Residents within adjacent dwellings. Low – Adjacent Commercial developments.
Groundwater (within superficial deposits aquifer)	Medium	Devensian Till of Diamicton (Secondary Undifferentiated Aquifer) Glaciofluvial Deposits of Devensian Sands and Gravels (Secondary A Aquifer). Superficial soils classed as having a high leaching potential. Site not located within a Source Protection Zone.
Groundwater (within bedrock aquifer)	Medium	Secondary A Aquifers in Pennine Lower Coal Measures Formation of Mudstone, Siltstone, and Sandstone (majority of Site), Cannel Rock (South Lancashire) of Sandstone, Old Lawrence Rock of Sandstone, The Site is not located within a Source Protection Zone. There are no registered water potable water abstractions within 1km.
Surface Waters	Medium	Multiple surface watercourses cross the Site. This includes an unnamed stream in the west which flows into Walshaw Brook with flows along the southwestern boundary and a possibly culverted watercourse in the northeast. These form part of the Kirklees Brook water body catchment which is heavily modified catchment. This catchment and has been attributed under the River Basin Management Plan (RBMP) ^{viii} as having a moderate ecological and physico chemical classification, failure for priority hazardous substances (failing for mercury and Polybrominated diphenyl ethers (PBDE) and good chemical quality for all other chemical parameters monitored.



Receptor	Sensitivity	Comment
Property / Buildings	Low	Low - There are no buildings located on Site.
Ecology / Ecosystems	Low	There are no designated habitats located on Site or within the vicinity of the Site. (Aquatic ecology has been considered within the assessment of sensitivity of Surface Waters receptors).

Operation Phase

13.79 The Sensitivity of the receptors during the Operational Phase, are as summarised in **Table 13.10**.

Table 13.10: Sensitivity of Identified Receptors During Operational Phase

Receptor	Sensitivity	Comment
Site Residents, visitors and maintenance workers	Low to High	High – Future Site residents and visitors.
		Low – maintenance workers.
Existing Users of Adjacent Land	Low to High	High – Members of the public using PRoW across the Site, Residential Site neighbours. Low – Adjacent Commercial developments.
Groundwater (superficial)	Medium	Unchanged – as per Table 13.9. There are no active groundwater abstraction licenses recorded within 1km of the Site. Groundwater is not considered for future Drinking water source potential owing to the extensive mine workings present.
Groundwater (bedrock)	Medium	Unchanged – as per Table 13.9.
Surface Waters	Medium	Unchanged – as per Table 13.9.
Property / Buildings	Medium	Residential properties with infrastructure and belowground utilities.



Receptor	Sensitivity	Comment
Ecology / Ecosystems	Low	There are no designated habitats located on Site or within the vicinity of the Site. Areas of soft landscaping and / or Public Open Space will not have any habitat designation.

Assessment of Significance

- 13.80 The assessment takes into account the physical or in-design incorporated or embedded mitigation measures within the Proposed Development.



Table 13.11: Assessment of Impact and Significance (without mitigation applied)

Receptor (Sensitivity)	Source	Pathway	Probability of Risk Occurring	Magnitude of Impact	Effect	Significance
Construction Phase						
Groundworkers during the preparatory and construction phases (High)	Contaminants at concentrations exceeding acute GAC within soils and perched groundwater are unlikely to be present or limited to areas of made ground only although unconfirmed at present.	Direct contact: Inhalation and ingestion of soil and soil dusts, dermal contact.	Low Likelihood to Likely	Medium	Moderate (Adverse)	Significant (Adverse)
	Ground gases generated from mineshafts, shallow mine workings, organic inclusions within made ground and natural organic deposits.	Migration and Build – up of asphyxiant and flammable ground gases within enclosed spaces.	Low Likelihood to Likely	Medium	Moderate (Adverse)	Significant (Adverse)
Existing Users of Adjacent Land (Low / High)	Contaminants at concentrations exceeding GAC within soils are unlikely to be present or limited to areas of made ground only although unconfirmed at present	Windblown dusts and surface run off.	Low Likelihood	Medium	Moderate / Minor (Adverse)	Significant (Adverse)

Receptor (Sensitivity)	Source	Pathway	Probability of Risk Occurring	Magnitude of Impact	Effect	Significance
Groundwater (within superficial Deposits Secondary Aquifers) (Medium)	Significant sources of mobile contaminants may be present limited to localised areas of made ground but dependent on chemical composition.	Leaching of made ground soils if present and mobilisation to superficial aquifer Leaching rates unlikely to significantly changed under construction works.	Low likelihood	Small	Minor (Adverse)	Not Significant
Groundwater Aquifer within (bedrock) (Medium)	Significant sources of mobile contaminants are not expected. Limited to localised areas of made ground but dependent on chemical composition. Contaminants within bedrock aquifer may be present from historical mining.	Generation of new migratory pathways and migration into and bedrock Secondary Aquifers (e.g. through piling and ground disturbance).	Unlikely	Small	Minor (Adverse)	Not Significant
Surface Waters (Low to Medium)	Silts generated during groundworks; fuels used to refill construction plant.	Direct Run-off.	Low Likelihood to Likely	Medium	Moderate / Minor (Adverse)	Significant (Adverse)
Buildings / Property (Low)	Contaminants within soils and groundwater that can provide an adverse chemical environment for below ground concrete and polymers (acidic pH, sulphates,	Direct contact / attack on buried structures, permeation of water supplies.	Unlikely (no existing structures)	Negligible	Negligible	Not Significant

Receptor (Sensitivity)	Source	Pathway	Probability of Risk Occurring	Magnitude of Impact	Effect	Significance
	hydrocarbons) are not expected but cannot be currently ruled out.					
Ecology & Ecosystems (Low / Medium)	phytotoxic contaminants within topsoil, subsoils are not expected but cannot be ruled out.	Plant uptake, leaching / run-off into surface waters.	Low Likelihood	Small	Minor to Negligible (Adverse)	Not Significant
Operational Phase						
Future Site Users and visitors (High)	Contaminants at concentrations exceeding GAC within soils are not expected but cannot be ruled out from areas of made ground.	Inhalation and ingestion of soil and soil dusts, dermal contact (within private gardens and other areas of soft landscaping).	Low Likelihood to Unlikely	Medium to Negligible	Minor to Moderate (Adverse)	Not Significant to Significant (Adverse)
	Methane and carbon dioxide associated with shallow mine workings (if present).	Vertical and lateral migration into dwellings, mineshaft may serve as a preferential migration pathway.	Low Likelihood to likely	Medium	Moderate (Adverse)	Significant (Adverse)
Future Site Maintenance workers	Contaminants at concentrations exceeding acute concentrations within soils.	Direct contact: Inhalation and ingestion of soil and soil dusts, dermal contact (within private	Low Likelihood To Unlikely	Small to Medium	Minor to Negligible (Adverse)	Not Significant

Receptor (Sensitivity)	Source	Pathway	Probability of Risk Occurring	Magnitude of Impact	Effect	Significance
(Low)		gardens and other areas of soft landscaping.				
	Methane and carbon dioxide associated with shallow mine workings (if present).	Accumulation in below ground structures / below ground enclosed spaces.	Low Likelihood to Likely	Medium	Moderate (Adverse)	Significant (Adverse)
Existing Users of Adjacent Land (Low)	Contaminants at concentrations exceeding GAC within soils and shallow groundwater. Asbestos fibres (loose).	Generation of windblown dusts.	Negligible	Small	Negligible	Not Significant
Groundwater (within superficial Deposits Aquifer) (Medium)	Significant sources of mobile contaminants are not expected. Limited to localised areas of made ground but dependent on chemical composition.	limited leaching may take place, substantially reduced following introduction of hardstanding / surface water drainage system.	Unlikely to Low Likelihood	Negligible	Negligible	Not Significant
Groundwater within bedrock Aquifer (Medium)	Significant sources of mobile contaminants are not expected. Limited to localised areas of made ground but dependent on chemical composition.	Foundations associated with development.	Unlikely	Negligible	Negligible	Not Significant

Receptor (Sensitivity)	Source	Pathway	Probability of Risk Occurring	Magnitude of Impact	Effect	Significance
Surface Waters (Low to Medium)	Potential for contaminants within surface water run-off from buildings and roads etc.	Migration through surface water drainage to discharge at outfall to Walshaw Brook.	Low Likelihood to Likely	Small	Minor (Adverse)	Not Significant
Buildings / Property (Medium)	Contaminants within soils and groundwater that can provide an adverse chemical environment for below ground concrete (including acidic pH, sulphates and other anions) are intrinsically linked with pyritic ground conditions which are expected within specific areas of the Site. Hydrocarbons within the ground can present issues to the integrity of polymers and can permeate through plastic piping. Excessive concentrations of hydrocarbons are not expected but cannot be currently ruled out.	Direct contact / attack on buried structures, permeation of water supplies.	Low Likelihood to Likely	Medium	Moderate (Adverse)	Significant Adverse
Ecology & Ecosystems (Low)	phytotoxic contaminants within topsoil, subsoils and perched groundwater are not expected but cannot be ruled out.	Plant uptake, leaching / run-off into surface waters.	Low Likelihood	Small	Minor (Adverse)	Not Significant

Mitigation

- 13.81 The following mitigation measures, to suitably reduce the risk of the presence of identified contamination, unstable ground and potential for pollution during the construction and operational phases are proposed.

Pre-Construction Phase & Prior to Detailed Design

- Site-wide ground investigation to confirm the Site's ground conditions and chemical composition of soils. The investigation will be suitable to inform detailed design proposals include the suitability of Site soils re-use within the development and inform potential foundation solutions*.
- The investigation will also target the infilled sand pit and brick field located in the northeastern Site area to establish depth, boundaries, geotechnical properties alongside the presence and nature of the chemical composition of infill and underlying strata*.
- Ground gas monitoring programme to determine gassing regime and whether gas mitigation measures will be required across the site.
- A mining investigation to include locating the identified shafts and confirming the presence and extent of shallow mine workings in accordance with a Coal Authority Permit*.
- Any shafts and / or shallow mine workings will be subject to appropriate remedial treatment / stabilisation works as required*.
- If the site investigation identifies any contamination present on Site, a Remediation Strategy will be produced to detail the remedial measures to be implemented to allow the re-development of the Site. This will be produced in accordance with LCRM.
- Provision of Materials Management Plan using the Definition of Waste Code of Practice (DoWCoP)^{ix} or similar.
- Piling risk assessment if piling is proposed to inform detailed design.
- Assessment to determine appropriate type and composition of water supply pipes.

**To be completed as part of embedded mitigation and hence is included and assessment within Table 13.1.*

Construction Phase

- Incorporation and implementation of any requirements determined from Pre-Construction Phase.
- Construction Environmental Management Plan (CEMP) to be produced, approved by regulatory authorities and implemented. CEMP to include: protocols for dealing with unexpected contamination, emergency pollution response; requirements for suppression of dust, debris, litter and silty or otherwise contaminated run off generation, standards of expected housekeeping, fuel storage requirements and monitoring of surface watercourses.



- Surface water management plan as part of CEMP. Implement measures to prevent escape of silty and otherwise contaminated run-off from entering watercourses. Install oil/water interceptor on surface discharge and maintain /empty to manufacturers recorded. Comply with Regulatory Position Statement 261^x. Or obtain an environmental permit where discharge continues for more than 3 months, a discharge permit will be required from the EA. Ensure that fuel and chemicals are stored appropriately in bunded facilities with drip trays and spill kits present. Adhere to guidance on Oil Storage^{xi} and although withdrawn, PPG2 provides useful guidance on the storage of oil and fuel^{xii}.
- Undertake routine monitoring of surface watercourses as required. Ensure buffer is present between surface waters and groundworks, construction compound/s and fuel/ chemical storage and filling areas.
- Implement emergency protocol for dealing with pollution.
- Installation and verification of any construction-stage remedial measures that may be required through the site investigation works and as detailed within the Remediation Strategy (e.g. installation of gas protection measures). Works to be independently verified by an appointed consultant.

13.82 It is considered that all the above mitigation measures can be completed under condition post planning consent

Residual Effects

13.83 With implementation of mitigation as presented within the section above, **Table 13.12** details the overall effect and significance applied for each identified contaminant linkage identified for both the construction and operational phase.



Table 13.12: Assessment of Significance of Residual Effects with Implementation of Mitigation

Receptor (& Sensitivity)	Effect without Mitigation	Significance of Effect without Mitigation	Mitigation Measures to be Implemented	Residual Effect with Mitigation Applied	Residual Significance
Pre -Construction / Construction Phase					
Ground workers during the preparatory and construction phases (High)	Moderate (Adverse)	Significant (Adverse)	Undertake Site investigation and quantitative contamination risk assessment within areas of made ground identified from Phase 1 Geo-Environmental Assessment. Undertake appropriate remediation and validation of contamination as necessary. Approval of remediation strategy and validation works by regulatory authorities. Ground gas and vapour monitoring programme and assessment. Protocol for confined space entry with usage of gas and vapour alarms as deemed necessary. Provision and implementation of CEMP. Inclusion of dust and debris suppression measures. Asbestos Management Plan (if asbestos fibres and/or ACM is encountered during investigation), wearing of PPE and implementation of good housekeeping. Protocols for dealing with unexpected contamination during groundworks and emergency pollution response.	Minor (Adverse)	Not Significant
Existing Users of Adjacent Land (High / Low)	Negligible to Moderate / Minor (Adverse)	Significant (Adverse) (Adjacent Residents)	Ground gas monitoring programme and assessment. Dust suppression and surface water management protocol to be included within CEMP, protocol for dealing with unexpected contamination during groundworks. Emergency pollution protocol.	Negligible to Minor (Adverse)	Not Significant

Receptor (& Sensitivity)	Effect without Mitigation	Significance of Effect without Mitigation	Mitigation Measures to be Implemented	Residual Effect with Mitigation Applied	Residual Significance
		Not Significant (Commercial workers)			
Groundwater (Aquifer within superficial Deposits) (Medium)	Minor (Adverse)	Not Significant	Undertake Site investigation and quantitative contamination risk assessment within areas of made ground identified from Phase 1 Geo-Environmental Assessment and controlled waters assessment. Undertake remediation and validation of impacts as necessary. Piling risk assessment to be undertaken where piling is proposed at detailed design.	Minor (Adverse)	Not Significant
Groundwater Aquifer within (bedrock) (Medium)	Minor (Adverse)	Not Significant	Provision and implementation of CEMP during groundworks and construction.	Minor (Adverse)	Not Significant
Surface Waters (Low to Medium)	Moderate / Minor (Adverse)	Significant (Adverse)	Surface water management plan as part of CEMP. Implement measures to prevent escape of silty and otherwise contaminated run-off from entering watercourses. Install oil/water interceptor on surface discharge and maintain /empty to manufacturers recorded. Where discharge continues for >3months, a discharge permit will be required from the EA. Ensure that fuel and chemicals are stored appropriately in bunded facilities with drip trays and spill kits. Undertake routine monitoring of surface watercourses as required. Ensure buffer is present between surface waters and	Moderate / Minor (Beneficial)	Significant (Beneficial)

Receptor (& Sensitivity)	Effect without Mitigation	Significance of Effect without Mitigation	Mitigation Measures to be Implemented	Residual Effect with Mitigation Applied	Residual Significance
			groundworks, construction compound/s, materials and waste stockpiles and fuel/ chemical storage and filling areas. Implement emergency protocol for dealing with pollution.		
Buildings / Property (Low)	Negligible	Not Significant	Location of below ground services, culverted watercourse and mineshafts to be surveyed and located. Stand off to be applied and mineshafts to be treated (as required) Undertake assessment of ACEC to determine appropriate classification for belowground concrete. Ground gas and vapour monitoring programme followed by installation and verification of gas and vapour protection measures within new buildings.	Negligible	Not Significant
Ecology & Ecosystems (Low)	Minor to Negligible (Adverse)	Not Significant	Intrusive Site investigation to determine phytotoxicity of soils and potential for reuse. Topsoil and subsoils to be reused and/or imported to the Site will be chemically tested to ensure they are suitable for use. Undertake assessment for topsoil and subsoil within gardens and areas of soft landscaping and public open space in accordance with BS3882:2015^{xiii} and BS8601:2013^{xiv}, respectively.	Negligible	Not Significant

Receptor (& Sensitivity)	Effect without Mitigation	Significance of Effect without Mitigation	Mitigation Measures to be Implemented	Residual Effect with Mitigation Applied	Residual Significance
Operation Phase					
Future Site Users, visitors and maintenance workers (High to Low)	Minor to Moderate (Adverse)	Significant (Adverse) to Not Significant	Undertake Site investigation and quantitative contamination risk assessment within areas of made ground identified from Phase 1 Geo-Environmental Assessment and controlled waters assessment. Ground gas and vapour monitoring programme followed by installation and verification of gas and vapour protection measures within new buildings. Water supply pipeline assessment to establish type of pipe to install in order to ensure contamination cannot permeate and contaminate drinking water supply. Future maintenance workers to comply with confined space entry protocol if entering enclosed spaces.	Minor (Adverse)	Not Significant
Existing Users of Adjacent Land (High / Low)	Negligible	Not significant	Undertake Site investigation and quantitative contamination risk assessment within areas of made ground identified from Phase 1 Geo-Environmental Assessment and ground gas and vapour monitoring programme. Undertake remediation and validation of impacts as necessary.	Negligible	Not Significant

Receptor (& Sensitivity)	Effect without Mitigation	Significance of Effect without Mitigation	Mitigation Measures to be Implemented	Residual Effect with Mitigation Applied	Residual Significance
Groundwater (Aquifer within superficial Deposits) (Medium)	Negligible	Not significant	Around 40% of the Site will be covered with buildings or hardstanding which will reduce the infiltration potential of rainwater to leach through and mobilise contaminants within soils and perched groundwater. Soils that are significantly contaminated will be subject to remediation before / during construction phase. This will reduce potential for infiltration and hence mobilisation of leachable contaminants. Grouting /otherwise of mine workings and mineshafts to be undertaken as part of embedded mitigation which should reduce mobilisation of leachable toxic metals and acidic pH.	Moderate (Beneficial)	Significant (Beneficial)
Groundwater Aquifer within (bedrock) (Medium)	Negligible	Not significant	Soils that are significantly contaminated will be subject to remediation before / during construction phase. This will reduce potential for infiltration and hence mobilisation of leachable contaminants. Piling risk assessment to be undertaken – to include assessment of risks to bedrock if disturbed. Grouting /otherwise of mineworkings and mineshafts to be undertaken as part of embedded mitigation which should reduce mobilisation of leachable toxic metals and reduced pH environment.	Moderate (Beneficial)	Significant (Beneficial)

Receptor (& Sensitivity)	Effect without Mitigation	Significance of Effect without Mitigation	Mitigation Measures to be Implemented	Residual Effect with Mitigation Applied	Residual Significance
Surface Waters (Low to Medium)	Minor (Adverse)	Not significant	Sustainable urban drainage system (SUDS) with swales and ponds to be constructed to stem the flow and naturally aid filtration of surface water run off (further information is provided within Chapter 10, Water Resources and Drainage). Green corridors to be planted adjacent to existing surface watercourses.	Moderate (Beneficial)	Significant (Beneficial)
Buildings / Property (Medium)	Moderate (Adverse)	Significant (Adverse)	Undertake assessment of ACEC to determine appropriate classification for belowground concrete. Ground gas and vapour monitoring programme followed by installation and verification of gas and vapour protection measures within new buildings.	Negligible	Not Significant
Ecology & Ecosystems (Low)	Minor (Adverse)	Not significant	Intrusive Site investigation to determine phytotoxicity of soils and potential for reuse. Soils that are significantly contaminated will be subject to remediation before / during construction phase. Topsoil and subsoils to be reused and/or imported to the Site will be chemically tested to ensure they are suitable for use. Undertake assessment for topsoil and subsoil within gardens and areas of soft landscaping and public open space in accordance with BS3882:2015 ^{xv} and BS8601:2013 ^{xvi} , respectively. Green corridors to be planted adjacent to existing surface watercourses with ecological enhancement.	Moderate (Beneficial)	Significant (Beneficial)

Cumulative Impacts

- 13.84 The potential cumulative effects of the Proposed Development have been considered in relation to ground conditions.
- 13.85 The Site forms part of the wider JPA9, Walshaw allocation in the adopted PFE for the delivery of up to 1,250 dwellings, a new primary school and an enhanced local centre, together with all necessary infrastructure and local services. As such, the likely cumulative effects of the allocation as a whole have been considered.
- 13.86 Given the immediate association of the wider allocation to the assessment Site, it is considered likely to have similar geological conditions and will be of similar end use. As such, the risks both in terms of contamination, groundwater and ground gases are likely to be similar. It is assumed that similar mitigation measures will be incorporated for these developments in accordance with the requirements of the relevant legislation set out herein and construction best practice. As such, the effects associated with the redevelopment of neighbouring land are considered unlikely to alter the level of the effects identified above.
- 13.87 Assuming that best practice construction methods and appropriate soil handling, ground gas mitigation and management and traffic management are used at all developments, cumulative effects during construction phase on the ground conditions are considered as **Minor**, Temporary and **Adverse**. While during operation, the effects are considered as **Negligible**, and therefore **Not Significant**.
- 13.88 A further allocation in the wider area is PFE Policy JPA7, Elton Reservoir, which seeks to deliver around 3,500 homes and associated infrastructure, including two new two-form entry primary schools, a new secondary school and two new local centres. Given the physical separation of these Developments it is not considered that any cumulative effects are likely in regard of ground conditions.

Summary and Conclusions

- 13.89 A ground conditions assessment has been undertaken of the potential for impact of contamination and land stability that may arise during the earthworks and construction phases of the project to impact nearby sensitive receptors.
- 13.90 The assessment accounts for the sensitivity of the surrounding area, probability of impacts and magnitude of effects. Through the incorporation of embedded and additional mitigation measures, the overall significance of effect (either as Beneficial or Adverse) has been determined. All mitigation as proposed is suitable to be delivered post planning consent and will be subject to discharge of relevant planning conditions.
- 13.91 Mitigation is to include targeted geo-environmental investigation and assessment together with remediation and validation elements as necessary. The assessments will follow best practice guidance as provided within the LCRM assessment framework and geotechnical requirements in accordance with the requirements of British Standards and Eurocodes.



- 13.92 Ground stabilisation will be achieved via means of further investigation followed by the treatment of mine workings and mineshafts together with appropriate verification, provision of a suitable earthworks specification of the Site. Stabilisation of ground will be undertaken where significant ground disturbance is required and/or there are areas of deep infill (the former Leemans Hill Quarry located in the northeast, for example). A piling risk assessment is to be prepared to determine optimal piling methodologies and an assessment will be undertaken where made ground is potentially present along the alignment of service trenches for proposed drinking water supply. The detailed development design will account for the findings of the geo-environmental assessments.
- 13.93 A series of protocols will be prepared and implemented using best practice and achieving the required standard during the contamination phase. This will include provision of a CEMP, a surface water management plan, procedure of how to address unexpected contamination should this be encountered during groundworks, and an emergency procedure to follow should an environmental pollution incident occur. Reuse of site soils and importation of fill and/or soils to site will be managed via usage of a Materials Management Plan. These mitigation measures can be completed post planning consent and managed under condition.
- 13.94 Overall, no unacceptable impacts on human health, controlled waters, building or property or ecological receptors have been identified. The effects of the Propose Development in relation to ground conditions are therefore predicted to be **Not Significant** for the purposes of EIA either when the Site is considered in isolation or in terms of wider cumulative effects.



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- ^v Rudland D.J, Lancefield R.M & Mayell P.N, (2001). 'Ciria C552. Contaminated land risk assessment. A guide to good practice'
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- ^{vii} Places for Everyone Joint Development Plan Document (Adopted 21 March 2024).
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- ^{xiv} British Standards (2013) 'BS8601: 2013. 'Specification for Subsoil'.
- ^{xv} British Standards (2015) 'BS3882:2015. Specification for Topsoil'
- ^{xvi} British Standards (2013) 'BS8601: 2013. 'Specification for Subsoil'.



14. Landscape & Visual Impact

Introduction

- 14.1 This Landscape and Visual Impact Chapter of the ES has been prepared to provide an assessment of the likely landscape and visual effects of the Proposed Development. The landscape and visual effects have been considered in relation to the proposals detailed in the planning application (12221-FPCR-XX-XX-DR-A-0004-P02-Parameter Plan and 12221-FPCR-XX-XX-DR-A-0001-P06 Framework Masterplan).
- 14.2 The Chapter have been prepared by FPCR Environment and Design Ltd (FPCR) as competent experts. The authors are Chartered Members of the Landscape Institute and the Chapter has been prepared in accordance with guidance of the professional institution, the 'Guidelines for Landscape and Visual Impact Assessment', third edition (GLVIA3), published by the Landscape Institute and the Institute of Environmental Management and Assessment, in 2013.
- 14.3 FPCR is a multi-disciplinary environmental and design consultancy established over 60 years, with expertise in architecture, landscape, ecology, arboriculture, urban design, masterplanning and environmental impact assessment. The practice is a member of the Landscape Institute and Institute of Environmental Management and Assessment and are frequently called upon to provide expert evidence on landscape and visual issues at Public and Local Plan Inquiries.

Site Location

- 14.4 Figures 14.1 and 14.2 at the end of this Chapter show the location and context of the Site to the south of Scobell Road, which is situated approximately 1.9m to the northwest of Bury City Centre. The Site is bounded to the north and west by the settlement of Walshaw. To the south is an area of parkland with lakes and woodland associated with the Stables Country Club.

Proposed Development

- 14.5 The Proposed Development is for an outline application for up to 275 dwellings with associated open space and infrastructure.



Legislation and Policy

National Planning Policy

National Planning Policy Framework (The Framework, December 2024)

- 14.6 The Framework sets out the Government’s economic, environmental and social planning policy and in combination these policies give the Government’s vision of sustainable development. It emphasises the need for well-designed places, promoting healthy and safe communities and conserving and enhancing the natural environment.
- 14.7 Regarding landscape and green infrastructure, the Natural Environment section of the Framework provides a policy context for the countryside and green infrastructure. The key objectives include protecting and enhancing valued landscapes 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.
- 14.8 Paragraph 187 states at part a) that planning policies and decisions should protect and enhance valued landscapes and goes on to clarify that this should be in a manner commensurate with their statutory status or identified quality in the development plan. Part b) states that planning policies and decisions should recognise *“the intrinsic character and beauty of the countryside”*.
- 14.9 Paragraph 188 advises that:
- “Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; 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”.*
- 14.10 Paragraph 189 goes on to add:
- “Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and National Landscapes, which have the highest status of protection in relation to these issues...”, and*
- “The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.”*
- 14.11 The Site is within an undesignated landscape with no special protected status and is not in the setting of a nationally designated landscape. The character of the Site and its immediate context is assessed within this Chapter to help inform decisions regarding *“the intrinsic character and beauty of the countryside”*. The potential to enhance green infrastructure networks is also considered.



[Planning Practice Guidance \(PPG\)](#)

- 14.12 The PPG was first published on the 6th March 2014 and is a regularly updated online planning resource which provides guidance on the Framework and the planning system.

Local Planning Policy

[Places for Everyone Joint Development Plan Document \(PfE\) \(March 2024\)](#)

- 14.13 The PfE was adopted in March 2024 and is a long-term plan of nine Greater Manchester districts for jobs, new homes and sustainable growth. The document supersedes some of the Bury Unitary Development Plan policies.
- 14.14 The Site falls within JP Allocation 9: Walshaw. The allocation extends further to the south and east and is loosely bounded by the urban areas of Tottington to the north, Woolfold and Elton to the east Lowercroft to the south and Walshaw to the west. The allocation sets out the potential for the Site, as well as requirements and provisions that any development will have to fulfil.
- 14.15 In addition to the allocation policy, the following are of most relevance to landscape and visual matters:

[Policy JP-G1: Landscape Character](#)

This policy requires development to respond to the local context and the specific guidance on the Landscape Type within the Landscape Character and Sensitivity Assessment. It ensures a considered and sensitive approach to landscape management and the enhancement of the landscape.

‘Development within a Landscape Character Type, as shown on Figure 8.1, should reflect and respond to the special qualities and sensitivities of the key landscape characteristics of its location...

The interface of new development with the surrounding countryside/landscape is of particular importance....’

[Policy JP-G2: Green Infrastructure Network](#)

- 14.16 This policy ensures new development integrates new and existing green infrastructure, delivers improvements and provides a long term management and maintenance strategy. The Site does not fall within an area identified as Priority Green Infrastructure. There are areas approximately 300m to the northeast and to the west that fall within the designation.

‘...Development within and around the Green Infrastructure Network should be consistent with delivering major green infrastructure improvements within them and should contribute to improvements. Development which involves the removal of land from the Green Belt (including allocations proposed in this plan) will be required to offset the impact of removing land from the Green Belt through identifying and delivering compensatory improvements to the environmental quality and accessibility of remaining Green Belt in the vicinity of The Site. Details of specific sites and projects will be established in discussion with the relevant Local Authority. Wherever practicable,



opportunities to integrate new and existing green infrastructure into new development will be taken to protect, enhance and expand the green infrastructure network. Where new or improved green infrastructure is delivered as part of a development, the developer should make appropriate provision for its long-term management and maintenance.'

Policy JP-G7: Trees and Woodland

- 14.17 This policy requires development to consider the objectives of the Greater Manchester Tree and Woodland Strategy.

Bury Unitary Development Plan (1997)

- 14.18 The Bury UDP was adopted by the Council in 1997. Some of these policies have now been superseded by the PfE. The following 'saved' UDP policy is of relevance to landscape and visual matters and the Proposed Development:

Policy EN6/4 – Wildlife Links and Corridors

'The Council will seek to consolidate and, where appropriate, strengthen wildlife links and corridors, and will not permit development which would adversely affect identified areas. In particular, the Council will seek to ensure that new development within or adjacent to identified links or corridors contributes to their effectiveness through the design, landscaping and siting of development proposals and mitigation works, where appropriate.'

Other Relevant Strategies, Guidelines or Documents

Greater Manchester Green Infrastructure Framework (March 2011)(2040)

- 14.19 The Greater Manchester Green Infrastructure Framework document aims to summarise Green Infrastructure priorities at a strategic level. At a sub-regional level the report (along with other documents) informs the preferred policy approach to delivering the Greater Manchester Strategy.

Greater Manchester Tree and Woodland Strategy

- 14.20 'Greater Manchester Tree and Woodland Strategy' aims to plant more trees and to protect and manage existing trees and woodland.
- 14.21 Under the heading Planning and Development Management the following guidelines are provided:
- *Recognise the importance of mature trees and that loss of mature trees means loss of benefits and decreased resilience.*
 - *Enforce National Planning Policy Framework (paragraph 118) statements on protection of irreplaceable habitats.*
 - *Move toward a natural capital approach when considering proposals for tree losses and replacements – moving beyond basic numeric replacement conditions.*



- Refer developers to this document and request that proposals consider the value of trees on development sites.
- Ensure developers contribute to cost of establishment and maintenance of new trees.
- Refer to planting priority maps in Section 3 when considering options for replacement of mitigation planting, or net gain proposals relating to offsite gain.
- Contribute records of trees lost and trees planted through development.

[Bury Green Infrastructure Report](#)

- 14.22 The Bury Green Infrastructure Report aims to provide advice and strategy on the implementation of the Council's emerging green infrastructure policy.

Assessment Methodology

- 14.23 This Landscape Chapter has been prepared based upon the Guidelines for Landscape and Visual Impact Assessment, third edition (GLVIA3), published by the Landscape Institute and the Institute of Environmental Management and Assessment, in 2013. The assessment of Landscape Value also takes account of guidance in Landscape Institute Technical Guidance Note 02-21 "Assessing landscape value outside national designations".

- 14.24 In summary, the GLVIA3 states:

"Landscape and Visual impact assessment (LVIA), is a tool used to identify and assess the significance of and the effects of change resulting from development on both landscape as an environmental resource in its own right and on people's views and visual amenity." (GLVIA3 paragraph 1.1.)

- 14.25 There are two components of LVIA:

"Assessment of landscape effects; assessing effects on the landscape as a resource in its own right;

Assessment of visual effects: assessing effects on specific views and on the general visual amenity experienced by people." (GLVIA3 paragraph 2.21.)

- 14.26 The components of this assessment include: baseline studies; description and details of the landscape proposals and mitigation measures to be adopted as part of the scheme; identification and description of likely effects arising from the Proposed Development; and an assessment of the significance of these effects.

- 14.27 In terms of baseline studies the assessment provides an understanding of the landscape that may be affected, its constituent elements, character, condition and value. For the visual baseline this includes an understanding of the area in which the development may be visible, the people who may experience views, and the nature of views.



Assessment of Landscape Effects

- 14.28 GLVIA3 states that “An assessment of landscape effects deals with the effects of change and development on landscape as a resource” (GLVIA3 paragraph 5.1).
- 14.29 The baseline landscape is described by reference to existing published Landscape Character Assessments and by a description of the Site and its context.
- 14.30 A range of landscape effects can arise through development. These can include:
- Change or loss of elements, features, aesthetic or perceptual aspects that contribute to the character and distinctiveness of the landscape;
 - Addition of new elements that influence character and distinctiveness of the landscape;
 - Combined effects of these changes.
- 14.31 The characteristics of the existing landscape resource are considered in respect of the susceptibility of the landscape resource to the change arising from this development. The value of the existing landscape is also considered.
- 14.32 Each effect on landscape receptors is assessed in terms of size or scale, the geographical extent of the area influenced and its duration and reversibility. In terms of size or scale of change, the judgement takes account of the extent of the existing landscape elements that will be lost or changed, and the degree to which the aesthetic or perceptual aspects or key characteristics of the landscape will be altered by removal or addition of new elements. Geographical extent is considered by reference to the extent of the area over which there will be a change. Duration is considered for the landscape effects, with short term effects being defined as those lasting less than 5 years, medium term effects lasting between 5 and 10 years and long-term effects being defined as anything over 10 years in duration.
- 14.33 The level of effect is determined by considering the sensitivity of the landscape receptors and the magnitude of effect on the landscape. Final conclusions on the overall landscape effects are drawn from the assessment components described. This assessment describes the nature of the landscape effects, and whether these are adverse or beneficial, at the following stages of development; construction, completion (year 1) and longer term (year 15).
- 14.34 The criteria used in the assessment are set out in Appendix A included in this ES within **Volume 3: Technical Appendix 14.A**.

Assessment of Visual Effects

- 14.35 An assessment of visual effects deals with the effects of change and development on the views available to people and their visual amenity. This assessment describes the nature of the visual effects and, whether these are Adverse or Beneficial, at the following stages of development; construction, completion (year 1 winter) and longer term (year 15 summer).



- 14.36 The first stage in the assessment is to identify approximate visibility/ visibility mapping. This is done by either a computerised Zone of Theoretical Visibility (ZTV)¹, or by manual methods using map study and field evaluation. A series of viewpoints are included within the assessment that are representative of views towards the Site from surrounding visual receptors. Other views of the Site are included where it supports the description and understanding of the Site's landscape and visual characteristics.
- 14.37 The views also typically represent what can be seen from a variety of distances from the development and different viewing experiences.
- 14.38 It is important to remember that visual receptors are all people. For each affected viewpoint the assessment considers both the susceptibility to change in views and the value attached to views.

"The visual receptors most susceptible to change are generally likely to include:

Residents at home;

People², whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focused on the landscape or particular views;

Visitors to heritage assets or to other attractions, where views of the surroundings are an important contributor to the experience;

Communities where views contribute to the landscape setting enjoyed by residents in the area;

Travellers on road, rail or other transport routes tend to fall into an intermediate category of moderate susceptibility to change. Where travel involves recognised scenic routes awareness of views is likely to be particularly high." (GLVIA3 paragraph 6.33.)

"Visual receptors likely to be less sensitive to change include:

People engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape;

People at their place of work whose attention may be focused on their work or activity, not on their surroundings, and where the setting is not important to the quality of working life(although there may be on occasion be cases where views are an important contributor to the setting and to the quality of working life." (GLVIA3 paragraph 6.34.)

- 14.39 Each of the visual effects is evaluated in terms of its size or scale, the geographical extent of the area influenced and its duration or reversibility.
- 14.40 In terms of size or scale, the magnitude of visual effects takes account of:
- The scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including proportion of the view occupied by the Proposed Development;

¹ Zone of Theoretical Visibility (ZTV): A map usually digitally produced, showing areas of land within which a development is theoretically visible. [GLVIA3]



- The degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale and mass, line height, colour and texture;
- The nature of the view of the Proposed Development, in terms of the relative amount of time over which it will be experienced and whether views will be full, partial or glimpses. (GLVIA3 paragraph 6.39)

14.41 The geographical extent of the visual effect in each viewpoint is likely to reflect:

- The angle of view in relation to the main activity of the receptor;
- The distance of the viewpoint from the Proposed Development;
- The extent of the area over which the changes would be visible.

14.42 As with landscape effects, the duration of the effect could be short to long term or permanent and the same definitions apply. The criteria used in this assessment are set out in Appendix A (see **Volume 3: Technical Appendix 14.A.**).

Overall Landscape and Visual Effects

14.43 The final conclusions on effects, whether Adverse or Beneficial, are drawn from the separate judgements on the sensitivity of the receptors and the magnitude of the effects. This overall judgement is formed from a reasoned professional overview of the individual judgements against the assessment criteria.

14.44 GLVIA3 notes, at paragraphs 5.56 and 6.44, that there are no hard and fast rules with regard to the level of effects, therefore the following descriptive thresholds have been used for this appraisal:

- Major;
- Moderate;
- Minor;
- Negligible.

14.45 Where it is determined that the assessment falls between or encompasses two of the defined criteria terms, then the judgement may be described as, for example, Major/ Moderate or Moderate/ Minor. This indicates that the effect is assessed to lie between the respective definitions or to encompass aspects of both.

Judging Overall Significance

14.46 A judgement is reached, based on the assessment, as to whether an effect is Significant or not. Those degrees of effects that are considered to be *Significant* by the assessor for *this* LVIA are judged to be effects that are either Major or Major/ Moderate.



14.47 GLVIA3 Statement of Clarification 1/13 (2013)³ notes that:

"Concerning 'significance', it is for the assessor to define what the assessor considers significant...Depending on the means of judgment and terminology (which should be explicitly set out), effects of varying degrees of change (or levels of change), may be derived. The assessor should then establish (and it is for the assessor to decide and explain) the degree or level of change that is considered to be significant." (GLVIA3 Statement of Clarification, § 3.)

Significance of Landscape Effects

14.48 GLVIA3 states, at paragraph 5.56, that:

"There are no hard and fast rules about what makes a significant effect, and there cannot be a standard approach since circumstances vary with the location and context and with the type of proposal. At opposite ends of the spectrum it is reasonable to say that:

Major loss or irreversible negative effects, over an extensive area, on elements and/ or aesthetic and perceptual aspects that are key to the character of nationally valued landscapes are likely to be of the greatest significance;

Reversible negative effects of short duration, over a restricted area, on elements and/ or aesthetic and perceptual aspects that contribute to but are not key characteristics of the character of landscapes of community value are likely to be of the least significance and may, depending on the circumstances, be judged as not significant;

Where assessments of significance place landscape effects between these extremes, judgements must be made about whether or not they are significant, with full explanations of why these conclusions have been reached." (GLVIA3 paragraph 5.56.)

Significance of Visual Effects

14.49 GLVIA3 states, at paragraph 6.44, that:

"There are no hard and fast rules about what makes a significant effect, and there cannot be a standard approach since circumstances vary with the location and context and with the type of proposal. In making a judgement about the significance of visual effects the following points should be noted:

Effects on people who are particularly sensitive to changes in views and visual amenity are more likely to be significant;

Effects on people at recognised and important viewpoints or from recognised scenic routes are more likely to be significant;

Large-scale changes which introduce new, non-characteristic or discordant or intrusive elements into the view are more likely to be significant than small changes or changes involving features already present within the view.” (GLVIA3 paragraph 6.44.)

Baseline Conditions

Landscape Character

National Character

14.50 National Character Area (NCA) profiles have been prepared by Natural England for the 159 NCA's defined across England. These NCA profiles include a description of the natural and cultural features that shape the landscape, how the landscape has changed over time, the current key drivers for ongoing change, and a broad analysis of each area's characteristics. Figure 14.2 at the end of this Chapter illustrates the NCA's and other defined character areas within the context of the Site.

14.51 At this very broad landscape scale, the Site, lies within Natural England's National Character Area (NCA) 54 - Manchester Pennine Fringe. The area wraps around Manchester from Bolton in the northwest to Marple in the southeast, and includes the industrial towns of Bury, Bolton, Rochdale, Oldham, Dukinfield and Glossop and therefore covers a very extensive landscape tract. Under Key Characteristics the NCA description includes the following references:

- *Transitional zone between elevated, open moorlands and densely populated urban areas on lower ground.*
- *Landform is a transition from upland to lowland, with smooth shoulders of land divided by steep-sided valleys with fast-flowing rivers.*
- *Elevated vantage points provide extensive views across the adjacent Manchester Conurbation NCA.*
- *Several rivers flow through the area from the Pennine uplands, linking with adjacent lowland areas.*
- *Woodland cover is characterised by a range of woodland types concentrated along river valleys, as well as some newer community woodlands in the urban areas.*
- *Field boundaries include dry 'gritstone' walls at higher elevations and hedgerows at lower elevations.*
- *Limited semi-natural habitats include broadleaved mixed and yew woodland, lowland dry acid grassland, lowland meadows, lowland heathland, and purple moor-grass and rush pasture, which are often fragmented.*
- *High population densities across a belt of industrial towns, with busy transport networks and motorways. Almost half of this NCA is classed as urban.'*

14.52 The description also states:

'...The area owes much of its character to its proximity to the adjacent Pennine moors, and the deeply incised, steep valleys that characterise the transition from moorland to urban area. The elevation of the area is generally between 100 m and 300 m, between the lower plains and higher Pennine moors.



Much of the countryside is influenced by recreational use from adjacent urban areas and also by the diversification of farmland. The river valleys, upland hinterland and proximity of urban development all contribute to the area's distinct Pennine fringe character...'

14.53 Statements of Environmental Opportunity relevant to Landscape and Visual Matters include:

'SEO 2: Seek to safeguard and enhance this area's distinctive patterns of field boundaries, ancient hedgerows, settlements, orchards, parkland, small woodlands, chases, commons and floodplain management with their strong links to past land use and settlement history, and for the benefits this will bring to soil erosion, soil quality and biodiversity.'

'SEO 3: Reinforce the existing landscape structure as part of any identified growth of urban areas, hard infrastructure and other settlements ensuring quality green infrastructure is incorporated enhancing health, access, recreation, landscape, biodiversity and geodiversity.'

14.54 Additional opportunity 1 states:

'Additional opportunity 1: Enhance and manage the relationship between access to the natural environment and conservation of the landscape, biodiversity, geodiversity and historic qualities of this popular area.'

Greater Manchester Landscape Character and Sensitivity Assessment

14.55 The Greater Manchester Landscape Character and Sensitivity Assessment (GMLCSA) has been prepared for Greater Manchester. This assesses the quality and sensitivity of different landscapes and considers cross-boundary relationships (including with the Peak District National Park).

14.56 The Site lies within Landscape Character Area: Affetside and Ainsworth and is further divided into Landscape Character Type Urban Fringe Farmland. Urban Fringe Farmland is found within various districts across Greater Manchester and includes the entire site and the land to the south. Relevant Key Characteristics include:

- *Rolling landscape with elevation ranging between 30 and 250m AOD. The landform becomes gentler as it falls towards the floodplains of the rivers Mersey and Bollin (from 10 to 60m AOD).*
- *Elevated farmland to the north and east, close to the Pennine and Dark Peak foothills, mainly comprising undulating hills and valleys.*
- *Landform dissected by narrow, often steep sided wooded cloughs, and drained by a network of streams and ponds (of local ecological value) throughout.*
- *Variable land use, with the more elevated land in the north and east typified by lower grade agricultural land used for dairy farming, horse grazing and sheep rearing. Pockets of dry heath, acid grassland and moorland fringe are also present.*
- *Pastoral land characterised by small and medium sized fields, forming various patterns from rectilinear to distinctive web shaped originating from Parliamentary enclosure.*
- *Flatter, more fertile floodplain areas give rise to a mix of pasture and arable cultivation. Fields tend to be larger with subtle boundary features, with occasional small pasture fields to the east of Altrincham.*



- *Field boundaries comprise often gappy, species-poor hedgerows with occasional established clumps of hedgerow trees. Post and wire fencing replaces hedges in many locations, whilst occasional stone walls provide definition at higher elevations, but many are in a degraded condition.*
- *Frequent recreational land uses with sports fields and golf courses located close to the urban edge. The manicured lush greens of the courses contrast sharply with areas of semi-improved grazing land.*
- *The open farmland contrasts strongly with adjoining residential and industrial urban areas, often forming a rural buffer to the Pennine and Dark Peak foothills.*
- *Open landscape with sparse woodland cover generally limited to isolated plantation woodland, hedgerows and the steep cloughs that bisect the rolling farmland.*
- *A small number of Ancient Woodlands (e.g. Oaken Bank Wood and Glade Wood within Hopwood Woodlands Local Nature Reserve (LNR), Rochdale) provide important habitats and wildlife corridors.*
- *Established clumps of hawthorn and dog rose line some of the field boundaries and highways, with some incorporating mature broadleaved trees.*
- *Other SBI-designated habitats include areas of dry heath, acid and of species rich grassland. Elton Reservoir, south-east of Bury, remains a legacy of the area's industrial past and is an important site for water fowl. Flashes also form locally important wetland habitats of industrial origin.*
- *Generally a dispersed pattern of scattered farmsteads and individual dwellings constructed of locally sourced gritstone. Occasional small settlements are linked by local roads and winding country lanes.*
- *Numerous rights of way and cycle routes permeate the landscape, linking to the surrounding urban areas. The Rotary Way and Rochdale Way are long distance footpaths connecting to the local network.*
- *In general the more elevated, rolling farmland has an exposed and open character with little sense of enclosure and strong visual connections with surrounding landscapes.*
- *Views within the floodplains are typically restricted by hedgerows, hedgerow trees and development, creating a more enclosed landscape with pockets of seclusion and relative tranquillity.*
- *Wide panoramic views from high points over the Greater Manchester conurbation contained within a bowl dramatically flanked by the South/West Pennines and the Peak District National Park.*
- *Long views towards the coastal plain to the west stretch as far as Fiddler's Ferry Power Station near Widnes.*
- *Historic mills with tall chimneys and warehouses also form landmarks on the skyline.*
- *Transport corridors and pylon lines are very apparent, with the lack of tree cover within the rolling open farmland leaving the large roads and motorway visually exposed and audible.*



- 14.57 The document assesses the sensitivity of the character areas based on various criteria. 'Form, density and settling of existing settlement/ development' and 'Access and recreation' are assessed as having a **Medium – High** sensitivity rating. 'Physical character (including topography and scale)', 'Natural character', 'Views and visual character including skylines' and 'Perceptual and experiential qualities' are assessed as having a **Medium** sensitivity rating. 'Historic landscape character' is assessed as having a **Low – Medium** sensitivity rating. The LCA has an overall **Medium** sensitivity rating to the development scenario 2 – 3 storey residential housing development.
- 14.58 Notes on the landscape sensitivity state that *'Areas on the immediate urban edge and adjacent to main roads and motorways typically have a lower sensitivity to both scenarios, due to the strong influence development already has on the rural qualities of the landscape.'*
- 14.59 Under the heading *'Special landscape qualities and key sensitivities'* the following statements are of relevance:
- *Locations of elevated, open character with some prominent rural skylines forming a backdrop to views from adjacent urban areas*
 - *Areas of complex, undulating landform cut by distinctive steep wooded cloughs.*
 - *Locally important semi-natural habitats and networks, including pockets of ancient and riparian woodland (e.g. Hopwood Woodlands LNR), patches of dry heath and acid grassland, remnant seminatural grasslands, ponds and flashes.*
 - *Intact lengths of gritstone walls, hedgerows and tree clumps along field boundaries forming ecological networks and bringing definition to the 18th and 19th century and post-medieval field patterns.*
 - *Opportunities to access and enjoy the rural landscape, including the long distance footpaths (Rochdale Way, Rotary Way, Middlewich Way), cycle routes and a strong public rights of way network crossing the farmland and emanating from adjacent urban areas.*
 - *The LCT's strong visual connections with foothills and uplands of the West/South Pennines and Peak District National Park, which lie to the north and east of Greater Manchester.*
 - *Pockets of relative remoteness and tranquillity, including in the lower-lying south where robust hedgerows and lines of trees provide enclosure; elevated points in the north and east creating a sense of exposure.*
 - *The LCT's role as an immediate rural backdrop to development and its important function in separating discrete urban areas, preventing coalescence.*
- 14.60 Under the heading *'Guidance and opportunities for future development and landscape management/enhancement'* the following statements are of relevance:
- *Avoid siting any development on the highly prominent, elevated and very sparsely settled land in the elevated north and east. Conserve open, undeveloped skylines.*
 - *Utilise dips in the landform, including valley slopes, and existing tree/woodland cover to integrate new development into the landscape.*



- *Protect and where possible enhance semi-natural habitats and networks, including pockets of ancient and riparian woodland (e.g. Hopwood Woodlands LNR), patches of dry heath and acid grassland, remnant semi-natural grasslands, ponds and flashes.*
- *Strengthen and restore the dry stone wall and hedgerow network in association with any new development, reflecting local characteristics (choice of stone and building style; hedgerow species and management regimes). Encourage the restoration of traditional boundaries where fencing is present.*
- *Ensure any new development does not dilute the strong field patterns associated with the landscape.*
- *Design-in the introduction of SuDS to any new development, addressing any changes in hydrology (and subsequent knock-on effects such as increased diffuse pollution from agricultural run-off). This landscape is part of the wider catchment of a number of Greater Manchester's main river valleys.*
- *Encourage woodland creation schemes on areas of low grade agricultural land, including through the Northern Forest initiative. Woodland planting along motorways and staggered blocks of planting should be used to help screen views of traffic and reduce noise.*
- *Conserve the rural road network, ensuring any new highway design minimises unnecessary signage and lighting and reflects local characteristics (e.g. road verges/boundaries).*
- *Protect the pockets of tranquillity and relative remoteness associated with the landscape, and the role the LCT plays as a rural backdrop and buffer between discrete urban areas.*
- *Conserve key views and intervisibility with the South/West Pennines and Dark Peak foothills, upland fringes and open moorlands.*

Bury Landscape Character Assessment (2009)

14.61 The Bury Landscape Character Assessment has been undertaken at a District/ Borough level. It subdivides the three NCA areas covering Bury into Landscape Types and Local Landscape Character Areas (LLCA). The Site lies within Landscape Type 54/1: Fringe Industrial Brook and is further divided into LLCA 1b Walshaw and Elton.

14.62 Relevant key characteristics of 54/1 Fringe Industrial Brooks include:

- *Enclosed space located within/along the fringes of Bury urban area*
- *Altitude between 90 to 170 metres above sea level*
- *Woodland cover less extensive than Pennine Industrial Brooks*
- *Walshaw Brook containing very little woodland*
- *Lower parts of Walshaw & Hollins areas mostly amenity grassland*
- *Brooks (central) dominated by semi improved neutral grassland*
- *Upper parts of all brooks dominated by improved grassland*
- *Hedgerows dominate both Walshaw and Pigs Lee Brook areas*



- *Rectangular field patterns more defined in peripheral / upper areas*

14.63 Relevant guiding principles include:

- *consolidate and strengthen wildlife links and corridors in all fringe industrial brook areas*
- *promote the introduction of broad leaved woodland and plantation woodland along Walshaw Brook*
- *prevent boundary loss and fragmentation around urban fringes*
- *repair and maintain network of hedgerows at Walshaw Brook and Pigs Lee Brook*
- *promote the introduction of species rich hedgerows along Elton Brook and Parr Brook*

Designations

14.64 Figure 14.3 at the end of the Chapter illustrates the location of landscape and other relevant designations. Designations within the study area are listed below:

- Kirklees Valley Local Nature Reserve is located approximately 500m north of the Site
- There are a number of Conservation Areas scattered across Bury, all of which are over 1.5km from the Site.
- Castlesteads Promontory Fort is the closest Scheduled Monument, located approximately 1.6km northeast of the Site.
- BURRS Country Park is located approximately 1.2km northeast of the Site.
- A large area of land within the study area is allocated as Green Belt. The closest point to the Site is approximately 250m west. The Site and land immediately to the south and east is allocated as Green Belt Release.
- Various Listed buildings can be seen across Bury, all of which are over 250m from the Site. Grade II* Listed Christ Church Walshaw Parish Church lies 280m southwest of the Site and Grade II Listed Peel Monument is located over 4km North of the Site. Both have some intervisibility with the Site.

Topography

14.65 The following should be read in conjunction with Figure 14.4 at the end of the Chapter.

Context – Landform

14.66 The Site lies on lower ground with a slight fall to the River Irwell to the east before rising up again to higher ground in the northeast. The land gently falls south and southeast towards Bury. Land rises again with the higher ground to the northeast and northwest with a more dramatic rise further north.



Site - Landform

- 14.67 The Site is gently undulating with an overall fall from north to south and west to east with the highest point at 131m AOD at northwest corner and its lowest point at 117m AOD at the southeast corner of the Site.

Site and Immediate Context

- 14.68 An assessment of landscape character of the Site and its immediate context has been carried out, providing a finer level of assessment than the published studies.
- 14.69 The Site is made up of several irregular shaped field parcels which form a wider network of fields divided by fragmented hedgerows and lines of trees. Fields are primarily made up of neutral grassland with small areas of mixed scrub. A small area of woodland provides a buffer between an industrial area located to the south of the Site.
- 14.70 Several public footpaths cross the Site or pass along the boundaries and form part of the wider PRow network. Two watercourses are present within the Site including Walshaw Brook which crosses north to south through the Site. Immediately to the north and west is the settlement of Tottington with several properties backing directly onto the Site. Properties on the opposite side of the roads face the Site. Additional fields extend to the south and east. Stables Country Club is located to the south next to several ponds and an area of woodland.

Landscape Value

- 14.71 In terms of "landscape value" it is appropriate to examine the role of the Site and its immediate context in terms of the range of local factors set out in LI TGN 02-21, and summarised in the methodology. This considers the landscape in terms of a range of factors as set out below. As a starting point, landscape designations have been considered.
- 14.72 Landscape Designations: The Site and its wider landscape context (including its VE (Visual Envelope) (Figures 14.5/14.6 at the end of the Chapter) are not subject to any national, local or other landscape designations.
- 14.73 Natural Heritage: The Site is made up of several fields divided by hedgerows and tree lines. Fields are predominantly neutral grassland with small areas of mixed scrub, woodland and scattered trees. The Ecological Appraisal carried out by FPCR (August 2024) (see **Chapter 8** of the ES) summarised that most habitats on Site are not considered to be of important ecological value. The mature trees present increase the structural and habitat diversity of the Site and are likely to be of value to local wildlife. None of the hedgerows are considered important under the Hedgerow Regulations 1997. Despite this status, hedgerows are a common habitat type both nationally and locally, they would therefore be considered important at a local scale.



- 14.74 Cultural Heritage: There are no statutory protected features of cultural heritage value on Site. In the wider context Grade II* Listed Christ Church Walshaw Parish Church lies 280m southwest of the Site. Its spire is visible from the Site and many of the surrounding areas. Grade II Listed Peel Monument is located over 4km away. Due to its size and elevated position within the landscape this is visible from many areas within the Site and its surrounding context.
- 14.75 Landscape Condition: The neutral grassland, scrub, woodland and hedgerows onsite are not considered to be of high quality. The Ecological Appraisal carried out by FPCR (August 2024) (see **Chapter 8** of the ES) states that the neutral grassland, scrub and woodland on site are of poor condition. There are individual trees considered to be in good condition. Hedgerows are generally managed, intact in most places and are in moderate - good condition.
- 14.76 Associations: The Site and its immediate context are not known to have any associations with well-known literature, poetry, art, TV/film and music; associations with science or other technical achievements; links to a notable historical event; or associations with a famous person or people that contribute to perceptions of the landscape of the Site.
- 14.77 Distinctiveness: The Site does not contain any rare or unusual features and is influenced by its location along the settlement edge of Walshaw. The Site is typical of the surrounding green space within the area with a slightly urban feel from surrounding development.
- 14.78 Recreational Value: Public footpaths cross the Site and run alongside its boundaries connecting to the wider landscape and urban network. The footpaths appear to be well used and have some recreational value at a local level.
- 14.79 Perceptual (Scenic): Long-distance views across the Site towards hills to the north and northeast are possible from within the Site and the immediate context. Local views generally feature housing along Scobell Street and other development. The spire of Christ Church Walshaw Parish Church appears in many views and Peel Monument can often be seen in the distance.
- 14.80 Perceptual (Wildness and tranquillity): The wide area of grassland with hedgerows and scattered trees provides a semi-rural feel. However, the proximity of the Tottington settlement to the north and west has a large influence meaning the Site does not have a strong perceptual value of wildness or tranquillity.
- 14.81 Functional aspects: At a local level the Site provides some contribution to local green infrastructure networks through the presence of hedgerows, scrub and woodland.
- 14.82 In conclusion and having appraised the above factors it is judged that the Site and the immediate landscape is of **Medium** landscape value.



Visual Baseline

- 14.83 A visual appraisal has been undertaken for the Site. This has explored the nature of the existing visual amenity of the area and sought to establish the approximate visibility of The Site from surrounding locations and receptors. A series of photo viewpoints have been selected which support this analysis.
- 14.84 Photographs have been taken to illustrate a view from a specific vantage point, or to demonstrate a representative view for those receptors that are moving through the landscape, e.g. rights of way users. The photographs may demonstrate varying degrees of visibility and include both short and long range views. The photographs were taken on the 13th August 2024 and seasonal differences have been taken into account when determining the visual effects on these receptors.
- 14.85 ‘Photo Viewpoints’, as referred to in this report are ‘Type 1 Visualisations’ or ‘Annotated Viewpoint Photographs’, as referred to in the Landscape Institute Technical Guidance Note on ‘Visual Representation of Development Proposals’ (TGN 06/19).

Photo Viewpoints

- 14.86 An assessment of the likely visual effects of the Proposed Development upon surrounding receptors is detailed in the subsequent section. Figures 14.5 and 14.6 at the end of the Chapter detail the location of the Photo Viewpoints and Figures 14.7-14.28 (also at the end of this Chapter) illustrates the photo viewpoints. They are briefly described below.

Viewpoint 1

- 14.87 Viewpoint 1 is taken from Scobell Street and is representative of residents along the street. The view looks directly across the Site and consists of grassland with scattered trees, hedgerows and patches of woodland. A house on Scobell Street is visible within the left of the view. To the right houses along Church Street and Collins Street are visible beyond the Site. Houses along Walshaw Road and Christ Church Walshaw Parish Church can be seen in the distance.

Viewpoint 2

- 14.88 This viewpoint is taken from the corner of Scobell Street and Church Street and is representative of residents along both streets. The view looks southeast across the Site. Grassland and scrub within the northwest corner of the Site is prominent within the view. Copthorne Cattery is visible within the centre of the view. To the right the spire of Christ Church Walshaw Parish Council can be seen sticking above properties along Church Street.

Viewpoints 3, 4 and 5

- 14.89 Viewpoints 3, 4 and 5 look east across the Site from various points along Church Street and are representative of residents and pedestrians along the street. Neutral grassland and scrub or woodland within the Site form the focus with various properties along the Site boundaries appearing within views. The hills to the east form the backdrop within all three of the views.



[Viewpoint 6A and 6B](#)

- 14.90 Viewpoints 6A and 6B are taken from within the Site and are representative of footpath users crossing the Site. From here there are panoramic views across the Site. Viewpoint 6A looks east and Viewpoint 6B looks south. Both views look across neutral grassland and scattered areas of scrub within the Site. In viewpoint 6A surrounding properties are visible along Scobell Street and there are views to the distant hills east of the Site.

[Viewpoints 7 & 8](#)

- 14.91 Viewpoints 7 and 8 are taken from the PRow to the south of the Site and are representative of footpath users as they approach the Site. The views look across fields towards the scrub and grassland within the Site. Properties along Scobell Street are visible beyond. Peel Monument is clearly visible on the hills to the north which form the backdrop of the view alongside the hills to the east within viewpoint 7.

[Viewpoints 9](#)

- 14.92 Viewpoint 9 is taken from the PRow to the south of the Site close to the southeastern corner and is representative of footpath users. The view looks northwest across the neutral grassland and scattered scrub within the Site. Vegetation and housing along Scobell Street and Church Street are visible withing the view. Long distance views to the hills in the north and Peel Monument can be glimpsed in the background.

[Viewpoint 10](#)

- 14.93 Viewpoint 10 is taken from the PRow to the southeast of the Site (next to the Site boundary) and is representative of footpath users. The view looks northwest along the southern site boundary and into the Site across the neutral grassland and scattered scrub. Tops of houses along Scobell Street are just visible above the sloping topography of the Site. To the right of the view, houses along Deacon Crescent are visible. Long distance views are possible to the hills in the north.

[Viewpoint 11](#)

- 14.94 Viewpoint 11 is also taken from the PRow to the southeast. The view looks across fields towards the Site boundary vegetation. There is a glimpsed view into the Site through a small gap within the vegetation along the eastern boundary. The tip of the spire of Christ Church Walshaw Parish Church can be seen sticking above the eastern boundary hedgerow. The houses at Deacons Crescent can be seen next to the Site within the righthand side of the image.

[Viewpoint 12](#)

- 14.95 This viewpoint is taken from Scobell Street next to the northeastern corner of the Site and is representative of residents and pedestrians here. The view looks along the street and the northern site boundary vegetation which screens views into the Site. Some of the onsite trees can be seen above the boundary vegetation.



[Viewpoints 13 & 14B](#)

- 14.96 Viewpoints 13 & 14B are taken from the PRow crossing the Site looking west and are representative of footpath users here. Views are of neutral grassland and scrub onsite are prominent in viewpoint 14B. However, the spire of Christ Church Walshaw Parish Church can be seen sticking above the vegetation. From here views are largely contained within the Site due to the topography and vegetation. Viewpoint 14B is taken from further west and a higher vantage point and properties along Scobell Street/ Church Street. Industrial buildings to the south of the Site and caravans to the west are also visible within the view as well as the spire of Christ Church Walshaw Parish Church and surrounding and surrounding vegetation.

[Viewpoint 14A](#)

- 14.97 Viewpoint 14A is taken from the same position as viewpoint 14B but looks southeast. Views are mostly constrained to the neutral grassland and scattered scrub. Properties along Scobell Street are visible to the left of the view.

[Viewpoint 15](#)

- 14.98 View is taken from Sycamore Road/ Scobell Street junction and looks southwest towards the Site. To the left of the view the Site is screened by properties along Scobell Street. The view looks at the vegetation and trees around the northern boundary which filter views deeper into the Site. To the left of the view vegetation is much lower and the properties along Church Street can be seen beyond the Site.

[Viewpoint 16](#)

- 14.99 Viewpoint 16 is representative of residents and is taken from Walshaw Road to the south of the Site and looks north across pasture fields towards the Site. Woodland forms the righthand side of the view. The Site is visible between the woodland and scattered scrub across the fields. Houses along Scobell Street are visible along the northern site boundary. Peel Monument is clearly visible on top of the hills to the north which form the backdrop within the view.

[Viewpoint 17](#)

- 14.100 Viewpoint 17 is taken from Footpath 75TOT to the northwest of the Site and is representative of footpath users to the northwest and residents at surrounding houses/ farmstead. The view looks across a field with scattered shrub and pylons. There is a boundary hedge to the right of the view and houses along Harwood Road can be glimpsed. There are long distance views across the landscape and Christ Church Walshaw Parish Church and other buildings within the surrounding context of the Site can be made out as a small element within the view. Long distance views extend to the surrounding hills and high-rise buildings at Manchester.



Viewpoint 18

- 14.101 Viewpoint 18 is taken from footpath 32RAM at Peel Monument and is representative of footpath users here and visitors to the tower. From this elevated position there are panoramic views across the landscape. The villages of Greenmount and Summerseat are visible along with other various settlements, woodland and field parcels across the landscape. Long distance views to surrounding hill and high-rise buildings at Manchester forming the backdrop of the view. From this distance the Site and the surrounding town of Tottington can be glimpsed but form a very small element within the wider landscape.

Viewpoint 19 & 20

- 14.102 Viewpoint 19 is taken from footpath 228RAM and viewpoint 20 is taken from Bridleway 24BUR. Both viewpoints are representative of footpath users to the north/ northeast and scattered properties/ farmsteads in this direction. The views look across fields with dense boundary vegetation, woodland and scrub. From this location there are panoramic views across various settlements, woodland and fields. Peel Monument is visible in the right-hand side of viewpoint 19. Christ Church Walshaw Parish Church and Industrial Buildings can be made out as very small elements within both the views close to the Site. Long distance views to the hills in the west are visible in the background.

Summary of Visual Baseline

- 14.103 The baseline analysis results in a number of reasoned conclusions which are summarised below:
- PRoW crossing and surrounding the Site have panoramic views across the Site.
 - Residential receptors who face onto the Site have open views across the Site.
 - Views from the west are limited to glimpsed views.
 - Long distance views are available from elevated positions in the north and northeast.

Assessment of Impact and Significance

- 14.104 The following section outlines the likely landscape and visual effects that would arise from the Proposed Development of the Site. Tables detailing these likely landscape and visual effects for the receptors are included in **Volume 3: Technical Appendix 14.B and 14.C** respectively. Please refer to these in conjunction with the following descriptions.
- 14.105 In the context of the assessment of effects, the landscape and GI proposals and primary mitigation measures have been incorporated as an integral (or ‘embedded’) within the Parameter Plans as part of the design and layout of the Proposed Development and include the following:
- Retention of land free from development within the southwest and southeast corner.
 - Incorporation of attenuation features within the areas dedicated to public open space.
 - Green Corridor along the existing PRoW route with retained views to Peel Monument.



- Siting and layout of development to follow existing field pattern with the majority of existing vegetation able to be retained.

14.106 All of these aspects and features have been taken into account in the landscape-led design of the Proposed Development and the development parameters and have therefore been assessed as part of the construction and operational stages, as detailed below.

14.107 The Assessment of Impact and Significance Section considers a very much simplified and worst-case scenario with the maximum parameters of all built development in place at 'year 1' and green infrastructure planting in place but not yet established. The Residual Effects assessment considers the Proposed Development 15 years after completion and takes into account the growth and management of the proposed and conserved planting and habitats over this time.

Construction Stage

14.108 Throughout the course of the construction process, the approaches and methodologies adopted will seek to avoid or minimise any unnecessary effects upon the landscape and surrounding visual receptors. Managed and controlled site activities and the application of good practices throughout the construction process will seek to minimise the potential Adverse effects arising from construction. This will include the protection of all trees and vegetation to be conserved in accordance with BS5837:2012 (Trees in Relation to Design, Demolition and Construction- Recommendations).

14.109 An earthworks strategy, including the formation of Sustainable Urban Drainage features, will balance cut and fill material across the Site, seeking to reflect the natural topography and minimise level changes. It is anticipated that an earthworks strategy will be submitted for approval to the Local Planning Authority in accordance with the requirements of a planning condition attached to a grant of permission for the Proposed Development.

Construction Landscape Effects

14.110 The predicted construction effects are considered with reference to the published landscape character assessments, local landscape character and site-specific landscape features. The landscape effects of the Proposed Development are detailed in the Table at **Volume 3: Technical Appendix 14.B**.

14.111 The construction of the scheme will give rise to short term direct and indirect landscape effects resulting from alterations to the landscape. Operations will be phased over a period of time and as such the overall impact of construction will vary and the duration of the resulting landscape effects will be short term, transitional and temporary.

14.112 Key sources of landscape effects resulting from the construction of the development will include:

- Phased topsoil and subsoil stripping and storage;
- Installation of a contractor compound(s) and site office(s);
- Traffic movements into and away from the area;



- HGV and special load movement;
- Earthworks to form the primary N-S access road, development platforms and SUDS / wetland habitat creation;
- Site operations, including materials storage, construction works and implementation of landscape proposals.

Construction Effects – Landscape Character Assessments

14.113 The Site lies within the following published landscape character areas.

- National Character Area Profile (NCA) 54: Manchester Pennine Fringe
- Greater Manchester Landscape Character and Sensitivity Assessment – Landscape Type (LT) Urban Fringe Farmland
- Bury Landscape Character Assessment (2009) – Landscape Type (LT) Fringe Industrial Brook

14.114 Within the extensive NCA 54: Manchester Pennine Fringe almost half of the NCA is classed as urban and the construction activities adjacent to the settlement edge will result in a Negligible magnitude of change and subsequent **Negligible** effect overall to the character area.

14.115 The Greater Manchester Landscape Character and Sensitivity Assessment, LT: Urban Fringe Farmland has a Medium sensitivity rating. The Site is appropriately located along the settlement edge of Walshaw and has Medium magnitude of change. However, the change of land use from fields to construction activities would ultimately result in a **Moderate/ Minor Adverse** effect.

14.116 Bury Landscape Character Assessment, LT: Fringe Industrial Brook covers also has a Medium sensitivity. The LT covers a smaller tract and therefore has a Medium magnitude of change and would result in a **Moderate Adverse** effect.

14.117 In summary, the assessed landscape construction effect increases as a result of the gradual increase in magnitude of change relative to the scale of each character area from a national to county/district level.

Construction Effects on the Site and Immediate Context

14.118 The Site and immediate context will change substantially during the construction period. The construction works will entail the active presence of plant and machinery, site compounds, temporary access routes, earthworks to create access, development platforms and SUDs components, vegetation removal, and the increasing presence of the built development, highway works and landscaping resulting in a high magnitude of change and **Major/ Moderate Adverse** effects within the construction stage.

Construction Visual Effects

14.119 A comprehensive visual impact assessment of the Proposed Development has been undertaken to determine the potential effects upon surrounding visual receptors during the construction stage.



- 14.120 A series of photo viewpoints (**Figures 14.7-14.28**), and a Visual Effects Table (**Volume 3: Technical Appendix 14.C**) are included and collectively detail and support the description of the likely visual effects arising from construction of the Proposed Development.
- 14.121 The Visual Envelope of the Proposed Development is described within the following 'Post Completion' section. During the construction stage, the visible extent of the Proposed Development will vary, largely subject to the stage and nature of the construction works. It will, however, be broadly comparable with that of the Visual Envelope for the completed development when construction is at the height of activity and buildings are under construction. The Visual Envelope for the Site is detailed on **Figure 14.6** at the end of the Chapter.
- 14.122 Given the nature and anticipated construction period for the Proposed Development, the visual effects arising from its construction will vary throughout the period of work. Construction activities and plant movements will be visible at times from all of those receptors with views towards the completed development as listed in the Visual Effects Table at **Volume 3: Technical Appendix 14.C**.
- 14.123 The visual effects for all of the receptors will vary during the course of construction and will be most notable during peak of construction activities closest to each receptor. At these times, the visual effects arising for some receptors may exceed those resulting from the completed and operational development, although these construction visual effects will only occur for a temporary period.
- 14.124 The clearest views towards the construction activities and plant movements etc. will be experienced generally by the following receptors identified internally within the Site and by the receptors adjacent to the Site peripheries:
- Receptor A - Recreational users of PRow crossing the Site – **Major/ Moderate Adverse**
 - Receptor B - Recreational users of PRow along the Site boundaries – **Major/ Moderate Adverse**
 - Receptor C – Residents of properties facing onto the Site – **Major/ Moderate Adverse**
 - Receptor D – Residents at Scobell Street with properties backing onto the Site – **Major/ Moderate Adverse**
 - Receptor E – Residents at Copthorne Cattery – **Moderate Adverse**
 - Receptor F – Residents at Collins Street/ Pleasant Street – **Moderate Adverse**
 - Receptor H – Road users along Scobell Street/ Church Street – **Moderate/ Minor Adverse**
 - Receptor J – Recreational users of PRow to the south/ southeast – **Major/ Moderate Adverse**
- 14.125 For these receptors assessed construction effects will inevitably be highest with the exception of residents at Copthorne Cattery where the existing vegetation will screen/ filter some views of construction activities and residents at Collins Street/ Pleasant Street where views would be primarily focused away from construction activities. Road users along Scobell Street/ Church Street would also experience lower effects due to the orientation of view and variability in views as they travel along the road, with surrounding development and existing vegetation which screen/ filter views.



14.126 For the following receptors who are not within the immediate vicinity of the Site assessed effects on construction would be slightly lower as views are filtered/ screened by surrounding development on intervening vegetation:

- Receptor G – Residents at Walshaw (not directly adjacent to the Site) – **Minor Adverse**
- Receptor I – Residents along Walshaw Road – **Moderate Adverse**

14.127 The following receptors are all over 1.5km from the Site and assessed effects at construction stage are all **Negligible** due to the distance, landform and intervening vegetation.

- Receptor K – Residents at scattered farmsteads to the west/ northwest
- Receptor L - Recreational users of PRow to the west/ northwest
- Receptor M - Recreational users at Footpath: 32RAM/ Peel Monument
- Receptor N - Recreational users of PRow to the east/ northeast
- Receptor O - Residents at scattered farmsteads to the east/ northeast

Post Completion Stage

Landscape Effects (Year 1 Scenario)

14.128 The predicted operational effects are considered with reference to the published landscape character assessments, local landscape character and site-specific landscape features. They consider a worst-case scenario 'Year 1' of completion with all completed development in place, prior to the establishment of mitigation planting. The landscape effects of the Proposed Development are detailed within the Table at **Volume 3: Technical Appendix 14.B**.

Landscape Character Assessments

14.129 In the context of the national and county scale landscape character assessment studies, the completed and operational development will have relatively localised implications and effects on the identified landscape character areas. This is reflective of the generally extensive nature of these landscape character areas.

14.130 The Proposed Development would have a direct effect upon limited parts of the published landscape character studies and assessed effects would vary from **Negligible** overall for the extensive Natural England, National Character Area Profile (NCA) 54: Manchester Pennine Fringe to **Moderate/ Minor Adverse** for the Greater Manchester Landscape Character and Sensitivity Assessment: Urban Fringe Farmland LT and the Bury Landscape Character Assessment: Fringe Industrial Brook LT.

14.131 NCA 54: Manchester Pennine Fringe: The Proposed Development would form a Minor component of this extensive NCA and therefore the magnitude of change would be Negligible. Proposed Development would extend the built form of Walshaw and would incorporate embedded green infrastructure with proposed mitigation planting and landscape and biodiversity enhancements. Overall assessed effects would be **Negligible**.



- 14.132 Greater Manchester Landscape Character and Sensitivity Assessment: Urban Fringe Farmland LT provides an overall sensitivity rating of Medium for the development scenario 2-3 storey residential housing and The LT provides 'Guidance and opportunities for future development and landscape management/enhancement'. The landscape mitigation embedded within the Parameters Plans makes provision for the implementation of the recommendations within the LT by siting development on lower land following the existing field pattern, providing areas incorporate SUDS and providing opportunities to improve the hedgerow network resulting in a low magnitude of change and **Moderate/ Minor Adverse** effects.
- 14.133 Bury Landscape Character Assessment: Fringe Industrial Brook LT covers multiple smaller areas across Bury and provides guiding principles for development. The landscape mitigation embedded within the Parameters Plans makes provision for the implementation of the guiding principles within the LT. The embedded green infrastructure runs alongside Walshaw Brook providing opportunities to repair and improve hedgerows and introduce woodland planting. There would inevitably be a change in land use from fields to development resulting in a Medium/ Low magnitude of change and **Moderate/ Minor Adverse** effects.

Site and Immediate Context

- 14.134 The nature of the direct change to the landscape character of the Site and its Immediate Context will be notable, yet it will reflect the type of development present and visible within the context of the Site. The magnitude of the landscape change arising from the Proposed Development will be moderated in part by the adjacent settlement edge context and the proposed green infrastructure.
- 14.135 Overall, the magnitude of landscape change arising from the completed Proposed Development upon the landscape of the Site and its immediate context will be Medium. In combination with the Medium sensitivity of this landscape this will result in a **Moderate Adverse** landscape effect. This overall level of landscape change and effect is not unusual for a development of this nature at a localised and site wide landscape scale. The GI proposals will deliver landscape benefits that will assist in restricting the extents of any Adverse landscape effect. This will be further mitigated and reduced in the short, medium and longer term by the management and maturing of the extensive landscape and planting proposals.

Visual Effects (Year 1 Scenario)

- 14.136 A comprehensive visual impact assessment of the Proposed Development has been undertaken to determine the potential effects upon surrounding receptors following completion of the Proposed Development.
- 14.137 Two assessments have been conducted for receptors during the operational stage of the Proposed Development. The first considers the effects upon full completion of the development and in the winter period (i.e. the visual screening effects of any deciduous foliage in the summer is not taken into account). This considers a worst-case scenario 'Year 1' of completion with all completed development in place, prior to the establishment of mitigation planting.



- 14.138 The second predicts the residual effects 15 years after completion and in the summer period (thus enabling the effectiveness of any planting to be evaluated). This assessment is provided within the Residual Effects section.
- 14.139 A series of photo viewpoints, related plans and a Visual Effects Table (**Volume 3: Technical Appendix 14.C**) are included and collectively detail and support the description of the likely visual effects arising from the Proposed Development.

Effects upon Visual Receptors

- 14.140 The ZTV (**Figure 14.5 & 14.6** at the end of this Chapter) of the Proposed Development identifies the surrounding land from within which views towards any part of the Proposed Development are likely to be possible. The ZTV is not however, an indicator of the effect of the Proposed Development on the view but simply, its visible extent in the surrounding landscape.
- 14.141 A computer modelled ZTV for the Proposed Development was initially prepared based upon landform data and proposed building heights. This has then been reviewed on Site and refined to take account of the visual 'screening' provided by buildings, trees, hedgerows and other features.
- 14.142 The ZTV of the Proposed Development includes the land to the south of the Site and extends just past Walshaw Road. Land immediately to the north and east of the Site is included within the ZTV but existing residential development starts to restrict visibility any further. Views are restricted beyond Woolford settlement to the east and southeast. The ZTV includes areas of higher land to the west/ northwest, northeast and the north including the higher land at Ramsbottom over 3.5km away.
- 14.143 There could be some limited locations (beyond the extent of the ZTV shown) that could have a potential distant or very limited view to a part of the development. Equally, there could be some locations shown within the ZTV that would not experience any views to the resultant development.
- 14.144 The effects of the Proposed Development upon individual identified visual receptors are detailed in the Visual Effects Table (**Volume 3: Technical Appendix 14.C**). The following summarises the visual effects of the Proposed Development upon full completion and prior to the establishment of mitigation planting, which is assessed in the Residual Effects section. Receptor references refer to the Visual Effects Table and corresponding locations are provided on **Figures 14.5 and 14.6**.

Residents

- 14.145 Residents at home with primary views from ground floor / garden and upper floors as considered to have a high visual susceptibility to change and residents with secondary views (primarily from first floor level) are considered to be of Medium susceptibility.
- 14.146 The closest and clearest views of the built development would be from properties adjacent to the development:
- Receptor C – Residents facing onto the Site – **Major/ Moderate Adverse** effects



- Receptor D - Residents at Scobell Street with properties backing onto the Site – **Major/ Moderate Adverse** effects

14.147 Other properties adjacent to the Site have lower effects due to oblique views and/ or boundary vegetation:

- Receptor E – Residents at Copthorne Cattery – **Moderate Adverse**
- Receptor F - Residents at Collins Street/ Pleasant Street – **Moderate/ Minor Adverse**

14.148 For the following receptors who are not within the immediate vicinity of the Site assessed effects at year 1 would also be slightly lower as views of development would be filtered/ screened by surrounding development on intervening vegetation:

- Receptor G – Residents at Walshaw (not directly adjacent to the Site) – **Minor Adverse**
- Receptor I – Residents along Walshaw Road – **Moderate Adverse/ Minor**

14.149 For residents further afield (over 1.5km), views of development would be glimpsed within the wider context of Bury and have **Negligible** effects at year 1.

- Receptor K - Residents at scattered farmsteads to the west/ northwest - **Negligible**
- Receptor O - Residents at scattered farmsteads to the east/ northeast - **Negligible**

Public Rights of Way (PRoW) and other footways

14.150 Public rights of way / footways where attention is primarily focused on the landscape and on particular views are considered to have a high susceptibility to change.

14.151 The clearest views of development from PRoW will be experienced generally by the following receptors identified internally within the Site and the immediate surroundings where receptors will experience open views of development forming a main component within the view:

- Receptor A - Recreational users of PRoW crossing the Site – **Moderate Adverse**
- Receptor B - Recreational users of PRoW along the Site boundaries – **Moderate Adverse**
- Receptor J - Recreational users of PRoW to the south/ southeast of the Site – **Moderate Adverse**

14.152 Users of PRoW further away experience wide panoramic views of Bury from elevated positions. The following receptors are all over 1.5km from the Site and assessed effects at year 1 are all **Negligible** due to the distance, landform and intervening vegetation

- Receptor L - Recreational users of PRoW to the west/ northwest - **Negligible**
- Receptor M - Recreational users of PRoW to the east/ northeast - **Negligible**
- Receptor N - Recreational users of PRoW to the east/ northeast – **Negligible**



Road and Transport Users

- 14.153 Road users along Scobell Street/ Church Street (Receptor H) would experience a range of views including existing housing and vegetation along the Site boundary as well as an introduction of development towards the northwest corner of the Site resulting in **Moderate/ Minor Adverse** effects at year 1.

Mitigation

Construction Stage

- 14.154 The location and design of temporary site compounds, lighting, signage and perimeter screen fencing, combined with effective project management would seek to ensure that the potential landscape and visual effects are mitigated and minimised during the construction phase and will be subject to condition.
- 14.155 It is anticipated that the construction working methods will seek to adopt best practices and a detailed Construction Environmental Management Plan (CEMP) will be agreed with the Local Planning Authorities and Statutory Bodies where necessary.
- 14.156 Protective fencing and measures in accordance with BS 5837 (Trees in Relation to Construction) would be implemented as required to protect the retained landscape features within the Site. The removal of any mature trees or vegetation would be undertaken outside the bird nesting season (or would otherwise if unavoidable, be inspected prior to removal by a suitably qualified ecologist and only removed following confirmation that there are no nesting birds present).
- 14.157 Early in the construction period for each phase, earthworks operations would also occur for a short period of time to construct the attenuation. The details of the proposed works are not known at this stage. However, it is anticipated that they would comprise excavation of the existing ground levels to an appropriate depth to construct development platforms, roads, swales and storage areas. Any visible depressions would then be planted with native marginal species or sown with a wet grass seed mix as appropriate.
- 14.158 Proposed landscape planting should be undertaken, progressively, as early as possible during construction to enable temporary landscape and visual effects from construction and after to completion to be mitigated as quickly as possible.
- 14.159 The use, location, extent and design of any temporary fencing will be determined at the detailed design stage and in consultation with the relevant authorities and surrounding properties. Particular attention will be paid to the potential visual effects upon those receptors within The Site and at The Site peripheries with the clearest views towards the construction activity.



Post-Completion Stage

- 14.160 The key principles of an overarching landscape mitigation are described earlier within this chapter as part of the embedded mitigation. The embedded mitigation is shown 12221-FPCR-XX-XX-DR-A-0004-P02-Parameter Plan could be developed and delivered at the detailed stage.
- 14.161 With regards landscape and visual assessment, the key objectives of the landscape and GI proposals for the scheme are to:
- Assist in assimilating the built development proposals and in establishing an appropriately robust and cohesive landscape setting within which the new built development and infrastructure proposals will be sited.
 - Mitigate and minimise as far as practicable the potential landscape and visual effects arising from the Proposed Development.
 - Secure and maximise biodiversity interest, through conservation, enhancement and creation of habitats and green spaces.
 - Contribute positively towards the landscape guidelines and recommendations set out by the planning policies, published landscape character and GI studies.
 - Achieve an overall development and landscape solution that recognises the character and features of the local landscape and draws upon these in the outline and subsequent detailed proposals.

Landscape and Green Infrastructure (GI) Mitigation and Proposals

- 14.162 The Parameters Plan fixes and defines the location of proposed residential development and embedded mitigation planting and the relationship with the proposed built development on the Site.
- 14.163 In summary, this includes:
- Retention of the existing PRoW Routes through the Site with tree planting and a green buffer to some areas.
 - A green corridor through the development providing a green buffer to Walshaw Brook and retaining views towards Peel Monument. The corridor would provide opportunities to improve hedgerows and native shrub planting along Walshaw Brook.
 - Provision of public open space land dedicated to landscape, SUDS and habitat related proposals with opportunities for woodland planting.
 - Sustainable drainage ponds are sited in the lower lying southeast and southwest of the Site. In addition to satisfying drainage requirements, these will be designed for landscape, amenity and biodiversity benefits, with other surrounding habitats including open conservation grassland and scrub.
 - Planting to the northern and western boundaries to soften the built edge providing a screening function and assisting to assimilate the built form within the landscape as it matures.
 - Residential development located close to the settlement edge of Walshaw would read an extension of existing development.



- Careful attention to the earthworks and drainage strategies will ensure that an integrated solution is delivered that considers and addresses the relevant landscape and visual issues and mitigates any potential adverse effects as far as practicable. The earthworks strategy will balance cut and fill material across the Site, seeking to reflect the natural topography and minimise level changes.

14.164 Detailed planting plans will be devised in accordance with the principles established at a later stage for the Proposed Development.

14.165 On-plot landscaping, detailed at a later stage can also contribute to the character of the landscape, a high-quality landscape which incorporates street and garden tree planting will further minimise the assessed landscape and visual effects.

Landscape Management

14.166 All of the landscape, GI and habitat areas will be managed and maintained in the long term. It is currently anticipated that this will be achieved through the implementation of a comprehensive Landscape and Ecological Management Plan (LEMP) to be determined alongside other relevant site management objectives and requirements, including those required to achieve biodiversity net gain. The subsequent detailed design and management works for the landscape and GI areas, will be advanced in close collaboration with the relevant authorities and other technical and environmental professionals. A clear management and monitoring strategy will be devised.

Building Design

14.167 The Proposed Development incorporates building height parameters (maximum 12m) reflective of local building heights and responsive to the Site and locations within. Buildings will have regard to locally characteristics and careful consideration given to their orientation and use of materials and recessive colours. Further detailed consideration of the design of the buildings will be undertaken at a later stage and will seek to minimise the impact upon the local landscape as far as practicable.

14.168 The 'Assessment of Effects' Section has assessed landscape and visual effects based on the maximum building heights (12m), as shown on the Scale Parameter Plan. Whilst these maximum parameters have been set, building heights may be lower.

Residual Effects

Construction Stage

Landscape Effects

14.169 The residual landscape effects during construction will remain broadly as stated for construction in the earlier Assessment of Effects Section. For the landscape of the Site and its immediate context the residual construction effect will be **Moderate/Major Adverse** and is **Significant** under the EIA Regulations, however this is a temporary effect.



Visual Effects

- 14.170 Overall, there will be no change to the visual effects for construction as set out in the earlier Assessment of Effects Section. **Significant**, but temporary Adverse effects under the EIA Regulations will occur for users of PRoW crossing the Site (receptor A), users of PRoW along the Site boundaries (receptor B) and users of PRoW to the south/ southeast of the Site (Receptor J) with **Major/ Moderate Adverse** effects.
- 14.171 **Significant**, but temporary Adverse effects under the EIA Regulations will also occur for residents of properties facing onto the Site (Receptor C) and residents at Scobell Street with properties backing onto the Site (Receptor D) with **Major/ Moderate Adverse** effects.
- 14.172 The CEMP will need to carefully consider these receptors in particular to minimise effects.

Residual Effects (Year 15)

Landscape Effects

- 14.173 An assessment of the residual landscape effects of the proposals (at Year 15) on the identified receptors is included in the Landscape Effects Table at **Volume 3: Technical Appendix 14.B**. None of the residual effects are assessed as Significant under the EIA Regulations. The assessed residual effects are summarised below: -
- Natural England, National Character Area Profile (NCA) 54 - Manchester Pennine Fringe - **Negligible**
 - Greater Manchester Landscape Character and Sensitivity Assessment: Landscape Type (LT) Urban Fringe Farmland – **Minor Adverse**
 - Bury Landscape Character Assessment (2009): Landscape Type (LT): Fringe Industrial Brook – **Minor Adverse**
 - Site and Immediate Context – **Moderate/ Minor Adverse**
- 14.174 The landscape effects of the Proposed Development will reduce further over time following the establishment and subsequent maturing of the proposed planting and habitats.
- 14.175 Maturing planting within the green corridors and areas of public open space will as it matures will, alongside the existing conserved woodland, trees and hedgerows, begin to provide a mature landscape structure absorbing the Proposed Development within its context.
- 14.176 The comprehensive management of not only the proposed planting and habitats but also the existing conserved trees and hedgerows within the Site will also assist in reducing the initial landscape effects over time.



Visual Effects

- 14.177 The visual effects of the Proposed Development will similarly reduce over time following the establishment and subsequent maturing of the proposed planting and habitats. The comprehensive management of the proposed planting and habitats and existing conserved trees and hedgerows will also assist in reducing the initial visual effects over time.
- 14.178 An assessment of the residual visual effects of the proposals (at Year 15) on the identified receptors is included in the Visual Effects Table at **Volume 3: Technical Appendix 14.C**.
- 14.179 None of the receptors have residual effects are assessed as Significant under the EIA Regulations.
- 14.180 The assessed residual effects are summarised below:

Residents

- 14.181 The greatest assessed visual effects are for residents within the immediate vicinity of the Site listed below:
- For residents of properties facing onto the Site (Receptor C) the proposed embedded planting along the north and west boundary would mature and soften views of development resulting in **Moderate Adverse** effects at year 15.
 - Residents at Scobell Street with properties backing onto the Site (Receptor D) will continue to have open/ filtered views onto development and assessed effects would not change from the year 1 assessment of **Moderate Adverse**.
 - Other properties adjacent to the Site have lower effects due to oblique views and/ or boundary vegetation. For the receptors listed below, at year 15, planting will be maturing and will help soften views of Proposed Development:
 - Receptor E – Residents at Copthorne Cattery – **Moderate/ Minor Adverse**
 - Receptor F – Residents at Collins Street/ Pleasant Street – **Minor Adverse**
 - For the following receptors who are not within the immediate vicinity of the Site assessed effects at year 15 would also be slightly lower as views of development would be filtered/ screened by existing surrounding development on intervening vegetation. The proposed year 15 planting will be maturing and help to soften views of Proposed Development:
 - Receptor G – Residents at Walshaw (not directly adjacent to the Site) – **Minor Adverse/ Negligible**
 - Receptor I – Residents along Walshaw Road – **Minor Adverse**
 - For residents further afield (over 1.5km), views of development would be glimpsed within the wider context of Bury and effects are assessed as **None** year 15, as the scheme assimilates into the landscape:



- Receptor K - Residents at scattered farmsteads to the west/ northwest – None
- Receptor O - Residents at scattered farmsteads to the east/ northeast - None

Public Rights of Way (PRoW) and other footways

14.182 The clearest views of development from PRoW will be experienced generally by the following receptors identified internally within the Site and the immediate surroundings where receptors will experience some open views of development which would form a main component within the view:

- Receptor A - Recreational users of PRoW crossing the Site – **Moderate/ Minor Adverse**
- Receptor B - Recreational users of PRoW along the Site boundaries – **Moderate/ Minor Adverse**
- Receptor J - Recreational users of PRoW to the south/ southeast of the Site – **Moderate/ Minor Adverse**

14.183 At year 15 green infrastructure along some areas of the PRoW would have established and begin to soften views of Proposed Development.

14.184 Users of PRoW further away experience wide panoramic views of Bury from elevated positions. The following receptors are all over 1.5km from the Site and assessed effects at year 15 are all **None** due to the distance, landform and intervening vegetation.

- Receptor L - Recreational users of PRoW to the west/ northwest - **None**
- Receptor M - Recreational users of PRoW to the east/ northeast - **None**
- Receptor N - Recreational users of PRoW to the east/ northeast – **None**

Road and Transport Users

14.185 Road users along Scobell Street/ Church Street (Receptor H) would experience a range of views including existing housing and vegetation along the Site boundary as well as an introduction of development towards the northwest corner of the Site resulting in **Minor Adverse** effects at year 1. At year 15 green infrastructure within the northwest corner of the Site will have established and begin to soften views of Proposed Development

14.186 The maturing and management of the existing and new embedded mitigation planting will offer noticeable visual improvements and mitigation to the surrounding identified receptors. Planting that will be detailed within the embedded green infrastructure framework will also play a key role in minimising visual effects as it matures.



Cumulative Effects

Allocation JP7 Elton Reservoir and JPA9 Walshaw

- 14.187 Allocation JPA9 includes the Site and the land immediately to the east and south of the Site. The allocation is for around 1,250 houses. Allocation JP7 Elton Reservoir is located over 2km from the Site and is allocated for around 3,500 houses and partially lies within the Green Belt designation. The effects on the Site and both allocated sites combined are assessed below.

Landscape Effects

- 14.188 The Visual envelope of the Proposed Development is shown on Figures 14.5 & 14.6 at the end of this Chapter.

National Character Area 54 – Manchester Pennine Fringe

- 14.189 Both the Site, the wider Allocation JPA9 Walshaw and Allocation JPA7 Elton Reservoir fall within the Natural England NCA (NCA) 54 - Manchester Pennine Fringe. Whilst combined development of the Sites collectively will increase the level of urbanisation within Bury, the NCA covers a very extensive landscape tract. The profile description recognises that there is high level of urban areas within the NCA. Assessed effects of both developments combined on the NCA overall remains **Negligible**.

The Greater Manchester Landscape Character and Sensitivity Assessment

- 14.190 The Greater Manchester Landscape Character and Sensitivity Assessment covers both the Site, the wider Allocation JPA9 Walshaw and Allocation JPA7 Elton. Whilst the Landscape Type covered various areas across Greater Manchester, all sites fall within the Urban Fringed Farmland Landscape Type. Combined, this would be an increase in 4,750 houses to the Landscape Type which would bring a change to the wider landscape type. The study judges this LT to have a Medium overall sensitivity to 'development scenario 2-3 storey residential housing'.
- 14.191 Both the allocated sites combined have the opportunity to contribute to the 'Guidance and opportunities for future development and landscape management/enhancement'. Both the allocated developments would be located on relatively low flat land that would not affect the key views noted in the guidance. Assessed effects would increase to **Moderate Adverse** during construction and upon completion (year 1) reducing to **Moderate/ Minor Adverse** at year 15.

The Bury Landscape Character Assessment (2009)

- 14.192 The Site and land to the south and east fall within the Landscape Type: Fringe Industrial Brook
- 14.193 The LT provides general guiding principles for the area which include strengthening wildlife corridors and preventing boundary loss and fragmentation around urban fringes. The Site combined with the JPA9 Walshaw Allocation will be a large increase in change of land use from field to development. Whilst the allocation could contribute to some of the guiding principles, the combined sites would ultimately result



in an increase in assessed effects to **Moderate Adverse** at year 1 and **Moderate/Minor Adverse** at year 15.

- 14.194 The JPA7 Elton Reservoir Allocation lies within the Canal and River Corridor Landscape Type and there is no intervisibility with the Site and would therefore not affect the assessed effects.

[The Site and Immediate Context](#)

- 14.195 The Site and Immediate context to the south and east fall within the JPA9 Walshaw Allocation. The allocation proposes around 1,250 houses. This would inevitably be a large change to the land use resulting in an increase in effects to **Major/ Moderate Adverse** during construction and year 1. However, as the green infrastructure planting matures the Proposed Development will further assimilate into the landscape reducing effects to **Moderate Adverse**. There is no intervisibility between the Site and the JPA7 Elton Allocation.

[Visual Effects](#)

- 14.196 The Visual Envelope of the Proposed Development is shown on Figure 14.5 at the end of the Chapter. The Site, the wider Allocation JPA9 Walshaw and Allocation JPA7 Elton Reservoir combined are considered within the visual analysis below.
- 14.197 JPA7 Elton Reservoir has no intervisibility with the Site. It is considered that the Site and this allocation would only be viewed together from long distance views (Receptors K, L, M, N O).
- 14.198 Recreational users of the PRoW crossing the Site (Receptor A) and along the Site boundaries (Receptor B) would already experience close up views of Proposed Development within the Site. Combined assessment with the JPA9 Walshaw Allocation site would remain the same with **Major/ Moderate Adverse** Effects at Construction. Assessed effects reduce to **Moderate Adverse** at year 1 and reduce again at year 15 to **Moderate/ Minor Adverse**.
- 14.199 Residents at properties facing onto the Site (Receptor C) would already experience **Major Adverse** effects at year 1, and **Moderate Adverse** effects at year 15. The Proposed Development within the Site would still form the main element within the view and assessed effects would not change as a result of the cumulative development.
- 14.200 Residents at Scobell Street with properties backing onto the Site (Receptor D) would experience views of development within the Site from upper floor rear windows only. The Proposed Development within the Site would likely screen most views to the further JPA9 Walshaw Development. Assessed effects would remain **Major/ Moderate Adverse** at construction and **Moderate Adverse** at year 1 and year 15.
- 14.201 Residents at Copthorne Cattery (Receptor E) and at Collins Street/ Pleasant Street (Receptor F) may experience a higher proportion of development with the combined development of the JPA9 Walshaw Allocation. This would be viewed in context with the surrounding development of the Site and houses at Walshaw and assessed effects would remain **Moderate Adverse** at construction and year 1 and **Moderate/ Minor Adverse** at year 15.



- 14.202 Residents at Walshaw (not directly adjacent to the Site) (Receptor G) would experience partial, glimpsed views of Proposed Development within the Site. Development of the JPA9 Walshaw Site might cause a slight increase of development within the views. This would be seen in context with existing surrounding houses and Proposed Development within the Site and combined assessed effects would remain **Minor Adverse** at construction and year 1 and **Minor Adverse/ Negligible** at year 15.
- 14.203 Road users along Scobell Street/ Church Street (Receptor H) would experience views of Proposed Development within the Site which is likely to screen any views of the JPA9 Walshaw development. Views would remain focused on the road. Assessed effects would remain **Moderate/ Minor adverse** at construction and year 1 and **Minor Adverse** at year 15.
- 14.204 Residents along Walshaw Road (Receptor I) would experience open views onto development at the JPA9 Walshaw allocation resulting in **Moderate Adverse** effects at construction, year 1 and year 15.
- 14.205 Recreational users of PRoW to the south/ southeast (Receptor J) fall within the JPA9 Walshaw allocation. Users of the PRoW would experience open views of development at a close range and assessed effects would increase to **Major Adverse** Effects at construction, **Major/ Moderate Adverse** at year 1 and **Moderate/ Minor Adverse** at year 15.
- 14.206 Recreational users of PRoW to the west/ northwest and scattered farmsteads to the west/ northwest (Receptor L and Receptor K) and users of PRoW to the east/ northeast and scattered farmsteads to the north/ northeast (Receptor N and Receptor O) and users of PRoW at Peel Monument (Receptor M) would experience a very small increase in development. From this distance, the Proposed Developments would form a very small portion of a much wider view, and assessed effects would therefore remain **Negligible – None**.

Summary and Conclusions

- 14.207 The Proposed Development has been designed with embedded mitigation. These proposals have been designed to take on board the recommendations of the relevant published landscape character guidance.
- 14.208 No special designations relating to landscape quality of value have been identified within the Site or immediate context. Grade II* Listed Christ Church Walshaw Parish Church lies 280m southwest of the Site and Grade II Listed Peel Monument is located over 4km North of the Site. Both have some intervisibility with the Site.
- 14.209 The Site falls within the JPA9 Walshaw Allocation within the Greater Manchester Places for Everyone Joint Development Framework Plan Document which allocates the land and wider context for 1,250 homes.
- 14.210 The Site and immediate context falls within the NCA 54: Manchester Pennine Fringe. Due to the scale of the NCA, development of the Site would result in **Negligible** effects upon construction and completion. Residual effects would remain **Negligible**, which is **Not Significant**.



- 14.211 The Site falls within Greater Manchester's Landscape and Sensitivity Assessment: Landscape Type: Urban Fringe Farmland. The landscape mitigation embedded within the Parameters Plans makes provision for the implementation of the recommendations within the LT by siting development on lower land following the existing field pattern, providing areas to incorporate SUDS and providing opportunities to improve the hedgerow network resulting in a low magnitude of change and **Moderate/ Minor Adverse** effects at construction stage and upon completion. Residual effects reduce to **Minor Adverse** once planting has matured, which is **Not Significant**.
- 14.212 The Site Falls within The Bury Landscape Character Assessment (2009): Fringe Industrial Brook LT which covers multiple smaller areas across Bury and provides guiding principles for development. The landscape mitigation embedded within the Parameters Plans makes provision for the implementation of the guiding principles within the LT, resulting in **Moderate Adverse** effects upon construction, reducing to **Moderate/ Minor Adverse** upon completions. Residual effects are assessed as **Minor Adverse** once planting has matured, which is **Not Significant**.
- 14.213 The nature of the direct change to the landscape character of the Site and its Immediate Context will be notable, yet it will reflect the type of development present and visible within the context of the Site. This overall level of landscape change and effect is not unusual for a development of this nature at a localised and site wide landscape scale. The GI proposals will deliver landscape benefits that will assist in restricting the extents of any Adverse landscape effect. This will be further mitigated and reduced in the short, medium and longer term by the management and maturing of the extensive landscape and planting proposals. At construction stage the Site and Immediate Context would have **Major/ Moderate** effects which **is Significant**. Effects would reduce upon completion to **Moderate Adverse**. Residual effects would reduce further to **Moderate/ Minor Adverse**, which is **Not Significant**.
- 14.214 At construction stage Receptors within the Site and within the immediate vicinity (Receptor A, B, C, D and J experience **Major/ Moderate Adverse** effects which **is Significant**. All other receptors have **No Significant effects** during construction.
- 14.215 Residents of properties facing onto the Site (Receptor C) would have **Major/ Moderate Adverse** effects at construction stage and upon completion which **is Significant**. Residual effects reduce to **Moderate Adverse** once planting starts to mature and soften views of development. All other receptors have **No Significant** effects upon completion.
- 14.216 There are **No Significant** residual visual effects.
- 14.217 Combined cumulative effects have been assessed with the Site, the JPA9 Walshaw allocation and the JP7 Elton Reservoir allocation. The Site forms part of the JPA9 Walshaw allocation. JPA7 Elton Reservoir allocation has no intervisibility with the Site.
- 14.218 Combined assessed effects on NCA 54: Manchester Pennine Fringe would remain **Negligible**. Whilst there is a slight increase of assessed effects on the Greater Manchester Landscape Character and Sensitivity Assessment and the Bury Landscape Character Assessment, assessed effects remain **Not Significant**.



- 14.219 The Site and Immediate context to the south and east fall within the JPA9 Walshaw Allocation. The allocation proposes around 1,250 houses. This would inevitably be a large change to the land use resulting in an increase in effects to **Major/ Moderate Adverse** during construction and year 1. However, as the green infrastructure planting matures the Proposed Development will further assimilate into the landscape reducing effects to Moderate Adverse. Combined effects would be **Significant** at construction and year 1 only.
- 14.220 Visually, it is considered that the Site and the JPA7 Elton Reservoir allocated site would only be viewed together from long distance views (Receptors K, L, M, N O) and there are **No Significant** visual effects for these receptors.
- 14.221 Receptors A B and D would already experience **Major/ Moderate Adverse** effects at construction stage due to the proximity of receptors to construction activities. Combined effects would not change from the assessed effects of the Site alone and would remain **Significant** at construction stage only.
- 14.222 Residents at properties facing onto the Site (Receptor C) would already experience **Major Adverse** effects at year 1, and **Moderate Adverse** effects at year 15. Assessed effects would not change as a result of the cumulative development and would remain **Significant** during construction and upon completion only. All other visual receptors have **No Significant** effects.
- 14.223 In conclusion, the overall assessment of the landscape and visual effects shows that the Site can successfully incorporate the Proposed Development adjacent to Walshaw settlement edge without significant long-term effects on the identified immediate and wider area landscape and visual receptors.



Reference List

- Guidelines for Landscape and Visual Impact Assessment, third edition (GLVIA3)
- LI TGN 02-21
- FPCR Ecological Appraisal – August 2024
- National Planning Policy Framework (FRAMEWORK, December 2023)
- Planning Practice Guidance (PPG)
- Greater Manchester Places for Everyone Joint Development Plan Document (PfE) (March 2024)
- Bury Unitary Development Plan (1997)
- Greater Manchester Green Infrastructure Framework (March 2011)
- Greater Manchester Tree and Woodland Strategy
- Bury Green Infrastructure Report
- Greater Manchester Landscape Character and Sensitivity Assessment
- Bury Landscape Character Assessment
- 12221-FPCR-XX-XX-DR-A-0004-P01-Parameter Plan
- 12221-FPCR-XX-XX-DR-A-0001-Framework Plan
- FPCR Figure 1 - Ariel Photograph Plan
- FPCR Figure 2 – Landscape Character
- FPCR Figure 3 - Designations
- FPCR Figure 4 - Topography
- FPCR Figure 5 & 6 Visual Appraisal
- FPCR Figures 7-28 Photo Viewpoints





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 Site Boundary

date	07/10/24	drwn/chkd	PIM / CEH
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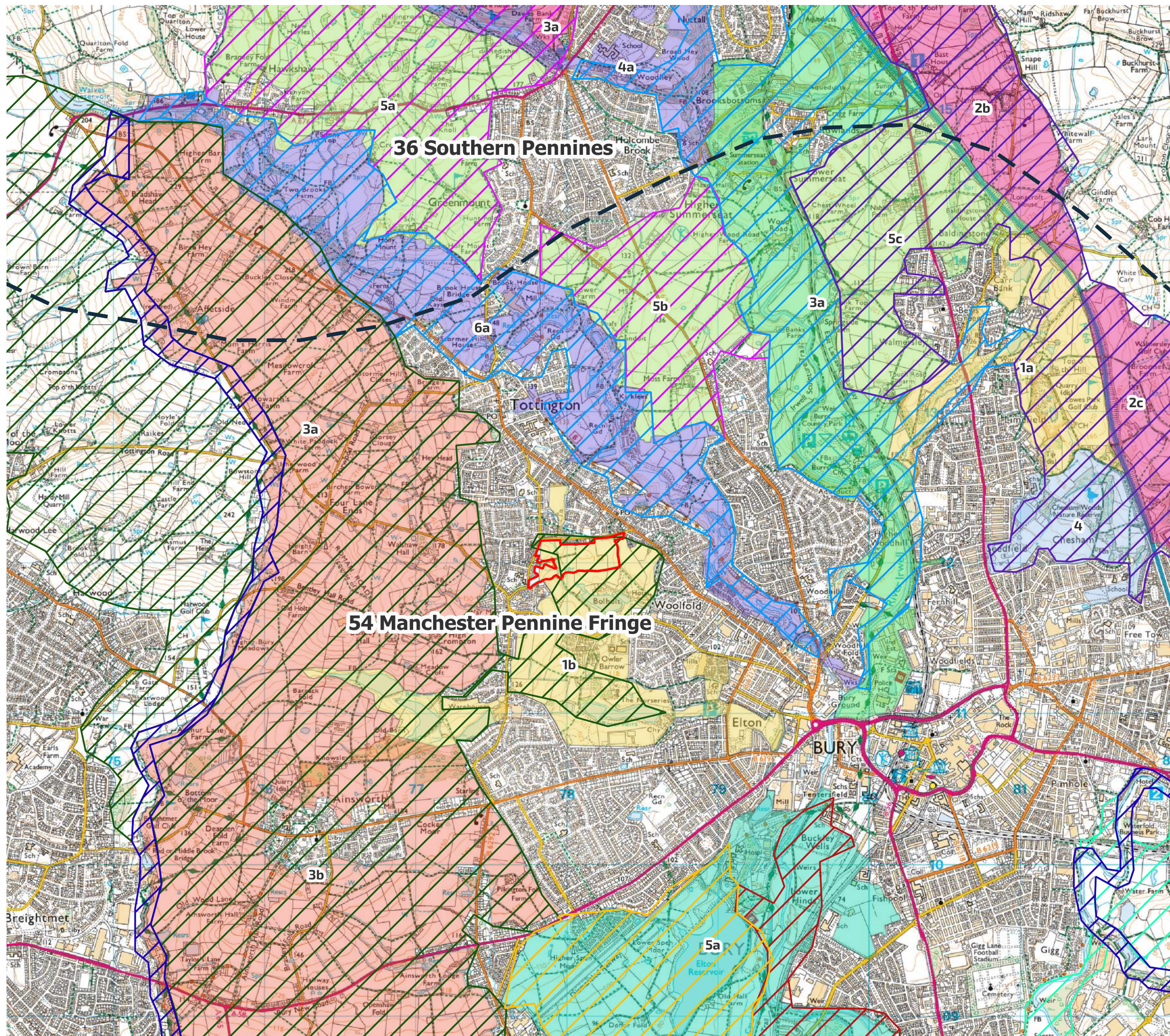
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project	

Land at Scobell Street, Bury

title	AERIAL PHOTOGRAPH PLAN	scale	1:25,000 @ A3
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client

Wain Estates

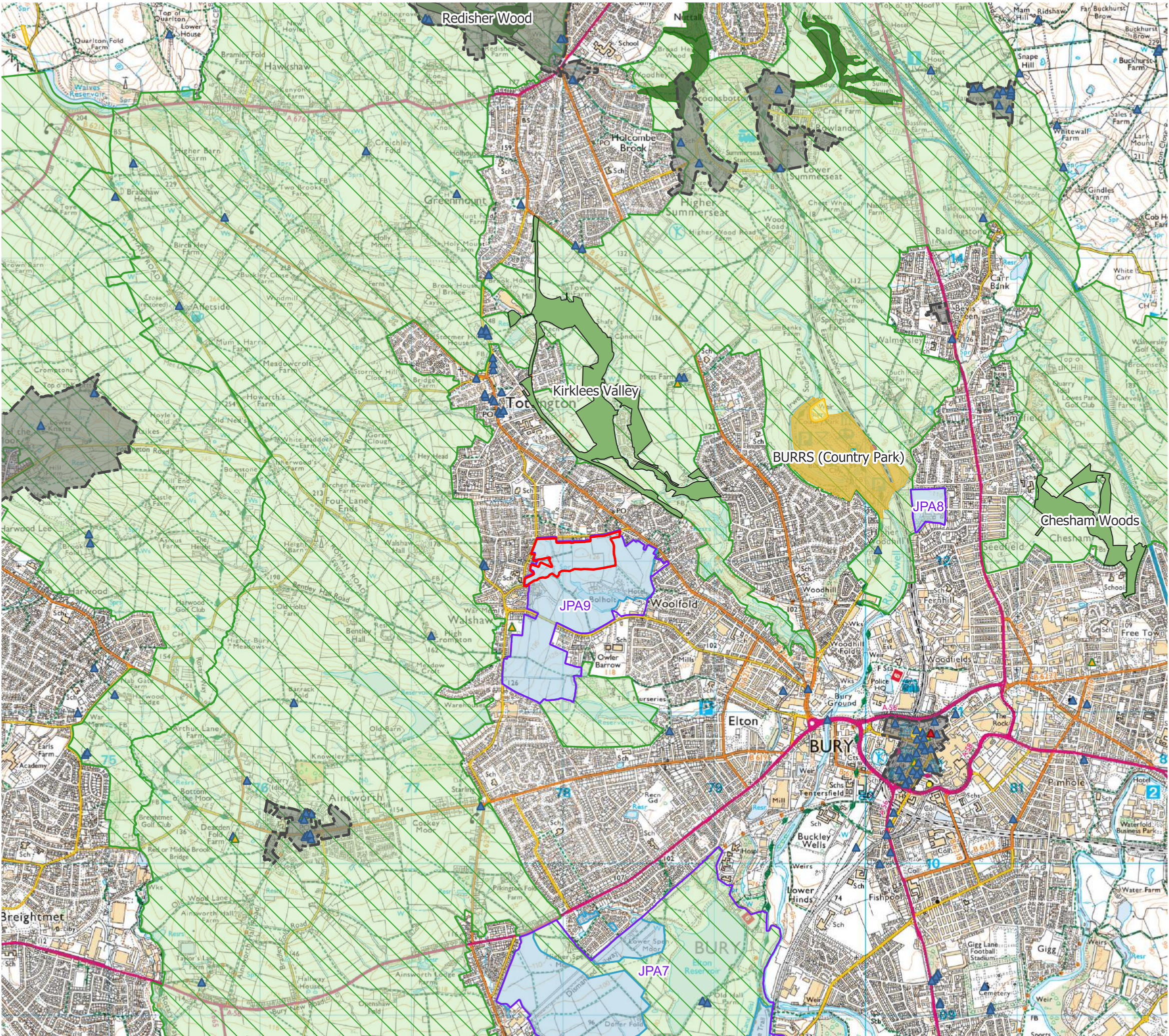
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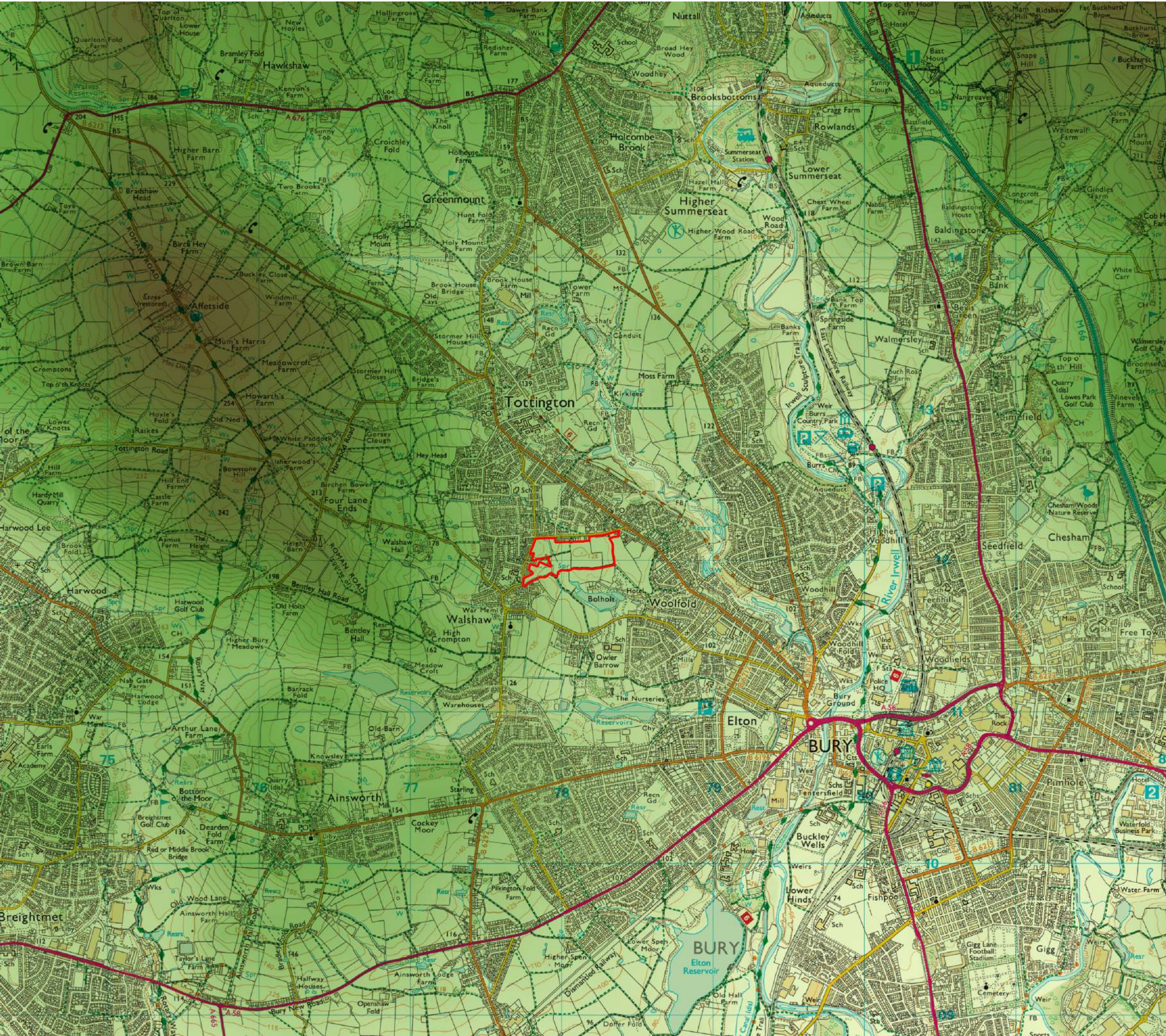
Land at Scobell Street, Bury

title LANDSCAPE CHARACTER AREA
PLAN
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FIGURE 14.2 A

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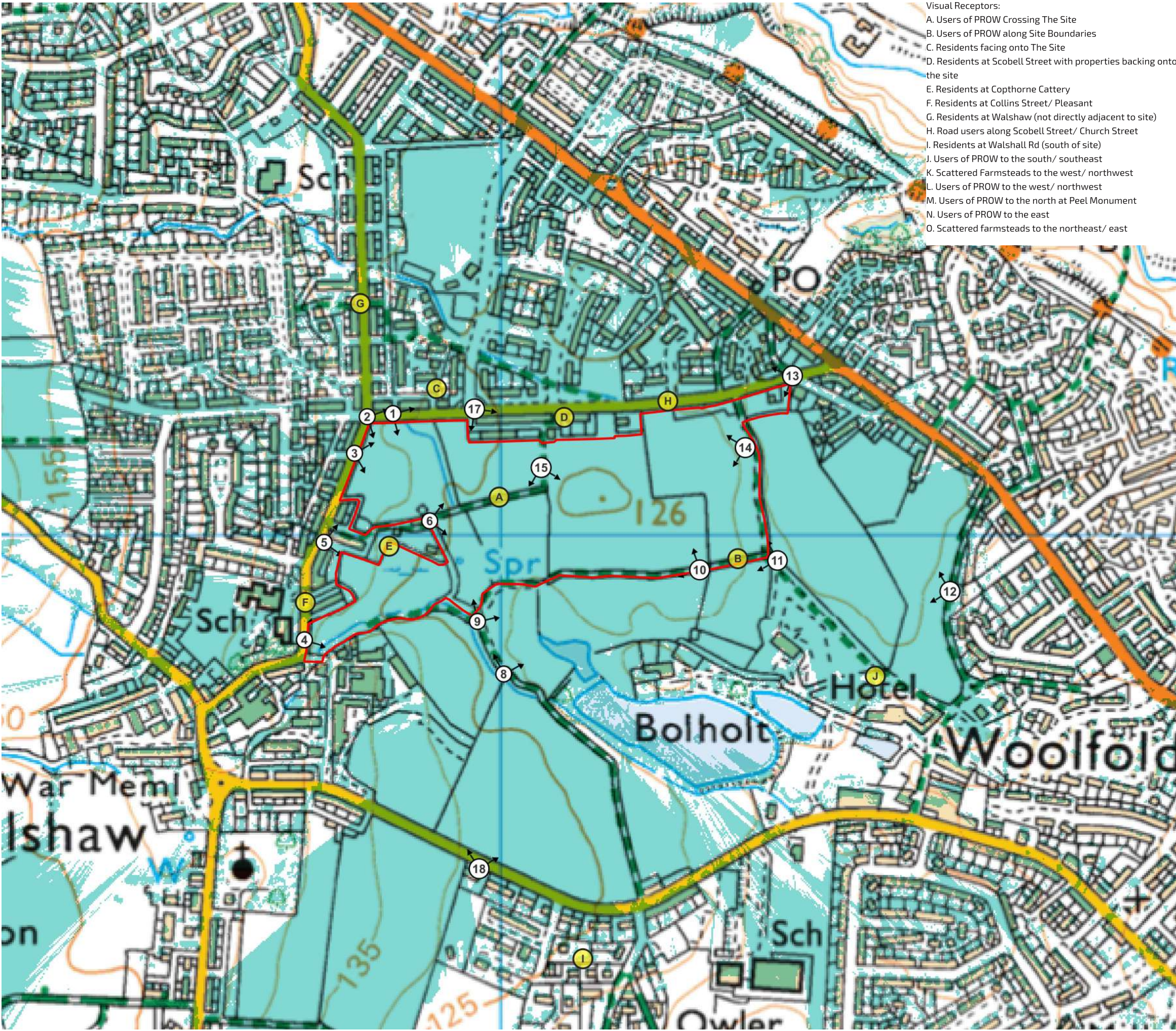
client
Wain Estates
project

Land at Scobell Street, Bury

title
TOPOGRAPHY PLAN
scale
1:25,000 @ A3

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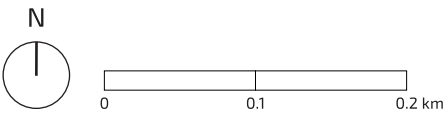
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- Visual Receptors:
- A. Users of PROW Crossing The Site
 - B. Users of PROW along Site Boundaries
 - C. Residents facing onto The Site
 - D. Residents at Scobell Street with properties backing onto the site
 - E. Residents at Copthorne Cattery
 - F. Residents at Collins Street/ Pleasant
 - G. Residents at Walshaw (not directly adjacent to site)
 - H. Road users along Scobell Street/ Church Street
 - I. Residents at Walshall Rd (south of site)
 - J. Users of PROW to the south/ southeast
 - K. Scattered Farmsteads to the west/ northwest
 - L. Users of PROW to the west/ northwest
 - M. Users of PROW to the north at Peel Monument
 - N. Users of PROW to the east
 - O. Scattered farmsteads to the northeast/ east

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Notes: The points used for the ZTV are based on drawing 12221-FPCR-XX-XX-DR-A-0004-P01-Parameter Plan. Building height is set to 12m above existing levels.

The surrounding context is modelled using LIDAR Composite First Return DSM (Digital Surface Model) 2022 - 2m published by the Department for Environment Food and Rural Affairs (DEFRA). This dataset is a raster elevation model at 2m spatial resolution, published in 2022. The first return DSM is produced from the first or only LIDAR signal returned to the sensor and includes heights of objects, such as buildings and vegetation, as well as the terrain surface where the first or only return was the ground.

- Site Boundary
 - Proposed Viewpoint Locations
 - Visual Receptors
 - Zone of Theoretical Visibility (ZTV)
- view is and ould
- seful in :fined it the ZTV i. For dicated ly offer
- accessible public viewpoints, and within the woodland blocks, which would usually prevent views out.

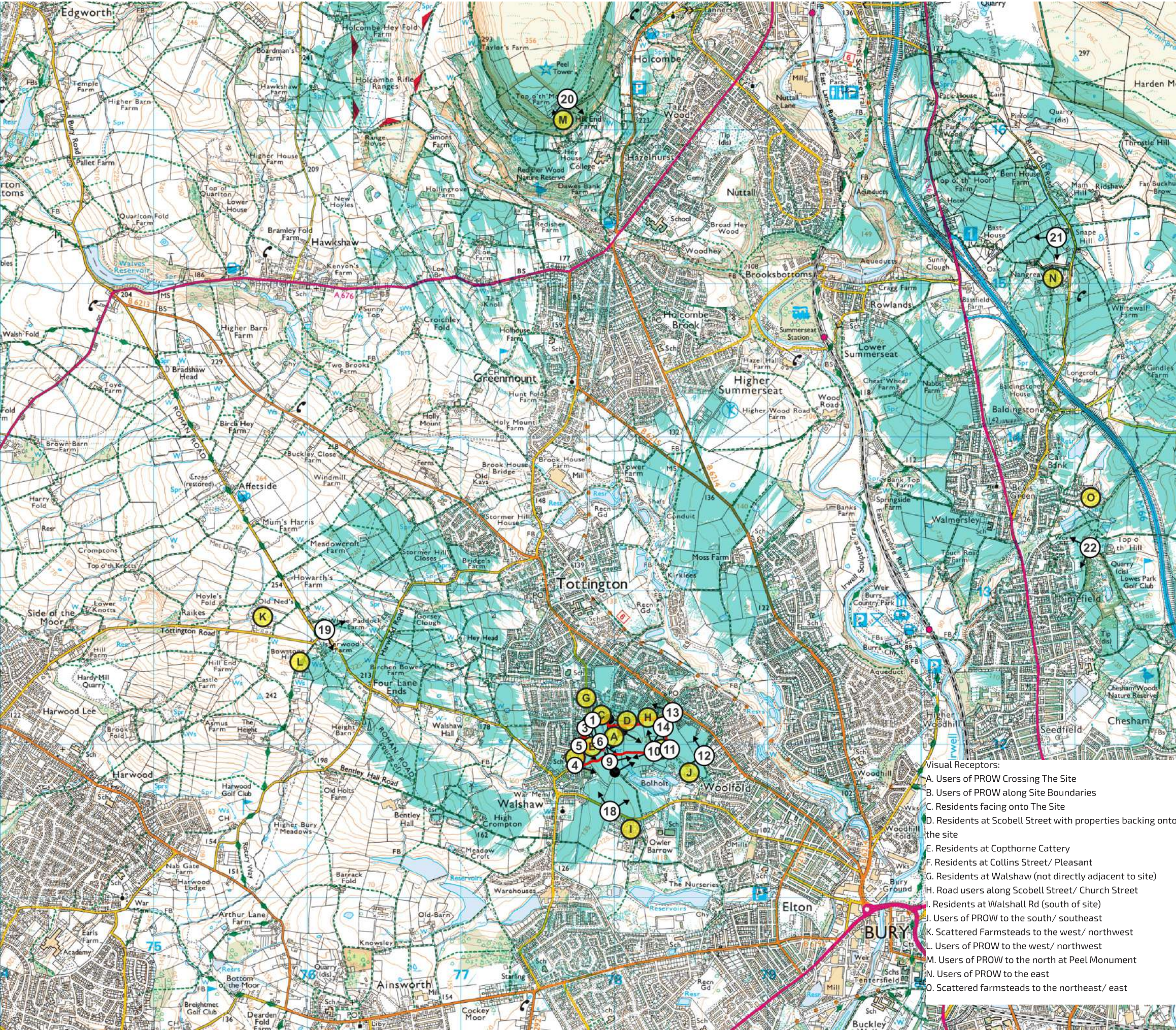
date 07/10/24 drwn/chkd PJM/ CEH

client Wain Estates project

Land at Scobell Street, Bury

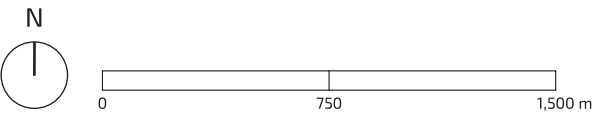
title PROPOSED VIEWPOINT LOCATION PLAN scale 1:5,000 @ A3 number rev

Figure 14.5 A



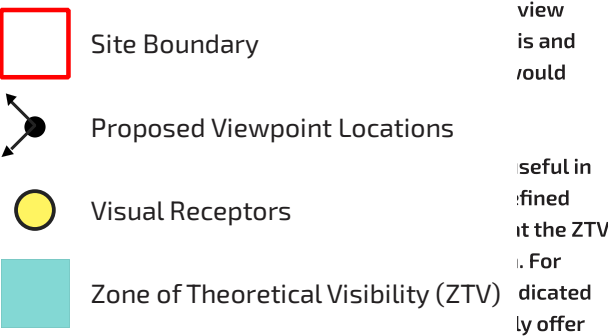
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Notes: The points used for the ZTV are based on drawing 12221-FPCR-XX-XX-DR-A-0004-P01-Parameter Plan. Building height is set to 12m above existing levels.

The surrounding context is modelled using LIDAR Composite First Return DSM (Digital Surface Model) 2022 - 2m published by the Department for Environment Food and Rural Affairs (DEFRA). This dataset is a raster elevation model at 2m spatial resolution, published in 2022. The first return DSM is produced from the first or only LIDAR signal returned to the sensor and includes heights of objects, such as buildings and vegetation, as well as the terrain surface where the first or only return was the ground.



accessible public viewpoints, and within the woodland blocks, which would usually prevent views out.

date 07/10/24

client Wain Estates

project Land at Scobell Street, Bury

title PROPOSED VIEWPOINT LOCATION PLAN

scale 1:25,000 @ A3

number

Figure 14.6

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Photo Viewpoint 1: View south from Scobell Street



Photo Viewpoint 1: Continued...

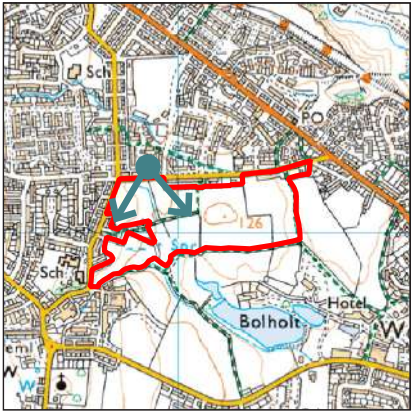


Photo Viewpoint 1

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 09:38
Camera make & model, sensor format & lens: Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 180° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

date 01/09/24 drwn/chkd PJM / SLS

client
Wain Estates
project
Land at Scobell Street, Bury

title
PHOTOVIEWPOINT 1
number
FIGURE 14.7
rev
A



Photo Viewpoint 2: View southeast from Scobell Street

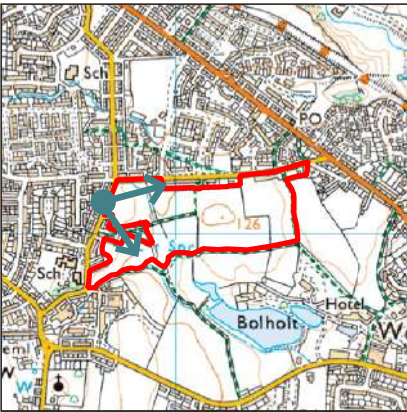


Photo Viewpoint 2

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 09:46
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 100° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

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**Land at Scobell Street,
Bury**

title
PHOTOVIEWPOINT 2
number
FIGURE 14.8

rev
A

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Houses off Scobell Street

The Site



Photo Viewpoint 3: View east from Church Street

Copthorne Cattery



Photo Viewpoint 3: Continued...

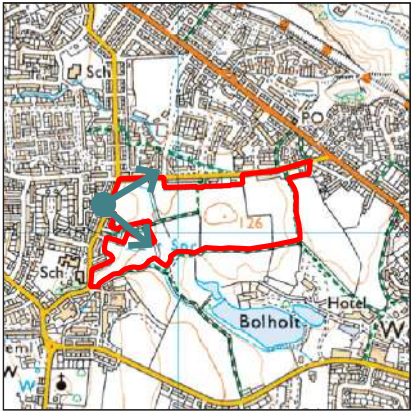


Photo Viewpoint 3

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 09:49
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 90° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

date 01/09/24 drwn/chkd PJM / SLS

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Wain Estates
project
Land at Scobell Street, Bury

title
PHOTOVIEWPOINT 3
number
FIGURE 14.9 rev **A**

Houses off Pleasant Street

The Site



Photo Viewpoint 4: View east from Church Street

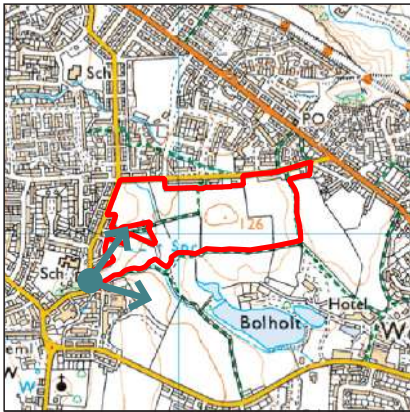


Photo Viewpoint 4

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 09:55
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 65° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

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Bury**

title
PHOTOVIEWPOINT 4

number
FIGURE 14.10

rev
A

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Photo Viewpoint 5: View east from Collins Street



Photo Viewpoint 5

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 10:00
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 90° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

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project	Land at Scobell Street, Bury		
title	PHOTOVIEWPOINT 5		
number	FIGURE 14.11	rev	A



Photo Viewpoint 6A: View north/ east from footpath 91TOT/ 92TOT crossing site



Photo Viewpoint 6A: Continued...

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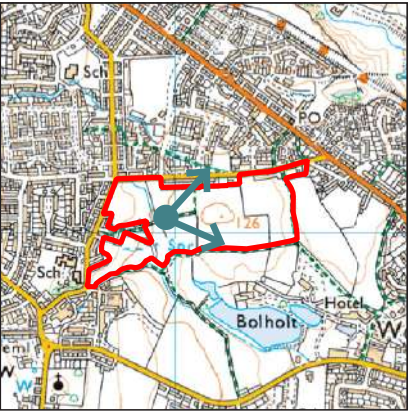


Photo Viewpoint 6A

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 10:09
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 85° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

date 01/09/24 drwn/chkd PJM / SLS

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Wain Estates
project
**Land at Scobell Street,
Bury**

title
PHOTOVIEWPOINT 6A

number
FIGURE 14.12

rev
A

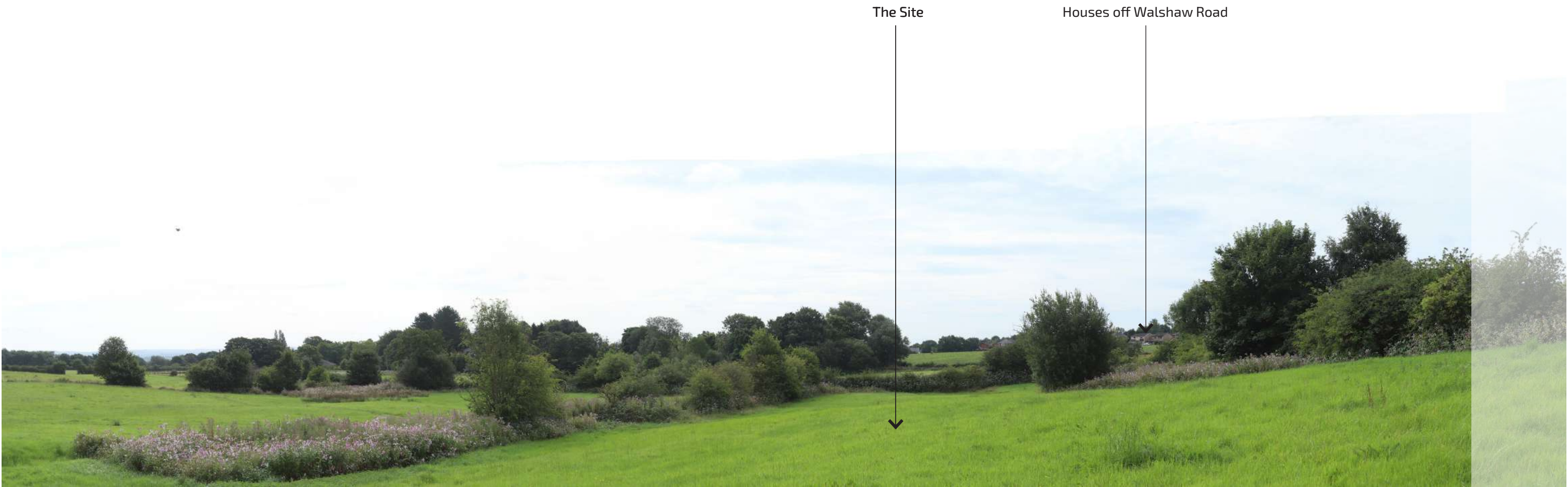


Photo Viewpoint 6B: View east/ south from 91TOT/ 92TOT crossing site



Photo Viewpoint 6B: Continued...

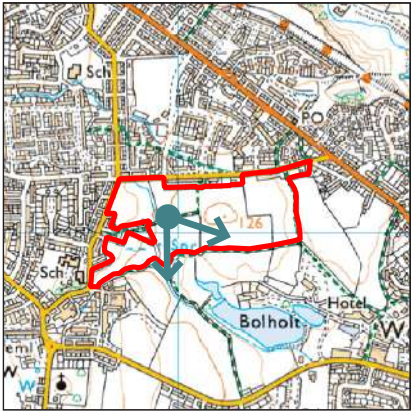


Photo Viewpoint 6B

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 10:09
Camera make & model, sensor format & lens: Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 140° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

date	drwn/chkd
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Wain Estates
project
Land at Scobell Street, Bury

title	rev
PHOTOVIEWPOINT 6B	
number	
FIGURE 14.13	A

Houses off Scobell Street

Peel Monument

The Site



Photo Viewpoint 7: View north from Footpath 128BUR to the south of the site



Photo Viewpoint 7: Continued...

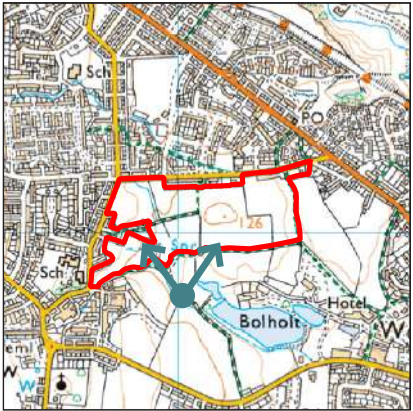


Photo Viewpoint 7
Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 10:17
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 0° (bearing from North)
Viewing distance: To be viewed at comfortable
arm's length

date	01/09/24	drwn/chkd	PJM / SLS
client	Wain Estates		
project	Land at Scobell Street, Bury		
title	PHOTOVIEWPOINT 7		
number	FIGURE 14.14	rev	A



Photo Viewpoint 8: View north from Foorpath 128BUR/ 129BUR to the south of the site



Photo Viewpoint 8: Continued...

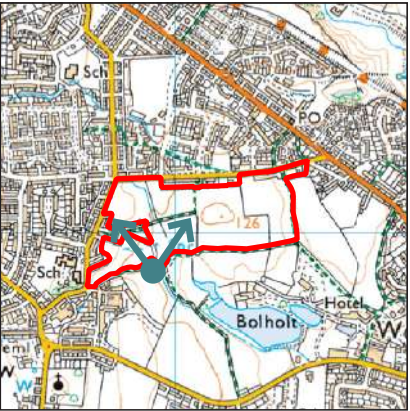


Photo Viewpoint 8

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 10:22
Camera make & model, sensor format & lens: Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 0° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

date 01/09/24 drwn/chkd PJM / SLS

client **Wain Estates**
project **Land at Scobell Street, Bury**

title **PHOTOVIEWPOINT 8**
number **FIGURE 14.15** rev **A**



Photo Viewpoint 9: View north from Footpath 93TOT to the south of the site



Photo Viewpoint 9: Continued...

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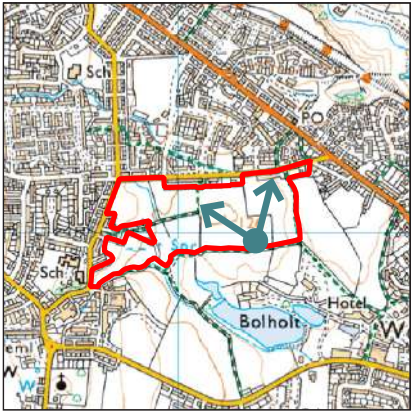


Photo Viewpoint 9

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 10:28
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 335° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

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Land at Scobell Street, Bury

title	rev
PHOTOVIEWPOINT 9	
number	
FIGURE 14.16	A



Photo Viewpoint 10: View northwest from PRoW to the at the southeast corner of the site



Photo Viewpoint 10: Continued...

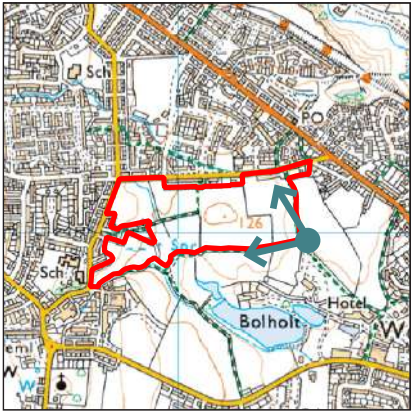


Photo Viewpoint 10

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 10:32
Camera make & model, sensor format & lens: Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 300° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

date 01/09/24 drwn/chkd PJM / SLS

client **Wain Estates**
project **Land at Scobell Street, Bury**

title **PHOTOVIEWPOINT 10**
number **FIGURE 14.17** rev **A**



Photo Viewpoint 11: View northwest from PRoW to the at the southeast



Photo Viewpoint 11: Continued...



Photo Viewpoint 11
Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 10:44
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 280° (bearing from North)
Viewing distance: To be viewed at comfortable
arm's length

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Bury**

title
PHOTOVIEWPOINT 11
number
FIGURE 14.18 rev **A**



Photo Viewpoint 12: View southwest from Scobell Street



Photo Viewpoint 12: Continued...

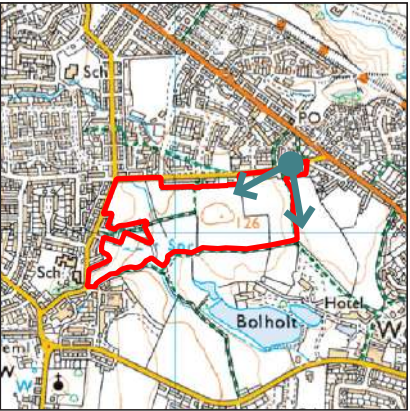


Photo Viewpoint 12

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 10:54
Camera make & model, sensor format & lens: Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 205° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

date 01/09/24 drwn/chkd PJM / SLS

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project **Land at Scobell Street, Bury**

title **PHOTOVIEWPOINT 12**

number **FIGURE 14.19**

rev **A**



Photo Viewpoint 13: View southwest from Footpath 94TOT crossing site



Photo Viewpoint 13: Continued...

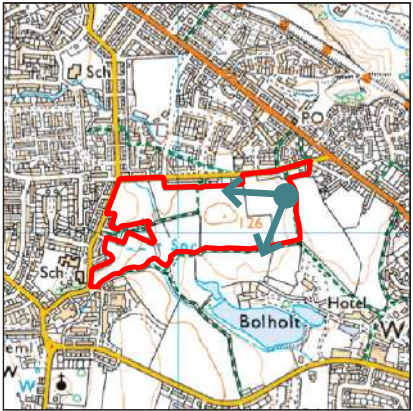


Photo Viewpoint 13

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 10:57
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 240° (bearing from North)
Viewing distance: To be viewed at comfortable
arm's length

date	01/09/24	drwn/chkd	PJM / SLS
client	Wain Estates		
project	Land at Scobell Street, Bury		
title	PHOTOVIEWPOINT 13		
number	FIGURE 14.20		
rev	A		

Properties along Scobell Street



Photo Viewpoint 14A: View southeast Footpath 91TOT at the site entrance from Scobell Street



Photo Viewpoint 14A: Continued...

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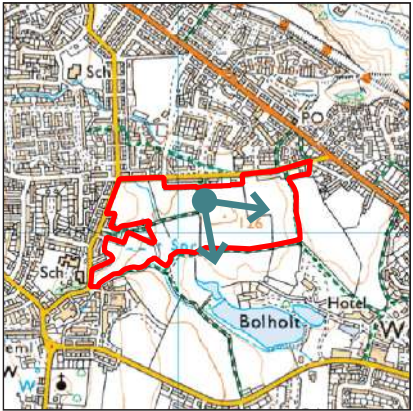


Photo Viewpoint 14A

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 11:07
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 125° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

date 01/09/24 drwn/chkd PJM / SLS

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Land at Scobell Street,
Bury

title
PHOTOVIEWPOINT 14A
number
FIGURE 14.21
rev
A

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Photo Viewpoint 14B: View west Footpath 91TOT at the site entrance from Scobell Street



Photo Viewpoint 14B: Continued...



Photo Viewpoint 14B

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 11:07
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 155° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

date	01/09/24	drwn/chkd	PJM / SLS
client	Wain Estates		
project	Land at Scobell Street, Bury		
title	PHOTOVIEWPOINT 14B		
number	FIGURE 14.22		
rev	A		



Photo Viewpoint 15: View south from Scobell Street/ Sycamore Road junction



Photo Viewpoint 15

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 11:13
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 200° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

date
01/09/24

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client
Wain Estates

project
Land at Scobell Street,
Bury

title
PHOTOVIEWPOINT 15

number
FIGURE 14.23

rev
A



Photo Viewpoint 16: View north from Walshaw Road



Photo Viewpoint 16: Continued...

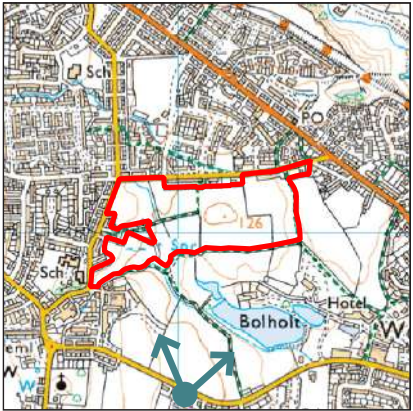


Photo Viewpoint 16

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 11:43
Camera make & model, sensor format & lens: Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 20° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

date 01/09/24 drwn/chkd PJM / SLS

client **Wain Estates**
project **Land at Scobell Street, Bury**

title **PHOTOVIEWPOINT 16**
number **FIGURE 14.24** rev **A**



Photo Viewpoint 17: View south east from Footpath 75TOT



Photo Viewpoint 17

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 13:06
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 115° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

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client	Wain Estates		
project	Land at Scobell Street, Bury		
title	PHOTOVIEWPOINT 17		
number	FIGURE 14.25	rev	A



Photo Viewpoint 18: View south from Footpath 32RAM at Peel Tower



Photo Viewpoint 18

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 13:54
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 185° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

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date	01/09/24	drwn/chkd	PJM / SLS
client	Wain Estates		
project	Land at Scobell Street, Bury		
title	PHOTOVIEWPOINT 18		
number	FIGURE 14.26	rev	A



Photo Viewpoint 19: View southeast from Footpath 228RAM



Photo Viewpoint 19
Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 15:00
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 210° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

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date	01/09/24	drwn/chkd	PJM / SLS
client	Wain Estates		
project	Land at Scobell Street, Bury		
title	PHOTOVIEWPOINT 19		
number	FIGURE 14.27	rev	A

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Photo Viewpoint 20: View southeast from Bridleway 24BUR



Photo Viewpoint 20

Visualisation Type: Type 1
Projection: 'cylindrical'
Enlargement factor: 100% (when printed at A1)
Date: 13/08/24
Time: 15:23
Camera make & model, sensor format & lens:
Canon EOS 6D FFS, Canon 50mm Lens
Horizontal Field of View: 83°
Direction of View: 240° (bearing from North)
Viewing distance: To be viewed at comfortable arm's length

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date	01/09/24	drwn/chkd	PJM / SLS
client	Wain Estates		
project	Land at Scobell Street, Bury		
title	PHOTOVIEWPOINT 20		
number	FIGURE 14.28	rev	A

15. Archaeology and Cultural Heritage

Introduction

- 15.1 This Chapter of the ES assesses the likely significant effects of the Proposed Development on the historic environment. In particular, it considers the potential effects of known and potential buried archaeological remains within the Site, as well as any potential impacts upon cultural heritage assets (e.g. buildings and extant historic landscape features) within the wider area.
- 15.2 This Chapter is supported by the following figures (which can be found at the end of this Chapter) and Technical Appendices:
- **Volume 3: Technical Appendix 15.1:** Historic Environment Desk-based Assessment.
 - **Figure 15.1:** Designated and Non-Designated Heritage Assets.
 - **Figure 15.2:** Potential Sub-Surface Archaeological Remains.
- 15.3 This Chapter of the ES has been produced by Michelle Burpoe BA, MA ACIfA of Lanpro Services Limited. Lanpro is an independent multi-disciplinary consultancy specialising in town planning, urban design, architecture, landscape and the historic environment. Michelle has worked as a heritage professional for archaeological units and research institutions throughout the last 15 years based across the U.K., Europe and the U.S.A. She has completed assessments across the North-West for a diverse range of projects in both urban and rural contexts, including small and large-scale residential developments, as well as minerals and renewables schemes.

Legislation and Policy

Legislation

[The Ancient Monuments and Archaeological Areas Act 1979](#)

- 15.4 The AMAAA largely concerns Scheduled Monuments (SMs) and designated archaeological areas, detailing in particular what can and cannot be undertaken on archaeological grounds.

[Planning \(Listed Buildings and Conservation Areas\) Act 1990](#)

- 15.5 The P(LBCA)A provides for the protection of listed buildings and Conservation Areas and is largely expressed in the planning process through policies in regional and local planning guidance, as outlined below. This Act is the primary legislative instrument addressing the treatment of listed buildings and Conservation Areas through the planning process.
- 15.6 Section 66 of the 1990 Act 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.”

15.7 Buildings on the list are graded to reflect their relative architectural and historic interest, based on the below:

- Grade I buildings are of exceptional interest;
- Grade II* buildings are particularly important buildings of more than special interest;
- Grade II buildings are of special interest, warranting every effort to preserve them.

15.8 In addition to the statutory criteria for listing, i.e. architectural and historic interest, and group value, the following general principles are also considered by the Secretary of State when determining if a building is suitable for addition to the list of building of special architectural and historic interest:

Age and rarity: the older a building is, and the fewer the surviving examples of its kind, the more likely it is to have special interest. The following chronology is meant as a guide to assessment; the dates are indications of likely periods of interest and are not absolute. The relevance of age and rarity will vary according to the particular type of building because for some types, dates other than those outlined below are of significance. However, the general principles used are that:

- before 1700, all buildings that contain a significant proportion of their original fabric are listed;
- from 1700 to 1840, most buildings are listed;
- after 1840, because of the greatly increased number of buildings erected and the much larger numbers that have survived, progressively greater selection is necessary;
- particularly careful selection is required for buildings from the period after 1945;
- buildings of less than 30 years old are normally listed only if they are of outstanding quality and under threat.

Aesthetic merits: the appearance of a building, both its intrinsic architectural merit and any group value, is a key consideration in judging listing proposals, but the special interest of a building will not always be reflected in obvious external visual quality. Buildings that are important for reasons of technological innovation, or as illustrating particular aspects of social or economic history, may have little external visual quality.

Selectivity: where a building qualifies for listing primarily on the strength of its special architectural interest, the fact that there are other buildings of similar quality elsewhere is not likely to be a major consideration. However, a building may be listed primarily because it represents a particular historical type in order to ensure that examples of such a type are preserved. Listing in these circumstances is largely a comparative exercise and needs to be selective where a substantial number of buildings of a similar type and quality survive. In such cases, the Secretary of State’s policy is to list only the most representative or most significant examples of the type.



National interest: the emphasis in these criteria is to establish consistency of selection to ensure that not only are all buildings of strong intrinsic architectural interest included on the list, but also the most significant or distinctive regional buildings that together make a major contribution to the national historic stock. For instance, the best examples of local vernacular buildings will normally be listed because together they illustrate the importance of distinctive local and regional traditions. Similarly, for example, some buildings will be listed because they represent a nationally important but localised industry, such as shoemaking in Northamptonshire or cotton production in Lancashire.

State of repair: the state of repair of a building is not a relevant consideration when deciding whether a building meets the test of special interest. The Secretary of State will list a building which has been assessed as meeting the statutory criteria, irrespective of its state of repair.

Hedgerow Regulations 1997

- 15.9 The Hedgerow Regulations 1997 define what a hedgerow is and sets out the criteria for determining what an ‘important’ hedgerow is, with the aim of protecting important countryside hedges from destruction or damage. A hedgerow is defined as being:

‘Any hedgerow growing in, or adjacent to, any common land, protected land, or land used for agriculture, forestry or the breeding or keeping of horses, ponies or donkeys, if –

it has a continuous length of, or exceeding, 20 metres; or it has a continuous length of less than 20 metres and, at each end, meets (Whether by intersection or junction) another hedgerow.’

- 15.10 The criteria for determining what is an ‘important’ hedgerow in relation to archaeology and history are:

“1. The hedgerow marks the boundary, or part of the boundary, of at least one historic parish or township and for this purpose “historic” means existing before 1850.

2. The hedgerow incorporates an archaeological feature which is –

included in the schedule of monuments compiled by the Secretary of State under section 1 (schedule of monuments) of the Ancient Monuments and Archaeological Areas Act 1979; or recorded at the relevant date in a Sites and Monuments Record.

3. The hedgerow –

is situated wholly or partly within an archaeological site included or recorded as mentioned in paragraph 2 or on land adjacent to and associated with such a site; and is associated with any monument or feature on that site.

4. The hedgerow –

marks the boundary of a pre-1600 AD estate or manor recorded at the relevant date in a Sites and Monuments Record or in a document held at that date at a Record Office; or is visibly related to any building or other feature of such an estate or manor.

5. The hedgerow –

is recorded in a document held at the relevant date at a Record Office as an integral part of a field system pre-dating the Inclosure Acts; or is partly of, or visibly related to, any building or other feature associated with such a system, and that system –



is substantially complete; or is of a pattern which is recorded in a document prepared before the relevant date by a local planning authority, within the meaning of the 1990 Act, for the purposes of development control within the authority's area, as a key landscape characteristic."

National Planning Policy

National Planning Policy Framework (The Framework)

- 15.11 Section 16 of the Framework (MHCLG 2024), entitled 'Conserving and enhancing the historic environment' provides guidance for planning authorities, property owners, developments and others on the conservation and investigation of heritage assets.
- 15.12 Overall, the objectives of Section 16 can be summarised as seeking the:
- Delivery of sustainable development
 - Understanding the wider social, cultural, economic and environmental benefits brought by the conservation of the historic environment, and
 - Conservation of England's heritage assets in a manner appropriate to their significance.
- 15.13 The Framework recognises that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. Paragraph 207 states that planning decisions should be based on the significance of the heritage asset (and any contribution made by its setting), and that 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 upon their significance"*. This is supported by paragraph 208 which states that LPAs should take this into account when considering applications.
- 15.14 Paragraphs 212-214 consider the impact of development proposals upon the significance of designated heritage assets. Paragraph 212 states that where a development is proposed that would affect the significance of a designated heritage asset *"great weight should be given to the asset's conservation (and the more important the asset, the greater this weight should be)"*. Paragraph 215 emphasises that *"where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits"* of the scheme, bearing in mind the great weight highlighted in Paragraph 212.
- 15.15 Heritage Assets are defined in Annex 2 of the Framework 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. It includes designated heritage assets and assets identified by the local planning authority (including local listing)".*
- 15.16 Annex 2 also defines 'Archaeological Interest' as a heritage asset which *"holds or potentially holds, evidence of past human activity worthy of expert investigation at some point"*. Heritage Assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.



15.17 A Designated Heritage Asset comprises a “World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation.”

15.18 In short, government policy provides a framework which:

- Protects nationally important designated Heritage Assets (which include World Heritage Sites, Scheduled Ancient Monuments, Listed Buildings, Protected Wreck Sites, Registered Parks and Gardens, Registered Battlefields or Conservation Areas).
- Protects the settings of such designations.
- In appropriate circumstances, seeks adequate information (from desk-based assessment and field evaluation where necessary) to enable informed decisions.
- Provides for the excavation, investigation and recording of sites not significant enough to merit in-situ preservation.

[Planning Practice Guidance](#)

15.19 The Planning Practice Guidance is a regularly updated web-based resource which is to be used in conjunction with the Framework. It is aimed at planning professionals and prescribes best practice within the planning sector. The relevant section is entitled ‘Conserving and enhancing the historic environment’. The guidance given in this section sets out the best practice to applying government policy in the Framework. It provides an interpretation for each of the interests assigned to heritage assets in understanding significance: archaeological, architectural and artistic, and historic (Paragraph: 006 Reference ID: 18a-006-20190723).

[Local Planning Policy](#)

[Places for Everyone Joint Development Plan Document](#)

15.20 The Places for Everyone (Pfe) Joint Development Plan Document is a long-term plan of nine Greater Manchester Districts (including Bury) for jobs, new homes and sustainable growth. All nine Councils adopted Pfe 21st March 2024 (GMCA 2024), with this document now forming part of the statutory development plan for each of the participating authorities.

15.21 The Site sits within the northern portion of Policy JP Allocation 9: Walshaw.

15.22 The following policies are also considered relevant to this Chapter:

- Policy JP-P1. Sustainable Places
- Policy JP-P2. Heritage
- Policy JP-P3. Cultural Facilities

15.23 Within Policy JPA9, heritage considerations are accounted for as:

“12. Take appropriate account of relevant heritage assets, and their setting, including the Christ Church Grade II* Listed Building, in accordance with Policy JP-P2.”



15.24 This is supported by the reasoned justification (GMCA 2024, 315)

“Christ Church in Walshaw is a Grade II* Listed Building sitting adjacent to the allocation. Any development will, therefore, be required to respect the setting of the church and capitalise on opportunities to draw on the contribution that the church makes to the character of the area. The completion of a Heritage Impact Assessment will be required.”

[Bury Unitary Development Plan](#)

15.25 Following the adoption of PfE in 2024, Bury Council is moving forward with a new Local Plan for Bury. Until this new Local Plan is produced and adopted Saved Policies of the *Bury Unitary Development Plan* (UDP) will continue to be used to make planning decisions. The following saved policies are considered relevant to this Chapter:

- EN2/3 – Listed Buildings
- EN3 – Archaeology
- EN3/1 – Impact of Development on Archaeological Sites
- EN3/2 – Development Affecting Archaeological Sites
- EN3/3 – Ancient Monuments

[Bury Local Plan Topic Papers](#)

15.26 As part of the evidence gathering for the new Local Plan, a series of ‘Topic Papers’ have been produced to identify key issues connected to heritage, urban design, and sustainable design and construction.

15.27 Topic Paper 9: Built Environment (BC 2018), sets out the broad profile of the Borough in terms of its built environment, highlighting its various heritage assets including Conservation Areas, Listed Buildings, Historic Parks, Archaeological Sites and Ancient Monuments, Local List and Townscape. It also highlights a number of key issues that need to be considered when taking forwards a new Local Plan.

[Standards and Guidance](#)

15.28 The Chartered Institute for Archaeologists’ (CIfA) *Standard and Guidance for Historic Environment Desk-based Assessment* (CIfA 2020) provides guidelines and recommendations for best practice in undertaking archaeological desk-based research and assessment.

15.29 Guidance on the implementation and interpretation of historic environment policy has been provided by the Historic England (HE) publications *Historic Environment Good Practice Advice in Planning Note 2: Managing Significance in Decision Taking in the Historic Environment* (GPA2; HE 2015) and *Historic Environment Good Practice Advice in Planning Note 3 (Second Edition): The Setting of Heritage Assets* (GPA3; HE 2017).

15.30 Historic England’s GPA 2 (HE 2015) outlines a seven-stage process for the assembly and analysis of relevant information relation to heritage assets potentially affected by a proposed development:



- Understanding the wider social, cultural, economic and environmental benefits brought by the conservation of the historic environment,
- Understand the significance of the affected assets,
- Understand the impact of the proposal on that significance,
- Avoid, minimise and mitigate impact in a way that meets the objectives of the Framework,
- Look for opportunities to better reveal or enhance significance,
- Justify any harmful impacts in terms of the sustainable development objective of conserving significance and the need for change, and
- Offset negative impacts on aspects of significance by enhancing others through recording, disseminating and archiving archaeological and historical interest of the important elements of the heritage assets affected.

- 15.31 In order to understand the nature, extent and level of significance, GPA2 advocates considering the four types of heritage value an asset may hold, as identified within *Conservation Principles, Policies and Guidance* (English Heritage 2008): *aesthetic, communal, historic* and *evidential*. However, the Framework has since provided a definition of significance dependent on the following four interests: *archaeological, architectural and artistic, or historic*.
- 15.32 Historic England's GPA3 (HE 2017) recognises that whilst setting is not a heritage asset, 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." Setting is described as being distinct to curtilage, character and context. This guidance also notes that the contribution of setting to the significance of a heritage asset is often expressed by reference to views, although the importance of setting lies in what it contributes to the significance of the heritage asset, and this can be influenced by a number of other factors.
- 15.33 The Historic England advice note *Statements of Heritage Significance: Analysing Significance in Heritage Assets. Historic England Advice Note 12* (HEAN12; HE 2019) brings together all of the above guidance in an analysis of an appropriate approach for applications for heritage and other consents in providing an understanding of the significance of heritage assets in line with the Framework. It emphasises the level of detail required in support of both planning and listed building consent applications, which should be no more than is necessary, i.e. proportionate to the significance of the heritage asset affected, to reach an informed decision.

Assessment Methodology

Study Area

- 15.34 A study area of a 1km buffer from the Site boundary was agreed with the Greater Manchester Archaeological Advisory Service (GMAAS), based on the prevailing circumstances within the surroundings, the nature of the proposals and professional judgement, as well as suitable for determining the potential impact of the Proposed Development upon heritage assets.



Information Sources

15.35 The following information sources were utilised during this assessment:

- A historic environment screening report produced by University of Salford in 2019 (UoS 2019), which was commissioned by GMCA to understand the historic environment interest of the Sites allocated within the Greater Manchester Spatial Framework;
- A historic environment assessment produced in 2020 (Lanpro 2020), which informed the masterplan for the promotion of allocation site Policy JP Allocation 9: Walshaw for the GMCA PfE DPD (GMCA 2024);
- Records held by the Greater Manchester Historic Environment Record (HER);
- Historic England's National Heritage List for England (NHLE);
- The 2019 Bury MBC Draft Local List of Buildings of Special Architectural or Historic Interest. Note: All of the buildings within the study area identified on the Draft Local List have been incorporated into the Greater Manchester HER records;
- The Bury Archives and Local Studies Centre, Manchester Central Library and Archive, and Lancashire Record Office;
- Historic maps and plans, and available aerial imagery, as reproduced within **Volume 3: Technical Appendix 15.1**;
- The Environment Agency website for LiDAR data published on the DEFRA Data Service Platform; and
- Two site visits carried out in January 2020 and April 2024 in overcast weather conditions.

Identification of Receptors

Designated Heritage Assets

15.36 Heritage assets and potential indirect impacts have been assessed using best practice, including that set out in GPA 3 (HE 2017). The heritage assets which require assessment have been selected with reference to Historic England's NHLE database.

15.37 Not all designated heritage assets will require full assessment for impacts on an individual basis. Where a designated heritage asset has been excluded, a clear justification is provided, for example if the asset is sufficiently far away, and well screened from the Site. Also, not all assets require the same level of assessment. As set out in paragraphs 207 & 208 of the Framework (MHCLG 2024), the level of detail required is that which is sufficient to inform the nature and degree of effect of development within the Site on the significance of the heritage asset in question.

Non-Designated Heritage Assets

15.38 As defined in the PPG (MHCLG 2019)

"Non-designated heritage assets are buildings, monuments, sites, places, areas or landscapes identified by plan-making bodies as having a degree of heritage significance meriting consideration in planning decisions, but which do not meet the criteria for designated heritage assets."



15.39 In terms of non-designated assets, the PPG states that there are two categories of non-designated sites of archaeological interest:

“1) Those that are demonstrably of equivalent significance to scheduled monuments and are therefore considered subject to the same policies as those for designated heritage assets.

2) Other non-designated heritage assets of archaeological interest”

15.40 Non-designated heritage assets comprise finds, features or buildings of local significance identified on the Greater Manchester HER, locally listed buildings identified in local planning policy, and previously unrecorded finds, features or buildings identified through an appraisal of sources or identification through a site visit. As outlined in GPA2 (HE 2015), HER’s include:

“assets that are known to have been demolished or destroyed or known only from antiquarian sources, assets which do not meet the criteria for national or local designation, and those which have yet to be formally assessed as such.”

15.41 As such an assessment will be undertaken to establish the significance and relevance of the Greater Manchester HER entries and Bury MBC Local List within the study area.

15.42 Assessment of cultural value, sensitivity and magnitude of impact of non-designated assets follows the same methodology for designated heritage assets.

Assessing Heritage Significance

15.43 The significance of a heritage asset is defined in the Framework as:

“The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset’s physical presence, but also from its setting.”

15.44 In the case of many heritage assets their importance has already been established through the designation (i.e. scheduling, listing and register) processes applied by Historic England.

15.45 In order to assess the heritage significance of previously unrecorded or non-designated heritage assets, the criteria used by ICOMOS (2011) *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*, the Department of Culture, Media, and Sports (DCMS) publication, *Principles for Selection of Listed Buildings* (DCMS 2018), and the ‘Scheduled Monuments Policy Statements’ published by the same body (DCMS 2013), are used. In addition, the guidance provided within Historic England’s *Conservation Principles, Policies and Guidance* (EH 2008) and HEAN 12 (HE 2019) are also utilised. The criteria for establishing value/sensitivity of heritage assets for this assessment are presented in **Table 15.1** below.



Table 15.1: Criteria for determining the heritage value/sensitivity of a Heritage Asset

Importance	Description
International (Very High)	- Archaeological sites or monuments of international importance, including World Heritage Sites. - Structures and buildings inscribed as of universal importance as World Heritage Sites. - Other buildings or structures of recognised international importance.
National (High)	- Ancient monuments scheduled under the Ancient Monuments and Archaeological Areas Act 1979, or archaeological sites and remains of comparable quality, assessed with reference to the DCMS's principles of selection for scheduled monuments (DCMS 2013). - Listed Buildings. - Conservation Areas. - Non-designated built assets of national importance, assessed with reference to the Secretary of State's published Principles of Selection for Listing Buildings (DCMS 2010).
Regional / County (Medium)	Archaeological sites and remains which, while not of national importance, score well against most of the DCMS's principles of selection for scheduled monuments (DCMS 2013).
Local (Low)	- Archaeological sites that score less well against the DCMS's principles of selection for scheduled monuments (DCMS 2013). - Historic buildings on a 'local list'. Non-designated built assets of local significance.
None (Negligible)	Areas in which investigative techniques have produced negligible or only minimal evidence for archaeological remains, or where previous large-scale disturbance or removal of deposits can be demonstrated.

Assessing Magnitude of Impact

- 15.46 It is widely recognised that the heritage value/sensitivity of an asset is not the same as its sensitivity to changes to its setting (GPA3; HE 2017, 9). Thus, in determining effects upon the setting of assets by a Proposed Development, both value and sensitivity to changes to setting need to be considered. Factors considered when assessing sensitivity to change include, but are not limited to, heritage value/sensitivity (**Table 15.2**), condition, type and period of asset and landscape positioning.
- 15.47 The magnitude of the impact is a product of the extent of development impact on an asset. The magnitude of change is rated as Major, Moderate, Minor, Negligible and Minor. Change can be Direct or Indirect, Adverse or Beneficial. The criteria for assessing the magnitude of change are set out in **Table 15.2** below.



Table 15.2: Magnitude of change

Magnitude	Direct Change	Indirect Change
Major Adverse	- Demolition of built heritage assets or demolition within a Conservation Area. - Complete removal of an archaeological site.	Radical transformation of the setting of an archaeological monument. Substantially harmful change to the significance of a built heritage asset or Conservation Area due to a change in setting.
Moderate Adverse	- Harmful alteration (but not demolition) of a built heritage asset or alterations to a building in a Conservation Area. - Removal of a major part of an archaeological site and loss of research potential / significance.	- Less than substantial harm to the significance of a built heritage asset or Conservation Area due to a change in setting. - Partial transformation of the significance of an archaeological site e.g. the introduction of significant noise or vibration levels to an archaeological monument leading to changes to amenity use, accessibility or appreciation of an archaeological site.
Minor Adverse	Alterations to a built heritage asset or Conservation Area resulting in minor harm. Removal of an archaeological site where a minor part of its total area is removed but the site retains significant future research potential.	Minor harm to the significance of an archaeological monument or built heritage asset or Conservation Area due to a change in setting.
Negligible	Negligible impact from changes in use, amenity or access. Negligible direct impact to the built heritage asset or Conservation Area.	Negligible perceptible change to the significance of a building, archaeological site or Conservation Area due to a change in setting.
Minor Beneficial	- Alterations to a built heritage asset or Conservation Area resulting in minor beneficial impacts. - Land use change resulting in improved conditions for the protection of archaeological remains.	- Minor enhancement to the setting of a built heritage asset or Conservation Area. - Decrease in visual or noise intrusion on the setting of a building, archaeological site or monument.
Moderate Beneficial	- Alterations to a built heritage asset or Conservation Area resulting in moderate beneficial impacts. - Land use change resulting in improved conditions for the protection of archaeological remains plus interpretation measures (heritage trails, etc.)	- Significant reduction or removal of visual or noise intrusion on the setting of a building, archaeological site or monument. - Improvement of the wider landscape setting of a built heritage asset, Conservation Area, archaeological site or monument. - Improvement of the cultural heritage amenity, access or use of a built heritage asset, archaeological site or monument.



Magnitude	Direct Change	Indirect Change
		Moderate enhancement to the setting of the built heritage asset and Conservation Area.
Major Beneficial	- Arrest of physical damage or decay to a built heritage asset or structure. - Alteration to a built heritage asset or Conservation Area resulting in significant beneficial impact.	- Significant enhancement to the setting of a built heritage asset. - Conservation Area or archaeological site, its cultural heritage amenity and access or use.

Characterisation of Effect

15.48 The significance of the impact of the scheme on archaeological and heritage assets is determined by the heritage value/sensitivity of the asset and the magnitude of impact to the asset.

15.49 **Table 15.3** below presents a matrix that demonstrates how the significance of effect is established:

Table 15.3: Evaluation of Significance of Effect

		Magnitude of Change				
		Major	Moderate	Minor	Negligible	No Change
Heritage Value/ Sensitivity of Asset	Very High	Major	Major	Major/ Moderate	Minor	Negligible
	High	Major	Major/ Moderate	Moderate/ Minor	Minor	Negligible
	Medium	Major/ Moderate	Moderate	Minor	Minor/ Negligible	Negligible
	Low	Moderate/ Minor	Minor	Minor/ Negligible	Minor/ Negligible	Negligible
	Negligible	Minor	Minor/ Negligible	Minor/ Negligible	Negligible	Negligible

15.50 Effects of Moderate or above are considered Significant in terms of The Town and County Planning (Environmental Impact Assessment) Regulations 2017, unless otherwise stated. However, professional judgement is also used in considering the significance of effects.

15.51 The judgement of the Significance of effects takes into consideration the impact on the heritage asset's heritage value/sensitivity (defined as 'Significance' in Annex 2 of the Framework). As part of this assessment, the impact on the contribution that the setting of a heritage asset makes to its value/sensitivity is also considered. The nature of the contribution that the setting of an asset makes to its heritage value/sensitivity varies from asset to asset (i.e. the setting of some assets have a greater contribution to the value/sensitivity and vice versa). Consequently, where there are effects from a



development on the setting of an asset that has only a limited contribution to the value/sensitivity of that asset, the effect on the value/sensitivity of the asset itself may be very limited or even potentially non-existent. Where a heritage asset has a setting that has a large contribution to the value/sensitivity of that asset, effects on the value/sensitivity of the asset itself will be greater.

Assumptions and Limitations

- 15.52 This assessment of direct and indirect impacts to archaeological and cultural heritage assets is based on the current understanding of the design proposals.

Scoping and Consultation

- 15.53 An EIA Screening Request was submitted to Bury Metropolitan Borough Council (MBC) 9th July 2024, and it was confirmed by the Council in their Screening Opinion of 1st August 2024 that an Environmental Impact Assessment (EIA) would be required as part of any future planning application.
- 15.54 A Pre-Application Enquiry was also submitted to the Council on 30th July 2024 for the proposed development, with a response provided by the Council 20th November 2024. The following has been noted in regard to heritage:

Criteria 12 of Policy JPA9 requires proposals within the allocation to take appropriate account of relevant heritage assets and their setting, including Christ Church, Grade II* Listed Building, in accordance with Policy JP-P2.

It is considered that given the location of the proposed development, it is unlikely to impact upon the setting of Christ Church, the Grade II* listed building to the extent that it would cause any loss of significance and architectural and historic interest as a listed building. However, this would depend on the detail of the eventual application and proposals for development in the site.

The application site partly coincides with the Historic Environment Record (HER) for Access road to Cop Thorns (MGM10031). A heritage statement should be provided to assess the impact upon the HER and whether any investigations are required. Comments from GM Archaeological Advisory Service are awaited.

- 15.55 Consultation has been carried out separately with GMAAS prior to the production of the Historic Environment Desk-based Assessment (HEDBA) (**Volume 3: Technical Appendix 15.1**), as well as following its drafting.

Baseline Conditions

- 15.56 The baseline conditions are discussed in detail in the HEDBA (**Volume 3: Technical Appendix 15.1**) and include a full archaeological and historical background of the Site, as well as a map regression, both of which provide a detailed description of the history of the Site and surrounding area.



Baseline Survey Information

Within the Site

- 15.57 The Site contains no designated heritage assets, nor any locally listed buildings.
- 15.58 The former farmstead at Cop Thorns is not recorded by the Greater Manchester HER, though the HER does record an associated southern access road as a non-designated heritage asset (HER 8748.1.0). It should be noted that the point identified as an access road appears to be incorrect, with no evidence for a road in this location on Yates' late-18th century plan. This plan, and later 19th century maps, document Cop Thorns as having been accessed from the west, from Church Street, with the identified southern access road appearing to actually represent a footpath leading to Walshaw Brook. Due to its location within the Site itself, Cop Thorns will be assessed further.
- 15.59 A number of historic landscape features not recorded by the Greater Manchester HER were identified in the HEDBA as being within the Site. These were observed from mapping evidence, LiDAR, and site walkover. The existing field boundaries within and along the perimeter of the Site appear to date to the early – late-19th century, though many are so poorly preserved that they are represented by modern post and wire fences or marked by a partial line of mature trees. The extant field boundaries which have been identified of being of potential historic interest will be assessed further.
- 15.60 The HEDBA identified the low potential for remains of prehistoric, Roman and medieval period dates to survive within the Site. The HEDBA further identified a low potential for significant archaeological remains dating to the post-medieval, industrial and modern periods to survive within the Site. Relic field boundaries and evidence for ploughing activity (cultivation marks) have been identified within the Site, which are thought to date to the medieval – post-medieval periods. Evidence of small-scale industrial workings have also been identified within the HEDBA, such as 'Brick Yard' and 'Sandhill' within the north-eastern part of the Site. There is the potential that further remains of these extractive activities may also be identified elsewhere within the Site.

Within the 1km Study Area

- 15.61 The HEDBA identified 11 Listed Buildings within 1km of the Site, ten of which are Listed at Grade II and one at Grade II*. Seven of the Grade II Listed Buildings are situated within the town of Tottington to the north/north-west of the Site, and the remaining three Grade II and one Grade II* situated within or immediately adjacent the village of Walshaw to the west and south-west of the Site. The site visit has confirmed that due to the topography and built environment of Tottington, as well as the Site's location c. 840m to the south/south-east, there is no intervisibility between any part of the Site and the seven Grade II Listed Buildings within the town, nor do these Listed Buildings have any historical or functional association with the Site that contribute to their significance. Therefore, these seven designated structures have been scoped out of further assessment.



- 15.62 The topography and built environment of Walshaw also prevent any intervisibility between the Site and the three Grade II Listed Buildings within the village of Walshaw. Therefore, due to the overall lack of historic and present intervisibility between these assets and the Site, as well as the lack of historical or functional association which may contribute to their significance, these assets have also been scoped out of further assessment.
- 15.63 Due to its location less than 300m from the south-western corner of the Site, the spire of the Grade II* Christ Church (NHLE 1163417) can be seen across the Site, and is considered sensitive to development within the Site, and has therefore been included for further assessment.
- 15.64 The HEDBA identified a further 96 non-designated heritage assets within 1km of the Site, including 12 assets which classified as 'built-heritage' and the remaining 84 which are classified as 'monuments'. Many of these asset's date to the post-medieval, industrial and modern periods, representing the growth of both Walshaw and Tottington, before and during the Industrial Revolution. The 12 non-designed 'built-heritage' assets include houses, farmsteads, a church and several former mills. Six of these assets are also recorded by Bury MBC on their *Draft Local List* as 'buildings of special architectural or historic interest.' All 12 non-designated building heritage assets have been scoped out of further assessment, as there will be no harm to their significance in terms of the heritage values which are embodied in their physical presence, nor any harm to their setting.
- 15.65 There is one asset recorded by the Bury MBC *Draft Local List* that is not included within the Greater Manchester HER as a non-designated built-heritage asset: Victoria Hotel, 12-14 Hall Street, Walshaw, BL8 3BD. This asset is located immediately opposite the former Walshaw Co-op building (HER 13747.1.0). This asset has no historical or functional association with the study site and is entirely screened from the Site by the built-environment and vegetation of Walshaw. It has therefore been scoped out of further assessment.
- 15.66 84 non-designated 'monuments' are recorded by the Greater Manchester HER within 1km of the Site, and include artefact findspots, as well as evidence of former medieval and post-medieval field systems (e.g. ridge and furrow), together with, further industrial structures and their associated infrastructure (mills, reservoirs, etc.). As none of these assets are located within the Site itself and do not have any historic relationship with the Site itself there will be no harm to their significance. As such, they have all been scoped out of further assessment.

Heritage Receptors to be Addressed

- 15.67 The following extant heritage assets are considered sensitive to the Site's construction and operational phase effects. The locations of all the extant heritage assets identified within **Table 15.4** below are illustrated on **Figure 15.1** at the end of this Chapter.



Table 15.4: Designated and Non-Designated Heritage Assets

NHLE ID	HER Ref.	Heritage Receptor	Description
1163417	9501.1.0	Christ Church	Grade II* Listed Building
-	8748.1.0	Cop Thorns and access road to Cop Thorns	Non-designated asset
-	-	Extant Historic Landscape Features	Field boundaries within and bounding the Site of historic interest

- 15.68 The potential for sub-surface archaeological remains will also be addressed as part of this ES Chapter, with areas of archaeological potential identified on **Figure 15.2** at the end of this Chapter.

Future Baseline

- 15.69 The baseline would not be expected to change should the Proposed Development not proceed, and the Site remains in its current, undeveloped state.

Evaluation

Cultural Heritage

Christ Church (NHLE 1163417)

- 15.70 Christ Church on High Street, Walshaw is a Grade II* Listed Building that was first listed on 29th January 1985. The Church is located c. 300m to the south-west of the Site. The list entry (HE 2024) provides the following details:

“1888, by Lawrence Booth. At right angles to road and sloping away from it. Gothic Revival. Stone Chancel, large nave, passage aisles, 2-bay, double-glazed transepts, over south-east of which rises tower with paved open windows in top stage and recessed spire. Interior has plain granite piers with shaft-rings. Paid for by Rev J G Haworth and Miss Nancy Haworth of cotton spinning and fustian making family: "Jesse Haworth Memorial Church" in prominent relief lettering on west front of landmark value.”

- 15.71 The Church was built in one phase over a four-year period. The Reverend John Gorrell Haworth of Higher Crumpsall and Miss Nancy Haworth of Walshaw funded the cost of the church in memory of the uncle to the Reverend, Jesse Haworth (1835-88). The 28th June 1887 edition of the Manchester Courier reported that Jesse Haworth “*closely identified with the industrial interest of that locality, and was instrumental in promoting the material well-being of its inhabitants... the Earl of Derby, through his agent Mr Statter, has promised to give a suitable site of land for the church and the parsonage house.*” It also reports that Jesse Haworth had previously erected day and Sunday schools from designs by Lawrence Booth, which he has recently enlarged, demonstrating the existing connection with the Manchester architect of Christ Church.



- 15.72 The 1838 tithe apportionment details for Tottington Lower End show the Haworth family to be foremost tenants of the Earl of Derby within the Site: James Haworth was the executor for the late William Gorrell, who shares a name with the Reverend J.G. Haworth, who owned Cop Thorn and the surrounding fields (plots 2381-7).
- 15.73 The church was built on the locally high ridge of land along High Street overlooking the landscape to the north-east, east, south-east and south. It sits on the west side of a graveyard, which surrounds it to the north, east and south, with the steeple on the south-east side. During the early years of the 20th century, the graveyard was expanded to the north and east to its current size, bound by a low stone wall and railing. By the end of the 1920s, the Vicarage had been constructed within the grounds and to the south-west of the Church, which is still extant. The layout of the Church and graveyard has changed little since.
- 15.74 The position of the Church was deliberately chosen to the south of the settlement of Walshaw, which not only provided relatively unencumbered views of the Church but also provided a central location within an area of expanding settlement. Height is provided by a spire atop a tower and on a prominent ridge making it a local landmark that Pevsner (1969, 101) deemed it to be so that it would be visible from the town below to the east, Woolfold. A photograph of the Church from shortly after it was completed showed it to be within open surroundings with commanding views across the landscape. Two clock faces adorn the east and south elevations of the tower suggesting that these were to be the principal elevations when viewed across the landscape.
- 15.75 The current immediate setting of the Church is enclosed by mature trees and vegetation within the graveyard, above which the steeple rises. Intervening vegetation, built form and topography prevent most of the Church other than the spire from being viewed from within the Site. Nonetheless, the commanding position of the spire make it a conspicuous landmark.
- 15.76 Christ Church is considered to be of *high heritage significance*, in accordance with paragraph 206 of the Framework (MHCLG 2024) and recognised by its statutorily designated status as a Grade II* listed building (**Table 15.1**). The principal heritage significance is derived from its architectural and aesthetic values, combined with the historical and communal interests associated with the local Haworth family, deeply rooted in the agricultural and industrial development of Walshaw. Furthermore, its setting within the graveyard and its landmark position overlooking the landscape to the south and east of Walshaw contributes to its significance, reminding onlookers of its purpose as a memorial to Jesse Haworth.

Cop Thorns

- 15.77 Cop Thorns is situated within the western half of the Site and is considered to be of *local or low heritage significance*.
- 15.78 A structure is first depicted within the location of the area of Cop Thorns (HER 8748.1.0) on Yates' map surveyed in the 1770s, suggesting a possible date for the former farmstead of at least 18th century. The earliest available map which both depicts and identifies Cop Thorns (as 'Cop Thorn') is the 1838 Tottington Lower End tithe map, with this farmstead appearing well-established in the area.



- 15.79 The accompanying title apportionment notes a number of associated plots which are part of the farmstead holdings (plots 2381-7), with the farmstead itself noted as comprising a '*Cottage farm house barn cow house and lane*', with the associated land to the east and south composed of orchard, pasture and meadows. Only one long rectangular building is shown on the tithe map bounding the north side of plot 2583, which suggests that this was a linear farmstead, with the house and working buildings attached in-line.
- 15.80 Cop Thorns appears unchanged on the OS map of 1851, with this map the first to depict the footpath between Cop Thorns and Walshaw Brook, with this map also illustrating a well on the eastern extent, south of the farmstead. The 1893 OS map shows the individual structures of the linear farmstead for the first time and appear to be composed of either a three-celled structure with an outshut or a four-celled structure (with the westernmost building appearing to be a later addition) with two small outshuts on either end of the linear range. The west half of the structure projects out from the east half on the north side, which this projection also observed during the site inspection, and suggests that the two halves resulted from separate phases of construction. Inspection of the north elevation also showed quoins from the former eastern end of the structure prior to it being extended with the easternmost cell. The unchanging length of the structure on the historic maps suggests these alterations were carried out prior to the production of the tithe map in 1838.
- 15.81 The main structure at Cop Thorns remains relatively unchanged throughout the 20th century, although it is represented as a three-celled structure on the OS map of 1957-60, with numerous outbuildings having been added and removed within its surroundings, and it is probable by this period that the structure had become two dwellings. During the site inspection, it was noted that Cop Thorns currently comprises two dwellings, with the western dwelling appearing to be the original farmhouse, and the eastern dwelling having been converted from a barn, with this structures southern and eastern-facing elevations having been rebuilt, likely as a result of the conversion. One of these dwellings is in use as a cattery and has associated buildings to the south.
- 15.82 Cop Thorns is of some local historical interest, with the structure (excluding the rebuilt elevations) representative of local post-medieval vernacular architecture, though it is no longer in use as a farmstead. As a surviving heritage asset from the 18th century rural landscape to the east of the settlement of Walshaw, it is still within much of its original agricultural setting, (e.g. adjacent early-19th century field system; historic footpaths), although its present context is within much reduced grounds, with the field boundaries largely poorly preserved and almost non-existent in areas.

Extant Historic Landscape Features

- 15.83 The extant field boundaries within and along the perimeter of the Site were identified within the HEDBA, plotted on **Figure 15.1**, and have been classified according to date. Many of the extant field boundaries within the Site appear on the earliest available map to depict field divisions, the 1838 Tottington Lower End tithe, which suggests that many of these features originated in the early-19th century and are likely earlier (possibly 18th century) in date. The majority of these early-19th century hedgerows are poorly preserved and are largely represented by post and wire fencing.



- 15.84 There are several better-preserved sections of hedging surviving within and adjacent to the Site boundary, including the western half of the Site's southern boundary, part of which bounds Walshaw Brook. This stretch marks a former parliamentary boundary between Tottington Lower End and Elton. The most well-preserved hedgerow within the Site is a north/south aligned hedgerow with associated bank within the south-eastern part of the Site, which first appears on the 1838 Tottington Lower End tithe map. Several stretches of hedgerow within the Site dating to the late-19th century are also better preserved, though are of less historic interest due to their post-1838 establishment.
- 15.85 Combined, these extant historic landscape features are considered to be of *low* or *local significance* due to their historic interest and evidential value, as together they inform an understanding of the development of Walshaw and its rural agricultural surroundings. However, such landscapes are not rare in the region or district, and overall, the hedgerows within and bounding the Site are not particularly well-preserved, nor do they display a wide range of features which could add to the understanding of their use and development.

Potential Sub-Surface Archaeological Remains

- 15.86 The HEDBA identified the presence of sands and gravels, as well as the presence of extant (e.g. Walshaw Brook) and former (probable palaeochannel) watercourses within and immediately adjacent the Site (**Figure 15.2** at the end of this Chapter). Landscapes with this combination of conditions were usually favored in the prehistoric period for settlement, though no settlement activity of prehistoric date has been identified within the Site or wider landscape. Whilst it is considered there is low potential for prehistoric activity to be present within the Site, should well-preserved prehistoric remains be identified, they could be of *low (local) – medium (regional) significance*, due to their historical and evidential (archaeological) interests and values.
- 15.87 There is limited potential for significant Roman or medieval remains to survive within the Site and, should such remains of these periods be identified, they are anticipated to be of *low* or *local significance* due to their historical and evidential (archaeological) interest and values.
- 15.88 The HEDBA identified the low potential for significant archaeological remains dating to the post-medieval, industrial and modern periods to survive within the Site. Features relating to former field systems have been identified within the Site, with relic field boundaries which match fields depicted on the 1838 Tottington Lower End tithe observed on both aerial and LiDAR imagery. Further relic field boundaries which appear to pre-date the boundaries depicted on the tithe were also identified during the HEDBA, and it is possible that these may date to the late-medieval/early post-medieval periods. Evidence for ploughing has also been identified on aerial and LiDAR imagery, with these cultivation marks respecting both relic and extant historic field boundaries. Whilst these features retain some historic interest, they hold little, if any, evidential value or archaeological interest, and are not readily visible on the ground. As such, the contribution they make to the understanding of the historic landscape is limited and, should such remains survive below ground, they would be of overall *negligible significance*.



- 15.89 Evidence of small-scale, local industrial workings have also been identified within the HEDBA. ‘Brick Yard’ field was first identified on the 1838 Tottington Lower End tithe within the north-eastern corner of the Site and is identified as such on subsequent historic maps until the mid-20th century, when the land was repurposed for allotment gardens with greenhouses. Likewise, the 1838 tithe identifies a field west of ‘Brick Yard’ as ‘Sand Hill’, which is noted within the accompanying apportionment as being “*part of sand hole*”. This area is identified as a ‘Sand Pit’ on subsequent mapping until the early-20th century, when it appears to have gone out of use, though evidence of this former quarrying is still visible within this part of the Site. This plot is located across the glaciofluvial sand and gravels which extend across part of the Site, and it is likely that these natural deposits were being quarried out from at least the early-19th century.
- 15.90 The Coal Authority has recorded the site of one historic mine shaft within the southern part of the Site. The recent mine survey (EAL 2024) did not identify any evidence of mining within this area; however, the potential for mine shafts within the Site should not be discounted, given the presence of shallow coal seams within the area, and evidence for other extractive works identified elsewhere within the Site.
- 15.91 Should remains of small-scale industrial workings of any kind be present below-ground within the Site, they are likely to be of *low* or *local significance* due to their historical and evidential (archaeological) interest and values.

Assessment of Impact and Significance

Likely Significant Effects

Construction Phase

Cultural Heritage

Christ Church

- 15.92 Christ Church will not be directly impacted during the Proposed Development, as it is located outside the Site boundary.
- 15.93 The Church is set on the west side of its graveyard, north-east of the Vicarage, and occupies a prominent position along the southern extent of Walshaw. The architectural and aesthetic values the Church possesses can be most appreciated and understood from within the churchyard itself, and the surrounding mature trees and vegetation, as well as the wider built environment of Walshaw, entirely restrict views from within the churchyard towards the Site. It is considered that the construction works will have a **Negligible** impact upon these elements of the structures’ significance.



15.94 The wider setting of this late-19th century church has been shown to contribute to the structures historical and communal interest, as well as its aesthetic values, as it was intended to be viewed as a memorial to Jesse Haworth, an industrialist from a local family of repute, who was deeply rooted in both the agricultural and industrial surroundings of Walshaw. It is a landmark structure within both the town and surrounding landscape, situated atop a ridge, and possesses a tall spire which dominates a surrounding built-environment largely composed of two-storey dwellings. Construction works within the Site have the potential to impact upon the wider views of the spire from the surrounding landscape, specifically from the north and north-east looking south and south-west. It is considered that during the construction phase, there will be a **Minor Adverse** impact upon these elements of the Church's significance.

15.95 It is therefore considered that the overall significance of effects upon Christ Church during the construction phase will be **Negligible – Minor Adverse**.

Cop Thorns

15.96 Cop Thorns will not be directly impacted during construction phase works, as the former farmstead, now two dwellings, and their associated outbuildings to the south, will be retained as part of the Proposed Development.

15.97 Cop Thorns will experience impact to its setting during the construction phase of the Proposed Development, as a result of its location within the western part of the Site. Historically, this asset was set within its own gardens carved out of the surrounding farmland, and it is still much within its original agricultural setting, directly overlooking its semi-rural surroundings. However, it is no longer a working farmstead, having been converted into two separate dwellings, one of which is in use as a cattery and possesses associated outbuildings to the south.

15.98 The Proposed Development will include the construction of one area of residential development to the north of Cop Thorns, which will be separated from the former farmstead by existing vegetation as well as a new residential access road, in addition to the establishment of a through road to its immediate east, which will enter the Site's north-western corner at the junction of Scobell Street, Church Street, and Booth Street and exit south of Cop Thorns, across Walshaw Brook.

15.99 It is considered that Cop Thorns would be permanently affected by the Development within the Site during the construction phase, as there will be a tangible change to its setting, also resulting in an impact upon its historic interest. Therefore, it is considered that the overall significance of this effect would be **Minor – Moderate Adverse**.

Extant Historic Landscape Features

15.100 There are a number of extant field boundaries within the Site which could be classified as historic, many of which are poorly preserved and incomplete. There are several better-preserved sections of boundaries within the Site, including along the western half of the southern boundary, as well as a north/south aligned hedgerow within the south-eastern part of the Site.



- 15.101 The Proposed Development will retain many of the extant field boundaries within and adjacent to the Site. However, there will be loss of some of the boundaries within the eastern part of the Site, including an L-shaped section of incomplete hedge which dates to the late-19th century. The north/south aligned hedgerow to the south, which is the most well-preserved stretch of historic hedgerow within the Site and dates to the early-19th century (and possibly earlier), will also be removed during construction works.
- 15.102 As part of the Proposed Development, a new Site entrance will be established at the southern boundary of the Site, through which a new through road will pass. This will necessitate the loss of a small area of preserved hedgerow which marked the former parliamentary boundary between Tottington Lower End and Elton.
- 15.103 The construction phase of the Proposed Development will result in a tangible change to the significance and setting of the extant field boundaries within the Site, as their overall agricultural setting will be removed, and there will be some physical loss to several stretches of the more well-preserved and historic hedgerows. It is considered that during the construction phase, the overall significance of these effects will be **Minor Adverse**.

Potential Sub-Surface Archaeological Remains

- 15.104 No archaeological remains have been previously identified within the Site. Throughout the lifespan of Church Street to the west and Scobell Street to the north, there has likely been slight alterations to their routes, and it is possible that previous iterations of these roadways have resulted in below-ground truncations along these boundaries of the Site. The construction of several areas of housing along the Sites northern and western boundaries may have also resulted in some below-ground truncations within areas of the Site which are adjacent to these features.
- 15.105 The mapped history of the Site suggests that these fields have largely been in agricultural use (as indicated by the relic field boundaries and cultivation marks identified on aerial and LiDAR imagery), and where it has been cultivated in the past, this is likely to have caused widespread but low-level truncation of any earlier archaeological deposits. More localised impacts will have occurred within the more recent developments of the study site, such as local industrial works within 'Brick Yard' and 'Sand Hill' in the north-eastern part of the Site which, based on the geology of the Site, have the potential to extend elsewhere within the Site. The Coal Authority also notes potential historic mining activity within the Site, though evidence for such activity has not yet been identified. It is therefore considered that construction works have the potential to result in a **Minor Adverse** impact upon potential below-ground remains.

Operational Phase

Cultural Heritage

Christ Church

- 15.106 Upon completion and operation, the Proposed Development will result in some loss of Christ Church's wider agricultural setting, which contributes to both this asset's historical and communal interests, as well as its aesthetic values.



- 15.107 The Proposed Development has been designed taking into account the visibility of the Church both within the Site and to the north and north-east of the Site. The new dwellings within the site will range between 2-3 storeys in height, with the positioning of the buildings responding to the existing landscape within the Site, as well as the surrounding townscape. The higher contours of the Site will consist predominantly of two-storey dwellings, with the taller dwellings (between 2.5 and 3 storeys) will be selectively used, positioned in higher density perimeter blocks. This will allow for views of the Church spire over the roofscapes of the Proposed Development, rather than narrowing the views along the proposed road network.
- 15.108 Within the Site itself, the majority of the existing field boundaries and pockets of vegetation will be retained, in addition to the establishment of new stretches of planting. These measures will allow some elements of the Site's post-medieval field systems to survive, though the agricultural land within will be lost.
- 15.109 Therefore, the overall significance of effect for this Grade II* Listed structure, which is an asset of *high heritage significance*, is considered to be **Negligible – Minor Adverse**

Cop Thorns

- 15.110 Upon completion, the establishment of a new through road to the immediately east of Cop Thorns will result in a **Minor – Moderate Adverse** visual impact from local traffic movement within the Site. However, it is proposed to landscape both the eastern and western extent of this new road which, when fully established, will lessen this visual impact to **Minor Adverse**.
- 15.111 It is considered that the proposed new residential development to the north of Cop Thorns, as well as to the east of the new through road will also result in a **Minor – Moderate Adverse** impact upon the significance and setting of Cop Thorns, as development within the Site will remove the historic context in which the former farmstead is situated. However, the Proposed Development has been designed in order to prevent Cop Thorns from being enveloped by the surrounding development. The new residential dwellings will be set back both north of Cop Thorns and east of the through road. The land to the south of Cop Thorns will be retained as open green space, though a small pond will be established within one area. The surrounding hedgerows and pockets of vegetation will be retained, in addition to the establishment of new stretches of planting. These measures will allow the former Farmstead to still be appreciated as having been distinctly separate to and preceding the 19th and 20th century development along Church Street and Scobell Street, and should they been carried out, it is considered that the overall impact will be **Minor Adverse**.
- 15.112 It is therefore considered that the overall significance of effect for this asset, that is of *local or low heritage significance* (as laid out in **Table 15.1**), will be **Negligible – Minor Adverse**.



Extant Historic Landscape Features

- 15.113 The completed development will result in a **Minor Adverse** impact upon the surviving historic landscape, as the Site will not longer be agricultural in nature. However, such agricultural landscapes are not rare within this region or district, and overall, the hedgerows within and bounding the Site are not particularly well-preserved, nor do they display a wide range of features which could add to the understanding of their use and development.
- 15.114 The loss of the historic field pattern within the Site will be mitigated through the retention of a number of field boundaries which are considered to be historic, as well as many of the remaining field boundaries within the site which are not. This retention, and enhancement, will allow for the preservation of these links, which when paired with other landscape elements that are being preserved (e.g. historic/present footpaths through the Site), shaped the existing landscape around Walshaw.
- 15.115 It is therefore considered that the overall significance of effect for this asset, that is of *local* or *low heritage significance* (as laid out in **Table 15.1**), will be **Negligible – Minor Adverse**.

Potential Sub-surface Archaeological Remains

- 15.116 There will be a **Negligible** impact to sub-surface archaeological remains during the operational phase of the development.

Mitigation

Embedded Mitigation Measures

- 15.117 This section describes the measures which have been ‘embedded’ into the development.

Construction Phase

- 15.118 Potential effects to the setting and significance of Christ Church and Cop Thorns will be lessened by the embedded landscaping mitigation within the design, such as the retention of the majority of extant field boundaries, or the remnants of these, within and bounding the Site.
- 15.119 This preservation, in combination with the established set back of the proposed dwellings to the north, south and east of Cop Thorns, as well as the establishment of additional planting along the eastern and western extents of the new through road will prevent the former farmstead from becoming enveloped by the wider residential development.

Operational Phase

- 15.120 As with the construction phase, potential effects to the settings of Christ Church and Cop Thorns will be lessened by embedded mitigation within the design, such as the retention of most of the extant field boundaries, or the remnants of these, therefore preserving the historic field pattern of the early to late-19th century.



Additional Mitigation Measures

Construction Phase

- 15.121 A Construction Environment Management Plan (CEMP) will be secured through a planning condition, which will outline the methods to be employed by the developers and contractors to manage and, where practical, minimise the impact of the development's site clearance and construction activities upon the Site and surrounding area.
- 15.122 In their consultation response, GMAAS note that the areas of higher topography and areas of better draining geology (such as sands and gravels) within the Site have the potential to be focal points wherein remains of prehistoric date may be located. These areas should be targeted with further archaeological investigation in the form of geophysical survey initially, as any information retrieved from these sites will inform further regional research priorities regarding the density and distribution of prehistoric sites. There is no evidence to suggest that the Site contains, or has the potential to contain, any archaeological remains of sufficient importance to preclude or constrain development. It is, therefore, reasonable to assume that, should significant archaeological remains be identified by further stages of evaluation, that their loss could be mitigated through excavation and recording where it is not feasible to preserve the remains in situ.

Operational Phase

- 15.123 Embedded mitigation measures such as tree and hedge planting, and the retention of existing hedgerows and tree lines throughout the Site will be managed over the lifespan of the Proposed Development through a Landscape Management Plan (LMP). The LMP, which will be secured through a planning condition, will ensure adequate maintenance of embedded mitigation measures so that the existing and proposed planting survives and matures as expected.

Residual Effects

Construction Phase

- 15.124 A CEMP will be prepared prior to the commencement of site clearance and construction and will include best practice measures to mitigate impacts on cultural heritage assets and extant historic landscape features. Therefore, should such measures be enabled, the residual effects during the construction phase are considered to be **Negligible**.

Operational Phase

- 15.125 An LMP will be prepared which will ensure adequate maintenance of embedded mitigation measures so that the existing and proposed planting survives and matures as expected. Therefore, should such measures be continually carried out, the residual effects during the operational phase are considered to be **Negligible – Minor Adverse**.



Cumulative Effects

- 15.126 As noted in **Chapter 2 – Methodology**, the impacts of delivery of the entire GMCA PfE Policy JP Allocation 9: Walshaw has been included in the cumulative assessment, as has Policy JP Allocation 7: Elton Reservoir, which is located c. 2.3km to the south of the Site at its nearest point.

Policy JP Allocation 7: Elton Reservoir

- 15.127 The Elton Reservoir Allocation Site is c. 251.7ha in area and is almost entirely surrounded by the existing urban area south-west of Bury. This Allocation Site does not contribute to the setting or significance of any of the cultural heritage or archaeological remains identified within the Site, nor is there intervisibility between the Allocation Site and the present Site under assessment. It has therefore been concluded that development within this Allocation Site will result in no cumulative impacts to the identified cultural heritage, landscape, and potential sub-surface archaeological remains within the Site.

Policy JP Allocation 9: Walshaw

Construction Phase

Cultural Heritage

Christ Church

- 15.128 The cumulative effect to the setting and significance to Christ Church would be increased when considered alongside the wider Policy JP Allocation 9: Walshaw scheme, south and east of the Site. The original concept masterplan submitted as part of the GMCA site allocation, specifically contained within the Walshaw Garden Neighbourhood Development Framework (WGNDf; Barton Wilmore 2019) assures to protect the Grade II* Listed Church with a surrounding green buffer in order to maintain its prominence in the area's character, with views towards the church being maintained and framed by new development. This includes the establishment of an area of landscaping along the eastern perimeter of the Church graveyard, as well as proposed tree planting. These elements have also been retained as part of the updated illustrative masterplan, as detailed within the Design & Access Statement (Wain Estates 2024). It is therefore considered that the significance of these cumulative effects would be **Minor Adverse**.

Cop Thorns

- 15.129 The cumulative effect to the setting and significance to Cop Thorns would be slightly increased when considered alongside the wider Policy JP Allocation 9: Walshaw scheme, as there will be an additional tangible change to this asset's original agricultural setting, situated within its own gardens overlooking its semi-rural surroundings, with this change also resulting in a further impact upon its historic interest. It is therefore considered that significance of these cumulate effects would be **Minor Adverse**.



Extant Historic Landscape Features

- 15.130 As part of the wider Policy JP Allocation 9: Walshaw scheme, there will be the further loss of some of the extant field boundaries within the wider Allocation Site, though many of these are also poorly preserved and incomplete. Within the southern part of the Allocation Site, a number of these boundaries date to at least the late-18th century, with other identified stretches having also been identified as ranging from early-19th – early-20th century in date. The cumulative effect during the construction phase will result in a tangible change to the significance and setting of these extant field boundaries, as their overall agricultural setting will be removed, and there will be some physical loss to several areas of hedgerows. It is therefore considered that the significance of these cumulative effects would be **Minor Adverse**.

Archaeology

- 15.131 There will be no cumulative effects to potential sub-surface archaeological remains within the Site by the wider Policy JP Allocation 9: Walshaw scheme.

Operational Phase

Cultural Heritage

Christ Church

- 15.132 Should the mitigation measures detailed within the WGNDF (Barton Wilmore 2019) for the wider Policy JP Allocation 9: Walshaw be implemented, the cumulative effects during the operational phase would be **Minor Adverse**.

Cop Thorns

- 15.133 Should the mitigation measures detailed within the WGNDF (Barton Wilmore 2019) for the wider Policy JP Allocation 9: Walshaw be implemented, the cumulative effects during the operational phase would be **Negligible - Minor Adverse**.

Extant Historic Landscape Features

- 15.134 Should the mitigation measures detailed within the WGNDF (Barton Wilmore 2019) for the wider Policy JP Allocation 9: Walshaw be implemented, the cumulative effects during the operational phase would be **Negligible - Minor Adverse**.

Archaeology

- 15.135 It is considered that there will be a **Negligible** impact to sub-surface archaeological remains during the operational phase of the developments.

Summary and Conclusions

- 15.136 This Chapter of the ES has assessed the likely significant effects of the Proposed Development on the surrounding historic environment and is supported by a Historic Environment Desk-based Assessment (HEDBA) produced in June 2024 (see **Volume 3: Technical Appendix 15.1**). The HEDBA provides a baseline assessment of the Site and an assessment of the significance of designated and non-designated



heritage asset, the historic landscape, and potential sub-surface archaeological remains, as well as their setting. This was carried out using guidelines set out by the Chartered Institute for Archaeologists and Historic England, as well as best practice and professional judgement.

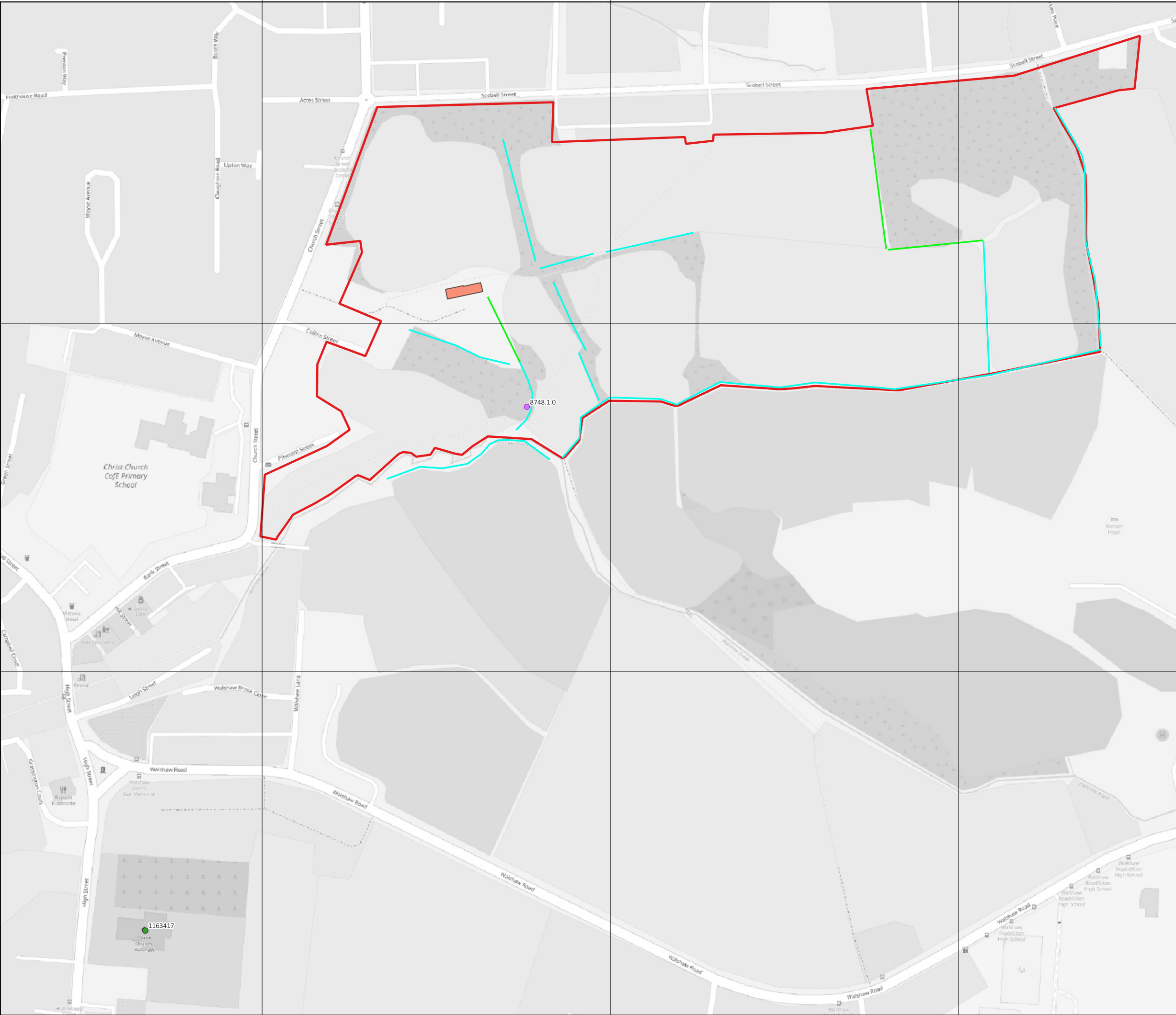
- 15.137 The HEDBA identified the potential for the Grade II* Listed Christ Church to be visually impacted by the proposed development. The HEDBA also identified the potential for the non-designated Cop Thorns to be impacted by the Development. Finally, it was identified that there was the potential for extant elements of the historic landscape (e.g. hedgerows) as well as the potential for sub-surface archaeological remains of former agricultural and industrial/extractive use to be impacted upon by the Proposed Development.
- 15.138 No effects to heritage assets which would be Significant for the purposes of EIA or suggest the withholding of Planning Permission were identified during this assessment.



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- Ministry of Housing, Communities & Local Government (MHCLG) 2024, National Planning Policy Framework
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Environmental Impact Assessment

Land to the south of Scobell Street, Bury

Figure 15.1:
Designated and Non-Designated Heritage Assets

- Legend:
- Site Boundary
 - Grade II* Christ Church
 - HER point of Cop Thorns access road
 - Cop Thorns
 - Extant early-19th century field boundary
 - Extant late-19th century field boundary

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AC0000862729



Co-ordinate system: OSGB36 / British National Grid
Scale: 1:2600 @ A3

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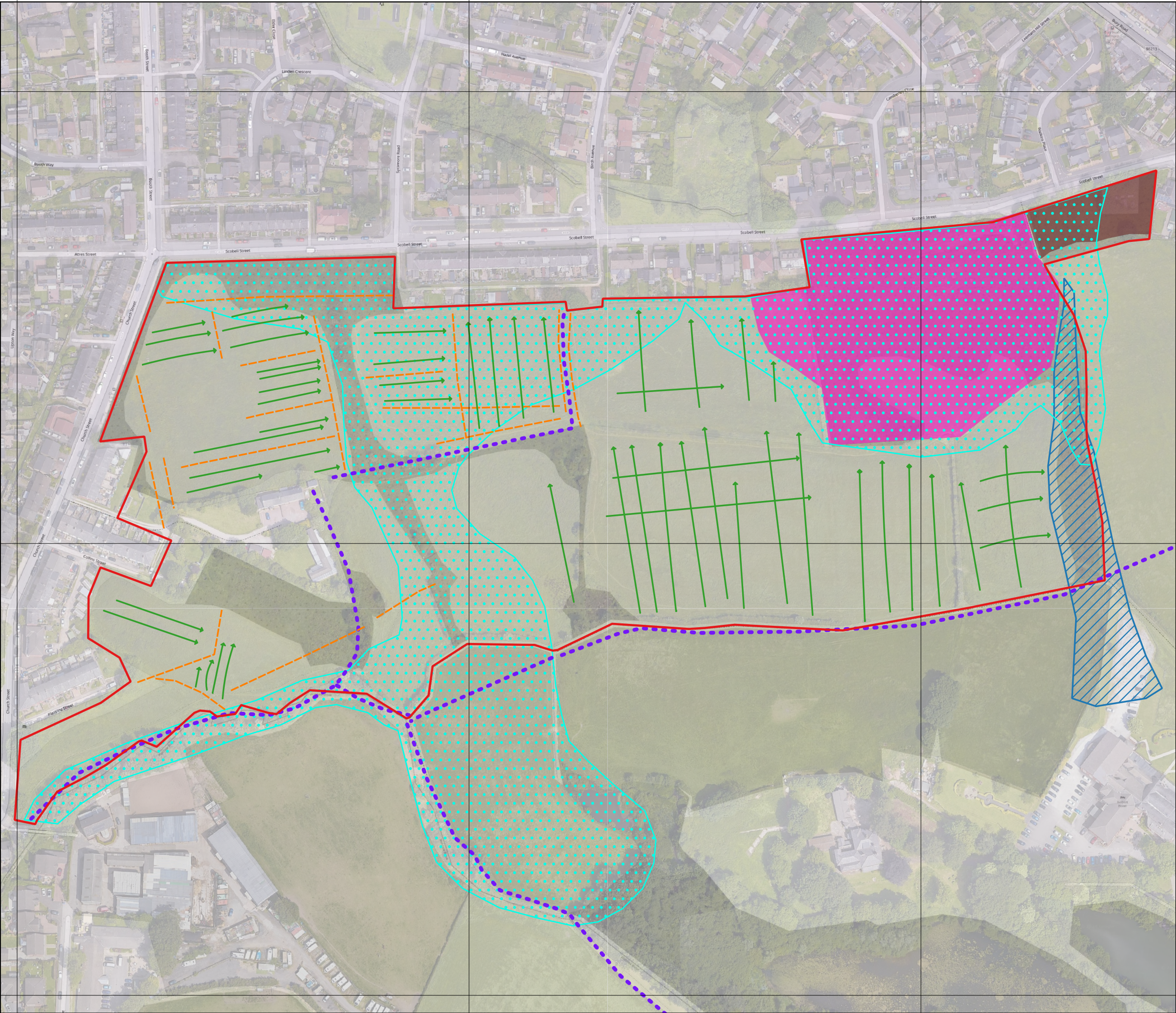
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Environmental Impact Assessment

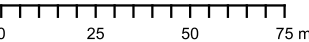
Land to the south of Scobell Street, Bury

Figure 15.2:
Potential Sub-Surface Archaeological Remains

- Legend:
- Site Boundary
 - Relic field boundaries
 - Cultivation marks
 - Historic footpaths
 - Site of 'Brick Yard'
 - Site of 'Sand Hill'
 - Sands and Gravels
 - Probable Palaeochannel

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Scale: 1:2000 @ A3



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16. Conclusion of significant impact & mitigation

Introduction

- 16.1 The residual impacts of the Proposed Development have been assessed and can be described as the potential combined consequences of some or all of the outcomes identified in the EIA on a particular receptor and the impacts which remain after the implementation of the proposed mitigation measures. The impacts have been identified in the preceding technical Chapters [Ref: **Chapters 8-15**] and are summarised in **Table 16.1** below. It is expected that various mitigation measures will be secured through planning conditions.
- 16.2 The EIA and the indicative design evolution has been an iterative process therefore many measures to mitigate potential Adverse environmental impacts, such as appropriate scale, massing, siting and landscape features have been and will be incorporated into the Proposed Development in order to avoid, reduce or offset such impacts and deliver and enhance beneficial impacts.
- 16.3 **Table 16.1** below summarises the impacts from both the construction phase and operational phases. Following the Table is a discussion of the residual impacts and a conclusion.
- 16.4 Overall, the Proposed Development is considered to constitute a sustainable, high quality development which will assist the Council in meeting its housing and economic objectives in accord with PfE policy JP9. The development proposals accord with planning policy at the local, regional and national level and would contribute to the development objectives for the local area and the region.



Table 16.1: Impacts Summary Table

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
Ecology & Biodiversity	Kirklees Valley LNR – increase in visitor pressure.	Typically, the effects on local wildlife sites and nature reserves which are accessible to the public arise as a result of erosion or physical damage such as trampling of habitats or increased effects of nutrient enrichment of soils and resulting habitat degradation of sensitive habitats resulting from dog waste.	Areas of greenspace are proposed within the scheme, encompassing approximately 40% of the Site. This will provide significant alternative recreation opportunities; it is recommended that final layouts include desirable and usable greenspace. The provision of a dedicated dog exercise area (for example) in final plans would be a desirable facility, that would likely be utilised by current and potential users of the LNR offsetting any potential increases in visitor numbers.	Not significant Adverse impact at a local level.
	Kirklees Brook SBI - increase in visitor pressure.	Given the distance from the Site and its connectivity via public footpaths, there is the potential for increased recreational effects to have an Adverse effect on the SBI through increased visitor pressure.	Areas of greenspace are proposed within the scheme, encompassing approximately 40% of the Site. This will provide alternative recreation opportunities, to minimise impacts to the SBI.	Not significant Adverse impact at a local level.
	Cyrus Ainsworth's Nurseries and Parkers Lodges SBI - increase in visitor pressure.	There is the potential for increased recreational effects to have an Adverse effect on the SBIs through increased visitor pressure. Given the distance from the Site to the Cyrus Ainsworth's	Not required.	Negligible.

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
		Nurseries and Parkers Lodges Cockey Moor Wood Pasture and Marsh SBIs this is considered Negligible.		
	Cockey Moor Wood Pasture and Marsh SBI - increase in visitor pressure.	There is the potential for increased recreational effects to have an Adverse effect on the SBIs through increased visitor pressure. Given the distance from the Site to the Cyrus Ainsworth's Nurseries and Parkers Lodges Cockey Moor Wood Pasture and Marsh SBIs this is considered Negligible.	Not required.	Negligible.
	Hedgerows – loss and accidental damage during construction.	There will be a loss of 4.65 units of native hedgerows due to the loss of hedgerows H3, H5 and H6 being removed to facilitate development, all other hedges will be retained. Impacts during construction, such as accidental damage and pollution, have the potential to negatively affect the health of retained hedges. Therefore, there is a Not Significant Adverse effect at a local level.	During works, all hedgerows will be protected through the implementation of appropriate measures including Root Protection Areas (RPA) and protective fencing in accordance with BS 5837 (2012) Trees in Relation to Design, Demolition and Construction and as indicated by the Arboricultural Impact Assessment. Measures to prevent pollution during construction will be outlined in the CEMP, as detailed above, and will include protective fencing. This should be secured by means of a planning condition.	Not Significant Adverse impact at a local level.
	Lines of Trees- loss and accidental	Loss of LoT 4.	During works, all lines of trees will be protected through the implementation of	Negligible.

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
	damage during construction.	Impacts during construction, such as accidental damage, pollution have the potential to negatively affect the health of trees. In the absence of mitigation construction and operational impacts on trees are predicted to be a Not Significant Adverse effect at a local level.	appropriate measures including Root Protection Areas (RPA) and protective fencing in accordance with BS 5837 (2012) Trees in Relation to Design, Demolition and Construction and as indicated by the Arboricultural Impact Assessment. Measures to prevent pollution during construction will be outlined in the CEMP, as detailed above, and will include protective fencing. This should be secured by means of a planning condition.	
	Individual trees - loss and accidental damage during construction.	Loss of trees 2, 9, 11, 12, 13, 14 and 18. Impacts during construction, such as accidental damage, pollution have the potential to negatively affect the health of trees. In the absence of mitigation construction and operational impacts on trees are predicted to be a Not Significant Adverse effect at a local level.	During works, all lines of trees will be protected through the implementation of appropriate measures including Root Protection Areas (RPA) and protective fencing in accordance with BS 5837 (2012) Trees in Relation to Design, Demolition and Construction and as indicated by the Arboricultural Impact Assessment. Measures to prevent pollution during construction will be outlined in the CEMP, as detailed above, and will include protective fencing. This should be secured by means of a planning condition.	Negligible.
	Walshaw Brook - loss of vegetation, impacts from	During the construction phase, there will be the potential for disturbed soil to enter the river, and/or accidental fuel	The Site has been designed so that the stream is buffered from built development by the large expanse of greenspace as	Negligible.

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
	construction and operations.	and other pollutant spillages to enter the river resulting in a potential adverse effect on aquatic and riparian flora and fauna. A headwall will be constructed to discharge from the SuDS ponds in the watercourse. Any loss of vegetation as a result of the installation and operation of the outfall will be permanent but sufficiently small in scale to be Negligible. During the operational phase there is a risk of pollution and sedimentation discharge into the Walshaw Brook. This has the potential to course a Significant Adverse impact at a local level.	shown on the Framework Masterplan (12221-FPCR-XX-XX-DR-A-0001-P06), thereby minimising impacts during operation. The adoption of standard pollution methods within the CEMP for the construction phase will mitigate any potential pollution issues. The proposed SuDS drainage strategy/maintenance and management plan as integral to the scheme, will prevent silt, sediment, and pollutants entering the watercourse during the operational phase. During operation, the discharge rate will be as green field from the Site, so the discharge into the stream won't be any greater than the current discharge from the Site.	

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
	Himalayan balsam – increase in presence.	The invasive plant Himalayan balsam was present over much of the Site. Left untreated, this has formed large stands and has out-competed native species. This process will continue unless management/treatment is put in place.	An eradication and monitoring strategy will outline management, treatment and monitoring of this species. As the plant spreads by exploding seed pods and the developer will have no control over any Himalayan balsam offsite, then future habitat management prescriptions will include an element of monitoring for the species spreading back into the site and reestablishing. Further information can be gained from the Environment Agency information booklet, Guidance for the Control of Invasive Species in or near Fresh Water and Guidance on Japanese Knotweed, Giant Hogweed and Other Invasive Species produced by DEFRA.	Not Significant, Beneficial effect.
	Breeding Birds – loss of habitat and disturbance.	The majority of area based habitat will be lost along with three hedgerows, a line of trees and individual trees. Disturbance of breeding birds due to increased presence of people and dogs (negative); and disturbance of breeding birds as a result of increased presence of domestic cats (negative) impact of up to local significance).	The inclusion of green infrastructure planting and the maturation of gardens will lead to a more diverse range of habitats providing opportunities for a range of species found on Site compensating for the loss of habitat resulting from the development. Vegetation removal will be avoided during breeding bird season (March to August, inclusive) or will be carried out immediately	Neutral.

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
			following a nesting bird check by a suitably qualified ecologist. New hedgerow, tree and shrub planting will include thorny species to provide some protection against cats, and berry-bearing species to provide additional foraging opportunities for birds.	
	Commuting and foraging Bats – Loss of habitat and disturbance.	There will be a loss of hedgerow H3, H5 and H6, and line of trees 4 will be removed in its entirety. A number of individual trees will also be removed. Impacts during both the construction and operational impacts are considered Not Significant Adverse impact at a Local level.	There is potential for disturbance impacts during operations, via lighting, and noise/vibration. It is unlikely that any bat roosts will be impacted. It should be noted that the overall percentage of bat species that are known to be light sensitive (Myotis Sp. and brown long-eared bat) represented less than 0.4% of the bats registered over the year on the static bat detectors. Therefore, the increase in lighting is unlikely to be significant at a population level).	Negligible.
Traffic and Transportation	Driver Delay.	Minor Adverse or Negligible (Not Significant).	Travel Plan in place, improved connectivity with the existing community for active travel modes, carefully design primary	Negligible (Not Significant).

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
			movement network prioritising active travel movements.	
	Pedestrian and Cycle Delay and Severance.	Negligible (Not Significant).	Travel Plan in place, carefully design primary movement network prioritising active travel movements.	Negligible (Not Significant).
	Non-Motorised User Amenity and Fear and Intimidation.	Minor Adverse or Negligible (Not Significant).	Travel Plan in place, carefully design primary movement network prioritising active travel movements in a low speed environment.	Negligible (Not Significant).
	Accidents and Safety.	Minor Adverse or Negligible (Not Significant).	Travel Plan in place, infrastructure designed with reference to local design standards and industry best practice.	Negligible (Not Significant).
	Hazardous Loads.	Negligible (Not Significant).	N/A.	Negligible (Not Significant).
	All Above Impacts during Construction Phase.	Moderate Adverse (Significant).	Construction Traffic Management Plan in place.	Negligible (Not Significant).
	All Above Impacts with Cumulative Development Effects.	Moderate Adverse to Negligible (Significant to Not Significant).	Site Layout Design, Infrastructure Design, Construction Traffic Management Plan, Travel Plan for the future phases to the south of the Site.	Negligible (Not Significant).

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
Water Resources /Drainage /Flood Risk	Potential risk of contamination of surface water and groundwater during Construction.	Potential risk of contamination of surface water and groundwater from construction activities.	Implementation of CEMP and construction stage drainage will control ground works and manage wastewater and storage of fuel and chemicals.	Not Significant.
	Increased Surface Water Runoff during Construction.	Potential risk of increased runoff impacting flood risk within the site and downstream catchment.	Implementation of the construction stage drainage will intercept surface runoff and provide attenuation of flows prior to any runoff being received downstream.	Not Significant.
	Potential risk of contamination of surface water and groundwater during Operation.	Potential risk of contamination of surface water and groundwater.	Implementation of pollution control measures, Sustainable Drainage Systems and stormwater attenuation.	Not Significant.
	Effect of Increased Surface Water Runoff during Operation.	Potential risk of increased runoff impacting flood risk within the Site and downstream catchment.	Implementation of the proposed surface water management plan will include use of Sustainable Drainage Systems to intercept, treat and attenuate surface runoff, prior to being released to the watercourse network. The surface water arrangements will be sized to accommodate runoff throughout the lifetime of the development with allowances for climate change and urban creep.	Not Significant.

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
	Reduced Groundwater Recharge during Operation.	Surfacing over greenfield land will reduce the amount of rainfall that drains to ground.	Existing ground conditions are anticipated as overall having low impermeability, so existing groundwater recharge is relatively limited. The use of open unlined SuDS provides an opportunity for rainfall to permeate into the underlying subsoils, promoting groundwater recharge as much as is practicable.	Not Significant.
	Increased Foul Drainage during Operation.	Increased foul discharge.	United Utilities are responsible for any off-site reinforcement to secure availability of capacity (Water Industry Act 1991).	Not Significant.
Air Quality	Dust soiling as a result of fugitive dust emissions during the construction phase.	Temporary.	CEMP.	Negligible Not Significant.
	Increases in PM ₁₀ concentrations as a result of fugitive dust emissions during the construction phase.	Temporary.	CEMP.	Negligible Not Significant.
	Increases in NO ₂ , PM ₁₀ and PM _{2.5} concentrations	Permanent.	Not applicable.	Negligible Not Significant.

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
	associated with vehicle exhaust emissions during the operational phase.			
Noise	Construction phase.	Construction noise impacting existing Residential Receptors in the vicinity of development.	None.	Minor Adverse - Not Significant.
	Operational phase.	Road traffic noise impacting existing Residential Receptors in the vicinity of development.	None.	Negligible – Not Significant.
Ground Conditions	Construction workers: Risks to Human Health from contaminants within soils and groundwater during ground disturbance.	Direct contact with contamination via ingestion, inhalation and dermal contact with contaminants in soils, soil dusts, groundwater and surface water at toxic (acute) concentrations. Build up of asphyxiant and flammable ground gases and vapours within manhole chambers, trench workings and other enclosed spaces.	Undertake Site investigation and quantitative contamination risk assessment within areas of made ground identified from Phase 1 Geo-Environmental Assessment. Undertake appropriate remediation and validation of contamination as necessary. Approval of remediation strategy and validation works by regulatory authorities. Ground gas and vapour monitoring programme and assessment. Protocol for	Construction Phase: Minor (Adverse) (Not Significant).

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
			confined space entry with usage of gas and vapour alarms as deemed necessary. Provision and implementation of CEMP. Inclusion of dust and debris suppression measures. Asbestos Management Plan (if asbestos fibres and/or ACM is encountered during investigation), wearing of PPE and implementation of good housekeeping. Protocols for dealing with unexpected contamination during groundworks and emergency pollution response.	
	Future Site Users: Risks to Human Health.	Direct contact with contamination via ingestion, inhalation and dermal contact with contaminants in soils, soil dusts, groundwater and surface water at toxic chronic or toxic (acute) concentrations during occupation of private gardens and other areas of soft landscaping. Build up of asphyxiant and flammable ground gases and vapours within buildings, manhole chambers, trench workings and other enclosed spaces.	Undertake Site investigation and quantitative contamination risk assessment within areas of made ground identified from Phase 1 Geo-Environmental Assessment and controlled waters assessment. Ground gas and vapour monitoring programme followed by installation and verification of gas and vapour protection measures within new buildings. Undertake remediation and validation of impacts as necessary. Water supply pipeline assessment to establish type of pipe to install in order to	Operation Phase: Minor (Adverse) Not Significant.

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
			ensure contamination cannot permeate and contaminate drinking water supply. Future maintenance workers to comply with confined space entry protocol if entering enclosed spaces.	
	Existing Users of adjacent land: Risks to Human Health during construction Phase.	Direct contact with contamination via ingestion, inhalation and dermal contact with contaminants in soil dusts, groundwater and surface water at chronic concentrations. Build-up of asphyxiant and flammable ground gases and vapours within manhole chambers, trench workings and other enclosed spaces.	Ground gas monitoring programme and assessment. Dust suppression and surface water management protocol to be included within CEMP, protocol for dealing with unexpected contamination during groundworks. Emergency pollution protocol.	Construction Phase: Negligible to Minor (Adverse) Not Significant. Operational Phase: Negligible Not Significant.
	Contaminant risks to groundwater within underlying Secondary A and Secondary (undifferentiated) aquifers.	Leaching and mobilisation of contaminants to aquifers.	Undertake Site investigation and quantitative contamination risk assessment within areas of made ground identified from Phase 1 Geo-Environmental Assessment and controlled waters assessment. Undertake remediation and validation of impacts as necessary. Piling risk assessment to be undertaken where piling is proposed at detailed design.	Construction Phase: Minor (Adverse) Not Significant. Operational Phase: Moderate (Beneficial)

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
			Provision and implementation of CEMP during groundworks and construction.	Significant (Beneficial).
	Risk of contamination and pollution of surface waters from contaminated soils, perched groundwater and activities during construction and operation.	Leaching and mobilisation of contaminants to watercourses.	Surface water management plan as part of CEMP. Implement measures to prevent escape of silty and otherwise contaminated run-off from entering watercourses. Install oil/water interceptor on surface discharge and maintain /empty to manufacturers recorded. Where discharge continues for >3months, a discharge permit will be required from the EA. Ensure that fuel and chemicals are stored appropriately in bunded facilities with drip trays and spill kits. Undertake routine monitoring of surface watercourses as required. Ensure buffer is present between surface waters and groundworks, construction compound/s, materials and waste stockpiles and fuel/chemical storage and filling areas. Implement emergency protocol for dealing with pollution.	Construction Phase: Minor (Adverse) Not Significant. Operational Phase: Moderate (Beneficial) Significant (Beneficial).
	Stability risks to existing and future		Location of below ground services, culverted watercourse and mineshafts to	Construction Phase: Negligible

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
	buildings and property.		be surveyed and located. Stand off to be applied. Mineshafts and shallow workings to be treated (as required). Undertake assessment of ACEC to determine appropriate classification for belowground concrete. Ground gas and vapour monitoring programme followed by installation and verification of gas and vapour protection measures within new buildings.	Not Significant. Operational Phase: Negligible Not Significant.
Landscape and Visual Impact	Landscape			
	Natural England, National Character Area Profile (NCA) 54 - Manchester Pennine Fringe.	Permanent.	Embedded mitigation which provides opportunities for improving hedgerows, creation of SUDS and provision of quality green space through well designed green infrastructure.	Negligible.
	Greater Manchester Landscape Character and Sensitivity Assessment: Landscape Type (LT)	Permanent.	Embedded mitigation which provides opportunities for restoring hedgerow networks. SUDS would be provided within the southeast and southwest of the Site and Development would be located on	Minor Adverse.

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
	Urban Fringe Farmland.		relatively low flat land that would not affect the key views noted in the guidance.	
	Bury Landscape Character Assessment (2009): Landscape Type (LT): Fringe Industrial Brook 1b Walshaw and Elton.	Permanent.	Development which follows the general field pattern meaning most vegetation could be retained and enhanced. The embedded green infrastructure runs alongside Walshaw Brook providing opportunities to repair and improve hedgerows and introduce woodland planting.	Minor Adverse.
	Site and Immediate Context.	Permanent.	A green corridor runs along the more sensitive part of the Site at Walshaw Brook and provides a buffer to the existing prow. Most vegetation would be retained, and development follows the existing field patterns. All public rights of way routes have been retained with some additional connecting routes provided through green spaces and along corridors. Attenuation basins give opportunity to provide additional wetland habitats within the Site along with areas of meadow grassland and increased tree planting.	Moderate/ Minor Adverse.

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
			As green infrastructure planting matures, the Proposed Development will further assimilate into the existing landscape.	
	Visual			
	Visual Receptor A: Recreational users of PRoW crossing the Site (Ref: 91TOT & 92:TOT).	Permanent.	Route is to be retained within green corridor through development parcels with green space retained along route of watercourse. Tree and shrub planting along PRoW route will further soften views of development.	Moderate/ Minor Adverse.
	Receptor B: Recreational users of PRoW along the Site boundaries south (within the Site) and east (outside of the Site Boundary) (Ref: 93:TOT and 94TOT).	Permanent.	Routes will be partially retained within green corridors with development set back. Along Footpath: 93TOT (along the southern boundary) tree planting will soften views of development. To the east, Footpath: 94TOT will pass by an area retained for green infrastructure with SUDS and past an area of development. The footpath enters the Site between two areas of Proposed Development for approximately 30m. Green infrastructure along some areas of the PRoW would have established and begin to soften views of Proposed Development.	Moderate/ Minor Adverse.

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
	Receptor C: Residents of properties facing onto the Site (approx. 50no.).	Permanent.	Green infrastructure within the northwest corner of the Site would be established and soften views of proposed development.	Moderate Adverse.
	Receptor D: Residents at Scobell Street with properties backing onto the Site (approx. 35).	Permanent.	None.	Moderate Adverse.
	Receptor E: Residents at Copthorne Cattery.	Permanent.	Proposed housing will be set back beyond areas of greenspace with associated landscape proposals softening views once implemented.	Moderate/ Minor Adverse.
	Receptor F: Residents at Collins Street/ Pleasant Street (approx..30.).	Permanent.	Planting to soften views of development.	Minor Adverse.
	Receptor G: Residents at Walshaw (not directly adjacent to Site).	Permanent.	Planting to soften views of development.	Minor Adverse/ Negligible.

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
	Receptor H: Road users along Scobell Street/ Church.	Permanent.	Green infrastructure within the northwest corner of the site would be established and soften views of proposed development.	Minor Adverse.
	Receptor I: Residents along Walshaw Road (approx. 6no).	Permanent.	Planting to soften views of development.	Minor Adverse.
	Receptor J: Recreational users of PRow to the south/ southeast of The Site	Permanent.	Proposed tree planting along the southern boundary would soften views from the south.	Moderate/ Minor Adverse.
	Receptor K: Residents at scattered farmsteads to the west/ northwest.	Permanent.	Planting throughout scheme will help the development to assimilate into the landscape.	None
	Receptor L: Recreational users of PRow to the west/ northwest.	Permanent.	Planting throughout scheme will help the development to assimilate into the landscape.	None
	Receptor M: Recreational users at Footpath: 32RAM/ Peel Monument.	Permanent.	Planting throughout scheme will help the development to assimilate into the landscape.	None

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
	Receptor N: Recreational users of PRoW to the east/ northeast (viewpoints 21 and 22).	Permanent.	Planting throughout scheme will help the development to assimilate into the landscape.	None
	Receptor O: Residents at scattered farmsteads to the east/ northeast (viewpoints 21 and 22).	Permanent.	Planting throughout scheme will help the development to assimilate into the landscape.	None
	Construction			
	Christ Church (NHLE 1163417) Grade II* Listed Building.	Temporary Negligible – Minor Adverse.	Implementation of a CEMP.	Temporary Negligible.
	Cop Thorns HER 8748.1.0 Non-Designated Heritage Asset.	Temporary Minor – Moderate Adverse.	Implementation of a CEMP.	Temporary Negligible.

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
	Extant Historic Landscape Features.	Temporary/Permanent Minor Adverse.	Implementation of a CEMP.	Temporary Negligible - Minor Adverse.
	Potential Sub-surface Archaeological Remains.	Permanent Minor Adverse.	Geophysical Survey. Archaeological Evaluation.	Permanent Negligible.
	Operational			
	Christ Church (NHLE 1163417). Grade II* Listed Building.	Permanent Negligible – Minor Adverse.	Implementation of an LMP/LSP.	Permanent Negligible – Minor Adverse.
	Cop Thorns HER 8748.1.0. Non-Designated Heritage Asset.	Permanent Negligible – Minor Adverse.	Implementation of an LMP/LSP.	Permanent Negligible – Minor Adverse.
	Extant Historic Landscape Features.	Permanent Negligible – Minor Adverse.	Implementation of an LMP/LSP.	Permanent Negligible – Minor Adverse.

Topic Areas	Description of Impact	Nature of Impact	Mitigation Measures	Residual Impact/Overall Significance after Mitigation
	Potential Sub-surface Archaeological Remains.	Permanent Negligible.	None Proposed.	Permanent Negligible.

Summary

- 16.5 A comprehensive assessment of the potential impacts of the construction and operational phases of the proposals has been undertaken as part of this EIA to establish the environmental impacts associated with the development.
- 16.6 The EIA has identified the potential for some **Minor-Moderate Adverse** residual impacts, particularly during the construction process in the form of visual intrusion, traffic generation and noise. The occurrence of some of these impacts will be unavoidable, despite the implementation of best practice measures.
- 16.7 In addition to the mitigation measures presented in the ES, it is recommended that a Construction Environmental Management Plan (CEMP) be developed to monitor and prescribe best practice in on-site construction activities. The CEMP will be developed in conjunction with North Devon Council and relevant consultees and will provide information on best practice and environmental controls/legislation which are routinely and successfully applied on other similar development proposals.
- 16.8 However, the longer-term impacts of the development are overall considered to be **Negligible / Not Significant** with some significant **Beneficial** impacts arising, particularly in regard to habitat creation highway safety/convenience and ground conditions. The potential impacts and mitigation measures in relation to each Chapter of analysis are set out below.

Ecology

- 16.9 Residual impacts are expected to be at least **Neutral** following implementation of mitigation and/or compensation measures. Within the wider ES significance criteria this corresponds to a **Negligible** and **Not Significant** effect.
- 16.10 The biodiversity value of habitats at the site pre- and post-development have been calculated using the statutory DEFRA Biodiversity Net Gain Metric. The proposals will result in a higher than 10% net gain in habitat, hedgerow and watercourse units.
- 16.11 Cumulative Effects of any additional existing or approved developments that are either within the vicinity of the Site or considered to share the same environmental resource have also been considered and **No Significant** effects to ecological assets have been identified and there would be **Significant Benefits** in terms of hedges, trees and BNG.

Traffic and Transportation

- 16.12 The anticipated effects of the Proposed Development on existing traffic and transport conditions in the study area has been considered. The assessments have been informed by a combination of numerical analysis and professional judgement / experience.



- 16.13 Whilst the development traffic will not create discernible environmental impacts on any of the links likely to be used by that traffic, there is still mitigation built into the Proposed Development through infrastructure and a Travel Plan and implementation of a Construction Traffic Management Plan.
- 16.14 It is expected that the residual impacts of the development will have a **Negligible** impact, with their impacts being **Not Significant**.
- 16.15 The cumulative impacts of the other components of the wider Walshaw allocation that could be built, which includes a new internal link and further improvements to connectivity and community infrastructure to enable local living will be **Negligible to Moderate Adverse** (but with mitigation all of them would be **Negligible**) and **Not Significant**.

Water Resources, Drainage and Flood Risk

- 16.16 The likely Significant environmental impacts of the Proposed Development with respect to foul and surface water drainage systems, and flood risk on both the Site, and in the vicinity of, the Site during construction and the post construction phase of the development with specific consideration to the potential risk of contamination of surface and groundwater; the effect of increased surface water run-off; reduced groundwater recharge; and increased foul water discharge.
- 16.17 A range of measures have been proposed to mitigate Adverse effects of the Proposed Development. This includes the provision of SuDS features which will provide amenity and biodiversity Benefits in the longer term.
- 16.18 Construction phase impacts will be mitigated through the implementation of the CEMP, together with safe and managed storage areas and a construction stage drainage plan. It is considered that the residual construction phase impacts on risk of flooding and the contamination of surface and groundwater, would be **Not Significant**.
- 16.19 Given the scope of mitigation proposed in the operational stage, including provision of managed drainage networks and SuDS, it is considered that the residual operational impacts on the risk of flooding, and the contamination of surface and groundwater, and increased foul drainage would be **Not Significant**.
- 16.20 The post mitigation scenario shows that there are no residual or cumulative effects to the drainage and flood risk environment caused by the Proposed Development.

Air Quality

- 16.21 An assessment of the potential impacts during the construction phase has been carried out in accordance with the latest Institute of Air Quality Management Guidance (IAQM). This has shown that for the Proposed Development, limited releases of dust and particulate matter are likely to be generated from on-site activities. However, through good site practice and the implementation of suitable



mitigation measures, the impact of dust and particulate matter releases may be effectively mitigated and the resultant impacts are considered to be **Negligible** and **Not Significant** for the purposes of EIA.

Noise

- 16.22 The Noise Assessment has considered the potential impact of noise and vibration generated during the construction phases; whether the Site is suitable for the Proposed Development when taking into account the existing environmental noise conditions and the potential impact of the Proposed Development from increased road traffic noise on nearby noise-sensitive locations.
- 16.23 The summary of operational phase effects identifies that for existing receptors, there is the potential for Significant effects in the construction phase due to construction activity and in the operational phase due to changes in road traffic noise.
- 16.24 Potential impacts on noise from construction will be managed through site-specific mitigation in the form of best practice measures to be implemented as part of a Construction and Environment Management Plan and indicative recommendations have been provided within the Site Suitability Assessment for likely mitigation requirements for the operational phase of the development in terms of appropriate glazing, ventilation and boundary treatments.
- 16.25 With these assumed parameters in place the expected impact on proposed receptors is **Not Significant**.

Ground Conditions

- 16.26 The assessment of the ground conditions of the Site and the surrounding area includes a consideration of the effects of the Proposed Development on human health, the environment, and the potential for the development to directly contribute to or to be affected by land instability and ground hazards.
- 16.27 The assessment has demonstrated that through the implementation of standard construction best practice procedures and additional intrusive ground investigation, following which contamination mitigation measures can be recommended and implemented, the Proposed Development will have a **Negligible** effect on ground conditions and contamination during the construction phase, and a **Minor/Moderately Beneficial** or **Negligible** effect on the ground conditions during the operational phase. These effects are **Not Significant** for the purposes of EIA.

Landscape and Visual Impact

- 16.28 The Landscape and Visual Impact Assessment defines the existing landscape and visual baseline environments; assesses their sensitivity to change; describes the key landscape and visual related aspects of the Proposed Development; describes the nature of the anticipated change upon both the landscape and visual environments; and assesses the magnitude and significance of the changes for the construction and operational phases of the Proposed Development.



- 16.29 Whilst the Proposed Development would result in some inevitable landscape impacts, the overall assessment of the landscape and visual effects shows that the Site can successfully accommodate the Proposed Development adjacent to Walshaw settlement edge. The long-term effects on the identified immediate and wider area landscape and visual receptors are **Not Significant** for the purposes of EIA.

Archeology & Cultural Heritage

- 16.30 The Heritage assessment undertaken has evaluated the likely significant effects of the Proposed Development on the surrounding historic environment. A baseline assessment of the Site has been undertaken along with an assessment of the significance of designated and non-designated heritage asset, the historic landscape, and potential sub-surface archaeological remains, as well as their setting.
- 16.31 It has been identified that there is the potential for the Grade II* Listed Christ Church and the non-designated Cop Thorns to be visually impacted by the Proposed Development. Potential for extant elements of the historic landscape (e.g. hedgerows) as well as the potential for sub-surface archaeological remains of former agricultural and industrial/extractive use to be impacted upon by the Proposed Development have also been identified.
- 16.32 However, the effects to heritage assets would be **Not Significant** for the purposes of EIA and no effects which would suggest the withholding of Planning Permission were identified during this assessment.

Conclusions

- 16.33 The Proposed Development has been designed in accordance with the findings and recommendations of the EIA. Any **Adverse** impacts identified through the assessment have been minimised and/or turned into **Beneficial** impacts as far as possible through the design process of the application or appropriate mitigation measures, particularly with regard to habitat creation, Biodiversity Net Gain, highway safety/convenience, surface water drainage and ground conditions. Those impacts associated with the construction activities will be controlled and monitored by a Construction Environmental Management Plan (CEMP) that will be devised in consultation with Bury Council.
- 16.34 The proposals are considered to be acceptable in terms of local and national planning policy. They would assist the Council in meeting its housing requirements and economic, environmental and social objectives over the Plan period and would deliver sustainable development in accord with the aims of the Framework.
- 16.35 The development would not have any impact so significant so as to warrant the withholding of planning permission for residential development on this Site.



18. Glossary of terms

Analysis (landscape)	The process of breaking the landscape down into its component parts to understand how it is made up.
Assessment (landscape)	An umbrella term for description, classification and analysis of landscape.
Baseline Studies	Studies of existing environmental conditions which are designed to establish the baseline conditions against which any future changes can be measured or predicted.
Biodiversity	The concept of variety in all species of plants and animals through which nature finds its balance.
Biodiversity Net Gain	Biodiversity net gain (BNG) is an approach to development, and/or land management, that aims to leave the natural environment in a measurably better state than it was beforehand.
Classification	A process of sorting the landscape into different types using selected criteria, but without attaching relative values to the different kinds of landscape.
Compensation	The measures taken to offset or compensate for residual adverse effects that cannot be mitigated, or for which mitigation cannot entirely eliminate adverse effects.
Constraints Map	Map showing the location of important resources and receptors that may form constraints to development.
Countryside	The rural environment and its associated communities (including the coast).
Cumulative Effects	The summation of effects that result from changes caused by a development in conjunction with other past, present or reasonably foreseeable actions.
Diversity	Where a variety of qualities or characteristics occurs.
“Do nothing situation”	Continued change/evolution of landscape or of the environment in the absence of the proposed development.
Element	A component part of the landscape (for example, roads, hedges, woods).
Enhancement	Landscape improvement through restoration, reconstruction or creation.
Environment	Our physical surroundings including air, water and land.
Environmental Appraisal	A generic term for the evaluation of the environmental implications of proposals (used by the UK Government in respect of policies and plans).
Environmental Assessment	A process by which information about the environmental effects of a project is collected, both by the developer and from other sources, and taken into account



	by the relevant decision making body before a decision is given on whether the development should go ahead.
Environment Effects	The predicted impact of a proposed development on humans, and the built and natural environment.
Environmental Fit	The relationship of a development to identified environmental implications opportunities and constraints in setting.
Environmental Impact Assessment	The evaluation of the effects on the environment of particular development proposals.
Environmental Impacts	The process whereby change, which may be adverse, beneficial, or both, is brought about in the existing environment as a result of development activities.
Environmental Statement	A document which sets out the developer's assessment of the likely effects of the project on the environment and which is submitted in conjunction with an application for planning permission.
Field Pattern	The pattern of hedges and walls that define fields in farmed landscapes.
Geographical Information System	Computerised database of geographical information that can easily be updated and manipulated.
Heritage	Historical or cultural associations.
Indirect Impacts	Impacts on the environment, which are not a direct result of the development but are often produced away from it or as a result of a complex pathway. Sometimes referred to as secondary impacts.
Interaction	The extent to which an impact that affects any given aspect of the environment brought about by the development can influence other aspects.
Landcover	Combinations of land use and vegetation that cover the land surface.
Landform	Combinations of slope and elevation of the land conditioned by knowledge and identity with a place.
Landscape Capacity	The degree to which a particular landscape character type or area is able to accommodate change without unacceptable adverse effects on its character. Capacity is likely to vary according to the type and nature of change being proposed.
Landscape Character	The distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement. It creates the particular sense of place of different areas of the landscape.
Landscape Character Type	A landscape type will have broadly similar patterns of geology, landform, soils, vegetation, land use, settlement and field pattern discernible in maps and field survey records.



Landscape Effects	Change in the elements, characteristics, character and qualities of the landscape as a result of development. These effects can be positive or negative.
Landscape Evaluation	The process of attaching value (non-monetary) to a particular landscape, usually by the application of previously agreed criteria, including consultation and third party documents, for a particular purpose (for example, designation or in the context of the assessment).
Landscape Factor	A circumstance or influence contributing to the impression of a landscape (for example, scale, enclosure, elevation).
Landscape Feature	A prominent eye-catching element, for example, wooded hilltop or church spire.
Landscape Quality (or condition)	Is based on judgements about the physical state of the landscape, and about its intactness, from visual, functional, and ecological perspectives. It also reflects the state of repair of individual features and elements which makes up the character in any one place.
Landscape Resource	The combination of elements that contribute to landscape context, character and value.
Landscape Sensitivity	The extent to which a landscape can accept change of a particular type and scale without unacceptable adverse effects on its character.
Land Use	The primary use of the land, including both rural and urban activities.
Landscape Value	The relative value or importance attached to a landscape (often as a basis for designation or recognition), which expresses national or local consensus, because of its quality, special qualities including perceptual aspects such as scenic beauty, tranquillity or wildness, cultural associations or other conservation issues.
Magnitude	A combination of the scale, extent and duration of an effect.
Methodology	The specific approach and techniques used for a given study.
Mitigation	Measures, including any process, activity or design to avoid, reduce, remedy or compensate for adverse landscape and visual effects of a development project.
Mitigation	Any process, activity or control designed to avoid, reduce or remedy adverse environmental impacts likely to be caused by a development project.
Perception (of landscape)	The psychology of seeing and possibly attaching value and/or meaning to landscape.
Precautionary Principle	Principle applied to err on the side of caution where significant environmental damage may occur, but where knowledge on the matter is incomplete, or when the prediction of environmental effects is uncertain.
Preference	The liking by people for one particular landscape element, characteristic or feature over another.
Quality	See Landscape Quality



Receptor	Physical landscape resource, special interest or viewer group that will experience an effect. A component of the natural or man made environment such as water, air, a building, or a plant that has the potential to be affected by an impact.
Regulatory Authority	The planning or other authority responsible for planning consents or project authorisation (synonymous with determining authority).
Scenario	A picture of a possible future.
Scoping	The process of identifying the likely significant effects of a development of the environment.
Scoping (EIA)	Under Part IV Section 13 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 a developer may request a formal Scoping Opinion from the relevant planning authority as to the information to be provided in the ES.
Screening	A person who is minded to carry out development may request the relevant planning authority to adopt a screening opinion.
Sense of Place (genius loci)	The essential character and spirit of an area; <i>genius loci</i> literally means ‘spirit of the place’.
Sensitive/Sensitivity	See landscape sensitivity
Sieve Mapping	Technique for mapping environmental constraints, working from a series of overlays, sieving out less important factors.
Significance	• A measure of the severity of an environmental effect, considered throughout this ES as follows: • <u>Adverse</u> – detrimental or negative impact • <u>Beneficial</u> – advantageous or positive impact • <u>Negligible</u> – no significant impact • Where Adverse or Beneficial impacts are identified, these should be assessed against the following scale: • <u>Minor</u> – slight impact • <u>Moderate</u> – limited impact • <u>Major/Substantial</u> – considerable impact
Sustainability	The principle that the environment should be protected in such a condition and to such a degree that ensures new development meets the needs of the present without compromising the ability of future generations to meet their own needs.
Technique	Specific working process.



The Stasis (“do nothing”) Scenario	The predicted future environmental conditions which would exist in the absence of the development.
Threshold	A specified level in grading effects, for example, of magnitude, sensitivity or significance.
Visual Amenity	The value of a particular area or view in terms of what is seen.
Visual Effect	Change in the appearance of the landscape as a result of development. This can be positive (i.e. beneficial or an improvement) or negative (i.e. adverse or a detraction).
Visual Envelope	Extent of potential visibility to or from a specific area or feature.
Visualisation	Computer simulation, photomontage or other technique to illustrate the appearance of a development.
Worst-case Situation	Principle applied where the environmental effects may vary, for example, seasonally to ensure the most severe potential effect is assessed.
Zone of Visual Influence	Area within which a proposed development may have an influence or effect on visual amenity.



Glossary of Acronyms (Transport)

Acronym	Full Name
AADT	Annual Average Daily Traffic Flow
ATC	Automatic Traffic Count
AAWT	Annual Average Weekday Traffic Flow
COBA	Cost Benefit Analysis computer program
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridge
EIA	Environmental Impact Assessment
HGV	Heavy Good Vehicle
IEA	Institute of Environmental Assessment
LAIP	Local Area Implementation Plan
LHA	Local Highway Authority
LTP3	Greater Manchester Local Transport Plan 3
MfS	Manual for Streets
Framework	National Planning Policy Framework
OGV	Other Good Vehicle
PSV	Passenger Service Vehicle
PIA	Personal Injury Accident
PRC	Practical Reserve Capacity
TA	Transport Assessment
TP	Travel Plan



