
Land South of Dearne Valley Parkway

Environmental Impact Assessment Scoping Report

October 2022

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Prepared on behalf of Equites Newlands (Goldthorpe) Ltd

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1.0 INTRODUCTION

- 1.1 This Environmental Impact Assessment (EIA) Scoping Report has been prepared by Barton Willmore, now Stantec, IEMA qualified assessors, on behalf of Equites Newlands (Goldthorpe) Ltd (the Applicant). The report accompanies a request for an EIA Scoping Opinion to Barnsley Metropolitan Borough Council (BMBC) in accordance with Regulation 15 of the *Town and Country Planning (EIA) Regulations 2017*, as amended¹ (the EIA Regulations) with respect to proposed employment development on Land South of Dearne Valley Parkway, South Yorkshire (the site).
- 1.2 In accordance with the EIA Regulations, a person who is minded to make an EIA application may ask the relevant planning authority to state in writing their opinion as to the information to be provided in the Environmental Statement (ES) (a Scoping Opinion).
- 1.3 Regulation 15 (2) of the EIA Regulations states that a scoping request must be accompanied by:
- (i) *a plan sufficient to identify the land;*
 - (ii) *a brief description of the nature and purpose of the development, including its location and technical capacity;*
 - (iii) *an explanation of the likely significant effects of the development on the environment; and*
 - (iv) *such other information or representations as the person making the request may wish to provide or make.*
- 1.4 The purpose of this Scoping Report is to provide sufficient information on the proposed development and its potentially significant environmental effects to allow BMBC to adopt an informed Scoping Opinion. EIA Scoping is a statutory process through which the content and detailed methodology of the ES is agreed. It is best practice and ensures that any future planning application is accompanied by a suitably proportionate and focused ES that takes all significant environmental issues into account.

¹ SI 2017/571 as amended by SI 2018/695

2.0 THE SITE AND PROPOSED DEVELOPMENT

The Site

Site Context

- 2.1 As mentioned in the introduction, the site is located to the south of Dearne Valley Parkway (see Appendix 1) and is located to the north west of Bolton upon Dearne: a village located between Barnsley (9.5km to the west of the site) and Doncaster (12.5km to the east) in South Yorkshire, within the administrative boundary of BMBC.
- 2.2 The north of the site is bound by the A635 Dearne Valley Parkway (along which lies a residential dwelling, external to the site boundary) and the south of the site is bound by Carr Head Lane. To the east the site is bound by the ALDI Goldthorpe Distribution Centre, with Goldthorpe Industrial Estate beyond; and to the west, the site is bound by open fields. Dearne Community Children's Centre and residential development of Bolton upon Dearne are situated to the southeast. To the south, the site borders Green Belt, beyond which lies the Royal Society for the Protection of Birds (RSPB) Dearne Valley Old Moor and Bolton Ings Reserves site.
- 2.3 The local road network includes the A635 Doncaster Road to the north and the A6195 to the west. There are several bus stops within proximity of the site serving routes 22c, 22x, 72, 72a, 208, 218, 218a, 220, 226, 668, X19 and X20. The bus network predominately provides a connection from the site to Barnsley Town Centre, however, also provides services to Grimethorpe. Goldthorpe, and Bolton upon Dearne train stations are 1.6km to the north east and 2.5km to the south east of the site, respectively.

Environmental Baseline Conditions

- 2.4 The site is not covered by any national or local landscape, ecological and heritage designations. The nearest statutory ecological designation to the site is the Dearne Valley Wetlands Site of Special Scientific Interest (SSSI), located approximately 144m to the south west of the site, at its closest point.
- 2.5 Within 2km of the site boundary, there are two Scheduled Monuments, comprising 'Heavy Anti-aircraft gun site 33m south east of Lowfield Farm', located approximately 1.8km to the south east, and 'Cross in the churchyard of All Saints' Church', located approximately 1.9km to the west. There are two Grade I and 24 Grade II Listed Buildings within 2km of the site, of which Billingley Hall Grade II Listed Building is the closest at approximately 580m to the

north. The closest non-statutory designated site is Hickleton Hall Registered Park and Garden, approximately 3.3km to the north east of the site. There are no Registered Battlefields within 2km of the site boundary.

- 2.6 The site is not located within a Conservation Area. The nearest Conservation Area to the site is the Billingley Conservation Area², 500m to the north of the site. The site does not fall within an area of archaeological significance or priority.
- 2.7 The majority of the site is located within Flood Zone 1, which is considered to be at the lowest risk of fluvial flooding. The Carr Dike (an existing watercourse running on a northeast-southwest axis across centre of the site) is flanked by Flood Zone 2 and 3. Flood Zone 3 is defined as being at the highest (>1%) chance of fluvial flooding in any given year.
- 2.8 A Nitrate Vulnerable Zone is found within the site. It is not located within a groundwater Source Protection Zone.
- 2.9 The site is not located within an Air Quality Management Area (AQMA). There are seven AQMAs currently designated within BMBC, the closest of which is AQMA 7, located approximately 3.4km to the east of the site.

Site Description

- 2.10 The site (see Appendix 1) extends to 92.59 hectares (ha) and is irregular in shape, comprising several agricultural fields, separated by hedgerows and the Carr Dike. Whilst the majority of the site comprises Barnsley Local Plan's³ ES10 employment allocation 'Land South of Dearne Valley Parkway', there are also parts of the site that fall within the Green Belt. These areas will not be used for building form, but rather landscape mitigation and sustainable drainage systems (SuDS) features such that they will not constitute 'inappropriate development' based on the definition contained in the National Planning Policy Framework (NPPF)⁴.
- 2.11 The site is largely flat, with few discernible landscape features of note within or surrounding the site. The site is located within Agricultural Land Classification⁵ (ALC) mostly Grade 3b with pockets of Grade 3a in the east and southeast. Grade 3b land denotes agricultural land of moderate quality whilst Grade 3a denotes land of good quality, known as 'Best and Most

²BMBC, Conservation Areas in Barnsley

³BMBC, Barnsley Local Plan (adopted January 2019). Available here: <https://www.barnsley.gov.uk/media/17249/local-plan-adopted.pdf>

⁴Department for Levelling Up, Housing and Communities (July 2021) National Planning Policy Framework. Available here: National Planning Policy Framework - GOV.UK (www.gov.uk)

⁵The Agricultural Land Classification (ALC) provides a method for assessing the quality of farmland to enable informed choices to be made about its future use within the planning system.

Versatile' land (BMV).

- 2.12 There is currently no vehicular access to the site. Pedestrian access is currently taken via Public Right of Way (PRoW) Dearne UD 15. National Cycle Route (NCR) 62 passes to the south of the site.

The Proposed Development

- 2.13 The Applicant is proposing to submit a Hybrid planning application for proposed employment development and associated infrastructure. The outline application element is for up to 204,000 sq m (Gross Internal Area) for Storage and Distribution (Use Class B8) and General Employment (Use Class B2) space, with ancillary offices. The full application element is for engineering infrastructure works including the access roads, earthworks to create the proposed development platforms/bunding, drainage works, flood compensation area and strategic landscaping.
- 2.14 The proposed development will comprise three development plateau areas which are divided into four development zones (Zones 1 to 4) (see Draft Parameters Plan at Appendix 2). In line with the Goldthorpe Masterplan Framework⁶, the proposed development proposes up to 204,000 sq m of commercial floorspace. The maximum heights above finished floor level (to ridge) of each zone is as follows:
- Zone 1 – 21m;
 - Zone 2 – 21m;
 - Zone 3 – 21m; and
 - Zone 4 – 18m.
- 2.15 The proposed vehicular access for the site will be via a new roundabout from A625 Barnsley Road at the northern boundary of the site. This roundabout has already been approved under Planning Permission 2021/1511 and is about to be constructed by BMBC. PRoW Dearne UD 15, from which pedestrian access is currently taken, would be diverted as part of the proposed development.

⁶ BMBC and Edward Architecture (September 2021) Goldthorpe Masterplan Framework

3.0 SCOPING

3.1 This scoping exercise has been informed by the screening process, desk-based research, professional judgement, and other information available for the site. Table 3.1 provides a summary of the scoping exercise.

Table 3.1: EIA Scoping Summary

Topics	Potential Construction Phase Effects	Potential Operational Phase Effects	Likely Significant Effects (Pre-Mitigation)	Comments
Socio-Economics	✓ - T	✓ - P	✓	Topic scoped into the ES
Cultural Heritage	✓ - P/T	✓ - P	✓	
Landscape Character and Visual Amenity	✓ - T	✓ - P	✓	
Biodiversity	✓ - P/T	✓ - P	✓	
Water Resources and Flood Risk	✓ - T	✓ - P	✓	
Soils and Agricultural Land	✓ - P/T	✓ - P	✓	
Noise and Vibration	✓ - T	✓ - P	✓	
Transport and Access	✓ - T	✓ - P	✓	
Air Quality	x	x	x	Topic scoped out of the ES
Land Contamination	x	x	x	
Wind Microclimate	x	x	x	
Daylight, Sunlight and Overshadowing	x	x	x	
Lighting	x	x	x	
Waste	x	x	x	
Major Accidents and Disasters	x	x	x	
Climate Change	x	x	x	

Key: ✓ Likely Significant Effect / x No Likely Significant Effect.
T – Temporary Effect / P – Permanent Effect

Environmental Disciplines Scoped Out

3.2 Further information on the topics scoped out of the EIA in Table 3.1 is set out in the following sections.

Air Quality

3.3 As identified in Chapter 2, the site does not sit within an AQMA nor is it within proximity of an AQMA.

3.4 During construction, emissions of dust and pollutants from construction plant, activity and haulage will be managed through standard best practice methods, implemented through a

Construction Environmental Management Plan⁷ (CEMP), to be secured via planning condition.

- 3.5 During the operational phase of the proposed development, potential environmental effects relate to emissions from operational traffic movements associated with the proposed development and the effects on existing sensitive receptors, such as local residents. It is not anticipated at this stage that the trip generation will be of a magnitude that would give rise to significant effects on existing receptors. As such, adverse effects resulting from operational traffic on existing receptors are not considered to be significant and will not be considered further within the EIA or reported in the ES.
- 3.6 It is anticipated that a standalone Air Quality Assessment report will be submitted in support of the future planning application, which would consider the potential operational vehicular impacts on existing human / ecological receptors (where required) and derive any appropriate operational mitigation measures (where deemed to be required and secured via planning condition).

Land Contamination

- 3.7 A Phase 1 Ground Conditions Desk Study (Appendix 3) has been undertaken on the site. A review of the historical land uses on the site identified the following:
- There is a bindstone quarry (assumed to be backfilled by 1890) located in the north eastern corner of the site. Further quarries are present surrounding the site;
 - In the 1960s several drains are created in the north of the site;
 - The northern half of the site is marked as an opencast coal mine quarry from 2001 to 2010. No significant changes are shown to the present day; and
 - A historical landfill is identified in the north of the site, registered as accepting domestic refuse.
- 3.8 The desk study identified that the entire area of the former opencast site (the northern half of the site) comprises infilled deposits. The Alluvium comprise a Secondary A aquifer and the Pennine Middle Coal Measures and Mexborough Rock are both Secondary A aquifers. The site is not located within or in proximity to a Groundwater Source Protection Zone or Drinking Water Safeguarded Zone. There are no groundwater abstractions within 1km of the site.
- 3.9 The desk study identified the potential for the following geotechnical risks on the site:

⁷ The purpose of a Construction Environmental Management Plan is to outline how a construction project will avoid, minimise or mitigate effects on the environment and surrounding area.

- Historical mining features including uncontrolled backfill to opencast workings and opencast buried highwalls;
- Known mine entries and possible underground shallow coal mining workings;
- Variable Made Ground/Infilled Ground;
- Low strength, compressible ground of opencast backfill and Alluvium;
- Attack of buried concrete by aggressive ground conditions;
- Shrinkage/swelling of Alluvium;
- Running sands, loose Made Ground/Infilled Ground and shallow groundwater;
- Fault which crosses the south-western tip of the site;
- Potential for obstructions associated with historical mining features;
- High groundwater associated with Carr Dike; and
- Potential for unforeseen ground conditions.

3.10 The following possible sources of contamination have been identified by the desk study and the resulting pollutant linkages on an un-remediated site have the potential for effects on receptors (site users, neighbours, groundwater and buildings):

- Made Ground/Infilled Ground, associated with the backfilled opencast sites and bindstone quarry, possibly including elevated concentrations of metals, metalloids, polycyclic aromatic hydrocarbons (PAH), petroleum hydrocarbons (PHC), asbestos fibres, and Asbestos Containing Materials (ACM);
- Historical landfill comprising household waste potentially containing metals, metalloids, asbestos fibres, ACM;
- Ground gases (carbon dioxide and methane) from organic materials in the Made Ground / Infilled Ground / alluvial deposits;
- Ground gases (carbon dioxide and methane) from organic materials in the landfill;
- Mine gases (carbon dioxide, methane, carbon monoxide and hydrogen sulphide) from shallow mine workings;
- Historical Licenced pollutant release site (Part B permit) for the processing of coal and coke.

3.11 However, as set out within the desk study, the site is not considered to be classified as Contaminated Land under Part 2A of the EPA (Environmental Protection Act) 1990⁸.

3.12 In order to confirm the ground conditions and the extent of the risk to receptors on the site, a Ground Investigation Survey will be carried out and will provide remedial processes where necessary. The Ground Investigation Survey will be submitted in support of the planning

⁸ UK Government (1990) Environmental Protection Act 1990

application and will confirm the potential geotechnical and geo-environmental risks on the site. This will include determining made ground / infilled ground, soil strength / density, depth / level of groundwater as well as assessing the distribution and extent of mine workings and mine entries and ground gas concentrations beneath the site. The Ground Investigation Survey will outline mitigation recommendations to ensure the site is 'suitable for use' for the construction and operation of the proposed development, as set out in the desk study. It is considered likely that the contamination on the site would be localised and can be effectively dealt with via a remediation strategy through standard industry techniques and any potential impacts (such as dust and odour) would be short-term during construction only controlled via the remediation implemented plan and CEMP.

- 3.13 Once operational, the land uses proposed are not highly contaminative and it is not expected that there is a high risk of contaminants being released into the environment. As stated above, a Ground Investigation Survey will be submitted as part of any future planning application and a condition would be imposed requiring a remediation strategy to be agreed with BMBC, as required based on the results of the Ground Investigation Survey, to ensure that there would be no harm caused to human health. Therefore, there are expected to be no significant potential impacts in terms of land contamination, and this topic is proposed to be scoped out of the ES.

Wind Microclimate

- 3.14 The proposed development will not include any high-rise buildings which could influence wind patterns. Therefore, likely significant wind effects are not anticipated, and this topic is proposed to be scoped out of the ES.

Daylight, Sunlight and Overshadowing

- 3.15 The scale and massing of the proposed development will not cause changes to daylight or sunlight availability or cause overshadowing of residents or amenity space. It is therefore proposed to scope this discipline out of the ES.

Lighting

- 3.16 The site is located on the western edge of the ALDI Goldthorpe Distribution Centre and existing residential development in Bolton upon Dearne, and is bound by the local road network, which is already well lit. Once completed, the site will form part of the contiguous built form of Goldthorpe & Bolton Upon Dearne, separated from adjacent residential receptors by the existing Goldthorpe Industrial Estate. Lighting will be designed carefully in accordance

with relevant Institution of Lighting Professionals (ILP) (2021) Guidance Notes for the Reduction of Obtrusive Light⁹, Institution of Lighting Professionals (ILP) and the Bat Conservation Trust (BCT) (2018) Guidance Note 08 – Bats and artificial lighting in the UK¹⁰ and BS 5489-1:2020¹¹ and BS EN 13201-2:2015¹². Therefore, the proposed development is not anticipated to result in a significant effect on lighting.

- 3.17 Where appropriate, lighting will be considered within the ES, including within the Biodiversity and Landscape and Views chapters. Lighting, as a discipline, is therefore proposed to be scoped out of the ES.

Waste

- 3.18 The proposed development is not anticipated to produce significant amounts of waste to the extent that the creation or disposal of which would give rise to significant effects on the environment. The CEMP, to be secured by a planning condition following planning approval, would detail the mitigation measures to be implemented during the construction phase to minimise waste and ensure that it is stored, managed, collected and disposed of appropriately. No demolition is required, therefore potential waste arisings are not expected to be significant.
- 3.19 Operational waste would be minimised as far as possible and disposed of in line with BMBC requirements and managed in accordance with all applicable legislation. No likely significant effects are anticipated and therefore this topic is proposed to be scoped out of the ES.

Major Accidents and Disasters

- 3.20 The proposed development is for storage and distribution and general employment uses which are not considered to be hazardous. The site is not in a location which is at risk of disasters, such as land instability or earthquakes. As previously stated, part of the site sits within areas of Flood Zone 2 and 3 due to the presence of the Carr Dike. A Flood Risk Assessment (FRA) and Drainage Assessment will be submitted with the planning application, and the ES will consider potential significant effects in relation to Water Resources and Flood Risk.
- 3.21 During the construction phase, the contractor(s) would implement measures in accordance with Health and Safety legislation, and best practice, to minimise the risks of accidents that would have effects on people or the environment. All such measures would form part of the CEMP, which would be secured through a planning condition. No likely significant effects are

⁹Guidance Note 01/21. Guidance Notes for the Reduction of Obtrusive Light (2021). Institution of Lighting Professionals.

¹⁰ Guidance Note 08/18. Bats and artificial lighting in the UK (2018). Institution of Lighting Professionals.

¹¹ British Standards BS EN 5489-1:2020 Lighting of roads and public amenity areas. Code of practice.

¹² British Standards EN 13201-2:2015 Road Lighting Performance requirements.

anticipated and therefore it is proposed to scope this topic out of the ES.

Climate Change

- 3.22 The UK Government is committed to reducing levels of carbon dioxide, nitrous oxide and other greenhouse gases (GHGs) by 2050 through the Kyoto Protocol: a treaty committing industrialised economies to reduce GHG emissions in accordance with agreed individual targets; and the Climate Change Act which, at its latest amendment in 2019, committed the UK to achieving net zero carbon emissions (compared to the 1990 baseline) by 2050.
- 3.23 In September 2019, BMBC declared a climate emergency. In order to reduce carbon emissions, BMBC has committed to two programmes: Zero 40, whereby the authority intends to become net carbon zero by 2040 through improvements to the council's own environmental performance; and Zero 45 whereby it is intended for Barnsley as an area to become net carbon zero by 2045 through its residents, communities, partners and businesses¹³.
- 3.24 The Applicant will consider how climate change may affect the proposed development from the outset as part of the design process. Considerations will include future-proofing and resilience measures. The proposed development will also include identification of the future climate in assessments within the ES, including Flood Risk and where relevant in the landscaping proposals, such as selecting plants suitable for a changing climate.
- 3.25 Additionally, the introductory chapters of the ES will summarise the findings of the EIA relevant to climate change and outline how climate change adaptations are integrated into the proposed development. These will draw upon technical chapters and reports and summarise the sustainability and energy provisions included, as well as other mitigation measures seeking to reduce greenhouse gas emissions such as Travel Plans. For a development of this nature, this is considered a suitably proportionate approach. Therefore, it is proposed to scope this topic out of the ES.

Environmental Disciplines Scoped In

- 3.26 For each of the topics scoped into the assessment, further information on the details to be included in the assessment and the methodology to be employed are set out as follows.

¹³BMBC Reducing Carbon Emissions < <https://www.barnsley.gov.uk/services/our-council/helping-our-environment/reducing-carbon-emissions/>>

4.0 SOCIO-ECONOMICS

Introduction

- 4.1 An assessment of the likely significant effects of the proposed development to socio-economics will be undertaken and included in the ES. This will include construction phase (temporary) and operational phase (permanent) effects.
- 4.2 Given the employment nature of the proposed development, the socio-economic issues considered relevant include changes to, and effects on:
- Total on-site job creation;
 - Net direct and indirect job creation (after taking account of leakage, displacement and multipliers);
 - Net employment effect to residents of Barnsley local authority;
 - Economic output measured in Gross Value Added (GVA) associated with total job creation and separately, net employment; and
 - Workforce Expenditure.
- 4.3 The proposed development will not create a new residential population and therefore social effects, including the impact on social infrastructure, for example, housing, education and primary healthcare, are not considered relevant. Furthermore, it is anticipated that both the construction and operational workforce would primarily be drawn from the local labour market, thereby placing no additional demand (or effect) on the local housing market or social infrastructure, or effects would be so small as to be insignificant. For this reason, construction and operational phase effects on housing delivery, education, healthcare services and open space have been scoped out of the assessment.

Baseline Conditions

- 4.4 The site comprises agricultural land and therefore there is no direct employment on the Site currently. However, in the immediate area surrounding the site there is the ALDI Goldthorpe Distribution Centre and the Goldthorpe Industrial Estate comprising small scale manufacturing units.
- 4.5 The employment rate in BMBC is lower than both the South Yorkshire Metropolitan County and national averages; 69.5% of BMB residents are in employment compared to 72.9% for South Yorkshire Metropolitan County and 75.4% for England. Nonetheless, the unemployment rate is lower in BMB (4.4%) compared to South Yorkshire Metropolitan County (6.3%) but

marginally higher than England (4.3%).

- 4.6 The BMB area is a net exporter of labour, which means there are fewer jobs than there are residents of working age. Currently there are estimated to be 92,000 jobs in BMB, compared to approximately 153,100 residents of working age, meaning there is 0.6 of a job for every resident of working age in BMB.
- 4.7 Average GVA¹⁴ per worker in BMB is comparable to the South Yorkshire Metropolitan County average (circa £44,000 per worker per annum), both of which are significantly lower than the national average (circa £55,000 per worker per annum).

Approach

- 4.8 A desktop study will be undertaken to determine the national and local policy context and baseline conditions for BMB, South Yorkshire Metropolitan County and England. Existing baseline conditions will focus on:
- the age profile and economic activity of the resident population;
 - the local employment profile including the number of jobs and industrial/occupational profile from a resident-based and workplace-based perspective;
 - GVA by sector; and
 - expenditure.
- 4.9 Future baseline conditions in respect of the resident population, employment and GVA for the proposed development's anticipated year of completion, will also be considered.
- 4.10 The baseline will be established using a combination of data sources including nationally published statistics from the Office for National Statistics (ONS), Experian and Oxford Economics.
- 4.11 The socio-economic assessment will be based on the realistic 'worst-case' scenario, that being the scenario which results in the lowest number of operational jobs generated and associated benefits. Given the proposed flexibility in the proposed development parameters, there is the potential for greater economic benefits. Whilst the chapter will report on these, the assessment of effects will ultimately be based on the worst-case.
- 4.12 The assessment will be made using quantitative methods. The number of direct jobs

¹⁴ Gross Value Added.

generated during the construction phase will be calculated using the Construction Industry Training Board, Labour Forecasting Tool which is regarded as an industry standard. Indirect employment during the construction phase will be calculated following guidance from the HM Treasury Green Book (2022)¹⁵.

- 4.13 The number of direct jobs generated during the operational phase will be calculated having regard to job/floorspace densities published in the Homes and Communities Agency (HCA) Employment Density Guide, 3rd Edition (2015)¹⁶. Where the Density Guide provides a range of values, the density which results in the lowest number of jobs will be used, to represent a reasonable worst-case scenario.
- 4.14 Additionality factors (leakage, displacement and multipliers) will be applied to the number of direct jobs, to calculate net additional employment for residents of Barnsley. Additionality will be applied following guidance from the HCA, Additionality Guide (2014)¹⁷ and the HM Treasury Green Book.
- 4.15 Economic output from the jobs created by the proposed development will be calculated by applying average GVA per worker per annum published by Oxford Economics.
- 4.16 Expenditure from employees will be based on convenience good expenditure per person for Barnsley sourced from Experian. Based on professional judgement and in light of an equivocal evidence base, it is assumed that approximately 10% of this annual spend per person could be spent by employees in the local area (for example, buying lunch, etc).
- 4.17 There are no published assessment guidance and technical significance criteria to assess socio-economic related effects. Accordingly, the evaluation of effects will be undertaken based on professional experience and judgement, having regard to the existing baseline position.
- 4.18 Mitigation measures will be recommended where any significant adverse effects are assessed to reduce potential adverse effects.
- 4.19 Consideration will be given to inter-project cumulative effects, subject to availability of cumulative scheme information in the public domain.

Summary

- 4.20 Table 4.1 summarises the receptors identified for inclusion in the assessment.

¹⁵ UK Government (2022) The Green Book

¹⁶ Homes & Communities Agency (2015) Employment Density Guide

¹⁷ Homes & Communities Agency (2014) Additionality Guide

Table 4.1: Socio-Economics Effects

Receptor	Effects	Scoped In?
Total job creation	Increase in short-term construction and long-term operational workplace-based employment at the Site/Borough level	✓
Net employment	Increase in long-term operational resident-based employment at the Borough level (i.e. jobs created for residents of Barnsley)	✓
Economic Output	Increase in Gross Value Added (GVA) in the short term (construction phase) and long term (operational phase) at the Borough level	✓
Workforce Expenditure	Increase in workplace-based expenditure due to construction and operational workforce spending at the Borough level	✓
Health, Schools and Housing	Potential impact on health, schools and housing is to be scoped out due to the proposed development not bringing forward any additional housing as part of the design.	X

5.0 CULTURAL HERITAGE

Introduction

- 5.1 New development has the potential to have direct physical and non-physical impacts on designated heritage assets (World Heritage Sites, Scheduled Monuments, Listed Buildings, Registered Parks and Gardens, Conservation Areas and Registered Battlefields) and also on undesignated heritage assets and buried archaeological remains.
- 5.2 An assessment of the likely significant effects of the proposed development on cultural heritage will be undertaken and included in the ES.

Baseline Conditions

- 5.3 An Archaeological Desk-based Assessment (DBA) and a Built Heritage Statement (BHS) are currently being prepared by RPS Planning and Environment (part of RPS Group plc) in respect of the proposals.
- 5.4 No World Heritage Sites, Scheduled Monuments, Listed Buildings, Registered Parks and Gardens, Conservation Areas or Registered Battlefields are located on or immediately adjacent to the site.
- 5.5 The nearest Scheduled Monument to the site is a Heavy Anti-aircraft gun site 330m south east of Lowfield Farm, on the south eastern side of Bolton upon Dearne, some 1.9km from the site. Given the lack of known historical associations, the distance, and intervening built form between the site and this Scheduled Monument, there is sufficient evidence to scope out the potential effect of the Scheduled Monument in the ES.
- 5.6 There are a number of Listed Buildings and one conservation area within 1km of the site. The Listed Buildings cluster in Bolton on Deane (all Grade II Listed apart from the Church of St Andrew, which is Grade I Listed), in Billingley and in Darfield (all Grade II Listed, apart from the Church of All Saints in Darfield). Both Billingley and Darfield also contain Conservation Areas. The potential impact of the proposed scheme on these Listed Buildings and conservation areas will be assessed as part of the Environmental Statement.
- 5.7 The South Yorkshire Sites and Monuments Record (SMR) includes a number of records within the site itself, as well as within the wider area. Within the site records relate to cropmarks on aerial photographs showing the presence of 'brickwork' field system of a type common across

South Yorkshire, and usually attributed to the Romano-British period (SMR entries 00079/01, 00085/01, 02687/01 and 04634). The findspot of a Romano-British brooch is also recorded (00593/01).

- 5.8 Within the wider landscape there are a number of other cropmarks identified in aerial photographs on the river floodplain, indicative of fairly widespread late prehistoric and Romano-British activity across the wider landscape. The SMR also contains a number of records of medieval and postmedieval date, predominantly relating to buildings in nearby villages or other structures of interest such as mills. It appears that by the medieval period that the modern settlement pattern was broadly established, and that from the medieval period onwards the site is likely to have been part of the agricultural hinterland of these settlements.

Approach

- 5.9 The DBA and BHS will be prepared in accordance with current best practice, and in accordance with current standards and guidance, including:

- Chartered Institute for Archaeologists (2021) Code of Conduct¹⁸;
- Chartered Institute for Archaeologists (2020) Standard and Guidance for Historic Environment Desk-Based Assessment¹⁹;
- Chartered Institute for Archaeologists (2020) Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment²⁰;
- Chartered Institute for Archaeologists (2020) Standard and guidance for archaeological geophysical survey²¹;
- Chartered Institute for Archaeologists (2020) Standard and guidance for archaeological field evaluation²²;
- Chartered Institute for Archaeologists (2020) Standard and guidance for the collection, documentation, conservation and research of archaeological materials²³;
- Chartered Institute for Archaeologists (2020) Standard and guidance for the collection, compilation, transfer and deposition of archaeological archives²⁴;
- Historic England (2015) Managing Significance in Decision-Taking in the Historic

¹⁸ Chartered Institute for Archaeologists (2021) Code of Conduct

¹⁹ Chartered Institute for Archaeologists (2020) Standard and Guidance for Historic Environment Desk-Based Assessment

²⁰ Chartered Institute for Archaeologists (2020) Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment

²¹ Chartered Institute for Archaeologists (2020) Standard and guidance for archaeological geophysical survey

²² Chartered Institute for Archaeologists (2020) Standard and guidance for archaeological field evaluation

²³ Chartered Institute for Archaeologists (2020) Standard and guidance for the collection, documentation, conservation and research of archaeological materials

²⁴ Chartered Institute for Archaeologists (2020) Standard and guidance for the collection, compilation, transfer and deposition of archaeological archives

Environment: Historic Environment Good Practice Advice in Planning Note 2²⁵; and

- Historic England (2017) The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3²⁶.

5.10 Data will be gathered from a number of information sources including:

- The National Heritage List for England (NHLE);
- The South Yorkshire SMR;
- Other national heritage datasets including the Archaeological Data Service (ADS), OASIS and the National Record of the Historic Environment (NHRE);
- Relevant primary and secondary sources held at the South Yorkshire Archives, also published and unpublished archaeological reports relating to excavations and observations within and adjacent to the site;
- Historic cartographic, photographic and graphic material; and
- The site itself, which will be subject to a walk-over inspection to verify the current site conditions.

5.11 The DBA and BHS will be presented as a Technical Appendix to the ES, whilst a summary of the results of the assessment will be included within the ES chapter.

5.12 Consultation will be undertaken with the Archaeological Advisor to the Local Planning Authority and Historic England, as appropriate. This consultation will seek approval of the contents of the DBA and BHS and will identify any potential requirements regarding the need for further archaeological work. Any archaeological investigations would be undertaken in accordance with a Written Scheme of Investigation (WSI) agreed with the Archaeological Advisor to the Local Planning Authority. Reports arising from any archaeological fieldwork undertaken in connection with the proposed development will be presented as Technical Appendices to the ES.

5.13 Early identification of potential impacts on heritage assets through alteration of their setting early in the design process should allow mitigation of these impacts through design.

5.14 The identification of the potential location and nature/importance of buried archaeological remains will be fed back into the design process, so that consideration can be given to the location of project elements and the methodologies for construction.

²⁵ Historic England (2015) Managing Significance in Decision-Taking in the Historic Environment: Historic Environment Good Practice Advice in Planning Note 2

²⁶ Historic England (2017) The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3

- 5.15 The ES chapter will include a review of the relevant legislation, policy and guidance relating to the heritage assets both within the site and the surrounding area. It will then present an assessment of the likely impacts and effects of the proposed development on the heritage assets, using a matrix-based approach in which the heritage assets are assigned a level of value or importance and this is reviewed against the predicted magnitude of impact on the heritage assets in order to reach an assessed level of effect.
- 5.16 The assessment will consider impacts arising from temporary and permanent works. It will also consider any mitigation of these impacts that has been achieved within the design process and will identify any further mitigation or offsetting of impacts that may be required before, during or after construction of the proposed development. Opportunities for enhancement of public awareness of the history and archaeology of the site will be identified and described, where appropriate.

Summary

- 5.17 Table 5.1 summarises the receptors identified for inclusion in the assessment.

Table 5.1: Cultural Heritage Effects

Receptor	Effects	Scoped In?
Scheduled Monument. Heavy Anti-aircraft gunsite 330m south east of Lowfield Farm (1019872)	None	x
Grade I Listed Building. Church of St Andrew, Bolton upon Dearne (1191492)	Potential impact through development within setting	✓
Grade II Listed Building. Barn approximately 50 metres to south of Cross Dagers Public House, Bolton upon Dearne (1315020)	Potential impact through development within setting	✓
Grade II Listed Building. Barn and cartshed to South of Number 67 (Grange Farmhouse), Bolton upon Dearne (1109948)	Potential impact through development within setting	✓
Grade II Listed Building. Animal shelter with hay loft and attached stables to the south east of Number 67 (Grange Farmhouse), Bolton upon Dearne (1109943)	Potential impact through development within setting	✓
Grade II Listed Building. Grange Farmhouse and attached farm buildings to east, Bolton upon Dearne (1109942)	Potential impact through development within setting	✓
Grade II Listed Building. Bolton-Upon-Deerne War Memorial, Bolton upon Dearne (1419031)	Potential impact through development within setting	✓
Grade II Listed Building. Poplar Farmhouse, Billingley (1109948)	Potential impact through development within setting	✓
Grade II Listed Building. Manor House, Billingley (1151201)	Potential impact through development within setting	✓
Grade II Listed Building. Billingley Hall, Billingley (1293499)	Potential impact through development within setting	✓

Receptor	Effects	Scoped In?
Grade I Listed Building Church of All Saints, Darfield (1315015)	Potential impact through development within setting	✓
Grade II Listed Monument to victims of Lundhill Colliery Explosion, situated approximately 55 metres to the south east of Church of All Saints, Darfield (1293398)	Potential impact through development within setting	✓
Billingley Conservation Area	Potential impact through development within setting	✓
Darfield Conservation Area	Potential impact through development within setting	✓
Potential buried archaeological remains within the site	Potential loss through direct impact as a result of development	✓

6.0 LANDSCAPE AND VISUAL AMENITY

Introduction

- 6.1 An assessment of the likely significant effects of the proposed development upon Landscape Character and Visual Amenity will be undertaken and included in the ES.

Baseline Conditions

Landscape Character

- 6.2 At a national scale, the site lies within Natural England's National Character Area (NCA) 38 'Nottinghamshire, Derbyshire and Yorkshire Coalfield'. This NCA covers a large area and stretches in a relatively narrow strip from Stapleford, west of Nottingham, to the northern edge of Leeds.
- 6.3 The Barnsley Borough Landscape Character Assessment (2002), which was then reviewed in 2016, defines the area within which the site lies as Landscape Character Type (LCT) D: 'Settled Arable Slopes'. At a local level, it further subdivides the LCT and categorises it as Landscape Character Area (LCA) D2: 'East Dearne Settled Arable Slopes'. The site shares several key characteristics with this LCA, including:
- Varied landform;
 - Large open, predominantly arable farmland, of medium to large field units of no consistent or obvious pattern;
 - Remnant hedgerow field boundaries occurring sporadically and in generally poor condition;
 - Dikes running across the arable land;
 - Sense of urbanisation with skyline views of settlement roofscapes;
 - Proliferation of scrubby, compartmentalised field units adjacent to settlements at the urban interface;
 - Lack of vertical elements in the rural landscape with little to break up the horizontal plane; and
 - Far reaching views providing a sense of openness and exposure.
- 6.4 The 2016 Review of the Assessment also states:

"...Although land reclamation schemes on former colliery sites have continued to establish and that, since the (2002) study, the area has been designated as the Dearne Valley Green Heart Nature Improvement Area the character area continues to be intensively farmed and the ALDI Distribution Centre, whilst partially screened by a bund and immature planting, is now a noticeable feature within the character area. The Landscape Character Assessment undertaken on behalf of the Dearne Valley Green Heart Partnership in 2011 also recognises some of this change. It is therefore considered that strength of character remains moderate and that landscape condition is poor. In respect of sensitivity and capacity none of the changes referred to above alter the conclusion that the character area has medium sensitivity and medium capacity to accommodate built development in areas of landscape decline that are less visually sensitive. ... The main change in the character area has been the development of the ALDI Distribution Centre, which has inevitably had a negative influence on landscape character, albeit this would reduce once tree planting on the landscaped bund establishes. To the south of this Lacewood Primary School has been erected on the western edge of Bolton Upon Dearne."

- 6.5 As stated in the Barnsley Borough Landscape Character Assessment (2002), which was then reviewed in 2016, the strength of the landscape character area in which the site is situated (LCA D2: 'East Dearne Settled Arable Slopes') is considered moderate, and the landscape condition poor. The LCA is also judged in the Assessment as being of medium sensitivity and having medium capacity to accommodate built development in areas of landscape decline that are less visually sensitive. Also, within the assessment, it is suggested that the main change in the character area has been the development of the ALDI Goldthorpe Distribution Centre, which has inevitably had a negative influence on landscape character, albeit this would reduce once tree planting on the landscaped bund establishes. Having visited the site for the purposes of this scoping assessment, it is confirmed that much of the character area descriptions reflect the site and its immediate context.

Site Landscape

- 6.6 The site is allocated for employment development within Barnsley Council's Local Plan (Site reference ES10) and is located south of the A635, and west of the settlement edge of Bolton upon Dearne and Goldthorpe. The site covers 92.59 ha.
- 6.7 The site is mainly comprised of large, open, and gently sloping agricultural fields. Carr Dike cuts through the middle of the site from the western boundary to the northern boundary and is lined with trees and overgrown hedgerows. Further hedgerows, which appear to be in poor / moderate condition, exist on site along internal field boundaries, with some boundaries having had hedgerows removed.
- 6.8 Three sets of overhead cables run across the site. Public Footpath 'Billingley CP 5' running

from A635 across the northeast of the site does not currently appear to be well used.

- 6.9 The A635 Dearne Valley Parkway lies adjacent to the northern boundary of the site, raised above the site on an embankment of between 2 and 4m in height. The road is screened in part by mature trees and vegetation along the embankment. Planning Permission 2021/1511 was granted (subject to conditions) in February 2022 for the creation of a new roundabout on the A635 to unlock the site allocation ES10.
- 6.10 The eastern boundary of the site borders the ALDI Goldthorpe Distribution Centre and Goldthorpe Industrial Estate. The boundary to the ALDI Goldthorpe Distribution Centre comprises a simple post and wire fence and a public footpath with a green palisade fence. Existing residential properties, Heather Garth Primary Academy and Lacewood Primary School are situated to the south-east of the site.
- 6.11 At its southern boundary, the site borders Green Belt land and an allocated site for residential development.
- 6.12 The western boundary is open, is not naturally de-marked, and extends diagonally through existing arable fields, beyond which is currently Green Belt land.

Designations

- 6.13 The site and immediate context are not subject to any statutory landscape designations.
- 6.14 Green Belt land borders the site to the south-west, west, and to the north of the A635.
- 6.15 Further south are the RSPB reserves: Dearne Valley – Bolton Ings and Old Moor – which form part of the newly notified Dearne Valley Wetlands Site of Special Scientific Interest (SSSI). Intervisibility is limited between these locations and the site.
- 6.16 The site and much of the local area also fall with the Dearne Valley Green Heart Nature Improvement Area.
- 6.17 Phoenix Park is a Country Park located approximately 1.6km north-east of the site. The site may be discernible in the distance from the highest points in the park.
- 6.18 An allocated Green Way within the Barnsley Local Plan is situated along the southern edge of Thurnscoe, approx. 1.1km north of the site. It is possible to see the site in the distance from this location. It is unlikely that there is any intervisibility between the site and the other Green

Ways in the context.

- 6.19 There are several Conservation Areas (CA) in the wider context, the closest being in Billingley, approx. 500m north of the site. Limited inter-visibility is anticipated between the CAs and the site.
- 6.20 Several statutorily listed buildings exist in the wider context, along with two scheduled monuments, and the grade II listed 'Hickleton Hall' Registered Park and Garden. It is unlikely that the site is visible from these locations.
- 6.21 The site lies approx. 17km to the northeast of Peak District National Park. It is not anticipated that there would be any inter-visibility between the site and the National Park.

Topography and Visual Envelope

- 6.22 The topography of the site and the wider context, combined with the openness of much of the landscape, particularly to the west and north, allow for far reaching views into and out of the site. The visual envelope to the east is limited by the existing built form on the urban edge of Bolton upon Dearne and Goldthorpe. Views of the site from the south are largely unavailable due to existing changes in topography and intervening features in the landscape.

Approach

- 6.23 The Landscape and Visual Amenity will form a chapter in the Environmental Statement (ES) and will identify and assess the likely significant effects that would arise as a result of the proposed development on key receptors and the visual amenity of the area.
- 6.24 The assessment process will be based on the current published guidelines for landscape and visual assessment provided in the Guidelines for Landscape and Visual Impact Assessment, 3rd edition (known as GLVIA3) (Landscape Institute and Institute of Environmental Management and Assessment, 2013) and guidelines for character assessment provided in Landscape Character Assessment: Guidance for England and Scotland (Countryside Agency and Scottish Natural Heritage, 2002).
- 6.25 The visual assessment will consider the likely visual effects upon receptors within the site, bordering the site and within the study area (3km beyond the site boundary). The visual assessment will assess approximate visibility through computerised Zone of Theoretical Visibility (ZTV) showing areas of land within which the proposed development is theoretically visible (GLVIA3, 2013). The ZTV will be produced using two sets of height data – both Digital

Terrain Model (bald earth) and LiDAR.

- 6.26 28 key viewpoints have already been identified (through consultation with BMBC/Gillespies) from which photos will be taken to assist in the assessment of visual impact. The viewpoint photographs will be included as annotated viewpoint photographs (Visualisation Type 1, LI technical Guidance Note 06/19).
- 6.27 Additionally, eight carefully selected viewpoint photographs (already agreed with BMBC/Gillespies), which represent sensitive visual receptors affected by the proposed development, will be reiterated as photomontages. These montages will be made up of a rendered model of the proposed development overlaid on site photography (Visualisation Type 3, LI Technical Guidance Note 06/19). These will be rendered to AVR Level 3. These will illustrate the proposals at Year 0 (upon completion) and at Year 15.
- 6.28 Conclusions on effects, whether adverse or beneficial, will be drawn from a separate judgement on the sensitivity of the receptors and the magnitude of effects. This overall judgement will involve a reasoned professional overview of the individual judgements against the criteria below to make the final overall judgement.
- 6.29 For the assessment, the following descriptive thresholds will be used with regard to effects:
- Major: An effect that will fundamentally change and be in direct contrast to the existing landscape or views;
 - Moderate: An effect that will markedly change the existing landscape or views but may retain or incorporate some characteristics/ features currently present;
 - Minor: An effect that will entail limited or localised change to the existing landscape/ views or will entail more noticeable localised change but including both adverse and beneficial effects and is likely to retain or incorporate some characteristics/ features currently present; and
 - Negligible: An effect that will be discernible yet of very limited change to the existing landscape or views.
- 6.30 Potential effects are based on the impact of the proposed development at Year 0. Residual effects are based on the impact of the proposed development 15 years post development.
- 6.31 Finally, a judgement will be reached based on the assessment, whether an effect is significant or not.
- 6.32 The following points stated in the approved Goldthorpe Masterplan Framework would be

considered in the LVIA:

- *"The impact of future development on long-distance views experienced from the north, especially those from Billingley Conservation area and from the residential development to the south east at Bolton upon Dearne;*
- *Although Carr Dike will be retained and buffered as part of the proposed development, the illustrative layout results in the loss of open farmland, the removal of some hedgerows and trees, and a change in character resulting from built development. The illustrative masterplan layout therefore introduces significant new native structure planting between development plots as well as wide native planting belts along site boundaries to help visually contain future development; and*
- *The use of an appropriate colour palette and limitations on buildings heights will be necessary to mitigate landscape and visual impact."*

6.33 A cumulative effects section will be included within the ES. This will assess the cumulative impacts of the proposed development in conjunction with any committed developments within the vicinity of the site identified through the scoping process.

6.34 The areas allocated for housing adjacent to the site will be considered as built as part of a future baseline when considering views from nearby residential receptors. Where these allocated sites are 'committed development', effects on these new residential receptors, who will experience near views of the proposed development, will also be considered within the assessment.

6.35 An assessment on night-time effects will be included in the ES chapter.

Summary

6.36 The provided information is based on desktop studies as well as the Goldthorpe Masterplan Framework, which will inform Landscape and Visual Impact Assessment (LVIA).

6.37 The ALDI Goldthorpe Distribution Centre and the units at Goldthorpe Industrial Estate are evident in many of the available views of the site experienced by the visual receptors in the surrounding area. Furthermore, there are several other units in the wider context, that have a similar character to the proposed development, and which are evident in the existing views

towards the site from different receptors. Therefore, the proposed development would not be introducing totally uncharacteristic elements into the existing landscape.

- 6.38 The scale of the proposed buildings means that it is likely that they will be visible to a number of the surrounding visual receptors, including those who do not currently have views of the site in its existing condition. It is unlikely that new planting will grow tall enough to fully screen the proposed development. If earth bunds with new planting on top are introduced, these will be more effective in visually screening the proposed development from the surrounding area, however planting will take several years to mature and so the proposed development is likely to be noticeable for a number of years after completion.
- 6.39 At this point, it is anticipated that the landscape character of the site and its immediate context have the ability to absorb change through the introduction of the proposed development, and that the proposals will be appropriate within this landscape context. It is considered that the proposed development would appear as a logical extension to the existing ALDI Goldthorpe Distribution Centre and Goldthorpe Industrial Estate, but would result in some localised adverse effects on landscape character and visual amenity. This assumption is based only on desk study and an initial site visit, and will require further landscape character and visual assessment.
- 6.40 Tables 6.1 and 6.2 summarise the receptors identified for inclusion in the assessment.

Table 6.1: Landscape Receptors

Receptor	Effects	Scoped In?
NCA 38: Nottinghamshire, Derbyshire and Yorkshire Coalfield	Direct	✓
NCA 30: Southern Magnesian Limestone	Indirect	✓
BBLCA C1: Elsecar Lowland River Floor	Indirect	✓
BBLCA C2: Lower Dearne Lowland River Floor	Indirect	✓
BBLCA D2: East Dearne Settled Arable Slopes	Direct	✓
BBLCA D3: West Dearne Settled Arable Slopes	Indirect	✓
BBLCA E3: Grimethorpe Settled Wooded Farmland	Indirect	✓
BBLCA E4: Hoyland Settled Wooded Farmland	Indirect	✓
RLCA 1b: Wentworth Parklands – Fringes	Indirect	✓
RLCA 2: Dearne Valley Floor	Indirect	✓
RLCA 3a: Wath and Swinton Farmlands – Swinton Racecourse	Indirect	✓
RLCA 3b: Wath and Swinton Farmlands – Railway Triangle	Indirect	✓
DLCA A2: Mexborough Coalfield Farmlands	Indirect	✓
DLCA A3: Bamburgh to Hooton Coalfield Farmlands	Indirect	✓

Receptor	Effects	Scoped In?
DLCA B2: Dearne Coalfield River Corridor	Indirect	✓
DLCA C2: Cadeby To Adwick Limestone Plateau	Indirect	✓
Site and immediate context	Direct	✓

Table 6.2: Visual Receptors

Receptor	Effects	Scoped In?
RESIDENTS		
A635, adjacent to the northern boundary of the site (VP1)	Potential effects on visual amenity	✓
Billingley View (VP3, 4 & 5)		✓
Fairfield (VP3)		✓
Carr Head Lane / Commonwealth View (VP 5 & 6)		✓
Farm to the north of Hollygrove Roundabout / A635		✓
Barnsley Road / Holly Grove (VP7)		✓
Ingsfield Lane / Broadwater / Maori Avenue		✓
A635 Doncaster Road, Millhouses / Darfield		✓
Flat Lane, Billingley (VP12)		✓
Billingley Green Lane (VP22&23)		✓
Pagnell Avenue / Southern edge of Thurnscoe		✓
Rodes Avenue / Southern edge of Great Houghton		✓
B6411 Lidget Lane, Hickleton		✓
Green Lane, Bolton Upon Dearne (VP24)		✓
Hickleton Road, Barnburgh (VP25)		✓
Bella Wood View, Goldthorpe (VP26)	✓	
USERS OF PUBLIC RIGHT OF WAY		
Public Footpath 'Billingley CP 5' within the site, near to its northern boundary	Potential effects on visual amenity	✓
Public Footpath 'Billingley CP 6', Approx. 1.1km west of the site		✓
Public Footpath 'Dearne UD 8', Approx. 1.1km north-east of the site		✓
Public Footpath 'Dearne UD 13' / users of Phoenix Country Park, Approx. 1.7km north-east of the site		✓
Trans Pennine Trail		✓
Chapel Lane / Restricted Byway 'Great Houghton CP 10', Approximately 2.8km north of the site		✓
USERS OF SURROUNDING ROADS		
A635, adjacent to the northern boundary of the site;	Potential effects on visual amenity	✓
Dudley Drive;		✓
Billingley View;		✓
Carr Head Lane;		✓
Barnsley Road / Holly Grove;		✓
Ingsfield Lane / Broadwater / Maori Avenue;		✓
A635 Doncaster Road, Millhouses / Darfield;		✓
A6195;		✓
Billingley Green Lane;		✓
B6097 West Street / Montgomery Road, Wath-upon-Deerne		✓

Receptor	Effects	Scoped In?
Dudley Drive		✓
OTHER USERS		
Workers at ALDI Goldthorpe Distribution Centre;	Potential effects on visual amenity	✓
Workers at Goldthorpe Industrial Estate;		✓
Visitors to RSPB reserves: Dearne Valley – Bolton Ings and Old Moor;		✓
Billingley Conservation area		✓
Users of Heather Garth Primary School;		✓
Users of Lacewood Primary School.		✓

7.0 BIODIVERSITY

Introduction

- 7.1 An assessment of the likely significant effects of the proposed development to biodiversity will be undertaken and included in the ES.

Baseline Conditions

- 7.2 A Preliminary Ecological Appraisal was undertaken on the site in June 2020 (see Appendix 4) and included an Extended Phase 1 Habitat Survey.

Designated Sites

- 7.3 The Site is not covered by any statutory designation and no international nature conservation designations were recorded within 5km.
- 7.4 Dearne Valley Wetlands Site of Special Scientific Interest (SSSI) is approximately 100m south of the site and is designated for:

- Breeding gadwall *Mareca strepera*, shoveler *Spatula clypeata*, garganey *Spatula querquedula*, pochard *Aythya farina*, bittern *Botaurus stellaris*, black-headed gull *Chroicocephalus ridibundus* and willow tit *Poecile montanus klienschmidtii*;
- Non-breeding gadwall and shoveler; and
- Diverse assemblage of breeding birds of lowland damp grassland, scrub, open water and fen.

Non-statutory Designations

- 7.5 Two non-statutory sites are present within 1km. Skier's Spring Wood Local Wildlife Site (LWS), approximately 730m east of the site, is designated for its ancient semi-natural woodland; and Black Lane LWS, approximately proposed employment development and 50m from proposed attenuation infrastructure, the site, is designated for species-rich hedges.

Protected and Notable Species

- 7.6 No information on badgers or great crested newts was returned from a search of 1km from the site.

- 7.7 A summary of the records that have been returned by Barnsley Biological Records Centre (BBRC) is set out below. For conciseness only records from the last 20 years are included and shown on Figure 7.1 at the end of this chapter. Please note, the red line site boundary in Figure 7.1 is approximate but indicates the extent of the site area.

Mammals

- 7.8 Common pipistrelle *Pipistrellus pipistrellus*, pipistrelle species *Pipistrellus* sp. and noctule *Nyctalus noctula* have been recorded within the site. Daubenton's bat *Myotis daubentonii* have been recorded in Dearne Valley Wetlands SSSI to the south.
- 7.9 Brown hare *Lepus europaeus* have been recorded in arable fields in the vicinity and hedgehog *Erinaceus europaeus* have been recorded to the north east and at the southern boundary.
- 7.10 Otter *Lutra lutra* have been recorded within Dearne Valley Wetlands SSSI to the south and both otter and water vole *Arvicola* amphibious have been recorded in association with the River Dearne also south of the site.

Reptiles and Amphibians

- 7.11 Grass snake *Natrix helvetica* have been recorded in association with arable farmland approximately 730m north west of the site and separated by Doncaster Road.

Invertebrates

- 7.12 Small heath *Coenonympha pamphilus* and dingy skipper *Erynnis tages* have been recorded in Dearne Valley Wetlands SSSI to the south and cinnabar *Tyria jacobaeae* have been recorded associated with woodland in the vicinity of Billingley approximately 870m north west of the site.

Birds

- 7.13 The majority of notable bird records are from two locations in the site's vicinity (Dearne Valley Wetlands SSSI and the vicinity of Billingley). The following species were recorded within the site or its immediate vicinity: dunnock *Prunella modularis*, song thrush *Turdus philomelos*, grey partridge *Perdix perdix*, yellowhammer *Emberiza citrinella*, green sandpiper *Tringa ochropus*, marsh harrier *Circus aeruginosus* and reed bunting *Emberiza schoeniclus*. Skylark *Alauda arvensis* have been recorded on farmland west of the site.

Habitats

7.14 The following habitat features have been recorded within the site, as indicated in Figure 7.2 at the end of this chapter (please note, the red line site boundary in Figure 7.2 is approximate but indicates the extent of the site area):

- Broadleaved woodland;
- Broadleaved trees;
- Scrub;
- Improved grassland;
- Poor semi-improved grassland;
- Scrub;
- Arable;
- Bare ground;
- Hedgerows; and
- Running Water.

Approach

Assessment of Ecological Baseline

Desk Study

7.15 In order to compile existing baseline information, relevant ecological information will be requested from both statutory and non-statutory nature conservation organisations for the purposes of the assessment, including:

- Multi Agency Government Information Centre (MAGIC); and
- Barnsley Biological Records Centre (BBRC).

7.16 Further inspection, using colour 1:25,000 OS base maps (www.ordnancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk), will also be undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.

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

- 5km around the application area for sites of International Importance (e.g. Special Area of Conservation, Special Protection Area, Ramsar site);
- 2km around the application area for sites of National/ Regional importance (e.g. Sites of Special Scientific Interest); and
- 1km around the application area for sites of County Importance and notable species records (e.g. protected, Local Wildlife Sites or local BAP and notable species).

Habitat Survey Methodology:

- 7.18 Survey work will be carried out at the site based on extended Phase 1 survey methodology, whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Habitats were further assessed in accordance with UK Habitat (UKHab) assessment criteria as detailed within The Biodiversity Metric 3.1 Technical Supplement (Natural England July, 2021).
- 7.19 Using the above method, the Site will be classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified.

Faunal Surveys:

- 7.20 The need for further surveys has been informed by the Desk study and Phase 1 Habitat Survey. Survey methods will follow best practice methods such as those recommended by the CIEEM. Further surveys are confined to:
- Winter and breeding bird surveys;
 - Bat Activity surveys including transects and deployment of static bat detectors; and
 - Aerial trees inspections for bat roost potential.
- 7.21 Survey methods will follow best practice methods, such as those recommended by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Assessment of Impacts

- 7.22 The likely significant effects on the valued ecological receptors present will be based on sound professional judgement whilst also drawing on the latest available industry guidance and research.

7.23 The approach to the ecological assessment will be based upon the principles set out in the 'Guidelines for Ecological Impact Assessment in the United Kingdom' published by the CIEEM 'Guidelines for Baseline Ecological Assessment' which is produced by the Institute of Environmental Assessment in conjunction with more recent publications such as 'Biodiversity and Environmental Assessment: A Good Practice Guide for Road Schemes'²⁷, 'Developing Naturally'²⁸, 'A handbook for 'Scoping Projects'²⁹ and recent journal articles published by the CIEEM.

7.24 The likely significant effects on the valued ecological receptors present will be assessed including direct loss of habitats, impacts during construction, impacts during the operational phase, combined impacts of other potential developments in the area and any cumulative impacts on flora and fauna.

Mitigation Measures

7.25 Proposed mitigation measures will be identified in order to avoid adverse effects, where possible. Where inevitable or unavoidable adverse effects occur, measures will be proposed in order to reduce or compensate. All likely significant effects and mitigation will be assessed against and informed by national and local planning guidance including the NPPF and Local Biodiversity Action Plans.

7.26 In addition to mitigation and compensation measures, reference will be made to enhancement measures where possible focusing on targets for habitat creation or sympathetic management within local plans.

7.27 The overarching philosophy of the adopted approach in these publications and the intended ecological assessment of the proposal is:

- To avoid significant reductions in biodiversity; and
- To enhance biodiversity where practicable.

7.28 All likely significant effects and mitigation will be assessed against and informed by national and local planning guidance, including the NPPF and local biodiversity action plans.

²⁷ Byron, H (2000) Biodiversity and Environmental Impact Assessment: A Good Practice Guide for Road Schemes

²⁸ Oxford, M (2000) Developing Naturally

²⁹ Environment Agency (2002) Environmental impact assessment (EIA): a handbook for scoping projects

Approach to Biodiversity Net Gain

- 7.29 Natural England’s published biodiversity net gain metric is an MS Excel spreadsheet that will be used to quantify the predicted net-change in biodiversity value (“biodiversity units”) of the site before and after development. It will treat the flat “habitats” and linear features “hedgerows” and “rivers” separately, and is based on pre-determined values, along with published written guidance, set by a Natural England-led team of experts. The latest version of this metric is 3.1, published in April 2022, and this will be used for this scheme.
- 7.30 Biodiversity Net Gain and the output of the Biodiversity 3.1 metric will be used to inform the habitat creation and enhancement proposals for the scheme and to guide decisions around additional habitat provision. The condition assessment criteria provide a set of measurable objectives, against which management can be assessed, reviewed and, where necessary, modified as part of a review process.

Summary

- 7.31 Table 7.1 summarises the receptors identified for inclusion in the assessment.

Table 7.1: Biodiversity Effects

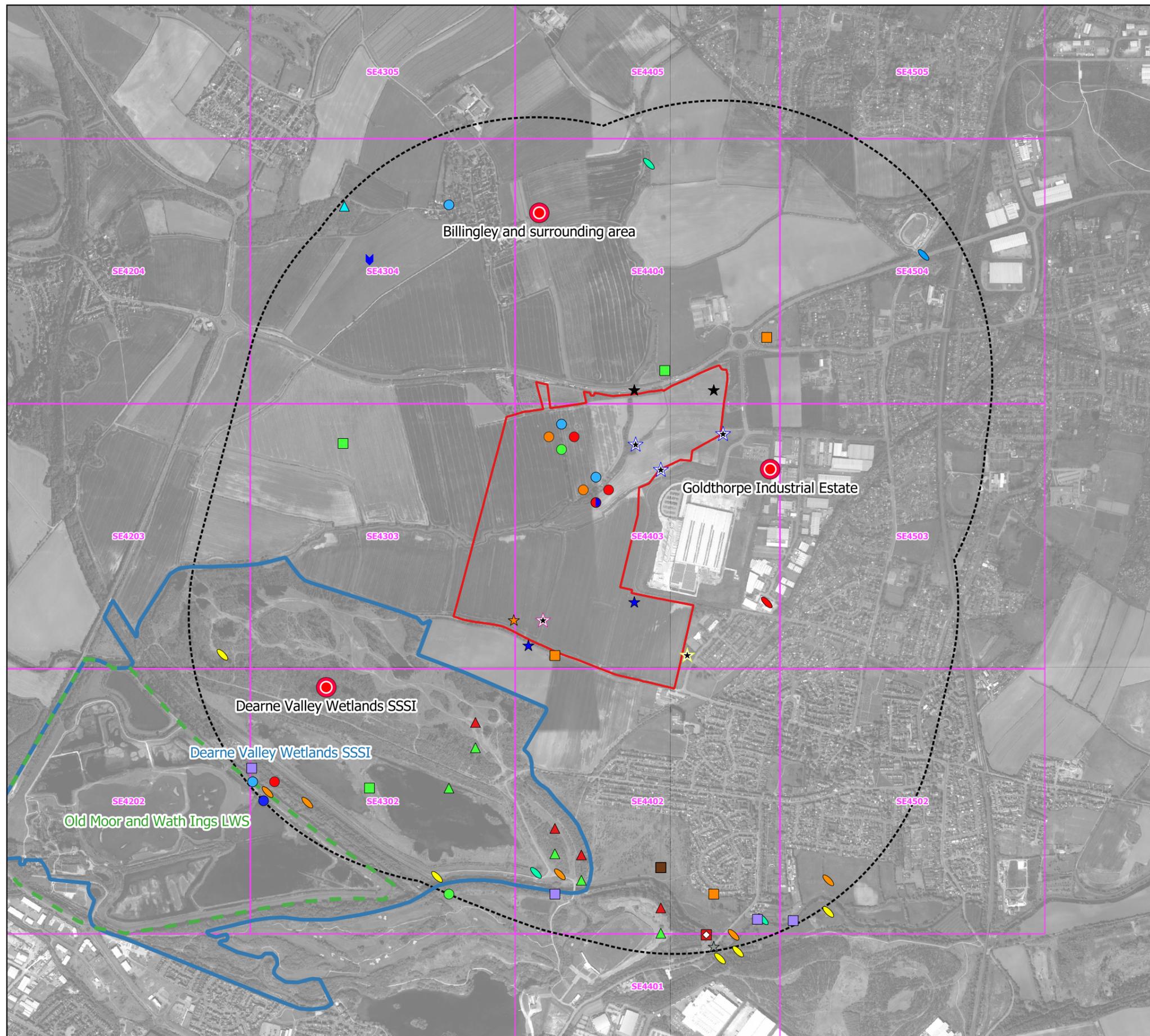
Receptor	Effects	Scoped In?
Statutory Designated Sites including: <ul style="list-style-type: none"> • Dearne Valley Wetlands Site of Special Scientific Interest (SSSI) 	Disturbance of interest features Pollution events	✓
Non-statutory Designated Sites: <ul style="list-style-type: none"> • Skier’s Spring Wood Local Wildlife Site • Black Lane LWS 	Disturbance of interest features Pollution events	✓
Habitats including: <ul style="list-style-type: none"> • Plantation broadleaved woodland • Broadleaved trees • Scrub • Grassland margin • Tall ruderal • Open water • Arable • Bare soil • Hedgerows 	Habitat loss Indirect effects on retained vegetation within and bordering the application site, through increase disturbance and through local changes in soils, drainage, hydrology and pollution events Operational effects such as pollution incidents from chemical spills, pollution of streams and fragile habitats from runoff and incorrect storage of materials	✓

Receptor	Effects	Scoped In?
Fauna including: <ul style="list-style-type: none"> • Bats • Birds - including over-wintering and breeding birds • Otter • Invertebrates • Reptiles and amphibians 	Direct loss of habitats and associated fauna within the application site boundary, interruption of wildlife corridors, decrease in value to wildlife through reduction in species and / or habitats Indirect effects on retained vegetation within and bordering the application site, through increase disturbance and through local changes in soils, drainage and hydrology Potential effects upon protected and notable species through disturbance	✓

Figure 7.1 Protected Species Plan

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Key

- Site Boundary
- 1km Buffer
- 1km Grid Squares
- Off-site Locations of Notable Bird Records

Designated Sites

- SSSI
- LWS

Bats

- Common Pipistrelle
- Daubenton's Bat
- Myotis sp.
- Noctule Bat
- Soprano Pipistrelle
- Unidentified Bat

Mammals

- ▲ Dingy Skipper
- ▲ Small Heath
- Brown Hare
- European Otter
- Water Vole
- West European Hedgehog

Birds

- ★ Green Sandpiper
- ★ Grey Partridge
- ★ Kingfisher
- ★ Linnet
- ★ Song Thrush
- ★ Yellow Wagtail
- ★ Yellowhammer

Reptiles

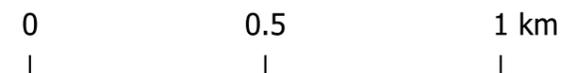
- ▼ Grass Snake

WCA Sch.9 Invasive Species

- American Mink
- Chinese Bramble
- Giant Hogweed
- Himalayan Balsam
- Japanese Knotweed
- Japanese Rose

Invertebrates

- ▲ Cinnabar



client
Newlands Developments

project
**Barnsley Road,
Goldthorpe**

drawing title
**Consultation Plan - Animals with Legislative
Protection**

scale @ A3
1:15000

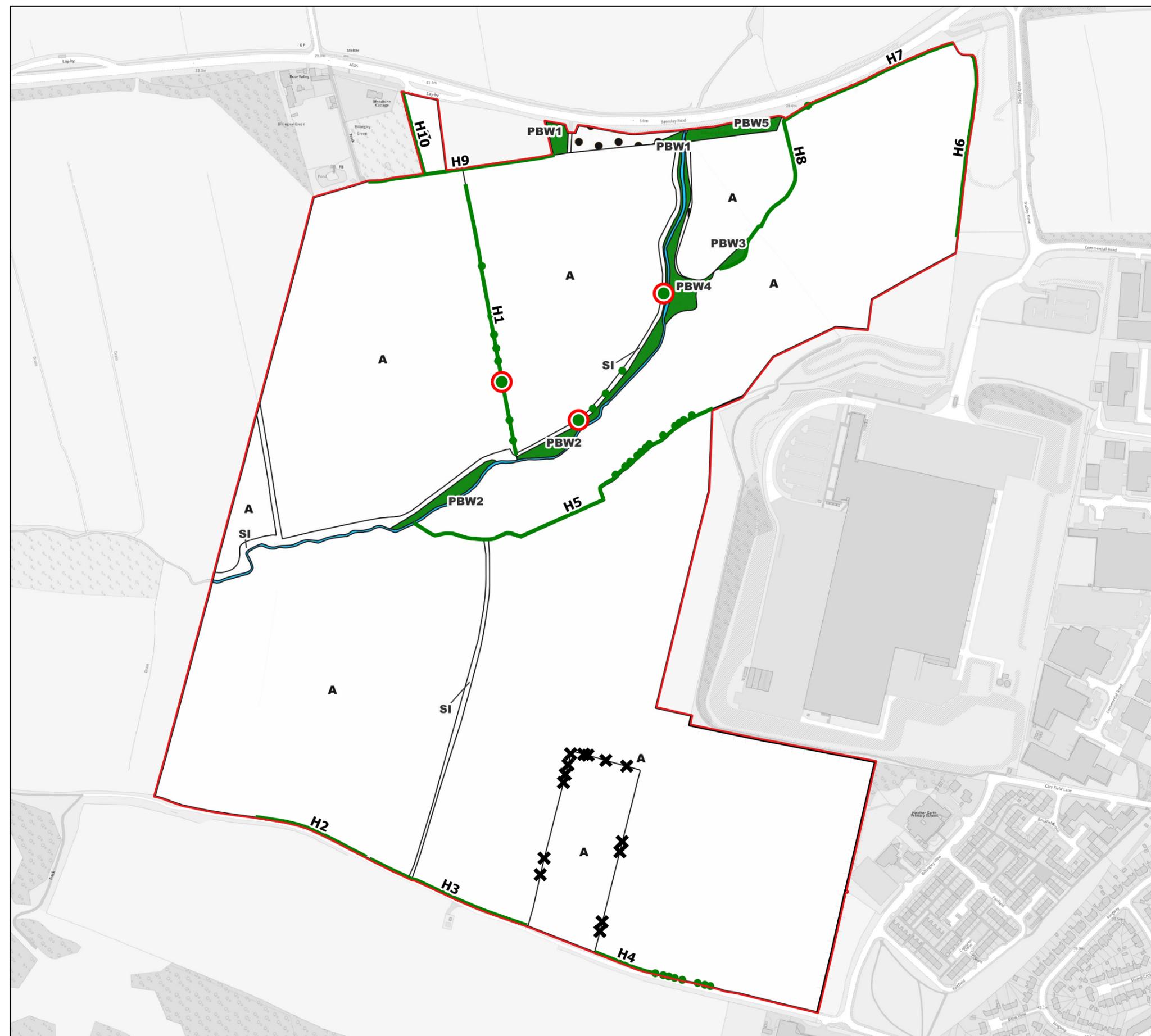
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OJB / EH

issue date
13/6/2022



Figure 7.2 Phase 1 Habitat Plan

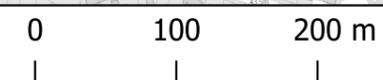


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Key

- Red Line Boundary
- Bare ground
- Broadleaved woodland - semi-natural
- A Cultivated/disturbed land - arable
- I Improved grassland
- SI Poor semi-improved grassland
- Running water
- Intact hedge - species-poor
- Fence
- X Scrub - scattered
- Tree with bat potential
- Broadleaved tree



client
Newlands Developments
project
Barnsley Road,
Goldthorpe
drawing title
PHASE 1 HABITAT PLAN



scale
1:5,000
drawing
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issue date
10/6/2022

drawing / figure number
Figure 7.2
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8.0 WATER RESOURCES AND FLOOD RISK

Introduction

- 8.1 An assessment of the likely significant effects of the proposed development to water resources and flood risk will be undertaken and included in the ES.

Baseline Conditions

Fluvial Flood Risk

- 8.2 The proposed development is predominantly located within Flood Zone 1 (Low Risk). There is an area of increased risk across the northern half of the site associated with the Carr Dike. The area of increased risk varies from Flood Zone 2 (Medium Risk) to Flood Zone 3 (High Risk).
- 8.3 The Environment Agency (EA) has confirmed that detailed hydraulic modelling is not available for the Carr Dike watercourse.

Tidal Flood Risk

- 8.4 The EA does not distinguish between fluvial and tidal flood risk however, given the site's elevated position (>21m AOD) and location inland and away from any tidally influenced watercourses, the site is considered to be at low risk of tidal flooding.

Surface Water Flood Risk

- 8.5 The site is predominantly classified as being at 'very low' risk of surface water flooding. There are however areas of increased risk within the site boundary classified as being 'low' to 'high' risk.
- 8.6 EA mapping shows several surface water flow paths within the site boundary flowing towards the Carr Dike. The flow paths predominantly travel at velocities exceeding 0.25m/s. The flow paths are largely limited to depths of up to 900mm although depths exceed 900mm within the channel.
- 8.7 There is also an area of increased risk across the northern half of the site classified as 'low' to 'high' risk which covers approximately 0.1km². EA mapping shows the flood waters to

predominantly be limited to velocities of less than 0.25m/s. The flood depths exceed 900mm.

Groundwater

- 8.8 British Geological Survey mapping shows the southern portion of the site is underlain by bedrock geology consisting of Mexborough Rock, consisting of sandstone. The northern portion of the site is underlain by bedrock geology of the Pennine Middle Coal Measures Formation, consisting of mudstone, siltstone and sandstone.
- 8.9 The portion of the site in close proximity to the Carr Dike is shown to be overlain by superficial deposits of Alluvium, consisting of clay, silt, sand and gravel.
- 8.10 Soil scapes shows the site to be overlain by 'slowly permeable, seasonally wet, acid loamy and clayey soils' with 'impeded drainage'. As such, groundwater levels are unlikely to be responsive to rainfall.
- 8.11 The site is not located within a groundwater Source Protection Zone.

Potable Water

- 8.12 The proposed development is within an area served by Yorkshire Water. The EA Water Stressed Areas Final Classification for 2021 classifies the Yorkshire Water company area as 'not seriously water stressed'.

Water Quality

- 8.13 The site is within the Dearne Operational Catchment. The Carr Dike from source to Dearne Waterbody is classified as having a 'moderate ecological status, and a chemical status of 'fail'.
- 8.14 The Carr Dike is protected under the Nitrates Directive.
- 8.15 The nearest statutory ecological designation to the site is the Dearne Valley Wetlands SSSI, which lies in areas around the site, located approximately 144m to the south west of the site, at its closest point.

Foul Water

- 8.16 Yorkshire Water provides the sewerage service for the area in which the site is located. The site currently comprises several agricultural fields and as such, there is not considered to be a foul drainage network serving the site.

Approach

Relevant Legislation and Guidelines

8.17 The assessment will be undertaken in-line with the following policy and guidance:

- National Planning Policy Framework;
- Flood Risk and Coastal Change Planning Practice Guidance;
- Environmental Protection Act;
- Land Drainage Act;
- Water Industry Act;
- Water Resources Act;
- Water Framework Directive;
- Water Act;
- Flood Directive;
- Flood and Water Management Act;
- Water Environment (Water Framework Directive) (England and Wales) Regulations;
- Nitrates Directive;
- BMBC Local Plan; and
- BMBC Local Flood Risk Management Strategy.

Hydrological and Hydraulic Modelling

8.18 Detailed hydrological and hydraulic modelling will be undertaken in order to confirm the site-specific fluvial flood risk. This will involve hydraulic modelling of both baseline and post-development scenarios, with the inclusion of compensation storage and mitigation measures, where necessary, in order to ensure a negligible effect on the wider area as a result of the proposed development.

Proposed Surveys / Site Visits

8.19 A site walkover will be undertaken in order to confirm the location of the watercourses within the study area. Topographical and channel surveys will be undertaken in order to confirm the site topography and the channel geometry.

Desk Based Assessment

8.20 A Flood Risk Assessment will be undertaken in order to consider the requirements of the NPPF

through:

- Assessing whether the proposed development is likely to be affected by flooding;
- Assessing whether the proposed development is appropriate in the suggested location; and
- Detailing measures necessary to mitigate any flood risk identified, to ensure that the proposed development and occupants would be safe, and that flood risk would not be increased elsewhere.

8.21 Hydrological and geological data will be obtained, such as:

- EA Flood Risk Data;
- British Geological Survey geological data;
- Historic flooding data;
- Surface water quality data; and
- Public sewer records.

Summary

8.22 Table 8.1 summarises the receptors identified for inclusion in the assessment.

Table 8.1: Water Resources and Flood Risk Effects

Receptor	Effects	Scoped In?
The site and the surrounding area.	Increase in fluvial flood risk as a result of the construction and operation of the proposed development.	✓
The site and the surrounding area.	Increase in tidal flood risk as a result of the construction and operation of the proposed development.	X
The site and the surrounding area.	Increase in surface water flood risk as a result of the construction and operation of the proposed development.	✓
Groundwater resources at the site and surrounding area.	Increased risk of groundwater flooding and decrease in groundwater quality as a result of the construction and operation of the proposed development.	X
Yorkshire Water potable water resources.	Increased strain on potable water supplies as a result of construction and operation of the proposed development.	X
Carr Dike and surrounding waterbodies.	Decrease in water quality of the Carr Dike and surrounding waterbodies as a result of the construction and operation of the proposed development.	✓
Yorkshire Water public sewers and the downstream catchment.	Increase in flood risk downstream due to increases in foul water outflows from the site during the construction and operation of the proposed development.	✓

9.0 SOILS AND AGRICULTURAL LAND

Introduction

- 9.1 An assessment of the likely significant effects of the proposed development to soil resources and agricultural land will be undertaken and included in the ES.

Baseline Conditions

Soils

- 9.2 The site comprises natural (undisturbed) soils and, in line with standard Natural England guidance, the soils should be investigated to assess any potential adverse impacts and to determine the potential for protection and reuse in landscaping. The National Soil Map (at 1:250,000 scale) shows the land as Bardsey Association: mainly loamy over clayey and fine silty slowly permeable soils formed over mudstone and shale, with some lighter better drained soils over sandstone³⁰.

Agricultural land

- 9.3 The site currently comprises agricultural land. Better quality ('best and most versatile') agricultural land is protected in the planning system, and the quality of the land needs to be determined and quantified in order to assess any potential adverse impacts. A detailed Agricultural Land Classification survey of the site (as part of a wider survey) by ADAS was published in 1995³¹, and shows the land to be a mixture of BMV land (mainly subgrade 3a with a small area of grade 2) and lower quality land in subgrade 3b.

Approach

- 9.4 A detailed soil survey will be undertaken to assess the nature quality of soil resources for protection and reuse in landscaping.
- 9.5 The assessment methodology is based on determining the sensitivity and magnitude of change on the relevant receptors of agricultural land and soil resources. The sensitivity of the agricultural land and soil receptors is determined as follows:

³⁰ Jarvis, R.A., *et al.*, 1984. *Soils and their use in Northern England*. Soil Survey of England and Wales Bulletin No. 10, Harpenden

³¹ Agricultural Land Classification detailed Post 1988 ALC survey, Billingley South (Barnsley UDP) - ALCL00995 (naturalengland.org.uk)

Table 9.1: Sensitivity criteria

Receptor	High	Medium	Low
Agricultural land quality	Grades 1 & 2	Subgrade 3a	Subgrade 3b and grades 3 & 4
Soil resource	Permeable coarse loamy and medium loamy soils, or other soils capable of supporting valuable habitats	Fine textured or sandy topsoils not capable of supporting valuable habitats	Damaged or contaminated soils Slowly permeable subsoils

9.6 The magnitude of change is determined using the following criteria:

Table 9.2: Magnitude of Change Criteria

Receptor	Large	Medium	Small	Negligible
Agricultural land	Irreversible loss of >80 ha of best and most versatile land	Irreversible loss of 20-80 ha of best and most versatile land	Irreversible loss of 5-20 ha of best and most versatile land	Irreversible loss of <5 ha of best and most versatile land
Soil resources	Loss of >80% of soil resources and insufficient protected for on-site uses. Subsoil compaction of >10% of Site	Loss or irreversible damage to 50-80% of soil resources. Compaction of 5-10% of subsoils	Loss or irreversible damage to <50% of topsoil resources. Compaction of <5% of subsoils	Only minor disturbance of soils within the Site.

Summary

9.7 Table 9.3 summarises the receptors identified for inclusion in the assessment.

Table 9.3: Soils and Agricultural Land Effects

Receptor	Effects	Scoped In?
Soils	Potential loss or damage to valuable soil resources	✓
Agricultural land	Potential loss of best and most versatile agricultural land	✓

10.0 NOISE AND VIBRATION

Introduction

10.1 An assessment of the likely significant noise and vibration effects of the proposed development on surrounding noise and vibration sensitive receptors will be undertaken and included in the ES.

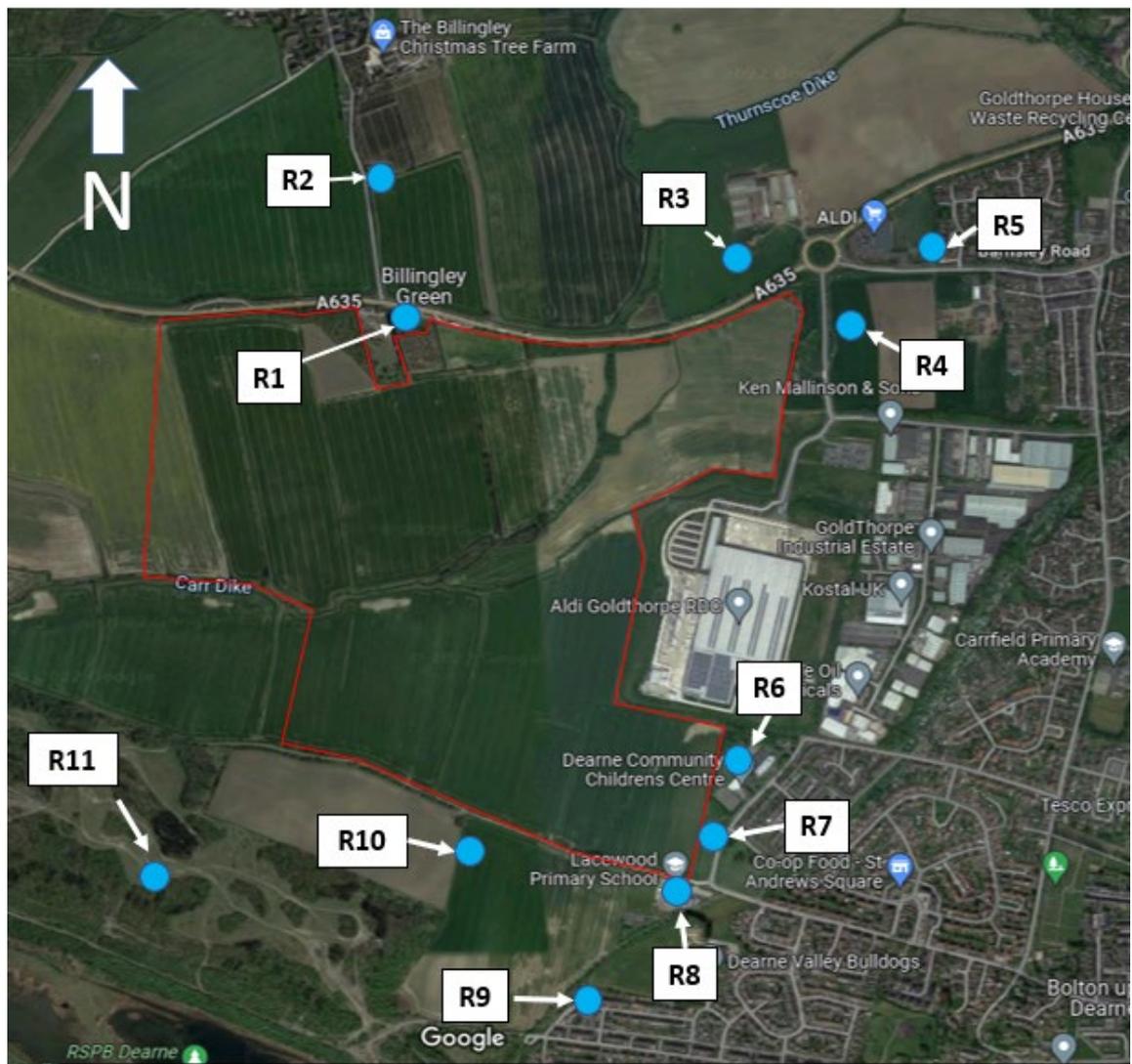
Baseline Conditions

10.2 The baseline noise environment at the nearest noise sensitive receptors is dominated to a greater or lesser extent by road traffic noise from the A635 which borders to the north of the site, Dudley Drive to the east of the site, which is used by vehicles accessing the Goldthorpe Industrial Estate, and then local roads in the vicinity of Carr Head Lane to the south-east.

10.3 The nearest sensitive receptors to the site have been identified as:

- R1 – The residential properties to the north of the site along the A635 including Woodbine Cottage, Sycamore Cottage (has planning consent but not constructed) and Rose Valley Cottages;
- R2 – The nearest residential dwellings north of the A635 on Billingley Green Lane;
- R3 – Residential property/farm house associated with the Farm off the Hollygrove Roundabout;
- R4 – The land allocated for housing development associated with Bolton House Farm;
- R5 – Existing residential properties on Holly Grove;
- R6 – Heather Garth School;
- R7 – Billingley View Residential Development (under construction);
- R8 – Lacewood Primary School;
- R9 – Existing residential dwellings on Maori Avenue;
- R10 – Broadwater Estate Housing allocation; and
- R11 – RSPB Dearne Valley.

10.4 The location of the sensitive receptors is shown in Figure 10.1. Please note, the red line site boundary in Figure 10.1 is approximate but indicates the extent of the site area.

Figure 10.1: Noise Sensitive Receptor Locations

10.5 To determine the existing levels of noise at sensitive receptors surrounding the site baseline noise surveys were conducted in June and July 2022 following the principles set out in BS 7445-2:1991³² and BS 4142:2014+A1:2019³³.

10.6 It is not practicable to undertake baseline monitoring at every noise sensitive receptor, therefore monitoring locations are selected to be representative of the affected locations in line with well-established common practice. Under this approach a monitoring location will relate to, and aid consideration of, more than one receptor location.

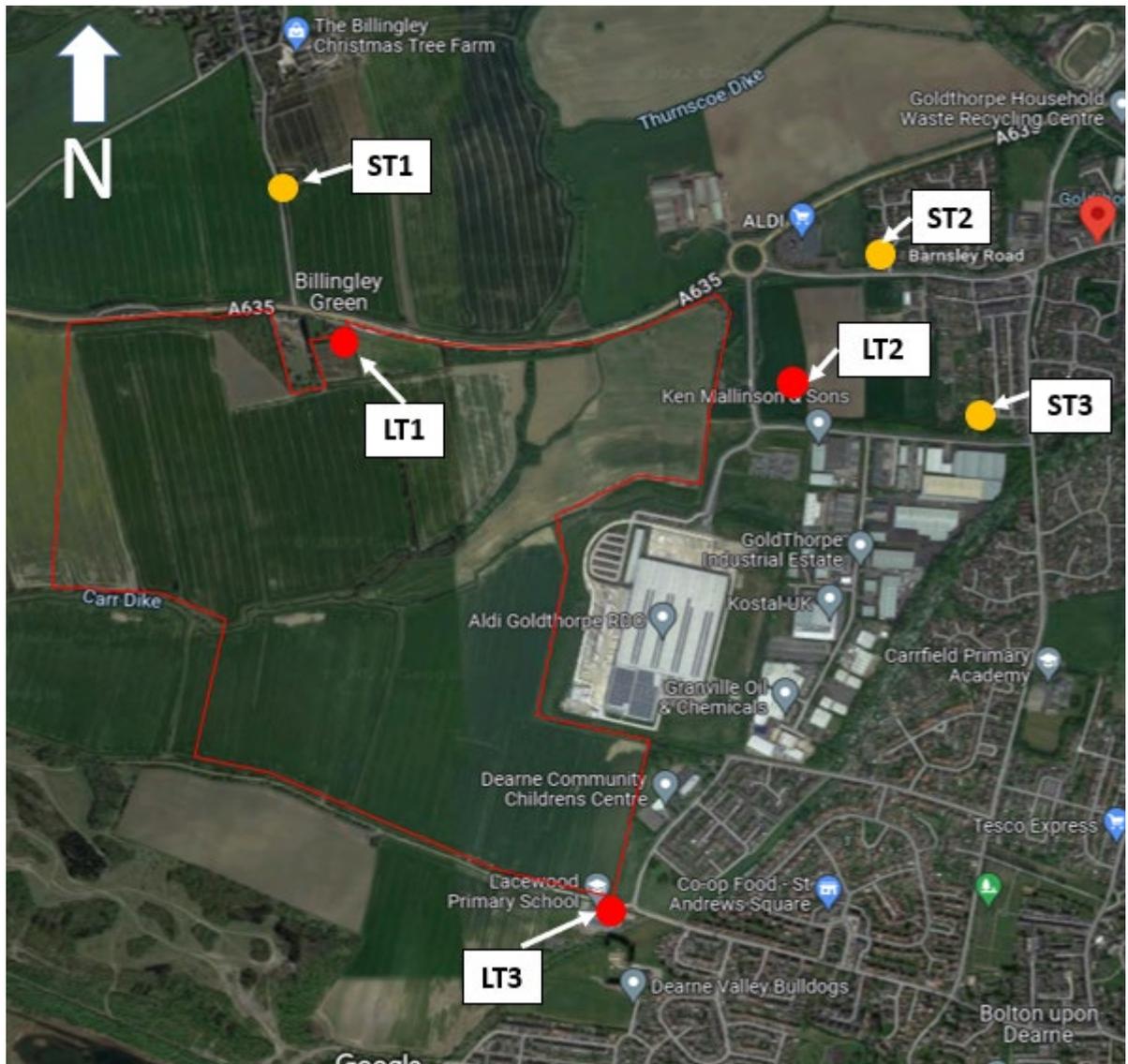
10.7 The baseline noise surveys were conducted between 13th and 22nd June 2022 at the locations

³² British Standards Institution (1991), BS 7445-2:1991 Description and measurement of environmental noise. Guide to the acquisition of data pertinent to land use.

³³ British Standards Institution (2019) BS 4142:2014+A1:2019: Method for rating and assessing industrial and commercial sound, BSI (2019).

ST1, ST2, ST3, LT2 and LT3 as shown in Figure 10.2. Further monitoring was also undertaken at one location (LT1) between 21st July and 1st August 2022. Please note, the red line site boundary in Figure 10.2 is approximate but indicates the extent of the site area.

Figure 10.2: Noise Survey Locations



- 10.8 The survey locations and timing of the June 2022 survey were agreed with the Environmental Health officer at BMBC.

Approach

Scope of Assessment

- 10.9 The proposed development has the potential to generate noise from the following sources:

- Construction of the proposed development;

- The change in road traffic flows on the surrounding highway network;
- Traffic serving the proposed development travelling along the internal access roads within the proposed development;
- Heavy Goods Vehicles (HGVs) and other operational activity at the warehouses and within the service yard areas such as manoeuvring, loading and unloading; and
- Noise from mechanical services plant serving the warehousing and associated office spaces.

10.10 With regard to vibration, once built the proposed development will not generate vibration therefore it is proposed to scope out any assessment of vibration in relation to the operational phase of the proposed development. During the construction phase, only piling has been identified as having the potential to generate levels of vibration which could adversely affect nearby receptors. However, at the time of writing no details are available about the construction methods and whether any piling would be required. If piling is expected to be required an assessment of construction vibration will be undertaken, otherwise the assessment of construction vibration would be scoped out of the assessment.

Planning Policy Context

10.11 With regard to the planning policy context for the assessment the relevant documents which set out the Government's planning policy and policy on noise management are the National Planning Policy Framework 2021³⁴ (the paragraphs concerning noise are paragraphs 174, 185 and 187) and the Noise Policy Statement for England (NPSE) 2010³⁵.

10.12 Further government guidance on the consideration of noise for planning has been published as the Planning Practice Guidance for Noise³⁶ (PPG:N), last revised in July 2019. The PPG:N supports the NPPF by providing a range of advice. It includes a noise exposure hierarchy table, and again makes reference to the NPSE.

Assessment Methodology and Criteria

10.13 In general, the assessment methodology used for each type of source is different in terms of how the potential noise or vibration impact is predicted and how the effect is assessed. The magnitude of the impact and the significance of the effect is dependent upon several factors, including the resulting noise level from the particular activity and the change from the baseline

³⁴ Ministry of Housing, Communities & Local Government (2021) National Planning Policy Framework.

³⁵ Noise Policy Statement for England, Defra, 2010.

³⁶ Department for Levelling up, Housing and Communities and Ministry of Housing, Communities and Local Government (2019), Planning Practice Guidance: Noise.

or future baseline (i.e. the 'do minimum' situation), the existing sound environment, and the duration, timing and character of the different noise sources. Also, in some situations, the number of dwellings affected forms part of the assessment of significance. The assessment methodologies and significance criteria anticipated for each element of the assessment are described below.

Construction Traffic

10.14 Noise levels associated with peak construction traffic will be calculated and assessed in accordance with the Calculation of Road Traffic Noise (CRTN, 1988³⁷). The significance of construction traffic noise effects would be determined using the thresholds set out in Table 10.1.

Table 10.1: Thresholds of potential effects of construction traffic at residential receptors.

Magnitude of Impact	Increase in noise level (dB)
Major	Greater than or equal to 5.0
Moderate	Greater than or equal to 3.0 and less than 5.0
Minor	Greater than or equal to 1.0 and less than 3.0
Negligible	Less than 1.0
<p><i>Note: Construction traffic noise shall constitute a significant effect where it is determined that a major or moderate magnitude of impact will occur for a duration exceeding;</i></p> <p><i>a) 10 or more days or nights in any 15 consecutive days or nights</i></p> <p><i>b) A total number of days exceeding 40 in any 6 consecutive months.</i></p>	

Construction Noise

10.15 In relation to construction noise impacts, indicative noise levels will be predicted at the nearest receptors using the methodology contained within Annex F of British Standard BS 5228-1:2009+A1:2014³⁸. This will be based on informed assumptions about the construction plant and equipment that will be used. The propagation of construction noise will be predicted following the principles of the ISO 9613-2:1996³⁹ methodology, assuming moderate downwind propagation between the source and receptors.

10.16 The significance of potentially adverse construction noise effects would be determined using the thresholds set out in Table 10.2. The values are based on the guidance within Annex E of BS 5228-1:2009+A1:2014 and the effects that construction noise can have on those exposed to it. The thresholds are expressed in terms of current Government policy.

³⁷ Department of Transport (1988) CRTN, Calculation of Road Traffic Noise.

³⁸ British Standards Institution (2014) BS 5228-1:2009+A1:2014 – Code of Practice for noise and vibration control on construction and open sites, Part 1: Noise.

³⁹ International Standards Organisation (1996) ISO 9613-2: Acoustics – Attenuation of sound during propagation outdoors – Part 2: General Method of calculation.

Table 10.2: Thresholds of potential effects of construction noise at residential buildings

Effect	Time Period	Threshold Value ($L_{Aeq,T}$) ^a
LOAEL	Day (07:00 – 23:00)	65
	Evening (19.00 – 23.00)	55
	Night (23.00 – 07.00)	45
SOAEL	Day (07:00 – 23:00)	75
	Evening (19.00 – 23.00)	65
	Night (23.00 – 07.00)	55

Notes:

^a *These effects are expected to occur if the programme of works indicates that the relevant threshold values are likely to be exceeded over a period of at least one month. The values apply to a location one metre from a residential building façade containing a window, ignoring the effect of the acoustic reflection from that façade.*

10.17 Where necessary, measures to avoid any significant adverse effects on health and quality of life, and to mitigate and reduce to a minimum any adverse effects, will be identified. This would include providing information on best practicable means.

Construction Vibration

10.18 Once further information is available regarding the construction methods, it will be confirmed if piling is required. If this is the case, an assessment will be undertaken regarding the potential vibration impact from piling at the nearest sensitive receptors. This assessment will follow the method set out in BS 5228-2:2009+A1:2014⁴⁰.

10.19 Although the concepts regarding Lowest Observed Adverse Effect (LOAEL) and significant observed adverse effect level (SOAEL) in Government policy refer only to noise exposure, it is helpful to adopt the same principles when assessing vibration impact and effect. Table 10.3 sets out the construction vibration exposure thresholds based on the guidance within Annex B of BS 5228-2:2009+A1:2014.

⁴⁰ British Standards Institution (2014) BS 5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control Construction and Open Sites, Part 2: Vibration

Table 10.3: Thresholds of potential effects of construction vibration at residential buildings

Effect	Threshold Value (PPV, mm/s) ^a
LOAEL	0.5
SOAEL	1.0 ^b
Notes: ^a This is the level at a residential receptor. ^b Guidance in BS 5228-2:2009+A1:2014 states that this level of exposure can be tolerated by those affected if prior warning and explanation has been given. It goes on to state that a level of 10 mm/s is likely to be intolerable in most building environments for any more than a very brief exposure.	

Operational Road Traffic Noise

- 10.20 The noise levels associated with changes in road traffic arising as part of the proposed development would be predicted in IMMI noise modelling software using the methodology detailed in the Department for Transport memorandum, Calculation of Road Traffic Noise (CRTN41).
- 10.21 Using data supplied by the appointed traffic consultant, that describes the anticipated change in flows from the future baseline (i.e. the flows for the assessment years without the proposed development – ‘do minimum’) to flows with the proposed development (i.e. ‘do something’), the potential effects of the predicted change in noise levels will be assessed. The approach would draw on, as appropriate, the principles of the Highways England guidance document the Design Manual for Roads and Bridges (DMRB⁴²), The Noise Insulation Regulations (as amended 1988)⁴³ and national policy and guidance.
- 10.22 The significance of potentially adverse road traffic noise effects will be based on a combination of the change in noise exposure between the do minimum (future baseline) and do something scenarios and the resulting noise exposure at the receptors. The noise exposure thresholds are set out in Table 10.4. These have been derived from the effects that road traffic noise can have on those affected⁴⁴ and are expressed in terms of Government policy.

⁴¹ CRTN, Calculation of Road Traffic Noise, Department of Transport 1988.

⁴² Highways England (2020) Design Manual for Roads and Bridges (DMRB) LA 111 Noise and Vibration.

⁴³ SI 1975 No. 1763 Building and Buildings, The Noise Insulation Regulations 1975, SI 1988 No. 2000 Building and Buildings, The Noise Insulation (Amendment) Regulations 1988.

⁴⁴ The evidence for using some these values can be found in guidance from the World Health Organisation. Similar values have been used for the assessment of other schemes such as A14 DCO and Northampton Gateway DCO.

Table 10.4: Thresholds of potential effects of road traffic noise (residential receptors)

Time period	Effect	Noise Exposure Threshold Value
Day (06:00-00:00)	LOAEL	50 dB LAeq 16 hour free-field ^{a,b}
	SOAEL	63 dB LAeq 16 hour free-field ^{a,c}
Night (23.00-07.00)	LOAEL	40 dB Lnight (free-field)
	SOAEL	55 dB Lnight (free-field)
Notes: ^a This is the <i>average daily value (07:00 – 23:00 hours) at a position one metre from a residential building façade containing a window, ignoring the effect of an acoustic reflection from that façade.</i> ^b equivalent to 55 dB LA10,18hr façade ^c equivalent 68 dB LA10,18hr façade		

10.23 If the daytime LOAEL threshold is exceeded, the data in Table 10.5 sets out how the magnitude of the impact will be described taking account of the change in daytime noise exposure and the resulting exposure level.

Table 10.5: Descriptors of impact magnitude of daytime road traffic noise change

Magnitude of Impact	Do Something Noise Exposure	
	Between LOAEL and SOAEL	SOAEL or greater
No Change	0	0
Negligible	Up to 2.9 dB(A)	Up to 0.9 dB(A)
Minor	3.0 – 4.9 dB(A)	1.0 – 2.9 dB(A)
Moderate	5.0 – 9.9 dB(A)	3.0 – 4.9 dB(A)
Major	10.0 dB(A) and over	5.0 dB(A) and over

10.24 Whether or not a significant adverse effect is expected to occur will be determined through a two-stage process. Firstly, the predicted 'do something' noise level (with the proposed development) will be compared with the LOAEL and SOAEL thresholds shown in Table 10.4, to determine whether they are below the LOAEL, between the LOAEL and SOAEL, or at/above SOAEL. Secondly the change in noise due to the proposed development will also be considered (i.e. the difference between the 'do something' and 'do minimum' scenarios). Table 10.5 is then used to determine the extent of the impact. If the result for any property falls in the categories shown by the shaded boxes with text in bold, that indicates that the property is regarded as experiencing a significant adverse effect.

10.25 If the night-time LOAEL threshold is exceeded, the data in Table 10.6 sets out how the magnitude of the impact would be described taking account of the change in night-time noise exposure and the resulting exposure level.

Table 10.6: Descriptors of impact magnitude of night-time road traffic noise change

Magnitude of Impact	Do Something Noise Exposure	
	Between LOAEL and SOAEL	SOAEL or greater
No Change	0	0
Negligible	Up to 0.9 dB(A)	Up to 0.9 dB(A)
Minor	1 – 2.9 dB(A)	1.0 – 2.9 dB(A)
Moderate	3.0 – 4.9 dB(A)	3.0 – 4.9 dB(A)
Major	5.0 dB(A) and over	5.0 dB(A) and over

10.26 Whether or not a significant adverse effect is expected to occur is determined through the two-stage process, as described above.

Operational Noise arising from HGV Activity

10.27 The potential impact of operational noise from HGV activity at the nearest receptors will be assessed with reference to the guidance provided in BS 4142:2014+A1:2019. The standard states that the initial extent of the impact can be determined by subtracting the typical background sound level from the rating level. The greater the difference, the greater the magnitude of the initial impact estimate.

10.28 The standard states that:

- A difference of around +10 dB_A or more is likely to be an indication of a significant adverse impact, depending on the context;
- A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context;
- Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context; and
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact.

10.29 While the difference between the rating level and background sound level provides an initial estimate of the impact, other factors should be considered in terms of the context, such as the resultant absolute noise levels and how the character and level of the specific sound source relates to the existing sound environment.

⁴⁵ BS 4142 states that: All the measurements and values used throughout this standard are "A"-weighted. Where "A" weighting is not explicit in the descriptor, it is to be assumed in all cases, except where it is clearly stated that it is not applicable, as in the case of tones.

10.30 Regarding consideration of the absolute levels of sound, the relevant guideline values provided in BS 8233:2014⁴⁶ have been referenced. Table 4 of that standard sets out desirable internal levels to be achieved in new dwellings from external sources. Information is also provided regarding desirable levels of sound for external amenity spaces associated with dwellings. The various values from BS 8233:2014 are summarised in Table 11.7.

Table 10.7: Summary of guideline sound levels from BS 8233:2014

Location (activity)	Time Period	Desirable Sound Level not to be exceeded
Inside Bedrooms and Living Rooms (resting)	Day (07:00 – 23:00)	35 - 40 dB LAeq,T
Inside Bedrooms (sleeping)	Night (23:00 – 07:00)	30 - 35 dB LAeq,T
Inside Dining Room/area (dining)	Day (07:00 – 23:00)	40 - 45 dB LAeq,T
External Amenity Space	Day (07:00 – 23:00)	50 - 55 dB LAeq,T

10.31 The lower values shown in Table 10.7 above are generally regarded as the LOAEL for steady external sound, i.e. no adverse effect due to the impact of the sound would be expected. If the sound has certain characteristics, it could be appropriate to consider a lower value as the LOAEL. Alternatively, a correction for those characteristics would be applied to the predicted levels.

10.32 The World Health Organisation's Guidelines for Community Noise⁴⁷ have been used to consider the potential impact from any maximum short-term noise levels from operational activities during the night-time period.

10.33 The guidelines state that, for good sleep, indoor sound pressure levels should not exceed around 45 dB LAFmax more than 10–15 times per night. This is equated to a level at the outside façade of 60 dB LAFmax with a partially open window. It is generally accepted that this criterion is a LOAEL⁴⁸.

Operational Noise arising from fixed plant

10.34 Sound emission from mechanical plant associated with the proposed development, such as that used for ventilation and cooling of the warehouses and associated office space, is considered a component of operational sound.

⁴⁶ BS 8233:2014: Guidance on sound insulation and noise reduction for buildings, BSI (2014)

⁴⁷ Guidelines for Community Noise, WHO (1999)

⁴⁸ There is no equivalent research regarding the probability of a noise-induced awakening from sources such as those which would occur at the SRFI. Hence the approach to maximum noise levels is based on WHO guidance.

10.35 Prior to the occupants of the warehouses being known, no information regarding the type or number of these units is available. It is therefore expected that the assessment will not directly assess noise from these sources. Prior to installation, it is proposed that details of the mechanical plant will be submitted to the relevant planning authority for approval prior to use.

Potential for Likely Significant Effects

10.36 The construction of the proposed development has the potential to generate adverse noise and vibration impacts, which would be temporary in nature. These would be mitigated and minimised as appropriate with the use of Best Practicable Means (BPM), with construction effects usually controlled and mitigated through a Construction Environmental Management Plan (CEMP).

10.37 It is considered unlikely there would be any significant adverse construction vibration effects associated with the proposed development given the distances between where any piling works which may be required (if piling is required at all) are anticipated to occur and the nearest receptors.

10.38 The proposed development will not give rise to operational vibration so this has been scoped out of the assessment.

10.39 With regard to operational road traffic noise, the proposed development would introduce additional road traffic onto the A635 and surrounding routes. It is considered likely that most receptors would not experience significant adverse effects as a result of the changes in road traffic flow, however the full extent of the impacts will be determined in due course once traffic data is available. If required, mitigation measures will be identified to reduce the impact at the receptor locations.

10.40 With regard to operational noise from the main site, it is anticipated that there may be some adverse impacts at some receptors, especially those which are in close proximity to the proposed development and where background sound levels are considered to be low. However, it is noted that work on the scheme design is ongoing and includes mitigation to protect the receptors and help minimise any adverse effects. As the assessment work progresses, further mitigation will also be explored and incorporated into the design of the scheme where appropriate.

Summary

10.41 Table 10.8 tabulates the receptors identified for inclusion in the assessment and the type of effect to be assessed, and indicates whether the likely effects are scoped in or out.

Table 10.8: Noise and Vibration Effects

Receptor	Effects – Are these scoped in or out?					
	Construction Traffic	Construction Noise	Construction Vibration	Operational Traffic	Operational Noise from Site activity	Operational Vibration
R1 – The residential properties to the north of the site along the A635 including	✓	✓	✓	✓	✓	x
R2 – The nearest residential dwellings north of the A635 on Billingley Green Lane.	✓	✓	x ¹	✓	✓	x
R3 – Residential property/farm house associated with the Farm off the Hollygrove Roundabout.	✓	✓	x ¹	✓	✓	x
R4 – The land allocated for housing development associated with Bolton House Farm.	✓	✓	x ¹	✓	✓	x
R5 – Existing residential properties on Holly Grove	✓	✓	x ¹	✓	✓	x
R6 – Heather Garth School	x	✓	✓	x	✓	x
R7 – Billingley View Residential Development (under construction)	x	✓	✓	x	✓	x
R8 – Lacewood Primary School	x	✓	✓	x	✓	x
R9 – Existing residential dwellings on Maori Avenue	x	✓	x ¹	x	✓	x
R10 – Broadwater Estate Housing allocation	x	✓	✓	x	✓	x
R11 – RSPB Dearne Valley	x	✓	x ¹	x	✓	x
Notes: ¹ Scoped out due to distance between site where piling likely to occur and receptor 100m or more.						

11.0 TRANSPORT AND ACCESS

Introduction

- 11.1 An assessment of the likely significant effects of the proposed development with regard to transport and access will be undertaken and included in the ES.

Baseline Conditions

- 11.2 The site is located to the immediate south of the A635 which connects between the A6195 to the west and Junction 37 of the A1(M) to the east. Baseline traffic flows will be obtained from junction turning count surveys which were undertaken on Tuesday 21 June 2022 at various locations on the local and strategic road networks. The survey data may be supplemented by Automatic Traffic Count (ATC) data obtained from the DfT⁴⁹ and WebTRIS⁵⁰ websites, where necessary.
- 11.3 The baseline personal injury accident record on the local and strategic road networks will be assessed using accident data received from BMBC and Doncaster Council (DC) for the period covering 2015-2022. The years 2020 and 2021 will be excluded from the assessment given accident records on the network may have been affected by changes in traffic flows as a result of the Covid pandemic restrictions.
- 11.4 The nearest bus stops are located on the A635 and Barnsley Road. Together, these stops provide access to the 203, 208, 218, 218a, 219, 664, X19 bus services which operate to and from major local towns including Barnsley, Rotherham and Doncaster.
- 11.5 A footway is provided on the northern side of the A635. The footway provides pedestrian access to/from Goldthorpe, with dropped kerbs and pedestrian refuge islands provided on the A635 (western arm), Dudley Drive and Barnsley Road arms of Hollygrove Roundabout.

Approach

- 11.6 Separate to the ES, a full and robust Transport Assessment is to be prepared as part of the planning application. The scope and methodology of the Transport Assessment has been discussed with BMBC, DC and National Highways, and the Transport Assessment to be submitted will address comments received from all parties.

⁴⁹ <https://roadtraffic.dft.gov.uk/>

⁵⁰ <https://webtris.highwaysengland.co.uk/>

- 11.7 The Transport and Access ES Chapter will be prepared in accordance with, and will cross-reference, the submitted Transport Assessment. In addition, a Travel Plan will be submitted with the planning application to encourage the use of sustainable modes of travel and to reduce the overall number of single-occupancy vehicle trips.
- 11.8 The likely transport effects of the proposed development will be identified for both the construction and operational phases of the proposed development, with reference to the methodology set out in 'Guidelines for the Environmental Assessment of Road Traffic⁵¹' published by the IEMA, which recommends consideration of the following environmental issues:
- Severance;
 - Driver delay;
 - Pedestrian delay;
 - Pedestrian amenity;
 - Fear and intimidation; and
 - Accidents and safety.
- 11.9 The assessment will consider the requirement for mitigation measures during the construction and operational phases of development where effects are considered to be significant, to be agreed with the relevant highway authorities.

Summary

- 11.10 Table 11.1 summarises the receptors identified for inclusion in the assessment.

Table 11.1: Transport and Access Effects

Receptor	Effects	Scoped In?
Highway links/junctions on the local and strategic road networks.	Potential effects include severance, increases in driver and pedestrian delay, changes to pedestrian amenity including fear and intimidation, and implications on accidents and safety.	✓

⁵¹ Guidelines for the Environmental Assessment of Road Traffic (1993). Institute of Environmental Management and Assessment.

12.0 CUMULATIVE EFFECTS

12.1 The ES will consider the potential for likely significant effects on the environment resulting from committed developments and those where approval is reasonably assumed in the area. PPG⁵² identifies that:

"...There are occasions where other existing or approved development may be relevant in determining whether significant effects are likely as a consequence of a proposed development..."

12.2 Following a search of the planning register in October 2022, three committed schemes have been identified in the surrounding area of up to 2km from the site boundary. These are outlined in Table 12.1 below. The Applicant seeks confirmation from BMBC as part of this Scoping exercise of any additional schemes that should be considered in the assessment of likely significant cumulative effects on the environment.

Table 12.1: Cumulative Schemes

Site and Planning Reference	Description	Planning Status	Distance from the site
Land off Barnburgh Lane, Goldthorpe, Rotherham, S63 9NT (2015/1198)	Erection of 61 dwellings with garages and/or parking spaces together with the provision of open space and associated roads and sewers	Approved June 2016, under construction.	1.8km east
Land off Doncaster Road and Fairfield Lane (Rotherham Metropolitan Borough Council, RB2021/1686)	Erection of 294 dwellinghouses and associated infrastructure	Approved September 2022	2km south
Land BMBC Asset ID E00546, Land off Willow Road, Thurnscoe, Rotherham, S63 0PG (2017/1051)	Erection of 129 dwellings (Phase 2), associated infrastructure and public open space (Full Consent). Residential Development (Phase 3) and associated infrastructure (Outline) - Hybrid Application.	Approved March 2018, under construction.	2km north east

Consultation

12.3 The following statutory and other consultees will be consulted through the EIA process:

- National Highways;
- Environment Agency;
- Natural England;

⁵² <https://www.gov.uk/guidance/environmental-impact-assessment>

- Historic England;
- BMBC (various departments); and
- This will also include any other stakeholder that BMBC nominates.

12.4 The feedback received through the consultation will be summarised in the ES and written up in full in the Statement of Community Involvement submitted in support of the planning application.

13.0 ENVIRONMENTAL STATEMENT STRUCTURE

13.1 The ES will contain two main volumes as set out in Table 13.1 below.

Table 13.1: Environmental Statement Structure

Volume 1: ES Main Text and Figures		
Chapter No.	Chapter Title	Description
1	Introduction	Introduction to the ES, EIA requirements, details of project team, ES organisation and availability.
2	EIA Methodology	Methods used to prepare each chapter, description of ES structure and content, generic significance criteria, scoping and consultation.
3	Site and Development Description	Site description and details of the proposed development.
4	Alternatives and Design Evolution	Outline of the main alternatives considered by the Applicant.
5	Construction Methodology and Phasing	Details of anticipated programme for development and construction methodology.
6	Socio-Economics	Effects of the proposed development on socio-economics.
7	Cultural Heritage	Effects of the proposed development on below ground archaeological assets.
8	Landscape Character and Visual Amenity	Effects of the proposed development on landscape character and visual amenity.
9	Biodiversity	Assessment of the effects of the proposed development on biodiversity and ecology at the site.
10	Water Resources and Flood Risk	Assessment of the effects of the proposed development relating to water resources and flood risk.
11	Soils and Agricultural Land	Assessment of the effects of the proposed development on soils and agricultural land at the site.
12	Noise and Vibration	Assessment of the effects of the proposed development relating to noise and vibration.
13	Transport and Access	Effects of the proposed development on transport and access.
14	Summary and Residual Effects	Summary of the residual and interactive effects of the proposed development.
Volume 2		
Technical Appendices		Technical data and reports to support the chapters in Volume 1.
Standalone Document		
Non-Technical Summary		Summary of the ES in non-technical language.

13.2 The first five chapters of the ES would be introductory and provide essential information for the subsequent technical chapters. Further information on these chapters is set out below.

Introduction

- 13.3 This chapter will provide background to the EIA, describe the structure of the ES and identify the project team. It will be supported by an appendix setting out the professional qualifications and experience of the contributors to the ES to comply with the EIA Regulations' requirement for "competent experts" to undertake EIA.

EIA Methodology

- 13.4 This chapter will set out the methodology used in the EIA, state the assumptions applicable to all disciplines, summarise the EIA Scoping process undertaken and summarise the public consultation process. Bespoke methodologies, limitations and assumptions will be contained in the technical chapters of the ES, where required.
- 13.5 The significance of an environmental effect is determined by the interaction of magnitude and sensitivity, whereby the effects can be positive or negative. Generic criteria to be used in carrying out this process are detailed below. Some technical chapters will use discipline-specific criteria with their own terms for magnitude, sensitivity and significance. This will be explained in the relevant chapter.

Prediction of Impact Magnitude

- 13.6 The methodology for determining the scale or magnitude of impact is set out in Table 13.2 below.

Table 13.2: Methodology for Assessing Magnitude

Magnitude of Impact	Criteria for assessing impact
Major	Total loss or major/substantial alteration to key elements/features of the baseline (pre-development) conditions such that the post development character/composition/attributes will be fundamentally changed.
Moderate	Loss or alteration to one or more key elements/features of the baseline conditions such that post development character/composition/attributes of the baseline will be materially changed.
Minor	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible/detectable but not material. The underlying character/composition/attributes of the baseline condition will be similar to the pre-development circumstances/situation.
Negligible	Very little change from baseline conditions. Change barely distinguishable, approximating to a 'no change' situation.

- 13.7 The sensitivity of a receptor is based on the relative importance of the receptor using the scale set out in Table 13.3 below.

Table 13.3: Methodology for Determining Sensitivity

Sensitivity	Examples of Receptor
High	The receptor/resource has little ability to absorb change without fundamentally altering its present character, or is of international or national importance.
Moderate	The receptor/resource has moderate capacity to absorb change without significantly altering its present character, or is of high importance.
Low	The receptor/resource is tolerant of change without detriment to its character, is of low or local importance.

Assessment of Effect Significance

13.8 Effect significance will be calculated using the matrix in Table 13.4. This illustrates the interaction between impact magnitude and receptor sensitivity.

Table 13.4: Effect Significance Matrix

Magnitude	Sensitivity		
	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 Adverse/Beneficial - Negligible
Negligible	Negligible	Negligible	Negligible

Site and Development Description

13.9 This chapter will describe the setting of the site and the existing conditions on the site, as well as explaining the proposed development and setting out the parameters. The parameters plans will be included as figures to the chapter.

13.10 This chapter will also outline the climate change mitigation and adaptation measures to be incorporated into the proposed development.

Alternatives

13.11 This chapter would describe the evolution of the proposed development based on environmental constraints. It will include a high-level comparison of the environmental effects of any alternatives studied by the Applicant.

Construction Methodology and Phasing

13.12 This chapter will outline the anticipated construction programme, phasing and methodology and explain the assumptions made. This chapter will form the basis of the construction phase assumptions documented in each of the technical chapters of the ES.

Technical Assessments

13.13 Each ES chapter will follow the headings set out below to ensure the final document is transparent, consistent and accessible.

- Introduction;
- Planning Policy Context;
- Assessment Methodology;
- Baseline Conditions;
- Likely Significant Effects;
- Mitigation Measures;
- Residual Effects;
- Cumulative Effects; and
- Summary.

13.14 Each chapter sub-heading is explained in further detail in Table 13.5 below.

Table 13.5: Technical Chapter Format and Content

Sub-Heading	Content
Introduction	<ul style="list-style-type: none"> • This section will introduce the assessment discipline and the purpose for which it is being undertaken.
Planning Policy Context	<ul style="list-style-type: none"> • This section will include a summary of national, regional and local policies of relevance to the environmental discipline and assessment. Where applicable, relevant legislation will also be summarised.
Assessment Methodology	<ul style="list-style-type: none"> • This section will provide an explanation of methods used in undertaking the technical study with reference to published standards, guidelines and best practice. The application of significance criteria will also be discussed. • It will also outline any difficulties encountered in compiling the required information.
Baseline Conditions	<ul style="list-style-type: none"> • This will include a description of the environment as it is currently (2022) and as it is expected to change given the project were not to proceed (i.e. 'do-nothing' scenario). The method used to obtain baseline information will be clearly identified. Baseline data will be collected in such a way that the importance of the particular subject area to be affected can be placed in its context and surroundings so that the effects of the proposed changes can be predicted.
Likely Significant Effects	<ul style="list-style-type: none"> • This section will identify the likely significant effects on the environment resulting from the construction and operational phases of the proposed development.
Mitigation Measures	<ul style="list-style-type: none"> • Adverse effects will be considered for mitigation and specific mitigation measures put forward, where practicable. Mitigation measures considered may

Sub-Heading	Content
	<p>include modification of the project, compensation and the provision of alternative solutions (including alternative technology) as well as pollution control, where appropriate.</p> <ul style="list-style-type: none"> • The extent of the mitigation measures and how these will be effective will be discussed. Where the effectiveness is uncertain or depends upon assumptions about operating procedures, data will be introduced to justify the acceptance of these assumptions. • Clear details of when and how the mitigation measures will be carried out will be given. When certainty of impact magnitude and/or effectiveness of mitigation over time exists, monitoring programmes will be proposed to enable subsequent adjustment of mitigation measures, as necessary. • The opportunity for enhancement measures will also be considered, where appropriate. • Information will be included on the mechanism by which the mitigation will be secured (e.g. by planning condition) with outline arrangements for monitoring and responsibilities for doing so, where necessary.
Residual Effects	<ul style="list-style-type: none"> • The residual effects, i.e. the effects of the proposed development assuming implementation of proposed mitigation, will be determined. The residual effects represent the overall likely significant effect of the proposed development on the environment having taken account of practicable/available mitigation measures.
Cumulative Effects	<ul style="list-style-type: none"> • The cumulative effects of the proposed development and the identified committed developments will be assessed.
Summary	<ul style="list-style-type: none"> • A summary of the assessment and conclusions will be provided at the end of each technical chapter.

Summary and Residual Effects

13.15 The residual effects of the proposed development will be summarised in one table at the end of the ES setting out the overall beneficial and adverse effects of the proposed development. This chapter will also set out any interactive effects that are likely to arise. These effects are defined as multiple effects on a single receptor (e.g. noise and dust on a designated ecological site).

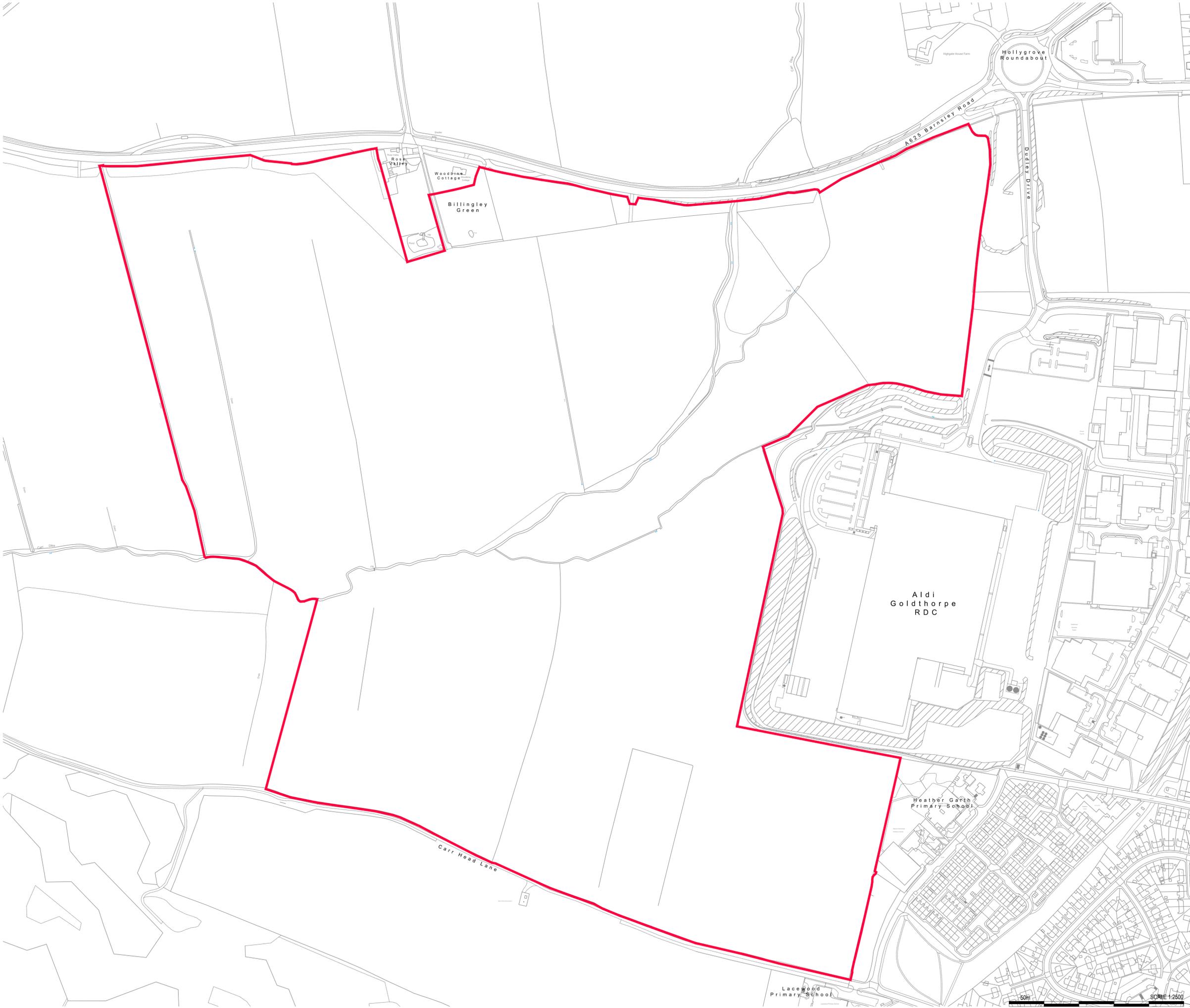
APPENDIX 1
SITE LOCATION PLAN

- Dimensions are in millimeters, unless stated otherwise.
 - Scaling of this drawing is not recommended.
 - It is the recipient's responsibility to print this document to the correct scale.
 - All relevant drawings and specifications should be read in conjunction with this drawing.



Key

— Development Boundary 228.80 ac 92.59 ha



Site boundary to be confirmed by the client

rev	amendments	by	ckd	date

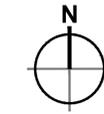
Barnsley Road, Goldthorpe
 Location Plan



Drawing Status:	Feasibility
Drawn / Checked:	JB / MDS
Date:	18/02/2022
Scale:	1:2500 A1
Drawing no:	Revision:
22081 F0001	F

APPENDIX 2
DRAFT PARAMETERS PLAN

- Dimensions are in millimeters, unless stated otherwise.
 - Scaling of this drawing is not recommended.
 - It is the recipient's responsibility to print this document to the correct scale.
 - All relevant drawings and specifications should be read in conjunction with this drawing.



Key

Development Boundary 228.80 ac 92.59 ha

Parameters Key

- Development Plateau
- Structural Landscaping
- Proposed levels gradient
- Strategic Landscape screening
- Estate Road infrastructure
- Proposed Public Right of Way diversion
- Existing Public Right of Way
- Existing Public Right of Way to be removed
- Flood Compensation Area (10ha)
- Proposed Attenuation
- Existing Watercourse
- Existing Retained Vegetation

Development Schedule						
Zone	Plot Size NDA (ha)	Maximum GEA Floor Space (m ²)	Maximum Plateau Height (in meters above ordnance datum)	Maximum Finished Floor Level (in meters above ordnance datum) [+1,000m above proposed plateau]	Maximum Building Height Measured to roof ridge / highest point (in meters above ordnance datum)	Ridge Height (above F.F.L. level)
Zone 1	11.65	51,236	23.90	24.90	45.90	21.00
Zone 2	8.71	32,377	26.00	27.00	48.00	21.00
Zone 3	21.98	85,935	33.75	34.75	55.75	21.00
Zone 4	2.74	16,258	33.75	34.75	52.75	18.00
Total	42.34	165,806				

The use class applied for within each zone is B8 with ancillary B1

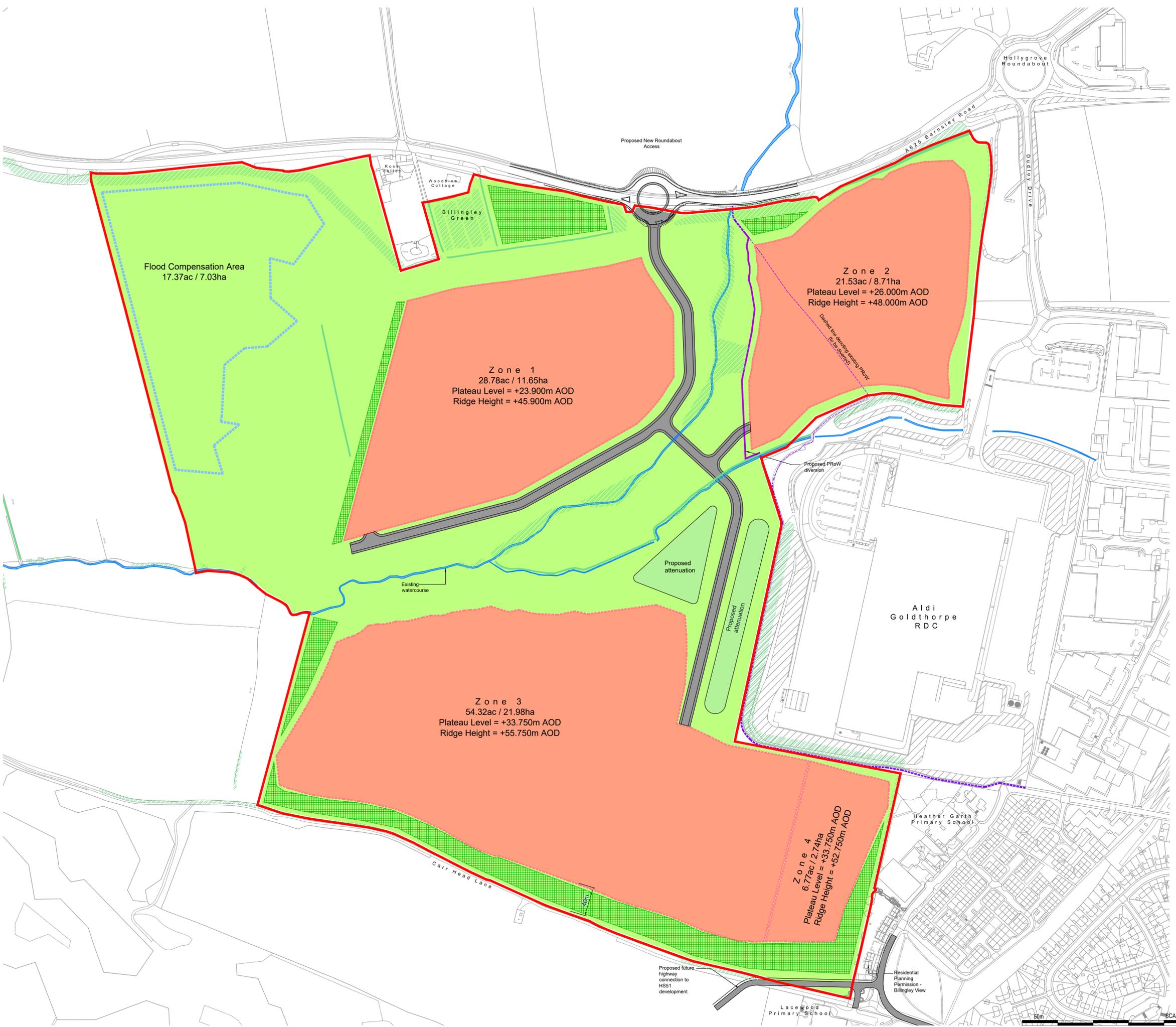
DRAFT

rev | amendments | by | ckd | date

Barnsley Road,
Goldthorpe
Parameters Plan



Drawing Status:	Feasibility
Drawn / Checked:	JB / MDS
Date:	13/06/2022
Scale:	1:2500 A1
Drawing no:	Revision:
22081 F0015	D



Proposed New Roundabout Access

Zone 2
 21.53ac / 8.71ha
 Plateau Level = +26.000m AOD
 Ridge Height = +48.000m AOD

Zone 1
 28.78ac / 11.65ha
 Plateau Level = +23.900m AOD
 Ridge Height = +45.900m AOD

Zone 3
 54.32ac / 21.98ha
 Plateau Level = +33.750m AOD
 Ridge Height = +55.750m AOD

Zone 4
 6.77ac / 2.74ha
 Plateau Level = +33.750m AOD
 Ridge Height = +52.750m AOD

Aldi Goldthorpe RDC

Heather Garth Primary School

Lacewood Primary School

Proposed future highway connection to HSS1 development

Residential Planning Permission - Billingley View

50m SCALE 1:2500

APPENDIX 3
PHASE 1 GROUND CONDITIONS DESK STUDY

APPENDIX 4
PRELIMINARY ECOLOGICAL APPRAISAL