

EIA Scoping Report

Request for an EIA Scoping Opinion for Land North of Bryn Lane, Wrexham Industrial Estate

02 November 2022

Net World Sports

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1. Introduction

1.1. Overview

- 1.1.1. This EIA Scoping Report has been prepared in relation to a forthcoming outline planning application, which will be submitted by CBRE Limited, on behalf of Net World Sports ('the Applicant'), to Wrexham County Borough Council ('Wrexham CBC'), for a commercial development, including industrial, storage and distribution, and ancillary retail/hotel floorspace, at a site north of Wrexham Industrial Estate, Wrexham (the 'application site').
- 1.1.2. The application site is situated to the north of Wrexham Industrial Estate, within the administrative area of Wrexham CBC. The application site is bound to the north by Francis' Lane, to the east by existing field boundaries and a public right of way, to the south by Bryn Lane, and to the west by Hugmore Lane / Industrial Estate Road.
- 1.1.3. The application site covers an area of circa 36.3 hectares (ha). It predominantly comprises arable land separated by hedgerows, with a small cluster of buildings and hardstanding located in the central southern and central northern part of the site.
- 1.1.4. The proposals comprise site clearance and preparation works, followed by construction of multiple units, collectively providing a total of up to 160,000sqm gross external area (GEA) for B1c (light industry appropriate in a residential area), B2 (general industrial), and B8 (storage and distribution) uses, as well as additional use classes which are likely to include ancillary retail/drive-thru facilities and potential for a hotel and petrol filling station. The proposals also include access and parking provision, including new access junctions, internal roads, service yards, and car and HGV parking, retention and enhancement of some existing on-site green spaces and provision of new landscaping and drainage/attenuation measures.
- 1.1.5. In the interest of undertaking a robust and transparent assessment of the likely significant environmental effects of the proposed development, it is proposed that an Environmental Statement (ES) is voluntarily submitted to Wrexham CBC in due course, in conjunction with the planning application.

1.2. Environmental Impact Assessment

Purpose of the Environmental Impact Assessment

- 1.2.1. Environmental Impact Assessment (EIA) is a process for ensuring that the likely significant effects of a new development on its surrounding environment are fully understood and considered before that development is allowed to proceed.

The Development in the Context of the EIA Regulations 2017

- 1.2.2. The procedures for carrying out EIA for a proposed development within the terrestrial environment in Wales are set out within The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 - herein the 'EIA Regulations 2017'.
- 1.2.3. The EIA process is divided into three main competent stages (prior to decision making); Screening, Scoping, and Assessment. These stages are discussed in the context of the proposed development in the following sections.
- 1.2.4. The EIA Regulations 2017 include two schedules ('Schedule 1' and 'Schedule 2'), which set out categories of development that potentially require EIA.
- 1.2.5. The proposed development is not a Schedule 1 development, for which EIA would be mandatory. It is however of a development type listed within Schedule 2 of the EIA Regulations, falling under category 10(a) industrial estate development projects.
- 1.2.6. A development is considered to be a Schedule 2 development if any part of it lies within a 'sensitive area' or if it meets or exceeds the relevant thresholds and criteria for that category of development, as detailed in the EIA Regulations 2017. For category 10(a) projects, these are as follows:
 - i. The area of the development exceeds 5 hectares.
- 1.2.7. The proposed development does not lie within a sensitive area, as defined in the EIA Regulations; however, on the basis that it exceeds the threshold criterion, the proposed development is considered to be Schedule 2 development and would therefore fall within the scope of the regulations. Schedule 2 developments are considered to be 'EIA development' if they are likely to result in significant effects on the environment by virtue of factors such as their nature, size, and location.
- 1.2.8. The Applicant acknowledges the nature and scale of the proposed development and the characteristics of the surrounding environment, and in the interest of undertaking a robust assessment of the likely environmental effects of the proposals, they have voluntarily committed to undertaking an EIA and submitting an Environmental Statement (ES) to Wrexham CBC alongside the proposed outline planning application. As such, a request for a screening opinion has not been submitted to Wrexham CBC.

Scoping

- 1.2.9. Scoping is an important, though optional, exercise undertaken during the early stages of the EIA process. Its purpose is to focus the EIA and resultant ES on key issues and to avoid the unnecessarily complicated examination of minor issues.
- 1.2.10. This report is a request for a Scoping Opinion submitted under Regulation 14(1) of the EIA Regulations 2017.
- 1.2.11. In accordance with Regulation 14(2), this request is 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. Its likely significant effects on the environment; and
 - iv. Such other information or representations as the person making the request may wish to provide or make.

- 1.2.12. Under the allowance to provide ‘such other information or representations as the person making the request may wish to provide or make’, the Applicant has taken the opportunity to provide the local planning authority, statutory consultees and other stakeholders with a better understanding of the proposed approach to the EIA process, the various technical assessments being undertaken and the intended structure of the ES.

Requirements of an Environmental Statement

- 1.2.13. The purpose of the ES is to provide the information reasonably required to reach a conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment.
- 1.2.14. Regulation 17(3), defines an ES as a statement which includes ‘at least’:
- a) a description of the proposed development comprising information on the site, design, size and other relevant features of the development;
 - b) a description of the likely significant effects of the proposed development on the environment;
 - c) a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;
 - d) a description of the reasonable alternatives studied by the applicant or appellant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the significant effects of the development on the environment;
 - e) a non-technical summary of the information referred to in sub-paragraphs (a) to (d); and
 - f) any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.
- 1.2.15. These information requirements appear in full within Schedule 4 of the EIA Regulations 2017.

1.3. Structure of this Report

- 1.3.1. The remainder of this report is structured as follows:
- Section 2: Overview of the application site and proposed development;
 - Section 3: The proposed approach to the EIA Methodology;
 - Section 4: An overview of the proposed scope of the ES;
 - Section 5: Those topics with potential for likely significant environmental effects;
 - Section 6: Those topics not requiring individual technical chapters;
 - Section 7: Those topics where potential for likely significant effects is not anticipated; and
 - Section 8: Summary and conclusions.

2. Site Description & Development Proposals

2.1. The Application Site & Surrounding Context

Location of the Site

- 2.1.1. The application site is located in the Borough of Wrexham, in north Wales. The site is centred on National Grid Reference (NGR) SJ 38557 51096 and is situated approximately 4.6 km east of the centre of Wrexham and 2.8 km west of the border with England.
- 2.1.2. The application site is located immediately north of Bryn Lane and Wrexham Industrial Estate.
- 2.1.3. The application site is bound to the north by Francis' Lane, to the east by existing field boundaries and a public right of way, to the south by Bryn Lane, and to the west by Hugmore Lane / Industrial Estate Road.
- 2.1.4. The current application site boundary is shown in Figure 2.1. This boundary is currently indicative and has been produced for the purposes of this scoping report. The definitive application site boundary will be confirmed in the planning application and accompanying ES in due course.

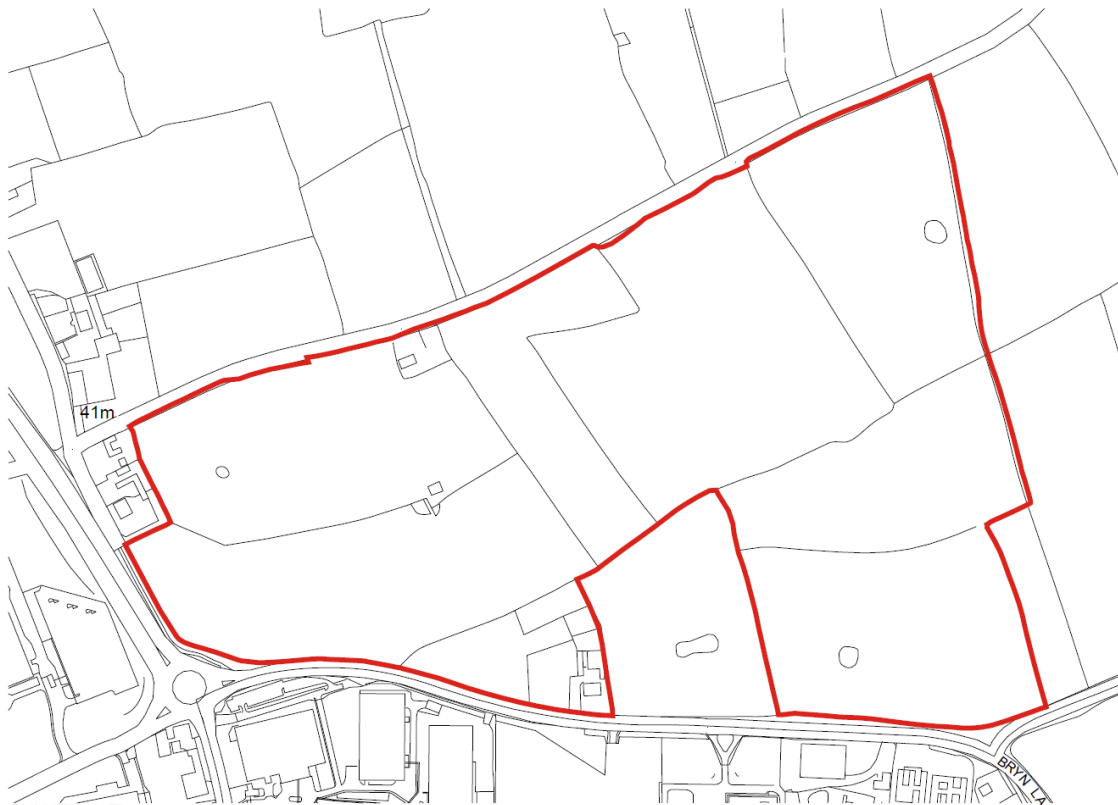


Figure 2.1 Location Plan

The Application Site

- 2.1.5. The application site is 36.3 ha in size and predominantly comprises arable land, separated into eight fields by intact and defunct hedgerows lined with intermittent trees.
- 2.1.6. Habitats identified in the site comprise dense/continuous scrub; tall ruderal vegetation; three ephemeral water bodies and seven ponds; swamp; scattered broad-leaved and coniferous trees; introduced shrub and bare ground with ephemeral/short perennial vegetation. There are a number of ponds within the application site. A review of historical maps show that the locations and sizes of these ponds have changed over time, with some likely to have been infilled in the past.
- 2.1.7. The agricultural land within the application site is denoted on the Welsh Government's 'Agricultural land classification: predictive map' as Grade 3b - moderate quality agricultural land. As the application site is not classed as best and most versatile land, Wrexham CBC are not required to consult with the Welsh Assembly Government (WAG) in relation to the loss of agricultural land at the site as result of any development proposals.
- 2.1.8. A cluster of buildings and associated hardstanding is located in the central southern part of the application site, adjacent to Bryn Lane. This includes a residential property and barn structures, which are currently in use. An access road linking these buildings with Bryn Lane is also present in the south of the application site. A residential property is located within the central northern part of the application site, located off Francis' Lane. This property is owned by the Applicant.
- 2.1.9. The application site gently slopes to the east. The land slopes from approximately 40m Above Ordnance Datum (AOD) in the west to between 27 and 31m AOD in the east and northeast, which follows the general topographical trend in the surrounding area.
- 2.1.10. The application site has a low probability of flooding from tidal and fluvial sources (less than 1 in 1,000-year annual probability), as shown on the Natural Resource Wales (NRW) flood risk map (4). The application site is also predominantly at very low risk of small watercourse and surface water flooding, with a number of small, isolated areas shown to be potentially at low to high risk of flooding from these sources.
- 2.1.11. There are no Public Rights of Way located within the application site.

Surrounding Environment

- 2.1.12. The application site constitutes the northernmost area within Wrexham Industrial Estate. Wrexham Industrial Estate is the UK's second-largest industrial estate extending to over 500 ha and is recognised as both a regionally and nationally important employment area. It is located 4.6km to the east of Wrexham City Centre.
- 2.1.13. The area beyond the application site to the north and east primarily comprises agricultural land.
- 2.1.14. Industrial Estate Road which bounds the application site to the west is a dual carriageway and a key road in the local highway network, linking Wrexham Industrial Estate to the A534, which continues to Wrexham City Centre.
- 2.1.15. The application site is well served by public transport, with bus stops at Abbey Road and Ash Road North within walking distance of the site, approximately 500 m to the south, providing regular bus services to Wrexham City Centre.
- 2.1.16. The nearest watercourse is located approximately 110 m to the west of the application site and is culverted underground. The closest above ground watercourse is located 135 – 225 m south of the application site.

- 2.1.17. Footpath Hol/26 / ISY/6, a Public Right of Way, is located immediately to the east of the application site.

Planning History

- 2.1.18. A recent search of the Council's online planning register has been undertaken and no planning applications relevant to the application site have been identified.

2.2. The Proposed Development

The Need for the Development

- 2.2.1. Wrexham CBC is currently preparing their Local Development Plan (LDP), a revised strategic planning framework which will set the planning requirements for achieving sustainable development and identify where and how much new development will be delivered over the period 2013-2028. Once adopted, the LDP will replace the current Unitary Development Plan as the primary planning policy document against which the Council will consider planning applications. The LDP is at an advanced stage, having been submitted for examination by an independent Inspector on 30 November 2018.
- 2.2.2. The LDP has been informed by an extensive evidence base, which has assessed the Borough's future needs and explores and identifies options for addressing them. Wrexham CBC's employment land requirements up to 2030 are set out in the Joint Employment Land Review (ELR) (2) (2015). The ELR estimates that 4,200 jobs will be generated across the study area (the Wrexham County Borough and Flintshire County economy) over the lifetime of the development plan, which equates to an employment land requirement of 45ha.
- 2.2.3. Qualitative research indicates that there is a growing land supply shortfall at Wrexham Industrial Estate, relative to identified demand. Wrexham Industrial Estate is recognised as a nationally and regionally important employment location. The industrial estate has a crucial role to play in delivering the Council's overall spatial strategy in the emerging LDP by contributing to delivering the jobs growth required to support the Council's proposed housing targets.
- 2.2.4. The ELR therefore identifies a need to allocate 20-30 ha of land at Wrexham Industrial Estate to ensure there are adequate sites to meet the needs of existing and future occupiers. Employment land allocations need to be sufficiently large to meet the needs of occupiers, with individual plot sizes between 2-5 ha deemed appropriate based on enquiries from prospective occupiers.
- 2.2.5. The allocation of additional land at Wrexham Industrial Estate has been subject to a site selection exercise to ensure that any site proposed for allocation at the Industrial Estate is the most appropriate in relation to environmental factors, accessibility, and infrastructure provision. Background Paper 05 'Wrexham Industrial Estate Expansion Selection' (3) considered two areas of search as possible locations for the expansion of the Industrial Estate: Area A and Area B. Area A is located to the north of the existing industrial estate. The application site at Bryn Lane comprises the majority of land within Area A. Area B comprises the area located to the southwest of the existing industrial estate.
- 2.2.6. Areas A and B were identified as potential locations to accommodate a strategic employment development due to the scale of infrastructure required to deliver strategic allocations and their proximity to recently completed link roads. Other locations on the edge of the Industrial Estate were not considered viable alternatives due to access, ecology, flooding, and highways constraints.

- 2.2.7. Following the area of search assessment, the Council set out in the Initial Sustainability Appraisal (2016) which supported the LDP Preferred Options and the Sustainability Appraisal which supported the LDP Deposit Version (2018), that Area A offered the best potential for accommodating a new extension of Wrexham Industrial Estate owing to its lower quality agricultural land, fewer ecology constraints, and proximity to markets accessed from the A483.
- 2.2.8. The application site is now proposed as an employment allocation under Policy SP11 of the emerging Local Plan, as allocation reference KSS3 'Land to the north of Bryn Lane, Wrexham Industrial Estate'. This policy recognises the potential of the site to deliver approximately 28ha of employment land for B use class purposes, including an ecological network and residential buffer zone, along with necessary infrastructure.
- 2.2.9. The delivery of the application site for development would contribute to the ability of the Council to deliver its overall spatial strategy, would ensure that there is adequate employment provision at Wrexham Industrial Estate to meet existing and future demand, and is the most sustainable and appropriate site available as demonstrated by the site selection process.

Description of the Development

- 2.2.10. The proposals are not yet finalised. They are subject to pre-application consultations and further design evolution. The parameters described below therefore include some contingency and are considered 'worst case' in terms of the potential size and scale of the development.
- 2.2.11. The proposed development is commercial in nature, and, at this stage, it is envisaged that it will encompass:
- Site clearance and preparation works, including demolition of existing buildings, removal of hardstanding areas and vegetation, where necessary;
 - Construction of multiple units, collectively providing a total of up to 160,000 sqm gross external area (GEA) for B1c (light industry appropriate in a residential area), B2 (general industrial), and B8 (storage and distribution) uses, as well as additional use classes which are likely to include ancillary retail/drive-thru facilities and potential for a hotel and petrol filling station;
 - The proposed buildings will be up to 28.5m in height above ground level;
 - Access and parking provision, including new access junctions, internal roads, service yards, and car and HGV parking. Two new junctions are proposed providing vehicular access from Bryn Lane, while a further access point is proposed for cyclists (cycle lane may be within the road) and pedestrians from Industrial Estate Road to the west of the site. Up to 1,350 car parking spaces and up to 300 HGV trailer spaces and 15 HGV lorry spaces are anticipated;
 - Retention and enhancement of some existing on-site green spaces and provision of landscaping around the site;
 - Implementation of drainage/attenuation measures; and
 - Off-site ecological enhancement including the relocation of ponds.
- 2.2.12. It is currently envisaged that the proposed development will be delivered in several phases, with enabling works potentially commencing in 2023, with completion anticipated in 2030 ('the opening year').

Form of application

- 2.2.13. The Applicant intends to submit an outline planning application to Wrexham CBC with all matters reserved, with the exception of access.

Scheme Parameters

- 2.2.14. The description of the proposals contained within the ES must be sufficient to enable the requirements of the EIA Regulations 2017 to be fulfilled, specifically to enable the likely significant effects of the proposed development to be identified. As the proposed development will be subject to an outline planning application, the precise nature of these proposals will be subject to approval at the reserved matters stage.
- 2.2.15. It is the intention that certain development parameters and key development principles will be approved at the outline stage to guide and inform the subsequent future reserved matters applications. Consequently, the Applicant will submit a number of parameters plans alongside the planning application, which will form the basis of the assessments contained within the ES. It is envisaged that these plans will include the following:
- Proposed access plan; and
 - Development plots parameter plan, including maximum building heights.
- 2.2.16. The Design & Access Statement will include a section which will set out the principles for the design of the development that will be secured through subsequent reserved matters applications. The Design & Access Statement will be provided as a stand-alone document alongside the planning application.
- 2.2.17. Illustrative plans will also be submitted alongside the planning application, which will indicate how the details that are reserved for future determination at the reserved matters stage could potentially come forward. Illustrative plans will include an illustrative masterplan.

Associated development

- 2.2.18. Associated development is that which does not form part of a planning application, but which is required in order for a development to progress. It takes place outside the application site boundary.
- 2.2.19. It is not currently known exactly what associated development works may be required to facilitate the proposed development at this stage, though such works may comprise:
- Off-site ecological mitigation;
 - Highways works; and
 - Improvement works to infrastructure, including utilities.
- 2.2.20. Such works will be discussed with Wrexham CBC and the appropriate statutory and non-statutory consultees to ensure that they have been adequately assessed within the EIA and planning application documents.

3. EIA methodology

3.1. Focus of EIA

- 3.1.1. EIA is a process that should be focused on the likely significant environmental effects of a proposed development. It is not intended to be a process to address all of the possible environmental effects.
- 3.1.2. One of the main criticisms of current EIA practice is that the scope is often drawn too widely, which results in environmental statements which are unnecessarily long and are less useful for their intended purpose, i.e., to act as a decision-making tool.

“At its best, EIA helps to shape the design and siting of development such that social value to communities and broader economic value to investors can both be met, without eroding natural capital and pushing the boundaries of environmental limits – a tool that can truly support moves towards sustainability. However, the many competing demands can often serve to stifle the process, resulting in reams of information that mask the key environmental issues that need to be considered.” (IEMA, 2011)

3.2. Relevant planning policy and guidance

- 3.2.1. The following national and local planning policy and guidance is relevant to the proposed development:
 - Future Wales: The National Plan 2040 (6);
 - Planning Policy Wales (February 2021) (7);
 - Well-being of Future Generations Act (Wales) 2015 ;
 - Welsh Government Technical Advice Notes (TAN):
 - TAN 5: Nature Conservation and Planning
 - TAN 6: Planning for Sustainable Rural Communities;
 - TAN 10: Tree Preservation Orders;
 - TAN 11: Noise;
 - TAN 12: Design;
 - TAN 15: Development and Flood Risk;
 - TAN 18: Transport;
 - TAN 20: Planning and the Welsh Language;
 - TAN 21: Waste;
 - TAN 23 Economic Development; and
 - TAN 24: The Historic Environment.
 - Wrexham Unitary Development Plan (February 2005);
 - Emerging Wrexham Local Development Plan 2013-2028;
 - Wrexham CBC Local Planning Guidance Notes; and
 - Institute of Environmental Management and Assessment (IEMA) Guidelines for environmental impact assessment.

3.3. Receptors

3.3.1. The following key receptors have been identified within the vicinity of the application site. It is proposed that the assessments will focus on identifying the effects of the proposed development at/on these receptors within the technical chapters in the main volume of the ES and the technical reports provided in the ES appendices:

- Local economy;
- Local labour force;
- Users of links and junctions on the local road network, including:
- Users of A534 / A5156 / Wrexham Golf Club;
- Users of A534 / Industrial Estate Road / Sandy Lane / Borrass Hall Lane;
- Users of Industrial Estate Road / Bryn Lane / Ash Road North / Abenbury Way;
- Users of Bryn Lane / Ridley Wood Road priority junction; and
- Users of B5130 / Ridley Wood Road priority junction.
- Nearby residential properties;
- Nearby schools;
- Nearby hospitals;
- Nearby care homes;
- Nearby places of work;
- Existing and future employees;
- Designated ecological sites including:
- Afon Dyfrdwy a Llyn Tegid (River Dee and Bala Lake) (Wales) Special Area of Conservation (SAC);
- River Dee and Bala Lake SAC (England);
- Midlands Meres and Mosses Ramsar;
- Johnstown Newt sites SAC;
- Afon Dyfrdwy (Wales) Site of Special Scientific Interest (SSSI);
- River Dee (England) SSSI;
- Vicarage Moss SSSI;
- Dee Cliffs, Farndon SSSI;
- Sontley Marsh SSSI; and
- Marford Quarry SSSI.
- Non-designated ecological sites including:
- Wrexham Industrial Estate Local Wildlife Site (LWS);
- Cefn Park LWS; and
- Borrass Wood North LWS.
- Habitats present at the site and in the immediate vicinity, including:
- Hedgerows; and
- Ponds.
- Protected species potentially present in the local area, including:
- Great crested newts;
- Lesser silver water beetle;
- Bats;
- Badger;
- Breeding birds;
- Wintering birds;

- Hedgehog; and
- Brown hare
- Local landscape character;
- Local visual receptors, including:
- Residents within their properties;
- Road users;
- Footpath users (pedestrians);
- Local employees;
- Users of the Clays Golf Driving Range and Golf Course;
- Potential unknown archaeological assets beneath the application site;
- Grade II Listed New Holt Lodge Farm;
- Grade II Listed Erilas Hall;
- Grade II Listed Cornish Hall;
- Principal Aquifer associated with the underlying bedrock;
- Secondary Undifferentiated Aquifer associated with the underlying superficial deposits;
- Secondary A Aquifer associated with the underlying superficial deposits;
- Underground (culverted) unnamed watercourse; and
- Future site users.

3.4. Approach to technical assessment of parameters

Assessing an Outline Application – Maximum Parameters Approach

- 3.4.1. Planning permission is being sought via an outline application, with all matters, with the exception of access, be reserved for future determination at the reserved matters stage.
- 3.4.2. In accordance with the 'Rochdale Envelope' approach, the EIA will be undertaken based on a number of fixed and outline maximum parameters.
- 3.4.3. The 'Rochdale Envelope' arises from the following cases: R. v Rochdale MBC ex parte Milne (No. 1) and R. v Rochdale MBC ex parte Tew [1999] and R. v Rochdale MBC ex parte Milne (No. 2) [2000]. The judgments in these cases describe the principle that one may set clearly defined parameters for development, which, when taken with development proposals set at an appropriate level of detail, may allow for environmental assessment to take place of those proposals. This allows the detail of the development to come forward within those parameters at a point after the assessment has taken place.
- 3.4.4. In accordance with the 'Rochdale Envelope' approach, to assess the effects of the proposed development on townscape/landscape and visual receptors, wirelines will be used, which will be set to the maximum parameters (i.e., maximum height and scale of the buildings).
- 3.4.5. Maximum parameters for the commercial floorspace and car parking spaces will be used for assessments, such as transport, air quality and noise, to ensure a robust approach to the EIA. Other topics will also utilise minimum parameters for the proposed land uses as these will provide a more robust approach to certain elements, such as the socio-economic assessment of potential beneficial impacts of the scheme on the local economy, whereby the minimum parameters will provide a conservative assessment.

3.5. Geographic and Temporal Scope

Geographical scope of assessment

- 3.5.1. The red line boundary for the application site is shown in Figure 2.1.
- 3.5.2. For each topic, the relevant geographical scope of assessment (also known as the 'study area') is stated within the technical sections contained in Section 5 of this report. These study areas have been determined using best practice and professional judgement to ensure that any receptors likely to experience significant effects have been included.

Temporal scope of assessment

- 3.5.3. It is currently envisaged that the proposed development will be delivered in several phases, with enabling works potentially commencing in 2023, with completion anticipated in 2030 ('the opening year').

3.6. Cumulative effects

- 3.6.1. The EIA Regulations 2017 require the consideration of cumulative effects. Cumulative effects can be either:
- The combined or 'inter-development' cumulative effect of the proposed development together with other developments that are consented but not yet completed (taking into consideration effects during both the construction and operational stages); and
 - The combined, synergistic or 'intra-development' cumulative effects caused by the combination of a number of effects of the proposed development on a particular receptor (taking into consideration effects during both the construction and operational stages), which may collectively cause a more significant effect than individually.
- 3.6.2. Inter-development cumulative effects will be described within each technical chapter in the ES, while intra-development cumulative effects will be considered within a separate, stand-alone ES chapter in the main volume of the ES.

Inter-Development Cumulative Effects

- 3.6.3. Good practice guidelines recommend that an EIA should assess the cumulative effects of a development with other developments only where there are likely to be significant effects.
- 3.6.4. Under the EIA Regulations 2017, the requirement for considering cumulative schemes within the inter-development cumulative assessment is restricted to 'cumulation with other existing development and/or approved development'.
- 3.6.5. In relation to EIA practice in England, the Ministry of Housing, Communities & Local Government's (now the Department for Levelling Up, Housing and Communities) stated in their response to the technical consultation on EIA thresholds in 2015 that urban development projects below the revised EIA screening thresholds "*will not be likely to have significant effects either alone or in combination with other projects because of their nature, location or impact*".
- 3.6.6. Whilst we are not aware of any formal advice being provided on this matter in relation to practice in Wales, CBRE consider this to be an equally appropriate and robust approach in Wales.

- 3.6.7. The majority of projects in the surrounding area are either Category 10(a) industrial estate development projects or Category 10(b) urban development projects. On this basis, the consideration of cumulative schemes has been generally limited to those projects where:
- the development includes more than 1 hectare (site area) of urban development which is not dwellinghouse development; or
 - the development includes more than 150 dwellings; or
 - the overall area of the development exceeds 5 hectares.
- 3.6.8. Consideration of cumulative effects has also been given to other projects outside of these categories, if present in the surrounding area, with reference to their specific EIA screening thresholds (e.g. Category 3(a) Industrial installations for the production of electricity, steam and hot water (unless included in Schedule 1) over 0.5ha).
- 3.6.9. Existing developments form part of the baseline and will therefore be considered in the ES in this way. Consented developments within 1 km of the application site, that meet the aforementioned criteria, and are yet to be completed, have been identified. These schemes are set out in Table 3.6.1.

Table 3.6.1**Cumulative schemes for inclusion in the Inter-Development Cumulative Assessment**

Planning Ref	Address	Description	Stage of Development
P/2020/0167 (approved 10/08/2020)	Land South of Ridleywood Lane and, East Of Bryn Lane, Wrexham	Reserved Matters Pursuant to Outline Planning Permission P/2020/0167 (Appearance, Landscaping And Scale) - Erection Of Storage and Distribution Warehouse	Under construction
Reserved matters: P/2021/0610 (approved: 24/11/2021)	Industrial Estate, Wrexham, LL13 9UT.	P/2020/0167: Application for removal or variation of conditions imposed under planning appeal ref no. APP/H6955/A/16/3164652 (planning ref no. P/2016/0327): - condition 2, condition 3, condition 4, condition 5, condition 10 and condition 24.	
Associated applications: P/2016/0327, P/2016/0722, P/2011/0891		P/2016/0327: Variation to condition nos. 2 And 3 of planning appeal ref no. APP/H6955/A/12/2188910 to extend the time limits for submission of reserved matters application and for commencement of development by a further 3 and 5 years respectively	
		P/2016/0722: Submission of reserved matters (appearance, landscaping and scale) in respect of outline planning permission P/2011/0891 (appeal decision APP/H6955/A/12/2188910 (granted on 06.08.2013)	
		P/2011/0891: Outline application for B8 storage and distribution warehouse development and associated ecological mitigation area including means of access off Bryn Lane and layout)	

Planning Ref	Address	Description	Stage of Development
P/2020/0603 (approved 24/11/2020)	Unit 6, Pacific Park, Bridge Road North, Wrexham	Erection of 2 new industrial units on land to the north of unit 6 Pacific Park	Under construction
Associated applications: P/2021/0494, P/2021/1186	Industrial Estate, Wrexham, LL13 9PN.		
P/2015/0843 (approved: 26/05/2016)	Land Off, Ash Road South, Wrexham	Erection of industrial unit comprising two storey office and warehouse accommodation and single storey dust extraction building and associated car parking and storage area.	Under construction
Associated applications: P/2016/0797, P/2019/0410, P/2020/0658, P/2020/0675	Industrial Estate, Wrexham, LL13 9UG		

- 3.6.10. It should be noted that although these schemes have not been completed at the time of writing, it is possible that some may have been completed and in operation at the time of assessment. Should this be the case, these developments may instead be included within the baseline, rather than as a cumulative scheme.
- 3.6.11. The potential for the schemes listed in Table 3.6.1 above to produce cumulative environmental effects alongside the proposed development will depend on the type of effect in question. As such, although the complete list of cumulative schemes will be considered in the EIA, not every scheme will be included within the detailed assessments undertaken for each technical topic. Where individual cumulative schemes have been scoped out of detailed consideration for a particular topic, justification will be provided in the relevant ES chapter.

Intra-Development Cumulative Effects

- 3.6.12. Intra-development cumulative effects will be considered within a standalone chapter of the ES (Chapter 13: Intra-Development Cumulative Effects). This will take the form of a matrix setting out the different effects arising from the proposed development that will be experienced at each receptor and whether these effects are likely to interact to produce a cumulative effect on that receptor. For example, a residential property close to the site boundary may be affected by both noise and air quality effects, which would have the potential to interact, producing a cumulative effect on the receptor. In each case, a significance of effect value will be applied to each cumulative effect established.

3.7. Associated development

- 3.7.1. As noted in the previous chapter, associated development refers to works that does not form part of the planning application, but which are required for a development to progress. This might include the upgrading of road junctions and/or the provision of off-site service/utilities infrastructure.
- 3.7.2. While the extent of the associated development required to deliver the proposed development has yet to be confirmed, a suitable level of consideration will be given to its effects within the relevant chapters of the ES.

3.8. Iterative Assessment, Mitigation & Monitoring

- 3.8.1. EIA is an iterative process, as illustrated in Figure 3.1. An initial impact assessment of the proposed development is undertaken, on the basis of which recommendations are made regarding how the proposals could be altered to lessen adverse effects and improve beneficial effects. Where avoidance is not possible, then the focus will be to lessen the magnitude of effect in line with the principles of the mitigation hierarchy, as illustrated in Figure 3.2. Where these measures are incorporated into the design of the proposed development and, as such, will be shown on the application plans, or are related to the management of the proposed development and, as such, will be secured at the planning application stage through other means, they are termed 'embedded mitigation'.
- 3.8.2. The revised designs then undergo a further impact assessment and, if required, additional mitigation and enhancement measures are identified. The ES will include an assessment of residual effects, which are those likely to arise after any additional proposed mitigation and enhancement has been applied.

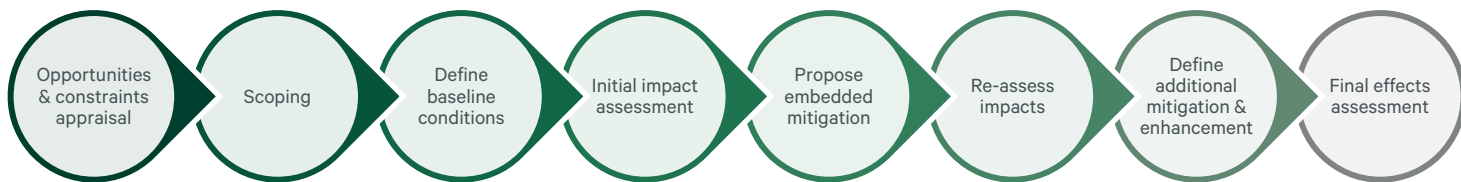


Figure 3.1: Iterative EIA approach

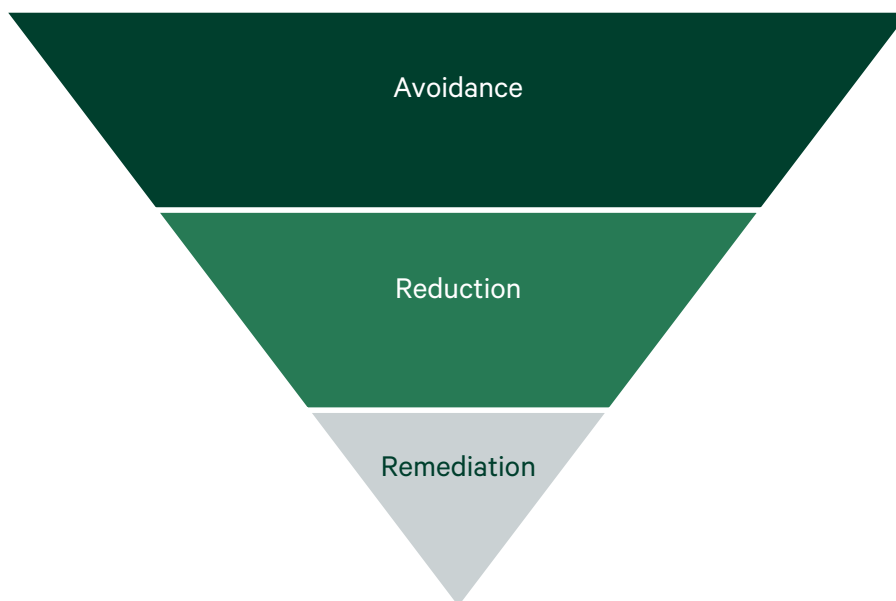


Figure 3.2: Mitigation hierarchy

- 3.8.3. The ES will clearly state appropriate management and monitoring activities that will be undertaken to both mitigate any potential adverse significant effects and to review the efficacy of any recommended enhancement measures, where relevant. These will also be reviewed at the reserved matters stage to ensure that they remain effective and appropriate, with the potential for revision if required.

3.9. Consideration of alternatives

3.9.1. Schedule 4 of the EIA Regulations 2017 requires the ES to contain:

"A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the applicant or appellant which are relevant to the proposed development and its specific characteristics and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects."

3.9.2. Potential alternatives can be broadly grouped into the following categories:

- Alternative sites;
- Alternative land uses;
- Alternative processes; and
- Alternative development layouts.

3.9.3. The Applicant has purchased the application site with the clear intent to bring forward a commercial development at the site, given the site's allocation within the emerging Local Plan. On this basis, no alternative sites or land uses have been considered by the Applicant. Alternative processes have also not been considered.

3.9.4. As such, the ES chapter (Chapter 5: Alternatives and Design Evolution) will therefore focus on alternative development layouts and the design evolution of the proposed development.

3.10. Structure of the Environmental Statement

3.10.1. An ES must meet the requirements set out in Schedule 4 (Regulation 17(3)) of the EIA Regulations 2017; however, these requirements do not include a specific structure that an ES should accord with. This section sets out CBRE's proposed structure for the ES.

Volumes of the ES

3.10.2. The ES will be presented in four separate volumes:

- **Volume I** will comprise the non-technical summary of the information contained in Volumes II and III, making it readily understandable to non-specialists;
- **Volume II** will be the main volume of the ES and will describe: the proposals, the alternative options considered, the baseline environmental conditions, the likely significant effects of the proposed development alone and in combination with the cumulative schemes, the proposed mitigation measures, and the residual environmental effects;
- **Volume III** will comprise the Landscape & Visual Impact Assessment (LVIA), which, due to the size of the document, will be included as a separate volume, rather than as a technical chapter within Volume II; and
- **Volume IV** will contain the technical appendices, which will include all of the technical reports that have informed the assessments reported within the technical chapters in Volume II. Where relevant, it will also contain reports which deal with topics that are considered unlikely to result in significant environmental effects.

- 3.10.3. The proposed structure of Volume II of the ES is shown in Table 3.10.1. To enable the reader to easily cross reference between Volume II and the associated technical appendices in Volume IV, the numbering of the appendices will remain consistent with the chapter numbers in Volume II.

Table 3.10.1**Proposed structure of Volume II of the ES**

Chapter	Content
1. Introduction	Proposed development background; application site context; explanation of EIA and the EIA Regulations; the structure of the ES; information on the project team and chapter authors; where to view hard copies of the ES; how to comment etc.
2. EIA Methodology	Approach to EIA process, including: consultation, responses received and how/where issues have been addressed within the ES, discussion of issues scoped out of the EIA, structure of technical chapters, and assessment of residual impact significance.
3. Application Site and Surrounding Area	Description of application site and the wider study area.
4. Proposed Development	Description of the elements of the development relevant to the assessment of their possible effects on the environment.
5. Alternatives & Design Evolution	Outline of the alternatives considered by the applicant, including alternative layouts etc.
6. Construction Strategy & CEMP	Description of the demolition and construction strategy, including indicative phasing of the works, and the proposed mitigation measures to be adopted through the Construction Environmental Management Plan.
7.- 12. Technical topics	Detailed assessment of each environmental topic area (socioeconomics, transport, air quality, noise and vibration, biodiversity and archaeology,), including consideration of direct, indirect, primary, secondary, short, medium and long-term and inter-development cumulative effects. Please note that the assessment for technical topic Landscape and Visual will be provided within Volume III of the ES.
13. Intra-development cumulative effects	Assessment of intra-development cumulative effects from the proposed development on key receptors.
14. Summary of Mitigation & Residual Effects	Full list of the residual effects of the proposed development, the mitigation measures proposed and how these are to be secured.
15. Glossary & Abbreviations	List of abbreviations and glossary of terms.

3.11. Structure of the Technical Chapters

- 3.11.1. The technical chapters will be structured as follows:

- Introduction;
- Methodology;
- Baseline conditions;
- Potential impacts;
- Embedded mitigation;
- Assessment of effects (including embedded mitigation);
- Additional mitigation & enhancement measures;

- Residual effects; and
- Inter-development cumulative effects.

- 3.11.2. The structure of the technical chapters – particularly the use of tables – has been devised by CBRE to make the technical assessments better focussed and more accessible to readers, and to reduce the length of the main volume of the ES. Where information has been summarised in the tables, references are provided as to where the full information is provided in the technical appendices.
- 3.11.3. CBRE’s technical chapter structure was reviewed by an ES assessor from the Institute of Environmental Management & Assessment (IEMA) in September 2017 and the approach was commended.

Introduction

- 3.11.4. This section provides details of:
- the company that has undertaken the technical assessment, as well as the author(s);
 - the purpose of the chapter;
 - a list of any figures supporting the assessment; and
 - a list of all of the technical appendices that are relevant and referenced within the chapter.

Methodology

- 3.11.5. This section provides details of:
- the legislation, guidance, standards and policies that have informed the assessment;
 - the consultees that have been contacted in preparing the chapter (e.g., technical officers at the local planning authority and officers at statutory consultees, such as the Environment Agency);
 - the comments raised during scoping and a commentary on how the comments have been addressed within the assessment;
 - the technical scope of the assessment and the scenarios that have been assessed;
 - how baseline conditions have been characterised (e.g., site visits/surveys/review of publicly available data)
 - how receptor sensitivity has been assessed and the sensitivity scale adopted within the assessment;
 - how impact magnitude has been assessed and the scale of magnitude adopted within the assessment;
 - how significance has been assessed (e.g., whether a matrix or some other approach has been adopted);
 - where relevant, a description of how climate change, human health and risk of major accidents and/or disasters have been taken into account within the assessment;
 - any associated development (i.e., development which is required to facilitate the proposed development but does not form part of the planning applications, such as off-site utilities works) that is relevant to the assessment; and
 - any assumptions or limitations.

Baseline Conditions

- 3.11.6. This section takes the form of a table that provide a list of:
- the key receptors that have been identified;
 - a brief description of the receptors and the baseline conditions relevant to each;

- the sensitivity attributed to each receptor; and
- where further details can be found within the relevant technical appendices.

Potential Impacts

- 3.11.7. This section takes the form of a table that provides details of the potential impacts of the proposed development that have been scoped into the ES, split by stage (i.e., demolition and construction or operation), and whether those impacts are likely to be adverse or beneficial in nature.

Embedded Mitigation

- 3.11.8. This section will take the form of a table listing the embedded mitigation that has been introduced to address the potential significant impacts of the proposals, the reason(s) that the intervention was included (e.g., the siting of a building so as to avoid particularly sensitive habitats within the site boundary) and where further details can be found within the relevant technical appendices.

Assessment of effects (including embedded mitigation);

- 3.11.9. This section takes the form of a table including details of:
- whether the impact is relevant to the demolition and construction or operational stage of the development(s);
 - the receptor(s) that are likely to be affected;
 - the impact (including consideration of any embedded mitigation);
 - the magnitude of the impact;
 - the significance of the impact;
 - whether additional mitigation is proposed; and
 - where further details can be found within the relevant technical appendices.

Additional Mitigation and Enhancement Measures

- 3.11.10. This section takes the form of a table providing details of:
- the stage during which the mitigation or enhancement measures will be implemented;
 - the possible effect that is being mitigated;
 - the additional mitigation and/or enhancement measure(s) being proposed;
 - how each measure will be secured and when it will be triggered;
 - the magnitude of the impact post-mitigation;
 - whether the post-mitigation impact is adverse or beneficial; and
 - where further details can be found within the technical appendices.

Residual Effects

- 3.11.11. This section takes the form of a table providing details of:
- the stage during which the impact is applicable;
 - the receptor(s) affected;
 - the residual effect following the implementation of the additional mitigation/enhancement measures; and
 - the significance of the residual effect and whether it is adverse or beneficial, short-, medium- or long-term, direct or indirect, permanent or temporary, and reversible or irreversible.

Inter-Development Cumulative Effects

- 3.11.12. This section is split into two parts. The first comprises a table providing details of:
- the list of schemes identified through scoping as having the potential to result in inter-development cumulative effects alongside the proposed development (i.e., the cumulative schemes);
 - a brief description of the cumulative schemes, including a statement on where each is in the planning/construction process; and
 - a description of whether the schemes are likely to result in inter-development cumulative effects under each assessment scenario for the specific topic area under consideration.
- 3.11.13. The second part of this section comprises a table including the cumulative schemes relevant to the specific topic under consideration and providing details of:
- the stage during which inter-project cumulative effects may arise;
 - the receptor(s) likely to be affected;
 - any additional measures that are required to mitigate the identified inter-development cumulative effects; and
 - the significance of the effect and whether it is adverse or beneficial, short-, medium- or long-term, direct or indirect, permanent or temporary, and reversible or irreversible.
- 3.11.14. In some instances, for example where the cumulative schemes are not of relevance to the specific topic under any of the assessment scenarios, the second part of this section will not be presented but reference will be made to the preceding section 'Residual Effects' tables, as the residual effects would remain consistent with these effects.
- 3.11.15. This is also the case where cumulative schemes may be intrinsically considered within the main technical assessment, such as with transport, where committed developments will have already been included in the traffic modelling.

3.12. Assessment of significance

- 3.12.1. Ministry of Housing, Communities & Local Government's (now the Department for Levelling Up, Housing and Communities) Guidance suggests that it is advantageous to devise generic assessment criteria for determining the significance of impacts that can apply for all environmental topics considered within an ES. This ensures that, where possible, effects are assessed in a comparable manner.
- 3.12.2. Prevailing good practice suggests that environmental impacts should be considered in terms of the importance, value or 'sensitivity' of receptors and the predicted scale, or 'magnitude', of the potential impacts. The significance of potential effects should then be determined through consideration of the respective sensitivity and magnitude.
- 3.12.3. In line with Department for Levelling Up, Housing and Communities Guidance and prevailing good practice, each of the environmental issues within the ES will be assessed following the same general approach, whereby the receptor sensitivity and magnitude of effect are taken into consideration in establishing the significance of effects. All identified effects will be assessed using the same significance descriptors, which will help to provide a direct comparison between the effects assessed under each chapter.
- 3.12.4. Where methodologies have been adapted from specific industry recognised guidelines, e.g., Landscape Institute and Institute of Ecology and Environmental Management (IEEM) Guidelines, an explanation as to the chosen methodology will be provided within the relevant chapter.

- 3.12.5. Provided below is the general approach to the consideration of receptor sensitivity, impact magnitude and effect significance that will be used in the ES. Should methodologies for any of the technical topics differ from the below, the reasoning behind this will be discussed within the relevant ES chapter.

Receptor & Sensitivity

- 3.12.6. Receptors are defined as the physical resources or user groups that are subject to impacts. They will be identified through a combination of desk-top studies and site visits undertaken by the various members of the EIA team. Further details will be provided in each of the technical chapters, but sensitivity may depend on factors such as: rarity; quality; importance in an international, national, regional or local context and/or replaceability etc.
- 3.12.7. The sensitivity of receptors is considered as being 'very high', 'high', 'medium', 'low' or 'negligible'. A table is included within the methodology section of each chapter explaining the rationale for each of these criteria. A summary is then provided at the end of the baseline conditions section to draw conclusions relating to the perceived sensitivity of identified receptors.

Impact & Magnitude

- 3.12.8. Impacts are generally understood to be the changes resulting from an action.
- 3.12.9. The magnitude of an impact is generally considered to be 'large', 'medium', 'small' or 'negligible'. As with sensitivity, a table will be included in each technical chapter of the ES alongside an explanation of the rationale for each of these criteria. Where it is possible to do so, criteria will be based on recognised standards and guidelines. Where this is not possible, the criteria will be based on expertise and professional experience.

Effects & Significance

- 3.12.10. Effects are generally understood to be the consequences of impacts on sensitive receptors. The significance of the effect is informed by the magnitude of the impact and the sensitivity of the receptor.
- 3.12.11. The assessment of significance within the ES is also considered using a common scale, with effects described as being 'major', 'moderate', 'minor' or 'negligible' (which also includes neutral or no impact assessments). Rather than prescribing a particular methodology (e.g., the use of a significance matrix), the method for ascribing significance is left to the judgement of each technical consultant, so that it reflects best practice within their specialist area. Broad definitions for each of these descriptors are provided in Table 3.12.1.

Table 3.12.1
Typical Descriptions of Significance Criteria

Significance of effect descriptor	Typical definition
Major	These effects may represent key factors in the decision-making process. Potentially associated with sites and features of national importance or likely to be important considerations at a regional or district scale. Major effects may relate to resources or features that are unique and which, if lost, cannot be replaced or relocated.
Moderate	These effects, if adverse, are likely to be important at a local scale and on their own could have a material influence on decision-making.
Minor	These effects may be raised as local issues and may be of relevance in the detailed design of the scheme but are unlikely to be critical in the decision-making process;
Negligible	These effects are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error. These effects are unlikely to influence decision making, irrespective of other effects.

3.12.12. Effects are generally considered to be ‘Significant’ where they are of ‘Moderate’ or ‘Major’ significance (either adverse or beneficial). However, the approach may differ between assessments. Where this is the case, this will also be outlined within the relevant ES technical chapter.

3.12.13. In addition to the significance of the effect, statements will also be made as to whether effects are adverse or beneficial, direct or indirect, temporary or permanent, reversible or irreversible, short-, medium- or long-term and/or cumulative. Definitions and examples for each are provided below:

- Adverse – a harmful or unfavourable effect (e.g., the loss of trees to allow the construction of new buildings);
- Beneficial – a favourable or advantageous effect (e.g., the creation of jobs as a result of proposed construction works);
- Direct – an effect without intervening factors (e.g., the removal of trees to allow for the construction of new buildings);
- Indirect – an effect not directly caused by the development (e.g., changes to the pattern of traffic movements across the road network as a result of a new road being constructed);
- Temporary – an effect lasting only for a limited period of time (e.g., piling during construction);
- Permanent – an effect lasting or intended to last or remain unchanged indefinitely (e.g., land reclamation from the sea);
- Reversible – an effect that is capable of being reversed so that the previous state is restored (e.g., the removal of solar panels to revert to grazing pasture);
- Irreversible – an effect that is not capable of being undone or altered (e.g., gravel extraction);
- Short term – an effect lasting between 0 and 7 years;
- Medium term – an effect lasting between 8 and 12 years;
- Long term – an effect lasting more than 12 years; and
- Cumulative – increasing by one addition after another (e.g., traffic generated by different developments occurring in close proximity to one another).

3.12.14. Where relevant, inter-development cumulative effects will be described within each technical chapter. Intra-development cumulative effects, will, however, be considered within Chapter 13: Intra-Development Cumulative Effects.

3.13. Competent Experts

3.13.1. Regulation 17(4) of the EIA Regulations 2017 states that:

“An environmental statement must—

(a) be prepared by persons who in the opinion of the relevant planning authority or the Welsh Ministers, as appropriate, have sufficient expertise to ensure the completeness and quality of the statement;

(b) contain a statement by or on behalf of the applicant or appellant describing the expertise of the person who prepared the environmental statement.”

3.13.2. Table 3.13.1 sets out each of the technical consultant organisations that have fed into this scoping report and will be undertaking the technical assessments to support the planning application.

Table 3.13.1
Technical Consultant Organisations and Relevant Topics

Technical topic	Consultant organisation
EIA Methodology & Approach	CBRE
Socio-Economics	CBRE
Transport	Cora IHT
Air Quality	Redmore Environmental Ltd
Noise and Vibration	Tetra Tech
Biodiversity	The Environment Partnership (TEP)
Landscape and Visual Assessment	Nicholsons Lockhart Garratt
Climate Change	CBRE
Major Accidents and Disasters	CBRE
Human Health	CBRE
Historic Environment	TEP
Ground Conditions	CBRE / Tier Environmental Ltd
Flood Risk and Drainage	CBRE / Tier Environmental Ltd
Materials and Waste Management	CBRE
Wind Microclimate	CBRE

4. Proposed scope of the Environmental Statement

4.1. Introduction

4.1.1. This section considers the likely environmental effects of the proposed development and therefore the technical topics proposed for inclusion within the ES.

4.1.2. Regulation 4(2) states that:

“The Environmental Impact Assessment must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following—

(a) population and human health;

(b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;

(c) land, soil, water, air and climate;

(d) material assets, cultural heritage and the landscape; and

(e) the interaction between the factors referred to in sub-paragraphs (a) to (d).”

4.1.3. A list of technical topics was initially evaluated based on the potential for each to exhibit significant environmental effects as a result of the proposed development. This evaluation process included provisional assessments for each topic to understand the existing baseline conditions.

4.1.4. Based on the initial evaluation process, Table 4.1.1 summarises:

- The topics that are considered to have the potential for likely significant environmental effects; and
- The topics where the potential for likely significant environmental effects is not anticipated.

Table 4.1.1
Significance of effect

Topics with potential for <u>likely significant environmental effects</u>	Topics with potential for likely significant environmental effects but <u>not requiring their own technical chapter</u>	Topics where potential for <u>likely significant effects are not anticipated</u>
Socio-economics	Climate Change	Historic Environment
Transport	Major Accidents and Disasters	Daylight, Sunlight and Overshadowing
Air Quality	Human Health	Ground Conditions
Noise and Vibration		Flood Risk & Drainage
Biodiversity		Waste and Materials
Landscape and Visual		Wind

- 4.1.5. For those topics that are considered to have the **potential for likely significant environmental effects**, a detailed assessment will be provided within a technical chapter in the main volume of the ES (ES Volume II), or in the case of Landscape & Visual in a separate ES Volume (ES Volume III).
- 4.1.6. The only exceptions are climate change, human health and risks of major accidents and disasters. Stand-alone technical chapters are not proposed for these topic areas. Instead, where the risks of major accidents and/or disasters or effects of the development in relation to human health or climate change are relevant to a specific technical assessment, this will be stated and assessed within the respective ES chapter.
- 4.1.7. For those topics where the **potential for likely significant environmental effects is not anticipated**, topic specific technical chapters will not be provided within the main volume of the ES. However, where planning requirements stipulate that technical reports for these topics are required to support the planning application, these reports will be proposed as part of the planning submission.
- 4.1.8. The reasons for the judgements made in regard to the potential for likely environmental effects and the means by which the topics will be addressed in the ES, whether by ES chapter or technical report, are provided in the sections that follow.
- 4.1.9. Scoping is not limited to the submission of a request for a Scoping Opinion and is an ongoing process. If, as a consequence of further assessment being carried out by the technical consultants, it becomes clear that one or more of the topics where the potential for likely significant environmental effects is not anticipated are in fact likely to result in significant effects then the matter will be reported through the preparation of a full ES chapter.

5. Topics with potential for likely significant environmental effects

5.1. Introduction

- 5.1.1. This section considers those topics that are considered to have the potential for likely significant environmental effects as a result of the proposed development, and which will be subject to detailed consideration within Volume II of the ES, or in the case of landscape and visual, in ES Volume III.

5.2. Socio-economics

Context

- 5.2.1. The proposals will result in impacts on the local economy during the construction phase. Once operational, the proposed development will bring forward new commercial floorspace at the site.
- 5.2.2. The assessment of the potential socio-economic effects will include consideration of the following potential effects:
- Employment generated during the construction phase; and
 - Employment generated within the new commercial uses, considering the gross employment as well as the net additional employment, above any existing employment on-site.

Baseline Conditions

Population

- 5.2.3. According to 2011 Census data, WBC had a resident population of 134,844 at that time, representing a growth of 4.9% from the 2001 Census (128,500).
- 5.2.4. The site is located within Holt ward. The ward population in 2011 of 3,587, translates to a population density of 0.9 persons per hectare (pph). This is lower than both the local authority (2.7 pph) and national (1.5 pph) population densities. This shows the application site is located in a more rural area with a higher proportion of open space compared to the wider region.

Economy

- 5.2.5. According to Office for National Statistics (ONS) figures, the Total Gross Value Added (GVA) for WBC was £3.2 billion in 2018. According to the Inter Departmental Business Register (ONS), a total of 4,135 enterprises were reported in WBC in 2020. Total employment across the local authority was reported to be 60,000 in 2020, of which 40,000 (66.7%) were in full-time employment and 19,000 (31.7%) were in part-time employment.

Key Receptors

- 5.2.6. The relevant sensitive receptors in the local area are considered to be:
- Local economy; and
 - Local labour force.

Key Issues and Requirement for Assessment

- 5.2.7. The proposed development will have a number of socio-economic impacts during the construction and operational stages and there is considered to be the potential for likely significant effects. As set out above, the key impacts arising from the proposed development will be impacts on employment. There is considered to be the potential for likely significant effects.
- 5.2.8. A Socio-Economic Impact Assessment will be completed as part of the EIA process in order to assess these potential effects. The findings of the assessment will be provided in the Socio-Economics chapter in the main volume of the ES.

Assessment Methodology

- 5.2.9. The ES chapter will follow a standard format setting out relevant national and local policy, the proposed methodology, existing baseline conditions, and the impacts and effects assessment. The ES chapter would include the identification of appropriate mitigation and the assessment of the residual effects.

Baseline Conditions

- 5.2.10. A detailed assessment of the baseline conditions will be undertaken as part of the socio-economic assessment. This will include a review of the local demographic and economic characteristics of the area surrounding the application site.
- 5.2.11. The local area will be put into context against the wider local authority (WBC) and national (Wales) profiles. The baseline conditions for the application site will be established with reference to the following sources:
- A policy review to provide an outline of the relevant local and regional, social and economic policies and objectives for the area.
 - A desk-top review of current social and economic conditions in the local area in comparison with local, regional and national trends, information available from the project team, the WBC, and published database records, such as the ONS and the Official Labour Market Statistics (NOMIS). This information will be used to establish the base case, including the:
 - Social baseline: A review of the demographic in the area and indices of deprivation; and
 - Economic baseline: A review of workforce, economic activity, earnings, industries of occupation and occupational classification.

Assessment of Potential Effects

- 5.2.12. The likely effects of the proposed development will be examined and the significance of said effects will be assessed. In particular, the assessment will address:
- The quantum of construction work and its anticipated direct and indirect employment generation; and
 - Employment generated within the new uses, considering the gross and net employment numbers on-site.
- 5.2.13. No specific comprehensive, quantitative socio-economic assessment methodology exists, and as such a quantitative analysis of employment effects associated with the proposed development will be undertaken using established methodologies, including the Additionality Guide by the Homes and Communities Agency (HCA) (now Homes England), which enables the assessment of the net effect once deadweight, leakage, displacement, substitution and economic multipliers have been accounted for.

- 5.2.14. The socio-economic assessment will, wherever possible, be appraised against relevant national standards such as those provided by the HCA. Where no standards exist, professional experience and judgement will be applied and justified.
- 5.2.15. The socio-economics ES chapter will provide a summary of relevant planning policy and guidance at the local, regional and national levels.
- 5.2.16. The assessment of socio-economic baseline conditions and potential impacts will use a number of methodologies, data sources and assumptions. These are set out below:
- The socio-economic baseline will be established using:
 - 2011 Census Data;
 - NOMIS – Official Labour Market Statistics (2022); and
 - Welsh Index of Multiple Deprivation (WIMD) (2019);
 - Demolition and construction employment impacts will be assessed using the latest published results in the Annual Business Survey (ABS); and
 - Operational employment impacts will be assessed using the HCA standard job density for commercial floorspace and any relevant information from the Applicant as appropriate.
- 5.2.17. The results of the socio-economic assessment will benchmark the overall project aims against a variety of additional socio-economic components, and how these meet established social and economic policy objectives at the local authority and national levels.
- 5.2.18. The assessment of effects significance will accord with that described in Chapter 3 of this document. The methodology will consider the sensitivity of the receptor and the magnitude of the impact and will be both transparent and repeatable.
- 5.2.19. Any mitigation measures required to address any likely adverse effects will be identified through the assessment.
- 5.2.20. The assessment will include a consideration of the cumulative effect of the proposed development in combination with the cumulative schemes scope into the ES.

5.3. Transport

Context

- 5.3.1. The proposed development will generate additional vehicle trips on the local transport network. These vehicle trips will be generated during both the demolition and construction stage and the operational stage and are considered to have the potential to result in significant environmental effects.

Baseline conditions

- 5.3.2. The application site is bounded by Bryn Lane to the south, Industrial Estate Road to the West, Francis Lane to the north and agricultural land to the east.
- 5.3.3. Bryn Lane (7.7 m) is subject to a 40-mph speed limit with partial footways on the northern side of carriageway and a full footway on the southern side.
- 5.3.4. There is an existing public right of way which forms of the eastern border of the site, which the proposed development will link into. Figure 5.2 identifies the public rights of way surrounding the application site.

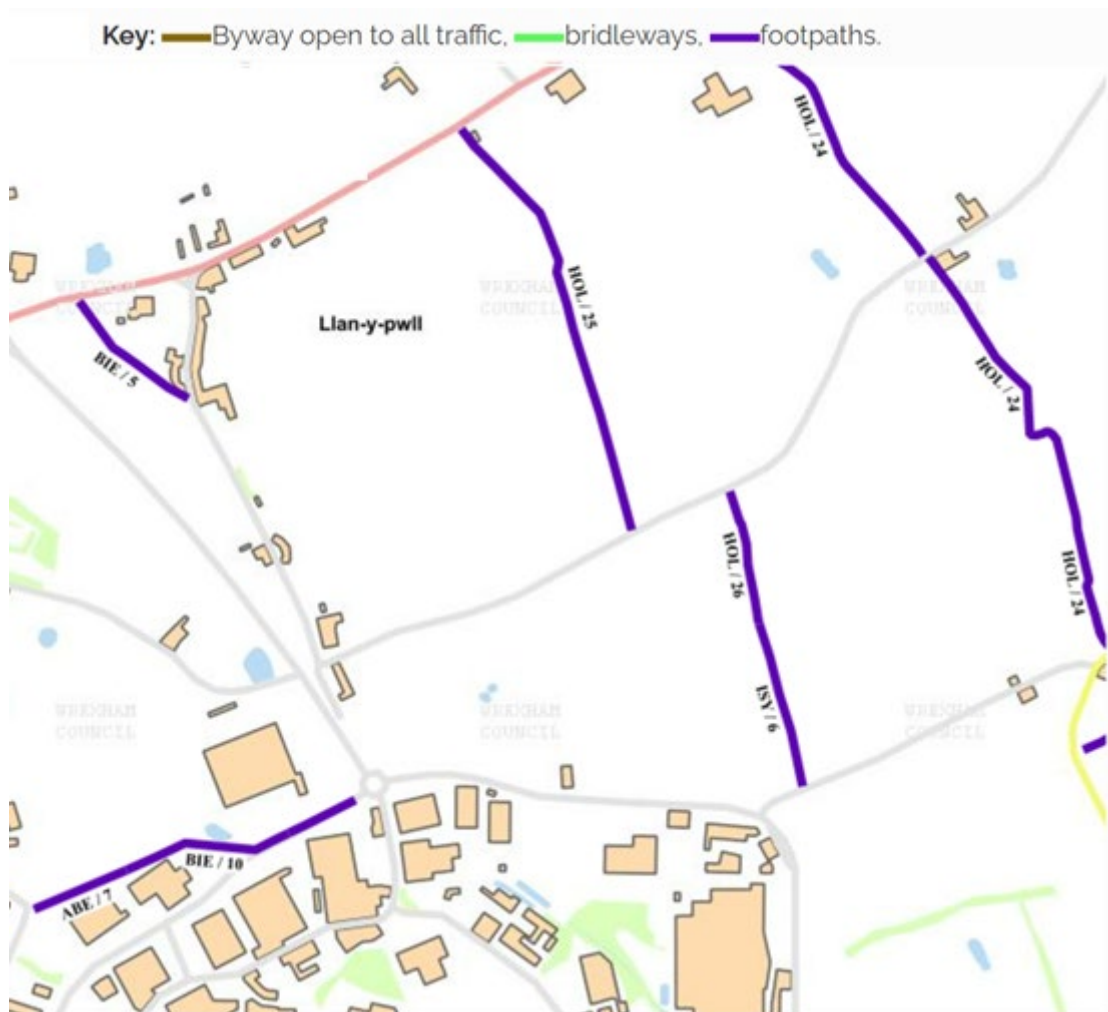


Figure 5.1 Public Rights of Way

- 5.3.5. There are bus stops within walking distance of the site along Abbey Road (Abbey Road stop) and Ash Road North (Wrexham Industrial Estate stop). Both of these bus stops are circa 600m away from the application site. The bus stops are served by the 41A service, which provides a service once every hour routing between Wrexham Bus Station and Redwither Tower (via Wrexham Industrial Estate).
- 5.3.6. Classified turning counts were conducted on Wednesday 1 December 2021, at the following junctions within the local road network surrounding the application site:
- A534 / A5156 / Wrexham Golf Club roundabout;
 - A534 / Industrial Estate Road / Sandy Lane / Borrass Hall Lane roundabout;
 - Industrial Estate Road / Bryn Lane / Ash Road North / Abenbury Way roundabout;
 - Bryn Lane / Ridley Wood Road priority junction; and
 - B5130 / Ridley Wood Road priority junction.
- 5.3.7. Queue surveys were also undertaken at the above junctions at the same time as the turning counts.
- 5.3.8. An Automatic Traffic Count (ATC) was installed for a 1-week period between the 30 November and 6 December 2021 to determine vehicle speeds and volume along Bryn Lane.

5.3.9. The 85th percentile speeds along Bryn Lane were 50mph and 46.4mph for the eastbound and westbound directions respectively. These speeds are over the 40mph speed limit.

5.3.10. Figure 5.3 shows the location of the traffic surveys.

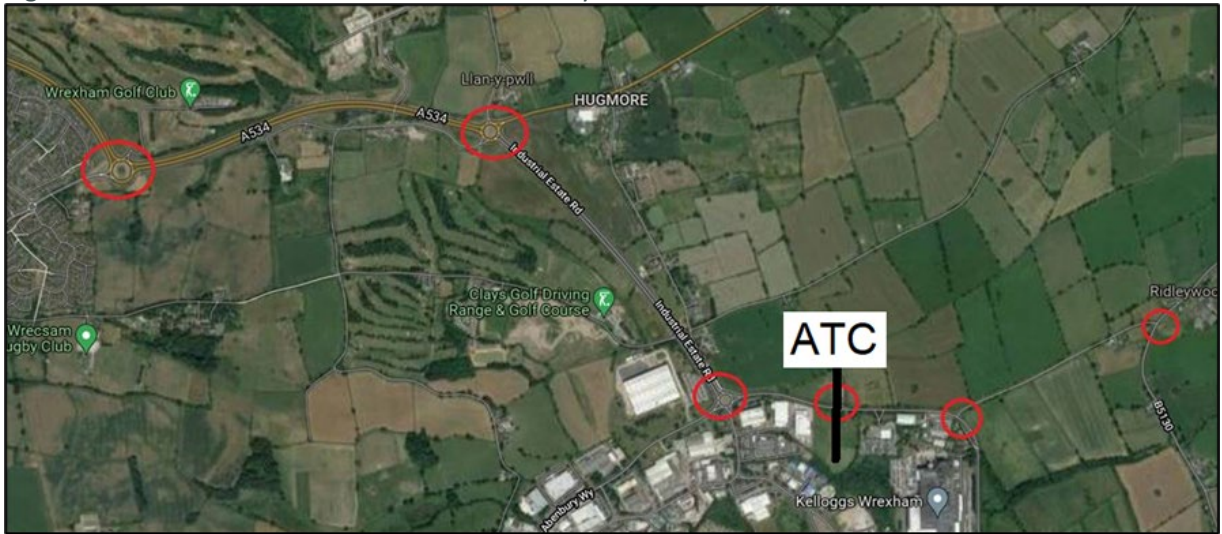


Figure 5.2 Location of traffic surveys

Key issues and requirement for assessment

5.3.11. In accordance with guidelines produced by the Institute of Environmental Management and Assessment (IEMA) within the context of ES, consideration of transport impacts should be given to the following:

- Severance;
- Driver delay;
- Pedestrian delay;
- Pedestrian amenity;
- Fear and intimidation;
- Accidents and safety;
- Hazardous loads; and
- Dust and dirt.

5.3.12. The proposals are expected to result in an increase in vehicle trips on the local road network during both the demolition and construction and operational stages, which could potentially affect conditions related to severance, driver delay, pedestrian delay, pedestrian amenity, fear and intimidation, and accidents and safety on the local road network. The potential effects associated with dust and dirt will be considered within the air quality assessment, with mitigation measures implemented during construction through a Construction Environmental Management Plan.

5.3.13. Given the scale of the construction works and the operational development, it is considered that there is the potential for likely significant effects to arise.

5.3.14. On this basis, it is proposed that a Transport chapter will be included in the main volume of the ES. The chapter will be supported by the following technical documents, which will be included within the ES Appendices:

- Transport Assessment (TA)
- Travel Plan; and

- Framework Delivery and Servicing Plan.

Assessment methodology

Sensitive Receptors

- 5.3.15. Sensitive receptors will comprise links and junctions on the local and strategic road network in the vicinity of the site, including pedestrian and cycle facilities, such as footways and crossing points. Public transport receptors will also be considered including bus and rail services. The sensitive receptors that will be assessed comprise:
- A534 / A5156 / Wrexham Golf Club;
 - A534 / Industrial Estate Road / Sandy Lane / Borrass Hall Lane;
 - Industrial Estate Road / Bryn Lane / Ash Road North / Abenbury Way;
 - Bryn Lane / Ridley Wood Road priority junction; and
 - B5130 / Ridley Wood Road priority junction.

Guidance

- 5.3.16. The methodology that will be employed in this assessment has been developed from guidance given in the DfT's 'Guidance on Transport Assessment' (GTA) and also the Institution of Environmental Management and Assessment's (IEMA) 'Guidelines for the Environmental Assessment of Road Traffic' (8). Methodologies detailed in the DfT's GTA guidelines recommend that Environmental Statements for large developments should be assessed in accordance with the IEMA guidelines noted above.
- 5.3.17. The IEMA guidelines outline that *"Previous research has identified that the most discernible environmental impacts of traffic are noise, severance, pedestrian delay and intimidation"*. The noise effects of changes in road traffic associated with the proposed development will be assessed in the Noise and Vibration ES Chapter.

Assessment Approach

- 5.3.18. To assess the effects of the additional traffic generated by the proposed development, the following sequence of steps has been followed:
- Determine:
 - The existing character of the road network;
 - The existing traffic levels on the road network;
 - The forecast traffic levels; and
 - The additional traffic generated by the proposed development;
 - Identify:
 - The geographical boundaries of the Study Area; and
 - The year of assessment;
 - Assess:
 - The significance of the additional traffic; and
 - The effects of the additional traffic.

Information Sources

- 5.3.19. Information used within the assessment will be derived from the following sources:

- Consultations with Wrexham County Borough Council’s transport departments, their consultants Mott MacDonald and the Traffic Wales on available traffic data, the extent of the study area and the principal effects to be considered;
- Data on the likely traffic generation of the proposed development, based on information provided by the Applicant;
- Site inspections; and
- Available Existing Traffic Count Data which include data from the Wrexham Industrial Estate Study (traffic counts at the Gourton Hall Road Roundabout (2018) and the Department for Transport Annual Daily Traffic Database.

Impact Assessment & Significance Criteria

RECEPTOR SENSITIVITY

- 5.3.20. The IEMA guidelines do not provide specific criteria for evaluating sensitivity, however, for the purposes of assessment, the sensitivity of road sections to changes in traffic levels will be evaluated on a scale of “very low”, “low”, “medium” and “high”, based on factors including their usage by pedestrians and cyclists (judged by the presence/absence of footways and cycle lanes) and the size of communities through which the road section passes.
- 5.3.21. Consideration will also be given to the composition of the traffic on the road network under both existing and future conditions. For example, cars and Light Goods Vehicles (LGVs) would have less effect on traffic and the road system than HGVs. Similarly, HGVs could have a lower scale of impact than abnormal load vehicles depending on the timing and frequency of the abnormal loads. The sensitivity to change in traffic levels of any given road segment or junction will therefore be generally assessed by considering the residual capacity of the network under existing conditions. Where there is a high degree of residual capacity, the network may readily accept and absorb an increase in traffic, and therefore, the sensitivity may be considered to be low. Conversely, where the existing traffic levels are high compared to the road capacity, there is little spare capacity, and the sensitivity to any change in traffic levels would be considered to be high.

MAGNITUDE OF IMPACT

- 5.3.22. Impact magnitude criteria for the severance, driver delay, pedestrian delay, pedestrian amenity, and accidents and safety, will be set out within the ES chapter in due course, and will be based on the IEMA guidelines and professional judgement where necessary.
- 5.3.23. The determination of the magnitude of the impact will be undertaken by reviewing the drawings for the proposed development, establishing the parameters of the road traffic that have the potential to cause an effect (e.g., construction and operational traffic) and quantifying these effects against the criteria.
- 5.3.24. Detailed junction modelling will be undertaken within the Transport Assessment (TA) for peak highway periods where the traffic impact at the observed junctions exceed 5% which is equivalent to the threshold for daily traffic variation.

SIGNIFICANCE OF EFFECTS

- 5.3.25. The scale of effects will be assessed based on the categories of sensitivity and magnitude (identified in accordance with the approach outlined above), as shown in Table 5.3.1.

Table 5.3.1
Significance matrix

		Sensitivity			
		High	Medium	Low	Very Low
Magnitude	Major	Major	Major	Moderate	Negligible
	Moderate	Major	Moderate	Minor	Negligible
	Minor	Moderate	Minor	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

- 5.3.26. Effects are considered to be significant where the effect is classified as being of ‘major’ or ‘moderate’ significance. Effects are identified as being adverse where there is an increase in predicted traffic flow associated with the proposed development. Adverse effects are further defined as:
- **Minor:** slight, very short or highly localised effect of no significant consequence;
 - **Moderate:** limited effect (by extent, duration or magnitude) which may be considered significant; or
 - **Major:** considerable effect (by extent, duration or magnitude) of more than local significance or in breach of recognised acceptability, legislation, policy or standards.

Supporting Documents

- 5.3.27. The ES chapter will be supported by the following documents, which will be provided in the ES appendices:
- A TA, which will assess the impact of the proposed development on the local transport network;
 - A Travel Plan (TP) will be prepared for the proposed development. This will outline a package of measures and initiatives aimed at promoting sustainable travel choice; and
 - A Delivery and Servicing Plan (DSP) will provide a framework to manage all types of freight vehicle movement to and from the site once the scheme is operational. The document will outline how servicing of the proposed development will take place, as well as identifying deliveries that could be reduced, re-timed or consolidated, particularly during busy periods, and assist in reducing impacts on road users, including cyclists and pedestrians.

5.4. Air Quality

Context

- 5.4.1. The proposed development has the potential to affect local air quality through the following mechanisms:
- Traffic generation during both the construction and operational stages; and
 - Dust generated by construction activities.

Baseline Conditions

Local Air Quality Management

- 5.4.2. As required by the Environment Act (1995), Wrexham CBC has undertaken review and assessment of air quality within their area of jurisdiction. This process has indicated that concentrations of all pollutants considered within the Air Quality Strategy are currently below the relevant Air Quality Objectives (AQOs). As such, no Air Quality Management Areas (AQMAs) have been designated within the county.

Air Quality Monitoring

- 5.4.3. Monitoring of air quality is undertaken by Wrexham CBC throughout their area of jurisdiction. A review of the most recent data indicates that there is one passive diffusion tube within a 2 km radius of the application site: St Pauls School, located 1.36 km to the south-east of the application site.
- 5.4.4. Recent nitrogen dioxide (NO₂) monitoring results from this monitoring site are shown in Table 5.4.1.

Table 5.4.1
Passive Diffusion Tube Monitoring Result

Monitoring site		2019 Monitored NO ₂ Concentration (µg/m ³)
60	St Pauls School	7.7

- 5.4.5. As shown in Table 5.4.1, the annual mean NO₂ concentration was below the relevant Air Quality Objective (AQO) of 40 µg/m³ at the St Pauls School survey site in 2019.
- 5.4.6. Wrexham CBC do not monitor concentrations of particulate matter with an aerodynamic diameter of less than 10 µm (PM₁₀) within the vicinity of the application site.

Background Pollutant Concentrations

- 5.4.7. The total concentration of a pollutant is comprised of explicit local emission sources (such as roads and industrial sources) and the background component. The background component consists of indeterminate sources which are transported into an area from further away by meteorological conditions. Background pollutant concentrations are therefore the ambient level of pollution that is not affected by local sources of pollution.
- 5.4.8. Predictions of background pollutant concentrations on a 1 km by 1 km grid basis have been produced by the Department for Environment, Food and Rural Affairs (DEFRA) for the entire UK to assist local authorities in their review and assessment of air quality. The application site is located within grid square NGR: 338500, 350500. Data for this location was downloaded from the DEFRA website (5) and is summarised in Table 5.4.2

Table 5.4.2**Background Pollutant Concentrations and Air Quality Objectives/Air Quality Limit Values Pollutant**

Pollutant	Predicted 2022 Concentration	Background	Air Quality Objective / Air Quality Limit Value	
			Concentration ($\mu\text{g}/\text{m}^3$)	Averaging Period
NO ₂	11.36		40	Annual mean
			200	1-hour mean, not to be exceeded on more than 18 occasions per annum
PM ₁₀	11.02		40	Annual mean
			50	24-hour mean, not to be exceeded on more than 35 occasions per annum
Particulate matter with an aerodynamic diameter of less than 2.5 μm (PM _{2.5})	6.85		20	Annual mean

- 5.4.9. As shown in Table 5.4.2, background pollutant concentrations of NO₂, PM₁₀ and PM_{2.5} are well below the relevant annual mean AQOs and Air Quality Limit Values (AQLVs).

Key Issues and Requirement for Assessment

- 5.4.10. The primary source of air pollutant emissions during both the demolition and construction stage and the operational stage will be vehicle traffic generated by the proposed development, including contractors' vehicles, Heavy Goods Vehicles (HGVs) and other diesel-powered vehicles, such as excavators, during the demolition and construction stage. This will result in emissions of nitrogen oxides (NO_x), PM₁₀ and PM_{2.5} and other combustion related pollutants.
- 5.4.11. Given the scale of the proposed development and the expected increase in traffic levels generated at the application site during both the demolition and construction and operational stages, it is considered that there is the potential for likely significant air quality effects to arise on existing sensitive receptors in the immediate surrounding area, as a result of traffic emissions associated with the development. On this basis, it is proposed that an Air Quality ES chapter is provided in the main volume of the ES.
- 5.4.12. The proposed energy strategy for the operational development does not include any combustion plant. On this basis, an assessment of operational combustion plant emissions won't be included within the ES chapter.
- 5.4.13. Demolition and construction activities also have the potential to produce dust, which can also impact local air quality. Dust is a generic term which usually refers to particulate matter in the size range 1-75 microns. The primary air quality issue associated with construction stage dust emissions is the loss of amenity and/or nuisance caused by, for example, soiling of buildings, vegetation and washing, and reduced visibility. Dust can be generated where earthworks are undertaken, or materials are stored and transported between locations.
- 5.4.14. An Air Quality Impact Assessment report will be provided within the ES appendices. Potential dust effects on sensitive receptors within 350m of the site boundary and/or within 50m of the access roads will be assessed and reported in this document in accordance with the methodology outlined within the Institute of Air Quality Management (IAQM) guidance.

- 5.4.15. Based on the level of risk identified, in accordance with the guidance, the applicable schedule of best practice mitigation measures will be implemented through a Construction Environmental Management Plan (CEMP) (which will be secured by condition) to ensure that significant effects are avoided. The IAQM guidance states that with the application of these best practice mitigation measures, the residual effects can be reduced to Negligible. Given that significant residual effects on sensitive receptors are not anticipated, it is proposed that an assessment of construction dust effects is scoped out of the Air Quality ES chapter. However, the full schedule of construction dust mitigation measures to be included within the CEMP will be set out within the Construction Strategy & CEMP chapter in the main volume of the ES.

Assessment Methodology

Demolition and Construction Stage Traffic Air Quality Assessment

- 5.4.16. The proposed development has the potential to impact on existing air quality as a result of road traffic exhaust emissions associated with vehicles travelling to and from the proposed development during the construction stage. An assessment will be undertaken in accordance with the criteria provided in the IAQM guidance document 'Land-use Planning & Development Control: Planning for Air Quality'. This will involve comparing the predicted total daily vehicle trip generation from the site during construction with the following thresholds:
- A change of Light Duty Vehicle (LDV) flows of more than 100 Annual Average Daily Traffic (AADT) within or adjacent to an AQMA or more than 500 AADT elsewhere; and,
 - A change of HDV flows of more than 25 AADT within or adjacent to an AQMA or more than 100 AADT elsewhere.
- 5.4.17. Should the above criteria not be met then the associated air quality impacts would be considered negligible. Alternatively, should they be exceeded then potential effects would be quantified using dispersion modelling, in line with the methodology outlined below for the operational stage emissions assessment.

Operational Stage Traffic Air Quality Assessment

- 5.4.18. The proposed development has the potential to impact on existing air quality as a result of road traffic exhaust emissions associated with vehicles travelling to and from the proposed development during the operational stage. Potential impacts will be defined by predicting pollutant concentrations at sensitive locations using dispersion modelling for the following scenarios:
- Baseline;
 - Future Baseline (or 'Future Year Do-Minimum' (DM)) (predicted baseline traffic flows without the proposed development in place during the proposed opening year of the scheme); and
 - Future Baseline with the Proposed Development (or 'Future Year Do-Something' (DS)) (predicted traffic flows with the proposed development in place during the opening year of the scheme).

Sensitive Receptors

- 5.4.19. The DEFRA guidance (7) provides the following examples of where long-term and short-term AQOs should apply:
- Residential properties;
 - Schools;
 - Hospitals;

- Care homes; and,
- Places of work.

- 5.4.20. Receptors potentially sensitive to changes in NO₂, PM₁₀ and PM_{2.5} concentrations will be identified within 200 m of the affected highway network in accordance with the guidance provided within the Design Manual for Roads and Bridges (DMRB) on the likely limits of pollutant dispersion from road sources. The criteria outlined in DEFRA guidance LAQM (TG22) will be utilised to identify appropriate sensitive receptor locations.
- 5.4.21. The sensitive human receptors that will be considered in the ES chapter will be identified once the traffic data is available. This will include consideration of receptors along Bryn Lane, Industrial Estate Road and Abenbury Way, as well as any other locations within the vicinity of the affected road network.
- 5.4.22. Sensitive ecological designations within the vicinity of the site are outlined in the Biodiversity section below. Designations within 200m of relevant road links will be identified once the traffic data is available. Those within 5km of the site that may be affected by the proposals include the following:
- River Dee and Bala Lake Special Area Conservation (SAC);
 - Midlands Meres and Mosses Ramsar Site;
 - Vicarage Moss Site of Special Scientific Interest (SSSI);
 - Wrexham Industrial Estate Local Wildlife Site (LWS);
 - Cefn Park LWS; and,
 - Borrass Woods North LWS.

Assessment of Effect Significance

- 5.4.23. The sensitivity of receptors affected by road vehicle exhaust emissions during the construction and operational stages will be considered on a scale of very high, high, medium, low or negligible, as outlined in Table 5.4.3 as determined through dispersion modelling. Should the criteria set out in paragraph 5.4.20 not be met then construction phase air quality impacts would be considered negligible. It should be noted these are based on the values provided within the IAQM guidance.

Table 5.4.3
Operational Stage Receptor Sensitivity

Receptor Sensitivity	Pollutant Concentration at Receptor in Assessment Year
Very High	110% or more of AQO
High	103 - 109% of AQO
Medium	95 - 102% of AQO
Low	76 - 94% of AQO
Very Low	75% or less of AQO

- 5.4.24. The significance of effect on each receptor will be defined in accordance with the criteria shown in Table 5.4.4. These are based upon the guidance provided within the IAQM guidance. The significance descriptors have, however, been modified to align with the overriding approach applied across the ES.

Table 5.4.4
Significance of Road Vehicle Exhaust Emission Effects

Receptor Sensitivity	Predicted Concentration Change as a Proportion of AQO (%)			
	1	2-5	6-10	>10
Very High	Moderate	Major	Major	Major
High	Moderate	Moderate	Major	Major
Medium	Minor	Moderate	Moderate	Major
Low	Negligible	Minor	Moderate	Moderate
Very Low	Negligible	Negligible	Minor	Moderate

Table Source: IAQM document 'Land Use Planning and Development Control: Planning for Air Quality'

- 5.4.25. It should be noted that changes of 0%, i.e., less than 0.5%, will be described as negligible in accordance with the IAQM guidance.
- 5.4.26. It should be noted that the determination of significance relies on professional judgement and reasoning should be provided as far as practicable. This will be considered throughout the assessment when defining predicted effects.

Cumulative Effects

- 5.4.27. Finally, an assessment of the effects of the proposed development alongside the cumulative schemes scoped into the EIA will also be undertaken and reported in the ES chapter.

5.5. Noise and Vibration

Context

- 5.5.1. The proposed development has the potential to alter the noise and vibration at surrounding receptors due to the following mechanisms:
- Activities taking place at the site during the demolition and construction stage;
 - Traffic generation on the local roads network during both the demolition and construction stage and the operational stage; and
 - Noise from building service plant and HGV loading and unloading at the site during the operational stage.

Baseline Conditions

- 5.5.2. A baseline monitoring survey was undertaken at nine locations in and around the application site, as shown in Figure 5.1, from Tuesday 26 October 2021 to Tuesday 2 November 2021. Attended short-term measurements were undertaken at six locations during the day (shown as ST1-6), evening and night-time with three additional locations (shown as LT1-3) being measured unattended over a 166-hour period.
- 5.5.3. The ambient noise climate is characterised by road traffic noise from Bryn Lane to the south of the site and the A534 to the west. In addition, noise was audible from the surrounding industrial units.

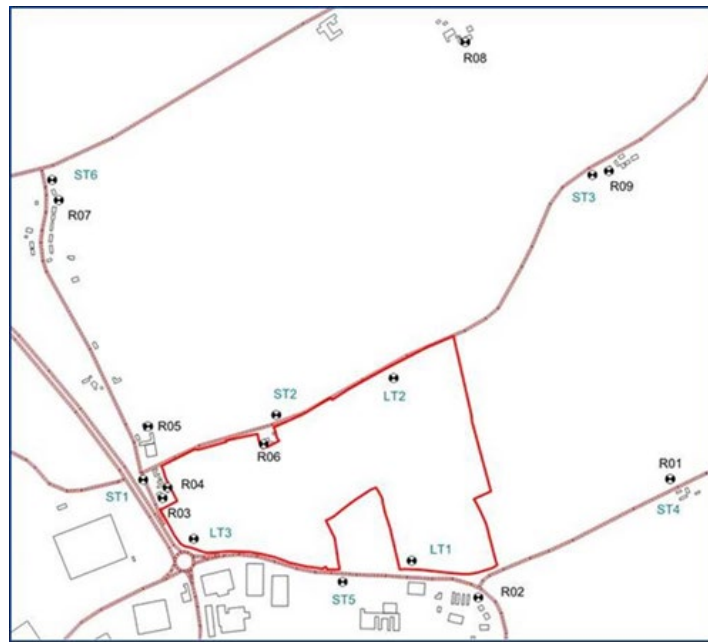


Figure 5.3 Baseline survey locations

Key Issues and Requirement for Assessment

- 5.5.4. By virtue of the nature of construction activities, noise and vibration will be generated during the demolition and construction stage. Given the proximity of a number of noise sensitive receptors to the application site and local road network, including residential properties, there is considered to be the potential for significant effects to arise.
- 5.5.5. Noise impacts on surrounding sensitive receptors during the operational stage would be linked to road traffic generated by the completed scheme and proposed building services plant and HGV loading and unloading at the application site. Given the nature and scale of the proposed development, it is expected to result in a notable increase in vehicle movements on the surrounding network, which could have the potential for likely significant noise effects on existing and proposed residential receptors.
- 5.5.6. On this basis, it is proposed that a Noise and Vibration ES chapter will be provided in the main volume of the ES. The chapter will be supported by a Noise and Vibration Impact Assessment report, which will be included in the ES appendices.

Assessment Methodology

Noise Modelling

- 5.5.7. The noise modelling will be undertaken using Cadna-A software, in accordance with the guidance provided within Calculation of Road Traffic Noise 1988. This will be utilised for all assessments during the demolition and construction and operational stages.

Assessment Scenarios

- 5.5.8. The following scenarios will be assessed in the Noise and Vibration ES chapter:
- The assessment of the demolition and construction stage activities, which will also include the consideration of necessary site enabling work activities; and
 - The final completion of the scheme, assuming full occupation/operation.

- 5.5.9. An assessment of the effects of the proposed development alongside the cumulative schemes considered in the EIA will also be undertaken.

Sensitive Receptors

- 5.5.10. Key sensitive receptors to noise generally include individuals or groups of residential properties, hospitals and schools, within close proximity to the proposed site boundary.
- 5.5.11. The key receptors being assessed within the noise and vibration assessment are detailed in the table below.

Table 5.5.1
Sensitive Noise & Vibration Receptors

Designated Site	Location	Designation reason
R01	Harcourt, Ridley Wood	Residential
R02	2 Bryn Lane	Residential
R03	Spring Grove, Hugmore Lane	Residential
R04	Spring Grove Barn, Hugmore Lane	Residential
R05	Holt Lodge Farm, Hugmore Lane	Residential
R07	Ambergate, Hugmore Lane	Residential
R08	Cornish Hall, Wrexham Road	Residential
R09	1 Whispering Oaks, Francis Lane	Residential

Construction Noise & Vibration

- 5.5.12. Noise levels from potential on-site construction activity and construction vehicle movements associated with the development of the application site will be assessed in accordance with BS 5228-1+ A1 2014 criteria which indicate if a significant effect is likely to occur at noise sensitive properties.
- 5.5.13. Point sources and line sources representing all likely items of plant and construction traffic will be presented in the model, and in the case of mobile plant, these will be placed in worst case locations with respect to nearby noise sensitive receptors.
- 5.5.14. Construction vibration associated with the development of the application site will be assessed in accordance with BS 5228-2+ A1 2014 criteria which indicate if a significant effect is likely to occur at vibration sensitive properties.

Operational Stage Noise

- 5.5.15. Noise levels from potential future operations during the operational phase of the proposed development, such as building service plant and HGV movements and unloading/reloading events will be assessed in accordance with BS4142 2014 + A1 2019. Traffic noise associated with the proposed development will also be assessed in line with HD213/11 published in Design Manual for Roads and Bridges.
- 5.5.16. The assessment will also take into account the absolute noise levels of site operations in relation to the criteria outlined within BS 8233 2014 as part of the consideration of the context of the assessment. The assessment will identify the change in noise levels predicted at existing receptors as derived from the Institute of Environmental Management & Assessment 'Guidelines for Environmental Noise Impact and Assessment'.

Assessment of Effect Significance

- 5.5.17. Criteria will be provided in the ES chapter to define the receptor sensitivity and the impact magnitude. The significance of the noise and vibration effects will be established taking into account both factors. The receptor sensitivity, impact magnitude and effect significant criteria will be based on industry guidance, and professional judgement where necessary. The criteria will be both transparent and repeatable.

5.6. Biodiversity

Context

- 5.6.1. Biodiversity can be defined as *“the variability among living organisms from all sources, including, 'inter alia', terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems.”*
- 5.6.2. The proposed development has the potential to affect the biodiversity (including flora and fauna) present within and surrounding the application site.

Baseline Conditions

Designated Sites

INTERNATIONAL DESIGNATIONS

- 5.6.3. There are four internationally designated sites within 10 km of the site as shown in Table 5.6.1.

Table 5.6.1
Internationally designated sites

Designated Site	Location	Designation reason
Afon Dyfrdwy a Llyn Tegid (River Dee and Bala Lake) (Wales) Special Area of Conservation (SAC)	Approximately 3.1 km to the east of the application site	Designated for its riverine habitat and species, including bullhead, river lamprey, brook lamprey, sea lamprey, Atlantic salmon, otter and floating water-plantain.
River Dee and Bala Lake SAC (England)	Approximately 3.1 km to the east of the application site	As above
Midlands Meres and Mosses Ramsar	Approximately 3.5 km to the north-west of the application site	Designated for its wetland habitats and associated rare plant and invertebrate populations
Johnstown Newt sites SAC	Approximately 8 km to the south-west of the site	Designated for its population of great crested newt

NATIONAL DESIGNATIONS

- 5.6.4. The following six nationally designated sites are located within 5 km of the site:
- Afon Dyfrdwy (Wales) Site of Special Scientific Interest (SSSI) is located approximately 3.1 km to the north-east of the site and forms part of the Afon Dyfrdwy a Llyn Tegid (River Dee and Bala Lake) SAC (Wales). It is designated for its geomorphological and geological interest, as well as its habitats and populations of floating water plantain, slender hair's-ear, sea barley, hard-grass, otter, salmon,

bullhead, brook lamprey, river lamprey, sea lamprey, club-tailed dragonfly and other aquatic invertebrates.

- River Dee (England) SSSI is located approximately 3.5 km to the north-east of the site and forms part of the River Dee and Bala Lake SAC (England). It is designated for its geomorphology, river habitats as well as its populations of Atlantic salmon, otter and club-tailed dragonfly.
- Vicarage Moss SSSI is located approximately 3.7 km to the north-west of the site and is designated for its geomorphological and botanical interest, in particular the basin mire habitat on site.
- Dee Cliffs, Farndon SSSI is located approximately 4.3 km to the north-east of the site and is designated for its geological interest.
- Sontley Marsh SSSI is located approximately 4.7 km to the south-east of the site and is designated for its mesotrophic mire habitat.
- Marford Quarry SSSI is located approximately 5.0 km to the north-west of the site and is designated for its populations of butterfly and moth species, which are associated with the calcareous plant communities on site.

5.6.5. The application site falls within a Natural England Impact Risk Zone (IRZ) for Dee Cliffs, Farndon SSSI and Vicarage Moss SSSI. Although IRZs are applicable to England, they may extend into Wales for sites close to the border.

5.6.6. The advice states that the local planning authority may need to consult Natural England for a variety of proposals in this zone, including:

- Infrastructure - Airports, helipads and other aviation proposals;
- Air Pollution - Any industrial/agricultural development that could cause air pollution (including: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t); and
- Combustion - General combustion processes >50MW energy input. Including: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

LOCAL DESIGNATIONS

5.6.7. There are no statutory locally designated sites within 2 km of the application site.

NON-STATUTORY DESIGNATIONS

5.6.8. There are three non-statutory locally designated sites within 2 km of the site. These are:

- Wrexham Industrial Estate Local Wildlife Site (LWS) is located approximately 0.6 km to the south of the site. The reason for designation of this site is unknown, but habitats present include grassland and ancient woodland.
- Cefn Park LWS is located approximately 1.3 km to the south-west of the site. The reason for designation of this site is unknown but the habitats on site comprise broad-leaved woodland.
- Borrass Wood North LWS is located approximately 1.6 km to the north of the site. The reason for designation of this site is unknown, but the site contains ancient woodland habitats.

Habitats

5.6.9. The following habitats were identified at the application site and on adjacent land during the extended phase 1 habitat survey undertaken on 3rd and 7th December 2021:

- Arable;
- Semi-improved neutral grassland;
- Poor semi-improved grassland;
- Dense/continuous scrub;
- Tall ruderal;
- Standing water;
- Swamp;
- Dry ditch;
- Species-rich and species-poor hedgerows with trees;
- Species-poor intact and defunct hedgerow;
- Scattered broad-leaved and coniferous trees;
- Introduced shrub;
- Bare ground with ephemeral/short perennial vegetation;
- Buildings; and
- Hardstanding.

FAUNA

Amphibians

- 5.6.10. Desktop records identified records of great crested newt *Triturus cristatus* on site and common toad *Bufo bufo* 532 m from the application site. Great crested newt are a European protected species, Section 7 (S7) species and are a Wrexham Local Biodiversity Action Plan (LBAP) species. There are seven ponds on the application site and three ephemeral water bodies. Great crested newts are present in the wider area surrounding the application site. Habitat Suitability Index (HSI) of each of the ponds on site and within 250m of the site were carried out in June 2022. A great crested newt eDNA survey was carried out at the same time as the HSI. A positive result for the presence of great crested newt was identified in a number of ponds on site. The report is currently being prepared.

Lesser silver water beetle

- 5.6.11. Desktop records did not identify any records of lesser silver water beetle *Hydrochara caraboides* within 2 km of the application site. The lesser silver water beetle is red data list species, protected under Schedule 5 of the Wildlife and Countryside Act 1981 and also a S7 species. An assessment of the ponds on site for their suitability for lesser silver water beetle will be undertaken to determine if further surveys are necessary.

Bats

- 5.6.12. Desktop records did not record any bat species within the application site. Records of brandts *Myotis brandtii*, brown long eared *Plecotus auritus*, common pipistrelle *Pipistrellus*, daubentons *Myotis daubentonii*, lesser horseshoe *Rhinolophus hipposideros*, natterers *Myotis nattereri*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, whiskered *Myotis mystacinus*, pipistrelle species and myotis species have been recorded within 2 km of the site.
- 5.6.13. All bats are European protected species. Brown long eared, common and soprano pipistrelle and noctule are S7. Lesser horseshoe bat is an S7 and Wrexham LBAP species.

- 5.6.14. An initial ground-based assessment of the tree stock has been undertaken and an aerial inspection of all trees considered to have the potential to support roosting bats (and identified as requiring tree works or felling) is currently being undertaken to confirm the value of the tree and the presence/absence of bat roosts. This inspection has been carried out by an appropriately licensed bat consultant. For trees assessed as having moderate or high suitability nocturnal surveys will be undertaken in 2023 between the period May and September inclusive.
- 5.6.15. A number of buildings on site have been assessed as having suitability to support roosting bats. These buildings are to be demolished as part of redevelopment of the application site. Nocturnal surveys of these buildings were undertaken in the 2022 survey season. None of the building were identified to contain bat roosts. The report is currently being prepared.
- 5.6.16. The application site has been assessed as moderate suitability for foraging and commuting bats. Transect surveys supplemented by static detectors are currently underway and will be complete by October 2022.

Badger

- 5.6.17. Desktop records recorded badger *Meles meles* within 2 km of the site. Badger is on the Wrexham local biodiversity action plan. No badger setts were found on site during any of the surveys undertaken to date. Mammal signs in the form of pathways, latrine disturbed wasp nest were found during the extended phase 1 habitat survey and a later hedgerow survey. If no works commence on site within 12 months of the survey work an updated badger survey for will be required given the transient nature of the species. If badger sett(s) are found on site or within 30 m of site boundary, then a licence from NRW will be required to permit works within 30 m of the sett(s).

Breeding birds

- 5.6.18. Desktop records recorded a number of bird species within 2 km of the application site including amber and red list birds of conservation concern, S7 and Wrexham local biodiversity action plan species and schedule 1 species. The hedgerows, trees and water features provide suitable habitat for breeding birds. A suite of breeding bird surveys for the application site has been undertaken comprising four visits in April, May, June and July. The report is currently being prepared.

Winter birds

- 5.6.19. Wintering bird surveys of the application site have been undertaken in October, November and December 2021 and January, February and March 2022. These surveys recorded mallard *Anas platyrhynchos* and a small number of passerine birds (reed bunting *Emberiza schoeniclus*, yellowhammer *Emberiza citrinella*, and dunnoek *Prunella modularis*) on-site.

Hedgehog

- 5.6.20. Desktop records recorded hedgehog *Erinaceus europaeus* 284 m from the application site. Hedgehogs are a S7 species. The hedgerows and areas of dense scrub and tall ruderal provide shelter, foraging and hibernation habitat for hedgehog.

Polecat and brown hare

- 5.6.21. Desktop records recorded polecat *Mustela putorius* within the application site and brown hare *Lepus europaeus* 1.3 km from the site. Polecat and brown hare are S7 species. A single brown hare was observed on site during the phase 1 survey.

Other species

- 5.6.22. Desktop records revealed otter *Lutra lutra* 181 m from the application site and common lizard *Zootoca vivipara* 453 m from the site, grass snake *Natrix natrix* 1.2 km from the application site, slow worm *Anguis fragilis* and adder *Vipera berus* 1.3 km from the application site. There are no on-site habitats suitable to support water vole *Arvicola amphibius* and otter or reptiles. Water vole, otter, slow worm, common lizard, grass snake and adder are S7 species.
- 5.6.23. Desktop records revealed a number of invertebrates within 2 km of the site including Dingy Skipper *Erynnis tages*. Dingy skipper are an S7 species. With the exception of the ponds and potential lesser silver water beetle interest the habitats on-site only have limited potential for invertebrates and so no further invertebrate surveys will be required.
- 5.6.24. Desktop records revealed European eel *Anguilla Anguilla* 886 m from the application site. There are no habitats on site suitable to support European eel. European eel are an S7 species.

FLORA

- 5.6.25. The initial ecological assessment of the application site was undertaken in December 2021. An updated survey of the application site has been undertaken across the 2022 survey season to look for presence of invasive and protected plant species.
- 5.6.26. A hedgerow assessment of the hedgerows on site has also been undertaken to ascertain if any of the hedgerows on site are 'important' under the Hedgerow Regulations 1997. However due to late timings of surveys the presence/absence of bluebell will not have been evident at the time of the survey.

HABITATS

- 5.6.27. Native hedgerows and ponds (both are S7 habitats, and ponds are a Wrexham LBAP habitat) are present within the site.

ARBORICULTURE

- 5.6.28. Tree surveys were undertaken in February and March 2022 in accordance with BS5837:2012 - Trees in relation to design, demolition and construction – Recommendations. 120 individual trees; 13 groups of trees; and 23 hedges were recorded during the survey, equating to approximately 1.3336ha of canopy cover and 4,724m of hedgerow. Of these, 25 features are high quality (Category A); 70 are moderate quality (Category B); 34 are low quality (Category C); and 4 are poor quality (Category U).
- 5.6.29. The tree population comprises almost entirely broadleaved species, with the exception of occasional Leyland and Lawson cypress, with pedunculate oak being the dominant species. Trees are largely middle aged or mature and in fair or good condition, with the majority comprising field boundary oaks within hedgerows that are characteristic of the agricultural setting. The most significant area of continuous tree cover is situated along the eastern site boundary, although trees are scattered across the site and are a significant feature of the landscape. The tree survey also identified 2 veteran trees, both oaks. One is within the site boundary, and one is located on the opposite side of Ridley Wood Road to the south-east of the site.
- 5.6.30. The desktop review identified no Tree Preservation Orders within the site boundary, although trees on the opposite side of Ridley Wood Road are protected by TPO No. 60 1991. There is no Conservation Areas and no Ancient Woodland present within the site.

Key Issues and Requirement for Assessment

- 5.6.31. While the habitats at the application site are generally considered to be of low ecological value, the application site does have the potential to support great crested newts, lesser silver water beetle, breeding and wintering birds, bats (foraging, commuting, and roosting) and brown hare, which could be impacted by the proposed development.
- 5.6.32. On this basis, it is proposed that a Biodiversity ES chapter will be provided in the main volume of the ES. The chapter will be supported by various ecological reports that will be included within the ES appendices. These will cover the following:
- Ecological Assessment;
 - Great Crested Newt Assessment;
 - Lesser Silver Diving Beetle Assessment;
 - Breeding Bird Survey Report;
 - Winter Bird Survey Report;
 - Preliminary Roosting Assessment;
 - Emergence / re-entry bat survey results;
 - Bat Activity Assessment
 - Hedgerow Assessment; and
 - Arboricultural Impact Assessment.

Assessment Methodology

Assessment Scenarios

- 5.6.33. The following scenarios are proposed for assessment in the ES chapter:
- Demolition and construction stage activities, which will also include the consideration of necessary site enabling work activities; and
 - The final completion of the scheme, assuming full occupation/operation.
- 5.6.34. The results from the assessment scenarios will be compared against the future baseline. The results for the future baseline scenario will be informed by the existing baseline results obtained from surveys undertaken in 2021 and 2022.
- 5.6.35. An assessment of the effects of the proposed development alongside the cumulative schemes considered in the EIA will also be undertaken.

Assessment Process Criteria

- 5.6.36. This assessment will be undertaken using the Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines for EcIA (hereafter referred to as the 'Guidelines'). Although this is recognised as current industry guidance for ecological assessment, the guidance itself recognises that it is not a prescription about exactly how to undertake an ecological impact assessment (EcIA); rather, CIEEM advises that they "provide guidance to practitioners for refining their own methodologies".

IMPORTANT ECOLOGICAL FEATURES (IEFS)

- 5.6.37. It is necessary to determine which ecological features identified in the data search and extended phase 1 habitat survey (habitats, species, ecosystems and their functions / processes) are important. IEFS should be subject to detailed assessment if they are likely to be impacted by the proposed development. It is therefore not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts such that there is no risk to their viability. Ecological features can be important for a variety of reasons and the rationale used to identify this is explained below. Importance may relate, for example, to the quality or extent of designated sites or habitats, to habitat / species rarity, to the extent to which they are threatened throughout their range, or to their rate of decline.

EVALUATION TO DETERMINE IMPORTANCE

- 5.6.38. Under the Guidelines, the importance of an ecological feature should be considered within a defined geographical context. The following frame of reference will be used in the assessment:
- International and European Value;
 - National Value;
 - Regional Value;
 - Metropolitan, County, vice-county or other local authority; and
 - Local Value.
- 5.6.39. Those ecological features that are considered to have an importance lower than 'Local' will not be considered further. Considering the Guidance, features of less than 'Local' importance are generally considered unlikely to trigger a mitigation or policy response in an EclA.

Designated Sites

- 5.6.40. Some sites have already been assigned a level of nature conservation value through designation, and the Guidelines recommend that the reasons for this designation need to be considered in the assessment. Such designations include:
- Internationally important sites such as SACs, SPAs and Ramsar sites;
 - Nationally important sites such as SSSIs and NNRs; and
 - Locally important sites such as SINC and Local Nature Reserves (LNR).

Biodiversity

- 5.6.41. The Guidelines state that there are various characteristics that can be used to identify ecological resources or features likely to be important in terms of biodiversity and that consultation, especially with local specialists, can be crucial for identifying less obvious IEFs.

Habitats

- 5.6.42. The Guidelines recommend that the value that habitats and plant communities should be measured against should include published selection criteria, where available. Where areas of a habitat or plant community do not meet the necessary criteria for designation at a specific level, the Guidelines recommend that the ecologist may consider the local context if appropriate.

Species

- 5.6.43. The Guidelines deal with species that need to be assessed because they are of biodiversity value, rather than because they are legally protected (although some species may fit in to both categories). In assigning value to a species, it is necessary to consider its distribution and status, including a consideration of trends based on available historical records. The valuation of populations should make use of any relevant published evaluation criteria.

DELINEATION OF THE 'ZONE OF INFLUENCE' (STUDY AREA)

- 5.6.44. The Zone of Influence (ZoI) is the area in which IEFs would be affected by biophysical changes caused by the proposed development. The ZoI has been determined through:
- A review of the baseline conditions in comparison with the effects of the proposed development (during both the construction and operational phases); and
 - Consideration of the wider local environment, such as the built and intervening form, underlying geology and hydrology.
- 5.6.45. Given the nature of the proposed development and the peri-urban location of the application site, the ZoI has been determined to be a 1 km radius from the application site.

Changes to Future Baseline

- 5.6.46. Potential effects on ecological features will be assessed in the context of how the predicted baseline conditions within the ZoI might change between completion of the baseline surveys and the start of construction.

Assessment of Potential Effects

- 5.6.47. The Guidance defines that effects can be adverse or beneficial. Adverse effects can include:
- Direct loss of wildlife habitats;
 - Fragmentation and isolation of habitats;
 - Disturbance to species from noise, light or other visual stimuli;
 - Changes to key habitat features; and / or
 - Changes to the local hydrology, water quality and / or air quality.
- 5.6.48. Beneficial effects can include:
- Increasing species diversity;
 - Extending or connecting habitats and
 - Improving water quality.
- 5.6.49. Adverse and beneficial effects on nature conservation features will be characterised based on predicted changes because of the proposed activities. To characterise the effects on each feature, the assessment will take account of the following parameters:
- The magnitude of the effect;
 - The spatial extent over which the effect would occur;
 - The temporal duration of the effect;
 - Whether the effect is reversible and over what timeframe; and
 - The timing and frequency of the effect.

ASSESSMENT CRITERIA

- 5.6.50. In accordance with the Guidelines, the assessment will identify those beneficial and adverse effects which would be 'significant', based on the structure, function and conservation status of the ecological feature. The Guidelines define an ecologically significant impact as "... an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general..."
- 5.6.51. The conservation status of habitats and species within a defined geographical area is described in the Guidelines as follows and will be used in this assessment to determine whether the effects of the proposals on non-designated habitats and species are likely to be significant:
- For habitats, "... conservation status is determined by the sum of influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area"; and
 - For species, "... conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area".
- 5.6.52. In addition to determining the significance of an effect on any ecological features, this ES chapter will also identify any legal requirements in relation to wildlife.

SIGNIFICANCE OF EFFECT CRITERIA

- 5.6.53. Once an impact has been described, it is necessary to determine if the effect is 'significant'. In the context of CIEEM EclA guidance a significant effect is one that either supports or undermines biodiversity conservation objectives for 'important ecological features'. This can include impacts on the structure and function of sites and habitats or the conservation status of habitats and species (i.e., does the impact alter the extent, distribution or abundance of the feature?). The decision on significance is made irrespective of the geographical scale of importance of the feature; even if an effect is found not to be significant at the level at which the feature has been valued, it may be significant at a more local level. A significant negative effect is not necessarily one that would make the proposals unacceptable.
- 5.6.54. The standard EIA terminology for characterising effect significance across the EIA is as follows:
- Major Beneficial;
 - Moderate Beneficial;
 - Minor Beneficial;
 - Negligible;
 - Minor Adverse;
 - Moderate Adverse; and,
 - Major Adverse.
- 5.6.55. Box J. et al. (2017) set out an approach to explain the translation between traditional EIA significance terminology and that of the CIEEM guidelines. This is set out in the following Table 5.6.2. The CIEEM approach will be used to describe significance.

Table 5.6.2

Translation between traditional EIA and CIEEM terms of significance

Scale of significance following CIEEM guidelines	Equivalent significance using traditional EIA approach
International / national (positive or negative)	Major (adverse or beneficial)
County / District (positive or negative)	Moderate (adverse or beneficial)

Scale of significance following CIEEM guidelines	Equivalent significance using traditional EIA approach
Local (positive or negative)	Minor (adverse or beneficial)
Not significant (positive or negative)	Negligible

5.7. Landscape and Visual Impact Assessment

Context

- 5.7.1. Given the scale of the proposed development and the greenfield nature of the application site, the proposals are considered to have the potential to give rise to significant effects on the local landscape character and views of the site from the local area.

Baseline Conditions

- 5.7.2. The application site is located to the north of Wrexham Industrial Estate, to the north of Bryn Lane. The application site is bound to the north by Francis' Lane, to the east by field boundaries, to the south by Bryn Lane and to the west by Hugmore Lane / Industrial Estate Road. The site itself comprises agricultural fields, bound by hedgerows.
- 5.7.3. There are residential properties located to the northwest corner of the application site, to the north (off Francis' Lane) and to the south (off Bryn Lane).
- 5.7.4. Within the wider area, industrial / commercial properties dominate the area to the south and west of the site (associated with Wrexham Industrial Estate) and agricultural / countryside uses are located to the north and east.

Key Issues and Requirement for Assessment

- 5.7.5. The main effects likely to arise from the proposed development in relation to this topic area are:
- Changes to the landscape character of the application site and how this integrates with the surrounding area; and
 - The potential effects on views within the local and wider area.
- 5.7.6. Given the scale of the proposed development and the greenfield nature of the application site, the proposals are considered to have the potential to give rise to significant effects on the local landscape character and views of the site from the local area. As such, a Landscape and Visual Impact Assessment (LVIA) will be undertaken. Due to the length of the reporting, it is proposed that the assessment will be provided in a separate ES Volume (ES Volume III), rather than as a technical chapter in the main volume of the ES.

Assessment Methodology

Assessment Scenarios

- 5.7.7. The following proposed development scenarios are proposed for assessment:
- Demolition and construction stage activities, which will also include the consideration of necessary demolition and site enabling work activities;
 - The final completion of the scheme, assuming full occupation/operation; and
 - 15 years after completion of the scheme.

- 5.7.8. An assessment of the effects of the proposed development alongside the cumulative schemes considered in the EIA will also be undertaken.

Guidance

- 5.7.9. The assessment will be carried out in accordance with the latest relevant guidance as set out in 'Guidelines for Landscape and Visual Impact Assessment' (GLVIA3), published by the Landscape Institute (LI) and the Institute of Environmental Management and Assessment (IEMA) in 2013, and 'Technical Advice Note (TAN) 12: Design', March 2016, Welsh Government. These documents do not set out a prescriptive approach to how assessments should be undertaken, but rather identify key principles and good practice.

Study Area

- 5.7.10. The study area is determined iteratively through the assessment process, influenced by fieldwork and desk study, to define the area which is proportionate to the proposed development's landscape and visual effects.
- 5.7.11. A 3 km study area has been deemed appropriate for this assessment. Viewpoints are therefore proposed up to a distance of 3 km from the application site.

Scoping of Viewpoints

- 5.7.12. A broad and representative selection of views suitable to illustrate the existing character of the study area and the potential effects of the proposed development are proposed for inclusion within the LVIA. The viewpoints are representative of views typically available to the application site from the surrounding area.
- 5.7.13. An initial list of 29 viewpoints were issued to Wrexham CBC for consultation and agreement. Following feedback with Wrexham CBC and further site assessment, two additional viewpoints are also proposed for inclusion.
- 5.7.14. The initial list of proposed viewpoints is provided in Table 5.7.1. The viewpoints are shown in the figure provided in Appendix A.

Table 5.7.1
Proposed viewpoints for inclusion in the LVIA

VP No.	Location	Grid Ref	Viewing Direction	Visual Type/s	Receptor	Distance to Development
1	Francis Lane / Spring Grove Barn / Holt Lodge Farm	338006, 351164	Southeast	Road Residents	users /	On site boundary
2	Francis Lane / Honeysuckle Cottage	338265, 351253	South	Road Residents	users /	On site boundary
3	Francis Lane / Footpath WX/HOLT/25	338619, 351424	South	Road Footpath users	users/	~10m
4	Francis Lane / Footpath WX/HOLT/26	338821, 351522	Southwest	Road Footpath users	users /	On site boundary
5	Ridley Wood Road / WX/ISYCOED/6	338979, 350888	West	Road Footpath users	users /	~35m

VP No.	Location	Grid Ref	Viewing Direction	Visual Type/s	Receptor	Distance to Development
6	Bryn Lane / Ridley Wood Industrial Complex	338801, 350841	North	Road users / employees of industrial units		~20m
7	Bryn Lane / Little Acorns	338513, 350863	North	Road Residents	users /	~10m
8	Bryn Lane / Wockhardt unit	338163, 350900	North, northeast	Road users		~25m
9	Hugmore Lane / Spring Grove Barn	338003, 351029	East	Road users		~10m
10	Abenbury Way	337836, 350755	Northeast	Road users		~320m
11	Clays Golf Driving Range & Golf Course	337678, 351191	Southeast	Visitors to Driving Range / Golf Course		~330m
12	Hugmore Lane / Holt Lodge Cottages	337867, 351364	Southeast	Road Residents	users /	~250m
13	Hugmore Lane / Hugmore House	337684, 351715	Southeast	Road Residents / Footpath users	users /	~645m
14	A534 / Footpath WX/BIESTON/5	337436, 351931	Southeast	Road Footpath users	users /	~960m
15	A534 / Hugmore Farm	337961, 352128	South	Road Residents	users /	~930m
16	Hazel Brook / Footpath WX/HOLT/25	338302, 352237	South	Residents / Footpath users		~875m
17	Cornish Hall / Footpath WX/HOLT/24	338979, 352403	Southwest	Footpath users		~890m
18	Aldersey Farm / Footpath WX/HOLT/24	339246, 352019	Southwest	Road Residents / Footpath users	users /	~645m
19	Footpath WX/HOLT/24	340167, 351602	West, southwest	Footpath users		~640m
20	Footpath WX/HOLT/24 / Laurel Grove House	339632, 351180	West	Road Residents / Footpath users	users /	~710m
21	B5130	339686, 350694	Northwest	Road Residents	users /	~750m
22	Bryn Lane / Kellogg's Factory	338967, 350671	North, northwest	Road Employees of industrial units	users /	~205m

VP No.	Location	Grid Ref	Viewing Direction	Visual Type/s	Receptor	Distance to Development
23	Footpath WX/ISYCOED/14	340407, 349002	Northwest	Road users / Footpath users		~2.3km
24	Bridleway WX/ABENBURY/10 / Footpath WX/ABENBURY/12	336034, 350290	East, northeast	Footpath users		~2.1km
25	Bryn Estyn Road / Bryn Estyn Court	336359, 351264	East, southeast	Residents / Road users		~1.66km
26	Cefn Road / Footpath WX/ABENBURY/2#2	335291, 350990	East	Road users / Footpath users		~2.7km
27	Borras Hall Lane / Borras Hall Court / Footpath WX/BIESTON/6	337217, 352619	Southeast	Road users / Residents / Footpath users		~1.64km
28	Francis Lane	340314, 353066	Southwest	Road users		~2.1km
29	Well House / Footpath WX/ISYCOED/5	340609, 351662	West, southwest	Road users / Residents / Footpath users		~1.77km
30*	Borras Road	338450, 353812	South	Road users		~2.39km
31*	Hoseley Lane	336663, 353974	Southeast	Road users		~3.12km

*These two additional viewpoints have been included in response to a request from Wrexham CBC following initial consultations. The locations of these viewpoints are currently approximate but exact locations will be established in due course.

PREPARATION OF VISUALISATIONS

- 5.7.15. Relevant guidance for the production of the Accurate Visual Representations (AVRs) will be followed, as contained in The Guidelines for Landscape and Visual Impact Assessment (LI and IEMA, 2013); Visual Representation of Development Proposals (Technical Guidance Note 06/19 September 2019).
- 5.7.16. Camera points and photo control points have been surveyed and will be tied to the 3D model provided by the project architects in due course. The visualisations provided will accord with the requirements of type 4 visualisations (as described in LI TGN 06/19).
- 5.7.17. It is proposed that all AVRs will be produced as wirelines. Three images will be provided for each viewpoint:
- Baseline;
 - Proposed Development (shown in wireline); and
 - Proposed Development (shown in wireline) + Cumulative Schemes (shown in wireline).
- 5.7.18. The AVRs will be based on winter photographs obtained in 2022.

Assessment of Landscape and Visual Effects

LANDSCAPE ASSESSMENT

- 5.7.19. An appraisal of the character of the landscape will be made in the baseline assessment. It will be made through desk-based assessment and field study of aspects of landscape character, including landscape features, landscape character, designated landscapes and aesthetic/perceptual aspects. It will be informed by consideration of the landscape fabric of the area and will be made with reference to aspects of landscape, their nature and sensitivity. The appraisal will include the classification and description of Landscape Character Areas (LCAs).
- 5.7.20. Assessment of the degree and nature of potential change to the LCAs as a result of the proposed development will be made with reference to the viewpoints from within the areas, which will show the likely degree of change to the typical and important character attributes of each area.

Visual Assessment

- 5.7.21. The visual assessment will consider the effects of the proposed development on the specific views scoped into the LVIA and on the general visual amenity experienced by people.

Sensitivity, Magnitude, and Significance

- 5.7.22. For both landscape and visual effects, the effect significance will be established based on the:
- The sensitivity of the receptors (landscape or visual), which depends upon the value attached to the landscape or view and the susceptibility to harm due to the proposed development; and
 - The magnitude of the impact (the change brought about by the development proposal), which depends upon the scale and geographical extent of the change, and its duration and reversibility.
- 5.7.23. Sensitivity and magnitude will be determined using a combination of quantitative (objective) and qualitative (subjective) methods and will be assessed using professional judgement.
- 5.7.24. The assessment will follow this step-by-step approach:
1. Description of the existing landscape, with an evaluation of different areas;
 2. Consideration of the potential effects of the proposals, and of receptor sensitivity to those effects;
 3. Assessment of the magnitude of each effect (involving judgements relating to the scale, extent and duration/reversibility of effects); and
 4. Assessment of the significance of each effect (involving judgements relating to how sensitivity and magnitude combine). At this stage, a separate judgement is made as to whether an effect is beneficial, neutral or adverse.
- 5.7.25. Table 5.7.2 illustrates how the sensitivity and magnitude will be combined to determine the effect significance.

Table 5.7.1
Significance of effect matrix

		Sensitivity of Receptor to Change		
		High	Medium	Low
Magnitude of Effect (Adverse / Beneficial)	Large	Major	Major to Moderate	Moderate
	Medium	Major to Moderate	Moderate	Minor
	Small	Moderate	Minor	Negligible
	Negligible	Minor	Negligible	Negligible
	None	Neutral	Neutral	Neutral

- 5.7.26. Judgements about the sensitivity of the landscape or visual receptor and the magnitude of the effect on said receptor will be combined to draw conclusions about the effect significance on a case-by-case basis. Note that for both landscape and visual receptors, ‘there are no hard fast rules about what makes a significant effect, and there cannot be a standard approach since circumstances vary with the local and landscape context and with the type of proposal’ (LI and IEMA, 2013, paragraphs 5.56 and 6.44).
- 5.7.27. For those assessments, effects of major to moderate or major significance will be considered ‘significant’ in that they are the principal landscape or visual effects of the proposed development. The identification of ‘significant’ effects equally does not necessarily mean that said effects would be unacceptable. Equally, effects considered to be ‘not significant’ should not be completely disregarded (LI and IEMA, 2013; paragraph 3.34), but are lesser effects which are considered, with professional judgement, to be less important in decisions regarding the landscape and visual effects of the proposed development.

6. Topics not requiring an individual chapter

6.1. Climate Change

- 6.1.1. The EIA Regulations 2017 require a consideration of climate as part of the EIA process. The EIA Regulations 2017 seek to account for climate by requiring a description of 'the impact of the project on climate' and 'the vulnerability of the project to climate change' (Schedule 4, paragraph 5(f)).
- 6.1.2. Key climate projections for the UK are as follows:
- Summers will become hotter and drier;
 - Winters will become milder and wetter;
 - Soils will become drier on average;
 - Snowfall and the number of very cold days will decrease;
 - Sea levels will rise; and
 - Storms, heavy and extreme rainfall, and extreme winds will become more frequent.
- 6.1.3. The consequences of climate change have the potential to lead to significant environmental effects on multiple EIA topic areas. For example, rising sea levels can affect fluvial and coastal flood risks and hotter and drier summers may affect sensitive ecological habitats.
- 6.1.4. It is proposed that the effects of climate change that are relevant to each technical topic will be considered within the specific technical ES chapter. If climate change does not affect the assessment of the technical discipline, this will be stated.
- 6.1.5. For those assessment where climate change is relevant, the following will be considered within the context of the most recent climate change projections:
- The vulnerability of the baseline environment to projected changes;
 - The vulnerability of the proposed development to climate change; and
 - The effect of the proposed development within the context of climate change.

6.2. Major Accidents and Disasters

- 6.2.1. In the absence of industry recognised guidance on this subject in the context of EIA, useful sources that provide guidance related to the topic, include:
- HM Government Office National Risk Register 2020 Edition;
 - UK Government Emergency Response & Recovery Guidance (October 2013); and
 - International Federation of Red Cross & Red Crescent Societies Disaster and Crisis Management Guidance.
- 6.2.2. A disaster can be defined as *"a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources. Though often caused by nature, disasters can have human origins"*.

- 6.2.3. An accident can be defined as *“an unfortunate incident that happens unexpectedly and unintentionally, typically resulting in damage or injury”*.
- 6.2.4. The EIA Regulations 2017 state that the following should be provided within the ES in relation to this topic:
- “a description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned.”*
- 6.2.5. Major accidents and disasters of potential relevance to the proposed development include vehicle accidents, which will be considered in the Transport ES chapter.
- 6.2.6. Other types of major accidents and disasters may also be of relevance to the location of the application site and the nature of the proposed development but, are considered unlikely to result in significant effects, e.g., extreme temperatures, and have therefore not been included.
- 6.2.7. Therefore, it is not proposed that risks of major accidents and disasters are the subject of a separate technical ES chapter. However, vehicle accidents will be considered in the Transport ES chapter.

6.3. Human Health

- 6.3.1. The EIA Regulations 2017 also introduced the requirement for ‘population and human health’ factors to be included on the list of environmental topics considered in EIA. It is also noted that legislation, such as the Well-being of Future Generations (Wales) Act 2015 sets a goal for ‘A healthier Wales’. The Well-being of Future Generations (Wales) Act 2015 Essentials Guide (2021) identifies how multiple elements such as climate change, poverty, health and wellbeing, coronavirus, jobs and economic activity all contribute to quality of life.
- 6.3.2. Health is largely determined outside of the ‘health’ service- a point reinforced in the report Securing Good Health for the Whole Population, which uses the term ‘National Sickness Service’. This service deals with almost an exclusive focus, on the urgent need to improve short-term access and quality to health services. Investments in social systems and places in which people spend their time and live their lives are a requirement of effective health improvements.
- 6.3.3. The health map (shown in Figure 6.1), originally developed by Barton and Grant shows the complex interrelationships between health, physical, lifestyle, economic and social environments. People are at the core of the map, being surrounded by layers of influences that could theoretically be modified. The first of these is lifestyle, for example a person could decide to give up smoking. Beyond this, the map shows how the individual is situated in a community, a broader social world comprising social networks and social support that can affect an individual’s health.
- 6.3.4. As the health map radiates outwards, wider influences exist that impact on decisions to stop smoking for example. The map also illustrates how human health is intimately connected to the health of the wider environment and ecosystems – pointing to the importance of integrating health and sustainable development agendas.



Figure 6.1 Health map

- 6.3.5. Many of the technical ES chapters proposed for inclusion in the ES will already address the potential implications of their topics on human health by virtue of set target values or objectives based on human health tolerances (e.g., air quality or noise) or through the consideration of policy requirements and targets promoting healthier behaviours (e.g., active travel such as cycling and walking).
- 6.3.6. Therefore, effects on human health are already considered to be 'scoped in' to the ES, albeit it is not proposed that human health is the subject of a separate technical ES chapter. Human health considerations that are relevant to each technical topic will be clearly identified within each relevant technical ES chapter. The relevant literature or studies, which draw upon the human health outcomes anticipated as a result of the use of these targets, will be referenced where necessary.

7. Topics where potential for likely significant effects is not anticipated

7.1. Historic Environment

Context

- 7.1.1. The Planning Policy Wales (7) defines the historic environment as being made up of individual historic features which are known collectively as historic assets. These historic assets comprise Listed Buildings, Conservation Areas, historic assets of special local interest, Historic Parks And Gardens, Historic Landscapes, World Heritage Sites; and archaeological remains (including Scheduled Monuments).
- 7.1.2. Planning Policy Wales states “*The planning system must take into account the Welsh Government’s objectives to protect, conserve, promote and enhance the historic environment as a resource for the general well-being of present and future generations*”.

Baseline Conditions

- 7.1.3. A Heritage impact assessment has been carried out for a 1km study area around the application site. This included a review of the Cadw records Historic Environment Record data, review of archival materials at the Wrexham archive, and a site walkover.
- 7.1.4. Within the study area there are no World Heritage Sites, Conservation Areas, Registered Battlefields, Registered Parks and Gardens or Scheduled Monuments. There are three Grade II Listed buildings within the study area. There are no known non-designated heritage assets pre-dating the medieval period recorded within the study area. Non-designated heritage assets of the medieval period are predominantly associated with agricultural activity including the remains of ridge and furrow. The post-medieval period is most heavily represented in the baseline record and predominantly comprises built heritage in the form of farms and farm buildings. Within the application site are three areas of visible ridge and furrow which have been considered as historic assets, as well as a number of former marl pits relating to post-medieval agricultural practice. A single post-medieval homestead (Honeysuckle Cottage) with modern house replacing the earlier building is located within the northern bounds of the application site. The possible site of a Second World War aircraft crash is recorded within the application site.
- 7.1.5. Preliminary consultation was also carried out with the Development Control Archaeologist at Clwyd Powys Archaeological Trust which highlighted the subsurface potential for archaeological remains pre-dating the post-medieval period and recommended that a geophysical survey be undertaken of the site at the pre-determination stage to help identify any potential archaeological remains.
- 7.1.6. A geophysical survey was undertaken of the application site. This recorded anomalies consistent with ridge and furrow cultivation, marl pits, former field boundaries and modern agricultural activity. No archaeological remains likely to pre-date the medieval period were recorded.

Statutory designations

- 7.1.7. No designated heritage assets are recorded within the application site.
- 7.1.8. There are three Grade II Listed buildings within 1 km of the application site comprising:

- New Holt Lodge Farm (Cadw ref 1541), a 19th century farmhouse incorporating the remains of a 17th century structure, located 115m to the north of the north-west site boundary;
- Erilas Hall (Cadw ref 84802), a mid-19th century estate farmhouse incorporating a late medieval or early post-medieval cruck-framed house with surviving cruck pairs and a late 16th century brick stack. It is located 766m to the west of the western site boundary; and
- Cornish Hall (Cadw ref 1536), an early 17th century house with 3 wings projecting from a central range, it is located 825m to the north of the north-eastern site boundary.

7.1.9. No scheduled monuments, registered parks and gardens, battlefields or world heritage sites are recorded within the 1 km study area.

Archaeological and Historic Background

- 7.1.10. The River Dee which flows 3 km to the east of the application site formed an important communications route to the coast in the north and was a significant area during the prehistoric and Roman periods. Evidence for the Neolithic and earlier periods is primarily in the form of occasional finds of tools and weapons however archaeological work at Borrass Quarry, approximately 1.8km to the northwest of the application site, has provided evidence for a Neolithic settlement with a later phase of activity dated to the Bronze Age period. A site of known Bronze Age burials and Roman military settlement is located 3 km to the north-east of the application site at Holt. A round barrow dated to the Bronze Age period is also located 3 km to the south of the application site, which is now protected as a scheduled monument. A number of Bronze Age barrows are recorded in the area of Wrexham including Sutton Green Barrow (Scheduled Monument DE291) located approximately 3km to south-east of the application site, Hillbury Round Barrow (DE164) and Fairy Oak Round Barrow (DE163) located approximately 5km to the west of the application site, and Bryn Alyn Round Barrow (DE059) located approximately 5.6km to the north-west of the application site. These barrow monuments were constructed on sand and gravel deposits laid down by glacial meltwater, and as such the deposits would have provided useful building material to create mounds to cover the burials.
- 7.1.11. Bryn Alyn Camp, an Iron Age defended enclosure occupying a natural promontory is located 5.5km to the north of the application site. No historic assets of the Roman period are recorded within a 1km study area of the application site however a Roman settlement, known as the Legionary Works Depot (DE013), is located at Holt, 5.5km to the north-east of the application site.
- 7.1.12. No historic assets of the early medieval period are recorded in the study area however a section of the defensive bank and ditch of Wat's Dyke (DE151) survives to the south of Bryn Alyn Camp, to the west of Wrexham. This forms part of a 64km long linear earthwork which runs roughly parallel to the Offa's Dyke.
- 7.1.13. The area surrounding the application site contains numerous cultivation remains of medieval to post-medieval ridge and furrow earthworks which demonstrate intensive agricultural use of the landscape during these periods. Aerial views and available partial LiDAR data indicate the presence of three areas of ridge and furrow within the application site and demonstrate that some of the present field boundaries conform with the medieval landscape pattern. Modern ploughing appears to have levelled any ridge and furrow remains across most of the application site.

- 7.1.14. The site is within the parish of Gresford and includes the historic boundary between the townships of Holt and Ridley. Available historic mapping, including mid-19th tithe maps, show that in the late post-medieval period, the application site and much of the surrounding area was comprised of agricultural fields comprising a mix of meadow, arable, and pasture use. The field system seen on this historic mapping is still marked out by hedgerows which are extant within and delineating the site. This includes the historic township boundary between Holt and Ridley, which is demarcated by a line of hedgerow that spans east to west across the application site. At the west side of the application site this boundary turns north and follows Hugmore Lane.
- 7.1.15. Within the application site, and in many of the surrounding fields, a series of ponds are present on historic mapping which may represent post-medieval marl pits, the material from which was historically utilised to enrich agricultural soil in a process called marling. Historic map evidence demonstrates that during the 19th and 20th centuries several marl pits across the application site were periodically opened, backfilled or naturally silted up, and re-cut.
- 7.1.16. The Second World War Marchwiell Royal Ordnance Factory (ROF) at Wrexham was constructed in 1939 to the south of the site and covered an area of 1,400 acres, producing solventless cordite, an explosive propellant for cannon and rockets. Following the closure of the ROF in the post-war period, the Wrexham Industrial Estate was established there.
- 7.1.17. The site of RAF Wrexham, referred to locally as Borrass airfield, which was largely constructed in 1940-41 is located approximately 1.5 km to the north-west of the application site. It is now occupied by Wrexham Golf Club and an aggregate quarry. A number of aircraft crash sites associated with the airfield are recorded in the wider area of the site including one, Francis Lane air crash site, which is recorded within the application site. No information regarding this event, including date of the event, type of aircraft or details of personnel involved is available through online records or by through consultation with the RAF Museum, Air Historic Branch, and Royal Commission on the Ancient Historic Monuments of Wales (RCAHMW).
- 7.1.18. A small number of archaeological events are recorded in the study area including an archaeological desk-based assessment (Archaeology Wales, 2014) that included part of the application site within its study area, archaeological assessments associated with the construction of the Wrexham Industrial Estate Access Roads, and photographic surveys of nearby built heritage included New Holt Lodge Farm. No previous geophysical surveys, evaluation trenching or archaeological excavations are recorded in the immediate area.

Key Issues and Requirement for Assessment

Second World War Aircraft Crash Site

- 7.1.19. The application site includes a recorded 1940s aircraft crash site. All military crash sites in the United Kingdom are controlled sites under the Protection of Military Remains Act 1986. It is an offence under this act to tamper with, damage, move or unearth any items at such sites, unless the Ministry of Defence (MOD) has issued a licence authorising such activity. A licence is required from the Joint Casualty and Compassionate Centre (JCCC) to enable the disturbance of any such sites. Before a licence can be issued, applicants are required to research and supply to the JCCC all relevant information on the aircraft they wish to recover including: location of crash site and the fate of the crew.

- 7.1.20. As part of the baseline review the RAF Museum at Hendon and the Air Historical Branch were consulted but neither organisation were able to provide further information on this event. The RCAHMMW was also contacted but were unable to supply further information. The site was not included in a CPAT study of military crash sites and was deliberately excluded since airfield crashes would be removed and no physical remains would be present. It was assessed therefore that there is a low potential for any remains associated with the crash to be present.

Historic Hedgerows

- 7.1.21. The application site includes twelve hedgerows which can be demonstrated from historic mapping to have been in place since at least 1843, including one which forms a parliamentary boundary between the townships of Holt and Ridley. The layout of several of the hedgerows conform with the surviving pattern of ridge and furrow cultivation suggesting a possible late-medieval origin to the hedgerow pattern. The hedgerows on the application site will be assessed within the Heritage Impact Assessment against the criteria of the Hedgerow Regulations Act 1997.

Archaeological Potential

- 7.1.22. The proposed development has the potential to directly impact on any as yet unknown historic assets with archaeological interest that may be present as below-ground remains within the application site. A review of baseline conditions supported by non-intrusive evaluation, including a geophysical survey, suggests that the application site has a low potential for archaeological remains pre-dating the medieval and post-medieval periods and any such remains are likely to be of low (local) heritage significance. The presence of ridge and furrow remains indicates that any medieval and post-medieval remains, if present, are likely to be agricultural in origin and of local (local) heritage significance only.

Requirement for Assessment

- 7.1.23. The proposed development is not anticipated to result in direct effects on any designated historic assets, as these assets are not located within or directly adjacent to the application site.
- 7.1.24. The proposed development may have the potential to result in indirect effects on the nearby Grade II Listed New Holt Lodge Farm (Cadw ref 1541) through development within its wider landscape context.
- 7.1.25. The rural nature of the application site reflects the wider post medieval agricultural landscape character present to the east of Wrexham. The immediate setting of New Holt Lodge Farm includes gardens to the north, two large fields to the east (shown in this location on the tithe map and recorded as belonging to the farmstead), hedgerow and trees to the west and the former farmyard buildings to the south. These farmyard buildings, along with extant trees and hedgerow along Francis Lane largely screen the listed building in view from the application site. It is anticipated that any change arising from the proposed development is therefore likely to be barely distinguishable and result in no harm to the heritage significance of New Holt Lodge Farm. Its immediate setting which provides a positive contribution to its heritage significance will remain unchanged. The effect therefore is likely to be negligible or none, which is not a significant effect.

- 7.1.26. The proposed development has a low potential to result in indirect effects on two non-designated historic assets at Spring Grove through development within their setting. These are recorded in the HER to be a late-19th century L-plan farm building and farmhouse. The application site comprises the immediate rural setting of these historic assets to the east and the extant field system may have been historically associated with the farmstead at Spring Grove. As such it provides a minor positive contribution to the heritage significance of these two non-designated historic assets. It is anticipated that any change arising from the proposed development is therefore likely to be low to moderate. As non-designated historic assets, their heritage significance is low, therefore the impact of the effect is likely to be at most minor adverse, and therefore not a significant effect.
- 7.1.27. Therefore, an assessment of effects on built heritage is proposed to be scoped out of the Environmental Statement, but would be included within a stand-alone heritage impact assessment report, to be submitted in support of the planning application.
- 7.1.28. Preliminary consultation was been carried out with the Development Control Archaeologist at Clywd-Powys Archaeological Trust who has confirmed that further research would be required to understand the site's potential to include unknown heritage assets of archaeological significance, to establish the nature of the recorded aircraft crash site as well as to determine the significance of the hedgerows that may be affected by the proposed development. A geophysical survey was requested to be carried out at the predetermination stage. Following a review of baseline conditions and completion of geophysical survey, it is concluded that the application site has a low potential to include archaeological remains pre-dating the medieval period. Any such remains are likely to be of low heritage significance. Due to this low potential, it is proposed that an assessment of effects on below ground archaeology be scoped out of the Environmental Statement but would be included within a stand-alone heritage impact assessment report to be submitted in support of the planning application.

Assessment Methodology

Assessment Scenarios

- 7.1.29. The following scenarios will be assessed in the Heritage Impact Assessment:
- The assessment of the demolition and construction stage activities, which will also include the consideration of necessary site enabling work activities.

Policy and Guidance

- 7.1.30. The Heritage Impact Assessment will be prepared in accordance with national and local government policy and guidance.

Information Sources

- 7.1.31. The Heritage Impact Assessment will be informed by a review of information held by the Clwyd-Powys Historic Environment Record and Wrexham Archive, as well as a walkover survey and geophysical survey of the application site.

Sensitive Receptors

- 7.1.32. The assessment will consider the potential effects of the proposed development on as yet unknown buried archaeological remains from the following periods:
- Prehistoric;
 - Roman;
 - Anglo-Saxon/Early medieval;

- Medieval;
- Post Medieval; and
- Modern.

Mitigation and Residual Effects

- 7.1.33. Mitigation measures will be recommended where necessary in order to reduce potential adverse effects. The residual effects of the proposed development with these measures in place, will also be reported in the assessment report.

Assessment of Effect Significance

- 7.1.34. Criteria will be provided in the Heritage Impact Assessment to define the receptor sensitivity and the impact magnitude. The significance of the archaeological effects will be established taking into account both factors. The receptor sensitivity, impact magnitude and effect significant criteria will be based on industry guidance, and professional judgement where necessary. The criteria will be both transparent and repeatable.

7.2. Ground Conditions

Context

- 7.2.1. The proposed development would introduce new users to the site, who could be adversely affected, should any historical contamination be present. There would also be the potential for contaminants to be released to soils associated with construction and operation of the proposed development.

Baseline Conditions

- 7.2.2. The application site is predominantly agricultural with a residential / farm property (Little Acorns) located in the southern extent of the site and a property to the north, of Francis' Lane. The agricultural fields are delineated by localised copses of trees and hedgerows.
- 7.2.3. The majority of the application is grass with the exception of the area at the Little Acorns and property off Francis' Lane where some localised hardstanding is located.
- 7.2.4. To date, underground service drawings have not been obtained; however, there remains a potential for such features to be present beneath the application site. A Utilities Statement is being prepared and will be submitted as part of the planning application.
- 7.2.5. A Groundsure report has been obtained for the application site. This included extracts of Ordnance Survey plans dated from 1872 and 2021 and has been used to inform this scoping report.

Geology & Hydrogeology

- 7.2.6. The application site isn't shown to be located within an area of artificial ground. Given the history of development on part the application site and potential for historically infilled ponds, the presence of localised Made Ground is anticipated. The Groundsure report identifies land immediately south of the application site as 'Landscaped Ground'.
- 7.2.7. The application site is shown to be underlain by superficial deposits of Devensian Till – Diamicton. This is identified to be a Secondary (undifferentiated) Aquifer. Nearby BGS logs to the southeast indicate that the Till may be Circa 38 m bgl whilst BGS logs to the northwest indicate the Clay extends to a depth of Circa 26 m bgl.

- 7.2.8. The western and northern/north-western parts of the application site are shown to be underlain by the Kinnerton Sandstone Formation. The eastern and south-eastern parts of the application site are shown to be underlain by the Salop Formation comprising mudstone. The Kinnerton Sandstone Formation is a Principal Aquifer, and the Salop Sandstone Formation is a Secondary A Aquifer. Both of these aquifers underlying the application site have low vulnerability.

Mining

- 7.2.9. The application site does not lie within the potential zone of influence of any recorded underground coal workings. Part of the application site is located within a coal mining reporting area. However, a CON29M report for the site has not identified any risk from coal mining workings.

Contamination Sources

- 7.2.10. The application site is not located within a radon affected area and therefore basic radon protection measures are not currently required for the proposed development.
- 7.2.11. Given the nature of the application site, on-site potential contamination sources are expected to be limited to made ground from infilled historical ponds. Potential offsite sources of contamination comprise the licenced waste facilities located approximately 125 m to the south of the application site and the Royal Ordnance Factory (Wrexham), located as close as 20 m south of the application site.

Key Issues and Requirement for Assessment

- 7.2.12. The review of baseline conditions has identified a limited potential for ground contamination to be present within the application site. Intrusive investigation will be undertaken in due course to understand the ground conditions at the site further. It is anticipated that this will be secured by planning condition.
- 7.2.13. Construction works, including piling, excavation, spoil handling and disposal, will be undertaken in accordance with an approved Construction Environmental Management Plan (CEMP), to prevent pollution of ground and surface waters and to protect human health during the works.
- 7.2.14. Regulations will be adhered to, and any potentially enhanced risks associated with contamination will be managed by the undertaking of phased assessment and development of a remediation strategy via planning if necessary. This will ensure that exposure to any contamination present is minimised to an acceptable level, which will prevent any significant adverse construction effects occurring.
- 7.2.15. Where proposed activities are likely to generate soil arisings as part of the construction works, the design will be informed by the requirements of the CL:AIRE Definition of Waste: Code of Practice in order that the sustainable re-use of soils can be embedded within the design and the development remain compliant with current waste regulation. As part of this process a Materials Management Plan (MMP) may form an appropriate route to material re-use subject to conformance with the relevant regulation and guidance. While these considerations are not directly required to meet planning or undertake compliant EIA, early consideration of how excess soils can be managed is likely to lead to future programme and cost benefits at construction stage.

- 7.2.16. On completion of the proposed development, it is considered that there would not be the potential for any likely significant adverse operational effects on future users as a result of the use of the development. The ground gas regime at the application site will be assessed as part of the ground investigation and protection measures will be incorporated into the new buildings (if required). It is expected that areas of soft landscaping will be appropriately designed and include provision for a layer of certified clean landscaping soils. If required, this reduces the significance of direct exposure pathways. Overall, the nature of the proposed development and its use does not present a significant contamination risk to human receptors.
- 7.2.17. Given that the proposed development is not considered likely to give rise to significant effects related to ground contamination, it is considered that a Ground Conditions ES chapter is not required. A Phase 1 Environmental Risk Assessment report will be prepared, which will be submitted separately alongside the planning application in due course. The report will include a Preliminary Risk Assessment (PRA). The PRA will include a review of site specific and readily available desk-based geo-environmental information and an outline Conceptual Site Model (CSM).

7.3. Flood Risk & Drainage

Context

Flooding could adversely affect new buildings and site users brought to the site under the proposals, should it occur. The proposed development will also result in changes to the drainage conditions at the site that could affect flood risk off-site if unmanaged.

Baseline

Hydrology

- 7.3.1. The nearest watercourse to the application site is an unnamed watercourse located approximately 110 m to the west and is culverted underground. The closest above ground watercourse is located 135 – 225 m south of the application site.

Historic Flooding

- 7.3.2. The site is not located within the Natural Resources Wales historic flood outline for this area. The British Hydrological Society “Chronology of British Hydrological Event” has no information on flooding within the vicinity of the site. No other historical records of flooding for the site have been recorded. Therefore, it has been concluded that the site has not historically flooded.

Development Advice Map

- 7.3.3. The Development Advice Map (DAM) which accompanies TAN15 confirms that the site is located within Zone A: Considered to be at little or no risk of fluvial or tidal/coastal flooding.

Flood Map for Planning

- 7.3.4. The Flood Map for Planning (FMfP) shows that the site is located within Flood Zone 1 for flooding from rivers and sea however, small areas of the site are located within Flood Zones 2 and 3 for flooding from surface water and small watercourses.

Fluvial and Tidal Flooding

- 7.3.5. The Natural Resources Wales Flood Risk Map shows that the site is not at risk of fluvial or tidal flooding. It can therefore be concluded that the risk of fluvial or tidal flooding is not significant.

Groundwater Flooding

- 7.3.6. Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded. Groundwater flooding tends to occur sporadically in both location and time. When groundwater flooding does occur, it tends to mostly affect low-lying areas, below surface infrastructure and buildings (for example, tunnels, basements and car parks) underlain by permeable rocks (aquifers).
- 7.3.7. The susceptibility of the site to groundwater flooding, based on the underlying geological conditions, is low. There are no records of groundwater flooding at or near to the site. It can therefore be concluded that the risk of groundwater flooding is not significant.

Surface Water Flooding

- 7.3.8. The soil condition at the site and within the vicinity of the site and the topography of the site suggest that the site is relatively well drained and surface water flooding would not be expected to accumulate to any significant depths. Surface water flooding tends to occur sporadically in both location and time. Such surface water would tend to be confined to the streets around the development.
- 7.3.9. Natural Resources Wales Flood Risk Maps indicate that the majority of the site has a very low risk of surface water flooding with a chance of flooding of less than 1 in 1000 years (0.1%) in any year, including the effects of climate change. However, small areas of the site have a low risk of surface water flooding with a chance of flooding of between 1 in 1000 (0.1%) and greater than 1 in 100 (1%) years, including the effects of climate change. This is associated with low spots on the site.
- 7.3.10. It can therefore be concluded that the risk of surface water flooding is of low significance. The risk from the surface water sources could be managed and mitigated by using a number of flood mitigation measures to manage and reduce the overall flood risk at the site.

Sewer Flooding

- 7.3.11. Sewer flooding occurs when urban drainage networks become overwhelmed and maximum capacity is reached. This can occur if there is a blockage in the network causing water to back up behind it or if the sheer volume of water draining into the system is too great to be handled. Sewer flooding tends to occur sporadically in both location and time such flood flows would tend to be confined to the streets around the development.
- 7.3.12. Any sewer will inevitably have a limited capacity so in extreme conditions there would be surcharges, which may in turn cause flooding. Flood flows could also be generated by burst water mains, but these would tend to be of a restricted and much lower volume than weather generated events and so can be discounted for the purposes of this assessment. Given the design parameters normally used for drainage design in recent times and allowing for some deterioration in the performance of the installed systems, which are likely to have been in place for many years, an appropriate flood risk probability from this source could be assumed to have a return period in the order of 1 in 10 to 1 in 30 years.
- 7.3.13. The provision of adequate level difference between the ground floors and adjacent ground level would reduce the annual probability of damage to property from this source to 1 in 100 years or less. Therefore, sewer flooding poses a low flood risk to the site. It can therefore be concluded that the risk of sewer flooding is not significant.

Flooding from Artificial Drainage Systems/Infrastructure Failure

- 7.3.14. There are no other nearby artificial water bodies including the small ponds, water channels and artificial drainage systems that could be considered a flood risk to the site. The Natural Resources Wales Reservoir flood map shows that the site is not at risk of reservoir flooding. The risk of flooding from these sources is considered to be not significant.

Nitrates & Phosphates

- 7.3.15. The application site is not located within 2km of either a Nitrate Sensitive Areas (NSA) or Nitrate Vulnerable Zones (NVZ).
- 7.3.16. The application site is located within a Phosphorus Sensitive Special Area of Conservation (SAC) freshwater catchment area associated with the River Dee. It should be noted that available mapping showing 'Annual mean orthophosphate concentrations in the River Dee SAC in ug/l' indicates that the River Dee within the region of the site pass the target.

Key Issues and Requirement for Assessment

Flooding

- 7.3.17. The review of baseline conditions has identified that the application site is not considered to be at risk of fluvial or coastal flooding.
- 7.3.18. Applying the Flood Risk Vulnerability Classification in TAN15, the proposed development is classified as 'less vulnerable'. In TAN15 (Section 9.0) appropriate uses have been identified for the DAM zones and FMfP. The proposed development is classified as 'less vulnerable'. TAN15 states that 'less vulnerable' uses are appropriate at this location.
- 7.3.19. The proposed development will have no impact on the movement of floodwater across the site. The overall direction of the movement of water will be maintained within the developed site and surrounding area. The conveyance routes (flow paths) will not be blocked or obstructed. There will be no increase in the floodwater levels due to the proposed development. There will be no loss in flood storage capacity and no change in the on-site and off-site flood risk. Therefore, the site is compliant with A1.12 of TAN15 and will not increase flood risk elsewhere.
- 7.3.20. The flood risk at the site will be further managed and mitigated by using a number of risk management techniques and mitigation strategies to manage and reduce the overall flood risk at the site. These measures are currently being explored and could include:
- Buildings to be located above the highways by 150mm to enable the full capacity of any secondary flood conveyance to be utilised;
 - Raising utility entry points;
 - Using first floor or ceiling down electrical circuits; and
 - Sloping landscaping away from properties.
- 7.3.21. On this basis, significant effects related to flood risk are not anticipated.

Nitrates & Phosphates

- 7.3.22. As noted above, the application site is not located within 2km of either a Nitrate Sensitive Areas (NSA) or Nitrate Vulnerable Zones (NVZ). As such, effects on nitrates do not need to be considered further.

- 7.3.23. As noted above, the application site is located within a Phosphorus Sensitive SAC freshwater catchment area associated with the River Dee. It should be noted that available mapping showing 'Annual mean orthophosphate concentrations in the River Dee SAC in ug/l' indicates that the River Dee within the region of the site pass the target. As such, due consideration during development of the drainage strategy / design will be given with respect to this designation and any necessary mitigation / avoidance measures.
- 7.3.24. The River Dee itself is located some significant distance (approximately 1.8km) from the application site and that the nearest surface water feature from the site comprises an underground water course 110m west. The site is underlain by Devensian Till – Diamicton which has been proven in BGS logs to comprise cohesive materials locally to depths of Circa 26 to 38m bgl, which is considered sufficient to provide protection of the underlying bedrock aquifers from any vertical migration of any potential contaminants of concern.
- 7.3.25. Furthermore, given that the proposed development comprises light industrial / storage and distribution uses, rather than new residential development (that would lead to increased nitrate and phosphate emissions), and the proposals will also include the demolition of two existing residential properties and will take agricultural land out of use (removing nitrate and phosphate emissions associated with these existing uses), significant adverse effects in regard to nitrates and phosphates are not anticipated.

Summary

- 7.3.26. Given that the proposed development is not considered likely to give rise to significant effects related to flood risk, drainage or nutrients, it is considered that a Flood Risk & Drainage ES chapter is not required. A Flood Risk & Drainage Strategy report will be submitted alongside the planning application in due course.

7.4. Materials and Waste Management

Context

- 7.4.1. Waste will be produced during both the construction and operational phases of the proposed development.
- 7.4.2. The development and implementation of European Union (EU) waste policy and legislation is delivered by EU Directives, such as the Landfill Directive, Waste Electrical and Electronic Equipment Directive etc. Member States must implement the policy drivers and requirements of these Directives through national legislation.
- 7.4.3. Materials include both primary (virgin aggregates and minerals) and secondary (manufactured construction products such as recycled and reclaimed aggregates) materials.
- 7.4.4. The revised Waste Framework Directive (rWFD) is a unique EU Directive because it clarifies the definition of 'waste' and of other concepts such as 'recycling' and 'recovery'. It implements a revised Waste Hierarchy, expands the 'polluter pays' principle by emphasising producer responsibility and applies more stringent waste reduction and waste management targets for Member States. It also requires Member States to take measures to promote high quality recycling and to set up separate collections of paper, plastic, metal and glass. EU environmental legislation such as this will remain in force as part of UK law and can be repealed or amended at the will of Parliament or the devolved parliaments/ assembly.

Baseline

- 7.4.5. Based on the history of the application site, it is unlikely that significant quantities of hazardous waste soil materials are present; however, some may be present within localised areas of the application site.

Key Issues and Requirement for Assessment

Waste

- 7.4.6. Waste will be produced during all phases of the proposed development. The reuse of material arising from the construction works will minimise the amount of waste generated.
- 7.4.7. Given the greenfield nature of the application site, it is considered unlikely that significant quantities of hazardous waste soil materials will be present, however it is noted that local occurrences may be present beneath some areas of the application site. This will be confirmed through investigation, sampling, laboratory analysis and waste classification in accordance with the Guidance on the Classification and Assessment of Waste (WM3).
- 7.4.8. Subject to volumetric fill requirements and a future assessment of suitability of re-use (both chemically and geotechnically), some materials may be considered for potential re-use in line with an appropriate end-of-waste protocol such as WRAP Quality Protocol for Aggregates from Inert Waste, U1 Exemption or a Materials Management Plan in accordance with the CL:AIRE Definition of Waste Code of Practice (DoWCoP). This would reduce the quantity of waste to be taken offsite and minimise material requirements.
- 7.4.9. Any areas of poor-quality soils that may be encountered are likely to require off-site disposal at an appropriately licensed facility, although it is noted that these are likely to be extremely limited given the former uses of the application site. Measures to ensure the appropriate management of waste produced during the construction phase will be included within a CEMP.
- 7.4.10. It will be necessary to register the application in advance of the intended reclamation works with Natural Resources Wales before disposal to landfill can take place. There will be requirement for the waste producer to provide appropriate Waste Acceptance Criteria (WAC) testing of the Soils for disposal to ensure that the soils are appropriately classified and that the landfill is licensed to receive such soils. A consignment note shall be completed, signed and retained by all parties involved. The consignment note shall state the volume of waste, a physical description of the material and statement of its chemical composition. The waste consignment notes shall be kept by the contractor for a period of at least two years.
- 7.4.11. During operation, the proposed development will be designed in accordance with Wrexham CBC's requirements for waste collection and recovery, which encourage the separation of waste at source to minimise the volume taken to landfill. This will include for the design of access routes to accommodate waste collection vehicles.
- 7.4.12. Given the existing nature of the application site and reuse of materials proposed during the works, the quantity of waste produced from the proposed development is considered unlikely to significantly impact local landfill capacity.
- 7.4.13. Therefore, no significant effects on waste capacity are envisaged as a result of the proposed development and it is considered that inclusion of a waste chapter in the main volume of the ES is not necessary.

Materials

- 7.4.14. Material consumption will be required to construct the proposed development. As noted above, material arising from the construction works would be re-used wherever possible to minimise the amount of waste generated, subject to suitability testing. The quantities of other materials required to complete the construction of the proposed development would be unlikely to result in major changes to the availability of materials within the region.
- 7.4.15. Therefore, no significant effects on material availability are envisaged as a result of the proposed development and it is considered that inclusion of a materials chapter in the main volume of the ES is not necessary.

7.5. Wind Microclimate

Context

- 7.5.1. Assessments of wind microclimate focus on pedestrian comfort and safety and are typically undertaken with reference to the Lawson Comfort Criteria. Significant effects on wind microclimate are principally associated with tall buildings or developments in highly urbanised/developed environments.

Key Issues and Requirements for Assessment

- 7.5.2. The proposed commercial units will vary in height up to a maximum height of 30 m. At this height, the proposed buildings are not considered likely to significantly alter the wind microclimate within the pedestrian environment at the application site or in the surrounding area. It is therefore considered that inclusion of a wind microclimate ES chapter in the main volume of the ES is not necessary.

7.6. Daylight, Sunlight & Overshadowing

Context

- 7.6.1. Daylight, sunlight and overshadowing assessments are typically undertaken with reference to BRE standards. Daylight, sunlight and overshadowing effects are principally associated with tall buildings or developments in highly urbanised/developed environments.

Key Issues and Requirements for Assessment

- 7.6.2. The proposed commercial units will vary in height up to a maximum height of 30 m. There are very few residential properties in proximity to the application site and, at this height, the proposed buildings are not considered likely to result in significant daylight or sunlight effects upon them. It is therefore considered that inclusion of a Daylight, Sunlight & Overshadowing ES chapter in the main volume of the ES is not necessary.

8. Summary and conclusions

8.1. Request for a Scoping Opinion

- 8.1.1. This report constitutes a request for a Scoping Opinion, under Regulation 14(1) of the EIA Regulations 2017.
- 8.1.2. In accordance with Regulation 14(3), should Wrexham CBC consider that they have not been provided with sufficient information to adopt a Scoping Opinion, they should notify the person making the request of the points on which they require additional information.

8.2. List of consultees

- 8.2.1. As a minimum, copies of this scoping report should be circulated to the following:
- Wrexham CBC - Planning;
 - Wrexham CBC - Environmental Health;
 - Wrexham CBC - Transport;
 - Wrexham CBC Ecology;
 - Wrexham CBC Historic Environment;
 - Wrexham CBC - Flooding; and
 - Natural Resources Wales.

8.3. How to comment

- 8.3.1. Comments on this scoping report should be sent to:
- Mr Matthew Phillips
Wrexham County Borough Council
Planning & Regulatory Service
Guildhall
Wrexham
LL11 1AY
- 8.3.2. Information on the closing date for comments is available on the Wrexham CBC website (<https://planning.wrexham.gov.uk/planning>).

8.4. Period for adopting scoping opinion

- 8.4.1. As per Regulation 14(4), the local authority shall now consult with the Applicant and the consultation bodies and adopt their scoping opinion within 5 weeks of receiving this request.

9. Bibliography

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5. —. *Planning Policy Wales*. February 2021. Edition 11.
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9. **Department for Transport.** DfT Circular 02/2013. The Strategic Road Network and the Delivery of Sustainable Development. 2013.
10. **Holman et al .** Guidance on the Assessment of Dust from Demolition and Construction (v1.1). s.l. : Institute of Air Quality Management, 2016.
11. **Welsh Assembly Government .** Technical Advice Note 6: Planning for Sustainable Rural Communities. July 2010.

Appendices

Appendix A Proposed Viewpoint Locations

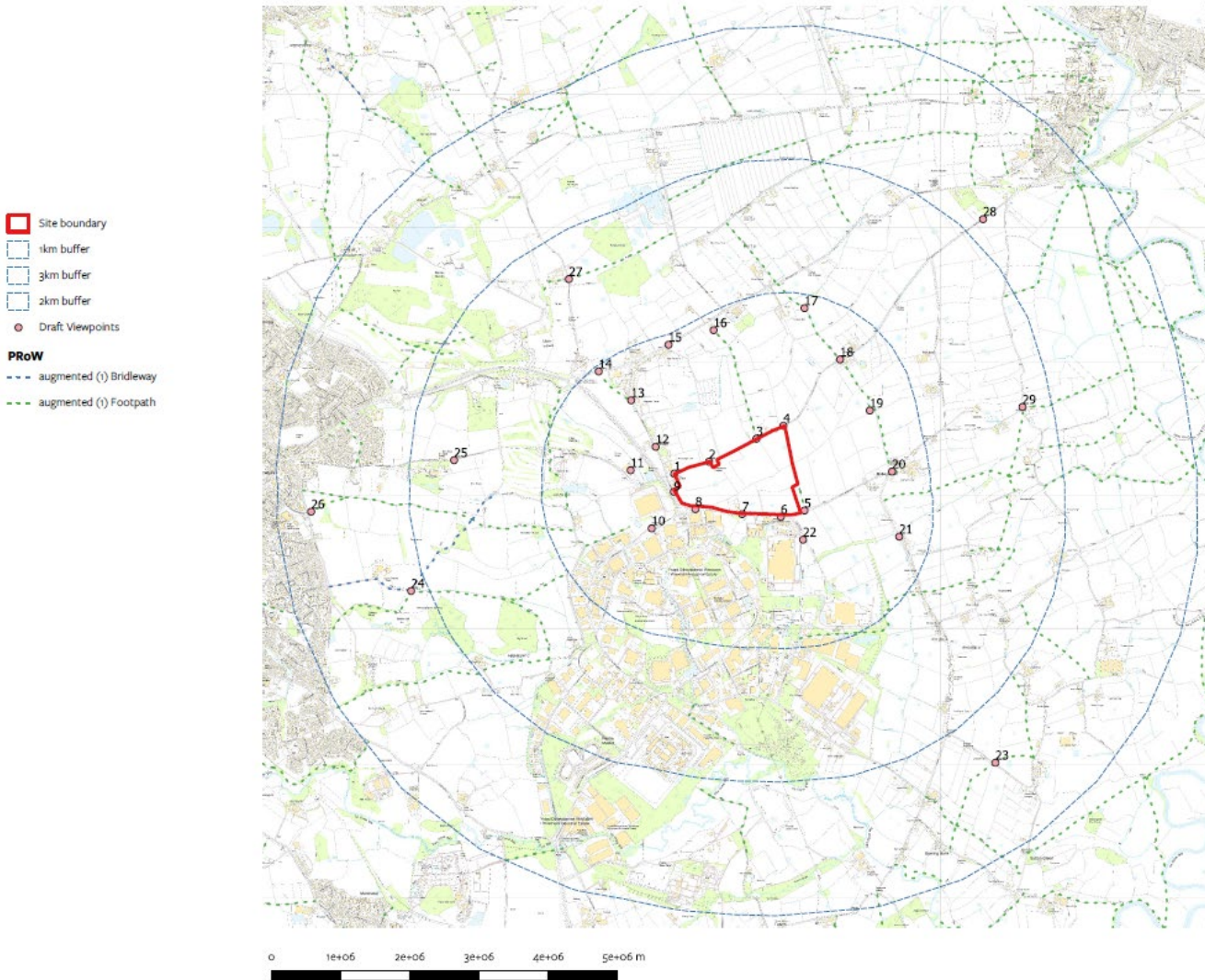


Figure A.1 Location of Initial List of Proposed Viewpoints



Figure A.2 Approximate Location of Viewpoints 30 and 31 Recommended by LB Wrexham Officer