

Chapter 2: EIA Methodology

2. EIA Methodology

2.1. Introduction

This chapter sets out:

- the stages of the EIA that have been undertaken;
- the issues that have been ‘scoped in’ and ‘scoped out’ of consideration in this ES;
- the format of the ES technical chapters; and
- the methodology that has been used to assess the significance of effects associated with the proposed development.

2.2. EIA Approach

This ES has been prepared in accordance with The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (1) (‘the EIA Regulations 2017’), which implement Council Directive 2011/92/EU (2) on the assessment of the effects of certain public and private sector projects on the environment.

2.3. Screening

Screening is the first stage of the EIA process. It establishes if a development is ‘EIA development’ and whether the planning application therefore needs to be accompanied by an ES.

The EIA Regulations 2017 include two schedules (‘Schedule 1’ and ‘Schedule 2’), which set out categories of development that potentially require EIA. A set out in Chapter 1 *Introduction*, the proposed development is not 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. 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.

The proposed development does not lie within a sensitive area, as defined in the EIA Regulations; however, on the basis that the application site area exceeds the 5 hectare threshold, the proposed development is considered to be Schedule 2 development and would therefore fall within the scope of the EIA Regulations 2017. 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.

The Applicant acknowledges the nature and scale of the proposed development and the characteristics of the surrounding environment, and recognises that the proposed development is likely to give rise to significant environmental effects. As such, the Applicant has committed to undertaking an EIA and submitting this ES to Wrexham CBC alongside the hybrid planning application. A request for a screening opinion was not submitted to Wrexham CBC under Regulation 6(1) of the EIA Regulations 2017.

2.4. Scoping

2.4.1. The Intended Focus of EIA

EIA is a process that should focus on the likely significant environmental effects of a proposed development. It is not intended to be a process to address all the possible environmental effects. One of the main criticisms of current EIA practice is that the scope is often drawn too widely, which results in ES documents that 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.”
(2)

2.4.2. Request for a Scoping Opinion

Scoping is an important, though optional, exercise undertaken throughout 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. In practice, the process involves determining the information that needs to be included in the ES through consultation with the competent authority, statutory consultees and other stakeholders.

A request for a scoping opinion (‘EIA Scoping Report’) was compiled and submitted on behalf of the Applicant to Wrexham CBC on 02 November 2022. At the time the EIA Scoping Report was prepared, the Applicant was proposing to submit an outline planning application in due course and, as such, the proposed scope of assessments set out in the document was based on this planning strategy.

As part of the preparation of the document, a list of technical topics was evaluated based on the potential for each to exhibit significant environmental effects as a result of the proposed development. The evaluation process included provisional assessments for each topic to understand the existing baseline conditions, as well as consultations with relevant officers at Wrexham CBC. Based on this process, the EIA Scoping Report set out:

- The topics considered to have the potential for likely significant environmental effects and are therefore proposed to be **‘scoped in’** to the ES (i.e. as a stand-alone technical topic chapter included within the main volume of the ES);
- The topics that require consideration in the EIA but will be considered within the ‘scoped in’ topic ES chapters, rather than their own stand-alone chapters; and
- The topics where the potential for likely significant environmental effects is not anticipated, and are therefore proposed to be **‘scoped out’** of ES (i.e. no technical topic chapter is proposed for inclusion in the main volume of the ES).

These topics are summarised in **Table 2.4.1**.

Table 2.4.1
Proposed EIA Scope as set out in EIA Scoping Report

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 & Vibration		Flood Risk & Drainage
Biodiversity		Waste and Materials
Landscape & Visual		Wind

It was proposed in the EIA Scoping Report that for those topics proposed to be scoped into the ES, a detailed assessment would 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 volume of the ES (ES Volume III).

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 the 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.

For those topics where the potential for likely significant environmental effects is not anticipated, it was proposed in the scoping report that topic specific technical chapters would not be provided within the main volume of the ES. However, it was proposed that, in most cases, stand-alone reports would be submitted separately alongside the planning application in relation to these topics scoped out of the ES.

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The reasons for the judgements made in regard to the potential for likely environmental effects and the means by which the topics would be addressed in the ES were provided in the EIA Scoping Report. The EIA Scoping Report is included in **Appendix 2.1, ES Volume IV**.

Following submission of the EIA Scoping Report, both the design of the proposed development and the planning strategy evolved, with the Applicant now proposing to submit a hybrid planning application, rather than an outline application. These changes necessitated submission of an addendum to the EIA Scoping Report (‘EIA Scoping Report Addendum’) to Wrexham CBC on 22 February 2023 to formalise the changes prior to Wrexham CBC issuing their formal EIA Scoping Opinion. The EIA Scoping Report Addendum, in combination with the original EIA Scoping Report, comprised an amended request for a scoping opinion (‘amended EIA Scoping Report’). The amended EIA Scoping Report included a number of proposed minor changes to the technical methodologies for various technical topics; however, no fundamental changes, such as changes to the topics proposed to be scoped in and scoped out of the ES, were made. The EIA Scoping Report Addendum is included in **Appendix 2.2, ES Volume IV**.

2.4.3. Scoping Opinion and Summary of Consultation Responses

The EIA Scoping Report was circulated by Wrexham CBC to a range of internal and external consultees.

Wrexham CBC issued its draft EIA Scoping Opinion to the Applicant for comment on 02 March 2023. On behalf of the Applicant, CBRE provided comments on the draft document to Wrexham CBC by phone call and an email on 03 March 2023 and a subsequent email on 18 April 2023. This email correspondence is provided in **Appendix 2.3**, ES Volume IV. Wrexham CBC subsequently issued their formal EIA Scoping Opinion on 02 June 2023. The formal EIA Scoping Opinion and consultee comments are provided in **Appendix 2.4, ES Volume IV**.

The comments provided in the EIA Scoping Opinion, as well as subsequent correspondence are summarised in **Table 2.4.2**, which also indicates where these issues have been addressed within the ES.

Table 2.4.2
General EIA Scoping Opinion Comments & Responses

Consultee / Comment	Where Addressed
Wrexham CBC (02 June 2023)	
In respect of the amendments put forward after the consultations had taken place (as presented in the EIA Scoping Report Addendum), the changes to the site area and the specific details of the proposal are not considered to require additional consultation. The consultation responses have had regard to the overall quantum of development, the site area and key constraints. It is considered unlikely that the revisions give rise to any additional impacts that have not already been identified and considered.	This is noted. As confirmed in the EIA Scoping Report Addendum, no fundamental changes, such as changes to the topics proposed to be scoped in and scoped out of the ES, were made.
The Public Protection Officer has confirmed that the methodology for the proposed Air Quality Assessment is acceptable.	These comments have been discussed within Chapter 9 <i>Air Quality</i> and Chapter 11 <i>Biodiversity</i> of the ES.
Natural Resource Wales (NRW) have advised that they consider the development is likely to have significant effects. As discussed later in this table, NRW consider the proposed development to have the potential to affect air quality and have indirect effects on ecological statutory designated sites within 5km of the application site during construction and when operational. NRW have recommended that the ES should fully assess these impacts. In light of NRW’s recommendation, Air Quality should fall within the scope of the ES.	
The development will increase foul water flows that enter the River Dee via the Waste water Treatment Works (WwTW) at Five Fords. The Dee forms part of the River Dee and Baka Lake Special Area of Conservation (SAC) and in January 2021, Natural Resources Wales (NRW) introduced stringent standards on the discharge of phosphorus into the SAC. Increases in	Chapter 11 Biodiversity reports an assessment of the effects of the proposed development on ecological receptors. The potential impacts on biodiversity resulting from an increase in phosphorous entering the River Dee and

Consultee / Comment	Where Addressed
phosphorus discharges into the SAC have the potential to cause damaging effects on the SAC. Whilst the WwTW has provision to remove a percentage of phosphorous from treated water, water entering the river from it will still contain phosphorous. The WwTW is operating within the limits of its existing consent but the consent itself is out of date and pre-dates the new more stringent targets. The development will therefore increase phosphorous entering the SAC and therefore adversely impact upon it. By itself the development is considered unlikely to result in a significant increase in additional phosphorous entering the river and therefore any adverse impact will not be significant. Nevertheless the development could only proceed following the completion of a separate Habitat Regulations Assessment which concludes no adverse impact. This will only be possible where measures are in place to mitigate for the additional phosphorous. These will either be delivered by way of upgrades to existing foul water infrastructure or other mitigation measures that developers will need to contribute to financially or deliver directly themselves. Accordingly there is adequate regulation in place to ensure no adverse impact on the SAC. The impact on the SAC due to additional phosphorous therefore does not need to fall within the scope of the ES. NRW have made a number of recommendations regarding the information that should be included within the ES to enable the impact of the proposed development on protected species to be assessed. Having regard to NRW’s recommendations, Biodiversity should be included within the scope of the ES	Bala Lake SAC has been assessed in Chapter 11 Biodiversity. A separate shadow Habitat Regulations Assessment (sHRA) Report has been prepared and accompanies the planning application. As discussed in Chapter 4 <i>Proposed Development</i> and Chapter 5 <i>Alternatives and Design Evolution</i> , an option for an on-site waste water treatment strategy has been developed should there not be sufficient capacity within the existing sewerage network to deal with the proposed development’s sewerage, in order to address concerns regarding phosphates.
NRW have advised that it would not be reasonable to scope out impacts the development may have on hydrology, particularly the underlying bedrock aquifer. NRW have therefore recommended that this matter be included within the ES. Having regard to NRW’s recommendations, Groundwater and Land Contamination should be included within the scope of the ES.	A <i>Ground Conditions and Contamination</i> chapter (Chapter 12) has been scoped into the ES.
In accordance with the 2017 Regulations matters relating to Climate Change and Human Health ought to be considered in the ES, however it is agreed that they do not need to be covered in distinct chapters.	As set out in the EIA Scoping Report and confirmed within Section 2.12.1 of this chapter, each technical topic has given consideration to impacts relating to Climate Change and Human Health, as relevant.
In respect of socio-economics, the proposed development would be significant in terms of proposed floor space and also potential numbers of jobs created. However when the context of the site is considered, both in terms of its proximity to the Wrexham Industrial Estate as well as the wider County Borough, it is considered unlikely that the development would have significant social or economic impacts. The development would be unlikely to have any significant effect on the demography of the County Borough. The numbers of jobs created would undoubtedly be of benefit to the economy of the County Borough. However, the types of jobs likely to be created are unlikely to significantly alter the land uses proposed, types of employment available in the County Borough or the overall structure of the economy. In light of the above, social-economic impacts are considered unlikely to be significant in EIA terms and therefore do not need to fall within the scope of the Environmental Statement. Notwithstanding the above, the economic benefits of the development would be an important planning material consideration. Supporting information setting out the anticipated economic benefits of the development therefore	As set out in the Scoping Report and based on the assessment undertaken and presented within Chapter 7 <i>Socio-Economics</i> , significant effects from the proposed development are likely to arise. As such, to ensure the requirements of the EIA Regulations 2017 are met, socio-economics has been scoped into the ES.

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should be submitted with a formal application, although as non-Environmental Statement document.	
Welsh Government (WG) (Trunk Roads) have recommended that the scope of the Transport Assessment should be extended to include consideration of the impact that additional vehicular movements may have on Junction 6 of the A483. This is because the junction may be approaching capacity. The Council's Highways Officer has also make recommendations on the matters to be included within the scope of the Transport Assessment. Neither the WG nor the Council's Highways Officer have provided a view as to whether the impact on the local highway network is considered significant in EIA terms. The cumulative impact of the development of the emerging LDP allocations Key Strategic Sites 2 and 3 (KSS2 and KSS3) was considered in 2019 in the Vectos Murcrosim Holt Road VISSIM Modelling. The proposed development site occupies the majority of the KSS3 allocation. The modelling identified a number of interventions required to mitigate for traffic generated by the two sites, particularly during peak times. The modelling did not assess the impact on Junction 6 of the A483. In accordance with the recommendation from WG, this is something that will need to fall within the scope of the Transport Assessment. The development, both by itself and in combination with developments anticipated to come forward during the Local Development Plan period up to 2028, KSS2 in particular, will increase traffic on local roads. This has the potential to increase congestion, particularly during peak times. Nevertheless, the impacts are likely to be relatively localised. Provisions can also be put in place to mitigate those impacts to be secured via conditions and/or obligations. The impact on the highway network is not considered to be significant in EIA terms and therefore does not need to fall within the scope of the Environmental Statement. Notwithstanding the above, a Transport Assessment should be prepared and submitted with a planning application, albeit as a non-ES document.	As set out in the EIA Scoping Report and discussed within Chapter 8 <i>Transport</i> , based on the scale and nature of the proposals and prior to undertaking a transport assessment, it was considered that significant effects are likely to arise in relation to transport. As such, to ensure that the ES meets the requirements of the EIA Regulations 2017, a Transport assessment has been scoped into the ES as a discrete chapter. Refer to Chapter 8 <i>Transport</i> for the full response to these comments. In respect of the potential cumulative impact of the KSS2 and KSS3 sites, refer to the <i>Inter-Development Cumulative Effects</i> section of this chapter (Section 2.9).
The Public Protection Officer has confirmed that the methodology for the proposed Noise and Vibration assessments is acceptable. The development has the potential to generate noise and vibration during construction. It can be reasonably concluded that best practice techniques would be employed to minimise construction impacts. In any case, impacts arising from construction would be relatively localised and would therefore not be significant in EIA terms. When operational, the development has the potential to generate noise and vibration, although the extent of this will, to a significant extent, be dependent upon the end users, particularly end users undertaking activities that fall within Class B2. These impacts are likely to be relatively localised, however. Controls on noise and vibration can be secured by condition. Controls also exist via other legislation. The noise and vibration impacts of the development are considered unlikely to be significant in EIA terms and therefore do not need to fall within the scope of the Environmental Statement. A Noise and Vibration Assessment should be prepared and submitted with a planning application but as a non-ES document.	As set out in the Scoping Report and based on the assessment undertaken and presented within Chapter 10 <i>Noise and Vibration</i> , significant effects from the proposed development are likely to arise. As such, to ensure the requirements of the EIA Regulations 2017 are met, noise and vibration has been scoped into the ES.
The development would undoubtedly be a significant intrusion of urban/industrial development into the rural landscape surrounding the Wrexham Industrial Estate. The character of the site will be significantly and	As set out in the EIA Scoping Report and discussed within ES Volume III <i>Landscape and Visual Impact Assessment</i> , based on the scale and nature of the

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irreversibly changed. Nevertheless, from both nearby and longer distance viewpoints, the proposed development would be viewed in the context of the existing Industrial Estate. The landscape impact of the development is not considered to be significant in EIA terms. A Landscaping and Visual Impact Assessment therefore does not need to fall within the scope of the ES. Notwithstanding the above, a Landscaping and Visual Impact Assessment should be undertaken and submitted with a formal planning application, albeit as a non-ES document.	proposals and prior to undertaking an assessment, it was considered that significant effects are likely to arise in relation to landscape and visual impacts. As such, to ensure that the ES meets the requirements of the EIA Regulations 2017, a Landscape and Visual Impact Assessment has been scoped into the ES as a discrete volume.
Cadw recommended that before the historic environment is scoped out of the ES, the Clwyd-Powys Archaeological Trust be consulted. CPAT were also consulted and have confirmed that effects on below ground archaeology can be scoped out of the ES. CPAT have advised that the hedges within the site would be classed as important under the Hedgerow Removal Regulations 1997 and therefore recommended this matter be scoped into the ES. Despite CPAT's advice, whilst it is acknowledged that hedgerows within the site are of historic importance, removal is unlikely to be significant in EIA terms. Accordingly, this matter does not need to fall within the scope of the ES. Nevertheless an assessment of the impact of the development on historic hedgerows should be included within the scope of Heritage Impact Assessment (HIA). The HIA should be submitted with a formal planning application, but as a non-ES document.	To confirm, an assessment of impacts relating to the historic environment has been scoped out of the ES and a Heritage Impact Assessment has been prepared and forms a standalone document which accompanies the planning application. This document include a Historic Hedgerows Assessment.
The site is identified as Zone A on NRW's Development Advice Map and is excluded from Zones 2 and 3 on Flood Maps for Planning. The proposed development would therefore not be at significant risk of flooding from rivers. The development has the potential to increase surface water rates. Without appropriate drainage infrastructure, this would increase the risk of flooding from surface water both on site and in the locality. Such impacts would, however be localised and not significant in EIA terms. Furthermore, there will be a statutory requirement for the development to incorporate sustainable urban drainage systems. Flood risk and drainage therefore do not need to fall within the scope of the ES.	To confirm, an assessment of impacts relating to flood risk and drainage has been scoped out of the ES. A standalone Flood Consequence Assessment and proposed drainage plans, have been prepared and accompany the planning application.
Waste will be produced both during the construction and operational phases of the development. Nevertheless, the quantity and type of waste produced is unlikely to be significant in EIA terms. Materials and Waste Management therefore do not need to fall within the scope of the ES.	To confirm, an assessment of impacts relating to materials and waste management has been scoped out of the ES.
The impact of the development, particularly on dwellings close to the site, will need to be assessed. However these impacts will be localised to the immediate surroundings of the site and will not be significant in EIA terms. Daylight, Sunlight and Overshadowing do not need to fall within the scope of the ES.	As set out in the EIA Scoping Report, the height and massing of the proposed buildings are not considered likely to result in significant daylight or sunlight effects. As such, the assessment of impacts relating to daylight, sunlight and overshadowing has been scoped out of the ES.
NRW have advised that the site lies within 160 metres of Redwither Brook. This discharges into the River Clywedog, a major tributary of the River Dee. Whilst this topic does not need to be a distinct chapter within the ES, the matter should nevertheless be given consideration in the Groundwater and Land Contamination chapter of the ES.	A <i>Ground Conditions and Contamination</i> chapter (Chapter 12) has been scoped into the ES.

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Wrexham CBC (16 December 2022)	
In an email dated 16 December 2022, Wrexham CBC recommended the following additional schemes be included in the list of cumulative schemes set out in the EIA Scoping Report: – P/2021/1189 - Village Bakery, Wrexham Industrial Estate, LL13 9UH. Application for construction of industrial unit (Classes B2/B8). – P/2022/0065 – The Bridgeway Centre, Wrexham Industrial Estate, LL13 9QS. Application for construction of industrial development (Classes B1,B2,B8). – P/2018/1087 & P/2022/0668 – Wilkinson Business Park, Wrexham Industrial Estate, LL13 9AE. Applications in 2018 & 2022 for construction of industrial development (Classes B1, B2, B8).	As confirmed in our response to the Case Officer, Matthew Phillips, on 13 January 2023, the additional schemes recommended have not be included within the EIA as they do not meet the criteria for cumulative schemes for the reasons set out below. – The Village Bakery scheme is located ~1.4 km away and is 0.72 ha in size and therefore falls below the cumulative schemes criteria set out in the EIA Scoping Report. – The Bridgeway Centre is located ~1.4 km away and is also pending consent. For these reasons, it falls outside of the cumulative schemes criteria set out in the EIA Scoping Report. – The Wilkinson Business Park is located ~2 km away and as such, falls outside of the cumulative schemes criteria set out in the EIA Scoping Report. The 2022 application is also pending consent. Accordingly, it is not considered that there would be significant in-combination effects with the proposed development. This approach was agreed with the Case Officer in an email on 13 January 2023. The full set of correspondence is provided in Appendix 2.5.
Wrexham CBC Highways (12 December 2022)	
Wrexham CBC is happy in principle with the proposals for the ES chapter for which a Transport Assessment, Travel Plan and Framework Delivery and Servicing Plan would be included as appendices. A Construction Traffic Management Plan (CTMP) would also be required to mitigate the impacts of construction traffic. In their response, Wrexham CBC also set out the requirements for the scope of the TA. Wrexham CBC would request that the traffic surveys are undertaken again to ascertain current traffic levels. These should ideally be in a ‘neutral’ month. 2021 traffic levels were likely impacted by the COVID-19 pandemic. Wrexham CBC requested that Bryn Lane should be included within the scope of the updated traffic surveys.	New traffic surveys were carried out in March 2023 (agreed with Wrexham CBC Highways to be a neutral month) and also included the Junction 6 of the A483. These comments are addressed in Chapter 8 <i>Transport</i>.
Wrexham CBC Public Protection (06 December 2022)	
The proposed methodology in respect of air quality and noise and vibration as outlined in the EIA Scoping Report is considered acceptable. The following conditions will be recommended: No part of the development shall commence until an appropriate Dust Management Scheme has been submitted to, and approved in writing by, the Local Planning Authority. The dust mitigation measures as are approved shall be fully implemented for the entire duration of the construction phase. The rating level of any noise generated by reason of this development shall not exceed the pre-existing background level at any time. The noise levels shall be determined at nearby noise sensitive premises, and measurements	These conditions are noted. As confirmed in Chapter 6 <i>Construction Strategy & CEMP</i>, a Dust Management Plan will be submitted to, and approved by, the Local Planning Authority to be secured by way of an appropriately worded planning condition. Comments relating to noise limits have been discussed in Chapter 10 <i>Noise and Vibration</i>.

Consultee / Comment	Where Addressed
and assessment shall be made in accordance with BS4142:2014 Methods for Rating and Assessing Industrial and Commercial Sound. No part of the development shall commence until a scheme of external lighting has been submitted to, and approved in writing by, the Local Planning Authority. The scheme shall have regard to best practice guidance provided by the Institution of Lighting Professionals (https://www.theilp.org.uk/resources/free-resources/ilp-guidance notes/). The external lighting scheme as required must include the following: a) Location and height of proposed lighting, b) An Isolux diagram for the proposed lighting scheme to a distance that includes sensitive premises, and c) Design of columns and any proposed hoods. The lighting shall be installed in strict accordance with the scheme as is approved prior to first use of the development, and shall thereafter be permanently retained in a fully operational condition. Following an application for a hotel Wrexham CBC would also look to recommend conditions relating to containing cooking odours and installing grease traps.	
Welsh Water (06 December 2022)	
It is unlikely that sufficient capacity exists to accommodate the proposed development without causing detriment to the existing services we provide to our customers, or in regard to the protection of the environment. There are no planned reinforcement works within Dwr Cymru Welsh Water's Capital Investment Programme and therefore, at this stage, we are unable to provide you with a point of adequacy on the network. As part of the environmental statement, we would expect that foul and surface water drainage is detailed, in conjunction with any impacts to Welsh Water Dwr Cymru assets.	This is noted. Consultation is ongoing with Welsh Water, NRW and Wrexham CBC to identify whether there is sufficient capacity and develop an on-site foul and surface water strategy that would treat effluent from the proposed development, if required. This is discussed in Chapter 4 <i>Proposed Development</i> and Chapter 5 <i>Alternatives and Design Evolution</i>.
Natural Resource Wales (NRW) (Issued 05 December 2022 & re-issued 04 April 2023 following further consultation with Wrexham CBC (see Appendix 2.3))	
NRW advise that the ES should describe the proposed scheme in detail in its entirety. This description should cover construction, operation and decommissioning phases as appropriate and include detailed, scaled maps and drawings as appropriate. Any maps, drawings and illustrations that are produced to describe the project should be designed in such a way that they can be overlaid with drawings and illustrations produced for other sections of the ES, such as biodiversity.	Chapter 4 <i>Proposed Development</i> and Chapter 5 <i>Construction Strategy & CEMP</i> provide a description of the proposed development during both the demolition and construction and completed development stages. Chapter 5 <i>Construction Strategy & CEMP</i> also includes a brief summary of the anticipated decommissioning works. A separate description relating to the decommissioning stage has not been considered at this point in time given that this would form part of a future planning application. Due to the fact that decommissioning of the new buildings would involve similar methods to those described in relation to the demolition and construction works set out in Chapter 5, the impacts are likely to be similar in nature.
In respect of air quality, The application site is within: – 2.6km of the River Dee Site of Special Scientific Interest (SSSI) – 2.7km of the River Dee and Bala Lake Special Area of Conservation (SAC)	These comments have been discussed within Chapter 9 <i>Air Quality</i> and Chapter 11 <i>Biodiversity</i> of the ES.

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– 3.3km of Midlands Meres and Mosses Ramsar / Vicarage Moss SSSI – 4.8km of Sontley Marsh SSSI – 4.9km of Marford Quarry SSSI The project has the potential to affect air quality and have indirect effects on protected sites (e.g., SSSIs, SACs, Ramsar sites) during both the construction and operational phase (due to both air pollution and dust). The EIA Scoping Report refers to potential effects from the following sources: – Traffic generation during both the construction and operational stages; and – Dust generated by construction activities. We therefore advise that the ES should fully assess impacts of air pollution and dust on protected sites. We would expect the ES to include an assessment of the amount of predicted pollution from the proposal against the relevant critical loads and critical levels for any designated sites that may be affected.	
We note the application site is within the catchment of the River Dee and Bala Lake Special Area of Conservation (SAC). As you are aware, on the 21st January 2021, we published an evidence package outlining phosphorus levels for all river SACs across Wales. In line with our Planning Advice (July 2022), under the Habitats Regulations, Planning Authorities must consider the phosphorus impact of proposed developments on water quality within SAC river catchments. Section 7.3.25 of the EIA Scoping Report states: <i>“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.”</i> The suitability of foul drainage arrangements for the proposed development is a matter for the LPA to determine. We therefore advise that as part of any future planning application submission, the applicant provides the LPA with sufficient details e.g., of the proposed method of foul drainage to inform their Habitats Regulations Assessment (HRA). If additional wastewater is to be discharged, it is likely the LPA will require further information from the applicant to inform their HRA.	As discussed in Chapter 4 <i>Proposed Development</i>, an option for an on-site wastewater treatment system has been designed to ensure that there would be no phosphate impacts to the River Dee SAC, if there is insufficient headroom in the existing WwTW. The sHRA provides information on the proposed on-site mitigation strategy that has been used to inform their assessment. Refer to the sHRA which accompanies the planning application for further information.
The site is within 160m of Redwither Brook (Main River) which discharges to the River Clywedog, a major tributary of the River Dee. Section 6.2. “Major Accidents and Disasters” of the EIA Scoping Report states that this topic will not require an individual chapter. We do not consider this to be appropriate and advise that as well as being scoped in, the matter should be explored within an individual chapter to clearly identify the risks assessed and mitigation proposed across the whole development. There should be sufficient infrastructure in place to mitigate and contain any spills and a review of the site drainage and oil interceptors should be undertaken and submitted before planning permission is granted. An appropriate environmental management system (EMS) should be implemented, which addresses emergency procedures.	In response, Groundwater and Land Contamination has been scoped into the ES as a discrete chapter (Chapter 12 <i>Ground Conditions & Contamination</i>). Chapter 12 reports on the assessment of all impacts associated with historical and potential contamination on all relevant receptors, including those relating to impacts on water quality as a result of accidental spills during construction and operation of the proposed development. On this basis, the preparation of a discrete major accidents and disasters ES chapter is not considered necessary. This is in line with advice provided in the IEMA Major Accidents and Disasters in EIA Primer (4), which states that:

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The site lies within the Dee Protection Zone (DPZ) and may need a consent to produce and store the fuels onsite. Please see the following link for further information: Natural Resources Wales / Dee Water Protection Zone.	<i>“Major accidents and/or disasters can be scoped out of the assessment if you can clearly demonstrate that... all possible major accidents and/or disasters are adequately covered elsewhere in the assessment or covered by existing design measures or compliance with legislation and best practice.”</i>
NRW advise that the ES should include sufficient information to enable the relevant decision maker to determine the extent of any environmental impacts arising from the proposed scheme on legally protected species, including those which may also comprise notified features of designated sites affected by the proposals. Evaluation of the impacts of the scheme should include: direct and indirect; secondary; cumulative; short, medium and long-term; permanent and temporary; positive and negative, and construction, operation and decommissioning phase and long-term site security impacts on the nature conservation resource, landscape and public access.	NRW's full set of comments are addressed in Chapter 11 <i>Biodiversity</i>.
‘Ground Conditions’ are referred to in section 7.2 of the EIA Scoping Report under “Topics where potential for likely significant effects is not anticipated”. However, the site is highly sensitive with respect to groundwater. It is located within a Source Protection Zone (SPZ) 3 (an area defined around large and public potable groundwater abstraction sites; the purpose of SPZs is to provide additional protection to safeguard drinking water quality through constraining the proximity of an activity that may affect a drinking water abstraction); and overlies a principal bedrock aquifer. As stated in Section 7.2.7 of the EIA Scoping Report, above the bedrock the superficial aquifer is clayey till, which is classed as a Secondary aquifer. Till can act as an aquitard, slowing, but not preventing subsurface movements of liquids, the extent of which will likely be determined by sand and gravel lenses as much as the referenced thickness of the till in Section 7.2.7. We acknowledge that the greenfield area of the site has limited potential for ground contamination to be present, and that till can give a degree of protection to the underlying bedrock aquifer. However, due to the points stated above it does not appear reasonable to scope out potential impacts that the development might have on hydrogeology, particularly the underlying bedrock aquifer. We therefore do not agree with the statement in Section 7.2.17 that the proposed development is not likely to give rise to significant effects relating to ground contamination (which we have interpreted as including hydrogeology, as it is not mentioned elsewhere). We advise that ‘Ground Conditions’ should be scoped in to the ES. However, we acknowledge that a Preliminary Risk Assessment may also be required or used to inform the ES.	In response, Groundwater and Land Contamination has been scoped into the ES as a discrete chapter (Chapter 12 <i>Ground Conditions & Contamination</i>). NRW's full set of comments are addressed in Chapter 12 <i>Ground Conditions and Contamination</i>.
We agree with the scoping of 7.4. Materials and Waste Management and the proposed survey and assessment methods.	This is noted. To confirm, a Materials and Waste Management chapter has been scoped out of the ES.
Welsh Government (Trunk Roads) (20 December 2022)	
As the Welsh Government is aware that Junction 6 of the A483 may be approaching capacity, it requests that the scope of the Transport Assessment be extended to include consideration of the impact the additional vehicle movements may have on the junction.	These comments are addressed in Chapter 8 <i>Transport</i>.
Cadw (20 January 2023)	
A scoping report produced by CBRE has been submitted along with this request for a scoping opinion. Chapter 7 of this report has considered the impact of the proposed development on the settings of the above designated	As discussed below, CPAT agreed that the archaeological potential of the application site is considered to be low, As such, a standalone Heritage

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Consultee / Comment	Where Addressed
historic assets and concluded that this will not be significant. As such, the impact of the proposed development on the settings of designated historic assets can be scoped out of the EIA.	Impact Assessment has been prepared and accompanies the planning application.
The scoping report has also suggested that sufficient investigation has been carried out to determine that the proposed development will not have a significant impact on the buried archaeological resource and therefore the historic environment can be scoped out of the EIA. However, before the historic environment is scoped out of the EIA, the Clwyd-Powys Archaeological Trust should be consulted in regard to whether sufficient appropriate archaeological investigation has been carried out to prove that the proposed development will not have a significant impact on the buried archaeological resource.	
Clwyd Powys Archaeological Trust (CPAT) (07 December 2022)	
We note the content of 7.1 (Historic Environment) in the scope which includes the outline results of a completed DBA and geophysical survey.	As above, a standalone Heritage Impact Assessment has been prepared and accompanies the planning application. Refer to the Heritage Impact Assessment for information on the assessment of heritage impacts, including impacts to historic hedgerows.
We have received a copy of the geophysical survey report and we are in agreement that no significant anomalies other than a former ridge and furrow field system of medieval and post medieval date are present. There appear to be no earlier features than the field system in the results although to some extent the field system ridging will mask earlier features that may be present. Overall though the archaeological potential based on the geophysical results does seem to be low.	
The key direct impact identified by the DBA would be the removal of any historic hedges. It is clear that most of the hedges surviving here formed part of a pre 1843 field system (7.1.13) and one also forms part of a historic township boundary (7.1.14). This is also supported by the geophysical survey which shows the degraded remains of a ridging system within former hedgerow boundaries across the whole development site. These hedges would therefore be classed as 'important' under the Hedgerow Removal Regulations 1997 under the cultural criteria. Every effort should therefore be made to retain the historic hedgerows within any future development layout and maintain them.	
With regard to the WWII aircraft crash location (7.1.17 and 7.1.20) we contacted a local researcher who has completed extensive ground and documentary studies on aircraft crashes in the Wrexham area and he confirms that the crash was a US Curtis Tomahawk fighter plane AN892. This appears to have been a surface crash on the field with all of the remains being recovered and this was confirmed by an eyewitness who saw the plane being dismantled and the fuselage being driven off-site. The potential for intact aircraft remains therefore seem low, but a contingency should be built into the project for unexpected remains and the requirements of the Protection of Military Remains Act for licenced recovery of any remains that may be found.	
We agree that the assessment of indirect effects on the built heritage can be scoped out of the EIA and that a HIA will be included. The HIA should use the Cadw guidance on Managing the Setting of Historic Assets in Wales (which includes a setting assessment methodology) as well as the Cadw Conservation Principles (2011) in reaching its conclusions.	

Consultee / Comment	Where Addressed
We agree that the assessment of effects on below ground archaeology can be scoped out of the EIA and that a HIA will be included which addresses these impacts.	
The above ground impacts to the historic hedgerows will need to be scoped into the assessment and included within a HIA. Mitigation must be stated where historic hedgerows may be impacted.	

2.5. Public Consultation

In accordance with the Planning (Wales) Act 2015, statutory pre-application consultation was undertaken for a period of 28 days, the details of which are set out in the Pre-Application Consultation report, including the summary of the responses received and how these have been addressed.

The consultation was communicated via site notice and letters to the following list of consultees, which directed interested parties to a website which contained information on the application site and proposed development, provided copies of the draft application documents and provided an opportunity for the provision of feedback on the proposals:

- All neighbours adjoining and surrounding the site;
- Specialist consultees:
 - Local planning authority;
 - Local highway authority;
 - Coal Authority;
 - Natural Resources Body for Wales;
 - Canal and River Trust;
 - The water and sewerage undertaker;
 - The Fire and Rescue Authority;
 - Welsh Ministers;
- Community consultees:
 - Holt Community Council; and
 - Councillor Michael Morris.

The comments provided during the consultation period that are of relevance to the EIA are summarised in **Table 2.5.1**, which also indicates where these issues have been addressed within the ES. The full set of Specialist Consultee comments are provided in **Appendix 2.6, ES Volume IV**.

Table 2.5.1
Statutory Pre-Application Consultation Comments & Responses

Consultee / Comment	Where Addressed
Natural Resource Wales (14 July 2023)	
<u>Foul Drainage and Protected Sites</u>	Discharge to the public foul sewerage network is the proposed approach (Section 2.6 of the Phosphate Assessment). Non-mains foul sewerage disposal has been identified as a fall-back option should there not be sufficient headroom in the existing DCWW waste water
NRW note the report (Harrison, A., Technical Note: Phosphate Assessment, Reference TE1624-TE-00-XX-TN-GE-002-V02, June 2023, Tier Environmental Ltd) is submitted in support of the above application.	

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Consultee / Comment	Where Addressed
Section 2.6 of the report confirms that a connection to the existing Dŵr Cymru/Welsh Water (DCWW) Five Fords Wastewater Treatment Works is proposed, however Section 6 of the report states that DCWW have confirmed that Five Fords WwTW is unlikely to have sufficient headroom to accommodate the development. The report then states that an on-site wastewater treatment system has been designed in order to treat foul drainage on site which would ultimately discharge via a pumping station into an existing ditch. Government guidance on private sewerage in Welsh Government Circular 008/2018 stresses that the first presumption must be to provide a system of foul drainage discharging into a public sewer. Only where having taken into account the cost and/or practicability it can be shown to the satisfaction of the local planning authority that connection to a public sewer is not feasible, should non-mains foul sewerage disposal solutions be considered.	treatment plant. Further clarification has been provided in ES Chapter 4 <i>Proposed Development</i> (Section 4.12) and ES Chapter 12 <i>Ground Conditions and Contamination</i> (Table 12.8.1 Proposed Mitigation & Enhancement Measures). Please refer to DCWW consultation response which states that there are concerns regarding insufficient capacity for the foul drainage associated with this development, hence the on-site solution proposed.
NRW also refer to their Planning Advice and have advised that the Applicant provide the LPA with further information as identified in the section titled ‘What does this mean for development proposals involving connection to public wastewater treatment works’ and ‘What does this mean for development proposals involving private sewerage treatment systems’ of that advice.	NRW’s Planning Advice recommends that the following information is included in support of a planning application: – Confirmation of how foul drainage will be managed; – Scale plans showing the location of the nearest public sewer and proposed connection point; – Where a private sewage treatment system is proposed within a sewered area, evidence to justify why a connection to public sewer is not feasible in line with Circular 008/2018 and Planning Policy Wales. For all other private sewage treatment systems, evidence that Circular 008/2018 has been followed; and – Where discharges to ground are proposed, developers should provide the results of infiltration testing with calculations to demonstrate that the drainage field size and design is appropriate for the volume of discharge proposed and follows the relevant British Standard. The foul drainage proposals are shown in the submitted drainage plans which accompany the planning application. A summary is also included within Chapter 4 <i>Proposed Development</i> of this ES & the Phosphates Assessment presented in Appendix 12.2 provides justification for the potential requirement for private sewerage treatment, should there not be sufficient capacity in the existing network. Given the hybrid nature of the planning application and acknowledging that discussions are ongoing with DCWW, the level of detail is considered sufficient for the purpose of the planning application and further information will be provided in due course to support with the discharge of suitably worded planning conditions. For avoidance of doubt, surface water discharge to ground is unlikely to be feasible based on the findings

Consultee / Comment	Where Addressed
<u>Great Crested Newts</u> NRW advise that further information is required to assess the extent of adverse effects on the species and any avoidance or mitigation measures required to demonstrate that the proposed development would not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in its natural range.	of the ground investigations, i.e. low permeability cohesive soils across the site. NRW’s full set of comments have been addressed in ES Chapter 11 <i>Biodiversity</i>. Refer to Table 11.2.1, Chapter 11 <i>Biodiversity</i> for further information.
<u>Bats</u> NRW advise that the Ecological Assessment has insufficient information to assess the need for avoidance / mitigation measures in relation to bats. NRW note that Section 4.6 of the Bat Roost Survey report states that trees that will be ‘unavoidably impacted by the development’ require additional survey in the form of nocturnal roost surveys and this should include lighting assessments. NRW concur with the report and advise that the results of the surveys should be submitted together with an assessment of the impacts of the scheme on these roost sites and proposals to avoid, mitigate or compensate for them. Where appropriate, this should be supported with detailed plans. All surveys should be undertaken in accordance with current published guidance.	NRW’s full set of comments have been addressed in ES Chapter 11 <i>Biodiversity</i>. Refer to Table 11.2.1, Chapter 11 <i>Biodiversity</i> for further information.
<u>Contaminated Land</u> NRW concur with the further works as proposed within Chapter 12 of the ES and advise that further information (as listed in their full response in Appendix 2.6) could be provided with the full planning application and would negate the need for all conditions listed.	This is noted. As confirmed in Chapter 12 <i>Ground Conditions and Contamination</i>, the Phase 2 Intrusive Ground Investigation Report and any subsequent Remediation Strategy, as required, will be submitted to Wrexham CBC prior to the start of any works on-site to support the discharge of the relevant planning conditions.
Dwr Cymry Welsh Water (DCWW; 17 July 2023)	
The site is crossed by a public sewer - DCWW suggest the layout is amended to take account of this or diversion of the sewer may be required. DCWW suggest that a survey is undertaken to confirm the exact location of the sewer. DCWW recommend consultation with the Council as the SuDS Approval Body (SAB). For foul water drainage, concerns that there would not be sufficient capacity to accommodate development, and recommend instructing DCWW to undertake a Hydraulic Modelling Assessments to examine the impact of the development. In terms of phosphates, DCWW note the flows would drain to the Five Fords WWTW which has a phosphates consent, and "no problems are envisaged with the Waste Water Treatment Works for the treatment of domestic discharges from this site."	DCWW’s comments are noted. The drainage proposals remain as presented in the drainage plans and the summary presented in ES Chapter 4 <i>Proposed Development</i> remains the same. The public sewer crosses through the outline element of the hybrid application, where the proposed layout is not applied for in detail as part of this application. The exact location of the combined sewer will be determined by geophysical and/or trial pits, and any required protection, mitigation measures or amendments to the proposed development layout will be agreed with DCWW at Reserved Matters stage. As confirmed in the Pre-Application Consultation Report, the Applicant will engage in the SABs process.

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2.6. Sensitive Receptors

The sensitive receptors listed below have been identified in the vicinity of the application site. The assessments focus on identifying the effects of the proposed development at/on these receptors within the relevant chapters of the ES.

- Local economic activity;
- Local labour force;
- Users (vehicular, cyclists & pedestrians, and public transport) of the following links on the local road network:
 - A5156 link;
 - A534 link;
 - Industrial Estate Road link;
 - Bryn Lane link; and
 - Ridleywood Road link.
- Nearby residential properties, including:
 - Spring Grove, Hugmore Lane;
 - Ty Gwanwyn, Hugmore Lane;
 - Spring Grove Barn, Hugmore Lane;
 - Holt Lodge Farm, Hugmore Lane;
 - Ambergate, Hugmore Lane;
 - Harcourt, Ridleywood;
 - 2 Bryn Lane;
 - Aldersey Farm, Francis Lane;
 - Properties along Sandy Lane to the north-west of the application site;
 - Properties along A534 Wrexham Road (Yr Efail) to the north and north-east of the application site;
 - Properties along Borrass Hall Lane to the north of the application site;
 - Properties along The Links, to the north-east of the application site;
 - Properties along Birkdale Road, to the north-east of the application site;
 - Properties along A534 Holt Road, to the east of the application site;
 - Properties along Bader Court, to the north-east of the application site;
 - Properties along Avondale Grove, to the north-east of the application site;
 - Properties along Bieston Close, to the north-east of the application site;
 - Properties along Ffordd Llwelyn, to the north-east of the application site;
 - Properties along Ffordd Garmonydd, to the north-east of the application site;
 - Properties along Chester Road, to the north-east of the application site;
 - Properties along Plas Acton Close, to the north-east of the application site;
- International statutory designated sites – Afon Dyfrdwy a Llyn Tegid (River Dee and Bala Lake) SAC (Wales and England) and Midlands Meres and Mosses Ramsar;
- National statutory designated sites - Afon Dyfrdwy (River Dee) (Wales) SSSI (Wales and England) and Vicarage Moss SSSI and River Dee (England) SSSI;
- Local non-statutory designated ecological sites -- Wrexham Industrial Estate Local Wildlife Site (LWS) and Cefn Park LWS;
- Semi-natural broadleaved woodland;
- Native hedgerows;
- Scattered trees;
- Veteran trees;
- Standing water (ponds);
- Great crested newt (GCN) (*Triturus cristatus*) and other priority (Section 7 (S7)) amphibian species;
- Lesser silver water beetle (LSWB) (*Hydrochara caraboides*);
- Bats;
- Badger (*Meles meles*);
- Breeding birds;
- Wintering birds;
- Hedgehog (*Erinaceus europaeus*);
- Brown hare (*Lepus europaeus*);
- Human Health (Demolition & Construction Workers, Future Site Users and Adjacent Site Users);
- Surface Water Feature: River Dee and its tributaries;
- Surface Water Feature: River Dee and Bala Lake SAC;
- Ground Water Feature: Kinnerton Sandstone Formation Principal Aquifer;
- Ground Water Feature: Salop Formation Secondary A Aquifer;
- New buildings and infrastructure;
- Retained and Proposed Vegetation;
- Local landscape character, notably;
 - National Landscape Character Area 13 Deeside and Wrexham;
 - National Landscape Character Area 14 Maelor
 - Character of the setting of the application site ; and
 - Character of the application site.
- Local visual receptors, namely:
 - Residents of dwellings along Hugmore Lane;
 - Users of Francis' Lane;
 - Users of Public Footpath Holt 25;
 - Users of Public Footpath Holt 26/Isycoed 6;
 - Users of Ridley Wood Road;
 - Users of Bryn Lane;
 - Employees of Ridley Wood Industrial Complex;
 - Users of Hugmore Lane;
 - Users of Abenbury Way;

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- Employees of and visitors to Clays Driving Range and Golf Course;
- Residents of Hugmore House;
- Users of Public Footpath Bieston 5;
- Users of A534 Wrexham Road;
- Residents of Hugmore Farm;
- Residents of Hazel Brook House;
- Users of Public Footpath Holt 24;
- Residents of dwellings along Francis’ Lane;
- Users of B5130;
- Residents of Laurel Grove House;
- Employees of Wrexham Industrial Estate;
- Users of Rodens Hall Road;
- Users of Public Footpath Isycoed 14;
- Users of Public Bridleway Abenbury 10 and Public Footpath Abenbury 12;
- Pedestrian users of Bryn Estyn Road;
- Users of Borrás Hall Lane;
- Users of Borrás Road; and
- Users of Public Footpath Holt 20.

The following existing ecological receptors have also been considered in the ES. However, as discussed in Chapter 11 Biodiversity, they are not considered to result in significant effects and as such, these receptors were screened out of a full assessment within the Assessment of Effects (Including Embedded Mitigation) section of Chapter 11:

- International statutory designated site – Johnstown Newt Sites SAC;
- Statutory designated site – Sontley Marsh SSSI;
- Statutory designated site – Marford Quarry SSSI;
- Non-statutory designated site – Borrás Wood North LWS;
- Semi-natural broadleaved woodland;
- Arable land;
- Semi-improved neutral grassland;
- Poor semi-improved grassland;
- Modified neutral grassland;
- Amenity grassland;
- Dense scrub;
- Tall ruderal;
- Ditches;
- Introduced shrub;
- Bare ground with ephemeral/short perennial vegetation;
- Buildings;

- Hardstanding; and
- Polecat.

2.7. Assessing an Outline Application - Maximum Parameters Approach

A hybrid planning application has been submitted by the Applicant, which seeks full planning permission for development in approximately 20.06 ha of the application site (the ‘detailed component’) and outline planning permission for development in the remaining 17.15 ha of the application site (the ‘outline component’). Under the outline component of the application, all matters (access, appearance, landscaping, layout and scale) are reserved for future determination at the reserved matters stage and thus do not form part of the planning application.

In accordance with the ‘Rochdale Envelope’ approach, the EIA for the outline component has been undertaken based on a number of fixed and outline maximum parameters.

The ‘Rochdale Envelope’ arises from two 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]. These cases dealt with outline planning applications for a proposed business park in Rochdale. The judgement within these cases set out the following key points that comprise the Rochdale Envelope approach to assessment of an outline application:

- The outline application should acknowledge the need for details of a project to evolve over a number of years, within clearly defined parameters;
- The environmental assessment must take account of the need for such evolution, within those parameters, and reflect the likely significant effects of such a flexible project in the environmental statement;
- The permission (whether in the nature of the application or achieved through ‘masterplan’ conditions) must create ‘clearly defined parameters’ within which the framework of development must take place. It is for the local planning authority in granting outline planning permission to impose conditions to ensure that the process of evolution keeps within the parameters applied for and assessed;
- Taken with those defined parameters of the project, the level of detail of the proposals must be such as to enable a proper assessment of the likely environmental effects, and necessary mitigation- if necessary considering a range of possibilities:
 - ‘The assessment may conclude that a particular effect may fall within a fairly wide range. In assessing the ‘likely’ effects, it is entirely consistent with the objectives of the Directive to adopt a cautious ‘worst case’ approach. Such an approach will then feed through into the mitigation measures envisaged.... It is important that these should be adequate to deal with the worst case, in order to optimize the effects of the development on the environment’ (Para.122 of the Judgement);
- The level of information required is: ‘sufficient information to enable *‘the main,’* or the *‘likely significant’* effects on the environment to be assessed..., and the mitigation measures to be described...’ (para.104 of the Judgement).

The proposed development parameter plan, maximum floorspace schedule, and principles for the design of the proposed development, set out in the Design and Access Statement, that have formed the basis of the assessment process for the outline component of the proposed development within the EIA are presented in Chapter 4: *Proposed Development*, ES Volume II.

2.8. Geographic & Temporal Scope of Assessment

2.8.1. Geographical Scope of Assessment

The red line boundary for the application site is shown in **Figure 3.2.1**, provided in Chapter 3: *Application Site and Surrounding Area* in this volume of the ES.

The sensitive receptors that have been considered within the assessments reported in this ES are set out in Section 2.6 above. The relevant geographical scope of assessment for each technical topic is stated within the methodology section in the respective technical topic chapter.

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2.8.2. Temporal Scope of Assessment & Assessment Scenarios

As described in ES Volume II, Chapter 6 *Construction Strategy & CEMP*, it is currently envisaged that the proposed development will be delivered over a number of phases over a 88-month period, with site preparation and enabling works anticipated to commence in Q3 2023, and completion of all construction works anticipated in Q4 2030, when the scheme will be fully operational. The first phases of the development (the detailed component) are expected to be completed and become operational in Q4 2027.

For all technical topics, an assessment of a construction phase scenario and an operational phase scenario is considered an appropriate and robust approach. Given the length of the construction period and the fact that no sensitive receptors (including the potential hotel) will be introduced by the proposed development while construction works are ongoing, an assessment of multiple construction phase scenarios is not considered necessary. It is noted that Unit 2 is likely to be build and occupied whilst construction works are ongoing around it, but as it is a commercial use, it is not considered ‘sensitive’ in EIA terms.

The scenarios that have been assessed for all topics are therefore as follows:

- The assessment of the construction phase activities, which also includes the consideration of demolition works; and
- The final completion of the scheme, assuming full occupation/operation.

In respect of the Air Quality demolition and construction stage assessment, given that vehicular traffic is expected to increase on the road network over time, the final year of the construction stage (Q4 2030) has been used as the basis of the assessment as it is likely to be the worst case. To further provide a conservative assessment, emissions factors for 2019 have been used in all scenarios given that air quality is predicted to improve in the future. Refer to Chapter 9 *Air Quality* for further information on the assessment scenarios. While these constitute the main assessment scenarios considered in the ES, some technical topics also consider further scenarios to ensure compliance with best practice or industry guidance. For example, the landscape and visual impact assessment considers both the fully operational opening year (2030) and an agreed ‘horizon’ assessment year, 15 years’ into the future once the landscaping proposals have had time to establish.

The specific assessment scenarios that have been considered for each technical topic in the ES are set out in relevant technical topic ES chapter.

2.9. Assessment of Cumulative Effects

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 phases); 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 phases), which may collectively cause a more significant effect than individually.

Inter-development cumulative effects are described within each technical chapter. Intra-development cumulative effects, meanwhile, are considered within Chapter 13: *Intra-Development Cumulative Effects*.

2.9.1. Inter-Development Cumulative Effects

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.

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’.

In relation to EIA practice in England, the Ministry of Housing, Communities & Local Government (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*”. 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.

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.

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).

Consented developments within 1 km of the site, that meet the aforementioned criteria and are yet to be completed, have been identified. These schemes are set out in **Table 2.9.1**. While existing developments generally form part of the baseline and have therefore generally been considered in the ES in this way. The main exception is any recent developments that were not completed at the time a particular baseline survey was undertaken. In this instance, whether it is most appropriate to include the scheme in the baseline or as a cumulative scheme would be considered on a topic-by-topic basis, based on what is considered the most logical and robust approach for each assessment.

Table 2.9.1
Cumulative Schemes Considered within the ES

Name/Address/ Planning Ref	Scheme Description	Stage of Development
Land South of Ridleywood Lane and, East Of Bryn Lane, Wrexham Industrial Estate, Wrexham, LL13 9UT P/2020/0167 (approved 10/08/2020) Reserved matters: P/2021/0610 (approved: 24/11/2021) Associated applications: P/2016/0327, P/2011/0891, P/2018/0977	Erection Of Storage and Distribution Warehouse together with ecological mitigation	Completed & occupied in January 2023.
Unit 6, Pacific Park, Bridge Road North, Wrexham Industrial Estate, Wrexham, LL13 9PN P/2020/0603 (approved 24/11/2020) Associated applications: P/2021/0494, P/2021/1186	Erection of 2 new industrial units on land to the north of unit 6 Pacific Park	Under construction
Land Off, Ash Road South, Wrexham Industrial Estate, Wrexham, LL13 9UG P/2015/0843 (approved: 26/05/2016) Associated applications: P/2016/0797, P/2019/0410, P/2020/0658, P/2020/0675	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

The potential for each individual scheme listed in **Table 2.9.1** 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 have been considered in the EIA, not every scheme has been 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.

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As discussed in Table 24.2 of this chapter, as Wrexham CBC consider there to be in-combination effects with future developments, and KSS2 in particular, the traffic data for the KSS2 allocation has been included within the traffic data provided for the ‘inter-development’ cumulative effects assessment that has been used for the transport, air quality and noise and vibration assessments. Given that the KSS2 site does not benefit from any planning consents at this stage, it is considered that the data used represents a conservative approach. Refer to Chapter 8 *Transport* for further information. Given the distance of the KSS2 site from the application site, it has not been considered necessary for other technical assessments to give consideration to this allocation.

2.10. ES Technical Chapter Approach

In general, each of the technical chapters of this ES, provided in ES Volume II, is structured as follows:

- Introduction;
- Methodology;
- Sensitive Receptors;
- Baseline conditions;
- Potential impacts;
- Embedded mitigation;
- Assessment of effects (including embedded mitigation);
- Additional mitigation & enhancement measures;
- Residual effects; and
- Inter-development cumulative effects.

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 full information is provided in the technical appendices.

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.

2.10.1.Introduction

This section provides details of:

- the company that has undertaken the technical assessment, as well as the author(s) and their professional qualifications;
- the purpose of the chapter;
- a list of figures supporting the assessment, which are provided within or at the end of the chapter; and
- a list of all of the technical appendices that are relevant and referenced within the chapter.

2.10.2.Methodology

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 and spatial scope of the assessment;
- which assessment scenarios have been considered and through what means;
- how baseline conditions have been assessed (e.g. site visits/surveys/review of publicly available data) and the scale of sensitivity adopted within the assessment;
- the assessment method specific to the technical topic;
- the assessment criteria used, including: how the receptor sensitivity has been determined; how impact magnitude has been assessed – specifically whether there are any aspects of the project that are relevant to the assessment but not described in Chapter 4: *Proposed Development* – and the scale of magnitude adopted within the assessment; and how effect significance has been assessed (e.g. whether a matrix or some other approach has been adopted);
- where relevant, a description of how climate change, major accidents and disasters, and human health have been taken into account within the assessment;
- any associated development (i.e. development which is required to facilitate the development but does not form part of the planning application, such as off-site utilities works) that is relevant to the assessment; and
- any assumptions or limitations.

2.10.3. Sensitive Receptors

This section takes the form of a table that provides a list of the sensitive receptors (existing & introduced) that have been identified as a sensitive receptor for consideration in the specific technical assessment reported in the ES chapter.

2.10.4.Baseline Conditions

This section takes the form of a table that provides a list of:

- the key receptors that have been identified;
- a brief description of the baseline conditions relevant to the topic in question and the key receptors;
- the sensitivity attributed to each receptor; and
- where further details can be found within the relevant technical appendices.

2.10.5.Potential Impacts

This section takes the form of a table that provides details of the potentially significant impacts of the proposed development, split by stage (i.e. demolition & construction or operation), and whether those impacts are likely to be adverse or beneficial in nature.

2.10.6.Embedded Mitigation

This section takes 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.

2.10.7.Assessment of Effects (Including Embedded Mitigation)

This section takes the form of a table or multiple tables and includes details of:

- whether the impact is relevant to the demolition & construction or operational stages of the development;
- the receptor(s) that are likely to be affected;
- the impact (including consideration of any design intervention);

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- the magnitude of the impact;
- the significance of the effect;
- whether additional mitigation is proposed; and
- where further details can be found within the relevant technical appendices.

2.10.8.Additional Mitigation and Enhancement Measures

This section takes the form of a table and includes 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 effect is adverse or beneficial; and
- where further details can be found within the technical appendices.

2.10.9.Residual Effects

This section takes the form of a table and includes 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 effect and whether it is adverse or beneficial, short-, medium- or long-term, direct or indirect, permanent or temporary, and reversible or irreversible.

2.10.10. Inter-Development Cumulative Impacts

This section is split into two parts. The first comprises a table providing the 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 it is in the planning/construction process; and
- a description of whether the scheme is likely to result in inter-development cumulative effects for the specific topic area under consideration.

The second part of this section comprises a table including the cumulative schemes relevant to the specific topic under consideration 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-project 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.

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’ table, as the residual effects would remain consistent with these effects.

This is also the case where cumulative schemes may be intrinsically considered within the main technical assessment, such as with air quality, where cumulative traffic data have been considered within Scenario 2 (Future Baseline) to capture the worst-case percentage changes from the future baseline and proposed development above the Air Quality Objectives (AQOs).

2.11. Assessment of Significance

Good EIA practice 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.

Prevailing good practice also suggests that environmental effects 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 respective sensitivity and magnitude.

In line with prevailing good practice, each of the environmental issues within the ES have been 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 have been assessed using the same significance descriptors, which helps to provide a direct comparison between the effects assessed under each chapter.

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 is provided within the relevant chapter.

The standardised approach to the assessment of effect significance across the technical chapters is described below. Where assessments have diverted from this methodology, the alternate approach is described in the relevant chapter.

2.11.1.Receptors & Sensitivity

Receptors are defined as the physical resources or user groups that are subject to impacts. They have been identified through a combination of desk-top studies and site visits undertaken by the various members of the EIA team. Further details have been 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.

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.

2.11.2.Impact & Magnitude

Impacts are generally understood to be the changes resulting from an action.

The magnitude of an impact is considered as being ‘very large’, ‘large’, ‘medium’, ‘small’ or ‘negligible’. As with sensitivity, a table is included in each chapter of the ES alongside an explanation of the rationale for each of these criteria. Where it is possible to do so, criteria are based on recognised standards and guidelines. Where this is not possible, the criteria are based on expertise and professional experience.

2.11.3.Effects & Significance

Effects are generally understood to be the consequences of impacts. The significance of the effect is informed by the magnitude of the impact and the sensitivity of the receptor.

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.

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Broad definitions for each of these descriptors are provided below:

- **Negligible** – Effects which 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.
- **Minor** – These effects may be raised as local issues and may be of relevance in the detailed design of the project but are unlikely to be critical in the decision-making process.
- **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.
- **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.

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 has also been outlined within the relevant ES technical chapter.

In addition to the significance of the effect, statements are also 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).

Where relevant, inter-development cumulative effects have been described within each technical chapter. Intra-development cumulative effects, have, however, been considered within Chapter 13: *Intra-Development Cumulative Effects*.

2.12. Topics Not Requiring Individual Chapters

As set out in the EIA Scoping Report, for topics considered to have the potential for likely significant environmental effects, a detailed assessment has been provided within a technical chapter in the main volume of the ES. The only exceptions to this approach are climate change, major accidents and disasters, and human health. Stand-alone technical chapters have not been prepared for these topic areas. Instead, where the effects of the proposed development in relation to climate change, major accidents and disasters, or human health are relevant to a specific technical assessment, this is stated and reported within the respective ES chapter. Further information on each of these topic areas and how they have been considered throughout the ES is provided below.

2.12.1.Climate Change

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)).

The effects of climate change that are relevant to each technical topic have been considered within the respective technical ES chapter.

For those assessments where climate change is relevant, the following has been 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.

If climate change does not affect the assessment of the technical discipline, this has been stated.

Summary of Climate Change Projections

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.

Table 2.12.1 summarises the results of the UK Climate Projections (UKCP18) for the Welsh administrative area for the RCP8.5 (high) emissions scenario between 2080 and 2099.

Table 2.12.1
UKCP18 Projections for Climate Variables for a Medium Emissions Scenario (RCP4.5) in Wales

Variable	2080-2099 Projections		
	UKCP18 Probability Level ¹		
	10% (Approx. Lower Limit)	50%	90% (Approx. Upper Limit)
Mean annual temp (°C)	2.2	3.9	5.7
Mean temp. over summer months (JJA) (°C)	2.4	5.2	8
Mean temp. over winter months (DJF) (°C)	1.2	3.2	5.3
Mean winter precipitation change (mm)	0	22	48
Mean summer precipitation change (mm)	-62	-36	-5

1. The following probability levels of projections have been used: 10% level – indicates that 10% of the UKCP18 model runs fall at or below the specified value. 50% level – indicates that 50% of the UKCP18 model runs fall at or below the specified value. 90% level – indicates that 90% of the UKCP18 model runs fall at or below the specified value.

Source: DEFRA UKCP18 Climate Projections (2022) (4)

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2.12.2. Major Accidents and Disasters

The EIA Regulations 2017 introduced the requirement for EIAs to consider the expected effects arising from the vulnerability of projects to major accidents or disasters. The EIA Regulations 2017 specifically require the assessment of potential significant effects to include ‘*the expected effects deriving from the vulnerability of the proposed development to risks of major accidents and/or disasters that are relevant to that development*’ (Part 1, Paragraph 4).

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*”.

The IEMA Major Accidents and Disasters in EIA Primer (2020) constitutes the primary industry guidance on major accidents and disasters in EIA. In addition to this Primer, the following additional sources have informed the consideration of major accidents and disasters within this ES:

- Cabinet Office National Risk Register (NRR) 2020 Edition (5);
- UK Government Emergency Response & Recovery Guidance (October 2013) (7); and
- International Federation of Red Cross & Red Crescent Societies Disaster & Crisis Management Guidance.

Major accidents and disasters of potential relevance to the proposed development include vehicle accidents. Chapter 8 *Transport* has therefore given consideration to impacts from major accidents and disasters, where relevant. Chapter 12: *Ground Conditions and Contamination* has also considered the potential impacts from accidental spills, as discussed in **Table 2.4.2**.

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.

Therefore, potential impacts from risks of major accidents and disasters have not been presented in a discrete technical ES chapter. However, vehicle accidents and accidental spills have been considered in the Transport and Ground Conditions & Contamination ES chapters, respectively. This is in line with advice provided in the IEMA Major Accidents and Disasters in EIA Primer (4), which states that:

“Major accidents and/or disasters can be scoped out of the assessment if you can clearly demonstrate that:... all possible major accidents and/or disasters are adequately covered elsewhere in the assessment or covered by existing design measures or compliance with legislation and best practice.”

2.12.3. Human Health

Many of the technical ES chapters 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. contaminated land, 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).

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 have been 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, have been referenced where necessary.

2.13. Over-Riding Difficulties

No over-riding difficulties, such as technical problems or lack of know-how, were encountered during the preparation of this ES that significantly reduces its ability to fulfil its purpose.

Any minor difficulties experienced and/or assumptions made during the completion of individual surveys/assessments are discussed in the methodology section of the relevant technical chapter(s) and the relevant technical appendices.

2.14. Works Cited

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