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COMMERCIAL PROPERTY ADVICE



**Request for a Screening and Scoping Opinion  
Town and Country Planning Act 1990  
The Town and Country Planning (Environmental Impact Assessment) Regulations 2017**

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**Amendments to the consented new bridge over the River Trent and Walton-on-Trent Bypass**

**On Behalf Of:**  
Countryside

**Prepared By:**  
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Issued

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Bypass**

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**Date.....10-11-2023.....**

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## **1.0 INTRODUCTION**

### **1.1 Background**

- 1.1.1 Harris Lamb Property Consultancy (**HLPC**) has been commissioned by Countryside Partnerships (the “**Applicant**”) to prepare a screening opinion and scoping request under The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) in relation to changes to a consented new bridge over the River Trent and a bypass around the village of Walton-on-Trent (hereafter the “**Consented Scheme**”) which sits across the administrative areas of East Staffordshire Borough Council (ESBC) and South Derbyshire District Council (SDDC) (Section 9 of this report for plans).
- 1.1.2 Countryside Partnerships (here after “**Countryside**”) are required to construct a new bridge over the River Trent and a bypass around the village of Walton-on-Trent as part of the redevelopment of the former Drakelow Power Station site, located c. 2.3 km to the north-east of Walton-on-Trent (NGR: SK 23776 19833), which has planning permission for approximately 2,200 homes and associated infrastructure (hereafter called “**Drakelow Park**”)¹. David Wilson Homes (DWH) completed the first phase of the development, and the Applicant has now secured Reserved Matters Approval for their first phase of development and construction is now underway.
- 1.1.3 The Consented Scheme has two planning permissions: one for South Derbyshire (reference 9/2003/1525/M) and one for East Staffordshire (reference PA/28617/001). The previous owner subsequently applied to vary the planning permission issued by South Derbyshire, so the extant permission is 9/2006/0973/B. The Consented Scheme was due to be delivered by the 400<sup>th</sup> occupation of the residential development at the Drakelow Park.

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¹ APP/B3410/A/05/1187474 Appeal granted 6<sup>th</sup> November 2006 SSBC

1.1.4 Since planning approval for the Consented Scheme, Countryside have been engaging with the two highway authorities and the Environment Agency in order to secure technical approval for construction of the consented new bridge over the River Trent and a bypass around the village of Walton-on-Trent. However, due to technical approval not being awarded the Consented Scheme cannot currently be implemented. As such, agreement currently is being sought for a change in the trigger level of occupied dwellings at the Drakelow Park site from the 400<sup>th</sup> occupation to the 800<sup>th</sup> occupation. This agreement is outside the current planning application as it will be agreed through a Section 106 Deed of Variation.

1.1.5 However, amendments are needed to the Consent Scheme to secure technical approval largely a result of the time passed since the original consents were granted. Currently, the following changes have been identified that are required to secure technical approval:

- Design Flood Level has changed since 2005 meaning the bridge deck over the River Trent and highway need to be elevated above flood level including freeboard from the Consented Scheme.
- Changes to guidance for design of roads and bridges and changes to the Design Flood Level has also led to a change in the horizontal alignment of the road that may require additional land. Larger embankment footprint impacts on adjacent land boundaries and Extra-High Voltage (EHV) pylon stand-off requirements which is also a factor in the requirement for the revised horizontal alignment.
- The road in the vicinity of the Hanson Quarry entrance on Station Lane currently floods and there is an opportunity to mitigate this existing issue with the tie in at the western end of the alignment that may necessitate additional land.

- The box culverts and their design are not supported and the request for a departure from standard was rejected due to maintenance requirements.

1.1.6 In light of the above, it is necessary to amend the extant planning permissions so that the new road and bridge is capable of being built following the grant of technical approval by the two respective highway authorities. Section 9 (Plans) shows the Consented Site boundary and the additional land boundary anticipated to be required to meet the above requirements at this stage.

1.1.7 Countryside intend to submit a Section 73 application to each Local Authority (ESBC and SDDC) to agree changes to the Consented Scheme. In addition, a new full planning application will be submitted to ESBC to include land required to accommodate the changes to the alignment of the new road to tie into the existing bank/highway at the western extent and a Section 73 application cannot be used.

1.1.8 A separate revision of the Transport Assessment (TA) is being undertaken in relation to the change in the trigger level at which the Consented Scheme is to be provided to give time for the Consented Scheme to be redesigned and approved, whilst avoiding delay to the continued delivery of new homes at Drakelow Park. This is being considered separately under a S106 Deed of Variation. The predicted generation of traffic is expected to be lower than that already approved. The changes required to the Consented Scheme to secure technical approval for construction is not predicted to alter the predicted trip generation.

## **1.2 Need for an EIA**

1.2.1 It is Applicant's view that the development as a whole would constitute EIA development having regard to the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 as amended. The development falls into *Schedule 2, Section 10 – Infrastructure projects (f) being the construction of a road greater than*

*1 hectare in size* and as the Proposed Development is likely to have significant effects on the environment by virtue of factors such as its nature, size or location.

1.2.2 Taken together with the knowledge that the previous Consented Scheme was an EIA development, the decision has been taken not to separately request a formal EIA Screening Opinion. Instead, this document requests a combined EIA Screening Opinion and an EIA Scoping Opinion with both Local Planning Authorities (LPAs) on the basis that the change to the Consented Scheme requires an EIA. Scoping the EIA is focussed on making sure the scope is relevant and proportionate to only those changes required to the Consented Scheme.

### **1.3 EIA Scoping Process**

1.3.1 EIA Scoping is undertaken prior to an EIA to understand the potential receptors that may be affected by the Proposed Development and informs the scope of the EIA and, therefore, the Environmental Statement (ES) which is the document that details the EIA.

1.3.2 EIA Scoping assists in focusing the attention (of developers, consultees and decision makers) on key environmental impacts for inclusion and consideration within the EIA and also identifies those matters which do not need to be assessed in detail.

1.3.3 This Scoping Report has been prepared to facilitate early pre-application engagement with key statutory consultees and stakeholders on the Proposed Development together with the proposed structure, methodology and content of the EIA.

1.3.4 It is the purpose of this document to, therefore, request a Scoping Opinion under Section 15 of the EIA Regulations. This document aims to provide the relevant planning authorities with the following information as required under the EIA regulations to provide a Scoping Opinion:

- 15 (2) A request under paragraph (1) must include—
- (a) in relation to an application for planning permission—
  - (i) a plan sufficient to identify the land;
  - (ii) a brief description of the nature and purpose of the development, including its location and technical capacity;
  - (iii) an explanation of the likely significant effects of the development on the environment; and
  - (iv) such other information or representations as the person making the request may wish to provide or make;
- (b) in relation to a subsequent application—
  - (i) a plan sufficient to identify the land;
  - (ii) sufficient information to enable the relevant planning authority to identify any planning permission granted for the development in respect of which the subsequent application is made;
  - (iii) an explanation of the likely significant effects on the environment which were not identified at the time planning permission was granted; and
  - (iv) such other information or representations as the person making the request may wish to provide or make.

#### **1.4 Structure of this Document**

- 1.4.1 The remainder of this Scoping Report comprises the following chapters which aim to address the requirements above:



- Chapter 2: Describes of the existing environment with the currently identified environmental sensitivities.
- Chapter 3: Describes the Proposed Development.
- Chapter 4: Describes the consideration of alternatives.
- Chapter 5: Provides a summary of the planning context.
- Chapters 6: Identifies key environmental issues (including cumulative effects) identified to date relating to each of the environmental assessment topics and the proposed methodologies and approaches for the assessment of potential effects in the EIA.
- Chapter 7: Provides an overview and justification for the of the topics that have been scoped out of EIA.
- Chapter 8: Provides the structure of the ES and summarises the general approach that will be undertaken for the EIA.
- Chapter 9: Plans and Appendices

## **1.5 The Project Team**

- 1.5.1 This document has been prepared by HLPC on behalf of the Applicant with technical input from a range of specialist consultants with expertise in similar developments. Table 1.1 identifies the team members and their responsibilities.

**Table 1.1: Project Team**

Area of Expertise	Consultant
Planning	HLPC
Project management and design	Brookbanks and Cass Hayward
EIA Co-ordination & ES Production	HLPC
Landscape and Visual	Aspect
Historic Environment	Daclour Maclaren
Ecology	HLPC
Transport	Capricorn
Air Quality	Air Pollution Services
Noise and Vibration	Hepworth Acoustics Services
Water Environment/Drainage	JBA Associates
Ground Conditions	Cass Haywood
Major Accidents and Natural Disasters	HLPC
Human Health	HLPC – input by above team

1.5.2 As required by Regulation 18.5 a and b of the EIA Regulations the EIA will be prepared by competent experts and copies of C.V.s are available upon request.

## **1.6 General Assumptions**

1.6.1 This report has been produced at an early stage of preliminary design and can only be based on information available up to this point. Designs are being developed and proposed construction methodology has not been finalised. Where there are data gaps, a precautionary approach has been taken. Each environmental factor has specific assumptions and limitations, and these are highlighted within individual sections.

1.6.2 The heat and radiation topic required under the EIA Regulations 2017 is not relevant to a road scheme. The Proposed Development would not introduce any sources of radiation and although it would generate limited amounts of heat from minor elements such as lighting, this would not cause significant effect to any receptors. This topic has therefore been scoped out of this report and will not be assessed further within the EIA.

## **2.0 DESCRIPTION OF THE EXISTING ENVIRONMENT**

### **2.1 Location of the Proposed Development**

- 2.1.1 The site comprises land on both the Staffordshire and Derbyshire sides of the River Trent with the new bridge linking the two parcels. A site location plan is provided in Section 9 (Plans).
- 2.1.2 On the Derbyshire side (eastern extent approximate end grid reference NGR SK 21934 18510), the site consists of fields dominated by unmanaged tussocky grassland north of the Walton Cricket Club ground on the north side of Walton-on-Trent between the river and the road to Drakelow (Drakelow Road).
- 2.1.3 On the Staffordshire side (western extent approximate end grid reference SK 20690 18150) the site comprises the water meadows, again dominated by unmanaged grassland, and is adjacent to Tucklesholme Nature Reserve constructed in 2018 and managed by Staffordshire wildlife Trust (SWT). Several Public Right of Ways (PRoWs) run along the outer edge of Tucklesholme Nature Reserve and partly along the northern Site boundary, along with two Long Distance Routes – ‘National Forest Way’ and ‘Cross Britain Way’ in the immediate context of the site. Two of these PRoWs cross the site onto Station Lane.
- 2.1.4 For the most part, the site is on flat, low-lying valley landform and floodplain either side of the River Trent on mostly undeveloped land that rises gently in its eastern extents up to Main Street, north of Walton-on-Trent, which connects the village to Drakelow.
- 2.1.5 Station Lane provides the current access over the River Trent and access to Walton-on-Trent from the west. The existing bridge over the river is called Bailey Bridge or Walton Bridge which is a single lane bridge built in the 1940s and meant to be a temporary bridge over the river with traffic challenges as a result. A series of lakes

associated with Barton Quarry characterises the floodplain beyond this road to the south.

- 2.1.6 The village of Walton-on-Trent lies immediately south of the eastern extents of the Site and Walton Cricket Club and the Grade II\* listed Church of St Laurence are located adjacent to the southern Site boundary.

## **2.2 Site Planning History**

- 2.2.1 Two planning applications were originally submitted for the bridge and bypass to the respective planning authorities on either side of the River Trent. Application 9/2003/1525/M was submitted to SDDC and was approved on 26<sup>th</sup> May 2005. Application PA/28617/001 was submitted to ESDC on the 17<sup>th</sup> December 2003 and was refused by Notice dated 15<sup>th</sup> July 2005. A subsequent appeal was lodged (APP/B3410/A/05/1187474) which was allowed on the 6<sup>th</sup> November 2006.
- 2.2.2 A subsequent Section 73 application to vary condition 11 of the SDDC road permission (9/2006/0973/B) was approved on 29<sup>th</sup> May 2007.
- 2.2.3 Following the grant of the respective planning permissions, associated planning conditions were discharged and the permissions were implemented. Countryside sought confirmation that both permissions remained extant through the submission of applications for Certificates of Lawful Development which were both approved by the respective Councils (SDDC - DMPN/2020/1362 and ESDC - P/2020/01411).
- 2.2.4 Since planning approval updated flood modelling work has identified the risk of flooding of the new bridge and bypass due to changing flooding predictions in the intervening time and further work is needed to agree an acceptable design solution with the relevant authorities which require additional planning consents.

## 2.3 Identified Environmental Receptors

2.3.1 An initial review of the environmental receptors within the vicinity of the Site that could be affected by the proposed changes is provided in Table 2.1. This may not be an exhaustive list as further work is undertaken by the technical team and any feedback of known environmental receptors known by the consultees would be welcomed. Given the time lapse since the original assessment was undertaken the environmental baseline has also altered for some technical disciplines. At the time of writing this report the original Environmental Statement that accompanied the planning applications for the Consented Scheme has been requested as an electronic copy of the Environmental Statement was not available on-line.

**Table 2.1: Identified Environmental Receptors**

Topic	Key environmental constraint identified to date
Landscape and Visual	<p>The Site is not covered by any national or local qualitative landscape designations.</p> <p>National Character Area (NCA) 69: Trent Valley Washlands and immediately adjacent to NCA 72: Mease / Sence Lowlands.</p> <p>The Landscape Character of Derbyshire (4th Edition, March 2014) identifies the Site as being covered by the Mease / Sense Lowlands: 'Village Estate Farmlands' Landscape Character Type (LCT) in its easternmost extents and the Trent Valley Washlands: 'Riverside Meadows' LCT between this landscape and the River Trent. On the western side of the River Trent, the Planning for Landscape Change SPG (May 2001) assessment identifies the Site as being covered by the Trent Valley Washlands: 'Riparian Alluvial Lowlands' LCT.</p> <p>Public Rights of Way and two Long Distance Routes – 'National Forest Way' and 'Cross Britain Way' on-site / in the immediate context of the Site.</p>
Historic Environment	<p>The Site is not located within a World Heritage Site, Registered Park and Garden, Registered Battlefield, nor does it contain, wholly or in part any Listed Buildings or Scheduled Monuments. The following assets are within the vicinity of the Proposed Development:</p> <p>St Laurence Church (List Entry No 1159347) (Grade II*)</p> <p>Lynchgate to east of St Laurence's Church (List Entry No 1224601) (Grade II)</p> <p>Barr Hall and attached farm buildings (List Entry No 1096426) (Grade II)</p> <p>Walton on Trent Conservation Area</p> <p>One of a line of three World War II concrete pillboxes is recorded within the Site on the western side of the Trent and was situated to defend Walton Bridge (MST4831). The pillbox is not a listed asset.</p> <p>Numerous historic features identified within the wider landscape as set out in Appendix 1 Section 10 including evidence of human occupation from pre-historic through to the post-medieval period.</p>
Ecology	<p>Branston Waterpark LNR c. 2km north</p> <p>River Mease Special Area of Conservation (SAC) Site of Special Scientific Interest (SAC)</p> <p>National Forest Inventory Woodland Felled</p>

Topic	Key environmental constraint identified to date
	Priority Habitats Coastal and floodplain grazing marsh (western side)
Air Quality	The proposed development is not situated within an air quality management area (AQMA), suggesting existing levels of pollution are acceptable in the local area.
Noise	Noise sensitive receptors e.g. pedestrians, residential dwellings, places of worship, recreational areas, offices, sports grounds etc.
Water Environment	<p>The majority of the Proposed Development site is at risk from flooding, with the site predominately in Flood Zone 3 of the Flood Map for Planning.</p> <p>River Trent and the Barton Brook, a tributary of the Trent are within the Site. The River Trent and the Barton Brook are Statutory Main Rivers.</p> <p>The site is underlain by Secondary A aquifer and a Secondary B aquifer. The Tame Anker Mease - Secondary Combined groundwater body exists under the Site.</p>

### **3.0 NATURE AND PURPOSE OF THE DEVELOPMENT**

#### **3.1 The Consented Scheme**

3.1.1 The Consented Scheme provides a new 1.5 km bypass to serve the new Drakelow Park development and to skirt the village of Walton-on-Trent, which will result in removing local and development traffic and ease traffic levels in the village at peak times by constructing a new bridge over the River Trent and retain the Bailey Bridge that will be turned into a pedestrian-only walkway. The Consented Scheme is shown in Section 9 (Plans).

#### **3.2 Proposed Development**

3.2.1 The EIA is being prepared to support proposed amendments to an already permitted scheme for a bypass around the village of Walton on Trent and a new bridge over the River Trent. The overall description of what is proposed is:

3.2.2 *“Proposed amendments to the alignment and configuration of previously approved Walton bypass and new bridge over the River Trent”.*

3.2.3 The need to amend the alignment and configuration of the previously approved bridge (Consented Scheme) is now required in order to achieve technical approval from the respective Highway Authorities in order to be able to construct it. To summarise, the changes that are now anticipated to be required include:

- Increase the height of the span of the bridge.
- Realign the route of the road/bridge where it ties into the existing highway on the Staffordshire side of the River Trent.
- Construction and incorporation of new culverts within the overall bridge design to address concerns over flooding.

3.2.4 Whilst the overall objective is to secure the realignment and reconfiguration of the bridge and road, the method of how this is to be achieved is dictated by the fact that the proposed bridge runs between two administrative areas; South Derbyshire District Council (SDDC) and East Staffordshire Borough Council (ESBC). When planning permission was originally granted, a separate planning permission was issued for the respective parts of the bridge and road that fell within each Council area. As such, there are two planning permissions; one for South Derbyshire (9/2003/1525/M) and one for East Staffordshire (PA/28617/001). The previous owner subsequently applied to vary the planning permission issued by South Derbyshire so the extant permission is 9/2006/0973/B.

3.2.5 It is proposed that two Section 73 applications will be submitted, one to each Council, seeking to vary the approved plans listed on the permission to address the proposed changes to the height and alignment of the bridge and road. A separate full planning application will also be submitted to East Staffordshire seeking approval for what will largely be engineering works that are required to facilitate the new tie in of the road/bridge to the existing highway. As these works sit outside of the red line area of the previously permitted scheme a Section 73 application cannot address these changes hence a new application is required for these works. The three applications in totality will address the amendments to the bridge and road that are required. To summarise, the three applications that are to be submitted are:

- **Application 1** – South Derbyshire: “*Section 73 application to vary condition 4 on planning permission 9/2006/0973/B to amend previously approved plans to reflect proposed changes to the height of the bridge*”.
- **Application 2** – East Staffordshire: “*Section 73 application to vary condition 2 and the plans listed in Appendix A on planning permission PA/28617/001 to amend*”.



*previously approved plans to reflect proposed changes to the height and alignment of the bridge and road”.*

- **Application 3** – East Staffordshire: “*Full planning application for engineering and associated works required in order to construct and facilitate the proposed changes to the road and bridge (as previously approved by PA/28617/001)*”.

3.2.6 Taking a precautionary approach, for the purposes of the EIA the three applications are to be considered together as no one element can be delivered on its own.

### **3.3 Phasing and Timing**

3.3.1 The Proposed Development is expected to open to traffic in 2025-2026, by which time 800 dwellings would be occupied at Drakelow Park. The Drakelow Park development is programmed for full completion by 2033.

### **3.4 Consultation**

3.4.1 This Scoping Report will be submitted to ESBC and SDDC to request a formal Scoping Opinion in accordance with the EIA Regulations. The EIA will be based on the consultation responses from each Council.

3.4.2 The Applicant has been engaged in formal pre-application advice and consultation as follows:

- A series of Technical Workshops with Key Stakeholders including Staffordshire County Council and Derbyshire County Council (Highways and Structures) and the Environment Agency over 18 months.
- Initial consultation with Staffordshire Wildlife Trust.

3.4.3 The Applicant welcomes comments on the content of the Scoping Report and the assessment methodologies proposed. The Applicant is keen to seek views on

whether additional data sources should be accessed, and whether additional bodies or organisations should be consulted during the EIA process. Consultation responses regarding specific technical areas will be incorporated into the appropriate sections of the ES.

### **3.5 Cumulative Schemes**

- 3.5.1 The EIA will consider the effects of the Proposed Development in isolation, and also any potential cumulative impacts that may arise when the scheme is considered alongside other developments in the vicinity. The scope of the cumulative assessment will be determined in consultation with SSBC and SDDC.
- 3.5.2 The envelope over which cumulative impacts are to be considered will be determined in consultation with SSBC and SDDC. Other relevant existing and/or permitted developments within this area will be recorded and cumulative effects assessed within an area to be agreed as part of the scoping process.
- 3.5.3 The scope of cumulative assessment for individual technical topic areas will be dictated by the nature of the impacts under those topic areas, the level of information available at the time of the assessment and good practice guidance as appropriate.
- 3.5.4 We have undertaken a review of current applications in planning and note that there are two large scale residential schemes that are being considered by South Derbyshire including the proposals at Land North of Shardlow Road and West of Alvaston Bypass (DMPA/2023/1271) and Land to the West of Primula Way, Littleover (DMPA/2022/1617). However, due to the distance of these schemes from the proposed application site we do not consider that there would likely be cumulative impacts arising and in conjunction with the Proposed Development. There do not appear to be any current major developments being considered by East Staffordshire.

Should either Council be aware of other applications we would be happy to include these in the assessment.

## **4.0 CONSIDERATION OF ALTERNATIVES**

### **4.1 Introduction**

4.1.1 Part 5, Schedule 18 of the EIA Regulations requires an outline of the main alternatives studied by the applicant. In this instance the potential alternative scenarios comprise: firstly, do nothing; secondly, consideration of an alternative strategic development proposal; and, thirdly, consideration of an alternative configuration of development within the Site.

### **4.2 Do Nothing**

4.2.1 The majority of the Site benefits from planning permission and for this reason, a “do nothing” scenario is not proposed to be considered in detail within the assessment. The additional areas of land are required to secure technical approval for Proposed Development by the regulating authorities and therefore these areas cannot be considered separately under a “Do Nothing” consideration. Furthermore, a driving need for the changes to the Consented Scheme to achieve technical approval is to meet revised Design Flood Levels and as such a “Do Nothing” approach would not be considered appropriate.

### **4.3 Consideration of Alternative Strategic Development**

4.3.1 The majority of the Site benefits from planning permission and for this reason “consideration of alternative strategic development” scenario will not be assessed in detail.

4.3.2 The Applicant does not control alternative land in the local area which can be delivered to provide the development proposed. The Applicant has full control of this Site and therefore there are no land ownership/availability barriers to development.

#### **4.4 Design Alternatives**

- 4.4.1 Changes to the Consented Scheme will be informed by the following a suite of environmental assessments and through feedback from statutory consultees prior to design fix in an iterative way to minimise environmental impacts that will be set out in the ES.

## **5.0 PLANNING POLICY OVERVIEW**

5.1.1 A summary of the relevant planning policies of the respective Development Plans for both South Derbyshire District Council and East Staffordshire Borough Councils is provided below and any feedback on the relevant policies for the Proposed Development to be considered is welcomed.

### **5.2 South Derbyshire District Council Local Plan**

5.2.1 The South Derbyshire District Council Part 1 Local Plan was adopted in June 2016 and covers the period 2011 to 2028. Relevant policies include Policy S1 Sustainable Growth Strategy. The policy states that the Plan will ensure that new infrastructure is provided to support the growth across the District. This will include new transport and education provision.

5.2.2 Policy S2 reiterates the presumption in favour of sustainable development set out within the National Planning Policy Framework confirming that Councils will work proactively with applicants to seek solutions which means that proposals to secure development that improves the economic social and environmental conditions in the area will be supported.

5.2.3 Policy SD2 Flood Risk states that when considering development proposals the Council will follow a sequential approach to flood risk management giving priority to the relevant of sites with the lowest risk of flooding. It goes on state that development in areas that are identified at being at risk of flooding will be expected to be resilient to flooding throughout the design and layout, incorporate appropriate mitigation measures, not increase flood risk to other properties or surrounding areas and not affect the integrity or continuity of existing flood defences.

5.2.4 Policy BNE1 Design Excellence states that all new developments will be expected to be well designed, embrace the principles of sustainable development, encourage

healthy lifestyles and enhance people's quality of life. In respect of design, principal new areas of growth that span administrative, landownership, developer parcel or phase boundary should be considered and designed as a whole through a collaborative working approach.

- 5.2.5 Policy BNE2 confirms that development that affects South Derbyshire's heritage assets will be expected to protect, conserve and enhance the assets and their settings in accordance with national guidance.
- 5.2.6 Policy BNE3 Biodiversity confirms that the Local Planning Authority will support development which contributes to the protection, enhancement, management and restoration of biodiversity or geodiversity and delivers net gains in biodiversity where possible.
- 5.2.7 Policy BNE4 Landscape Character and Local Distinctiveness confirms that the quality of South Derbyshire's landscape and soilscape will be protected and enhanced through the careful design and sensitive implementation of new development. It goes on to say that in bringing forward proposals developers will be expected to demonstrate that close regard has been paid to the landscape types and landscape character areas identified in the landscape character of Derbyshire.
- 5.2.8 Policy INF2 Sustainable Transport confirms that planning applications for development with significant transport implications should be accompanied by a Transport Assessment.
- 5.2.9 The Council have also adopted a Part 2 Local Plan which contains non-strategic housing allocations and detailed development management policies. Relevant policies to the consideration of the proposed development includes policy BNE12. The former power station land confirms that the Council will support development on the former Drakelow and Willington power station sites as shown on the Policies Map.

In respect of the former Drakelow Power Station the policy confirms that uses within use Class B1, B2 and B8 and for energy purposes to assist in the regeneration of the previously developed land would be supported. It notes that the existing Drakelow Nature Reserve will be retained to its current extent along with the creation of a buffer zone.

5.2.10 The area of bridge and road on the Derbyshire site of the River Trent is shown as white land on the adopted Proposals Map. There are no designations or specific policies to consider in respect of the proposed development.

### **5.3 East Staffordshire Local Plan**

5.3.1 The East Staffordshire Local Plan covers the period 2012 to 2031 and was adopted in October 2015. On the Proposals Map the site is identified as being in Flood Zones 2 and 3 and also subject to the national forest designation.

5.3.2 Principle 1 reiterates the Framework's presumption in favour of sustainable development whilst Strategic Policy 1 sets out how development proposals will be required to demonstrate the principle of sustainable development and how they will be assessed against the presumption in favour of sustainable development.

5.3.3 Strategic Policy 8 sets out how development outside settlement boundaries will be considered noting that it will not be permitted unless it is necessary to deliver infrastructure development where an overriding need for the development to be located in the Countryside can be demonstrated. In considering proposals an application will be judged against a number of criteria including that the proposed development will not have an adverse impact on the transport and highway network and that it provides adequate access for all necessary users.

5.3.4 Strategic Policy 9 states that the Council will ensure that sufficient on and off site physical, social and community infrastructure is provided to support development.



- 5.3.5 Strategic Policy 26 confirms that the Borough Council will support implementation of the National Forest Strategy 2014 to 2024. It goes on to state that developments shall contribute towards the creation of the forest by providing onsite or nearby landscaping that meets the national forest development planting guidelines.
- 5.3.6 Strategic Policy 27 confirms that proposals in flood risk areas, or proposals which would affect such areas, would only be permitted where they would not cause unacceptable harm to the following interests:
- 5.3.7 The protection and storage capacity of the floodplain, washlands and other areas at risk from flooding;
- access to watercourses for maintenance;
  - characteristics of surface water runoff;
  - the integrity of fluvial defences;
  - the drainage function of the natural watercourse system; or
  - a necessity for additional public finances for flood defence works.
- 5.3.8 The policy confirms that the Council will require a Flood Risk Assessment in areas at risk of flooding (land within Flood Zones 2 and 3) and the proposals that have potential to generate significant volumes of surface water runoff due to the size to assess the impact on the foregoing interests.
- 5.3.9 Strategic Policy 29 confirms that when considering proposals for development the Council will seek to protect, maintain and enhance the biodiversity and geodiversity of the Borough amongst other measures ensuring the development retains, protects and enhances features of biological and geological interest and provides for the appropriate management of these features. It also seeks to ensure that development

produces a net gain in biodiversity in line with UK and/or Staffordshire Biodiversity Action Plan Species and biodiversity opportunities.

5.3.10 Strategic Policy 30 Locally Significant Landscape states that within locally significant landscape areas development will not be allowed which would adversely affect the quality, character, appearance or the setting of these areas.

5.3.11 Detailed Policy 1 states that planning permission would normally be granted for development which responds positively to the context of the surrounding area and itself exhibits a high quality of design is compliant with the Staffordshire design guide.

#### **5.4 Local Plan Review**

5.4.1 South Derbyshire consulted on Issues and Options to inform a new Local Plan concluding in December 2022. Due to the relatively early stage of the Local Plan preparation the Issues and Options document is not considered relevant to the current proposals.

5.4.2 East Staffordshire undertook a review of the Local Plan at an Extraordinary Council Meeting on 19th October 2020. The review was undertaken in line with policy SP6 of the Local Plan and Regulation 10a of the Town and Country Planning (Local Planning) (England) Regulation 2017 as amended. The recommendation that the update to the Local Plan, be delayed for a maximum of 5 years, was agreed and as such the current adopted Local Plan remains extant and forms part of the Development Plan for East Staffordshire. A further review took place in December 2021 and a subsequent review in 2022. Again, it was concluded that the Local Plan was considered to be up to date for the purposes of decision-making and no further review is currently proposed.

5.4.3 We would welcome feedback from the respective LPAs on any additional relevant planning policy required for consideration.

## **6.0 POTENTIALLY SIGNIFICANT ENVIRONMENTAL ISSUES**

### **6.1 Background**

6.1.1 Based on the nature of the Proposed Development and the location of the Site, an initial environmental constraints exercise was undertaken to identify the likely significant environmental effects of the Proposed Development and, therefore, inform the scope of the EIA. The remainder of this Scoping Request provides the proposed scope of the EIA in terms of technical assessments and the methodology proposed.

### **6.2 Landscape and Visual**

#### Scope of Assessment

6.2.1 The Proposed Development will require changes to the vertical and horizontal alignment of the bypass and new bridge and changes to the existing and proposed flood attenuation scheme and a small area of landtake outside the previously consented area as required by the EA and Highways Authority to raise the existing road out of the flood zone.

6.2.2 Following on from the initial findings summarised below, a detailed appraisal of the surrounding study will be undertaken by Aspect, including a thorough desktop study, using Ordnance Survey data, historical map data, local policy and published character assessments. A Zone of Theoretical Visibility (ZTV) Plan will also be prepared by Aspect to identify the theoretical extent of visibility of the Proposed Development typically covering a 3 km study area, which is considered appropriate for the size, scale and location of the proposals. It is noted, however, that the exact extent of the study area will be informed by the ZTV and is likely to be less than 3 km. The desktop study and ZTV will inform further on-site field analysis to identify key viewpoints, analyse the character and visual environment of the local area, and determine the extent and significance of any potential landscape and visual effects.

- 6.2.3 The assessment of effects will be derived from guidance provided within GLVIA3 (Guidelines for Landscape and Visual Impact Assessment 3rd Edition) published by the Landscape Institute and the Institute of Environmental Management and Assessment in April 2013.
- 6.2.4 A detailed appraisal of the Site and its setting and the assessment of landscape and visual effects of the Proposed Development will be included as part of a Landscape and Visual Impact Assessment (LVIA).

Baseline Conditions

- 6.2.5 The Site and its setting are illustrated on ASP1 – Site Location Plan, ASP2 – Site and Setting Plan and ASP3 – Designations Plan, with the topography of the Site and its setting illustrated on ASP4 – Topography Plan (refer Section 9).
- 6.2.6 The Site comprises several pasture and grassland fields and river meadows associated with the River Trent floodplain to the north and west of Walton-on-Trent, Derbyshire. In landscape terms, the Site is not covered by any national or local qualitative landscape designations. It is noted that the area forms part of the National Forest and Tucklesholme Nature Reserve, a former gravel pit, bounds the north-western extents of the Site. The River Trent divides the Site in two, flowing in a north-easterly direction. The northern extents of Walton-on-Trent Conservation Area covers the eastern land parcels of the Site.

*Landscape-related Policy Overview:*

- 6.2.7 The Site is covered by the landscape-related policies of SDDC's Adopted Local Plan Part 1 (adopted June 2016) covering the period 2011-2028 and Adopted Local Plan Part 2 (Adopted November 2017) and ESBC's Local Plan 2012-2031 (adopted October 2015).

6.2.8 Relevant adopted Supplementary Planning Documents (SPDs) and Supplementary Planning Guidance (SPG) in landscape and visual terms include SDDC's South Derbyshire Design Guide SPD (November 2017), Trees & Development SPG (May 2004) and ESBC's Design Guide (June 2008) and Planning for Landscape Change SPG (May 2001).

6.2.9 It is also noted that The National Forest Strategy 2014-2024 forms part of the evidence base for SDDC and that the Walton-on-Trent Conservation Area Character Statement (SDDC, 2014) contains landscape and visual analysis of land covered by the Conservation Area.

*Landscape Character Overview – Published Studies:*

6.2.10 At National level, Natural England's National Character Area Profiles (September 2014) locates the Site within National Character Area (NCA) 69: Trent Valley Washlands and immediately adjacent to NCA 72: Mease / Sence Lowlands, which covers land to the east.

6.2.11 At County / District level, the Site is covered by three character areas. The Landscape Character of Derbyshire (4th Edition, March 2014) identifies the Site as being covered by the Mease / Sence Lowlands: 'Village Estate Farmlands' Landscape Character Type (LCT) in its easternmost extents and the Trent Valley Washlands: 'Riverside Meadows' LCT between this landscape and the River Trent. On the western side of the River Trent, the Planning for Landscape Change SPG (May 2001) assessment identifies the Site as being covered by the Trent Valley Washlands: 'Riparian Alluvial Lowlands' LCT.

*Landscape and Visual Overview:*

6.2.12 For the most part, the Site itself lies on flat, low-lying valley landform and floodplain either side of the River Trent on mostly undeveloped land that rises gently in its

eastern extents up to Main Street, north of Walton-on-Trent, which connects the village to Drakelow. Tucklesholme Nature Reserve comprises a restored wetland habitat from a former gravel pit and bounds the Site to the north-west, while Station Lane provides a connection over the River Trent and access to Walton-on-Trent from the west. A series of lakes associated with Barton Quarry characterises the floodplain beyond this road to the south. The village of Walton-on-Trent lies immediately south of the eastern extents of the Site and Walton Cricket Club and the Grade II\* listed Church of St Laurence are located adjacent to the southern Site boundary. The extent of vegetation cover in the localised and wider setting, including established roadside vegetation along Station Lane, provide the Site with a degree of containment, though the Site is considered to be somewhat exposed in the immediate and localised setting as a result of the flat terrain. It is noted that several detracting features characterise this landscape including pylons that cross the Site, the railway to the west and Station Lane to the south, with heavy haulage vehicles accessing Barton Quarry off this road and traffic congestion an issue by the existing Walton bridge.

- 6.2.13 In visual terms, given the largely flat topography of the Site's immediate and localised setting and with a good degree of roadside vegetation along the local road network, the Site itself is not readily perceived from local roads except for along a section of Station Lane in the south-western extents of the Site. The eastern extents of the Site are likely to be perceived in passing views on train services between Burton-on-Trent and Tamworth due to open views across the floodplain from sections of the railway to the west. Several Public Right of Ways (PRoWs) run along the outer edge of Tucklesholme Nature Reserve and partly along the northern Site boundary, along with two Long Distance Routes – 'National Forest Way' and 'Cross Britain Way' in the immediate context of the Site. Two of these PRoWs cross the Site onto Station Lane, including a PRoW associated with the 'National Forest Way'. Parts of the Site are likely to be perceived in long distance views from this Long Distance Route to the

north as it winds along the river. It is noted that there is a degree of intervisibility between the eastern extents of the Site and the built form in the northern extents of Walton-on-Trent. A number of principal views are established within the Walton-on-Trent Conservation Area Character Statement (SDDC, 2014), with several of these views overlooking land associated with the eastern extents of the Site, including from the setting of the Grade II\* listed Church of St Laurence.

*Key Landscape and Visual Receptors:*

6.2.14 The identified key landscape and visual receptors likely to be impacted by the Proposed Development are included in Table 6.1 below:

**Table 6.1: Identified Key Landscape and Visual Receptors**

<b>Landscape Receptors</b>	<b>Visual Receptors</b>
River Trent and floodplain	Motorists – Station Lane and Main Street
Grade II* listed Church of St Laurence and its setting	PRoW users and Long Distance Route walkers
Trees and vegetation	Residents
Pasture and grassland fields	Churchgoers
Public Rights of Way / Long Distance Routes	Users of sports facilities – Cricket ground
Roads – Station Lane and Main Street	Tucklesholme Nature Reserve users
Brook south of Station Lane	Railway passengers
Key landscape features of the Site itself: River Trent Pasture and grassland fields River meadows Boundary hedgerows Small woodland area Native scrub and trees Pond in south-western extents Earth bunds in eastern extents	

*Likely Significant Landscape and Visual Impacts of the Proposed Development:*

6.2.15 From the initial desktop study and a site visit conducted in October 2023, it is considered that the Proposed Development would not result in any material change in landscape or visual terms to that which has already been assessed as part of the original EIA undertaken for the Consented Scheme. The Proposed Development could result in some localised adverse effects on some of the identified site-specific

landscape features located alongside the western end of the proposed bypass. However, the principles in landscape and visual terms, already established within the Consented Scheme, will not be materially altered by the Proposed Development. As such, we propose that landscape is scoped out from further inclusion within the EIA.

#### *Likely Cumulative Impacts*

- 6.2.16 Should landscape be included within the EIA, as part of the LVIA process, it will be necessary to assess any potential cumulative impacts that may arise when the Proposed Development is considered alongside other developments in the vicinity. It is understood that a list of cumulative sites will be determined in consultation with SDDC and ESBC.

#### *Conclusions*

- 6.2.17 The above overview of the landscape character and visual amenity in which the Site is set suggests that the Site and its setting have the capacity to accommodate the Proposed Development.
- 6.2.18 It is concluded that the Proposed Development would not result in any significant alterations in landscape and visual terms to the Consented Scheme and we would reiterate that landscape should therefore be scoped out of future inclusion within the EIA process.

### **6.3 Historic Environment**

- 6.3.1 The Proposed Development will require changes to the vertical and horizontal alignment of the bypass and new bridge and changes to the existing and proposed flood attenuation scheme with new areas of ground disturbance outside the previously consented area.

#### Archaeology



- 6.3.2 Extensive archaeological works have been completed for the proposed Walton-on-Trent bypass scheme since the first enabling works were undertaken in 2008 summarised in Appendix 1 (Section 10).
- 6.3.3 Dalcour Maclaren, in consultation Steve Baker the Derbyshire County Archaeologist, have compiled and had formally approved, a Written Scheme of Investigation (WSI) for archaeological mitigation for the Consented Scheme within the limits of South Derbyshire (Dalcour Maclaren, 2022). There are no design changes regarding this area of the Site, and it will be confirmed with Steve Baker that the WSI remains valid and approved for completion of the archaeological mitigation required for the Proposed Development.
- 6.3.4 Dalcour Maclaren undertook archaeological evaluation by trial trenching along the formerly approved alignment, comprising 10no. trenches along the former alignment and 2no. of trenches to its immediate south-southeast. This evaluation is considered to provide sufficient data regarding the stratigraphic sequence and archaeological potential of the overall Site.
- 6.3.5 The evaluation did not record any features, deposits or material of archaeological provenance. Following the conclusion of the evaluation, Shane Kelleher, Staffordshire County Council Archaeological Advisor, outlined his expectations for archaeological monitoring of any ground intrusive works, understood to be a topsoil strip of the easement only, and geoarchaeological monitoring and sampling of the bridge piers. Dalcour Maclaren will write a Written Scheme of Investigation for the East Staffordshire based works, in accordance and consultation with Shane Kelleher.
- 6.3.6 It is considered that the archaeological works completed to date provide sufficient information for the LPAs to assess the impact of the Proposed Development against the archaeological potential, and that final archaeological mitigatory works,

developed through consultation with the archaeological advisors of SDDC and ESBC and can be secured by suitable planning condition.

6.3.7 There is a potential that further hitherto unrecorded archaeological remains may be present in locations which have not yet been surveyed. It is considered that the implementation of a phased programme of archaeological recording, developed in consultation with archaeological advisors to ESBC and SDDC, will provide adequate mitigation for the loss of any archaeological assets associated with these areas and will provide the opportunity to study and understand better the archaeology of the area.

6.3.8 From this baseline evidence and the from the results of the archaeological recording events undertaken to date, it is considered that archaeological matters can be dealt with through planning condition. This would enable, not only the results of any archaeological works to be appropriately recorded, but would also enable the consolidation of the results of all previous archaeological events in the application area and made available to the public.

#### Built Heritage

6.3.9 In relation to built heritage, the Site is not located within a World Heritage Site, Registered Park and Garden, Registered Battlefield, nor does it contain, wholly or in part any Listed Buildings or Scheduled Monuments. The Site is within the vicinity of Listed Buildings and a Conservation Area. The eastern extent of the alignment enters the Walton-on-Trent Conservation Area (Designated 16<sup>th</sup> January 1992), for c. 350 m before joining to Main Street.

6.3.10 The Historic Environment baseline conditions comprise the following designated assets which may experience modifications to their settings as a result of the Proposed Development:

- St Laurence Church (List Entry No 1159347) (Grade II\*)
- Lynchgate to east of St Laurence's Church (List Entry No 1224601) (Grade II)
- Barr Hall and attached farm buildings (List Entry No 1096426) (Grade II)
- Walton on Trent Conservation Area

6.3.11 During the course of the assessment further assets may be identified, which would subsequently be included within the following assessment.

6.3.12 The nature of the proposed changes to the Consented Scheme has the potential to impact upon the significance of the heritage assets through adverse changes to their settings, where settings contribute to their significance.

6.3.13 Listed Buildings and Conservation Areas are protected under the Planning (Listed Building and Conservation Areas) Act (1990). In relation to development proposals, the Act states that *"in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the secretary of state shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses"* (Section 66). Similar protection to the setting of Conservation Areas is provided in Section 72 of the Act.

6.3.14 In order to determine the nature, extent and severity of impacts arising from the Proposed Development, if any, on a designated heritage asset, the NPPF states that a description of the significance of each heritage asset potentially affected by the proposed development should be provided in order to satisfy the requirements of the NPPF. This should include an assessment of the contribution made to the significance of the asset by its setting.

6.3.15 The significance of a heritage asset is defined within the NPPF as “the value of a heritage asset to this and future generations because of its heritage interest. The interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset’s physical presence, but also from its setting” (NPPF, 2021: page 71-72).

6.3.16 In respect of identifying the importance of setting to the identified significance of a heritage asset, Historic England’s guidance presented in the Setting of Heritage Assets Historic Environment Good Practice Advice in Planning: 3 (2017) will be utilised; specifically, what matters and why. A non-exhaustive list provided within the document identifies themes such as:

- Physical Surroundings:
- Topography;
- Definition, scale and ‘grain’ of surrounding streetscape, landscape and spaces;
- Historic materials and surfaces;
- Green space, trees and vegetation; and
- History and degree of change over time.
- Experience of surrounding landscape or townscape character;
- Views from, towards, through, across and including the asset; and
- Intentional intervisibility with other historic assets and natural features.

6.3.17 Given the limited changes from the Contented Scheme it is anticipated that impacts on built heritage can be addressed through a standalone report accompanying the Applications rather than through the EIA. It is proposed that a Heritage Impact

Assessment is undertaken, following the methodology presented above to provide an assessment of the potential impacts upon the identified heritage assets and the degree of harm.

- 6.3.18 From this baseline evidence and in anticipation of the final impact assessment results with recommendations for proportionate mitigation, it is determined that built heritage and archaeology matters are likely be dealt with through appropriate planning conditions or non-EIA reports and is proposed to be scoped out of the EIA.

## **6.4 Ecology**

- 6.4.1 The Proposed Development will require landtake outside the previously Consented Scheme. In addition, the ecological constraints are likely to have changed since the baseline recorded in 2005. As such there are potential for the Proposed Development to have ecological impacts without mitigation.
- 6.4.2 Consultation with statutory and non-statutory nature conservation organisations and other interest groups will be undertaken to seek general information and existing records within 2 km of the Site. Information on internationally designated sites for nature conservation have been requested for up to 10 km from the site. Records for bats were requested from up to 5 km from the Site.

### Methodology

- 6.4.3 The study area for each ecological receptor varies depending on the territory/homes range etc. Where faunal surveys are required, they adhere to the study area requested within the relevant best practice guidance.
- 6.4.4 The assessment of impacts followed guidance provided in the Chartered Institute of Ecology and Environmental Management Guidelines for Ecological Impact Assessment in the United Kingdom.

- 6.4.5 In accordance with the guidelines the assessment focuses on 'valued ecological receptors' which are species and habitats present within the zone of influence of the Proposed Development that are of sufficiently high value that an effect upon them as a result of the Proposed Development could be considered to be significant.
- 6.4.6 The value of sites, populations of species, species assemblages and habitats will be evaluated with reference to: their importance in terms of 'biodiversity conservation' value (which relates to the need to conserve representative areas of different habitats and the genetic diversity of species populations); and their legal status.
- 6.4.7 In accordance with Section 4.1 of the CIEEM guidelines, the assessment will only consider effects on 'Important Ecological Features'. Effects on 'Other Ecological Receptors' will not be considered in the assessment as effects to these receptors would not be considered to result in significant impacts (because issues material to the planning decision would not apply).
- 6.4.8 The following ecological surveys are being undertaken or proposed to inform an Ecological Impact Assessment (EclA) (Table 6.2).

**Table 6.2: Proposed Scope of Ecological Surveys**

Receptor	Scope	Initial findings	Surveys undertaken to date
Data consultation	Biological records request 2-5 km with local record holders and consultation with WT	TBC	Records from biological record holders in 2km of the site and consultation with SWT.
Vegetation	Phase 1 habitat survey/UK Habs survey. FISC Level 4	Terrestrial habitats are moderate grassland quality. No trees or hedegrows to be impacted.	Aug-23
	RiverMorph survey for BNG	TBC	Nov-23
Amphibians	GCN eDNA sampling of ponds within 250m- 500m of the site and not separated by barrier to dispersal.	All eDNA samples of ponds were negative for all sampling years.	Spring 2020 and 2023
Reptiles	7no. Survey undertaken in September/October 2023 using 145no. Artificial refugia	None recorded - smooth newts and common toads	September & early October 2023
Breeding birds	5no. BBS survey between June and July 2023 with 1 nocturnal survey	52 bird species 27 are considered as notable species including kingfisher and cettis warbler.	June/July 2023
Wintering birds	One site visit per month from November to February (total of four visits).	TBC	November 2023 - February 2023
Otters and water voles	Water vole survey on watercourses to be affected by scheme.	None recorded	Summer 2020, 2023
	Otter survey on River Trent by boat and bank side	Otter sighted on River Trent during BBS. No signs of holts identified in 200m of river crossing during survey in 2021 or 2023 so far and areas suboptimal for holts.	Summer 2020 & November 2023
Badgers	Badger presence/absence survey using cameras where needed. Survey site boundary and 50m beyond access permitting	Disused outlier in 2021.	March 2021 and November 2023
Bats - trees	No trees to be felled. Winter 2023 to confirm this once the AIA has been completed.	No trees with BRP due to be felled.	Confirm winter 2023
Bats - activity	Bat transect surveys with static detectors. Two transect routes with static per transect. September/October	Low levels of common bats recorded. Awaiting static analysis.	September & October 2023
Bats - buildings	No buildings to be impacted. Pill box subject to internal inspection.	No buildings to be impacted. The pill box considered to have negligible bat roost potential in 2020. To be confirmed in 2023.	January 2023 (hibernation)
Aquatic ecology	No in channel works and pollution prevention measures proposed therefore macroinvertebrate/fisheries and macrophyte surveys to be scoped out. WFD assessment anticipated to be required.	NA	NA

6.4.9 The construction and post-completion (operation) of the Proposed Development may result in both construction and operation impacts that will require investigation in the ES. The key potential impacts that may occur are:

- Land take/habitat loss with potential related impacts on the following species due to habitat loss and disturbance.
- Habitat fragmentation due to the construction of barriers to connectivity.
- Increased noise/vibration and visual disturbance on local species populations.
- Impacts on nationally and locally designated sites of nature conservation importance in the vicinity.
- Changes to the proposed light emissions potentially causing impacts on local bat and bird populations.

- Pollution effects on habitats and species in the area.

6.4.10 Further potential impacts and recommendations may be identified following the completion of the recommended Phase 2 ecological surveys described above as well as following the acquisition of further desk data and consultations.

6.4.11 In addition to the potential impacts envisaged above, the construction and operation of other development in the local and wider area may result in cumulative impacts which will be given consideration in the assessment once further details are available.

6.4.12 In addition to identifying impacts of the construction and operation of the Proposed Development, opportunities for positive impacts through ecological enhancement will be sought to deliver Biodiversity Net Gain using the prevailing Biodiversity Metric.

## **6.5 Traffic and Transport**

6.5.1 A separate revision of the Transport Assessment (TA) is being undertaken in relation to the change in the trigger level at which the Consented Scheme is to be provided to give time for the Consented Scheme to be redesigned and approved, whilst avoiding delay to the continued delivery of new homes at Drakelow Park. This is being considered separately under a S106 Deed of Variation. The predicted generation of traffic is expected to be lower than that already approved. The changes required to the Consented Scheme to secure technical approval for construction will not alter the predicted trip generation. On that basis it is proposed that the amended TA accompanies the planning applications and includes the following.

### Methodologies and Study Area

6.5.2 The TA is currently with the highways authorities, Derbyshire County Council (DCC) and Staffordshire County Council (SCC) for comment. It will be updated to take into



account comments and discussions with DCC and SCC, for submission of the planning applications for the Proposed Development.

6.5.3 The agreed package of highway and transport improvements to support Drakelow Park, including the bypass (as secured by the S106 Agreement), was informed by various TAs and supplementary reports. The main documents relevant to the updated TA are as follows:

- Transport Assessment Addendum (TAA) by David Tucker Associates (DTA), dated 13/11/2009. This report updated and substantially superseded DTA's original TA dated 06/04/09, following discussions and agreements with the highway authorities.
- DTA Transport Statement (TS) dated 20/10/15, which specifically considered the Walton Bypass trigger.

6.5.4 The traffic forecasts provided in both reports are based on traffic survey and model information that is at least 8 years old and now out of date. However, much of the original methodology described in the 2009 TAA is followed in the new assessment in order to provide an updated picture of the future traffic situation for direct comparison with the earlier forecasts.

6.5.5 The updated TA is based on a manual assessment, with no allowance for the dynamic re-routing of traffic in response to changing traffic conditions. This approach is comparable with original DTA traffic assignment methodology described in the 2009 TAA.

6.5.6 New traffic surveys undertaken during early 2023 have provided the base data for the updated assessment.

- 6.5.7 Trip generation calculations used in the revised assessment have been prepared following the original DTA methodology, but using up to date trip generation rates, National Travel Survey and National Census data.
- 6.5.8 The TA considers alternative trip distributions for a “No Bypass” scenario, which can be used to determine the revised level of development that would trigger the bypass. Census-based trip distribution models have been prepared for this purpose but are to be validated a survey of the completed Phase 1 of Drakelow Park, which was delivered some time ago by David Wilson Homes (DWH).
- 6.5.9 The traffic flow and impact assessments arising from these revised inputs make no allowance for reductions in external car-based trips that might arise from the Drakelow Park Travel Plan (now being implemented) and are therefore considered robust.
- 6.5.10 For consistency with the original assessments, the updated TA focuses on the Main Street/Walton Road/Station Lane corridor between the A38 and A444. The key junctions of interest within this corridor are as listed below (Table 6.3):

**Table 6.3: Study Area Junctions**

Junction Number	Junction Name
1A	A38 Barton Turn – western roundabout
1B	A38 Barton Turn – north-eastern roundabout
1C	A38 Barton Turn – south-eastern roundabout
2A	Main Street/Station Lane
2B	Main Street/Coton Road
3	Main Street/Bells End Road
4	Walton Road/Caldwell Road
5	Walton Road/Rosliston Road
6	St Peter’s Bridge/Stapenhill Road Roundabout

Time Horizon

- 6.5.11 The Proposed Development is now expected to open to traffic in 2026, by which time 800 dwellings would be occupied at Drakelow Park. The Drakelow Park development is programmed for full completion by 2033.
- 6.5.12 Traffic forecasts for the following development scenarios are therefore to be considered:
- 2026 Interim Phase: 800 dwellings at Drakelow Park;
  - 2033 Full Development: Full completion of Drakelow Park.
- 6.5.13 Both scenarios exclude the bypass scheme, and therefore allow the impact of the development on the existing highway network to be assessed. The 2026 Interim Phase scenario therefore allows the impact of a proposed new trigger of 800 dwellings to be tested.
- 6.5.14 The 2033 Full Development scenario is provided to enable the testing of alternative mitigation strategies, should the bypass scheme be subject to further delays beyond the control of the developer and/or the highway authorities.

Key Environmental Constraints / Opportunities

- 6.5.15 The main impact of delay to delivery of the bypass scheme is expected to arise from development traffic using the existing road network through Stapenhill to reach the A38, rather than Walton Road to the south. This is an existing residential area, which is expected to be sensitive to further traffic flow increases, over and above those previously allowed for. The TA will therefore focus on this part of the highway network.

Likely key impacts (positive and negative)

- 6.5.16 In the absence of the bypass scheme, a greater proportion of development traffic could travel to/from the north via Stapenhill and the A444/A5189 St Peter's Bridge

Roundabout. The impact of the two development scenarios at these locations is to be assessed relative to updated “No Development” scenarios that exclude both the development and the bypass. This will enable the impact of the development without the bypass scheme to be identified and the need for alternative or interim mitigation measures in this area to be considered.

#### Gaps in information

6.5.17 None identified but see Section 6 below.

#### Proposed Further Surveys

6.5.18 DCC and SCC have requested that a traffic survey is carried out at the completed Drakelow Park Phase 1 development (DWH) to validate the trip generation and distribution models used in the TA. This survey is to be undertaken during October 2023.

#### Preliminary Mitigation/Enhancement

6.5.19 No mitigation is expected to be required to accommodate the revised trigger of 800 dwellings. In the event that the bypass scheme is further delayed, a preliminary scheme of mitigation has been identified at the St Peter’s Bridge Roundabout for implementation in advance of the bypass scheme.

#### Summary

6.5.20 It is proposed that a TA is submitted with the planning applications and that Traffic and Transport is scoped out of the EIA.

## **6.6 Noise and Vibration**

#### Scope of Assessment

6.6.1 The Proposed Development will result in minor changes to the alignment of the Consented Scheme and areas of construction that may alter the previously predicted noise impact of the on existing noise-sensitive receptors in the area during the

construction and operational phases. It is understood that there will not be any changes to the traffic flows as a result of the Proposed Development.

6.6.2 To assess this change, the study area will extend outwards to residential areas adjacent to a sample of roads in the wider area, the extent/details of which will be informed by the changes to the alignment.

6.6.3 Potential noise impacts associated with the Proposed Development include:

- Site preparation and construction works.
- Traffic noise from vehicles on new section of the aligned road.

6.6.4 The following tasks will be undertaken as part of the noise assessment:

- quantifying baseline noise conditions at appropriate locations on the Site and at boundary or off-site locations representative of existing (and permitted) dwellings nearest to the proposed development; and
- assessment of potential construction noise impacts.

6.6.5 It is proposed that the existing noise environment will be quantified by carrying out a brief baseline noise survey. The baseline noise monitoring will be undertaken in line with standard acoustic measurement practices and fully calibrated noise monitoring equipment will be used.

6.6.6 At this stage of the Proposed Development, it is not possible, nor appropriate, to undertake detailed calculations of construction noise levels as the information is not available regarding construction timetabling, plant types and specific build techniques on which to base a detailed assessment.

- 6.6.7 However, due to the type and location of the Proposed Development, proposed construction impacts are highly unlikely to present any significant planning constraints and can be adequately mitigated by standard construction practices/measures. A qualitative assessment will therefore be provided highlighting general requirements and best practice in terms of mitigation of construction noise based on the advice in BS5228-1:2009+A1:2014 '*Code of Practice for noise and vibration control on construction and open sites – Part 1: Noise*'. Reference will also be made to the ABC threshold approach in BS5228 taking into account the results of the baseline noise survey. Following the outcome of the baseline survey and recommended threshold noise limits, suitable mitigation measures will be proposed to be included in a Construction and Environmental Management Plan (CEMP).
- 6.6.8 Due to the nature of the Proposed Development, there are not expected to be any significant sources of vibration, neither is the site subject to any existing sources of vibration that could have implications. It is therefore proposed to scope ground vibration out of the assessment. Nevertheless, standard best practice mitigation measures would be implemented during construction in accordance with the CEMP, to minimise potential temporary vibration from construction plant and activities.
- 6.6.9 For the operational phase, a traffic noise assessment will be provided in a comparative study, evaluating the impact of potential changes in traffic noise on a sample of surrounding roads.
- 6.6.10 Any changes in road traffic noise on existing residents will be evaluated considering relevant guidance and will be included as an appendix.
- 6.6.11 Noise level changes on existing roads will be calculated in accordance with relevant guidance in the Department of Transport document '*Calculation of Road Traffic*

Noise' (1988) based on appropriate traffic flow data used in the TA and impacts based upon the IEMA noise impact assessment guidelines.

- 6.6.12 The results of the baseline survey and assessment of noise associated with the Proposed Development during the construction and operational phases will be reported. Where appropriate, this will also include any outline recommendations for mitigation measures to address any predicted, significant adverse effects.
- 6.6.13 Where necessary appropriate noise mitigation measures will be recommended to adequately ameliorate noise impacts on the Proposed Development.
- 6.6.14 At this stage, during the operational phase, no noise mitigation measures are considered likely to be necessary for existing receptors on or near the existing highway network, but this will be reviewed as part of the assessment.

## **6.7 Air Quality**

### Background

- 6.7.1 The Proposed Development is located in an area where air quality is mainly influenced by emissions from traffic using the local road network. Historically, emissions from the power generation facility at Drakelow Power Plant would have also influenced the local air quality, but to a lesser extent currently.
- 6.7.2 The Proposed Development is not situated within an Air Quality Management Area (AQMA), suggesting existing levels of pollution are acceptable in the local area. Approximately 2 km southwest of the Proposed Development is the Burton-Upon-Trent AQMA No.2, which is likely to be highly sensitive to changes in air quality. The AQMA was declared by the East Staffordshire Borough Council (ESBC) in 2007 for exceedances of the NO<sub>2</sub> Air Quality Objectives (AQOs). There are no declared Clean Air Zones (CAZ), Low Emission Zones (LEZ), Ultra-Low Emission Zones (ULEZ), or Non-Road Mobile Machinery (NRMM) zones within the study area.

- 6.7.3 Monitoring in the locality of the Proposed Development has been conducted by both SDDC and ESBC. Measured annual mean NO<sub>2</sub> concentrations at the monitoring station closest to the Proposed Development (DT18 – A444 Stapenhill app Violet Way) have not demonstrated any exceedances of the AQO (40 µg/m<sup>3</sup>) since 2017. Measured concentrations in the locality of the Proposed Development ranged between 29 µg/m<sup>3</sup> and 45 µg/m<sup>3</sup> in 2019. Data for 2020 and 2021 are not considered representative of typical conditions due to the COVID-19 pandemic and data for 2022 and 2023 are not yet available.
- 6.7.4 In the absence of other major local development, the air quality in the area is anticipated to improve over time due to national strategies, such as road vehicle engine emissions regulated improvements.

#### Scope of Assessment

- 6.7.5 The potential for significant effects associated with air quality needs to be determined in relation to both the construction phase and operational phase. Effects on the local area are evaluated in terms of the following thresholds:
- national Air Quality Objectives (AQOs) as part of the local air quality management (LAQM) regime; and
  - the statutory limit values, critical loads and critical levels.
- 6.7.6 The potential for health effects for future users is also evaluated in relation to the potential for non-threshold health effects.
- 6.7.7 Consideration in relation to compliance with the PM<sub>2.5</sub> targets set as part of the Environment Act 2021 is not included as per Chief Planning Officer's statement on considerations when integrating the PM<sub>2.5</sub> targets in the planning system (Department for Levelling Up, Housing & Communities, 2023).



6.7.8 For the construction phase, the following elements require consideration:

- Dust associated with construction activities on the site and due to trackout from the site.
- Pollutant emissions from combustion in non-road mobile machinery used during the construction.
- Pollutant emissions associated with the construction related road traffic, such as construction staff trips and deliveries.

6.7.9 For the operational phase, the following elements require consideration:

- Impacts on the local area due to changes in traffic flows on local roads due to the trips associated with the operation of the Proposed Development.
- Impacts on the local area due to any centralised combustion plant such as combined heat and power (CHP) plant emitting air pollutants during the operation of the Proposed Development.
- Impacts on the local area due to changes in road alignment, such as a road moving near to sensitive receptors, or changes in the streetscape which could restrict pollutant dispersion, such as additional masses adjacent to roads.
- The cumulative impacts associated with other local development.
- The risk of impacts on future users of the Proposed Development, i.e. site suitability.

6.7.10 The impacts on the local area relate to the potential effects on sensitive human receptors (including nearby AQMAs) and sensitive ecological receptors.

- 6.7.11 As set out in Section 6.3 a separate revision of the Transport Assessment (TA) is being undertaken in relation to the change in the trigger level at which the Consented Scheme is to be provided to give time for the Consented Scheme to be redesigned and approved, whilst avoiding delay to the continued delivery of new homes at Drakelow Park. This is being considered separately under a S106 Deed of Variation. As part of the Deed of Variation, a standalone air quality assessment will be produced to determine the risk of air quality related effects to support the S106 Deed of Variation. This is not discussed further in this scoping document.
- 6.7.12 As set out in Section 6.3, the Proposed Development will result in minor changes to the alignment of the Consented Scheme and areas of construction. The potential for these changes to result in significant air quality effects has been considered in relation to each element of assessment set out in Paragraphs 6.7.8 to 6.7.10.
- 6.7.13 It is understood that the changes required to the Consented Scheme to secure technical approval for construction (this Proposed Development) will not alter the predicted trip generation and that there will not be any changes to the traffic flows due to rerouting etc during construction or operational phases.
- 6.7.14 It is noted that the construction timeline is likely to be delayed compared to the original Consented Scheme.
- 6.7.15 The changes to the Consented Scheme and the proximity to sensitive receptors have been reviewed.

#### Construction Phase – Construction Dust

- 6.7.16 The construction area has expanded slightly compared to the Consented Scheme. With appropriate mitigation, dust and elevated particulate matter (PM) levels effects are judged to be not significant. A standalone construction dust risk assessment (CDRA) following the Institute of Air Quality Management (IAQM) guidance will be

produced to develop the mitigation strategy. The potential for significant effects are scoped out of the ES.

Construction Phase – NRMM

- 6.7.17 A construction emission mitigation management plan will be produced as a standalone report which will look at opportunities to reduce emissions from NRMM. However, based on the changes being relatively minor, the change in emissions due to the Proposed Development are considered negligible and therefore the risk of significant effects is scoped out of the ES.

Construction Phase - Construction Traffic

- 6.7.18 On the basis that the traffic flows have not changed since the Consented Scheme (as per Section 6.3) and that air quality is predicted to improve into the future, the potential of a change in significant effects, compared to the Consented Scheme, due to construction traffic are scoped out of the ES.

Operational Phase - Impacts on the local area due to changes in traffic flows

- 6.7.19 On the basis that the traffic flows have not changed since the Consented Scheme (as per Section 6.3) and that air quality is predicted to improve into the future, the potential of a change in significant effects at both human receptors and ecological receptors, compared to the Consented Scheme, due to operational traffic are scoped out of the ES.

Operational Phase - Impacts on the local area due to any centralised combustion plant

- 6.7.20 It is understood that there is no significant change to the energy strategy due to the changes to the Consented Scheme and therefore the potential for effects related to combustion plant operational in the Proposed Development are scoped out of the ES.

Operational Phase - Impacts on the local area due to changes in road alignment or changes in the streetscape

- 6.7.21 The location where the road alignment will change slightly is not near to sensitive human receptors and is not near to nationally designated ecological sites; there is not proposed to be any significant changes to streetscape massing and thus potential significant effects related to changes in streetscape are scoped out of the ES.

Operational Phase - Cumulative impacts

- 6.7.22 It is understood that there are no other major developments in the local area that have been identified since the Consented Scheme traffic flows were determined which would significantly change the flows. Therefore, significant effects from cumulative operational impacts are scoped out of the ES at this stage.

Operational Phase - Site suitability

- 6.7.23 The changes which nominally relate to the road alignment and the bridge technical design are unlikely to change the exposure of future users of the site to poor air quality and, as such, the site suitability in relation to air quality is scoped of the ES.

Summary

- 6.7.24 A standalone assessment, not part of the ES, will assess any potential opportunities to improve air quality and provide a mitigation strategy in relation to construction activities.
- 6.7.25 The impact on air quality related to the change in trigger level of occupied dwellings at the Drakelow Park site from the 400<sup>th</sup> occupation to the 800<sup>th</sup> occupation will be covered in a detailed air quality assessment accompanying the S106 Deed of Variation, again, not part of this ES.
- 6.7.26 Air Quality is scoped out the ES.

## **6.8 Water Environment**

### Scope of Assessment

- 6.8.1 The baseline impacts of the Consented Scheme will be largely unchanged. However, requirements for flood risk and surface water mitigation have increased significantly since the scheme was consented. The mitigation measures proposed as part of the updated scheme will provide significant improvements to the Consented Scheme in terms of ensuring that the scheme is safe for its lifetime with regards to flood risk and will ensure that the impact on flood risk elsewhere is minimised. The increased surface water management requirements will also ensure that the impacts of runoff on water quality will be reduced since the operational state of the Consented Scheme.
- 6.8.2 At this stage, a high-level, desk-based assessment has been undertaken using publicly available spatial data under the Open Government Licence and from open sources including the Environment Agency and, where appropriate, information from site visits.
- 6.8.3 The study area for the assessment includes features of the water environment within 1 km of the Proposed Development. This distance was selected through professional judgement and through understanding of local watercourse connectivity which considers 1 km to be an appropriate distance for any potential impacts to be sufficiently dampened (e.g. pollution). The aims of this section are to:
- Explore the baseline information that has been collected to date.
  - Provide information on what would be collated through further desk study or survey work.
  - Identify the key receptors that would be considered in the EIA.

- Detail the methodology that would be used to assess effects on road drainage and the water environment.
- Outline the potential significant effects that could occur.
- Identify (and justify) any aspects/impacts scoped out of the assessment.

6.8.4 The Proposed Development has the potential to result in effects on drainage and the water environment, and in particular on flood risk, water quality and water resource attributes of surface water and groundwater receptors within the study area.

6.8.5 There may be interrelationships related to the potential effects on drainage and the water environment, and other disciplines.

Baseline Conditions: Hydrology

6.8.6 Surface watercourses are present within 1 km of the proposed Walton-on-Trent bypass scheme.

6.8.7 According to the Environment Agency Catchment Data Explorer, the *Trent – R Tame to R Dove* waterbody, which is within the site boundary has a Poor Water Framework Directive (WFD) ecological classification and a chemical status of ‘fail’ due to a range of attributes including agricultural and rural land management phosphate loading and sewerage discharge from the water industry.

6.8.8 The *Trent – R Tame to R Dove* classified waterbody includes the River Trent in the vicinity of the site and the Barton Brook, a tributary of the Trent, which flows parallel to the site and joins the Trent downstream of the existing Station Road Trent crossing. The Barton Brook originates upstream of Barton-under Needwood, flows in an easterly direction towards the River Trent and is heavily culverted. The Trent and the Barton Brook in the vicinity of the site are Statutory Main Rivers.

- 6.8.9 The Trent and Mersey Canal, Alrewas to Shardlow Water Body is located c. 600 m to the west of the Site. This water body has a good ecological WFD classification and a chemical status of fail.
- 6.8.10 LiDAR data and online mapping also suggests other surface water drainage flow paths and ordinary watercourses are present within the vicinity of the Site.
- 6.8.11 Tucklesholme Nature Reserve is located to the north of the Site. This nature reserve is a former gravel pit which has been restored back to a wetland habitat in 2018. There are a number of other mineral extraction pits to the south of the site, south of Station Road, which also present as surface water bodies.
- 6.8.12 According to the EA Catchment Data Explorer, the Tame Anker Mease - Secondary Combined groundwater body exists under the site. The groundwater body has an overall WFD classification of Good status for 2019.
- 6.8.13 At this stage it is unknown whether there are any surface water extraction or discharge points within the study area, other than the drainage from the existing road network.
- 6.8.14 The Proposed Development is located within 4 km north of the River Mease Site of Special Scientific Interest (SSSI). The site does not drain in the direction of the SSSI.
- 6.8.15 Table 6.3 provides the current WFD status for the water body catchments spanned by the Proposed Development.

**Table 6.3: Current WFD Status for the Waterbody Catchments Spanned by the Proposed Development**

Water Name Body (water body ID)	Overall Status	Type	HMWB <sup>2</sup> or Artificial	RNAG	Objective <sup>3</sup>
GB104028047180 Trent - R Tame to R Dove	Poor (2022)	River	Not designated artificial or heavily modified	Diffuse source Point source measures delivered to address reason, awaiting recovery	Good by 2027 (Disproportionate Burdens)
GB70410250 Trent and Mersey Canal, Alrewas to Shardlow Water Body	Good (2019)	Canal	Artificial	Unknown (pending investigation)	Good
GB40402G99080 Tame Anker Mease - Secondary Combine	Good (2019)	Groundwater body	N/A	N/A	Good

Baseline Conditions: Hydrogeology

- 6.8.16 The Envirocheck report, BGS and Defra MAGIC<sup>4</sup> mapping services have been consulted to establish aquifer designations for the Site.
- 6.8.17 The route of the Proposed Development is underlain by alluvium superficial deposits of clay, silt, sand and gravel. These superficial deposits support a Secondary A aquifer.
- 6.8.18 The Site is underlain by a mudstone bedrock from the Mercia Mudstone Group. The bedrock geology support a Secondary B aquifer.
- 6.8.19 The Environment Agency defines the Site as of medium to high groundwater vulnerability. High groundwater vulnerability means “*areas that can easily transmit pollution to groundwater. They are characterised by high-leaching soils and the*

<sup>2</sup> Heavily Modified Water body

<sup>3</sup> Objectives as published on Catchment Explorer

<sup>4</sup> www.magic.gov.uk



*absence of low-permeability superficial deposits". Medium groundwater vulnerability means "areas that offer some groundwater protection. They are likely to be characterised by intermediate leaching soils and / or the presence of intermediate permeability superficial deposits".*

6.8.20 Source Protection Zones refer to areas where the Environment Agency provides a greater level of protection to groundwater sources. The Site is not located within a Groundwater Source Protection Zone.

6.8.21 At this stage of assessment, following DMRB LA 113, all WFD watercourses and groundwater bodies within this study area will be classified as having High or Very High Importance. All Ordinary Watercourses and waterbodies within the study will be classified as having Medium or High Importance.

#### Flood Risk

##### *Fluvial*

6.8.22 The majority of the Proposed Development site is at risk from flooding, with the site predominately in Flood Zone 3 of the Flood Map for Planning. Flood Zone 3 is classified as land with a 1 in 100 annual probability or greater of flooding from fluvial sources, or 1 in 200 annual probability or greater of flooding from tidal sources. Flood Zone 2 is classified as land having between a 1 in 100 and 1 in 1000 annual probability of flooding from fluvial sources, or between a 1 in 200 and 1 in 1000 annual probability of flooding from tidal sources.

6.8.23 The flood risk is predominantly associated with the River Trent and Barton Brook, both Environment Agency Main Rivers.

6.8.24 The site forms a significant part of the River Trent floodplain but according to the East Staffordshire Strategic Flood Risk Assessment (SFRA) is not located in Flood Zone 3b.

6.8.25 Detailed hydraulic modelling is being undertaken to understand the flood risk from the River Trent and Barton Brook and to ensure there are no adverse flood risk impacts of the Proposed Development.

6.8.26 At this stage of assessment, all flood risk from watercourse receptors within this study area will be classified as having High or Very High Importance.

*Surface Water*

6.8.27 Risk of flooding at the Site is dominated by the risk from the fluvial sources therefore risk from surface water flows is low.

6.8.28 However, at this stage of assessment, all flood risk from surface water receptors within this study area will be classified as having High to Very High Importance.

*Flooding from Artificial Sources*

6.8.29 A consultation of Environment Agency mapping suggests that the Proposed Development is within an area at risk of flooding from reservoirs. However, the heavily regulated nature of reservoir management meant that the risk of flooding from this source is Low.

6.8.30 The Trent and Mersey Canal, Alrewas to Shardlow Water Body is located c. 600 m to the west of the Site. The canal is at a higher elevation to than the Site, however, there is significant high ground between including the A38 embankment, therefore the risk of flooding from a canal breach is Low.

6.8.31 Flooding from artificial waterbodies does not require further assessment.

*Tidal Flooding*

6.8.32 The study area is not indicated to be at risk of tidal flooding. Tidal flood risk does not require further assessment.

*Flood Risk from Groundwater*

6.8.33 Groundwater flooding can occur when groundwater levels rise close to or above ground levels. Groundwater flooding is most likely to occur in low-lying areas underlain by permeable rocks (aquifers). The East Staffordshire Borough Council SFRA and South Derbyshire District Council SFRA states that groundwater flooding is not a significant risk for the area.

6.8.34 Groundwater flood risk does not require further assessment.

*Flood Risk from Sewers*

6.8.35 Sewer flooding occurs when urban drainage networks become overwhelmed with runoff and their maximum capacity is reached. This can also occur if there is a blockage in the network causing water to back up behind it.

6.8.36 Given the predominantly rural nature of the surrounding area, it is unlikely that many of sewerage systems will be crossed by the Proposed Development.

6.8.37 Flooding from sewers does not require further assessment.

Potential Impacts of the Proposed Development

*Surface Water*

6.8.38 The Proposed Development has the potential to result in adverse impacts upon surface water resources. It is proposed that the following elements of assessment are scoped into the EIA:

- Pollution during construction due to increased generation and release of sediments and suspended solids, and increased risk of accidental spillage of pollutants such as oil, fuel and concrete associated with construction activities and site storage requirements.

- Loss or change to surface water supplies due to degradation of water quality, changes in drainage patterns or disruption to supply infrastructure due to the route options.
- Damage to bed, banks and riparian vegetation of watercourses at crossing points due to construction techniques which may deteriorate the ecological and hydromorphological quality of the watercourse.
- Impacts upon adjacent water bodies due to degradation of water quality during the construction period.
- Loss of standing water where infrastructure upgrades are constructed through or close to existing ponds or ditches.
- Pollution during road operation due to accidental spillage. On all roads, there is a risk that accidents or vehicle fires may lead to an acute pollution incident. Where commercial vehicles are involved, potential pollutants that may be spilled could range from hazardous chemicals to milk, alcoholic beverages, organic sludges and detergents. Spilled materials may drain from the road surface, polluting the receiving surface water bodies.

#### *Groundwater*

6.8.39 The Proposed Development has the potential to result in adverse impact upon ground water resources. It is proposed that the following elements of assessment are scoped into the EIA:

- New cuttings, deep foundations and dewatering activities which may cause a temporary barrier to groundwater flow, potentially blocking or altering groundwater flows during construction.

- New cuttings which have the potential to cause a local reduction of groundwater levels, should dewatering be required as part of construction.
- Polluted surface water runoff and direct migration of mobile pollutants to groundwater resources from construction vehicles, plant and high-risk activities that may contaminate groundwater resources.
- Deep foundations and associated sheet piling may have the potential to form rapid vertical flow pathways for pollution into the groundwater bodies and reduce groundwater flow to dependent receptors.
- The disposal of pumped water to surface may follow contamination pathways into surface water bodies or infiltrate down into the groundwater body.

*Flood Risk*

6.8.40 In accordance with the guidance all new development shall be designed to:

- remain operational and safe for users in times of flood;
- result in no net loss of floodplain storage;
- not impede water flows; and
- not increase flood risk elsewhere.

6.8.41 These requirements limit the potential impacts. However, likely significant impacts to flood risk receptors during construction of the Proposed Development could arise from:

- Temporary stockpiling of material in the floodplain during construction could result in a loss of flood storage and/or divert existing overland flow routes to areas that are not currently affected.

- Diversion of runoff, overland flow paths and watercourses during construction can lead to existing small watercourses being inundated, an increase in flood risk to third parties not currently at risk of flooding and increased risk of surface water flooding.
- Excavation adjacent to the banks of watercourses can increase the risk of overtopping and/or breach of the bank.
- Ponds constructed to hold water to manage sediment could cause flooding of local watercourses or adjacent land in the event of overtopping or a breach.
- Construction activities that extend below ground have the potential to be affected by groundwater and themselves affect groundwater flooding. Sections of the Proposed Development are located within areas at high and medium susceptibility to groundwater flooding.

6.8.42 Without the design guidance, significant impacts to flood risk receptors during operation of the Proposed Development could arise from:

- Earthworks and associated structures could generate a loss of floodplain. Without appropriate mitigation, the Proposed Development could result in loss of flood storage and increase flood risk.
- Blockages within watercourses and/or the floodplains, ultimately reducing their floodwater conveyance capacity and attenuation capability.
- Permanent earthworks could sever or block overland flow paths leading to ponding of rainfall.
- Realignment of existing watercourses and change of existing structures, has the potential to increase fluvial flood risk.

- An increase in the paved (impervious) area will generate more runoff and increase the volume of flood water.

*Scoping summary*

6.8.43 Road drainage and the water environment is scoped into the next stage of assessment and the topics. This should include Surface Water, Groundwater and flood Risk (surface water, groundwater and fluvial).

6.8.44 Sections scoped out of further assessment include flood risk from tidal, sewer and from artificial sources.

Proposed Assessment Methodology

6.8.45 The Water Environment Impact Assessment will involve the following key tasks:

- Consultation with relevant statutory and non-statutory bodies to establish the principal water environment issues associated with the study area.
- Detailed desk studies and field surveys to ascertain the current baseline conditions at the Site.
- Assessment of the potential impacts related to the construction and operation of the Proposed Development.
- Identification of measures to avoid, minimise or mitigation predicted impacts upon the water environment.

6.8.46 The assessment will focus on defining the characteristics and subsequent potential impacts upon surface and groundwater receptors including the wider hydrological catchment as categorised by the Environment Agency under the Water Framework Directive.

6.8.47 A WFD compliance assessment will be completed to ensure the Proposed Development and embedded mitigation is compliant with WFD guidelines. In addition to the LA113 guidance, the WFD assessment will also follow guidance presented in LA108.

*Loss or Change to Surface Water Receptors during Construction*

6.8.48 Evaluation of the potential for pollution of surface waters as a result of spillage and of the release of sediments into watercourses or water bodies will involve a review of areas where construction would be required within or in close proximity (i.e. within 50 m) to surface watercourses and water bodies. Mobilisation of potentially contaminated sediments during construction will also be considered in terms of local receptors, including surface or groundwater supplies (both licensed and unlicensed).

*Pollution from Routine Run-off*

6.8.49 DMRB guidance document LA 113: Road Drainage and the Water Environment (Highways England, 2020) specifies procedures for the assessment of pollution impacts from routine run-off on surface waters. These assessment methods or similar will be followed where appropriate.

*Pollution from Accidental Spillage*

6.8.50 DMRB guidance document LA 113 specifies procedures for the assessment of pollution impacts from accidental spillage. The assessment takes the form of a risk assessment, where the risk is expressed as the annual probability of a serious pollution incident occurring. This risk is the product of two probabilities:

- the probability that an accident will occur, resulting in a serious spillage of a polluting substance on the carriageway; and
- the probability that, if such a spillage did occur, the polluting substance would reach the receiving water body and cause a serious pollution incident.



6.8.51 These assessment methods or similar will be followed where appropriate.

*Loss or changes to groundwater aquifers and supported water supplies*

6.8.52 As assessment of the potential impacts of the Proposed Development on groundwater quality and quantity will be undertaken with respect to identified abstractions including licensed, unlicensed and private water supplies and other groundwater dependant receptors (such as Groundwater Dependent Terrestrial Ecosystems).

*Indirect Loss or changes to surface water receptors*

6.8.53 Surface Water bodies such as streams, lakes and wetlands can receive or recharge groundwater, with movement likely between receptors. Changes to groundwater as a result of dewatering may indirectly impact surface water bodies and result in changes to surface water flow. These impacts shall be assessed qualitatively.

*Flood Risk*

6.8.54 A Flood Risk Assessment (FRA) will be produced in accordance with the requirements of the National Networks National Policy Statement (NNPS) (Department for Transport, 2014), the National Planning Policy Framework (NPPF) (Department for Communities and Local Government, 2023) and its accompanying Technical Guidance (Department for Communities and Local Government, 2014) and the Environment Agency's climate change allowances (Environment Agency, 2020d).

6.8.55 The objectives of the FRA are to:

- Assess the risk to the Proposed Development from all potential sources of flooding.
- Establish the existing and future flood risk to the Proposed Development.
- Consider flood risk to the Proposed Development site during construction.

- Assess the potential impacts of the Proposed Development on flood risk elsewhere.
- Determine appropriate mitigation measures to manage flooding issues post development in a sustainable way.

6.8.56 Regarding climate change allowances, the Environment Agency Flood risk assessment: climate change allowances guidance will be referred to which uses peak river flow, peak rainfall intensity and sea level data from different sites around England to classify suitable allowances for the site. Updated detailed hydraulic modelling will be used to inform the FRA.

*Assessing Importance or Sensitivity*

6.8.57 The importance or sensitivity of the waterbodies is evaluated taking into account their quality, rarity, scale and substitutability. The following standard terms will be applied to the ES when determining the importance or sensitivity of water environment attributes, including surface water attributes, groundwater attributes and assets vulnerable to flood risk:

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

*Assessment of Significance*

6.8.58 Levels of significance will be assessed in line with the standard approach.

6.8.59 The magnitude of impacts will be evaluated taking into account the extent of loss and effects on integrity of the relevant waterbody attributes. The criteria used is based on the guidance and examples presented in the NPPF and DMRB guidance document.

6.8.60 The criteria for assessing the magnitude of an impact and estimating the importance of water environment attributes is provided in Appendix 2 (Section 10). The criteria considers both potential positive and negative impacts.

#### Assumptions and Limitations

6.8.61 The assumptions and limitations at the time of reporting are as follows:

- Data quality – only a desk study, using mainly web-based data and previous assessment reports has been undertaken.
- Data quantity – as per quality, only open, freely licensed data has been reported at this stage and therefore the amount of detail on certain topics is limited.
- Where impacts are uncertain a precautionary approach has been adopted.

6.8.62 For the next stage the assumptions and limitations are the following:

- Environmental data will be up-to-date and available from accessible sources (mainly web-based).
- Data will be requested from the Environment Agency under the Freedom of Information Act including their survey locations, current strategies and Extended Water Body Summary Sheets.
- Data will be available including traffic and road catchment data to allow water quality modelling assessments to be made.

- Design data in relation to the watercourses will be available to enable hydraulic modelling for flood risk and WFD assessments.
- Hydraulic modelling to assess the impacts of the Proposed Development on flood risk requires a verified model, else it will be based upon a number of assumed/estimated parameters, derived from comparable project experience. The work will be limited by the accuracy of the model and thus the observed data supporting it. Assumptions will be made in the absence of observed data.
- Hydraulic modelling analyses will be undertaken in accordance with guidance set out by the Environment Agency and using industry-standard methods.
- Hydraulic model sensitivity testing will be undertaken to understand the potential impact upon design flood levels caused by variation of model input parameters. On this basis, hydraulic modelling shall be considered to be a suitably robust tool for development planning and informing the preparation of an FRA.

### Conclusion

6.8.63 In line with DMRB, an assessment will be required where there is a potential for the proposed development to adversely affect the water environment. This scoping report has identified that the proposed development has the potential (if left unmitigated) to significant impact the water environment, therefore further assessment is warranted.

6.8.64 Road drainage and the water environment is therefore scoped into the EIA.

## **6.9 Ground Conditions**

6.9.1 The Proposed Development will require changes to the vertical and horizontal alignment of the bypass and new bridge and changes to the existing and proposed flood attenuation scheme with new areas of ground disturbance outside the previously consented area.

Scope of Assessment

- 6.9.2 Previous ground investigation reports that have provided information on the ground conditions of the Site. These are summarised as follows.

*Report on Ground Investigation at Walton-on-Trent Bypass, by Geotechnical Developments UK Ltd dated December 2005.*

- 6.9.3 This report was used as the basis of the design for the Consented Scheme developed by THDA Consulting Engineers and Scott Wilson. The report includes: a desktop study, 30no. trial pits; 15no. cable percussive boreholes; 4no. rotary boreholes; laboratory testing; comments on engineering considerations and geo-environmental aspects.

*Phase I review & Phase II Geo Environmental Assessment, by Geo Environmental Group dated June 2021.*

- 6.9.4 The report includes: a desktop study (including reference to exploratory holes from the 2005 ground investigation), 17no. trial pits; 4no. cable percussive / rotary boreholes; laboratory testing; comments on engineering considerations and geo-environmental aspects.

- 6.9.5 From these reports the general stratigraphy at the Site comprises topsoil over River Terrace Deposits over Mercia Mudstone Group. Alluvium is identified on the exploratory hole logs overlying the River Terrace Deposits at some locations. A few thin localised areas of Made Ground are also identified.

- 6.9.6 No visual or olfactory evidence of hydrocarbon contamination was noted in any of the exploratory holes during the fieldwork. Results of the testing undertaken in relation to the chemical contamination risk to human health and the environment at the Site in relation to the proposed works are detailed and discussed in the Phase I review &

Phase II Geo Environmental Assessment, by Geo Environmental Group dated June 2021.

6.9.7 Following a review of this work the Site and Proposed Development are considered low geo-environmental risk and no specific remedial measures are proposed. Suitable verification testing will be undertaken during the works.

6.9.8 A small number of additional / confirmatory trial pits / window samples are proposed (say 5no.) to reflect slight changes to the road alignment. Based on a review of previous data and the limited extent of new areas of Site, it is anticipated that ground investigation for these areas can be covered in non-EIA documentation to accompany the planning applications and through general construction protocols.

## **6.10 Climate Change**

6.10.1 Climate change is global in cause and effect and it is considered that the virtue of the scale and nature of the Proposed Development above and beyond the Consented Scheme, its implementation and operation will not significantly contribute to global climate change. With regard to climate change resilience, the Flood Risk and Surface Water Drainage Consultant is informing the design of the Proposed Development to ensure inherent design measures will safeguard against flooding risks and effects at the Site and elsewhere, even accounting for climate change. Accordingly, the ES will include a summary description of such inherent design features as part of the description of the Proposed Development. In view of the above, the Proposed Development is not anticipated to significantly affect greenhouse gasses or climate change and as such the ES will not provide a standalone impact assessment of climate change.

## **6.11 Major Accidents and Natural Disasters**

- 6.11.1 The EIA Regulations requires that risks due to major accidents and disasters are considered within the environmental assessment. A risk assessment of the major accidents and disasters that could potentially affect the Proposed Development was undertaken using guidance by International Federation of Red Cross and Red Crescent Societies website<sup>5</sup> and National Risk Register (NRR) of Civil Emergencies<sup>6</sup>.
- 6.11.2 Potential risks identified in the screening exercise were taken forward for more detailed consideration, with results being presented in Table 6.4 below, taking into account the risk of the probability of an event occurring, as well as the consequence and effect should such an event occur. These factors were used to determine if an event presented a significant risk (i.e. potential to cause loss of life or long lasting and/or permanent environmental damage and would require a response beyond existing response measures), and therefore would be scoped in for further assessment within the ES.
- 6.11.3 IEMA<sup>7</sup> (2020) states that major accidents and/or disasters should be considered as part of an assessment where the development has the potential to cause the loss of life, permanent injury and/ or temporary or permanent destruction of an environmental receptor which cannot be restored through minor clean-up and restoration.
- 6.11.4 Not all major events will be relevant to the Proposed Development, for example, the Proposed Development is not located in an area of volcanic activity, therefore the likelihood of this hazard occurring can be confidently screened out of the assessment. The purpose of this stage is to keep the assessment proportionate by using professional judgement to screen the long list of major events to determine those

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<sup>5</sup> Cabinet Office (2015) National Risk Register of Civil Emergencies 2015 edition

<sup>6</sup> [www.ifrc.org](http://www.ifrc.org) accessed October 2023

<sup>7</sup> [www.iema.net/resources/reading-room/2020/09/28/major-accidents-and-disasters-in-eia-an-iema-primer](http://www.iema.net/resources/reading-room/2020/09/28/major-accidents-and-disasters-in-eia-an-iema-primer) accessed October 2023

events that are relevant to the Proposed Development, or where the Proposed Development may have a realistic sensitivity to a particular event. Any major events that could not realistically occur, due to the type of development and the characteristics of the Proposed Development geographic location were omitted from the assessment at this stage.

- 6.11.5 The risk assessment shows that any risks from major accidents and disasters would either be considered through other environmental factors (e.g. flood risk with the Water Environment chapter) or can be sufficiently managed through the proposed scheme design (i.e. mitigation embedded into the design, where required). Major accidents and disasters have therefore not been scoped into the EIA as a standalone topic.



**Table 6.4: Initial scope of Major Accidents and Natural Disasters**

Type of Event	Relevant to the Proposed Development	Relevant Receptors	Embedded mitigation or proposed management actions	Manageable risk with mitigation?	Need for inclusion in EIA?
Human diseases	Yes - The construction of the Proposed Development is likely to require a number of people working in close proximity to one another and for the workforce to travel to and from the construction site.	People, drivers and workers	The spread of disease as a consequence of the Scheme is not considered to be any greater than that associated with other highway schemes. Standard control measures would be implemented by the appointed contractor during construction.	Y	Inclusion in the CEMP
Flooding	Yes – Part of the Proposed Development is located within an area of high to medium risk of flooding (Flood Zones 2 and 3) should the River Trent overflow its banks and to be vulnerable to pluvial flooding. Tsunami/ storm surge not relevant to the Scheme is not located within a coastal area.	Water resources and ecological receptors.  Nearby properties.  People, drivers and workers.	Detailed flood modelling has been undertaken as to be undertaken in Water Environment to identify, model and evaluate flood risk associated with the Proposed Development. This has considered both the vulnerability of the Proposed Development to flooding, and the potential for the Proposed Development to exacerbate flooding. Appropriate measures will be incorporated into the Proposed Development design to capture, control, manage, treat and discharge water. Allowances have also been made in the design to allow for the effects of future climate change predictions.	It is considered that these measures would appropriately manage potential flood risk associated with the Proposed Development.	Inclusion within Water Environment Chapter
Geological and ground related disasters e.g. earth quakes,	Yes – Construction requires significant excavations and earth movements, field drains,	Water resources and ecological receptors	Considered by geotechnical team as a fundamental part of the Proposed Development design. Appropriate design of the Proposed	Y	CEMP

Type of Event	Relevant to the Proposed Development	Relevant Receptors	Embedded mitigation or proposed management actions	Manageable risk with mitigation?	Need for inclusion in EIA?
landslides sink holes, ground stability	ponds, areas of spring issues/sinks and streams. Proposed Development not located within a geologically active area.	Nearby People, drivers and workers	Development to applicable standards means that receptors would not be of greater risk as a result of the Proposed Development.		
Poor air quality events	The Proposed Development has the potential to release emissions of air pollutants over the short term.	Aquatic environment Ecological receptors Nearby properties People, drivers and workers	The nature of the Proposed Development is unlikely to worsen air quality outside of short term temporary and duration that would be significant effect on air quality. cant effects on designated habitats. It is not considered necessary to undertake any more assessment than is already included in the assessment provided in the Air quality chapter	Y	Inclusion within Air Quality Chapter
Volcanic hazards	Proposed Development not located in the vicinity of a volcano. Highly unlikely that a volcanic eruption or ash cloud could significantly impact on any aspect of the Proposed Development.	N/A	N/A	N/A	N/A
Severe weather	The Scheme is located in an area which could experience storm events e.g. blizzards, cold waves, hailstorms and thunderstorms, heat waves, wild fires.	People, drivers and workers Aquatic environment Ecological receptors	Risk is no different from any other road/road users in the UK and specific measures not considered to be required. Construction, standard control measures would be implemented by the appointed contractor to manage the risk through CEMP	Y	Inclusion within CEMP

Type of Event	Relevant to the Proposed Development	Relevant Receptors	Embedded mitigation or proposed management actions	Manageable risk with mitigation?	Need for inclusion in EIA?
Animal diseases	Yes – The Proposed Development is located near where agriculture land where livestock are present	Aquatic and ecological receptors  People Workers  Road Users	The spread of disease as a consequence of the Proposed Development is not considered to be any greater than that associated with other highway schemes. Standard control measures would be implemented by the appointed contractor during construction to handle and dispose of either any diseased plants or injurious weeds, or both and prevent their spread.	Y	Inclusion within CEMP
Major industrial accidents e.g. Defence industry and unexploded ordnance (UXO) risk, nuclear power, chemical industry, oil and gas refinery	Site is at low risk from UXO and has not been affected by military activity None of the other facilities nearby, whilst the Proposed Development is at no more risk than the existing road. No further mitigation requirements are considered to be needed.	Aquatic and ecological receptors  People Workers  Road Users	The risks are assessed and managed through existing guidance	Y	Inclusion within CEMP
Engineering accidents/failures	Yes - Numerous utilities are located in the vicinity of the Proposed Development. The construction and operation of the Scheme would require the diversion, relocation or protection of a number of existing utility assets,	People, drivers and workers	Information regarding diversion works will be considered in the design process. The potential risk of construction related incidents when undertaking diversion works as part of the Proposed Development would be covered by relevant legislation, safe working practices and CDM regulations.	Y	Relevant legislation and CEMP.

Type of Event	Relevant to the Proposed Development	Relevant Receptors	Embedded mitigation or proposed management actions	Manageable risk with mitigation?	Need for inclusion in EIA?
	including drinking water, waste water, gas, electricity and telecommunications. There are a number of existing electricity cables located within the boundary.				
Major transport incidents e.g. Road accident Rail accident, aircraft disaster, maritime disaster, bridge failure	Yes - Proposed Development involves the construction of a bypass and construction of a number of structures, e.g. bridge over River Trent.	Aquatic environment  Ecological receptors  People, drivers and workers	During construction a Traffic Management Plan will be implemented to minimise road accidents resulting from traffic travelling to and from site. Further, the appointed Principal. Further, the health and safety in the context of road accidents has been considered within the design of the Proposed Development through the provision of safe crossings.  Appropriate design of the Proposed Development to applicable standards means that receptors would not be at greater risk as a result of the Proposed Development.	Y	Inclusion within CEMP & Traffic Management Plan
Widespread public disorder e.g. cyber attack, riots, terrorists attack, disruptive industrial action	No - The Proposed Development is unlikely to be more of a target than the existing road. The design has various technological inventions (e.g. traffic lights). No	N/A	N/A	N/A	N/A

Type of Event	Relevant to the Proposed Development	Relevant Receptors	Embedded mitigation or proposed management actions	Manageable risk with mitigation?	Need for inclusion in EIA?
	features that would make the Proposed Development more of a terrorist attack target than the existing road.				

## **6.12 Human Health**

- 6.12.1 Human health will be considered as required by EIA Regulations. This will likely be focused on identifying the environmental topics that have the potential to effect human health anticipated to be; flood-risk, noise and vibration, air quality.
- 6.12.2 During construction, all best-practice and legislative requirements necessary to protect the environment and human health will be implemented. This will include mandatory adherence to a CEMP. It therefore follows that the health and wellbeing of construction workers, local residents, local workers and visitors to the locality is unlikely to be significantly affected by the Proposed Development.
- 6.12.3 Inherent in the development scheme consideration and investigation is given to ground conditions and contamination perspective, whether the Proposed Development is acceptable in terms of air quality conditions to on and off-Site human receptors, whether the Proposed Development is acceptable in terms of noise and vibration conditions. The Proposed Development will also improve pedestrian connectivity particularly through Walton-on-Trent. The Proposed Development is not anticipated to give rise to additional impacts not already required to deliver the Consented Scheme in relation to community severance. Whilst all of the above can contribute to promoting and encouraging healthy lifestyles and wellbeing, the methodology for the assessment of health and wellbeing, and the methodology to benchmark quantify and qualify the implications of the above upon health and wellbeing, is still evolving. At this stage it is considered reasonable to assume that the implications of the completed and operational Proposed Development upon health and wellbeing will be no worse than insignificant and can be covered in assessments within the ES relating to the Water Environment, Noise and Air Quality, and the CEMP and as such the ES will not provide an impact assessment of human health.

### **6.13 Waste and Materials**

6.13.1 The Proposed Development may result in generation of additional waste and the need for additional materials than was predicted for the Consented Development.

Potential Construction impacts may include:

- Production of additional waste material, arising from more extensive excavation works.
- Excavation of possible contaminated lands in untested areas, which would require disposal off site at a suitably licensed facility although low geo-environmental risk has been identified during in work to date.
- Surplus materials and waste may occur where material supply exceeds material demand.

6.13.2 Waste will inevitably be generated as a consequence of the construction of the Proposed Development. However, a Site Waste Management Plan (SWMP) will be prepared to ensure that construction waste arisings will be effectively controlled and that good site management practice will be implemented to minimise the generation of waste and maximise the reuse or recycling of waste materials that arise from the Proposed Development where practicable.

6.13.3 Once operational it is not anticipated that significant amounts of waste will result from the Proposed Development.

6.13.4 In view of the above, the likely implications of waste generation associated with the Proposed Development are viewed to be insignificant when considered in light of the sustainable waste management measures to be implemented during construction that will be set out within the relevant non-technical chapters of the ES a Site Waste Management Plan and a CEMP.

## 7.0 TOPICS SCOPED OUT OF EIA

7.1.1 A number of topics have been scoped out of the EIA. These topics, and the reason they have been scoped out of EIA, are detailed below. Where relevant these topics may be covered within the non-EIA planning documentation.

**Table 7.1: Topics Proposed to be scoped out of EIA**

<b>Topic</b>	<b>Proposed Scope</b>
Landscape and Visual	Anticipate scoped out. Landscape and Visual Impact Assessment (LVIA) as non-EIA assessment.
Historic Environment	Scope out as changes in Consented Scheme mean minimal changes to land outside area previous archaeological excavations that can be covered under existing/amended WSI reports and if required a Heritage Statement.
Traffic and Transport	Scoped out as no changed to consented traffic flows anticipated. Planning applications to be accompanied by an updated TA.
Air Quality	Scope out - A standalone assessment, not part of the ES, will assess any potential opportunities to improve air quality and provide a mitigation strategy in relation to construction activities. The planning applications will be accompanied by: <ul style="list-style-type: none"> <li>• Construction dust risk assessment and mitigation strategy (including NRMM).</li> <li>• A detailed assessment of the change in trigger level and the impacts associated with this to support the S106 Deed of Variation.</li> </ul>
Ground Conditions	Scope out as changes in Consented Scheme mean minimal changes to land outside area that are largely understood based on previous site investigation studies. Minor areas can be covered through a non-EIA report and CEMP.
Major Accidents and Natural Disasters	To be included in Water Environment and CEMP
Human Health	To be included in general project description, Water Environment, Air Quality Chapters and CEMP
Climate Change	To be included in general project description Water Environment, Air Quality Chapters and CEMP
Waste	Site Waste Management Plan and a CEMP



## **8.0 ENVIRONMENTAL STATEMENT**

### **8.1 The Structure**

8.1.1 The structure for the ES will comply with the requirements of the EIA Regulations and take account of other good practice guidance. Essentially, the ES will comprise three parts, the main text, the supporting appendices and the Non-Technical Summary.

8.1.2 The format of an ES is not prescribed within the EIA Regulations, but Schedule 4 Part 2 of the EIA Regulations requires that the following information be provided as a minimum within the ES:

- *“a description of the development comprising information on the site, design and size of the development.*
- *a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects.*
- *the data required to identify and assess the main effects which the development is likely to have on the environment.*
- *an outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for the choice made, taking into account the environmental effects.*
- *a non-technical summary of the information provided under paragraphs 1 to 4 of this Part’.*

8.1.3 The proposed structure of the ES is provided below.

## **8.2 Approach to EIA**

### Technical Assessments

8.2.1 Each of the technical assessments will follow a systematic approach, with the principal steps as follows:

- description of baseline conditions;
- prediction of potential effects, including cumulative effects;
- assessment of effects;
- identification of appropriate mitigation measures; and
- assessment of residual environmental effects.

## **8.3 Baseline Description**

8.3.1 In order to evaluate environmental effects arising from the changes to the Consented Scheme, information relating to the existing environmental conditions will be collected. Any changes in the existing environment likely to occur prior to the start of the new development will be identified to establish the baseline and the sensitivity of the baseline will be described in relation to its environmental value or importance and with reference to the assessment criteria stated. The baseline will be used to assess what changes may take place during the construction and operation of the Proposed Development. The methods of data collection will be described within each technical assessment. Data will also be collected from public records and other archive sources and where appropriate field surveys will be carried out. The timing of the work and the study area will be outlined within each assessment.

## **8.4 Prediction of Potential Effects**

8.4.1 The prediction of potential effects will consider the construction and operation phases. During each phase of development, different environmental effects are likely to arise. For example, each technical assessment will consider the following:

- direct and indirect effects;
- short, medium and long term effects;
- permanent and temporary effects;
- positive and negative effects, and
- cumulative effects.

8.4.2 Following identification of potential environmental effects, baseline information will be used to predict changes to existing site conditions and permit an assessment of these changes.

## **8.5 Assessment of Effects**

8.5.1 The effect that the Proposed Development may have on each environmental receptor is influenced by a combination of the sensitivity of the receptor and the predicted degree of alteration from the baseline conditions (positive or negative). Environmental sensitivity may be categorised in many ways, for instance: threat to rare or endangered species, transformation of natural landscapes or views, changes to water quality and land use.

8.5.2 The initial assessment, consultation and scoping phases will identify these factors, along with the implications of the predicted changes. In order to evaluate environmental effects, assessment criteria will be identified within each technical chapter. Thresholds of significance will be used to make explicit the conclusions of

the assessment process. Significance will be based on the structured evaluation of the following three main criteria:

- identifying the nature and form of any predicted environmental effects;
- assessing whether effects identified are significant; and
- assessing the likelihood of identified effects.

8.5.3 For the purposes of environmental assessments, “effect” will be considered in terms of the following:

- **not significant:** no detectable or material change to a location, environment or species;
- **minor:** a detectable but non-material change to a location, environment or species;
- **moderate:** a material, but non-fundamental change to a location, environment or species; and
- **major:** a fundamental change to a location, environment or species.

8.5.4 Effects of moderate-major adverse/beneficial or greater are likely to be considered significant unless otherwise stated in the ES.

8.5.5 The ES will generally follow this theoretical approach. Where specific topic areas adopt a variation, this will be identified within the methodology of the relevant chapter. Within each chapter, the criteria for assessing significance of effects will also be made explicit. Each chapter will propose measures to avoid, reduce or remedy significant adverse effects (mitigation measures), if any are predicted. The

assessment process will conclude with an examination of residual effects after mitigation has been applied.

## **8.6 Mitigation and Enhancement**

8.6.1 Where the assessment process identifies any significant adverse effects, measures to avoid, compensate or mitigate these effects will be proposed. Such measures may include the consideration of alternatives to the scheme as proposed, such as changes to the locations, heights or footprints of buildings.

8.6.2 Each technical discipline will identify appropriate measures. Where possible these measures will be integrated into the overall design strategy as primary mitigation rather than “added on” to the proposals. By being flexible with the design, the EIA and the development teams will be able to respond to the findings of consultation and EIA work, and mitigate accordingly. Where necessary, secondary mitigation will be identified in response to any further effects of the development.

## **8.7 Cumulative Impacts**

8.7.1 In line with the EIA Regulations, an ES must give consideration to the cumulative effects or interaction of effects of a development. Cumulative effects are those which result from incremental changes caused by other past, present or reasonably foreseeable activities or projects in the local area, in combination with the Development. Cumulative effects can be split into two categories: (1) interaction of effects, which are the combined effects of individual effects, for example noise and vibration and ecology, from the Proposed Development on a particular receptor; and (2) cumulative effects, which are effects from several developments, which individually may be insignificant, but when considered together could result in a significant cumulative effect.

8.7.2 As set out in Section 3.5 this Scoping Report aims to consult the LPAs to establish whether there are any other committed development(s), that are reasonably foreseeable, within the area which have the potential to give rise to significant cumulative effects in combination with the Proposed Development. The agreed committed developments will be taken into account in the final ES.

## 8.8 Content of the ES

8.8.1 Table 8.2 outlines the chapters we anticipate being included within the ES, although chapter numbers may vary.

**Table 8.2: Proposed Content of the ES**

<b>Volume No.</b>	<b>Title</b>
<b>Volume 1</b>	<b>Environmental Statement</b>
<i>Chapter Number</i>	<i>Description</i>
1	Introduction
2	Site Conditions and Surrounding Environment
3	Proposed Development
4	Consideration of Alternatives
5	Planning Policy Context
6	Ecology
7	Noise and Vibration
8	Water Environment
9	Summary of Residual Effects
<b>Volume 2</b>	<b>Figures</b>
<b>Volume 3</b>	<b>Appendices</b>
<b>Volume 4</b>	<b>Non-Technical Summary</b>

8.8.2 The ES will include a draft CEMP. The draft CEMP will outline the mitigation measures that would be implemented during the construction phase of the Proposed Development. The draft CEMP will be updated at the next stage of the project by the contractor.

**9.0 PLANS**



**NOTES:**

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**KEY:**

- Site Boundary
- - - County Boundary Line

C	Additional land boundary removed, main boundary line amended	CDW	JB	MT	09.11.23
B	Red line boundary and additional land boundary amended	CDW	MT	MT	08.11.23
A	Additional land boundary amended to include nature reserve car park	CDW	MT	MT	16.10.23
-	First Issue	SB	JB	AC	04.10.23



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Countryside Partnerships

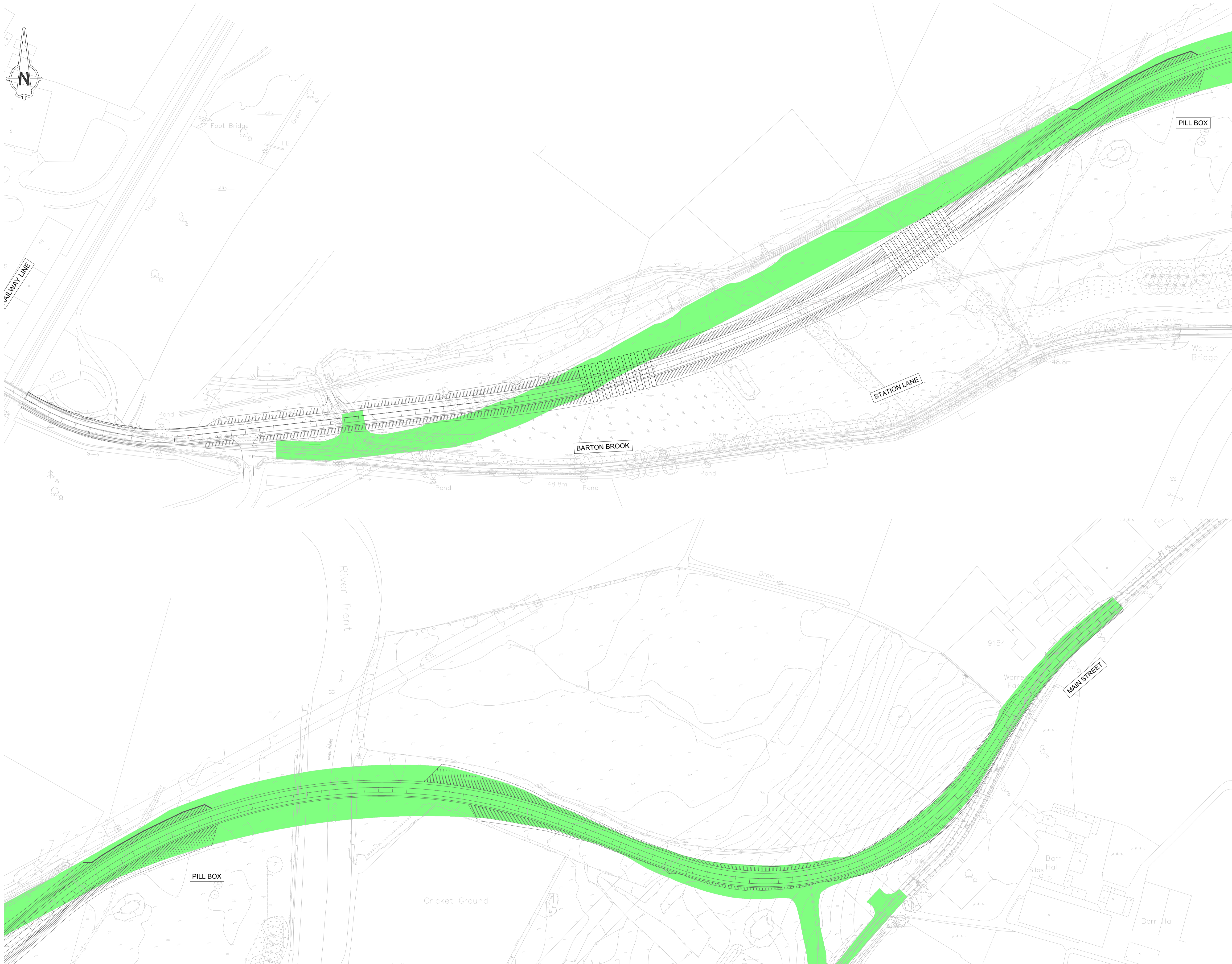
Walton-on-Trent Bypass

Redline Boundary Plan

Draft		Oct 2023
SB	AC	04.10.2023
1:2500	10738-SK-004	C
0 50 100 150 200 250 METRES		

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT HIS OWN RISK.





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**KEY:**

- Original Alignment
- Proposed Alignment
- 11 no. 3m dia UPVC culverts

First Issue LM JI MT 26.07.23



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Countryside Partnerships

Walton-on-Trent Bypass

Conceptual Alignment  
 Comparison Option 2

Status		Status Date
Draft		JULY2023
Drawn	Checked	Date
LM	JI	26.07.23
Scale	Number	Rev
1:1250	10738-002-001	-

## 10.0 APPENDICES

## **10.1 Archaeology Data**

### Prehistoric (up to AD 42)

- 10.1.1 The Trent valley and its tributaries were important corridors for human activity and movement since the prehistoric period as outlined in Howard's 2005 study of the Geoarchaeology of the Trent Valley and various programmes of archaeological work undertaken regionally along the Trent. Additionally, the Walton-on-Trent Conservation Area Character Statement highlights the Site as being in an area of high archaeological potential (South Derbyshire District Council, 2014: 23).
- 10.1.2 The archaeological potential of the Trent valley is evidenced within the wider vicinity of the Site, specifically c.840m to the west in Staffordshire where the Scheduled remains of a barrow cemetery (List Entry Number: 1006076) are recorded and c.1 km to the southwest of the Site in Derbyshire, where the Scheduled remains of a slight univallate hillfort are recorded (List Entry Number: 1017742).
- 10.1.3 Excavations undertaken within the limits of the Derbyshire alignment in 2005 by the University of Leicestershire Archaeological Services ahead of the proposed road development has established the archaeological potential of the Site. During this programme of fieldwork, a total of eight trenches were excavated and a linear feature to the south of Warren Farm was recorded that contained a single sherd of quartz-tempered pottery of Middle to Late Iron Age date (Harvey, 2005: 7).
- 10.1.4 Further linear and circular features were recorded approximately 150m to the northeast of St Laurence's Church and contained two flint flakes, a small sherd and a further two fragments of Middle to Late Iron Age pottery (Ibid: 14). These features have been interpreted as heavily ploughed prehistoric gullies and a possible pit alignment or posthole that formed part of a timber structure (Ibid: 14).

10.1.5 Flint scatters are recorded on the HER c.875m and c.840m to the south of the Site in a field (HER Number: 27532, 27531), c.600m southeast of the Site near the Walton-on-Trent Primary School (27521) and c.1km to the southeast near Walton Hill Farm. All of these finds were recovered during field walking between 1986-1988.

10.1.6 At Tucklesholme Quarry to the north of the Site in Staffordshire, numerous prehistoric assets have been recorded during various programmes of archaeological excavations. A Bronze Age round barrow, three ditches and a pit containing a possible cremation are recorded c.500m to the northwest of the Site (MST1439). Additionally, c.550m to the south of the Site is a record for a number of prehistoric features including a Bronze Age enclosure and ring ditch, which were excavated at Barton Quarry between 2007-2012 (MST20942). A further Bronze Age barrow was recorded within 100m to the north of the Site during excavations in 1991 (MST1443).

Roman (AD 43 – AD 410)

10.1.7 During the excavations which took place within the Site in 2005, two linear features were observed and excavated to the west of Drakelow Road in Derbyshire. The sides of the feature were steep and straight with a flat base and thirteen sherds of Roman pottery were recovered from the feature (Harvey, 2005: 8). This feature, and another similar linear feature to the west, have been interpreted as truncated gullies and may form a small enclosure (Ibid: 10).

10.1.8 Further evidence for Roman activity was recorded c.150m to the northeast of St Laurence's Church and comprised 12 sub-circular features and a linear feature that has been interpreted as a posthole structure (Harvey, 2005: 12). A single sherd of sandy ware pottery was recovered from these features and is interpreted as dating to the Early Roman period (Ibid: 12).

10.1.9 To the west of the Site in Staffordshire, it is recorded that the current A38 Lichfield Road follows the line of the Roman Road named Rykniel Street (Network Archaeology, 2011).

10.1.10 A kilometre to the north of the Site and to the south of the former Drakelow Powerstation, the HER has a record for several cropmarks identified on aerial photographs (27501). The cropmarks comprise a double ditched enclosure, a rectangular enclosure and linear features, which have been interpreted as a possible Roman fort or marching camp (27501).

Early Medieval (AD 410 – AD 1066)

10.1.11 Walton-upon-Trent was likely established in the early medieval period as a settlement adjacent to the River Trent and located as a major crossing point. This is further evidenced by the place-name etymology, with 'Walton-on-Trent' roughly translated as 'Welsh farm/settlement on the River Trent' as it is derived from the Anglian word 'walh' meaning a Briton or a Welshman and the Old English word 'tūn', meaning farmstead/village (Mills, 2011).

10.1.12 Early medieval activity within the surrounding area of the Site comprises several urns that were found during the excavation of a ballast pit in the mid-19th century, c.400m to the northwest of the Site in Staffordshire. These finds have led to the suggestion for the existence of a possible Anglo-Saxon cemetery (MST915).

10.1.13 Further early medieval activity is recorded c.280m to the south of the Site at the Barton Quarry and comprises a large Late Saxon enclosure measuring 45m in width and 60m in length (MST20943).

Medieval (AD 1066 – AD 1540)

10.1.14 Walton-on-Trent is recorded as a settlement in the Domesday Book and formed part of the hundred of Walecros (Powell-Smith, 2020). It had a recorded population of 23.5

households at the time of the survey in 1086, meaning that it was one of the larger 40% of settlements recorded at that time (Ibid).

10.1.15 Walton-on-Trent became a royal manor after 1066 when Earl Aelfgar was dispossessed and it came into the ownership of King William (SDDC, 2014: 4). The village was primarily an agricultural community with an early manor house called 'Old Hall' surviving at Walton-on-Trent up until 1855, when it was reduced to stables and a service wing (Ibid: 4; Country Images, 2017).

10.1.16 The land on the Derbyshire side was called Hall Orchard in the 19th century, which has been suggested as being related to the location of the Old Hall (Ibid: 4). Although, Ordnance Survey mapping from the late 19th century have shown two buildings to the south of Walton-on-Trent as being labelled as 'Old Hall' and the Derbyshire HER records these buildings as the possible site of Walton Old Hall (HER Number 27547).

10.1.17 Earthworks are recorded at Warren Farm to the immediate northeast of the Site and comprise visible remains of an external bank and ditch with a sub-rectangular platform measuring c.100m by 120m in size (HER Number 27727) (Harvey, 2005: 4). This has been interpreted as an unfinished medieval moat and the evaluations on this asset yielded no dating evidence; however, the layers below this feature have been dated to the 13th century AD (Harvey, 2005: 4).

10.1.18 Approximately 150m to the south of the Site at Walton-on-Trent stands the Grade II\* Listed Church of St Laurence. The church was constructed in the late 12th century and has 13th, 14th and 15th century alterations which have been followed by restorations in 1868 (Historic England, 2020). Stylistic elements of the church suggest that it could have Anglo-Saxon origins (SDDC, 2014: 3). At the northern point of the churchyard and at the end of Bells End Road, there is a large man-made earthwork possibly denoting an extended churchyard or earlier settlement evidence (Ibid: 5).

- 10.1.19 At Barton Quarry to the south of the Site in Staffordshire, excavations recovered pottery dating to the 11th and 12th century AD (MST20943).
- 10.1.20 Medieval agricultural activity has been recorded c.700m to the southeast and 600m to the south of the Site in the form of ridge and furrow, which is visible on aerial imagery and LiDAR data (HER Number: 27540 & 27542). Further agricultural activity is recorded c.320m to the south of the Site in Staffordshire and comprises the remains of a former field system including rectangular enclosures and ridge and furrow earthworks (MST1444).
- 10.1.21 The foci for settlement during the medieval period lies to the south of the Site around the Church of St. Laurence at Walton-on-Trent, with medieval assets closer to the Site attesting to the agricultural land providing the settlement with food, so the Site likely lay in open fields at this time.

Post-Medieval (AD 1540 - Present)

- 10.1.22 In 1723, a small country house was constructed c.515m to the southeast of the Site on the southern edge of Walton-on-Trent. Walton Hall has an attached stable range and garden wall and was built by a member of the Taylor family, although it later passed to the Disbrowe's through marriage (HER Number 27552). The Grade II\* listed building is a two and a half storey red-brick building comprising early Georgian architecture and bounded by parkland (List Entry: 1159300).
- 10.1.23 The HER records the site of a possible post-medieval windmill as being located c.880m to the southeast of the Site based on place name evidence. Historic mapping has shown that the area was called 'Windmill Bank'. To the south of the Site in Staffordshire, the HER records the site of a post-medieval mill located within the remains of medieval field systems (MST1444).

- 10.1.24 Further features of post-medieval date have been identified during excavations at Barton Quarry to the south of the Site between 2007-2012 and comprise former field boundaries, rubbish pits and the foundations of a barn (MST20944). Further post-medieval field boundaries are recorded to the north of the Site after being identified on aerial photography (MST18893) and due to the formerly agricultural nature of the Site and the land within the immediate vicinity of the Site, it is possible that there are post-medieval field boundaries within the Site itself.
- 10.1.25 In 1834, a bridge was built across the River Trent and prior to this the river was crossed via a ford or a ferry and it has been suggested that the original crossing was located to the south of Walton-on-Trent, where it would have been visible from the hillfort at Borrough Hill; however, it is noted that ford crossings did change locations (SDDC, 2014: 4).
- 10.1.26 The HER records a water meadow within the Site in Staffordshire, with surviving earthworks identified during a Water Meadow Survey in 2008 (MST18684). Aerial photographs from 1963 and 2000 revealed that the head and main drains of the water meadow survive. The desk-based survey also identified water meadow earthworks on the Derbyshire side of the Trent, possibly within the Site.
- 10.1.27 Historic Ordnance Survey mapping has revealed that from 1883 to around 1955, the River Trent to the west of the Site was wider with four islets within its channel.
- 10.1.28 One of a line of three WWII concrete pillboxes is recorded within the Site on the western side of the Trent and was situated to defend Walton Bridge (MST4831). The pillbox is not a listed asset.

#### 2022 Archaeological Works

- 10.1.29 Archaeological evaluation by trial trenching was undertaken by Dalcour Maclaren in April 2022, comprising the excavation of twelve trenches, ten trenches measuring



10m long x 4m wide and two trenches measuring 50m long x 1.8m wide within the Staffordshire limits of the former alignment.

10.1.30 Two further trenches, measuring 10m long x 1.8m wide were excavated within the Derbyshire limits of the former alignment in the location of the bridge piers.

## 10.2 Appendix 2: Water Environment

Table A1: Criteria for estimating the importance of water environment attributes

<b>Importance</b>	<b>Example</b>
<b>Very High: Attribute has a high quality and rarity on regional or national scale</b>	<i>Surface water</i>
	Large or medium watercourses with pristine / near pristine water quality, i.e. Water Framework Directive (WFD) Class 'High'. Site protected/designated under EU or UK habitat legislation: Special Areas of Conservation (SAC), Special Protection Area (SPA), Site of Special Scientific Interests (SSSI), Water Protection Zone (WPZ), Ramsar site, species protected by EU legislation. Watercourses supporting a wide range of significant species and habitats sensitive to changes in suspended sediment concentrations and turbidity such as salmon or freshwater pearl mussels. Water dependent ecosystems of international/ national biodiversity value. Water feature sediment regime provides a diverse mosaic of habitat types. Water feature includes varied morphological features (e.g. pools, riffles, bars, natural bank profiles) with no sign of channel modification. A watercourse and associated abstraction boreholes used for public water supply or private water supply serving >10 properties. Water body of high amenity value, including areas of bathing and where water emersion sports are regularly practised.
	<i>Groundwater</i>
	Principal Aquifer providing a regionally important resource or supporting site protected under EC and UK habitat legislation. Source Protection Zone (SPZ) 1. A groundwater body and associated abstraction boreholes used for public water supply or private water supply serving >10 properties.
<b>High: Attribute has a high quality and rarity on local scale</b>	<i>Flood Risk</i>
	Essential infrastructure including: Essential transport infrastructure which has to cross the area at risk. Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including electricity generating power stations and grid and primary substations; and water treatment works that need to remain operational in times of flood. Wind turbines.
<b>High: Attribute has a high quality and rarity on local scale</b>	<i>Surface water</i>
	Medium or small watercourses with minor degradation of water quality as a result of anthropogenic factors. Water body of good chemical and biological quality i.e. WFD Class 'Good'. Species protected under UK legislation Water dependent ecosystems of regional/county biodiversity value. Watercourses supporting some species and habitats sensitive to changes in suspended sediment concentrations and turbidity. Water feature sediment regime provides habitats suitable for species sensitive to changes in sediment concentration and turbidity. Water feature exhibiting a natural range of morphological features (e.g. pools, riffles, bars, varied natural riverbank profiles), with limited signs of artificial modifications or morphological pressures. A watercourse body and associated abstraction boreholes supporting minor/noncritical public drinking water supplies, or private water supply serving 2-10 properties. Water body of a moderate amenity value including public parks, boating, noncontact water sports, popular footpaths adjacent to watercourses, or watercourses running through housing developments/ town centres.
	<i>Groundwater</i>
	Principal Aquifer providing locally important resource or supporting river ecosystem. SPZ 2.

Importance	Example
	<p>A groundwater body and associated abstraction boreholes supporting minor/noncritical public drinking water supplies, or private water supply serving 2-10 properties.</p> <p><i>Flood Risk</i></p> <p>Development that is more vulnerable to flooding including: Hospitals. Residential institutions such as residential care homes, children’s homes, social services homes, prisons and hostels. Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels. Non–residential uses for health services, nurseries and educational establishments. Landfill and sites used for waste management facilities for hazardous waste. Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan.</p>
<p><b>Medium: Attribute has a medium quality and rarity on local scale</b></p>	<p><i>Surface Water</i></p> <p>Small watercourses with degradation of water quality as a result of anthropogenic factors. WFD Class of ‘Moderate’. Water dependent ecosystems of county/district biodiversity value. Watercourses supporting limited species and habitats sensitive to changes in suspended sediment concentrations and turbidity. Water feature sediment regime provides some habitat suitable for species sensitive to change in suspended sediment concentrations or turbidity. Water feature exhibiting some morphological features (e.g. pools, riffles and depositional bars). The channel cross-section is partially modified in places, with obvious signs of modification to the channel morphology. A watercourse and associated abstraction boreholes supporting a private water supply serving a single property, or for agricultural/industrial use. Water body of particular local social/cultural/educational interest. Water body of low amenity value with only casual access, e.g. along a road or bridge in a rural area</p> <p><i>Groundwater</i></p> <p>Aquifer with limited connection to surface water. SPZ 3. A groundwater body and associated abstraction boreholes supporting a private water supply serving a single property, or for agricultural/industrial use.</p> <p><i>Flood Risk</i></p> <p>Development that is less vulnerable to flooding including: Police, ambulance and fire stations which are not required to be operational during flooding. Buildings used for shops; financial, professional and other services; restaurants, cafes and hot food takeaways; offices; general industry, storage and distribution; non-residential institutions not included in the ‘more vulnerable’ class; and assembly and leisure. Land and buildings used for agriculture and forestry. Waste treatment (except landfill and hazardous waste facilities). Minerals working and processing (except for sand and gravel working). Water treatment works which do not need to remain operational during times of flood. Sewage treatment works, if adequate measures to control pollution and manage sewage during flooding events are in place.</p>
<p><b>Low: Attribute has a low quality and rarity on local scale</b></p>	<p><i>Surface water</i></p> <p>Small, heavily modified watercourses or drains with poor water quality as a result of anthropogenic factors. Water of poor or bad chemical or biological quality, i.e. WFD Class of ‘Poor’ or ‘Bad’. Water dependent ecosystems of local/less than local biodiversity value. Watercourses which do not support any significant species and habitats sensitive to changes in suspended sediment concentrations and turbidity.</p>

Importance	Example
	<p>Water feature sediment regime which provides very limited physical habitat for species sensitive to changes in suspended solids concentration or turbidity.</p> <p>Water feature that has been extensively modified (e.g. by culverting, addition of bank protection or impoundments) and exhibits limited-to-no morphological diversity. The water feature is likely to have uniform flow, uniform banks and absence of bars. Insufficient energy for morphological change.</p> <p>Watercourses not supporting water abstractions.</p> <p>Borehole without abstractions.</p> <p>Water body of no amenity value, seldom used for amenity purposes, in a remote or inaccessible area.</p>
	<i>Groundwater</i>
	No aquifer
	<i>Flood Risk</i>
	<p>Water-compatible development:</p> <p>Flood control infrastructure.</p> <p>Water transmission infrastructure and pumping stations.</p> <p>Sewage transmission infrastructure and pumping stations.</p> <p>Sand and gravel working.</p> <p>Docks, marinas and wharves.</p> <p>Navigation facilities.</p> <p>Ministry of Defence defence installations.</p> <p>Ship building, repairing and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location.</p> <p>Water-based recreation (excluding sleeping accommodation).</p> <p>Lifeguard and coastguard stations.</p> <p>Amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms.</p> <p>Essential ancillary sleeping or residential accommodation for staff required by uses in this category, subject to a specific warning and evacuation plan</p>

Table A2: Criteria for estimating the magnitude of an impact on an attribute

Magnitude	Criteria	Typical examples	
<b>Major adverse</b>	Results in loss of attribute and/or quality and integrity of the attribute	Surface water	Failure of both acute-soluble and chronic-sediment related pollutants in HEWRAT and compliance failure with EQS values. Calculated risk of pollution from a spillage $\geq 2\%$ annually (spillage assessment). Loss or extensive change to a fishery. Loss of regionally important public water supply. Loss or extensive change to a designated nature conservation site. Reduction in water body WFD classification.
		Groundwater	Loss of, or extensive change to, an aquifer. Loss of regionally important water supply. Potential high risk of pollution to groundwater from routine runoff - risk score $>250$ (Groundwater quality and runoff assessment). Calculated risk of pollution from spillages $\geq 2\%$ annually (Spillage assessment). Loss of, or extensive change to GWDTE or baseflow contribution to protected surface water bodies. Reduction in water body WFD classification. Loss or significant damage to major structures through subsidence or similar effects
		Flood risk:	Increase in peak flood level ( $> 100\text{mm}$ ).
<b>Moderate adverse</b>	Results in effect on integrity of attribute, or loss of part of attribute	Surface water:	Failure of both acute-soluble and chronic-sediment related pollutants in HEWRAT but compliance with EQS values. Calculated risk of pollution from spillages $\geq 1\%$ annually and $<2\%$ annually. Partial loss in productivity of a fishery. Degradation of regionally important public water supply or loss of major commercial/ industrial/ agricultural supplies. Contribution to reduction in water body WFD classification.
		Groundwater:	Partial loss or change to an aquifer. Degradation of regionally important public water supply or loss of significant commercial/ industrial/ agricultural supplies. Potential medium risk of pollution to groundwater from routine runoff - risk score 150-250. Calculated risk of pollution from spillages $\geq 1\%$ annually and $<2\%$ annually. Partial loss of the integrity of GWDTE Contribution to reduction in water body WFD classification. Damage to major structures through subsidence or similar effects or loss of minor structures.
		Flood risk:	Increase in peak flood level ( $> 50\text{mm}$ ).
<b>Minor adverse</b>	Results in some measurable change in attributes, quality or vulnerability	Surface water:	Failure of either acute soluble or chronic sediment related pollutants in HEWRAT. Calculated risk of pollution from spillages $\geq 0.5\%$ annually and $<1\%$ annually. Minor effects on water supplies.
		Groundwater:	Potential low risk of pollution to groundwater from routine runoff - risk score $<150$ . Calculated risk of pollution from spillages $\geq 0.5\%$ annually and $<1\%$ annually Minor effects on

Magnitude	Criteria	Typical examples	
		Flood risk:	Increase in peak flood level (> 10mm)
<b>Negligible</b>	Results in effect on attribute, but of insufficient magnitude to affect the use or integrity	The proposed project is unlikely to affect the integrity of the water environment.	
		Surface water:	No risk identified by HEWRAT (pass both acute-soluble and chronic-sediment related pollutants). Risk of pollution from spillages <0.5%.
		Groundwater:	No measurable impact upon an aquifer and/or groundwater receptors and risk of pollution from spillages <0.5%.
		Flood risk:	Negligible change to peak flood level ( $\leq \pm 10$ mm).
<b>Minor beneficial</b>	Results in some beneficial effect on attribute or a reduced risk of negative effect occurring	Surface water:	HEWRAT assessment of either acute soluble or chronic-sediment related pollutants becomes pass from an existing site where the baseline was a fail condition. Calculated reduction in existing spillage risk by 50% or more (when existing spillage risk is <1% annually).
		Groundwater:	Calculated reduction in existing spillage risk by 50% or more to an aquifer (when existing spillage risk <1% annually). Reduction of groundwater hazards to existing structures. Reductions in waterlogging and groundwater flooding.
		Flood risk:	Creation of flood storage and decrease in peak flood level (> 10mm).
<b>Moderate beneficial</b>	Results in moderate improvement of attribute quality	Surface water:	HEWRAT assessment of both acute-soluble and chronic-sediment related pollutants becomes pass from an existing site where the baseline was a fail condition. Calculated reduction in existing spillage by 50% or more (when existing spillage risk >1% annually). Contribution to improvement in water body WFD classification.
		Groundwater:	Calculated reduction in existing spillage risk by 50% or more (when existing spillage risk is >1% annually). Contribution to improvement in water body WFD classification. Improvement in water body catchment abstraction management Strategy (CAMS) (or equivalent) classification. Support to significant improvements in damaged GWDTE.
		Flood risk:	Creation of flood storage and decrease in peak flood level 1 (>50mm).
<b>Major beneficial</b>	Results in major improvement of attribute quality	Surface water:	Removal of existing polluting discharge or removing the likelihood of polluting discharges occurring to a watercourse. Improvement in water body WFD classification.
		Groundwater:	Removal of existing polluting discharge to an aquifer or removing the likelihood of polluting discharges occurring. Recharge of an aquifer. Improvement in water body WFD classification.
		Flood risk:	Creation of flood storage and decrease in peak flood level (>100mm).
<b>No change</b>		No loss or alteration of characteristics, features or elements; no observable impact in either direction.	