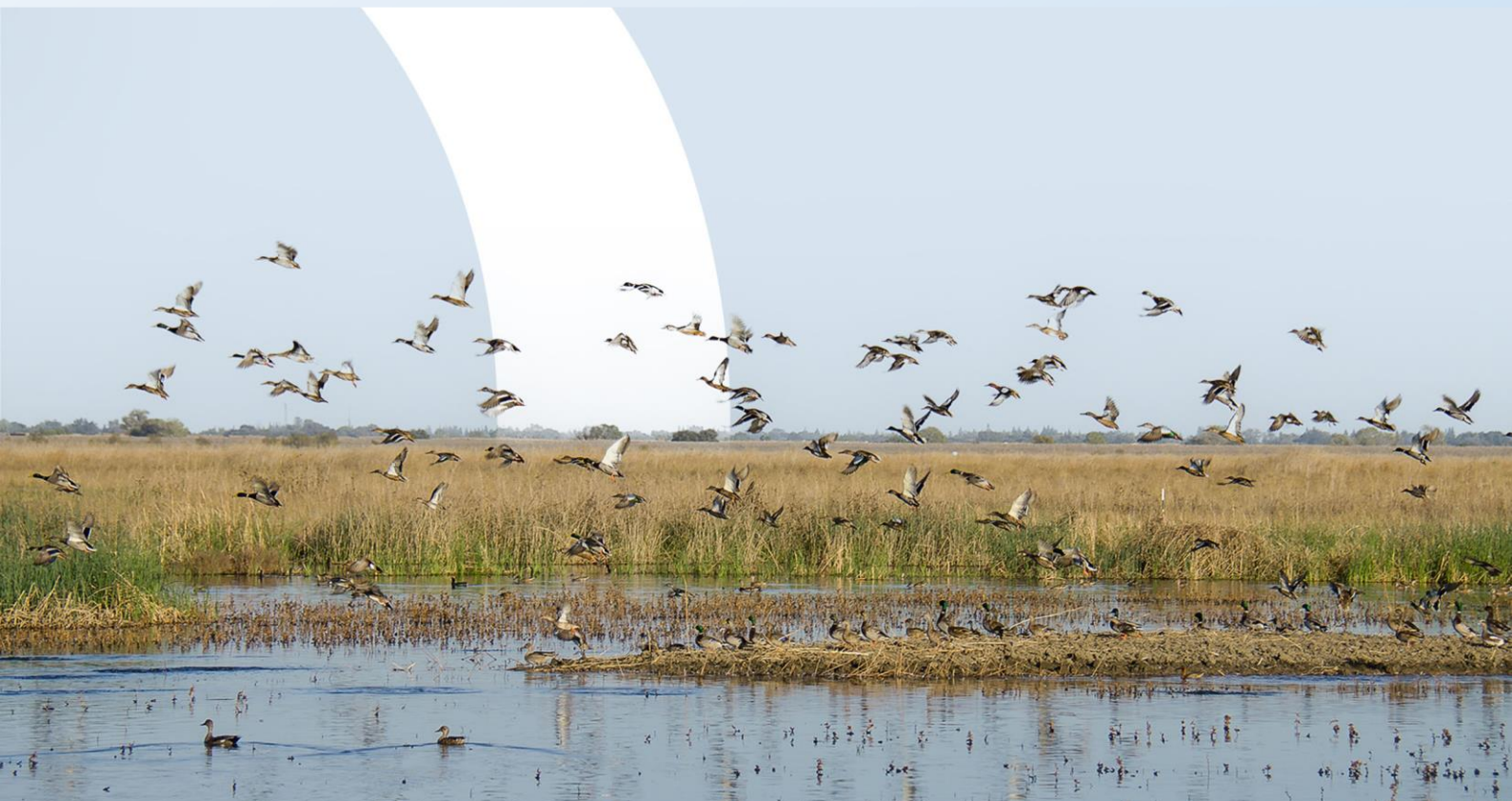




National Grid Electricity Transmission Plc

TYNE CROSSING STRATEGIC REPLACEMENT

Environmental Impact Assessment Screening
Report





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APPENDICES

APPENDIX A

FIGURE 1: SITE LOCATION PLAN

APPENDIX B

FIGURE 2: ENVIRONMENTAL CONSTRAINTS

APPENDIX C

FIGURE 3: LOCATION OF TUNNEL HEAD HOUSE AND CABLE SEALING END COMPOUNDS

1 INTRODUCTION

1.1 OVERVIEW

- 1.1.1. National Grid Electricity Transmission plc (National Grid) are proposing to bore a 1.6km long and 4.0m wide tunnel crossing under the River Tyne (from shoreline to shoreline), with underground electricity transmission cables and associated infrastructure between North Tyneside and South Tyneside in Tyne and Wear in North East England (see section 2.2 for full Project Description).
- 1.1.2. The purpose of this development is to allow for the safe passage of vessels and cargo with heights close to or above the height of the existing ZZA overhead transmission line ('OHL'). The development is known as the 'Project' in this EIA Screening Report.
- 1.1.3. This Environmental Impact Assessment (EIA) Screening Report supports National Grid's request to North Tyneside Council and South Tyneside Council and the Secretary of State for Energy Security and Net Zero (the Secretary of State) for Screening Opinions to confirm whether an Environmental Impact Assessment (EIA) is required in respect of the Project.
- 1.1.4. Consent under the Town and Country Planning Act 1990¹ ('TCPA') will be required for the construction of tunnel head houses (THHs), cable sealing end compounds (CSECs), the boring of the new tunnel and the removal of existing towers and overhead lines. It is proposed that National Grid will use permitted development rights for the construction of tunnels and underground cables. OHL works including six new towers will require Section 37 consent under the Electricity Act 1989. The consideration of whether the Project is an EIA development will assist with the determination of the consenting route. Hence, requests for a Screening Opinion are being made to North and South Tyneside councils under the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 ('TCPA EIA Regulations') and the Department for Energy Security and Net Zero (DESNZ) under the Electricity Works Environmental Impact Assessment (England and Wales) Regulations 2017 ('EW EIA Regulations').

1.2 THE TYNE CROSSING PROJECT

- 1.2.1. National Grid is the owner and operator of the high-voltage transmission network across England and Wales. Electricity is transmitted at 400kV and 275kV to link generation with major centres of demand. At these centres of demand, high voltage electricity is transformed to voltages of 132kV and below for delivery into the local distribution networks and directly connected customers. The local Distribution Network Operator (DNO) then supplies power to local homes and businesses through a series of substations and transformers.
- 1.2.2. National Grid has a statutory duty under the Electricity Act 1989 and its transmission license granted under that Act to develop and maintain an efficient, coordinated and economical transmission network.

¹Town and Country Planning Act 1990. Available: <https://www.legislation.gov.uk/ukpga/1990/8/contents>
[Accessed February 2025]

Additionally, under paragraphs 1 and 2 of Schedule 9 of the Electricity Act, National Grid is required to preserve natural beauty, conserve biological, geological or physiographical features of special interest and protected sites, architectural, historic or archaeological interest and should reasonably mitigate any effects on them.

- 1.2.3. The Project aims to provide a long-term solution to the problems encountered with the existing transmission line, as the height of this line has become a hinderance to large vessels/cargo sailing along the River Tyne, specifically jacket foundations produced for the offshore wind industry.

1.3 CONSENTING REGIMES

- 1.3.1. The proposed THHs, CESC's, access roads, associated infrastructure and works to modify and remove the existing overhead lines and towers ZZA064 to ZZA067 require consent under the TCPA by way of planning permission. As this EIA Screening request concludes in Section 4 that the Project is not considered EIA development, the installation of underground cables (including the boring of a new tunnel) is proposed be brought forward under National Grid's permitted development rights, pursuant to Part 15 (Class B(a)) of The Town and Country Planning (General Permitted Development) (England) Order 2015 (GPDO). If North Tyneside and South Tyneside councils deem the Project to be an EIA development, a planning application for the underground elements of the Project will be submitted to both Councils for their determination.
- 1.3.2. Section 37 of the Electricity Act 1989 establishes the statutory consenting process to install and keep installed overhead electric lines. It requires consent of the Secretary of State to install an electric line above ground unless the electric line either:
 - a) *has a nominal voltage of less than 20kV and is used for supplying a single customer; or*
 - b) *is within premises either occupied or controlled by the person responsible for the installation.*
- 1.3.3. The installation of six new towers and approximately 950m of new OHL on the north side of the River Tyne and 450m of OHL on the south side of the river would be above 20kV and not located on land occupied or controlled by National Grid. As such, the OHL components of the Project fall under Section 37 of the Electricity Act, and National Grid will seek consent (including deemed planning permission) from the Secretary of State for the OHL works.
- 1.3.4. The proposed works fall under different consenting regimes, however they are interrelated. All elements of the Project are therefore considered in this EIA Screening Report to ensure the environmental effects of the Project are assessed as a whole. Screening Requests are being made to North and South Tyneside councils under the TCPA EIA Regulations and Department for Energy Security and Net Zero (DESNZ) under the EW EIA Regulations.

1.4 PURPOSE OF THIS REPORT

- 1.4.1. In accordance with the TCPA EIA Regulations and EW EIA Regulations, the following information is contained within this EIA Screening Report:
 - A plan sufficient to identify the land (**Appendix A – Figure 1**);
 - A description of the nature and purpose of the Project, including a description of the physical characteristics (**Section 2**);
 - A description of the location of the Project, with particular regard to the environmental sensitivity of geographical areas likely to be affected (**Section 2 and Section 3**);

- Consideration of the likely significant effects on the environment arising from the Project (**Section 3**);
- Summary and conclusion as to whether the Project should be subject to an EIA (**Section 4**).

1.4.2. All information has been collated primarily from desk-based sources, accounting for the baseline conditions and the potential likely significant environmental effects of the Project. A range of environmental assessments are currently being prepared in support of the subsequent applications for the Project and where available, emerging information from these assessments has also been drawn upon.

2 THE PROJECT SITE AND DESCRIPTION OF DEVELOPMENT

2.1 THE PROJECT SITE

- 2.1.1. The Project will be located in the jurisdiction of North Tyneside and South Tyneside councils in North East England, within an existing industrial area. The surrounding site of the Project comprises Overhead Power Line (OHL) towers ZZA062 to ZZA069, with Towers ZZA062 to ZZA064 located in the East Howden area of North Tyneside and Towers ZZA065 to ZZA069 located in the Jarrow area of South Tyneside. The northern and southern parts of the sites are separated by the River Tyne dividing the northern and southern sides. The Project lies within the North Tyneside and South Tyneside Council areas. A Site Location Plan is contained in **Appendix A – Figure 1**.
- 2.1.2. The red line boundary (RLB) of the Project covers approximately 49 hectares (ha) and includes areas of deciduous woodland, mudflats, open mosaic habitats on previously developed land, and reedbeds (the Site). The works will also be within the riverbed of the River Tyne, and adjacent to the River Don. The Jarrow Slake Mud Flats Local Wildlife Sites (LWS), Howdon Wetlands LWS, and River Tyne (Newcastle LWS and Northumberland LWS) are located within the Project RLB. Two existing OHL towers including ZZA066 and ZZA067 of the Project are situated within the River Don Salt Marsh LWS.
- 2.1.3. The Site is situated within Tyne and Wear Lowlands National Character Area (NCA ID: 14) and does not contain any landscape designated sites or designated heritage assets. However, OHL towers ZZA066 and ZZA067 are located within St. Paul's Conservation Area within the Village of Jarrow. Within 500m of the Project there are several heritage assets, including the St. Paul's Monastery and Village of Jarrow Scheduled Monuments; the Church of St Paul and the Monastery of St Paul (Ruins of Jarrow Monastery) Grade I listed buildings; as well as several Grade II Listed Buildings.
- 2.1.4. The southern part of the Site lies in Bede ward of South Tyneside Council, while the northern part is situated in the Riverside ward of North Tyneside Council. The surrounding setting comprises a mix of residential, community, commercial and industrial elements, including housing, community facilities, businesses, industries, open fields, port infrastructure, and transport links.
- 2.1.5. There are no Public Rights of Way (PRoW) crossing the Site. Footpath J23 in South Tyneside is situated on the Site boundary and Restricted Byway J16 in South Tyneside is located just outside the Site boundary. The River Tyne Trail long distance footpath and National Cycle Network (NCN) 72 Hadrian's Cycleway and NCN 14 crosses the Project adjacent to the A187 Howdon Road, and south of the river.

Access

- 2.1.6. The northern portion of the Site will be accessed for construction and later maintenance purposes via the A187 Howdon Road which links North Shields to the A19 Tyne Tunnel. To the south of the River Tyne, access will be via A185 Jarrow Road, which connects South Shields to East Jarrow and A19 Tyne Tunnel.
- 2.1.7. The construction, maintenance and operation traffic vehicles will enter the north side of the Site from the A19 southbound, turning onto the A193 eastbound, and then through a new junction on the southbound side of A187, operating on a left in and left out basis.

- 2.1.8. The vehicles will enter the south side of the Site from A19 northbound, turning onto the A194 eastbound, then onto Hobson Way with the traffic then following the A185 westbound, and finally turning onto Priory Road / Church Bank northbound / reaching the Port of Tyne depending on the OHL towers to be accessed.

2.2 NEED FOR THE PROJECT

- 2.2.1. The existing ZZA transmission line is a dual-circuit 275kV overhead power line (OHL) that crosses the River Tyne, between East Howden and Jarrow, at tower locations ZZA064 and ZZA065. Originally installed in the 1960's, the ZZA transmission line (described in this document as the ZZA OHL) did not pose challenges for the river users of that time.
- 2.2.2. In recent years, innovation and technology improvements have allowed vessels with larger cargos and higher vertical profile to use the River Tyne. Currently, the existing ZZA OHL is now creating a constraint to the passage of vessels with heights close to or above the height of the existing ZZA OHL when there is a requirement to transport large Offshore Wind (OSW) equipment that has been manufactured within the Port of Tyne area. To allow for the safe passage of these vessels, there is a requirement to physically remove a section of the ZZA OHL or elements of a section of the ZZA OHL, which was previously completed on two occasions a number of years ago. Various users/manufacturers along the River Tyne, have identified that the existing ZZA OHL crossing is causing a constraint to the use of the river by vessels supporting local manufacturing and offshore industries, as the physical removal of the ZZA OHL or ZZA OHL elements for vessels with higher vertical profiles creates large disruptions, and significantly inhibits business growth and development in the area as the OSW equipment is getting much larger in size. In addition, the physical removal of the ZZA OHL or ZZA OHL elements is not possible anymore due to the increased security of electricity supply risk for consumers and the constraint costs that align with taking outages on this dual-circuit OHL which are now untenable. Therefore, as a permanent solution for the need to remove sections of existing ZZA OHL and related physical and cost constraints, NGET, with the support of WSP, have assessed alternative options to construct to allow the passage of larger vessels on the River Tyne (for the proposed Project layout see Appendix B – Figure 2).

2.3 DESCRIPTION OF THE PROJECT

- 2.3.1. The Project is comprised of the following principal elements:
- The boring of a 1.6km tunnel under the River Tyne;
 - Installation of new underground cables in the tunnel; with one cable per phase initially but with an option to increase this to be two cables per phase;
 - Associated infrastructure including two new THHs (one to the North of the River Tyne and one to the South),
 - two new CSECs (one to the North and one to the South),
 - six new 275Kv OHL towers (four on the north side and two on the south side of the River Tyne), and modifications to existing overhead lines; and
 - Removal of the existing overhead line and towers from ZZA063 to ZZA0687.
- 2.3.2. These components of the Project are described below.

Boring of a New Tunnel

- 2.3.3. The new tunnel is a technically feasible and achievable solution to complete the crossing of the River Tyne. The tunnel crossing beneath the River Tyne would be approximately 1.6km long, measured between the shaft centres. The location of the shaft (which are located within the CSEC compound) in the North (active Headhouse) would be placed east of Northumbrian Water's Howdon Treatment Works facility and North of the access bridge on the eastern most side of that site. The location of the South shaft (Passive Headhouse) will be approximately 150m directly east of Tower ZZA067 within the Port of Tyne car park facility. When constructed, the tunnel will be future proofed with space for extra cables to be added in the future, without the need for any additional tunnelling at a later date.
- 2.3.4. The maximum cable route length is approximately 1750m allowing for an additional 100m at each end for the cable connections within the respective CSECs. The new tunnel will be constructed initially with a single cable per phase solution, with a life span of approximately 100-120 years. This allows for the replacement of High Voltage (HV) cables every 40-50 years without any significant issues on the National Grid network or external impacts via the use of single circuit outages.
- 2.3.5. This solution is the result of an optioneering exercise which assessed this to be the optimal solution to eliminate the OHL crossing over Tyne and the associated obstruction caused to passing vessel traffic.

Installation of New Underground Cables in the Tunnel

- 2.3.6. A cable solution will be designed as a 400kV system to allow for future proofing of the network but will initially be run at 275kV. The cable solution will initially consist of single core XLPE 400kV insulated copper conductor and smooth welded aluminium sheathed power cable. The 400kV cable with 2500mm² copper conductor will allow for single cables per phase to be installed within the new bore tunnel. Therefore, for each circuit three High Voltage Alternating Current (HVAC) cables are required, giving a total of six cables running through the tunnel for a double circuit configuration.
- 2.3.7. A fibre optic cable and Electric Conduit Construction (ECC) cable will be provided for each circuit for protection, control and communication. The cable route between the shaft and the CSEC will be installed within cable troughs within the CSEC.

Associated Infrastructure

- 2.3.8. Two new tunnel headhouses will be required for the Project, each located over the tunnel shafts to control access and house monitoring equipment, tally rooms (location to note people in/out of the tunnel), and welfare facilities. One headhouse will be an active headhouse (northern side) in which fans drive the ventilation system with the other headhouse (southern side) being passive that does not contain any ventilation equipment.
- 2.3.9. Two CSECs will be constructed that contain the new headhouses and associated high voltage equipment required to connect the overhead power lines to the new cables providing for suitable monitoring, earthing and disconnection facilities. The location of the CSEC will be within the same location as the shafts described in section 2.2.4 above.
- 2.3.10. Each CSEC location will be approximately 75mx75m and will temporarily require additional areas of land for the location of construction compounds to support the construction of the CSECs, headhouses, shafts and tunnel.

- 2.3.11. Both locations to the North and South of the River Tyne would be feasible with suitable access and sufficient area to complete the tunnel, headhouse, CSEC and construction compounds.
- 2.3.12. The construction of six new towers (four towers in the North and two towers in the South) will be required to connect from Tower ZZA062 to the new CSEC in the North and from Tower ZZA069 to the new CSEC in the South.
- 2.3.13. The length of the new overhead line in the North is estimated to be 950m from tower ZZA062 to the new CSEC, and the length of the new overhead line in the South is estimated to be 450m from tower ZZA069 to the new CSEC.

Internal Access and Circulation for construction and maintenance

- 2.3.14. During construction, internal roads and pedestrian area layouts will be designed to allow for the safe movement of vehicles and pedestrians, with due regard to relevant health and safety legislation and recognised industry best practice. The access roads will vary in width across the Site and will be designed to allow for the delivery of the components during construction and for maintenance access during operation.

Lighting and Security

- 2.3.15. Flood lights mounted on pivoting structures are typically used for lighting. The structures are toppled under control for regular maintenance. A lighting calculation will be required to be performed to determine adequate lux levels within the compounds. Glare from the perspective of passing vehicles shall be considered and mitigated where applicable. Passive infrared sensors (PIR) are utilised for autonomous lighting around main access points. This would be used predominately during maintenance or fault scenarios, and will not be permanently lit once in operation.
- 2.3.16. CCTV, on pivoting structures for ease of maintenance, will be located at regular intervals along the perimeter fence line and/ or changes in direction to prevent blind spots. Suitable security gates and fencing (potentially electrified) will be required and will be designed in accordance with industry and NG standards.

Removal of the Existing OHL and Towers from ZZA064 to ZZA067

- 2.3.17. Following the design, construction of the new infrastructure along with its commissioning, the removal of the existing overhead lines and towers from ZZA063 to ZZA068 inclusive will be completed for the Project.

2.4 CONSTRUCTION AND COMMISSIONING

- 2.4.1. The Project will be constructed and operated in accordance with all relevant health and safety legislation. It is anticipated that the construction of the Project would take around 5 -6 years including dismantling and removal of old towers, following 1.5 years for the design and the granting of relevant consents, although a detailed programme of construction works would be the responsibility of the Principal Contractor in agreement with NGET. Construction is estimated to commence around 2028 with completion by 2033/2034.
- 2.4.2. The proposed locations for the new towers, CSECs, THHs and the new tunnel are generally determined at this stage, however the exact location within the planning application boundary is to be confirmed following detailed engineering and surveys. The existing overhead lines that require removal, will be dismantled through a mechanical and manual removal process.

2.4.3. Construction and commissioning will comprise of the following principal phases:

- **Phase One:** The initial stage of construction will be the completion of the Site setup activities along with any site clearance that may be required to provide for a suitable and level area. Following this, the construction of the tunnel shafts will be completed followed by the installation of the Tunnel Boring Machine (TBM) that will complete the boring of the tunnel under the river. The TBM will bore across the river from the North to the South between the two shafts in a predetermined route, removing the spoil and constructing a segmental concrete tunnel that will house the cable infrastructure.
- **Phase Two:** Whilst the construction of the tunnel is ongoing, two new 400kV CSECs will be constructed that house the required switchgear and connections to the new section of overhead line. Generally, this will contain a headhouse built using brick/block construction techniques with the whole area being fenced within a palisade/electrified fence. A total of six cables will be installed within the tunnel to connect each site together. The new towers and overhead line system will be built using galvanised steel structures with aluminium conductors to connect back to the existing towers ZZA062 and ZZA069 in the North and South, respectively.
- **Phase Three:** Once the new system is fully built, a series of outages will be completed to connect each existing circuit onto the new system, and once fully commissioned the existing OHL system between towers ZZA063 and ZZA068 will be dismantled and removed.

2.5 OPERATION

- 2.5.1. The new tunnel/headhouse/CSECs/OHL are designed to be autonomous and do not require any permanent manned activity at either location. However, there will be a requirement for periodic maintenance to the tunnel, headhouse, electrical infrastructure and the ventilation system.
- 2.5.2. Inspections are expected to be required every year, with maintenance every 10 years to ensure the continuous operation of the facility.
- 2.5.3. Access to either north or south facility will be completed via the access roads constructed as part of the overall Project.

2.6 DECOMMISSIONING

- 2.6.1. Owing to the nature of the Project, there is no intention to decommission the proposed tunnel and its associated infrastructure. However, if the need arises, decommissioning will involve the removal of all above ground features, employing similar methods to those used for the construction phase.
- 2.6.2. If the project was to be decommissioned, a written scheme of decommissioning would be submitted for approval by both North Tyneside Council and South Tyneside Council at least six months prior to any decommissioning works. The works would follow National Grid processes at the time for assessing and reducing environmental impacts and risks.
- 2.6.3. It is likely that any decommissioning works will have similar impacts as that of the construction works. Therefore, construction phase impacts can be considered as being representative for decommissioning impacts.

2.7 MITIGATION AND ENHANCEMENT

2.7.1. NGET will consider the potential impacts from the Project on nearby sensitive receptors and features of the surrounding environment. The following surveys, assessments and embedded mitigation will be captured as part of the Project:

- A Landscape and Visual Impact Assessment (LVIA) proportionate to the scale and likely impacts of the Project will be carried out to determine potential visual impacts and subsequent mitigation;
- A Construction Traffic Management Plan (CTMP) will be implemented during the construction of the Project. It will contain information on construction traffic routing, traffic volumes, the construction programme and the potential for any impacts on the surrounding road network;
- A Water Framework Directive (WFD) Screening Assessment will be undertaken to identify potential impacts to water resources. Should a full WFD Assessment be required this would outline mitigation requirements to minimise potential impacts;
- Habitat Regulations Assessment Screening will be undertaken to identify the potential for Likely Significant Effects on Northumbria Coast SPA, Northumbria Coast Ramsar and Durham Coast SAC. There is potential for effect pathways for impacts on qualifying species and habitats;
- Dust Risk Assessment and Construction/Operation traffic impact assessments will be undertaken which will recommend appropriate mitigation measures to be employed during the construction phase;
- A Construction Noise and Vibration Assessment will be prepared as part of the design process, which will identify means to mitigate any noise and vibration impacts identified. As part of the design process a high-level underwater noise assessment will be undertaken to identify possible constraints or risks to the Project from this source, and will propose next steps for the Project identifying the need for more detailed or quantitative assessments of noise impact pathways;
- An Archaeological Baseline Study will be required to fully understand the archaeological potential, which may subsequently require further evaluation and mitigation; and
- An Arboricultural Method Statement will be prepared required following an Arboriculture Impact Assessment, which may recommend that an Arboricultural Clerk of Works (ACoW) be appointed to oversee the tree protection during the existing OHL demolition and construction phases.

3 EIA SCREENING ASSESSMENT

3.1 INTRODUCTION

- 3.1.1. This section presents an analysis of the extent to which the Project is aligned with Schedules 1 and 2 of the TCPA EIA Regulations and EW EIA Regulations before considering the potential environmental effects associated with the Project.

3.2 TCPA EIA REGULATIONS

SCHEDULE 1 OR SCHEDULE 2: APPLICABLE THRESHOLDS

- 3.2.1. Regulation 2 of the TCPA EIA Regulations defines EIA development as:
- “Schedule 1 development” for which an EIA is required in every case; or
 - “Schedule 2 development” for which an EIA is required only if the particular project in question is *“likely to have significant effects on the environment by virtue of factors such as its nature, size or location.”*
- 3.2.2. Where a development falls within the description of the developments listed within Schedule 2 and exceeds the applicable thresholds and criteria, it must be screened against Schedule 3 to determine whether it is likely to have significant environmental effects. Additionally, where a development proposal falls within the description of the developments listed within Schedule 2, is below the applicable thresholds and criteria but is located wholly or partly within a ‘Sensitive Area’, it must be screened against Schedule 3 to determine whether it is likely to have significant environmental effects.
- 3.2.3. Sensitive Areas are defined in paragraph 2 of the TCPA EIA Regulations as: Sites of Special Scientific Interest (SSSI); National Parks; the Broads; National Landscapes (formerly Areas of Outstanding Natural Beauty); World Heritage Sites; scheduled monuments; and European designated nature conservation sites.
- 3.2.4. Development proposals which do not fall under the description of developments within Schedule 1 or Schedule 2 are not EIA development and, therefore, EIA is not required

3.3 SCHEDULE 3: SELECTION CRITERIA

- 3.3.1. Schedule 3 of the TCPA EIA Regulations contains the selection criteria that local planning authorities must take into account when screening Schedule 2 projects. These are:
- The **type and characteristics of development**, having regard to: size; cumulation with other developments; use of natural resources; production of waste; pollution and nuisances; risk of major accidents and / or disasters, including those caused by climate change; and risks to human health;
 - The **location of development**, having regard to environmentally sensitive geographical areas such as: existing and approved land uses; the relative abundance, availability, quality and regenerative capacity of local natural resources; and the absorption capacity of the natural environment; and
 - The **characteristics of any potential impact**, having regard to: the magnitude and spatial extent of the impact; nature of the impact; transboundary nature of the impact; intensity and complexity, probability, onset, duration, frequency and reversibility of the impact; cumulation

of the impact with the impact of other existing and / or approved development; and the possibility of effectively reducing the impact.

3.4 EW EIA REGULATIONS

SCHEDULE 1 OR SCHEDULE 2: APPLICABLE THRESHOLDS

- 3.4.1. In the EW EIA Regulations, “EIA development” is defined as any of the following:
- (a) development of a description as set out in Schedule 1 (EIA required);
 - (b) development of a description set out in Schedule 2 if:
 - (i) an EIA report is provided to the relevant authority in connection with an application for a section 36 or 37 consent, or a section 36 variation, for the development; or
 - (ii) the relevant authority makes a screening decision that the development is EIA development;
 - (c) development of any other description for which an application for a section 36 or 37 consent, or a section 36 variation, is made (or may be made) if the relevant authority makes a screening decision that the development is EIA development.
- 3.4.2. Schedule 1 of the EW EIA Regulations outlines the types of electricity-related developments that mandatorily require an Environmental Impact Assessment (EIA). These include, but are not limited to, nuclear power stations, thermal power stations with a generating capacity of 300MWth or more, and overhead lines with a voltage of 220kV or more and a length exceeding 15km.
- 3.4.3. Schedule 2 of the EW EIA Regulations outlines the types of electricity-related development that may require an EIA, specifically focusing on those needing a screening decision.

EIA SCREENING ASSESSMENT

IS THE PROJECT WITHIN SCHEDULE 1 OR SCHEDULE 2 OF THE TCPA OR EW EIA REGULATIONS?

- 3.4.4. The Project does not constitute development falling within Schedule 1 of the TCPA or EW EIA Regulations. Schedule 1 developments are large scale projects for which significant effects would be expected and comprise proposals such as new power stations.

TCPA EIA Regulations

- 3.4.5. The Project could fall within Schedule 2 development under the TCPA EIA Regulations if:
- any part of the development is to be carried out in a Sensitive Area; or
 - any applicable threshold or criterion in the corresponding part of column 2 of the table in Schedule 2 are exceeded or met by the Project.
- 3.4.6. The Project site is not located within a Sensitive Area, as defined in paragraph 2 of the TCPA EIA Regulations.
- 3.4.7. Schedule 2, Part 3 of the TCPA EIA Regulations covers energy industry developments, but does not specifically mention substations, underground tunnels beneath the riverbed, underground cables or overhead lines. For the other energy industry developments included thresholds for developments of either 0.5ha or 1ha are used to identify Schedule 2 developments.

- 3.4.8. Schedule 2, Part 10 covers infrastructure developments and does make reference to underground tunnels with respect to tramways or railways used exclusively or mainly for passenger transport. No further guidance is provided on tunnels across riverbeds.
- 3.4.9. The Tyne Crossing Project is **not, therefore, Schedule 1 or Schedule 2 development within the meaning given in the TCPA EIA Regulations and, therefore, EIA is not required under these regulations**. However, due to the similarities between the Project and other energy related developments, it has been considered against Schedule 3 criteria given the location, characteristics and potential impact of the development on the environment.

EW EIA Regulations

- 3.4.10. The project would be considered Schedule 2 development if it comprises of:
- Development to provide a generating station (other than a generating station of a description set out in paragraph 1 of Schedule 1 of the EW EIA Regulations) (paragraph 1); or
 - development to provide either of the following electric lines (other than an electric line of a description set out in paragraph 1 of Schedule 1);
 - a) an electric line installed above ground with a voltage of 132kV or more.
 - b) an electric line installed above ground in a Sensitive Area.
- 3.4.11. The Project does not involve the development of a generating station, nor would the OHL works be installed above ground in a sensitive area. The OHL works do, however, involve the installation of above ground electric lines with a voltage above 132kV.
- 3.4.12. The OHL line works associated with the project are therefore categorised as a 'Schedule 2' development under the EW EIA Regulations.
- 3.4.13. If Schedule 2 development is likely to have significant environmental effects because of factors such as its nature, size or location, it is considered an 'EIA development'. As the OHL works are integral to the development of the project, the environmental effects of the project as a whole are considered in the screening assessment below.

IS THE PROJECT LIKELY TO RESULT IN SIGNIFICANT ADVERSE ENVIRONMENTAL EFFECTS?

- 3.4.14. This section presents further details in line with the criteria set out in Schedule 3 of the TCPA and EW EIA Regulations, as well as the environmental factors, to help determine whether significant environmental effects are likely to result from the Project.
- 3.4.15. **Table 3.1** below is adapted from the TCPA EIA Regulations Screening Matrix and lists the environmental factors which have been considered within this EIA Screening Report.

3.5 ENVIRONMENTAL SCREENING CONSIDERATIONS

- 3.5.1. Table 3.1 considers the environmental baseline and potential impacts for the Project to give rise to significant environment effects, in addition to the key assumptions that have informed the information presented and any proposed mitigation measures. This is based upon the findings of the alignment selection studies and survey findings undertaken to date. Environmental Constraints data can be found in **Appendix C - Figure 3.0**.

Table 3-1 - Review of the Project against Environmental Sensitivities as identified within Schedule 3 of the Regulations

Consideration	The Tyne Crossing Project
EIA Regulations	
Is the Tyne Crossing Project a Schedule 1 development according to Schedule 1 of the TCPA EIA Regulations and / or Schedule 1 of the EW EIA Regulations? If YES, which description of development.	TCPA - No (see section 3.4). EW – No (see section 3.4).
Is the Tyne Crossing Project a Schedule 2 development under the TCPA EIA Regulations and / or the EW EIA Regulations? If YES, under which description of development?	TCPA - No. The proposed boring of a new tunnel across the Tyne River and its associated development including two new THHs, two new CSECs and the removal of the existing OHL works are not listed under the developments within Schedule 2. However, see section 3.4 for more details. EW – Yes. Development to provide and electric line installed above ground with a voltage of 132 kilovolts or more is listed as development requiring screening within Schedule 2.
Is the Tyne Crossing Project within, partly within, or near a 'Sensitive Area' as defined by Regulation 2 of the TCPA EIA Regulations and / or Schedule 2 of the EW EIA Regulations?	No, the proposed works are not within or near any 'Sensitive Areas' however, the works will be carried out within the River Tyne riverbed and in close proximity to River Don to the southern side of the project. The reminder of the works will be carried out on brownfield / industrial land.
Natural Resources	

Consideration	The Tyne Crossing Project
Will construction, operation or decommissioning of the Tyne Crossing Project involve actions which will cause physical changes in the topography of the area?	The Project involves construction of a new tunnel under the Tyne riverbed, underground cables, new towers and OHLs, two CSECs and two THHs which will require potential excavation, levelling and foundation works. No significant effects likely. The southern side of the Site is mainly flat with the northern end being relatively level. The addition of the new towers will not affect the topography of the Site, however the CSEC will amend topography slightly as minimum cut and fill is likely to be required. Therefore, significant physical changes in the existing topography of the area during construction works are not likely.
Will construction or operation of the Tyne Crossing Project use natural resources above or below ground such as land, soil, water, materials/minerals or energy which are non-renewable or in short supply?	Across the UK, the availability of materials typically required for construction schemes in terms of stocks, production or sales remains buoyant. For the North East of England region, stocks of asphalt and primary aggregate (in particular sand and gravel) are amongst the lowest in the UK; the availability (sales) of ready-mix concrete are also the lowest in the UK. However, the availability of concrete blocks is higher than the UK average. Information on steel stocks, production or sales are not available at a regional level. The Project involves boring of a new tunnel under a designated main river, the River Tyne, construction of THHs and CSECs and installing new towers and OHLs. The nature of the project means that it is difficult to use secondary sources during construction, as they can affect the operation and design life. However, the quantity of materials likely to be required would not be significant. and will be designed to ensure National Grid resources are in place to source materials from sustainable sources, and to use recycled materials where these do not compromise the required design standards and operational life. During the construction phase, key construction materials including steel, concrete, aluminium conductors and cabling will be required for: • construction of the two new THH buildings and CSECs; • construction of the tunnel lining;

Consideration	The Tyne Crossing Project
	• installation of six towers; and • replacement of existing overhead lines. Impacts from the consumption of large quantities of primary construction materials have the potential to be adverse, direct and permanent and could result in a significant adverse effect on the environment through the depletion of natural resources and degradation of the natural environment. The potential use of secondary construction materials with a recycled content would reduce adverse effects. However, the quantity of materials required is not likely to be significant. It is anticipated that the towers and tunnel lining will be constructed using prefabricated elements, thereby reducing the likelihood of surplus materials on site during construction which would require disposal. The Project also lies within a Mining Remediation Authority Coal Mining Reporting Area, although there are no Development High Risk Areas (DHRA) within the Project boundary. There is, however, a DHRA within 250m of the Project boundary (to the north of the River Tyne). There are no SSSI, SAC, SPA, Ramsar sites or Geological Conservation Review (GCR) sites on or within 250m of the Project as the Site is predominantly industrial with areas of community use and open land. No significant effects likely. Therefore, it is considered that the use of natural resources would not be significant. Energy would be required during the construction phase associated with the use of plant and machinery and vehicles, however energy use would not be significant During the operational phase of the Project, energy and resource use would not be significant.

Consideration	The Tyne Crossing Project
Are there any areas on/around the location which contain important, high quality or scarce resources which could be affected by the Tyne Crossing Project, e.g. forestry, agriculture, water/coastal, fisheries, minerals?	The Project's location is in proximity to River Tyne and River Don. The North Tyneside Local Plan Policies Map² indicates that there are no Mineral Safeguarding Areas (MSA) identified within the RLB, north of the Tyne. South Tyneside draft local plan policies map 2023-2040³ indicates that the MSA covers the entire Borough. However, the Project area is located within a parcel of land allocated for port and river-related permitted development and consists of land which is largely already developed. Any minerals resources can therefore already be expected to be sterilised, and no significant effects are predicted. Artificial ground is shown to be present across areas of the Project, associated within reclaimed/infilled land and landfills. Natural superficial deposits are shown to be variable comprising Tidal Deposits, Glaciolacustrine Deposits, the Pelaw Clay Member and Till. The underlying solid geology is shown to comprise Pennine Middle Coal Measures. As noted above, there are no SSSI, SAC, SPA, Ramsar sites or Geological Conservation Review (GCR) sites on or within 250m of the Project. A Construction Environmental Management Plan (CEMP) will be prepared to ensure adherence to best practice measures and good site management to avoid the risk of contaminants being released into nearby waterbodies. <u>Arboriculture</u> Across the Project area, the arboricultural features range from forms considered woodland, to scattered groups and individual trees. The following statutory and non-statutory arboricultural constraints have been identified during the desk study within the Site:

² North Tyneside Local Plan 2017-2032. Interactive policies Map available at: [North Tyneside Local Plan Policies Map](#)

³ [Publication Draft Local Plan \(2023-2040\) - South Tyneside Council](#)

Consideration	The Tyne Crossing Project
	<u>Tree Preservation Orders (TPOs):</u> • None present within the Site ⁴. <u>Conservation Areas:</u> • St Pauls Conservation Area⁵. <u>Ancient or veteran trees/ woodland:</u> • None present⁶⁷. The northern extent of the Project contains an area of broadleaved, deciduous woodland adjacent to the A187, north of the roundabout, providing high screening value between the main road and a residential area to the east. There is a narrow corridor of more condensed canopies within this area of woodland, assumably maintained due to the powerlines above. A large area to the north of the Project contains scattered, self-set, broadleaved, deciduous groups⁵ present on brownfield sites. Using Google Earth⁸ to study this area, these appear to

⁴ North Tyneside Council, Tree Preservation Orders [online] Available at: <<https://my.northtyneside.gov.uk/category/1154/tree-preservation-orders>> [Accessed 26 June 2025]

⁵ North Tyneside Council, Conservation areas in North Tyneside [online] Available at: <<https://my.northtyneside.gov.uk/category/1158/conservation-areas-north-tyneside>> [Accessed 26 June 2025]

⁶ Ancient Tree Inventory, 2025. Ancient Tree Inventory [online] Available at: <<https://ati.woodlandtrust.org.uk>> [Accessed 26 June 2025]

⁷ Magic (DEFRA), Multi Agency Geographic Information for the Countryside [online] Available at: <<https://magic.defra.gov.uk/MagicMap.aspx>> [Accessed 26 June 2025]

⁸ Google, 2025, Google Earth [online] Available at: <https://earth.google.com/web/@0,-0.6942999,0a,22251752.77375655d,35y,0h,0t,0r/data=CgRCAggBOgMKATBCAggBSg0I_____ARAA> [Accessed 26 June 2025]

Consideration	The Tyne Crossing Project
	have grown from a previous water treatment works site, suggesting these groups may be younger, lower quality features. The southern extent of the Project has an area of coniferous woodland⁵ encroaching the Project boundary at the northwest extent of the River Don. The areas of the Project adjacent to the River Don, where tower removal will be required, also overlap with St Paul's Conservation Area of South Tyneside. There are some scattered broadleaved groups within this overlap, as well as a narrow corridor of close spaced, broadleaved trees along the eastern extent of the River Don, which lie west of a large area of hardstanding (Port of Tyne carpark). This corridor provides valuable screening for areas within St Pauls Conservation Area³, such as playing fields, Jarrow Hall, and St Pauls Monastery, from the Port of Tyne carpark. It is likely that there will be some vegetation clearance in this area, however the amount will be confirmed based on the design and will be kept to a minimum where possible. Is a Significant Effect Likely? The Project has the potential to result in a range of arboricultural impacts, due to the presence of arboricultural features (individual trees, groups and woodland) within and adjacent to the Site boundary. These impacts may be caused by a range of construction and demolition activities, directly or indirectly. These may include but are not limited to, the potential loss of trees, encroachment into root protection areas, compaction of soil, and damage to tree canopies from construction vehicles, if appropriate protection measures are not enforced. There is potential for loss or damage to areas of broadleaved, deciduous woodland, particularly at the northern extent of the Project. These woodlands provide important visual screening and contribute to landscape value, and any removal or damage of these features could reduce the effectiveness of the visual screening they provide and reduce local landscape value. Similarly, the coniferous woodland towards the southern extent contributes to visual screening and may be affected by construction activities.

Consideration	The Tyne Crossing Project
	Any areas of woodland, as well as groups of lower arboricultural value across the Project, also contribute to local biodiversity, which has the potential to be impacted by this Project. St Pauls Conservation Area may also be affected by this Project, as any removal or damage to arboricultural features present within it could affect the setting of the Conservation Area. The visual screening provided to recreational areas, such as Jarrow Hall, may also be impacted by this Project. <u>Avoidance / Mitigation / Compensation:</u> An arboricultural baseline survey of the trees within the Site has been undertaken, in compliance with BS 5837, to assess the number of features and which quality category they fall under, in order to inform an Arboricultural Impact Assessment (AIA). With the nature of the tunnelling works being carried out underground (at depths below the main rooting area of trees (circa 2.5m)), it is assumed many impacts on arboricultural features will be avoided during the construction of the tunnel. However, direct and indirect impacts may still occur during the construction phase of the Project, such as (but not limited to) the removal of the existing OHLs, the installation of the new OHLs, and the construction of the associated infrastructure. Where impacts cannot be avoided, this will be reported in the AIA, accompanied by a Tree Removal and Protection Plan (TRPP), and suitable mitigation practices will be recommended, such as tree protection fencing fit for the purpose of excluding construction activity and appropriate for the degree and proximity of the works taking place. An Arboricultural Method Statement may be required, which may recommend that an Arboricultural Clerk of Works (ACoW) be appointed to oversee the tree protection during the demolition and construction phases. Where unavoidable, tree loss will be compensated through the implementation of a landscape design including new tree planting. A Landscape Architect would be commissioned to design the

Consideration	The Tyne Crossing Project
	tree planting as part of a comprehensive approach to landscape design. No likely significant arboricultural effects are anticipated during construction or operation.
Waste	
Will the Tyne Crossing Project produce solid wastes during construction or operation or decommissioning?	Regional data taken from the Environment Agency's Waste Data Interrogator⁹ for construction and demolition waste show that the North East region's recovery percentage is lower than the average across England with 43% of waste sent to landfill. The most recent Environment Agency¹⁰ data confirm that at the end of 2023, 16 landfill sites (for all waste types) in the North East of England were recorded as having 19.3 million cubic meters (Mm³) of remaining capacity, broken down as follows for each waste type: • Hazardous – 3.8Mm³ • Inert – 6.6Mm³ • Non-hazardous – 8.9Mm³ This has reduced by 8.8% from the previous year. Baseline data indicates that in the absence of future provision, landfill capacity is likely to become an increasingly sensitive receptor throughout the duration of the construction phase. Waste will be generated during construction phase from the following activities:

⁹ Environment Agency (2023) 2022 Waste Data Interrogator. Available at: <https://www.data.gov.uk/dataset/59ab8448-3905-49c6-9122-ae762f96f66b/2023-waste-data-interrogator>

¹⁰ Environment Agency (2024), 2023 Remaining landfill capacity, England) <https://data.gov.uk/dataset/237825cb-dc10-4c53-8446-1bcd35614c12/remaining-landfill-capacity>

Consideration	The Tyne Crossing Project
	- Boring of the new tunnel is estimated to generate a minimum of approximately 18,850m³ of site arisings - this does not include the quantity of excavated material from construction of the tunnel access shafts. - Removal of the existing towers and OHLs. Due to the various potential sources of ground contamination noted in the Geology and Hydrogeology section above, there will be a requirement to manage these arisings, through treatment prior to reuse or disposal as hazardous waste. It is therefore anticipated that the Project is likely to generate a significant amount of construction waste from these activities. The generation and disposal of waste during construction which cannot be diverted from landfill has the potential for an adverse impact on regional landfill void capacity and could result in a significant adverse effect. Landfill capacity is considered a sensitive receptor in the UK. However, it is expected that these potential impacts would be mitigated through the inclusion of targeted waste management measures within the CEMP, in line with industry best practice. This could include measures to divert waste from landfill through reuse of site arisings and recovery, recycling or treatment to reduce the adverse effects on landfill capacity. These measures would be implemented, monitored and managed through a Site Waste Management Plan (SWMP); a Materials Management Plan (MMP) would be implemented to manage and monitor reuse of excavated arisings. Therefore, it is considered that the disposal of waste during the construction phase would not be significant. Operational waste arisings are expected to be negligible in the context of regional (or national, where applicable) capacity, and would not be significant.
Pollution and Nuisances	

Consideration	The Tyne Crossing Project
Will the Tyne Crossing Project release pollutants or any hazardous, toxic or noxious substances to air?	The Project falls within the administrative areas of North Tyneside Council and South Tyneside Council . No Air Quality Management Areas (AQMAs) have been declared by either North Tyneside Council or South Tyneside Council ¹¹. The nearest AQMAs to the Project (6.4km and 7.7km from the Project, respectively) were declared by Newcastle City Council in 2008 for exceedances of the NO₂ annual mean objectives¹². The Class C Newcastle and Gateshead Clean Air Zone (CAZ) is located 7.6km from the Project and was introduced in 2023 to reduce air pollution in Newcastle city centre¹³. North Tyneside Council and South Tyneside Council both monitor NO₂ across their administrative areas with a network of automatic and passive monitors. Within 2km of the Project, monitors operated by North Tyneside Council and South Tyneside Council show that concentrations of NO₂ were consistently within the annual mean objective (40µg/m³) in the last five years. South Tyneside Council also monitors PM₁₀ at two automatic monitor sites within 2km of the Project, at which concentrations across the last five years were consistently within the PM₁₀ annual mean objective (40µg/m³). In addition to the local monitoring data, Defra provide estimated concentrations of pollutants over the whole of the UK at a resolution of 1km. Background concentrations of NO_x, NO₂, PM₁₀ and PM_{2.5} have been obtained from the Defra Background Mapping archive for 2025 from the base

¹¹ North Tyneside Council (2025) 2024 Air Quality Annual Status Report [online] Available at: https://my.northtyneside.gov.uk/sites/default/files/web-page-related-files/NTC%20ASR_Template_England_2024%20final%203%20a

¹² Defra (2025). AQMAs Interactive Map. Retrieved from UK Air Information Resources [online] Available at: <https://uk-air.defra.gov.uk/aqma/maps/> [Accessed June 2025]

¹³ Newcastle City Council (2025) Newcastle and Gateshead Clean Air Zone [online] Available at: <https://www.breathe-cleanair.com/> [Accessed June 2025]

Consideration	The Tyne Crossing Project
	year of 2021¹⁴. Maximum concentrations of NO₂, PM₁₀ and PM_{2.5} within 2km of the Project are considered low as they are <40% of their respective air quality objectives. The maximum concentration of NO_x within 2km of the Project is 21.5µg/m³, which is 72% of the limit value of 30µg/m³ for the protection of vegetation. Sources of air pollution within the vicinity of the Project are likely to include the local road network, particularly the A19, A185 and A187. Marine vessels operating within the River Tyne and manoeuvring or hotelling within Shields Harbour and Newcastle International Ferry Terminal may also impact air quality in the vicinity of the Project. The Tyne and Wear Metro runs to the north and south of the River Tyne, operating within 1km of the Project on both sides of the river. The Tyne and Wear Metro is largely electrified and so many locomotives will be electric and will not give rise to significant emissions to air, aside from some small particulate matter releases associated with brake wear. A review of permitted industrial sources within 2km of the Project shows seven large-scale Part A1 industrial processes regulated by the Environment Agency¹⁵. These include four permits for Medium Combustion Plants, the closest of which, operated by Northumbrian Water Ltd, is within 100m of the Project boundary. Additionally, there are 13 smaller-scale Part B industrial processes licensed by STC within 2km of the Project. These industrial processes will each be required to implement appropriate control measures as part of their operating permits and their emissions will be accounted for within nearby monitoring data and Defra background concentrations.

¹⁴ Defra (2025). Background Mapping data for local authorities - 2021 [online]. Available at: UK Air Information Resources: <https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021> [Accessed June 2025]

¹⁵ UK Pollutant Release and Transfer Register data sets (2025). Public Register of Industrial Pollution Sources. Available at: <https://prtr.defra.gov.uk/map-search> [Accessed June 2025]

Consideration	The Tyne Crossing Project
	In summary, the air quality within 2km of the Project is good, with monitored and background concentrations of air pollutants below relevant air quality objectives. The Project has the potential to cause air quality impacts from: • Dust and Particulate Matter (PM₁₀ and PM_{2.5}) generation during the construction phase; • Emissions of Nitrogen Oxide (NO_x), PM₁₀ and PM_{2.5} from construction vehicles using the local road network; and • Emissions of NO_x, PM₁₀ and PM_{2.5} from traffic associated with the operation / maintenance of the Project. For both human and ecological receptors, air quality impacts can occur because of direct exposure to pollution in ambient air, but also as a result of the deposition of pollutants on the surface of the ground and ecological receptors. There are a number of designated ecological sites in the vicinity of the Project, including multiple Local Wildlife Sites (LWS) and two Local Nature Reserves (LNRs) within 2km of the Project. In the wider area, there are a number of Sites of Special Scientific Interest (SSSI) as well as the Durham Coast Special Area of Conservation (SAC) and Northumbria Coast Special Protection Area (SPA) and Ramsar. These ecological sites may be impacted by the Project during construction and operation / maintenance activities. Sensitive human receptors (including residential properties, schools, hospitals, etc.) located in the vicinity of the Project may be impacted by dust, PM₁₀ and PM_{2.5} during the construction phase of the Project. Sensitive human receptors located along the routes used by construction and operation / maintenance traffic may additionally be impacted by emissions from vehicles associated with the Project using the existing road network. An air quality assessment would be completed to determine the potential for air quality impacts at sensitive ecological sites and human receptors resulting from both the construction and operation / maintenance of the Project.

Consideration	The Tyne Crossing Project
	A qualitative construction dust assessment would be completed following the Institute of Air Quality Management (IAQM) guidance¹⁶ with recommendation of appropriate mitigation measures to be employed during the construction of the Project. Following implementation of the mitigation measures identified through the construction dust assessment along with best practice measures, it is not anticipated that any significant construction dust effects would be present. Further, the CEMP would include a number of measures that would reduce dust and equipment emissions during construction. There is potential for air quality impacts from construction traffic generated by the Project. However, these will only occur for the duration of the construction phase. A screening assessment would be completed based on the Environmental Protection UK (EPUK) / IAQM guidance criteria¹⁷ and if necessary, a detailed assessment of construction traffic impacts would be undertaken. However, it is unlikely that there will be any significant effects during construction. Is a Significant Effect Likely? Given the nature of the Project, it is anticipated that there will be minimal changes to traffic numbers during operation/maintenance. Based on this understanding, the potential impacts to air quality on human and ecological receptors during operation/maintenance are not anticipated to be significant. This would be confirmed through the screening of traffic data against the EPUK / IAQM guidance criteria. No significant effects likely.

¹⁶ <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf>

¹⁷ IAQM (2024) Guidance on the Assessment of Dust from Demolition and Construction (v2.2) [online] Available at: <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf> [Accessed June 2025] EPUK/IAQM (2017) Land-Use Planning & Development Control: Planning For Air Quality [online] <https://www.iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf> [Accessed June 2025]

Consideration	The Tyne Crossing Project
Will the Tyne Crossing Project cause noise and vibration or release of light, heat, energy or electromagnetic radiation?	<u>Noise</u> The nearest sensitive residential areas are approximately 500 metres away, west of Priory Road, to the south of the river, and north of the A187 to the north of the River Tyne, although there may be other sensitive land uses such as St Pauls Monastery which is 250m away. Sensitive receptors might also include marine wildlife within the River Tyne and River Don. A baseline noise survey will be undertaken as part of the design of the Project, and this will include daytime and night-time noise measurements at locations representative of the nearest noise-sensitive receptors potentially affected by the Project. The noise climate is likely to be dominated by road traffic noise arising from vehicle movements on the A19, A187, A185 and local road network. In addition, noise-generating activities at the Port of Tyne and Northumbrian Water and other industrial facilities are likely to contribute to the ambient noise levels in the area. Techniques used for construction will produce sound that has the potential to propagate into the river. Underwater noise presents a possible impact pathway for effects on aquatic ecological receptors, such as migratory fish and the fish assemblage, which may be present in the river and surrounding area. During the construction phase, the Project has the potential for adverse noise and vibration effects due to the construction of the shaft, operation of the tunnel boring machine, construction vehicle movements and construction equipment to build associated infrastructure. The tunnel boring machine is expected to run for 18 months continuously during day and night. A construction noise and vibration assessment will be prepared as part of the design process. A quantitative construction noise assessment will be undertaken following guidance in BS 5228-1: 2009+A1 2014: Code of practice for noise and vibration control on construction and open sites and TRL 429. Mitigation for any identified noise and vibration impacts will be identified, if required. The Project has the potential for adverse noise effects arising from the ventilation strategy for the THH. The design will be supported with a quantitative operational noise assessment to determine

Consideration	The Tyne Crossing Project
	the likely noise impact arising from the operation of the Project. The predicted noise levels at the receptors will be assessed against the baseline sound levels using the guidance in BS 4142: 2014+A1:2019: Methods for rating and assessing industrial and commercial sound. Noise mitigation measures will be proposed should this be required. OHLs can emit noise, typically a crackle and occasionally they can hum under specific weather conditions, however noise levels associated with the new OHLs would not be significant. The design of the Project will be also supported with a high-level underwater noise assessment. A qualitative approach will be taken to identify likely noise-producing activities and impact pathways to ecological receptors, as identified by the aquatic ecology screening assessment. The constraints assessment will propose the next steps for the Project, including identifying any need for more detailed or quantitative assessment of noise impact pathways. Is a Significant Effect Likely? The underwater noise, construction noise and vibration and operational noise assessments will be undertaken during the design of the Project and will identify opportunities and mitigation to minimise potential noise and vibration impacts. Overall, there are not expected to be any significant environmental noise effects during the construction or operational phase of the Project. <u>Lighting</u> All construction and operational lighting will be positioned and adjusted so that it does not cause a nuisance to neighbouring properties. Night-time illumination, outside of working hours, will be reduced to a minimum commensurate with the need to maintain the Site's security requirements. No significant lighting effects are therefore expected. <u>Electromagnetic radiation</u> In the UK, there are presently no statutory regulations to limit public exposure to power-frequency electric or magnetic fields, the limits to be considered apply as a matter of government policy. In 2004 Public Health England (PHE), formerly the National Radiological Protection Board (NRPB), provided advice to the Government (NRPB, 2004) recommending the UK adopt the guidelines

Consideration	The Tyne Crossing Project
	published in 1998 by the International Commission on Non-Ionizing Radiation Protection (ICNIRP, 1998). These guidelines are designed to set conservative exposure levels for the general public to 50Hz electric and magnetic fields, and are endorsed by the UK's Health Protection Agency, the World Health Organisation, and the UK Government. UK's voluntary Code of Practice (DECC, 2012) as referred to by the National Policy Statement for Electricity Networks Infrastructure (EN-5) (DECC, 2011) set the criteria for suitable field levels in compliance with public exposure limits be <9kV/m for electric field and <360μT for magnetic field. Electromagnetic fields (EMFs) arise from the generation, transmission, distribution and use of electricity and can have adverse effects on human health, including impacts on the nervous system. Direct effects on human health are primarily a result of the induction of currents around power lines and electric cables, particularly where the public may be exposed for a considerable time. Indirect effects can occur as a result of the build-up of electric charges on the surface of the body producing a microshock. For CSEC, the EMFs close to sites tend to be dictated by the OHLs and cables entering the installation, not the equipment within the Site. National Grid has a very clear policy on EMFs, as set out in its Public Position Statement¹⁸, which states “...<i>In all our operations, as a minimum we comply with EMF regulations, guidelines or practices in force in the countries and different jurisdictions in which we operate</i>”. No significant effects are likely.

¹⁸ National Grid (2014) Electric and Magnet Fields: Corporate Public Position Statement. Available: <https://www.nationalgrid.com/electricitytransmission/sites/et/files/documents/Electric%20and%20Magnetic%20Fields.pdf> [Accessed February 2025]

Consideration	The Tyne Crossing Project
Will the Tyne Crossing Project lead to risks of contamination of land or water from releases of pollutants onto the ground or into surface waters, groundwater, coastal waters or the sea?	The Site is situated within a predominantly industrial setting with the wider area comprising a mixture of industrial, commercial and residential use with areas of community use and open land. Given the industrial setting of the Project, there is the potential to encounter and potentially mobilise historical contamination sources during the construction phase. There are various current and historical land uses within the Project boundary and within 250m of the boundary which may present potential sources of land or water contamination including the following: railway land, docks, depots, landfill, gasworks, infilled/reclaimed land, oil terminals, sewage works, waste activities, general 'works', timber processing/ storage and substations. The superficial deposits are variably classified as a Secondary A Aquifer, Secondary undifferentiated or unknown. The underlying bedrock is classified as a Secondary A Aquifer. The Project is not situated within a groundwater Source Protection Zone (SPZ) or within 1km of a SPZ. A trial trenching exercise and material assessment was undertaken to examine 48 stockpiles located on the Royal Quays development site, north of the Project, at the location of the northern THH / CSEC. ERGO19 attended the Site between 28th - 30th May 2025 to undertake site works inclusive of the recording of general descriptions from surface materials and general internal composition and obtaining of samples for subsequent chemical laboratory analysis to determine the chemical composition of materials and their suitability for reuse. The stockpiles are understood to have been generated from construction activities from a previous construction company. It was concluded that the sampled materials which determined the materials to be suitable for disposal as inert, non-hazardous and hazardous. Asbestos was identified in the samples at a concentration of <0.1% and therefore were considered to be non-hazardous. The report concluded that if material is moved from site, the waste classification should be confirmed with the individual landfill accepting the waste prior to disposal. Port of Tyne will be clearing this

19 ERGO, Stockpiled Materials Assessment, Land at Royal Quays, North Shields. May 2025

Consideration	The Tyne Crossing Project
	area and the stockpiles ahead of any construction works that would be taking place as part of this Project. The Project has the potential to cause significant effects on nearby hydrological and land receptors such as the tidal River Tyne and its tributary River Don during the excavation associated with the Project, as this could expose potential contaminants in the ground, or lead to contaminants migrating along permeable flow paths. In addition, there is the potential for pollution of surface watercourses and groundwater; including from suspended sediment in surface water bodies, hydrocarbon and oil pollution.. Sources of oils and hydrocarbons include leaks from access vehicles and powered hand tools. During the construction phase of the Scheme, there is the potential risk of turbid runoff water entering the local water environment from suspended sediments. Potential sources of suspended sediments on construction sites include excavations, exposed ground and stockpiles, plant and wheel washing, dust, and mud on site access roads. This risk will be mitigated for using best-practice techniques (e.g. SuDS) which will be outlined in the Site -specific CEMPs for the Scheme. A Water Framework Directive (WFD) Screening Assessment would be undertaken to assess potential impacts to water resources. Should a full WFD Assessment be required this would outline mitigation requirements to minimise potential impacts. With the implementation of embedded mitigation measures, primarily intrusive investigation and environmental assessment to be completed ahead of construction, and implementation of a CEMP, No significant environmental effects are likely. The CEMP will detail environmental protection measures required during the construction phase and will include, but not be limited to, the requirement to adhere to standard industry working practices to minimise the potential for environmental incidents during the construction phase. The CEMP will detail potential remediation and validation requirements identified during the environmental assessment completed following site-specific intrusive ground investigation completed to inform the design of the Scheme. The CEMP will also detail the requirements of materials management during the construction phase to ensure any materials excavated are either

Consideration	The Tyne Crossing Project
	disposed of appropriately or if there is a potential for re-used in accordance with a materials management plan. There are no anticipated environmental effects during the operational phase of the Scheme.
Are there any areas on or around the location which are already subject to pollution or environmental damage, e.g. where existing legal environmental standards are exceeded, which could be affected by the Project?	From information obtained from nearby planning application documents no evidence of areas which are subject to pollution exceeding existing legal environmental standards have been identified. No significant effects are likely.
Population and Human Health	
Will there be any risk of major accidents (including those caused by climate change, in accordance with scientific knowledge) during construction, operation or decommissioning?	There are three Control of Major Accident Hazard (COMAH) sites within 5km of the Project: • Prax Terminals Limited (lower tier); • Exolum Tyneside Limited (upper tier); and • Origin UK Operations Limited (lower tier). The consultation zones associated with Prax Terminals Limited and Exolum Tyneside Limited overlap the red line boundary. The Health and Safety Executive's Land Use Planning App also indicates the presence of explosives safeguarding zones. Other baseline conditions related to major accidents and disasters are described under 'Land stability and Climate' section. An event at one of the COMAH/explosives sites could have an impact on construction workers, however, this risk would be identified and managed via the CDM risk register, as required by the Construction (Design and Management) Regulations 2015, therefore no significant impacts during construction are anticipated. Worker's health and safety is managed via other regulatory regimes and as such is not considered in the assessment of MA&D. Is a Significant Effect Likely?

Consideration	The Tyne Crossing Project
	During the operational phase of the Project the risk with the presence of these COMAH and explosives sites is no different to the current situation. It is not anticipated that a major structural failure of the project would occur, whilst the risk posed from extreme weather events is also likely to be insignificant since the Site is not located in a region of extreme adverse weather.
Will the Project present a risk to the population (having regard to population density) and their human health during construction, operation or decommissioning (for example due to water contamination or air pollution)?	As set out above (see 'Pollution and Nuisances'), the Project will not result in significant noise or air quality effects, nor would there be a significant risk of soil and water contamination during both the construction and operational phases of the scheme. Moreover, as previously discussed, operation of the Project will not result in effects to human health from either EMFs or major accidents. Investment associated with the construction of the Project will generate some economic benefits including investment in the supply chain and spend by construction workers in the local economy. Once operational, the Project will enable opportunities for future offshore wind farm associated manufacturing upstream, which to date has been constrained by the existing OHL. However, given the scale of the Project, it is not anticipated that employment levels on site, levels of investment or spend in the local economy will be significant. No significant effects are likely.
Water Resources	
Are there any water resources including surface waters, e.g. rivers, lakes/ponds, coastal or underground waters on or around the location which could be affected by the Tyne Crossing Project, particularly in terms of their volume and flood risk?	<u>Water</u> The Project is adjacent to and crosses underneath the River Tyne, a tidal river approximately 4 km upstream of the estuary in the North Sea. The River Don, a tributary of the River Tyne, is located adjacent to the Project on the south bank of the Project. Approximately 1.8 km upstream of the Project, the Wallsend Burn flows into the River Tyne. According to the EA Catchment Data

Consideration	The Tyne Crossing Project
	Explorer²⁰, the ecological condition of the River Tyne, and its tributaries comprising the River Don and Wallsend Burn, are all considered moderate status. According to the MAGIC online mapping tool²¹, within the 2 km study area of the Project, there are no SSSI, SAC, SPA, Ramsar sites, Geological Conservation Review (GCR) sites, or Marine Protection Areas. There appears to be no public or private water supplies within the 2km study area, according to Ordnance Survey mapping²². The Project also has no recorded boreholes within the 2 km study area. According to MAGIC online mapping tool, there is a Source Protection Zone (Zone III – Total Catchment) located within the study area, approximately 2 km to the south of the Project. According to Landis²³, the soil profile underlaying the Project and within the study area is soilscape 18, described as being a slowly permeable, seasonally wet, slightly acid but base-rich loamy and clayey soil. Is a Significant Effect Likely? Refer to the contamination section for further detail on potential pollution of surface watercourses and groundwater, the potential risk of turbid runoff water entering the local water environment from suspended sediments, and the associated mitigation. During the construction phase of the Project, there is the potential risk of changes to the hydrological regime and physical disturbance to watercourses. Potential sources of this risk

²⁰ Environment Agency (2023) Catchment Data Explorer. Available at: [TYNE | Catchment Data Explorer | Catchment Data Explorer](#) [Accessed June 2025]

²¹ Defra (2025) MAGIC. Available at: [Magic Map Application](#) [Accessed June 2025]

²² Ordnance Survey (2025) 1:25:000 OS map. Available at: [OS Maps app | Digital map app](#) [Accessed June 2025]

²³ Landis (2025) Soilscales Viewer. Available at: [LandIS - Land Information System - Soilscales soil types viewer](#) [Accessed June 2025]

Consideration	The Tyne Crossing Project
	includes potential sediment runoff. This risk will be mitigated for using industry best-practice techniques outlined in the Site-specific CEMPs for the Project such as secondary containment etc. A Water Framework Directive (WFD) Screening Assessment would be undertaken to assess potential impacts to water resources. Should a full WFD Assessment be required this would outline mitigation requirements to minimise potential impacts. There are no anticipated significant environmental effects on statutory designated sites or water supplies. There are no anticipated environmental effects during the operational phase of the Project. <u>Flood Risk</u> The EA Historic Flood Map²⁴ shows that there is very little record of historic flooding within the 2 km study area of the Project, as there is a small area within the Tyne Dock to the south of the Tyne that has previously recorded flooding. The Project's 2 km study area is not recorded as a flood warning area²⁵. A review of the EAs Asset Information Management System Defence (Spatial Flood Defences)²⁶ information shows that the Project and the land within the 2 km study area benefit from raised ground. River and tidal flooding risk is defined as follows in the EA Flood Map for Planning²⁷: • Flood Zone 2: area with a risk of flooding between 0.1% to 1% AEP; and • Flood Zone 3: area with a risk of flooding greater than 1% AEP.

²⁴ Environment Agency (2025) Historic Flood Map. Available at: [Historic Flood Map - data.gov.uk](https://data.gov.uk/dataset/historic-flood-map) [Accessed June 2025]

²⁵ GOV.UK (2025) Flood Warning Areas. Available at: [Flood Warning Areas - data.gov.uk](https://data.gov.uk/dataset/flood-warning-areas) [Accessed June 2025]

²⁶ Environment Agency (2025) AIMS Spatial Flood Defences. Available at: [AIMS Spatial Flood Defences \(inc. standardised attributes\) - data.gov.uk](https://data.gov.uk/dataset/aims-spatial-flood-defences) [Accessed June 2025]

²⁷ Environment Agency (2025) Flood Map for Planning. Available at: [Map – Flood map for planning – GOV.UK](https://gov.uk/map-flood-map-for-planning) [Accessed June 2025]

Consideration	The Tyne Crossing Project
	The EA Flood Map for Planning shows that the Project is partially located in both Flood Zones 2 and 3, associated with banks of the River Tyne, River Don and Wallsend Burn. The EA Flood Map for Planning. shows that there are no existing flood defences within the 2 km study area. The River Tyne is shown to be tidally influenced, with the floodplain being limited to the channel. It is unclear at this stage the location of all on all land works, however it appears the southern THH is located within present day Flood Zone 2/Flood Zone 3, as well as Climate Change (2070-2125). Flood risk from all sources to works will be investigated further once the location of works is confirmed. However, the majority of the works will call within Flood Zone 1. Surface water risk, is defined as follows in the EA Long-Term Risk of Flooding from Surface Water Map²⁸: • High risk: area with a risk of flooding greater than 3.3% AEP; • Medium risk: area with a risk of flooding between 1% and 3.3% AEP; and • Low risk: area with a risk of flooding between 0.1% and 1%. There are small, sparsely distributed areas at low to high risk of surface water flooding within the 2 km study area of the Project. The Long-Term Risk of Flooding from Reservoirs Map²⁹ shows that the Project is located within an area at risk of flooding from reservoirs, primarily the south bank of the River Tyne and the surrounding banks of the River Don.

²⁸ Environment Agency (2025) Long-Term Risk of Flooding from Surface Water Map. Available at: [Technical map - Check your long term flood risk - GOV.UK](#) [Accessed June 2025]

²⁹ Environment Agency (2025) Long-Term Risk of Flooding from Reservoirs Map. Available at: [Technical map - Check your long term flood risk - GOV.UK](#) [Accessed June 2025]

Consideration	The Tyne Crossing Project
	The North Tyneside Council Level 1 SFRA³⁰ did not highlight the Project and its surrounding study area as being at risk of sewer flooding. Is a Significant Effect Likely? The Project has the potential to cause significant environmental effects on nearby flood risk receptors. During the construction phase, there is the potential for increased surface water flood risk. The increased areas of impermeable surfaces from construction sites will increase runoff and areas of standing water, however these will be appropriately mitigated through SuDS techniques and standard best practice outlined in the CEMP, if required. A site-specific drainage strategy and flood risk assessment would be undertaken to further assess the risk of surface water flooding as a result of the Project, and to ensure surface runoff is managed appropriately. There are no anticipated significant effects on fluvial, tidal, reservoir or sewer flooding during the construction and operational phases of the Project. There are no anticipated environmental effects on flood risk receptors during the operational phase of the Project.
Are there any protected areas which are designated or classified for their terrestrial, avian and marine ecological value, or any non-	<u>Designated sites</u> The following ecological designated sites have been identified with 5 km of the Site:

³⁰ JBA Consulting (2010) North Tyneside Council Level 1 Strategic Flood Risk Assessment. Available at: [JBA Consulting](#) [Accessed June 2025]

Consideration	The Tyne Crossing Project
designated / non-classified areas which are important or sensitive for reasons of their terrestrial, avian and marine ecological value, located on or around the location and which could be affected by the project? (e.g. wetlands, watercourses or other waterbodies, the coastal zone, mountains, forests or woodlands, undesignated nature reserves or parks. (Where designated indicate level of designation (international, national, regional or local).	European statutory sites • Northumbria Coast Ramsar Site (Reference: UK11049) is located approximately 3.08 km northeast of the Site; • Northumbria Coast Special Protection Area (SPA) (Reference: UK9006131) is located approximately 3.09 km northeast of the Site. • Durham Coast Special Area of Conservation (SAC) (Reference: UK0030140) is located approximately 3.79 km east of the Site. National statutory sites • Northumberland Shore Sites of Special Scientific Interest (SSSI) (Reference: 1003355) is located approximately 2.73 km northeast of the Site; • West Farm Meadow, Boldon SSSI (Reference: 1003177) is located approximately 2.84 km south of the Site; • Durham Coast SSSI (Reference: 1007205) is located approximately 3.08 km northeast of the Site; • Harton Down Hill SSSI (Reference: 1003225) is located approximately 4.04 km east of the Site; • Cleadon Hill SSSI (Reference: 1003608) is located approximately 4.18km southeast of the Site; • Tynemouth to Seaton Sluice SSSI (Reference: 1003223) is located approximately 4.45 km northeast of the Site; • Boldon Pastures SSSI (Reference: 1003262) is located approximately 4.49 km southeast of the Site. Local statutory sites • Primrose Local Nature Reserve (LNR) (Reference: 1009282) is located approximately 1.34 km southwest of the Site; • Wallsend Dene LNR (Reference: 1123090) is located approximately 2 km west of the Site; • Station Burn LNR (Reference: 1123036) is located approximately 2.08 km south of the Site;

Consideration	The Tyne Crossing Project
	• Silverlink Biodiversity Park LNR (Reference: 1123080) is located approximately 3.07 km north of the Site; • Tiledsheds LNR (Reference: 1009280) is located approximately 3.32 km southeast of the Site; • Swallow Pond & Plantation LNR (Reference: 1082957) is located approximately 3.67km northwest of the Site; • Pelaw Quarry Pond LNR (Reference: 1083017) is located approximately 3.8 km southwest of the Site; • Harton Down Hill LNR (Reference: 1008940) is located approximately 4.05km east of the Site; • Marsden Old Quarry LNR (Reference: 1009022) is located approximately 4.15 km southeast of the Site; • Cleadon Hills LNR (Reference: 1009281) is located approximately 4.18 km southeast of the Site; • Marden Quarry LNR (Reference: 1123081) is located approximately 4.5 km northeast of the Site. Local non-statutory sites • River Tyne - tidal extent (Newcastle Local Wildlife Sites (LWS) and Northumberland LWS) is located within the Site boundary; • Howdon Wetlands LWS is located within the Site boundary; • Jarrow Slake Mud Flats LWS is located within the Site boundary; • Towers ZZA066 and ZZA067 lie within River Don Salt Marsh LWS; • Straker Street LWS is located approximately 445m southwest of the Site; • Cemetery Road LWS is located approximately 750m southwest of the Site; • Primrose LWS is located approximately 1.54 km southwest of the Site; • Temple Park West LWS is located approximately 1.8 km southeast of the Site; • Station Burn LWS is located approximately 2.07 km south of the Site; • Newton Garths LWS is located approximately 2.13 km south of the Site;

Consideration	The Tyne Crossing Project
	• Willington Gut Saltmarsh LWS is located approximately 4.65 km west of the Site. Is a Significant Effect Likely? A Habitats Regulations Appraisal (HRA) Screening would be undertaken to identify the potential for Likely Significant Effects on Northumbria Coast SPA, Northumbria Coast Ramsar site and Durham Coast SAC. There is potential for effect pathways for impacts on qualifying species and habitats. There is potential for effects on Northumberland Shore SSSI, Tynemouth to Seaton Sluice SSSI, and Durham Coast SSSI due to hydrological connectivity being downstream from the Site on the River Tyne. There is potential for effects on Howdon Wetlands LWS, River Tyne LWS, Jarrow Slake Muds Flats LWS, and River Don Salt Marsh LWS as these are located within the Site. There is no potential for significant effects on any of the other listed designated sites as there is no potential pathway for impacts due to distance from the Site, nature of the Project, and/or they are not hydrologically connected. <u>Avoidance / Mitigation / Compensation:</u> The Project has been designed to avoid designated sites where possible. A Biodiversity Mitigation Strategy (BMS) would be implemented during clearance of the Site and construction of the Project. The BMS would form an appendix of the CEMP. The BMS and CEMP would set out appropriate standard good practice ecology and environmental mitigation measures which would avoid or minimise impacts on designated sites, including micro-siting working areas away from designated sites or areas of interest features where possible, measures to demarcate and protect retained habitats, and pollution prevention measures. Following this approach, it is anticipated that the likelihood of significant effects on designated sites can be reduced to the extent that these effects will be avoided. <u>Protected Habitats</u>

Consideration	The Tyne Crossing Project
	The following ecological Habitats of Principal Importance³¹ (HPI) have been identified during the desk study within 2 km of the Site: • Deciduous woodland is located within the Site³². • Mudflats are located within the Site. • Open mosaic habitats on previously developed land is located within the Site³³. • Reedbeds within the Site. The following habitats have been identified within the Site during UK Habitat Classification (UKHab) surveys carried out to date: • The River Tyne bisects the Site flowing west to east. The River Don flows into the River Tyne from the south of the Site. The rivers are flanked by mudflats when the tide is low. • Large areas to the north of the Site comprise a mosaic of bare ground, non-priority pond, mixed scrub, other broadleaved woodland, grassland, ephemeral and ruderal vegetation. • Other broadleaved woodland and other neutral grassland is scattered throughout. • A large extent of developed land sealed surface is present in the south of the Site, whilst being scattered throughout the rest of the Site. UKHab and Condition Assessment field surveys will continue to be carried out to verify habitats present within the Site, and up to 30m from the Site. The invasive non-native plant species

³¹ Section 41 of the Natural Environment and Rural Communities Act 2006 (as amended) requires the Secretary of State to publish a list of the Habitats and Species of Principal Importance (HPI and SPI) for the purpose of conserving biodiversity in England. Under Section 40 of the Act, every public body (including planning authorities) must further the conservation and enhancement of biodiversity in England through the exercise of functions.

³² The records of Deciduous Woodland Priority Habitat were sourced from the National Forest Inventory 2020, July 2024 version and were likely mapped as a desk based exercise available from the open sourced data base MAGIC [accessed <https://magic.defra.gov.uk/MagicMap.html>]

³³ The records of Open Mosaic Habitats on Previously Developed Land were sourced from the National land use database. However it should be noted that the confidence is listed as low. The records are available from the open sourced data MAGIC [accessed <https://magic.defra.gov.uk/MagicMap.html>]

Consideration	The Tyne Crossing Project
	Japanese knotweed <i>Reynoutria japonica</i> and cotoneaster species have been recorded on Site, which are legally controlled species listed on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended).
Could any protected, important or sensitive species of flora or fauna which use areas on or around the Site, e.g. for breeding, nesting, foraging, resting, over-wintering, or migration, be affected by the Project?	Species: An ecological desk study, assessment of suitability of habitats for key species, and ornithology surveys have been undertaken to date, and further species surveys are on-going. The following species/groups which are legally protected, or conservation-notable are present or potentially present at the Site and surrounding survey areas³⁴. Breeding Birds: All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), and additional protection is extended to species listed under Schedule 1 making it illegal to recklessly disturb such species when they are nesting. The Site contains suitable habitat for breeding passerines including scrub, woodland, reedbed, and hedgerows. There are also small areas of suitable habitat for breeding waterfowl including reedbed and waterbodies. Surveys for breeding birds undertaken to date (between April and June 2025), have identified breeding evidence for priority species including bullfinch, chaffinch, dunnoek, greenfinch, kestrel, mallard, song thrush, whitethroat, willow warbler, reed bunting and gadwall. No breeding Schedule 1 species have been recorded. Non-breeding birds: The Site contains areas of habitat suitable for non-breeding waders, waterfowl and gulls including mudflat and saltmarsh, notably including the River Don Salt LWS, Jarrow Slake Mud Flats LWS, River Tyne - tidal extent (Newcastle LWS and Northumberland LWS), and

³⁴ Survey areas are species-specific and have been defined in line with best practice guidance. They reflect the potential for species utilising habitats surrounding the Site to be affected by the Project (directly or indirectly), and provide contextual information on species presence within the locality.

Consideration	The Tyne Crossing Project
	Howdon Wetlands LWS. The Site contains suitable habitat for non-breeding passerines including scrub, woodland, reedbed and hedgerows but it is not thought to be highly suitable. Monthly intertidal surveys for non-breeding birds will be undertaken between September 2025 and April 2026. Badger: Badgers and their setts are protected under the Protection of Badgers Act 1992. The survey area includes woodland and scrub that are suitable for sett creation. Grassland is of limited suitability for sett construction, while areas of developed land sealed surface are unsuitable. The survey area is suitable for foraging and commuting where habitats such as woodland, scrub and grassland are present. Badger surveys are currently on-going in accordance with best practice guidance (Harris et al., 1989³⁵; Roper, 2010³⁶ and Andrews, 2013³⁷). Bats: Bats are protected under the Habitats Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended), while certain species of bats, including noctule and soprano pipistrelle, which potentially occur in the locality, are also Species of Principal Importance (SPI) in accordance with Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act 2006). Linear features, including riparian corridors and woodland edge habitat, as well as the mosaic of habitats in the north of the Site, provides suitable foraging and commuting habitat for bats. There are five records of European Protected Species Licences within 2km of the Site for common pipistrelle <i>Pipistrellus pipistrellus</i>. Trees within the survey area may contain potential roost features. Ground level tree assessments (GLTA) surveys will be undertaken of trees which may be impacted by the Project and, where trees are identified as PRF-M (potential to support multiple bats), follow-up surveys such as tree climbing and/or emergence surveys will be

³⁵ Harris S, Cresswell P and Jefferies D (1991) (Report) Surveying Badgers. The Mammal Society, Bristol;

³⁶ Roper (2010) Badger (Collins New Naturalist). HarperCollins, UK

³⁷ Andrews, R. (2013). The classification of badger *Meles meles* setts in the UK: A review and guidance;

Consideration	The Tyne Crossing Project
	undertaken where necessary. The methodology of all bat surveys would be in line with best practice guidance (Collins, 2023)³⁸. <i>Otter:</i> The European otter is protected under the Habitats Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended), and they are SPI in accordance with Section 41 of the NERC Act 2006. The River Tyne and River Don within the survey area contain optimal habitat for foraging and commuting, with areas of bankside and adjacent vegetation suitable for otter resting sites. Some areas of the River Tyne banks are unsuitable for otter rest sites due their built up nature. An artificial otter holt is known to be present along the northern bank of the River Tyne near the Site. Surveys for otter field signs will be carried out during June to July 2025 in accordance with best practice guidance (Chanin, 2003)³⁹. Where potential resting places are identified which may be impacted by the Project, further surveys such as camera trapping will be undertaken where necessary. <i>Water vole:</i> Water voles are protected under the Wildlife and Countryside Act 1981 (as amended), and they are SPI in accordance with Section 41 of the NERC Act 2006. A desk study carried out to inform optioneering of the Project identified records of water vole to the south along the River Don within 2km of the Site. Riparian habitat within the survey area is largely negligible suitability for water vole⁴⁰. The River Tyne is considered too large, fast flowing, and the water levels rise and fall considerably depending on the tide. The ponds in the north of the Site are isolated, and ditches in the wider survey area were dry during surveys to date. The stretch of the River Don within the survey area is suitable but poor for water vole. Although the River Don is considered too large and the water levels will rise and fall considerably depending on the tide, the flow appeared to be relatively slow, and whilst the banks mostly consist of mudflat, there are areas of more prominent

³⁸ Collins J. (ed.) (2023) Bat Surveys for Professional Ecologists, Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London

³⁹ Chanin P (2003). Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough;

⁴⁰ Dean, M. (2021) Water Vole Field Signs and Habitat Assessment: A Practical Guide to Water Vole Surveys;

Consideration	The Tyne Crossing Project
	steep banks topped with grass vegetation which could provide some potential for burrowing and foraging. Water voles are not listed on the citation for the River Don Salt Marsh LWS within the survey area, however, water voles are listed in the citation for Straker Street LWS, Cemetery Road LWS, and Primrose LNR which are immediately upstream of the River Don Salt Marsh LWS. Thus, it is considered there is a low risk that water voles could occur along the River Don within the survey area. The requirement for water vole surveys is being kept under review as the Project design progresses. <i>Reptiles:</i> Reptiles are protected from killing or injury under the Wildlife & Countryside Act 1981 (as amended) and are SPI in accordance with Section 41 of the NERC Act 2006. The survey area contains habitat suitable for reptiles to bask, forage, commute, refuge and hibernate, particularly the mosaic of habitat in the north of the Site. Reptile presence/likely absence surveys will be undertaken in September 2025, encompassing suitable habitat within 50m of the proposed overhead alignment and cable sealing end compounds. Reptile surveys would be carried out in line with best practice guidance (Gent & Gibson, 2003⁴¹ and Froglife, 1999⁴²). <i>Amphibians:</i> Great crested newt (GCN) are protected under the Habitats Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended), while great crested newts and common toads are SPI in accordance with Section 41 of the NERC Act 2006. There are ponds within the survey area which are suitable for breeding GCN and common toad breeding. Suitable terrestrial habitat for foraging, commuting, refuging and hibernating exists in the form of scrub, woodland, ruderal vegetation and grasslands. Of the waterbodies present within the survey area, five waterbodies were identified as being suitable for GCN through Habitat Suitability Index assessment. These five waterbodies were subject to presence/likely absence surveys using

⁴¹ Gent, A. and Gibson, S. (2003). Herpetofauna Workers Manual. JNCC. Peterborough

⁴² Froglife (1999) Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice sheet 10. Froglife, Halesworth;

Consideration	The Tyne Crossing Project
	environmental DNA analysis, but all returned negative results. Therefore, it is considered that GCN are likely absent from the survey area. <i>Terrestrial invertebrates:</i> The survey area contains habitat suitable for SPI and other notable terrestrial invertebrates, particularly the mosaic of habitat in the north of the Site. Within north of the Site, in the location of the proposed new overhead line (excluding the area proposed for new bore 4.0m tunnelling using a TBM), butterfly surveys identified dingy skipper <i>Erynnis tages</i> and small heath <i>Coenonympha pamphilus</i>, which are both are SPI in accordance with Section 41 of the NERC Act 2006. <i>Fish:</i> The River Tyne and River Don within the survey area were deemed to have suitability for fish species such as sea trout (<i>Salmo trutta</i>), Atlantic salmon (<i>Salmo salar</i>), European eel (<i>Anguilla Anguilla</i>), river lamprey (<i>Lampetra fluviatilis</i>) and sea lamprey (<i>Petromyzon marinus</i>). Baseline findings will be supported by walkover aquatic scoping surveys once undertaken. <i>Aquatic invertebrates:</i> The survey area contains habitat suitable for priority aquatic invertebrates, particularly the mosaic of mudflat habitat that flanks the north and south bank when the tide is low. Mudflats are characterised by high biological productivity and abundance of organisms, but low diversity with few rare species. One record exists from the National Biodiversity Network (NBN) atlas for the lagoon sea slug (<i>Tenellia adspersa</i>) (listed under the Wildlife and Countryside Act 1981 (as amended)), at the Tyne Bridge (2018). This species can be found in a range of habitats from estuaries and lagoons to almost freshwater habitats. It requires sheltered, shallow water and can be found on pebble beds or on vegetation. Baseline findings will be supported by walkover aquatic scoping surveys once undertaken. <i>Marine mammals:</i> The River Tyne within the survey area were deemed to have suitability for marine mammal species such as Bottlenose dolphin, harbour seal (<i>Phoca vitulina</i>) and grey seal (<i>Halichoerus grypus</i>) and which are protected in the UK (Habitats Directive, the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2017 (as amended). Incidental sightings of marine mammals will be recorded on the aquatic walkover survey. Is a Significant Effect Likely?

Consideration	The Tyne Crossing Project
	There could potentially be significant effects to breeding and non-breeding birds within the Site. Impacts could include temporary disturbance during construction, direct habitat loss and destruction of nests. Dependant on the final design, there is potential for significant effects to the bat population of the Site and surrounding habitats which provide suitable habitat for commuting, foraging and roosting. Impacts during construction could include harm to bats, the damage/destruction/disturbance/obstruction of roosts, loss of associated foraging and commuting habitats and disturbance or to bats using these habitats. There could potentially be significant effects during the construction period on unknown badger setts within the survey area where suitable habitat is present. Impacts may include direct habitat loss including setts, disturbance, and mortality during the construction stage. There could potentially be significant effects during the construction period on unknown resting sites for otter within the survey area where suitable habitat is present. Impacts may include direct habitat loss including rest sites, disturbance, and mortality during the construction stage. There could potentially be significant effects on the local reptile and amphibian population as suitable habitat was noted within the Site. Impacts may include direct habitat loss, disturbance and mortality during the construction stage. There could potentially be significant effects on the local terrestrial invertebrate population such as dingy skipper, as suitable habitat was noted within the Site boundary. Impacts may include direct habitat loss and mortality during the construction stage. Construction works have limited potential for significant effects on fish populations in the River Tyne, which includes species such as sea trout, European eel, river/sea lamprey and Atlantic salmon. They include pollution impacts due to sediment smothering/turbidity impacting egg/larvae with potential for wider catchment effects on fish populations. However, high background levels of turbidity mean that this unlikely. Depending on the construction methods for the tunnel and shafts, there is potential for noise/vibration which may cause injury or disturbance to fish. During operation, EMFs, may present barriers to passage for fish but this is considered unlikely.

Consideration	The Tyne Crossing Project
	Based on the current design, it is assumed that only ephemeral drainage ditches could be affected by direct land take associated with the new tunnel headhouse and towers. Land take may result in the loss or damage to fish habitats, and loss of connectivity to upstream spawning and foraging areas if identified as hydrologically connected to the River Tyne and River Don. The magnitude of these impacts would be limited through the implementation of standard mitigation measures. In relation to aquatic macroinvertebrate populations, construction works have limited potential for significant effects due to pollution, physical disturbance, habitat loss and/or smothering by sediment deposition. As for fish, the magnitude of these impacts would be limited through the implementation of standard mitigation measures. There could potentially be significant effects to marine mammals within the Site (River Tyne). Impacts could include temporary disturbance during construction from noise and vibration. Barriers to migration due to EMF from the cables is possible during operation but considered unlikely. <u>Avoidance / Mitigation / Compensation:</u> The primary mitigation measure is to undertake dedicated surveys for these protected and priority species to determine if significant effects can be avoided and/or minimised through Project design and micro siting; to avoid key areas of habitat used by sensitive species. Timing of works may be critical in avoiding the sensitive breeding/overwintering, migration and spawning seasons of protected and priority species. Protected and priority species surveys will be undertaken where necessary to determine the presence or likely absence of relevant species prior to the commencement of works, to inform assessment and mitigation requirements. A BMS and CEMP would be implemented during clearance of the Site and construction of the Project which would set out appropriate standard good practice ecology and environmental mitigation measures, and species-specific mitigation measures, to avoid or minimise impacts on species. This would include measures such as: micro-siting working areas away from sensitive areas where possible; measures to demarcate and protect retained habitats; pre-works checks for presence of species; supervision of works in sensitive areas if/where relevant by an appropriately experienced ecologist or Ecological Clerk of Works; preventing animals becoming trapped in excavations; safe storage of materials; and pollution prevention measures.

Consideration	The Tyne Crossing Project
	Other means of mitigation that may be adopted include noise/vibration controls (if works are being undertaken near intertidal areas, works are undertaken on an ebbing tide to alleviate vibration propagating to the water as efficiently); implementation should fish rescues be required for dry works; soft-start techniques if impacts on marine mammals are expected; MMO marine mammal observer and marine mammal surveys; vessel speeds limits; turbidity controls such as silt curtains, spill responses; and compliance with appropriate environmental standards (i.e. chemicals). Thermal impacts from EMF will inherently be mitigated by housing the cables in underground tunnels designed to reduce exposure as outlined in the project design. Through the combination of these measures, it is anticipated that the potential for significant effects on protected important and/or sensitive species can be negated or reduced.
Landscape Character and Visual Impact	
Are there any areas or features on or around the location which are protected for their landscape and scenic value, and/or any non-designated / non-classified areas or features of high landscape or scenic value on or around the location which could be affected by the project?⁴³ Where designated indicate level of designation (international, national, regional or local).	There are no landscape designated sites within 5 km of the Project. The overall Project lies within the Tyne and Wear Lowlands National Character Area (NCA ID: 14). On the north side of the River Tyne, the Project is situated within an area identified as 'North Tyneside – Employment Areas character area'. This character area is described as having extensive industrial areas dominated by large structures, with features such as the existing Overhead Line towers being mentioned as landmarks. On the south side of the River Tyne, the Project is covered by the 'South Tyneside - Character Area 7: Jarrow Riverside' character area. One of the 'Key Sensitivities' for this character area

⁴³ See question 8.1 for consideration of impacts on heritage designations and receptors, including on views to, within and from designated areas.

Consideration	The Tyne Crossing Project
	noted is the regenerating woodland within and between industrial sites which makes a strong contribution to the landscape character. Is a Significant Effect Likely? The Site exists within an industrial area, therefore during construction, it is anticipated that the Project has the potential to cause localised temporary adverse effects to the landscape and visual amenity for the local area due to activities such as: • the erection of security fence around the working areas needed for the works; • dismantling of existing towers and the construction of the new towers, the Cable Sealing End Compound, and Tunnel Head Houses; • excavation works at the entrance points, required for the boring of the tunnel crossing the River Tyne; • construction of temporary access roads and compound areas required for the works; • increase in vehicular traffic brought about by construction vehicles; and • localised removal of existing vegetation at the existing tower sites to facilitate construction. Whilst temporary adverse effects are anticipated to arise, these will occur within a landscape that is for the most part industrial in nature and will not be at odds with the wider landscape context, therefore the effects on landscape character during construction will not be significant. During operation, it is anticipated that the presence of the new tunnel headhouses at either side of the river may have an impact on landscape and visual amenity of the area due to its prominent riverside location, although due to their industrial and commercial context, significant effects are not anticipated. The preparation of a Landscape and Visual Impact Assessment will aid in the identification of landscape and visual effects from the Project and in determining mitigation strategies that can be implemented to identify both positive and negative impacts and reduce or offset the resulting effects.

Consideration	The Tyne Crossing Project
Is the Project in a location where it is likely to be highly visible to many people? (If so, from where, what direction, and what distance?)	Visual receptors in the area include the nearby residential settlements at Jarrow and East Howdon, recreational users of the riverfront parks, River Tyne Trail and St. Paul's Monastery along the bank of the River Don, and transitory views from local vehicular routes. Is a Significant Effect Likely? Construction impacts will arise as a result of works to construct the CSEC, including the headhouses and associated compounds, however within the existing industrial context of views, significant effects are considered unlikely to arise. Works to dismantle 6no. existing towers, including the visually prominent ZZA064 and ZZA065, and erect 6no. new towers will be relatively short duration activities, and within the context of existing pylons, prior to their removal, significant visual effects are unlikely to arise. Whilst construction activities are expected to extend into winter seasons, when there will be reduced screening for the Project due to loss of leaf cover, this is not anticipated to give rise to greater impacts and the effects experienced during construction are not anticipated to change. Once operational, it is anticipated that the Project will have a beneficial effect to the area as the existing large towers (ZZA064 to ZZA065) will be removed. In total 6no. new towers will be erected with a lower height which are less conspicuous, especially when compared with the existing towers and large industrial built form found in the riverside area. In addition, the existing overhead lines will be less noticeable as the section of existing overhead line connection crossing the River Tyne will be rerouted through an underground tunnel, and modification of connections to other towers will result in a decrease to a lower height. Impacts on visual receptors during operation of the Project are considered unlikely to give rise to a significant effect.
Cultural Heritage / Archaeology	
Are there any areas or features which are protected for their cultural heritage or	There are no designated heritage assets within the Site. Within a 2km study area surrounding the Project, there are 54 designated heritage assets comprising two scheduled monuments, 48 listed

Consideration	The Tyne Crossing Project
archaeological value, or any non-designated / classified areas and/or features of cultural heritage or archaeological importance on or around the location which could be affected by the project (including potential impacts on setting, and views to, from and within)? Where designated indicate level of designation (international, national, regional or local).	buildings, and four conservation areas. Of these listed buildings, three are Grade I listed, one is Grade II*, and the remaining 44 are Grade II. The majority of the 2 km study area is characterised by dense industrial and residential development with significant terrestrial and maritime transport infrastructure. Historic maps confirm that the Project on the north of the River Tyne occurs on land previously used for agriculture, partially developed for use as an industrial depot in the mid-twentieth century. The Project south of the River Tyne occurs on land known as Jarrow Slake, reclaimed in the twentieth century for industrial use. The following Cultural Heritage designations are identified within 500 m of the Project: Scheduled monuments: • Village of Jarrow (National Heritage List for England (NHLE): 1005897); and • St Paul's Monastery, Jarrow (NHLE: 1002978). Grade I listed buildings: • Church of St Paul (NHLE: 1355091); and • Monastery of St Paul Ruins of Jarrow Monastery (NHLE: 1025198). Grade II listed buildings: • Church of St John the Evangelist (NHLE: 1355013); • Bede Monastery Museum Jarrow Old Hall (NHLE: 1185882); and • Jarrow Bridge (Tyne and Wear County Council Bridge No 433) (NHLE: 1355092). Conservation Area: • St. Paul's Conservation Area. Archaeological Remains:

Consideration	The Tyne Crossing Project
	Within the wider area, archaeological remains have been found from the prehistoric to the modern period. Significant archaeological remains are present in the form of Anglo-Saxon and medieval settlements (monastic and domestic), post-medieval industrial and settlement remains and World War II defences. Is a Significant Effect Likely? Due to the existing current combined landscape character, including industrial, residential and commercial elements, it is unlikely that the Project will have an impact on designated heritage assets identified beyond 500m from the Project, caused by changes within their setting. Based on the information presented, and the scale of the development, there is the potential for impacts to designated heritage assets within a 500 m buffer from the alignment of the Project caused by changes to their setting. The Church of St John the Evangelist, a Grade II listed building, is the single designated asset north of the River Tyne within 500m of the Project. It is unlikely that the Project will impact this church, due to existing intervening structures between the asset and the Project. The remaining assets within 500 m of the Project, are south of the river and include the two scheduled monuments of St Paul's Monastery and the Village of Jarrow, situated within St Paul's Conservation Area where the River Don meets the south bank of the River Tyne. Currently, towers cross the conservation area in a manner described as 'visually intrusive'. The Project would remove the towers between Tower ZZA063 and Tower ZZA068, which currently pass through the conservation area on the west of the River Don, and replace them with a new tunnel headhouse outside of the conservation area on Jarrow Slake to the east of the River Don. Removal of the existing overground energy infrastructure would reduce existing effects on these designated heritage assets. However, there may still be effects through changes to the settings of these designated assets from the new structures. The Project includes new sub-surface energy infrastructure in the form of two new Tunnel Head Houses, two new Cable Sealing End Compounds, the boring of a new tunnel, new towers and OHL. These works on the north and south banks of the River Tyne have the potential to impact on

Consideration	The Tyne Crossing Project
	buried archaeological sites. Underneath the River Tyne, the new tunnel is expected at a depth below any heritage assets. There is a low potential for significant effects on archaeological remains within the study area where previous ground intrusion has occurred to the south of the River Tyne. Based on initial analysis of historic maps and the predicted scale of the Project, there is a potential for significant effects on previously unrecorded archaeological remains to the north of the River Tyne. These remains could range from any period from the prehistoric to the modern, based on the known archaeological record and land use associated with the River Tyne. The character of any potential archaeological remains may be linked to riverine or settlement activity along the River Tyne. Should peat deposits be found on the Site of the Project, there would be an increased likelihood that archaeological assets may contain organic remains or deposits of palaeoenvironmental importance. <u>Avoidance / Mitigation / Compensation:</u> There are few mitigation measures recommended for new energy infrastructure both south of the River Tyne, on the east of the River Don, and north of the River Tyne, apart from careful design to minimise effects. This includes construction of the Tunnel Head Houses which may have potential effects on buried archaeological remains. Potential effects on buried archaeological remains will require further analysis. In the first instance a desk-based assessment would be undertaken to fully assess the archaeological potential. This may be followed by further evaluation. Any archaeological remains thus located would then require further mitigation, normally through redesign to allow their preservation, or through excavation and recording. It is therefore considered unlikely that there will be any significant effects on cultural heritage and archaeological.
Traffic and Transport	

Consideration	The Tyne Crossing Project
Are there any routes on or around the location which are used by the public for access to recreation or other facilities, which could be affected by the Project?	The Project is located north of the A185, east of Slake Road, the A187 and the A19, and primarily south of the A187. No Public Rights of Way (PRoW) cross the Site. Footpath J23 in South Tyneside is situated on the boundary of the Project and Restricted Byway J16 in South Tyneside is located just outside the Project boundary. The River Tyne Trail long distance footpath and NCN 72 Hadrian's Cycleway and NCN 14 crosses the Project adjacent to the A187 Howdon Road, and south of the river. The Site will be accessed from the south via the A185 Jarrow Road and from the north via the A187 Howdon Road, both of which may be impacted by increased traffic during the construction phase. There will be additional traffic associated with the operation phase of the Project, but this is not expected to be significant. The A185 connects South Shields to Jarrow and the A19 Tyne Tunnel, while the A187 links North Shields (including the ferry terminal and Newcastle Quays Retail Park) to the A19 Tyne Tunnel. The A185 Jarrow Road provides access to several businesses and industrial areas, including the Port of Tyne, British Car Auctions, and J. Barbour & Sons. Is a Significant Effect Likely? A CTMP will be produced, which will set out the Project access arrangements, heavy goods vehicle (HGV) routeing strategy, light goods vehicle (LGV) routeing strategy, methods of construction traffic management, mitigation strategies, and management measures. Following implementation of the CTMP along with best practice measures outlined in the CEMP, there are no likely significant construction effects.

Consideration	The Tyne Crossing Project
Are there any transport routes on or around the location which are susceptible to congestion or which cause environmental problems, which could be affected by the Project?	Traffic estimates for the Project are not available at this stage. During the construction phase, there is potential for significant impacts on the surrounding road network, especially the A185 Jarrow Road and the A187 Howdon Road, as a result of increases in traffic generated from the construction works and the works to dismantle and remove the existing towers and overhead lines. However, the viability of removing the waste arisings via boat is being assessed which, if implemented, would significantly reduce the quantity of traffic on the local road network during the construction phase of the project. Additional traffic associated with the operation of the Project is expected to be very low and not significant. The impact during the construction phase will be limited by following best practice mitigation measures. Is a Significant Effect Likely? It is recommended that a Transport Statement would be prepared for the construction and operation stages of the Project. The Transport Statement will assess the impact of forecasted traffic generated by the construction and operation stages and will inform the CTMP and any mitigation measures proposed. Increase in traffic generated as a result of the construction works would be mitigated through best practice construction methods detailed within the CEMP and CTMP and significant effects are, therefore, considered unlikely.
Land Use	
Are there existing land uses or community facilities on or around the location which could be affected by the Project? E.g. housing, densely populated areas, industry / commerce, farm / agricultural holdings, forestry, tourism, mining, quarrying, facilities relating to health, education, places of worship, leisure / sports / recreation.	To the south, the Site is located in the ward of Bede in South Tyneside, which has a total population of 7,527 people (2022). In 2021, 54.0% of the population aged 16 years and over were economically active, 19.0% of the population held Level 4 qualifications or above, and 23.8% held no qualifications. Of those in employment, the most common industries to work in were 'Human health and social work activities' (17.5%) and 'Wholesale and retail trade; repair of motor vehicles and motor cycles' (14.9%). According to the Index of Multiple Deprivation, the four LSOAs (Lower Super Output Area) in Bede fall in either the most deprived 10% or 20% of LSOAs in England. The percentage of children

Consideration	The Tyne Crossing Project
	under 16 years living in families in relative low income in Bede is 36%, which compares to the England average of 22.1%. Approximately 13% of households are in fuel poverty in Bede (2022), and 13.9% in South Tyneside (2021). In the 2021 Census, 42.2% of residents self-reported their health as 'very good', and 32.4% as 'good'. However, in 2019 Public Health England reported that health in South Tyneside was generally worse than the England average, with life expectancy for men and women respectively 9.3 and 8.1 years lower in the most deprived areas of South Tyneside than in the least deprived areas. To the north, the Site is situated in the Riverside ward in North Tyneside, which has a total population of 11,953 people (2022). In 2021, 55.7% of the population aged 16 years and over were economically active, 25.8% of the population held Level 4 qualifications or above, and 22.9% held no qualifications. Of those in employment, the most common industries to work in were 'Human health and social work activities' (16.1%) and 'Wholesale and retail trade; repair of motor vehicles and motor cycles' (15.5%). A number of LSOAs fall either fully or partially within the Riverside ward, all but one of which are within the most deprived 10% and 20% of LSOAs in England. The percentage of children under 16 years living in families in relative low income in Riverside is 22%. Approximately 11.6% of residents in North Tyneside are in fuel poverty (2021). In the 2021 Census, 39.6% of residents self-reported their health as 'very good', and 34.1% as 'good'. In 2019 Public Health England reported the health of people in North Tyneside as varied when compared to the England average, with life expectancy for men and women respectively 11.5 and 10.7 years lower in the most deprived areas of North Tyneside than in the least deprived areas. The land uses surrounding the Site comprises: residential housing to the east, south east and north of the Site, recreational and amenity areas such as Percy Main Park, Howdon Park, and Jubilee Wood facilities, tourist attractions such as the Jarrow Hall: Anglo-Saxon Farm, Village and Bede museum, industrial uses, commercial outlets, open fields, port infrastructure, and transport links which could potentially be affected temporarily due to the activities associated with the construction phase of the Project.

Consideration	The Tyne Crossing Project
	During construction, there are a number of impacts which could give rise to potential significant effects on the local population and businesses. These include; • Increase in construction road traffic, including HGV movements, which could introduce further noise and emissions to the environment, contribute to traffic congestion and/or delays, as well as reduce, or be perceived to reduce, road safety. • Construction activities on land could reduce visual amenity for local residents (including those in Jarrow and East Howdon) and recreational users of outdoor spaces (including Charlie's Park in Jarrow, the River Tyne Trail long distance footpath, and NCN 72 Hadrian's Cycleway), cause disruption to recreational outdoor spaces should diversions be required, disrupt local businesses should they limit access to facilities, produce dust, and generate noise. Construction activities in the River Tyne could potentially disrupt maritime traffic access in the area. Many impacts are likely to be managed through the implementation of the CEMP, and best practice including implementing Management Plans for Traffic, Noise and Dust. Is a Significant Effect Likely? The potential impacts are not expected to give rise to significant effects, provided the assessments to determine potential impacts on receptors are carried out, management plans are prepared, and best working practices are implemented. Once operational, the Project is unlikely to affect the local population and land use, and is expected to improve access for marine vessels, resulting in opportunities for future offshore wind related manufacturing industries upstream.
Are there any plans for future land uses on or around the location which could be affected by the Project?	The present land use of the Site includes overhead line towers, and the proposed works include the boring of a tunnel with underground cables and associated infrastructure. As per the review of the planning applications there is one development proposal identified, that may have cumulative

Consideration	The Tyne Crossing Project
	impacts during the construction phase should their programmes overlap. This is discussed further in the Cumulative Effects section below. Is a Significant Effect Likely? There is the potential for significant cumulative effects on future land uses, as discussed within the Cumulative Effects Section below. However, other proposed developments in the nearby area (within 1km) identified within the Planning Application search would not be significantly affected by the Project during construction, or operation.
Land Stability and Climate	
Is the location susceptible to earthquakes, subsidence, landslides, erosion, or extreme /adverse climatic conditions, e.g. temperature inversions, fogs, severe winds, which could cause the Project to present environmental problems?	Information on Major Accidents and Disasters has been provided under Human Health and Population. In this section, climate related issues are discussed. <u>Climate</u> The Site is not affected by any known land stability issues. The current climate of North East England is strongly influenced by the high altitude of the Pennines and the North Sea. This results in the North East being one of the coolest areas within England. The lower lying areas in the east of the region received less rainfall than the west of the region, culminating places such as Teesside being one of the driest parts of the of the UK. Upland and coastal areas within the region are exposed to stronger winds.⁴⁴ Climate data for the current time period (1991-2020) indicates that average summer temperatures (in June, July and August) are 14.6°C and average winter

⁴⁴ Met Office (2016) North East England: Climate. Available at: https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/weather/learn-about/weather/regional-climates/north-east-england_-_climate-met-office.pdf

Consideration	The Tyne Crossing Project
	temperatures (January, February, December) are 5.1°C. Rainfall in summer is in the region of 171.8mm and winter rainfall is 141.4mm. Climate change is projected to lead to warmer wetter winters and hotter drier summers, with an increase in the intensity and frequency of extreme events such as heatwaves, drought, extreme rainfall leading to flash flooding, storms and wind events. Key climate projection trends by the end of the century 2071 – 2100 (2080s) under a high emissions pathway scenario (Representative Concentration Pathway (RCP) 8.5, 50th percentile) include:⁴⁵ • Increase in average summer temperature by 4.3°C • Increase in average winter temperature by 2.8°C • Decrease in summer rainfall by 24% • Increase in winter rainfall by 20% • Increase in Met Office heatwave events from a baseline of 0.3 events per year to 4 events per year • Increase in Met Office Fire Danger days per year (indicating the occurrence of wildfire), from a baseline of 12 events to 48 events per year. • Increase in the number of moths with a Standardised Precipitation Evaporation Index (SPEI) of less than -1.5 (indicating drought conditions) from a baseline of 0.1 to 0.3 • Reduction in regional summer soil moisture by 30% and winter soil moisture by 2.7%. Climate data for wind and storm are uncertain; however a precautionary principal would suggest increasing wind speeds and increasing frequency and intensity of storms.

⁴⁵ Nigel Arnell et. al. (2021). The Climate Risk Indicators. Available at: <https://uk-cri.org/>

Consideration	The Tyne Crossing Project
	Is a Significant Effect Likely? The assessment of significant effects in relation to climate change considers the impact that future climate change will have on the Project assets and users. Activities during the construction phase are anticipated to be in the short term (completion anticipated 2033 – 2034) and therefore the impact of future climate change will be less evident, with weather patterns similar to current conditions. In line with best practice and legislative requirements, the CEMP will include management measures and programme contingency for severe and adverse weather events. Similarly, health and safety impacts to the construction workforce will be mitigated through risk assessments. As such, the potential for significant effects to the construction phase as a result of climate change is considered unlikely. The underground tunnel housing the cables will be less impacted by climate change given its reduced exposure to above ground climatic conditions and other impacts such as sea level rise. The design will be appropriate to the geological conditions and informed by geotechnical investigations. The potential for significant effects from climate change on the underground assets are considered unlikely. Climate-related impact affecting the above ground infrastructure (OHL, towers, CSEC and THH) may include: • High temperatures may result in overheating issues, sag of overhead lines and reduction in current carrying capacity. • Increasing risk of wildfires could cause critical damage to above ground infrastructure. • Greater winter precipitation and heavy rainfall on dry ground in the summer is likely to result in increased flooding which can cause damage to infrastructure. • Changes in precipitation rates coupled with hot spells can cause changes in ground conditions affecting shallow foundations. • High winds can cause direct damage to infrastructure and also impacts from flying debris. • Lightning strike can cause power surges and outage and damage.

Consideration	The Tyne Crossing Project
	Whilst there are currently no details outlining design and operational measures to build resilience to future climate change, it is anticipated that: • The design will be in-line with appropriate standards allowing for some tolerance in climatic changes; • Regular inspection, maintenance and repair regimes will be implemented to ensure the infrastructure is in a good state of repair and operational condition. Furthermore, NGET are cognisant of climate change impacts to their business and operations as detailed in their Climate Change Adaptation Report.⁴⁶ Any potential significant effects to the Project from climate change are expected to be mitigated through design and operational measures, therefore the potential for significant effects to the above ground assets as a result of climate change is considered unlikely. <u>Greenhouse Gases</u> The assessment of greenhouse gases (GHG) is not restricted by geographical area but instead includes any increase or decrease in emissions as a result of the Project. In the baseline scenario, GHG emissions occur constantly and widely as a result of natural and human activity. Emissions sources include land use and land use change, industrial processes, and energy consumption (e.g., fossil fuels used in vehicles, electricity generation and transmission). There are no construction activities in the baseline scenario for the Project, therefore there are no associated emissions. The operational baseline includes emissions associated with transmission

⁴⁶ NGET (2024) Climate Change Adaptation Report. Available at: <https://www.nationalgrid.com/document/357171/download>

Consideration	The Tyne Crossing Project
	losses for the short section of overhead lines proposed for removal and any maintenance activities required for the existing overhead lines and towers in the absence of the Project. Is a Significant Effect Likely? It is expected that construction activities for the Project would generate GHG emissions. This would include embodied carbon from the manufacture of materials used in the Project (e.g. steel, copper, reinforced concrete, aluminium conductors, insulators, etc) and their transport to and from the construction locations; the use of fuel and energy in plant and equipment during construction, including tunnelling machines; and the transport of excavated material for reuse or disposal. However, it is assumed that the potential impacts associated with these emissions would be mitigated, to some extent, through the inclusion of targeted management measures within the CEMP, aligned to industry best practice and net zero policy. Given the scale of the Project and expected mitigation, GHG emissions during the construction phase are unlikely to materially impact the UK Government's ability to meet its international commitments to Net Zero by 2050 mandated through the statutory carbon budgets. As such, the potential for significant adverse environmental effects arising from GHG emissions during the construction phase are considered unlikely. Operational GHG emissions would result from the end-use of the Project, which are considered to be the same as those associated with the existing overhead lines (i.e. transmission losses and maintenance activities), albeit with the potential for minor variation depending on operational and maintenance efficiencies for the updated components and the overall length of cabling for the Project. There is expected to be minimal change in GHG emissions between operation of the current overhead lines and the Project. It is therefore considered unlikely for there to be adverse significant environmental effects from GHG emissions during operation of the Project.
Cumulative Effects	

Consideration	The Tyne Crossing Project
Could this project together with existing and/or approved development result in cumulation of impacts together during the construction/operation phase?	A review of planning applications within the last 5 years, within a 2km buffer from the Site was undertaken and are listed as follows: • Planning application (Reference: 22/02010/SCREIA). Proposed upgrades to treatment work at Howdon Sewage Treatment Works Northumberland Dock Road East Howdon Wallsend Tyne and Wear NE28 0RZ. This development is located adjacent to the northeast of the OHL tower ZZA064 on the north side of the River Tyne was submitted to request an EIA screening opinion. The decision was issued on 17th November 2022 and concluded that an EIA is not required. • Planning application (Reference: 25/00015/DEMGDO). Demolition of Building A on the College North Tyne Met site at Tyne Metropolitan College Battle Hill Drive Wallsend Tyne and Wear NE28 9NL. Located 1.9 km northwest of the Project on the north side of the River Tyne with planning permission granted on 3rd February 2025 and works to commence in September 2026. • Planning application (Reference: 24/01627/FULM). Redevelopment of former Tynemet College site, including demolition of modern college buildings and construction of 47no. Dwellings and associated hard and soft landscaping works at Queen Alexandra College Queen Alexandra Road West North Shields Tyne and Wear NE29 9BZ. Located 1.9 km northeast of the Project on the north side of the River Tyne and awaiting determination. • Planning application (Reference: 23/01645/REM). Phase 3 application for reserved matters as part of the Site to form 160 dwellings at Land at Former Smiths Dock Duke Street North Shields Tyne and Wear. Located 2km east from the OHL tower ZZA062 of the Project on the north side of the River Tyne with planning permission granted on 13th March 2025. • Planning application (Reference: 21/02336/CLPROP). Increase in berths to 398, in compliance with planning permission 98/00050/FULUDC at Royal Quays Marina Albert Edward Dock Coble Dene North Shields Tyne and Wear. Located 1.5 km east of the Project on the north side of the River Tyne with planning permission granted on 6th January 2022.

Consideration	The Tyne Crossing Project
	• Planning application (Reference: 21/02355/FUL). Demolition of existing buildings and erection of 39no. hybrid units for Use Class B2 and B8 at Former Motor Hog Wallsend Road North Shields Tyne and Wear. Located north of the OHL tower ZZA062 of the Project on the north side of the River Tyne with planning permission granted on 17th March 2022. • Planning application (Reference: 250243). Proposed demolition of a series of retail units at The Viking Centre. Located 1.1km west of the OHL tower ZZA067 of the Project on the south side of the River Tyne with planning permission granted on 29th April 2025. • Planning application (Reference: 250364). Proposed demolition of 14 buildings situated between the River Don to the north, Don Road to the east, and the A185 to the south and west. Located 150m west of the OHL tower ZZA067 of the Project on the south side of the River Tyne with planning permission granted on 3rd July 2025. • Planning application (Reference: 250048). Proposed Battery Energy Storage System and associated infrastructure. Located 200m southwest of the OHL tower ZZA067 of the Project on the south side of the River Tyne with screening opinion obtained on 21st March 2025. • LS Eco Advanced Cables Ltd. (LSEAC) have proposed to construct a £923 million high-voltage cable manufacturing factory at the Port of Tyne. The factory complex could include manufacturing space, testing facilities and offices, as well as a 202-metre tall tower where the cables could be stretched and sheathed. No formal Planning Application has been submitted to date, but consultation took place in May 2025. • Port of Tyne, Northside Development (no planning reference but in public domain). Hybrid planning application consisting of full planning permission for enabling works including groundworks, site clearance and installation of utilities; development of the land and quaysides to suit offshore wind storage, assembly, and shipping; and Outline planning permission (all matters reserved except for Access) for the Development of Zones to create high-quality commercial and industrial areas, including to cater for advanced engineering, renewable, marine and off-shore technology sectors (Class Ec/ B2 / B8). Is a Significant Effect Likely?

Consideration	The Tyne Crossing Project
	The majority of the planning applications of cumulative developments listed above are permitted and may already be under construction. Therefore, potential cumulative effects are not likely as construction of these developments would be completed prior to the commencement of the construction works of the Project. The Port of Tyne, Northside Development Project has been identified as one planning application that may have potential cumulative effects as the red line boundaries overlap for both schemes, and due to the likelihood that the construction phases may occur at the same time. Having two construction projects occurring simultaneously within close proximity has the potential to significantly amplify environmental impacts, including increased air pollution from dust and emissions, heightened noise levels affecting nearby communities and wildlife, and greater traffic congestion leading to elevated carbon emissions. Soil erosion, water contamination from runoff, and habitat disruption may also be exacerbated due to the cumulative scale of land disturbance. The overlap of construction activities can strain local resources, such as waste management systems, and increase risks of accidental spills or improper disposal of hazardous materials. The Northside Development Project is considered EIA Development and will therefore be undertaking an assessment to reduce potential significant effects. As part of this assessment, a cumulative assessment will also be undertaken, which will identify potential impacts and implement embedded mitigation to reduce significant effects on other potential developments. Where construction programmes overlap with the Project, to mitigate impacts, coordinated planning between the proposals and programme of construction works would be undertaken to ensure compliance with regulations. In addition, the use of good working practices and pollution prevention measures as outlined in the CEMP and management plans such as the Transport Statement and Construction Traffic Management Plan (CTMP) will be implemented during construction, and this will minimise potential significant cumulative effects during the construction phase of each of the projects. In-combination effects are the combined effects of development Projects which may, on an individual basis be insignificant, but cumulatively may have significant effect. However, it is

Consideration	The Tyne Crossing Project
	considered that with the utilisation of mitigation measures and construction best practice outlined above the Project is not likely to result in significant in-combination effects. No other committed developments listed above are considered likely to result in significant cumulative effects alongside the Project. No likely significant cumulative effects.
Transboundary Effects	
Is the Project likely to lead to transboundary effects?	Any effects that do arise are expected to be localised, temporary (in relation to the construction phase) and will be able to be managed by standard, well established mitigation measures. No transboundary effects are therefore expected. No likely significant effects.
Summary	
Is the Project likely to have significant effects on the environment?	From the information set out above, it can be seen to the basis of preliminary baseline information obtained, providing that mitigation and best practise measures are in place throughout the construction works, no significant environmental effects are anticipated. Whilst the Tyne Crossing Project will lead to some environmental issues as highlighted above, these are not expected to be significant and can therefore be appropriately managed by the relevant planning process without the need for a formal EIA. The installation of six new towers and configuration of the existing overhead line (OHL) to connect to the new CSECs will require Section 37 consent under the Electricity Act 1989, and the THHs and CSECs will require planning consent under the TCPA , along with other infrastructure as required. The tunnel works and underground cables, are considered Permitted Development.

Consideration	The Tyne Crossing Project
Does the Project require an EIA?	Key considerations of the potential environmental effects have been assessed against Schedule 3 of the TCPA EIA Regulations and Schedule 3 of the EW EIA Regulations, in line with the Screening Matrix. It demonstrates that, whilst the construction of the Project will potentially result in environmental effects, during the construction phase. However, given the temporary nature and providing mitigation measures will be embedded into the design to minimise impacts, these effects are not anticipated to be significant. Given the nature of the Project, no operational effects are anticipated. From the information available, it is not considered that the Project requires an EIA. Please see Section 4 for more detail.

4 CONCLUSION

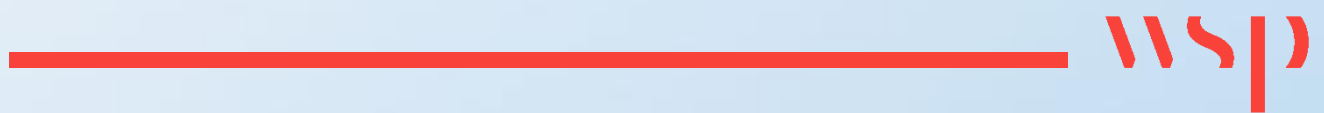
- 4.1.1. This EIA Screening Report has been prepared to support a request to North Tyneside Council, South Tyneside Council and the Secretary of State for a Screening Opinion to confirm whether EIA is required in respect of the Tyne Crossing Project. The requests are being made by National Grid to North and South Tyneside Councils pursuant to Regulation 6 of the TCPA EIA Regulations 2017 and to the Secretary of State under Regulation 10 of the EW EIA Regulations.
- 4.1.2. The Tyne Crossing Project is not Schedule 1 or Schedule 2 development within the meaning given in the TCPA EIA Regulations, however it could be considered similar to other energy related projects covered by Schedule 2 and therefore an assessment of the Project against Schedule 3 of the regulations has been undertaken. The OHL works associated with the Project do, however, fall within Schedule 2 (paragraph 2 (a)) of the EW EIA Regulations, and in consequence it is necessary to consider whether the Project is likely to give rise to significant environmental effects. As the OHL works are integral to the development of the new bored tunnel, CSEC and THHs and to ensure that effects are robustly identified, characterised and assessed, the environmental effects of the Project as a whole have been considered.
- 4.1.3. The appraisal presented in Section 3 demonstrates that the Project, which includes the proposed tunnel bored beneath the Tyne River and the associated CSEC and THH, new towers and OHL, is unlikely to have significant effects on the environment. Table 3-1 summarises the key considerations as assessed against Schedule 3 of the TCPA EIA Regulations and Schedule 3 of the EW EIA Regulations, in line with the Screening Matrix. It demonstrates that, whilst the construction of the Project will potentially result in environmental effects, given the temporary nature of the works and the mitigation measures to minimise potential impacts, these effects will not be significant. Table 3-1 reflects the mitigation which may be needed to manage issues around waste, flood risk, landscape and visual effects and ecological impacts, which are all standard measures and well understood in construction and landscape design terms.
- 4.1.4. The operation of the Tyne Crossing Project will not give rise to substantial vehicle movements, emissions to air, noise and vibration or releases of pollutants to land. Therefore it is not considered that the Project will result in significant effects during operation.
- 4.1.5. There is no potential for the construction and operational phases of the Project to result in environmental effects in-combination with other projects in the vicinity of the Project. The assessment presented in Section 3 demonstrates that if the construction phases of the Project overlaps with other projects (Port of Tyne, Northside Development) the effects would be temporary and predominately related to impacts associated with the construction works, which will be minimised by implementing good working practises in line with the CEMP. In addition, any potential impacts will be minimised by embedded mitigation within the cumulative effects assessment of the EIAs undertaken by the developers. Therefore, cumulative effects are not considered to be significant.
- 4.1.6. In conclusion, although the Project may present certain potential impacts, these can be effectively avoided through the adoption of a CEMP and additional mitigation measures identified via further surveys and assessments. Therefore, the Project is **not considered EIA development** but would instead proceed under a voluntary Environmental Assessment (EA) for the project in its entirety, with proportionate assessments submitted with the TCPA planning application and Section 37 application.

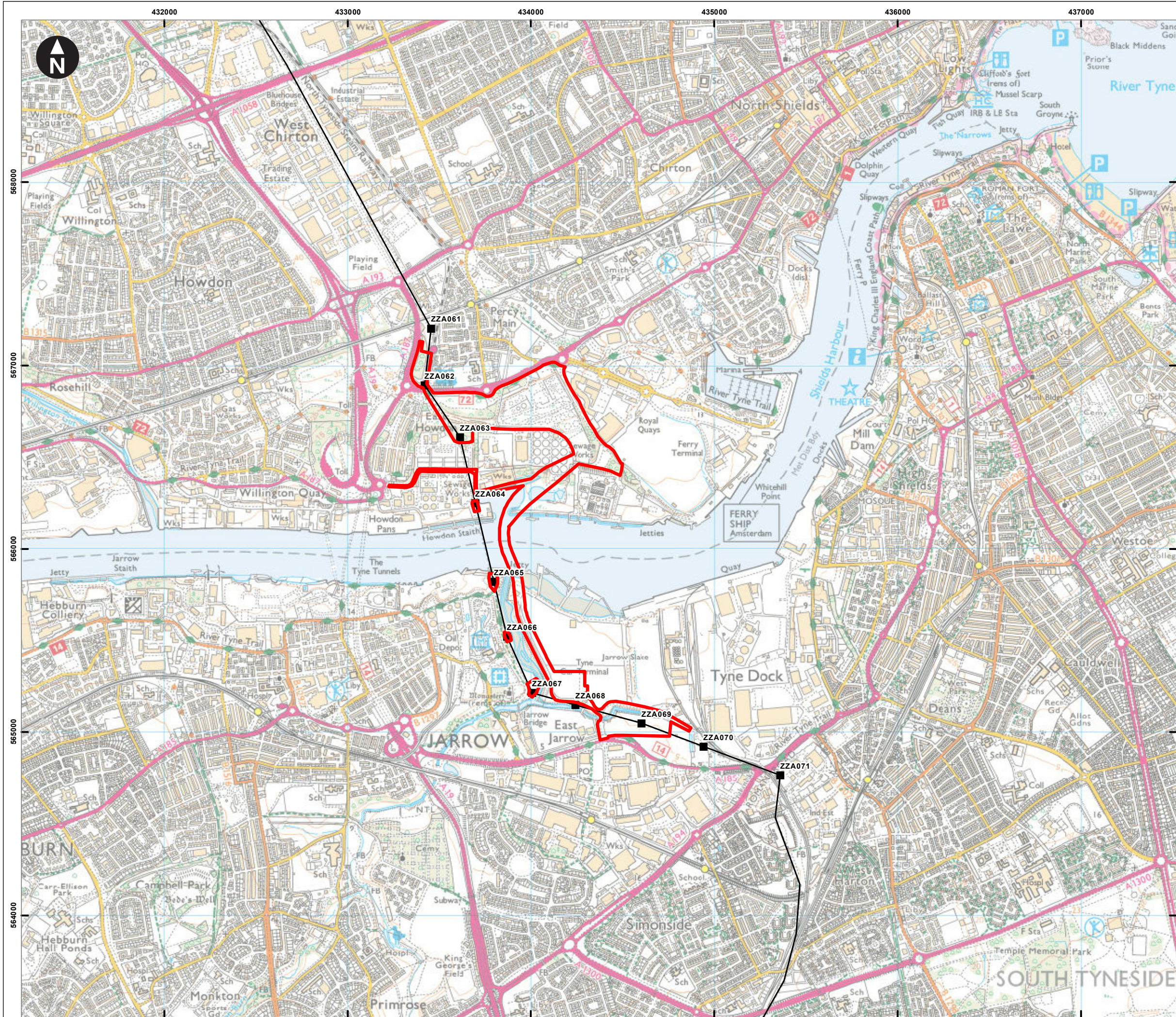


Ongoing assessments will generate recommendations for any supplementary mitigation required to address potential project impacts, including those outlined in Section 3.0.

Appendix A

FIGURE 1: SITE LOCATION PLAN





Key

- Site boundary
- Existing tower
- Existing overhead line

0 250 500 750 1,000 m

Scale at A3: 1:20,000

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P01	JP	DA	RT	27/06/2025
REVISION	DRAWN	CHECKED	APPROVED	DATE

Client

nationalgrid

NGET
Tyne Crossing
Environmental Screening Report

**Figure 1.0
Location Plan**

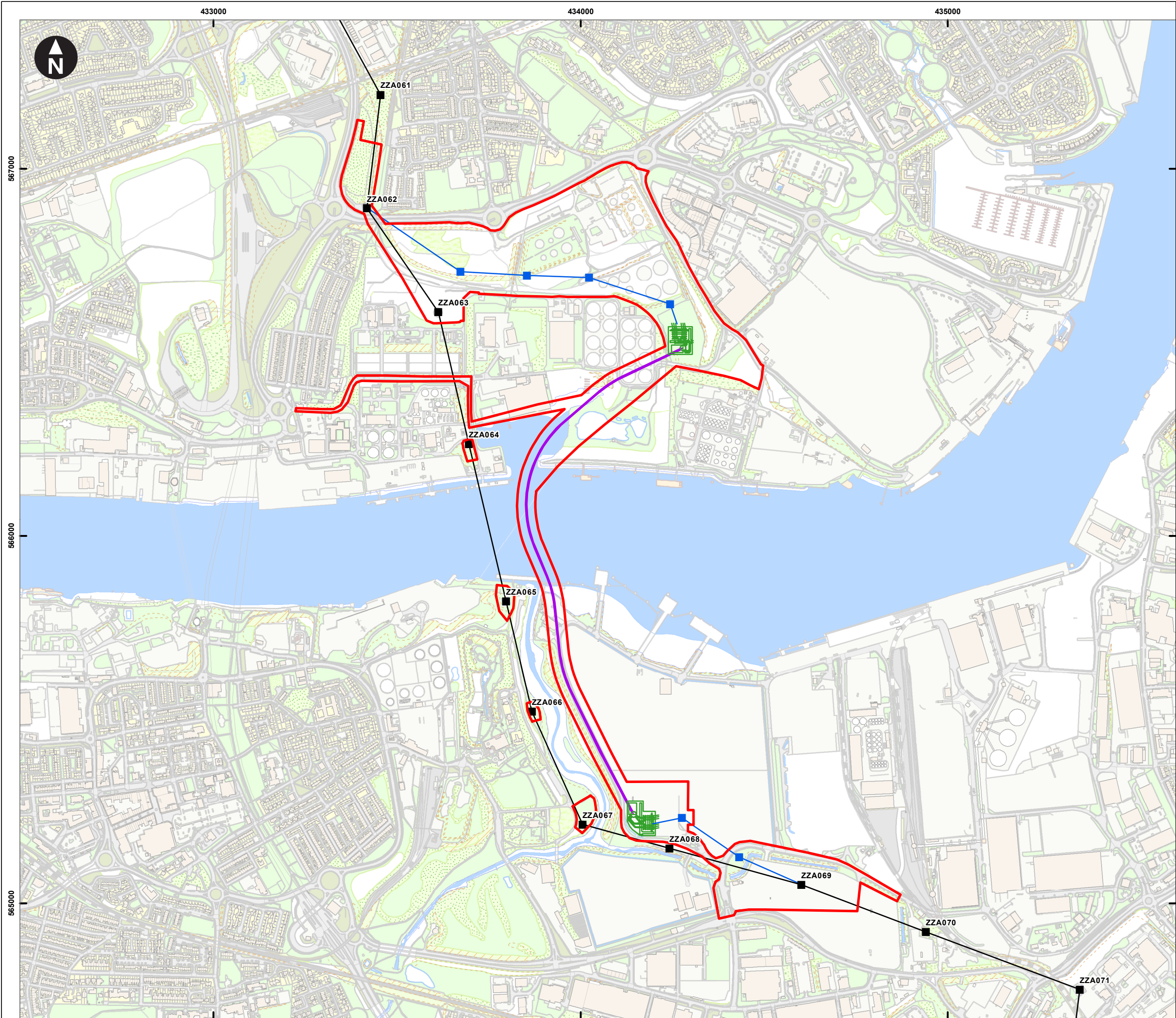
June 2025

wsp

Appendix B

FIGURE 2:ENVIRONMENTAL CONSTRAINTS





- Key
- Site boundary
 - Existing tower
 - Existing overhead line
 - Proposed tower
 - Proposed overhead line
 - Proposed CSEC/Head House
 - Proposed tunnel

0 250 500 m
Scale at A3: 1:10,000

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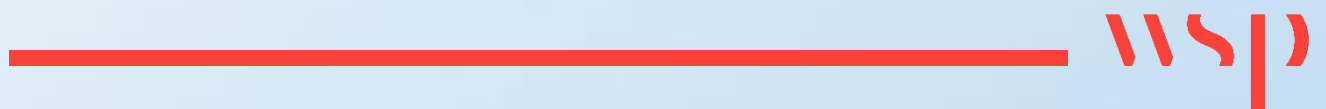
Figure 2.0
Proposed scheme

June 2025

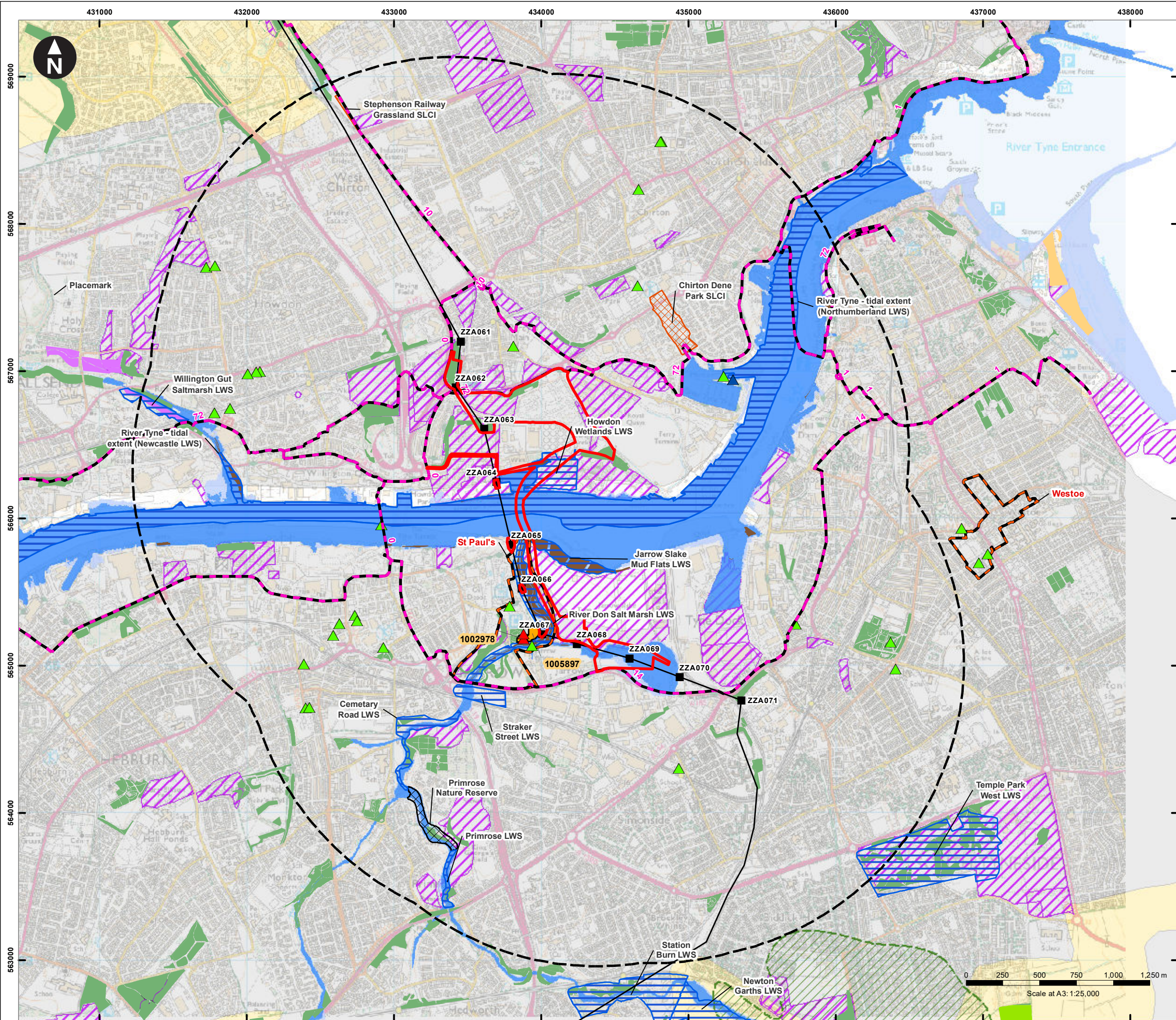


Appendix C

FIGURE 3: LOCATION OF TUNNEL HEAD HOUSE AND CABLE SEALING END COMPOUNDS



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Key

- Site boundary
- 2km search area
- Existing tower
- Existing overhead line
- National Cycle Route with number
- Conservation Area
- Scheduled Monument
1002978 St Paul's Monastery, Jarrow
1005897 Village of Jarrow

Listed Building

- Grade I
- Grade II*
- Grade II

Non-Statutory Sites

- Permitted waste landfill site
- Historic landfill site
- Source Protection Zone 3
- Flood Zone 3 (High risk of flooding)
- Flood Zone 2 (Medium risk of flooding)
- Flood Zone 1 (Low risk of flooding)
- Local Nature Reserve (LNR)
- Local Wildlife Site (LWS)
- Site of Local Conservation Interest (SLCI)

Priority Habitat

- Coastal sand dunes
- Deciduous woodland
- Good quality semi-improved grassland
- Lowland meadows
- Maritime cliff and slope
- Mudflats

Agricultural Land Classification

- Grade 3
- Urban

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Tyne Crossing
Environmental Screening Report

Figure 3.0
Environmental Constraints Plan



Amber Court
William Armstrong Drive
Newcastle upon Tyne
NE4 7YQ

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