

# Brinsworth to High Marnham: Great Grid Upgrade

## Chesterfield Substation and “Tie In” Works EIA Screening

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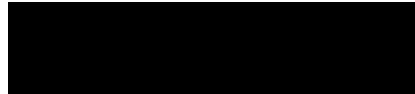
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# **Brinsworth to High Marnham: Great Grid Upgrade**

## **Chesterfield Substation and “Tie in” Works**

### **Chesterfield Substation and “Tie In” Works EIA Screening**

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# 1 Introduction

## 1.1 Request for an Environmental Impact Assessment (EIA) Screening Opinion

- 1.1.1 National Grid (NG) are proposing to develop a new 400kV substation on land near Chesterfield ('the Site') as part of the 'Great Grid Upgrade', which aims to provide additional resilience within the electricity network<sup>1</sup>. The Great Grid Upgrade will enable the electricity grid to carry more clean energy from renewable sources to communities, homes and businesses in every part of England and Wales, helping the UK to reach net zero. The proposals will also increase the security and resilience of the UK's electricity network.
- 1.1.2 In accordance with Regulation 6(1) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations'), National Grid requests that North East Derbyshire District Council adopt a Screening Opinion as to whether the proposed substation at Chesterfield (hereafter referred to as 'the proposed Scheme') would be likely to have significant effects on the environment by virtue of factors such as its nature, size or location, thereby determining whether or not the proposed Scheme is EIA development.
- 1.1.3 Tie in works to the substation (works outside the substation boundary to connect the substation into the existing transmission network (via overhead lines or cables)) are also required but are classed as 'permitted development' under the Town and Country Planning (General Permitted Development) (England) Order 2015, these will be screened within this report also.
- 1.1.4 A summary of the information which must be provided with such a request is set out in Table 1 alongside where it may be found in this report.

*Table 1 – Summary of Information Required by the EIA Regulations to Accompany a Screening Request*

Information Required	Content within this Screening Report
(2a) a plan sufficient to identify the land	<p>Section 2 provides a description of the location of the proposed Scheme.</p> <p>Figures are provided in Appendix A:</p> <ul style="list-style-type: none"> <li>• Site Location Plan</li> <li>• Environmental Features Plan</li> </ul>
<p>(2b) a description of the proposed Scheme, including in particular:</p> <p>(i) a description of the physical characteristics of the proposed development and, where relevant, of demolition works;</p> <p>(ii) a description of the location of the proposed development, with particular regard to the</p>	<p>Section 2 provides a description of the proposed Scheme and outlines its main physical characteristics including approximate dimensions and details of its appearance.</p> <p>Section 3 provides information about the key environmental sensitivities of the area.</p>

<sup>1</sup> <https://www.nationalgrid.com/the-great-grid-upgrade>

Information Required	Content within this Screening Report
environmental sensitivity of geographical areas likely to be affected.	
(2c) a description of the aspects of the environment likely to be significantly affected by the proposed development.	Section 3 provides a description of the aspects of the environment likely to be significantly affected by the construction and/or operation of the proposed Scheme.
(2d) a description of any likely significant effects, to the extent of the information available on those effects, of the proposed development on the environment resulting from:  (i) the expected residues and emissions and the production of waste, where relevant; and (ii) the use of natural resources, in particular soil, land, water and biodiversity.	Section 3 provides a description of the aspects of the environment likely to be significantly affected by the construction and operation of the proposed Scheme.
(2e) such other information or representations as the person making the request may wish to provide or make, including any features of the proposed development or any measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment.	Section 3 provides information about the control measures which are envisaged to avoid or prevent significant adverse effects on the environment.

## 1.2 The Proposed Scheme and EIA Regulations

- 1.2.1 The EIA Regulations define EIA development as either:
- a) Schedule 1 development; or
  - b) Schedule 2 development likely to have significant effects on the environment by virtue of factors such as its nature, size or location, taking into account the selection criteria set out in Schedule 3.
- 1.2.2 The proposed Scheme does not fall under the activities listed in Schedule 1 of the EIA Regulations, and neither are substations specifically listed under the developments within Schedule 2.
- 1.2.3 The proposed Scheme also does not fall within a sensitive area as defined by the EIA Regulations.
- 1.2.4 This report will therefore consider the criteria provided in Schedule 3 of the Regulations to establish whether significant effects on the environment are likely. Schedule 3 criteria include the characteristics and location of the development and the characteristics of the potential impact. The subsequent sections of this report consider the potential for significant adverse environmental effects on the environment by the proposed Scheme, taking into consideration the criteria in Schedule 3. This

report is also written in line with the UK Government EIA Screening Flow Chart<sup>2</sup>.

- 1.2.5 As statutory undertakers, National Grid benefit from Permitted Development rights under the Town and Country Planning Act 1990, which allows them to undertake certain works without needing to submit applications for planning permissions. Works to connect the proposed substation to the grid ('tie in' works) will take place under these rights.

## 1.3 Consultation

- 1.3.1 Consultation will be undertaken with a variety of different statutory and non-statutory consultees with regards to the proposed Scheme and its potential environmental impacts. We will proactively engage with statutory consultees such as the Environment Agency, Natural England and Historic England. Non-statutory consultation with the wider public will also be undertaken for the proposed Scheme as part of the Great Grid Upgrade. All matters arising from consultation will be taken into consideration as appropriate.

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<sup>2</sup> [eia-flow1.pdf \(publishing.service.gov.uk\)](http://eia-flow1.pdf (publishing.service.gov.uk))

## 2 Scheme Characteristics and Location

### 2.1 Site Location and Surroundings

- 2.1.1 The ‘red line boundary’ shown in Figure 1 of Appendix A illustrates the extent of the Site, occupying an area of approximately 14 ha, which is located to the south east of Chesterfield, south of Cock Alley. The ‘blue line boundary’ shown in Figure 1 of Appendix A illustrates the extent of the land required temporarily to construct the scheme, including the tie-in works to connect the substation to the grid.
- 2.1.2 Currently, the Site is predominantly comprised of the existing 275kV National Grid Chesterfield Substation, with agricultural parcels to the south; a number of existing pylons are also present within the Site boundary, as shown in Figures 1 and 2. The Site is bound to the north by Calow Lane, and to the east by Hallflash Lane. The land parcels that immediately surround the Site are predominantly agricultural in nature. The A617 is present to the south-west of the Site, beyond which are the southern areas of Chesterfield. Predominantly to the west of the Site is developed land, and land to the north, south and east is more rural in nature.
- 2.1.3 There are no designated sites or receptors within the Site boundary, however, the “Duckmanton Railway Cutting” Site of Special Scientific Interest (SSSI) is approximately 1 km to the north east and there are a number of Grade II listed buildings within 2 km of the Site.

### 2.2 The Proposed Scheme

#### Proposed Substation

- 2.2.1 The proposed Scheme would comprise a Gas Insulated Switchgear (GIS) 400kV substation and associated infrastructure. This includes approximately 16 bays, network stability equipment, standard substation plant and new substation control infrastructure. Within the national electricity system, substations act within the grid to enable electricity to be transmitted as different voltages, safely and effectively. Substations can transform the voltage of electricity either up or down as required. This is needed so that electricity can be safely transmitted throughout the country and into homes, businesses and buildings.
- 2.2.2 The GIS substation will be within a compound of approximately 150 m x 165 m and would include up to six Supergrid Transformers (SGTs). The tallest structure within the substation compound would be the GIS building which would be approximately 14 m in height. This is the only building proposed. There will be six Overhead Line (OHL) gantries, which are bridge-like structures with platforms used to support equipment and cabling. The compound would be surrounded by an approximately 3.4 m high security fence, including CCTV surveillance.
- 2.2.3 Substations are not generally lit or permanently illuminated, other than sensor-activated security lighting for nighttime access. Floodlights, approximately 4-6 m in height, would be installed but only used if access is required during the hours of darkness.
- 2.2.4 During operation, the proposed Scheme is likely to be accessed via a new entrance off Calow Lane, to the north of the Site. Calow Lane benefits from direct connection into the wider network, including the A617 and the M1.

2.2.5 Land within the red line boundary will be required for construction purposes, including temporary welfare and laydown areas. Land within the red line boundary will also be used for landscaping, screening, drainage features and potentially for habitat creation / enhancement if required for Biodiversity Net Gain purposes. Land within the blue line boundary will be required for the associated tie in works and for construction purposes, including temporary welfare and laydown areas. The full design and requirements for land will be detailed within the associated planning application. Post construction, any remaining areas of land only temporarily required would be restored to their former land use.

### **“Tie In” works**

2.2.6 The proposed Scheme is composed of a number of elements, to enable the connection of the proposed substation at Chesterfield to the wider network. This will comprise the installation of short stretches of Over Head Line (OHL) between the proposed substation and the existing OHL network, as well as the removal of some existing stretches of OHL, together with the temporary works (such as temporary masts) required to make these permanent changes. The Tie In works at Chesterfield therefore include the following elements:

- Three zones of Conductor / Shield Wire Pulling;
- Seven zones for new structures;
- Three zones for existing structures to be dismantled;
- One zone for a temporary mast during construction; and
- Two potential laydown areas.

2.2.7 The number of zones are representative of the current design information available. The final number of new structures will also be confirmed as part of the permitted development process.

2.2.8 Works proposed to be undertaken in each type of zone is presented within Table 2.

2.2.9 The Blue Line Boundary presented in Figure 1 will not be required to be used in its entirety for these works; rather the boundary is representative of the area within which the required works would take place.

*Table 2 – Proposed work types and corresponding zone names*

Zone Type	Typical Size	Proposed Works
<b>Conductor / Earth Wire Pulling Zone</b>	100 x 60 m	Works to include temporary works associated with the installation and modification of OHL conductors and associated temporary works.
<b>New Structure Zone</b>	100 x 60 m	Works to include civils activities, foundation installation, material storage, associated temporary works, and installation of new pylons.
<b>Structure Dismantle Zone</b>	60 x 60 m	Works to include civils activities, foundation removal, material storage, associated temporary works, and removal of the existing pylons.
<b>Temporary Mast Zone</b>	60 x 60 m	Works to include civils activities, material storage, associated temporary works, and installation/removal of temporary masts.

Zone Type	Typical Size	Proposed Works
<b>Laydown Areas</b>	100 x 60 m	Works to include additional temporary storage of equipment and materials required for the project's operations whilst not in use at a specific work zone mentioned above.

### 3 Environmental Baseline and Screening Assessment

- 3.1.1 The following sections should be read in conjunction with the enclosed figures shown within Appendix A. It is anticipated that the potential effects of the substation would be as presented within Table 3, and potential effects of the “Tie In” works within Table 4.

Table 3 – Screening of potential effects and proposed approach and mitigation, for the substation

Please note, Table 3 only covers baseline information for the Red Line Boundary, for baseline information on the Blue Line Boundary please refer to Table 4.

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
<b>Ecology</b>	<p>An Ecological Appraisal will form part of an Environmental Assessment Report (EAR) to be submitted alongside the planning application. A Biodiversity Net Gain (BNG) assessment will also be completed for the proposed Scheme.</p> <p>A Preliminary Ecological Assessment (PEA) has been undertaken for the Site, and a number of species and habitat surveys are ongoing. A desk study and a walkover field survey were undertaken in Spring 2023 to determine the potential of on-site habitats to support protected and notable species. The Site was found to support predominantly arable land and improved grassland, as well as species-poor boundary hedgerows and small areas of deciduous semi-natural woodland and scrub. Land designated as Furnace Hillock potential Local Wildlife Site (pLWS) is located on the western boundary.</p> <p>The Duckmantion Railway Cutting Site of Special Scientific Interest (SSSI) approximately 1km to the north-east of the Site. The Site is not within (or within 2 km of) any further statutory international, national or local ecological designations. There are 19 non-statutory sites within 2 km of the site, including Local Wildlife Sites (LWS), pLWSs and Derbyshire Wildlife Trust (DWT) Reserves. Furnace Hillock pLWS, the nearest non-statutory site, adjacent to the boundary, has no citation available at the time of writing this report.</p> <p>The following ecological features have been determined to not require further consideration because no potential impacts are anticipated:</p> <ul style="list-style-type: none"> <li>• Statutory designated sites for nature conservation;</li> <li>• Protected and notable plants: The habitats on Site are unlikely to support protected or notable species;</li> <li>• Invertebrates: The Site is not considered likely to support an important assemblage of invertebrate species; and</li> <li>• American Mink: adjacent watercourses are considered unlikely to support American Mink.</li> </ul>	<p>An Ecological Appraisal will be submitted alongside the planning application. A BNG assessment will also be completed for the proposed Scheme. Significant effects on ecological assets are not anticipated during construction or operation, following the application of appropriate mitigation. Mitigation will be incorporated into the design of the Site where practicable and will be implemented through relevant environmental and landscape management plans. BNG will be included within the proposed Scheme as appropriate. Further surveys are ongoing to inform the Ecological Appraisal and any mitigation required will be agreed as part of the planning application process.</p>

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
	<p>The following ecological features have been determined as requiring further consideration in the Ecological Appraisal, as potential adverse impacts are possible and appropriate mitigation measures will be investigated and incorporated as the design progresses to ensure that impacts are not significant:</p> <ul style="list-style-type: none"> <li>• Non-statutory designated site for nature conservation: Furnace Hillock pLWS is located adjacent to the Site;</li> <li>• Important habitats: The hedgerows and deciduous woodland located adjacent to the north of the Site, along Calow lane, qualify as a Habitat of Principal Importance in England (HPIE);</li> <li>• Birds: The woodland, trees, scrub, hedgerows, arable land and improved grassland provide nesting habitat for birds.</li> <li>• Bats: Several trees were identified during the survey to be suitable for roosting bats;</li> <li>• Badger: The woodland and hedgerows are suitable for badger.</li> <li>• Hedgehog and brown hare: the Site is suitable to support these species.</li> </ul>	
<b>Landscape and Visual</b>	<p>A landscape and visual assessment will be undertaken and reported within the EAR submitted alongside the planning application. This will consider impacts on landscape and visual receptors and include a number of visualisations from pre-agreed viewpoints.</p> <p>The Site is not located within areas designated nationally or locally for their landscape value. There are no Areas of Outstanding Natural Beauty (AONB) or National Parks within 2km of the Site. The proposed Scheme is located within National Character Area (NCA) Profile 38: Nottinghamshire, Derbyshire and Yorkshire Coalfield (NE402).</p> <p>The proposed Scheme is located within the primarily agricultural area of Cock Alley, with the developed edge of Chesterfield to the west. The Site itself is predominantly characterised by agricultural land use and the existing Chesterfield Substation. Pylons associated with this substation are visible in the area.</p> <p>There are likely to be some visual receptors that will experience views of the Site during the construction and operational phases, however, the Site already benefits from mature vegetation around its borders. Where</p>	<p>Given the nature of the area and the undulating land extending from the Site, it is anticipated that the combination of these elements, in addition to the application of suitable landscaping mitigation, would reduce any potential long term significant effects that could occur during construction or operational phases. A landscape and visual assessment will be submitted alongside the planning application.</p> <p>Landscape design will be implemented within the proposed Scheme to prevent long term adverse impacts on landscape character. Construction best practice methods will also be implemented to reduce any temporary effects during the construction phase. Where possible existing vegetation will be retained, in line with the mitigation hierarchy.</p>

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
	<p>possible vegetation will be retained, in line with the mitigation hierarchy. Receptors include those on roads in the local area and users of local footpaths, although views into the Site are likely to be glimpsing.</p>	
<b>Cultural Heritage and Archaeology</b>	<p>The EAR to be submitted with the planning application will include an assessment of potential impacts on heritage and archaeology. A Desk Based Assessment (DBA) has been undertaken for the Site. There are no designated heritage assets (World Heritage Sites, Scheduled Monuments or Listed Buildings) within the Site.</p> <p>There are also no World Heritage Sites, Scheduled Monuments, Registered Battlefields or Registered Parks and Gardens within 2 km of the Site.</p> <p>There are 15 Grade II Listed Buildings within 2 km of the site, most of which are along the A632 Chesterfield Road/Top Road to the north, or in Hasland to the south west. Given the distance between the Site and the Listed Buildings, and the current use of the Site, it is not anticipated that there would be any likely significant direct or indirect effects on the listed buildings as a consequence of construction or operation of the proposed Scheme.</p> <p>Geophysical surveys will be undertaken to investigate any archaeological potential on the Site, and results will be reported within the planning application alongside any required mitigation.</p>	<p>Likely significant effects on heritage assets are not anticipated during construction or operation. Heritage and archaeology will be assessed as part of the EAR submitted with the planning application. Geophysical survey will be undertaken to understand archaeological potential, any mitigation and a Written Scheme of Investigation (WSI) if required will be agreed as part of the planning application process. Other relevant best practice construction mitigation measures will be included with the Construction Environmental Management Plan (CEMP) which will be submitted with the planning application.</p>
<b>Air Quality</b>	<p>An Air Quality assessment will be undertaken for the proposed Scheme and will be submitted with the planning application, which will include an assessment of potential effects on air quality sensitive receptors during the construction phase. The Site is not within an Air Quality Management Area (AQMA).</p> <p>There are a number of residential receptors within 500 m of the Site boundary, the nearest being directly adjacent to the northern Site boundary. Most residential receptors in the area are separated from the Site by agricultural parcels, roads and vegetation.</p> <p>During the construction phase of the proposed Scheme, there is the potential for fugitive dust emissions from activities such as excavation, ground works, cutting, construction and storage of materials. Vehicle</p>	<p>Overall, any air quality/dust effects on the nearest sensitive receptors are expected to be minimal and temporary, and therefore significant effects are not anticipated to occur. Changes to air quality as a result of the construction and operation of the proposed Scheme will be assessed, and any required mitigation will be reported on within the EAR as part of the planning application process. Best-practice mitigation measures, taken from the Institute of Air Quality Management Guidance (IAQM) on the assessment of dust from demolition and construction, would minimise any construction dust effects. These would be adopted and included in the CEMP.</p>

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
	<p>movements both on-site and on the local road network also have the potential to result in the resuspension of dust from haul roads and highway surfaces. There is also the potential for air quality impacts from road traffic exhaust emissions from additional construction vehicles on local highways; however, this would be temporary.</p> <p>Due to the nature of the proposed Scheme, it is not anticipated that the operation of the substation or its maintenance would result in significant effects on air quality for receptors in the local area. Overall, any air quality/dust impacts on the nearest sensitive receptors are therefore expected to be minimal and temporary.</p>	
Water Resources and Flood Risk	<p>A Flood Risk Assessment (FRA) will be undertaken and submitted with the planning application, which will include an assessment on water resources and flood risk. A drainage strategy will also be developed, and the drainage layout will be included within the planning application.</p> <p>Within the Site itself, mapping does not show any small or large water courses or features, however, a tributary of the Calow Brook flows north to south directly to the east of the Site. Environment Agency (EA) mapping shows that the Site is within Flood Zone 1 (land assessed as having a less than 1 in 1000 annual probability (&lt;0.1%) of river or sea flooding). The Site is also shown on the EA mapping to not experience a risk of flooding from surface water or reservoirs.</p> <p>The FRA will confirm the predicted flood levels, plus an appropriate allowance for climate change and will inform the final design of the proposed Scheme. The potential to impact offsite receptors and surface water run-off will also be considered within the assessment.</p> <p>The Site is noted as being underlain by a Secondary A aquifer. The DEFRA Groundwater Vulnerability Map indicates that the Site has a 'Medium' vulnerability to groundwater flooding. This will be taken into consideration appropriately during the design process and will be reported upon, with any planned mitigation, within the planning application.</p>	<p>The Flood Risk Assessment provided as part of the application will assess the risk of flooding at the Site due to the proposed Scheme and provide a suitable mitigation strategy. An appropriately designed drainage strategy will also be implemented (submitted as part of the application) to deal with the new drainage requirements due to the proposed Scheme. It is considered that due to the Site's location, the nature of the proposed Scheme and with the appropriate design and mitigation in place that there is not likely to be any significant effects during construction and operation on flood risk, drainage or water quality.</p> <p>During the construction phase, works will be undertaken in accordance with Environment and Health and Safety legislation requirements and best practice measures will be implemented to minimise the risks of pollution incidents that would have effects on the water environment.</p> <p>The proposed drainage strategy for the proposed Scheme will be designed in accordance with the relevant design standards, industry guidance and government guidance.</p>
Land and Ground Conditions	The British Geological Survey (BGS) map identifies the bedrock geology at the Site as a mix of "Pennine Lower Coal Measures Formation – Sandstone" and "Pennine Lower Coal Measures Formation	Given the location of the Site and with appropriate mitigation measures in place, significant impacts from the proposed Scheme on ground conditions are not expected.

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
	<p>– Mustone, siltstone and sandstone". There are no historical landfill sites within the Site; the closest is approximately 260m north of the site.</p> <p>The risk of Unexploded Ordnance (UXO) at the Site is identified as low risk from freely available UXO mapping sources, and therefore no further action is required for construction workers in regards to UXO.</p> <p>The Coal Mining Report (2023)<sup>3</sup> for the Site, found that coal mining has previously been undertaken at the Site.</p> <p>The overall risk for the Site is likely to be low to high with the potential for active pathways on-site. This risk is primarily given due to the lack of site-specific ground investigation and chemical data, the chances of a possible contamination source within the site remains. Made Ground may be found on site due to current and previous uses. Identified areas of contaminated ground, if found, may require localised remediation as part of the site preparation programme to mitigate any potential impacts to maintenance workers and contractors.</p> <p>Further surveys will be undertaken to inform the design and required mitigation, including topographical survey, non-invasive utilities (Ground Penetrating Radar) survey and intrusive ground investigation.</p>	<p>During construction, best practice measures will be used to reduce the risk of contamination of soil and water through the implementation of appropriate management measures via the CEMP.</p> <p>An appropriate sustainable drainage strategy will be designed and submitted in support of the application to reduce the risk of contamination during operation.</p> <p>Appropriate best construction management practices would be followed to minimise risks of leaching or migration of potential contamination and would form part of the CEMP.</p>
<b>Noise and Vibration</b>	<p>A Noise Assessment for the operational phase (including noise monitoring) will be undertaken and submitted with the planning application.</p> <p>The existing dominant noise source in the area is the A617 to the south, as well as the existing substation on site. The south of the Site is shown to experience average noise levels of 55 – 59.99dB<sup>4</sup>. There are no noise important areas (NIA) within the Site boundary, the closest is approximately 500 m to the south west of the Site, associated with the A617. There are noise sensitive receptors within 500 m of the Site, including residential receptors on Calow Lane, unnamed roads by the Site, Hallflash Lane and Calow Green.</p>	<p>It is considered that there would be no significant noise and vibration environmental effects during the construction and operation of the proposed Scheme. During construction appropriate mitigation would be put in place, via the CEMP, and any effects are expected to be intermittent and temporary in nature. Due to existing noise sources, including the A617 and the existing substation, in combination with the application of required mitigation, it is not anticipated that there would be a significant noise effect during operation.</p>

<sup>3</sup> The Coal Authority (2023). 'Consultants Coal Mining Report National Grid Chesterfield Substation Calow Lane South Yorkshire'.

<sup>4</sup> Extrium > England Noise and Air Quality Viewer

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
	<p>Construction activities have the potential to generate elevated noise levels with potential for adverse effects on the surrounding residential properties. Appropriate mitigation measures would be implemented via the CEMP and would be sufficient to avoid significant adverse effects on sensitive receptors. Mitigation measures applied for construction noise would be in accordance with BS5228. Best practice measures would be adopted to minimise construction noise and vibration levels where practicable during construction.</p> <p>During operation there is the potential for the substation to generate noise, which can be described as a low frequency hum. Given that there is an existing substation with the boundary, this will not be a new noise source in the area. Where necessary, appropriate mitigation will be applied.</p>	
<b>Traffic and Transport</b>	<p>The EAR to be submitted with the planning application will include an assessment of potential impacts on traffic and transport. This will assess the primary traffic and transportation impacts on receptors as a direct result of any changes in traffic flows on surrounding roads used by construction and workforce vehicles. During operation, the proposed Scheme is likely to be accessed via a new entrance off Calow Lane, to the north of the Site. Calow Lane benefits from direct connection into the wider network, including the A617 and the M1.</p> <p>There are Public Rights of Way (PRoW) within the Site and the near vicinity; these are shown on Figure 2. "Calow FP 25" runs east to west through the middle of the Site and "Calow FP 16" runs east to west through the southern portion of the Site. The wider PRoW network connects north (Calow Lane area) to south towards Milehill in the south west and Hassocky Lane Solar Farm in the south east.</p> <p>These PRoW will require diversion and potential temporary or permanent closure depending on works required. Further information on potential temporary or permanent closures, as well as diversions, will be available within the EAR submitted alongside the planning application.</p>	<p>Due to the nature of the proposed Scheme, and the vehicle numbers required for both the construction and operation phase, with the appropriate traffic management in place it is unlikely that significant effects will occur. A Construction Traffic Management Plan (CTMP) will be submitted alongside the planning application. Consultation will be undertaken with the relevant bodies. The approach to any potential PRoW closure or diversion would be undertaken in liaison with the relevant bodies at the LPA as well as wider consultation. Further information on traffic movements and temporary changes required to Calow Lane and PRoW, implications and mitigation would be provided in the Transport Appraisal within the EAR.</p> <p>The CTMP for the proposed Scheme would set out how any potential impacts of road-based construction traffic would be reduced by identifying measures such as clear controls, hours of site operation, routes for large goods vehicles, and the timing management of deliveries. Operational traffic would be minimal; it is expected that under normal circumstances up to approximately ten cars/ light goods vehicles would visit the Site each month.</p>
<b>Agricultural and Soils</b>	A desktop survey of the Provisional Natural England Agricultural Land Classification Map has identified that the Site is classified as Grade 4	The proposed Scheme would result in some loss of land currently used for agricultural purposes. However, given the

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
	<p>Poor. Best and Most Versatile (BMV) soils are Grades 1 – 3. The mapping suggests that the soil in the area is largely restored soils mostly from quarry and opencast soils. The soil to the north of the Site is classified as slowly permeable seasonally wet acid loamy and clayey soil.</p>	<p>area of the land being lost and its categorisation of Grade 4, there would be no loss of BMV land and it is not anticipated that this loss would be significant from an agricultural and soils perspective. Further ALC surveys will be undertaken in advance of the planning application and an Agricultural Land Classification Report, including a Soils Management Plan will be prepared and submitted with the planning application.</p>
<b>Materials and Waste</b>	<p>New development has the potential to result in the generation of waste during the construction and operational phases, as well as the use of materials for construction purposes.</p> <p>The construction of the proposed Scheme will use natural resources such as land, water, materials and energy. However, this would be in the short term and would be mitigated through the use of sustainable design practices where possible and the use of suitable construction practices and is therefore not expected to be significant in nature. Waste produced during the construction phase would be dealt with accordingly. Negligible volumes of waste are anticipated during the operational lifetime of the proposed Scheme.</p> <p>A desktop survey of the British Geological Survey GeoIndex Onshore Map has identified that the Site is not within a Mineral Assessment Area and is not located close to significant mineral occurrences.</p>	<p>Significant effects related to waste and materials are not anticipated to occur during the construction or operational period. Use of natural resources would be mitigated through the use of sustainable design practices where possible and the use of sustainable construction practices. Waste management measures will be included in the CEMP.</p>
<b>Socio-economic, population and Human Health</b>	<p>The land surrounding the Site is predominantly agricultural in nature, with the edge of Chesterfield to the west. There are some nearby socio-economic receptors mostly to the north around Calow Lane and Calow Green, as well as to the south west. The Site is likely to be accessed via a new entrance off Calow Lane to the north, which connects into the wider networks of the A617 and the M1. The works required are unlikely to permanently affect socio-economic receptors.</p> <p>The risks to human health in association with the proposed Scheme are considered to be negligible and there would be no significant adverse environmental impact during construction or operation, following application of mitigation.</p>	<p>Significant effects on socio-economic receptors are not anticipated given the location of the receptors in relation to the Site. It is considered that human health would be appropriately considered within the relevant topic sections (e.g. ground conditions, traffic and transport and noise and vibration). It is not anticipated that there would be significant effects on human health as a consequence of either construction or operation of the proposed Scheme following mitigation.</p>

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
<b>Risk of major accidents and disasters (relevant to the project concerned)</b>	<p>New development has the potential to be affected by the risk of major accidents or disasters (and therefore has the potential to impact the environment). ‘Accidents’ are considered to be an occurrence resulting from uncontrolled events in the course of construction and operation of a development. ‘Disasters’ are considered to be naturally occurring extreme weather events or ground related hazard events. For such events to pose a risk to the environment, there must be a source (the event), a pathway (a process by which a receptor could be affected by the event), and a receptor.</p> <p>The proposed substation would be designed, constructed and operated in accordance with applicable Environment, Health and Safety legislation. It would also comply with relevant design safety standards. As the proposed substation would be managed under these existing health and safety regimes, it is not expected that likely significant effects relating to major accidents and disasters would result.</p>	<p>Significant effects are not anticipated during construction or operation due to the applicable legislation and standards that would be followed and applied.</p>
<b>Light, Heat and Electromagnetic Radiation</b>	<p>Lighting of the Site during construction and operation is expected to be in keeping with the nature of the proposed Scheme, and as such is expected to be minimal. Substations are not generally lit or permanently illuminated, other than sensor-activated security lighting for nighttime access. Floodlights, approximately 4 - 6 m in height, would be installed but only used in the event of access being required during the hours of darkness.</p> <p>The proposed Scheme will comply with all relevant legislation and electromagnetic fields (EMF) exposure limits.</p>	<p>National Grid will produce an EMF compliance report for the project. There is not anticipated to be any significant light, heat or electromagnetic radiation effects during construction or operation, and standard good practice will be applied to the design of the proposed Scheme to reduce effects where possible.</p>
<b>Microclimate (wind, sunlight, daylight).</b>	<p>The scale and massing of the proposed Scheme during the construction and operational phase are unlikely to cause microclimate effects such as wind pattern changes or cause daylight/sunlight overshadowing effects to nearby receptors (such as nearby dwellings).</p>	<p>Significant effects are not anticipated during construction or operation.</p>
<b>Cumulative Impacts</b>	<p>A review of available information on the North East Derbyshire District Council planning portal has been undertaken which found a number of current planning applications within 2km of the Site. Not all open applications are relevant to this assessment, however, there are some relevant committed developments which could interact with the proposed Scheme and lead to cumulative effects. These include, but are not limited to, the following:</p>	<p>Further assessment will be undertaken and included within the planning application with regards to cumulative impacts. Initial committed developments have been identified and given the nature of the proposed Scheme in combination with the current use of the site (existing substation and other NG assets such as pylons) it is not anticipated that these developments would generate significant adverse cumulative effects with the proposed Scheme.</p>

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
	<ul style="list-style-type: none"> <li>• 20/01283/FL (Solar Farm)</li> <li>• 22/01247/FL (Battery Energy Storage System)</li> <li>• 20/01005/FL (80 dwellings)</li> <li>• 21/00987/OL (36 dwellings)</li> <li>• Tie in works being developed under Permitted Development Rights</li> </ul> <p>An appropriate consideration of cumulative effects with any committed developments will be undertaken as part of the planning application process and will be included within relevant environmental deliverables such as the EAR.</p>	
<b>Transboundary Effects</b>	Due to the location of the Site, and the type of proposed Scheme, transboundary effects are unlikely to occur and are not considered further.	Significant effects are not anticipated during construction or operation.

Table 4 – Screening of potential effects and proposed approach and mitigation, for the "Tie In" works

Please note, Table 4 only covers baseline information for the Blue Line Boundary, for baseline information on the Red Line Boundary please refer to Table 3.

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
<b>Ecology</b>	<u>Baseline</u> <u>Designated Sites</u> The Duckmanton Railway Cutting Site of Special Scientific Interest (SSSI) is located approximately 1 km to the north-east of the Site.  <u>Habitats</u> The surveys undertaken to date (subject to access within the BLB) have identified the following habitats: <ul style="list-style-type: none"> <li>• Scrub;</li> <li>• Improved grassland;</li> <li>• Broadleaved semi-natural woodland;</li> <li>• Arable;</li> <li>• Ditch;</li> <li>• Hedgerow species poor;</li> </ul>	Significant effects on ecological assets are not anticipated during construction or operation phase of the proposed Scheme, following the application of appropriate mitigation. Mitigation will be incorporated into the design of the Site where practicable and will be implemented through relevant environmental and landscape management plans.

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
	<ul style="list-style-type: none"> <li>• Bare ground.</li> </ul> <p><u>Potential Impact</u></p> <p><i>Designated Sites</i></p> <p>No significant effects to the designated sites are anticipated during the construction works due to the nature of the proposals and the distance from the sites.</p> <p><i>Protected Species</i></p> <p>The ongoing surveys across the Site have the potential to identify protected species within the Site. Should protected species be identified, then the CEMP will specify best practice measures to protect the species (e.g. demarcation requirements). Should licences be required for works due to the presence of protected species, consultation with Natural England will be undertaken and a licence acquired before works related to the species are carried out. Following these mitigation measures (where required), it is anticipated that there will be no significant effects to protected species during the construction phase due to the nature of the proposals.</p> <p>No significant effects on protected species during operation are anticipated due to the nature of the proposed Scheme.</p> <p><i>Habitats</i></p> <p>Should impacts to habitats be identified as being unavoidable, further protected surveys following best practice guidelines may be required to establish if there are any ecological constraints. Where the presence of protected/notable species is confirmed, mitigation will be undertaken in advance/alongside construction activities. It is anticipated that this would include industry standard best practice, for example the timing of works, mitigation licencing, translocation, supervision by an Ecological Clerk of Works (ECoW) etc. Following the implementation of these measures, it is not anticipated that there will be significant effects during the construction phase.</p> <p>No significant effects on protected habitats during operation are anticipated due to the nature of the proposed Scheme.</p>	
<b>Landscape and Visual</b>	<p><u>Baseline</u></p> <p><i>Public Rights of Way</i></p> <p>There are PROW within the Site and the near vicinity; these are shown on Figure 2. There are PROWs located within the Site, these are:</p>	Given the nature of the area and the undulating land extending from the Site, it is anticipated that the combination of these elements would reduce any potential long term significant effects that could occur during construction or operational phases. As

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
	<ul style="list-style-type: none"> <li>• PRoW 25 – goes from east to west in the central part of the Site;</li> <li>• PRoW 16 – goes from east to west in the central part of the Site and north to south along the boundary of the central part of the Site;</li> <li>• PRoW 26 – intersects with the boundary of the central part of the Site;</li> <li>• PRoW 17 – runs along the boundary of the southern part of the Site and crosses across the Site from east to west in the southern part of the Site; and</li> <li>• PRoW 19 – runs north to south along the southern boundary of the Site.</li> </ul> <p><u>Potential Impacts</u></p> <p><i>Designated Sites</i></p> <p>No significant effects on designated sites are anticipated during the construction and operation phases as a result of the proximity of the Site to any designated sites.</p> <p><i>Public Rights of Way</i></p> <p>PRoW 25 may need to be permanently closed due to the proposed Scheme. An alternative pre-existing PRoW to the south of PRoW 25 is suggested to be used as a permanent diversion. Further information on potential temporary or permanent closures, as well as diversions, will be available within the planning statement.</p> <p>There is the potential for direct effects to the remaining PRoWs due to temporary closures or re-routing of the PRoWs during the construction phase. There is also the potential for indirect impacts to users of these PRoWs as a result of loss of amenity value during the construction phase. However, these impacts will be temporary and localised in nature.</p> <p><i>The Site and Residential Receptors</i></p> <p>There will be visual receptors that will have views of the Site during the construction and operational phases. The Site boundary benefits from mature vegetation in places, and where possible this will be retained. There are likely to be visual impacts arising from construction phase</p>	<p>such, no significant construction or operational effects are anticipated.</p> <p>There is the potential for impacts to PRoW users during the construction phase as a result of either permanent closures or potential temporary closures and loss of amenity value during works. Residential and non-residential receptors that have existing views of the Site are likely to experience adverse visual effects during construction works. Impacts during construction will be localised and temporary in nature. Construction best practice methods will also be implemented to reduce any temporary effects during the construction phase. Where possible vegetation will be retained. All construction mitigation measures will be detailed within the CEMP.</p>

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
	<p>activities as well as changes to the OHL network, including the removal of some existing stretches of OHL and the introduction of new infrastructure in the longer term. Construction phase impacts will be temporary and short term in nature, as such no significant effects during construction are anticipated. Due to the nature of the proposed Scheme and the existing visual landscape, no significant effects are anticipated during the operation phase.</p>	
<b>Cultural Heritage and Archaeology</b>	<p><b>Baseline Heritage Assets</b>  A Desk Based Assessment (DBA) has been undertaken for the site. There are 19 listed buildings within 2km of the Site. These consist of 18 Grade II, and 1 Grade II*. The closest Listed Building is a Grade II building 0.64km to the north of the Site.</p> <p><b>Non-designated Assets</b>  The DBA identified nine non-designated assets within 1km of the Site. The non-designated assets are from the Roman, Early Medieval/Dark Ages, Medieval, and Post Medieval periods.</p> <p><b>Potential Impacts Heritage Assets</b>  No significant impact to heritage assets, such as World Heritage Sites, Registered Parks or Gardens, or Scheduled Monuments, are anticipated during the construction and operation phases as a result of the proximity of the Site to any heritage assets.  Given the distance between the Site and the Listed Buildings, in combination with the type of works proposed, it is not anticipated that there would be any likely significant direct or indirect effects on the Listed Buildings during the construction or operation phases. This includes impact to setting, due to the nature of the proposals and the existing substation, the distance from the receptors, and the intervening topography.</p> <p><b>Non-designated Assets</b>  Provided best practice measures are carried out no significant impacts to non-designated heritage assets are anticipated during the construction phase. Due to the nature of the proposed Scheme, no</p>	<p>Given the distance between the Site and any designated heritage assets, it is unlikely that there will be direct or indirect effects to these assets during the construction and operation phase of the proposed Scheme.</p> <p>Archaeology potential within the site is anticipated to be low, as such provided appropriate construction mitigation is incorporated into the CEMP, no significant effects on archaeology are anticipated during the construction phase. Due to the nature of the proposed Scheme, no operational effects to archaeological features are anticipated.</p>

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
	<p>significant impacts to non-designated assets are anticipated during the operation phase.</p> <p><b>Archaeology</b> Excavations have the potential to disturb archaeological assets during the construction phase. Geographical surveys are to be undertaken to understand archaeological potential and identify any required mitigation to be incorporated into the CEMP. Based on this mitigation, no significant effects on archaeology are anticipated.</p>	
<b>Air Quality</b>	<p><b>Potential Impacts</b></p> <p><b>Designations</b> No significant impact to AQMAs are anticipated during the construction and operation phases as a result of the proximity of the Site to any AQMAs.</p> <p><b>Residential and Non-residential Receptors</b> During the construction phase of the proposed Scheme, there is the potential for fugitive dust emissions from activities such as excavation, ground works, cutting, construction and storage of materials. Vehicle movements both on-site and on the local road network also have the potential to result in the resuspension of dust from haul roads and highway surfaces. There is also the potential for air quality impacts from road traffic exhaust emissions from additional construction vehicles on local highways; however, this would be temporary. A CEMP will be produced incorporating appropriate mitigation measures, and best practice measures will be carried out during construction works. As such, following the implementation of any required mitigation, it is not anticipated that there will be any significant effects to residential and non-residential receptors during the construction phase.</p> <p>Due to the nature of the proposed Scheme, it is not anticipated that operation or maintenance would result in significant effects on air quality for receptors in the local area. Overall, any air quality/dust impacts on the nearest sensitive receptors are therefore expected to be minimal and temporary.</p>	<p>Overall, any air quality/dust effects on the nearest sensitive receptors are expected to be minimal and temporary, and therefore significant effects are not anticipated to occur. Changes to air quality as a result of the proposed Scheme will be assessed, and any required mitigation will be included in the CEMP. Best-practice mitigation measures, taken from the Institute of Air Quality Management Guidance (IAQM) on the assessment of dust from demolition and construction, would minimise any construction dust effects. These would be adopted and included in the CEMP. As such, following the implementation of any required mitigation, it is not anticipated that there will be any significant effects to residential and non-residential receptors during the construction phase.</p>
<b>Water Resources and Flood Risk</b>	<p><b>Baseline</b></p> <p>Surface Water Features</p>	<p>It is considered that due to the site's location, the nature of the proposed Scheme and with the appropriate design and mitigation in place that there is not likely to be any significant</p>

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
	<p>A small portion of the Calow Brook flows within the woodland at the south of the Site boundary.</p> <p><b>Potential Impacts</b></p> <p><b>Surface Water</b></p> <p>There is a generic risk that the construction works could mobilise existing or introduce new contaminants to ground or water, with the potential to impact surface water features. As such, controls will be incorporated into the CEMP to minimise contamination risks. Following the implementation of these controls, it is anticipated that there will be no significant effects to surface water during the construction phase. Due to the nature of the proposed Scheme, no significant effects are anticipated during the operational phase.</p> <p><b>Flood risk</b></p> <p>Following the implementation of appropriate mitigation measures within the CEMP, it is not anticipated that there will be significant effects to flood risk during the construction phase. No significant effects to flood risk are anticipated during the operation phase due to the nature of the proposed Scheme and the implementation of a suitably designed drainage strategy.</p>	<p>effects during construction and operation on flood risk, drainage or water quality.</p> <p>During the construction phase, works will be undertaken in accordance with Environment and Health and Safety legislation requirements and best practice measures will be implemented to minimise the risks of pollution incidents that would have effects on the water environment.</p> <p>The proposed drainage strategy for the proposed Scheme will be designed in accordance with the relevant design standards, industry guidance and government guidance.</p>
<b>Land and Ground Conditions</b>	<p><b>Baseline</b></p> <p><b>Made ground and Historic landfill</b></p> <p>There is one parcel of a historic landfill in the northernmost part of the Site. There are three parcels of Made Ground located within the southern part of the Site.</p> <p><b>Potential Impacts</b></p> <p>There is a generic risk that construction works could mobilise existing contaminants (e.g. from within the made ground) or introduce new contaminants to ground or water, with the potential to impact the Secondary A aquifer. To reduce the risk to water, excavated materials would be appropriately stored or, if necessary, covered to ensure that water runoff from stockpiles does not enter the water environment via drains and nearby watercourses. The CEMP will include any additional mitigation measures to minimise the potential for construction worker</p>	<p>Given the location of the Site and with appropriate mitigation measures in place, significant impacts from the proposed Scheme on ground conditions are not expected. Further investigation into ground conditions will be undertaken, including geotechnical ground investigation, any results will be taken into account for both design and planning purposes.</p> <p>During construction, best practice measures will be used to reduce the risk of contamination of soil and water through the implementation of appropriate management measures via the CEMP.</p> <p>An appropriate sustainable drainage strategy will be designed and submitted in support of the application to reduce the risk of contamination during operation.</p>

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
	(or any other site users) to be exposed to contaminants and to minimise the potential for impacts to controlled waters.	Appropriate best construction management practices would be followed to minimise risks of leaching or migration of potential contamination and would form part of the CEMP.
<b>Noise and Vibration</b>	<p><b>Potential Impacts</b></p> <p>Construction activities have the potential to generate elevated noise levels with potential for adverse effects on the surrounding residential properties. Appropriate mitigation measures would be implemented via the CEMP and would be sufficient to avoid significant adverse effects on sensitive receptors. Mitigation measures applied for construction noise would be in accordance with BS5228. Best practice measures would be adopted to minimise construction noise and vibration levels to the lowest levels possible during construction. Following the implementation of mitigation measures, it is anticipated that there will be no adverse impacts to noise and vibration during the construction phase.</p> <p>During the operational phase, noise generation by the proposed Scheme is anticipated to be low.</p>	It is considered that there would be no significant noise and vibration environmental effects during the construction and operation of the proposed Scheme. During construction appropriate mitigation would be put in place, via the CEMP, and any effects are expected to be intermittent and temporary in nature. Due to existing noise sources, including the A617 and the existing substation, in combination with the application of required mitigation, it is not anticipated that there would be a significant noise effect during operation.
<b>Traffic and Transport</b>	<p><b>Baseline</b></p> <p>The proposed Scheme is likely to be accessed via a new entrance off Calow Lane, to the north of the Site. Calow Lane benefits from direct connection into the wider network, including the A617 and the M1.</p> <p>There are Public Rights of Way (PRoW) within the Site and the near vicinity, these are shown on Figure 2 and outlined in the Landscape and Visual section of this table.</p> <p><b>Potential Impacts</b></p> <p>PRoW 25 may need to be permanently closed due to the proposed Scheme. An alternative pre-existing PRoW to the south of PRoW 25 is suggested to be used as a permanent diversion. Further information on potential temporary or permanent closures, as well as diversions, will be available within the planning statement.</p> <p>There is the potential for direct effects to the remaining PRoWs due to temporary closures or re-routing of the PRoWs during the construction phase. Further information on potential temporary or permanent closures, as well as diversions, will be available within the planning statement.</p>	<p>Due to the nature of the proposed Scheme, and the vehicle numbers required for both the construction and operational phase, it is unlikely that significant effects will occur with the appropriate traffic management arrangements in place,. During the operational phase it assumed up to approximately 10 light vehicles would visit per year. A Construction Traffic Management Plan (CTMP) will be produced as part of the planning application. Consultation will be undertaken with the relevant bodies. The approach to any potential PRoW closure or diversion would be undertaken in liaison with the relevant bodies as well as wider consultation.</p> <p>The CTMP for the proposed Scheme would set out how any potential impacts of road-based construction traffic would be reduced by identifying measures such as clear controls, hours of site operation, routes for large goods vehicles, and the timing management of deliveries. Operational traffic would be minimal, it is expected that under normal circumstances up to approximately ten vehicle / light van would visit the Site each year.</p>

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
<b>Agricultural and Soils</b>		
<b>Materials and Waste</b>		
<b>Socio-economic, population and Human Health</b>		Due to the nature of the proposed Scheme, the same potential effects (and their potential significance), any proposed approach to assessment and mitigation as set out in Table 3 for these topics, is applicable here. Please refer to Table 3 for any additional information.
<b>Risk of major accidents and disasters (relevant to the project concerned)</b>		
<b>Light, Heat and Electromagnetic Radiation</b>		
<b>Microclimate (wind, sunlight, daylight)</b>		
<b>Cumulative Impacts</b>	<u>Baseline</u> A review of available information on the North East Derbyshire District Council planning portal has been undertaken which found a number of current planning applications within 2km of the Site. Not all open applications are relevant to this assessment, however, there are some relevant committed developments which could interact with the proposed Scheme and lead to cumulative effects. These include, but are not limited to, the following: <ul style="list-style-type: none"> <li>• 20/01005/FL (80 dwellings)</li> <li>• 24/00047/FL (solar farm)</li> <li>• 22/01247/FL (battery energy storage system)</li> <li>• 14/00806/FL (solar farm)</li> <li>• 20/00488/EIA (solar farm)</li> <li>• Proposed substation at Chesterfield subject to the Town and Country Planning (Environmental Impact Assessment) Regulations 2017</li> </ul> <u>Potential Impact</u>	Initial committed developments have been identified and given the nature of the proposed Scheme in combination with the receiving environment it is not anticipated that these developments would generate significant adverse cumulative effects with the proposed Scheme.

Topic	Potential Significant Effects	Proposed Approach, Mitigation and Summary
	Due to the nature of the proposed Scheme, it is unlikely that there will be a significant cumulative impact to developments within the study area, provided appropriate mitigation measures are incorporated into a CEMP (for example, dust dampening, noise monitoring, vehicle washing etc.).	
<b>Transboundary Effects</b>	Due to the nature of the proposed Scheme, the same potential effects (and their potential significance), any proposed approach to assessment and mitigation as set out in Table 3 for this topic, is applicable here. Please refer to Table 3 for any additional information.	

## 4 Summary of Screening Assessment

- 4.1.1 The proposed Scheme does not fall under Schedule 1 or Schedule 2 of the EIA Regulations. Consideration of the proposed Scheme in relation to the criteria set out in Schedule 3 has been undertaken as shown in Table 3 and Table 4. A plan sufficient to identify the land is provided within Appendix A (Figure 1). A description of the proposed Scheme is provided in Section 2 and Section 3.
- 4.1.2 The proposed Scheme is composed of a GIS 400kV substation and associated infrastructure adjacent to an existing substation. This includes approximately 16 bays, network stability equipment, standard substation plant and new substation control infrastructure. The GIS substation would be within a compound of approximately 150 m x 165 m and would include up to six Supergrid Transformers (SGTs). The proposed Scheme also incorporates tie in works which include the installation of short stretches of OHL between the proposed substation and the existing OHL network, as well as the removal of some existing stretches of OHL, combined with the temporary works required to make these permanent changes.
- 4.1.3 Tie in works to the substation (works outside the substation boundary to connect the substation into the existing transmission network (via overhead lines or cables)) are also required but are classed as 'permitted development' under the Town and Country Planning Act 1990, although potential impacts for these works have also been screened within this report.
- 4.1.4 The information set out within Tables 3 and 4 affirms that significant effects on the environment are not likely to occur with the application of appropriate mitigation. Tables 3 and 4 also provide information about the control measures which are envisaged to avoid or prevent potential adverse impacts where necessary. Mitigation measures include consultation with relevant stakeholders, appropriate scheme design, landscape management and planting and the implementation of a CEMP and a CTMP. A planning application will be produced for the proposed Scheme which will include relevant environmental assessments and will detail specific mitigation as and where required.
- 4.1.5 We do not consider the proposed Scheme to be an EIA development by virtue of the nature of the proposals, in combination with the receiving environment as described in this report. We request that the North East Derbyshire District Council adopt an opinion according to the information presented in this report, and within three weeks of receiving this Screening Assessment as per regulation 6 of the EIA Regulations.

## Abbreviations

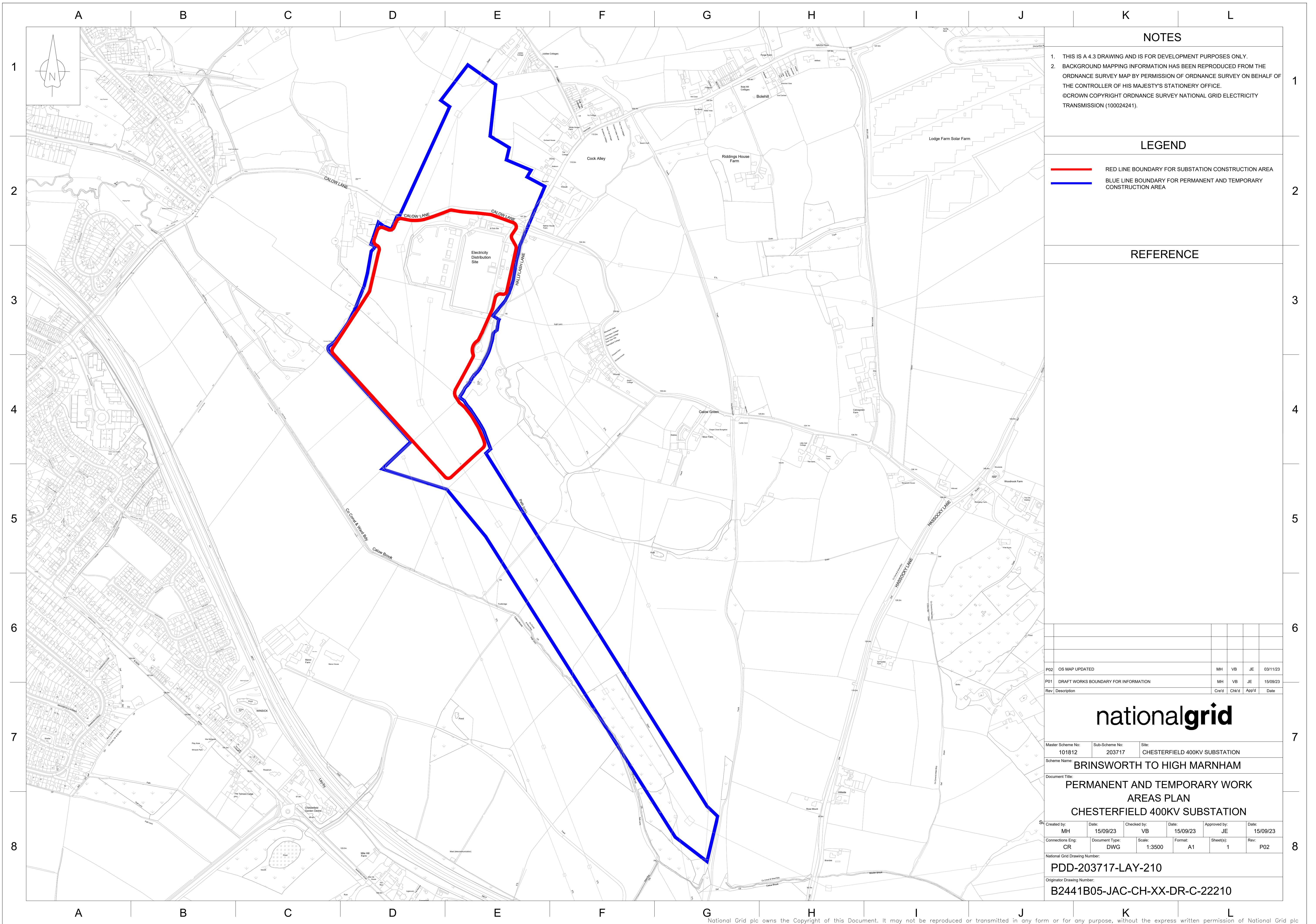
Abbreviation	Meaning
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
BGS	British Geological Survey
BNG	Biodiversity Net Gain
BMV	Best and Most Versatile
CEMP	Construction Environmental Management Plan
CTMP	Construction Traffic Management Plan
DBA	Desk Based Assessment
DEFRA	Department of Environment, Food and Rural Affairs
EA	Environment Agency
EAR	Environmental Assessment Report
EIA	Environmental Impact Assessment
EIA Regulations	Town and Country Planning (Environmental Impact Assessment) Regulations 2017
EMF	Electromagnetic Fields
HPIE	Habitat of Principal Importance in England
IAQM	Institute of Air Quality Management
INNS	Invasive Non-Native Species
LWS	Local Wildlife Site
LNR	Local Nature Reserve
NCA	National Character Area
NG	National Grid
PEA	Preliminary Ecological Assessment
PRoW	Public Right of Way
pLWS	potential Local Wildlife Site
SSSI	Site of Special Scientific Interest
UXO	Unexploded Ordnance
WSI	Written Scheme of Investigation

## Appendix A

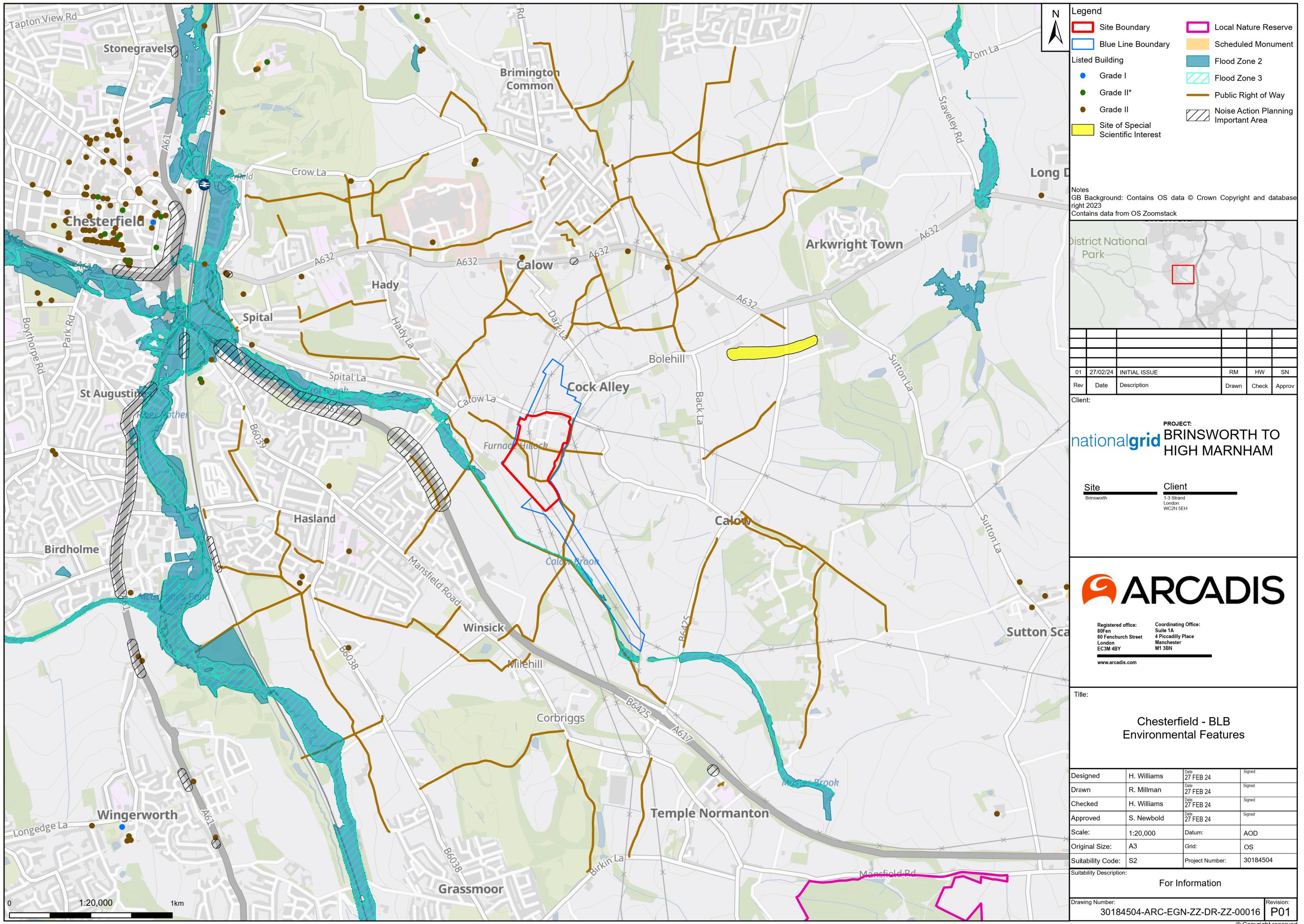
### Figures

Figure Number	Drawing Name
1	Site Location Plan
2	Environmental Features Plan

## Site Location Plan



## Environmental Features Plan





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