nationalgrid

Visual Impact Provision (VIP)

Peak District (East) Project

Environmental Summary Report

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Introduction

National Grid is proposing to underground a section of the existing overhead line within and adjacent to the Peak District National Park. The project is referred to as the Peak District (East) Project (hereon referred to as the Proposed Project) and forms part of the wider Visual Impact Provision (VIP) Project.

The Peak District (East) Project represents a major opportunity to mitigate the visual impact of existing electricity infrastructure within and adjacent to the Peak District National Park and to conserve and enhance the natural beauty, wildlife and environmental heritage of the area.



Overhead Transmission Line, Dunford Bridge

National Grid operates the high voltage electricity transmission system in Great Britain and owns the system in England and Wales. The system operates mainly at 400,000 and 275,000 volts, connecting the electricity generators to substations where the high voltages are transformed to lower voltages, enabling the power to be distributed to homes and businesses by Distribution Network Operators (DNO) who operate at a maximum of 132,000 volts. For more information on National Grid and its operations see http://www2.nationalgrid.com/uk/.

The Proposed Project comprises the permanent removal of an approximately 2km long section of existing overhead line that runs from the eastern entrance of the Woodhead Tunnel in Dunford Bridge, to Wogden Foot on the boundary of the Peak District National Park, and the permanent removal of the existing Sealing End Compound at Dunford Bridge. Eight existing pylons will be replaced with approximately 1.8km of new underground cable. A new Sealing End Compound and replacement tension pylon will be constructed at the eastern end of the Proposed Project to connect the new underground cable to the remaining existing overhead line.

National Grid is seeking to secure full planning permission for elements of the Proposed Project (as set out in the Table on page 4. It was confirmed in January 2019 that the project did not require a formal Environmental Impact Assessment. However, to support the planning application, an environmental assessment has been undertaken to understand and predict the effects that the Proposed Project may have on the receiving environment and to also meet National Grid statutory duties. This has considered the effects that the construction, operation and decommissioning stages of the Proposed Project might cause to the existing condition of the environment and takes into account measures incorporated into the project design and other methods (termed mitigation) that will be employed to reduce the significance of those effects.

The findings of the environmental assessment are reported in the Environmental Assessment Report. This document forms the Environmental Assessment Summary. It comprises a standalone document that presents a summary of the principal findings of the environmental assessment.

Consultation

Consultation has been integral to the design and development of this stakeholder led project. Stakeholder engagement has involved a range of activities including Stakeholder Advisory Group meetings, Stakeholder Reference Group meetings, direct engagement, third party channels, media relations, public drop-in events, attendance at appropriate local events, and the establishment of a project specific website (http://peakdistrict.nationalgrid.co.uk).

The Stakeholder Advisory Group (SAG) was established in April 2014. The Group is chaired by environmentalist and broadcaster Chris Baines and comprises senior representation from 15 stakeholder bodies, namely: Cadw, Campaign for National Parks, Campaign to Protect Rural England (CPRE), The Campaign for the Protection of Rural Wales (CPRW), Historic England, the Landscape Institute, the National Association for Areas of Outstanding Natural Beauty (AONBs), National Parks England, National Parks Wales, the National Trust, Natural England, Natural Resources Wales, The Ramblers, Visit England and Visit Wales. These organisations are dedicated to enhancing landscapes and countryside areas throughout England and Wales. They advise the project not only on identifying and developing individual projects, but also on the most effective ways to engage with stakeholders at a local level.

The Stakeholder Reference Group (SRG) for the Peak District was established in April 2015 and has been a critical part of National Grid's wider stakeholder engagement and empowerment programme, allowing open dialogues with local stakeholders, keeping them informed about the project, and establishing their priorities for using the Visual Impact Provision funding. Stakeholder Reference Group membership includes representatives from the Peak District National Park Authority, Barnsley Metropolitan Borough Council, Dunford Parish Council, Natural England and the Trans Pennine Trail office. The Yorkshire Wildlife Trust also joined the group in summer 2018.

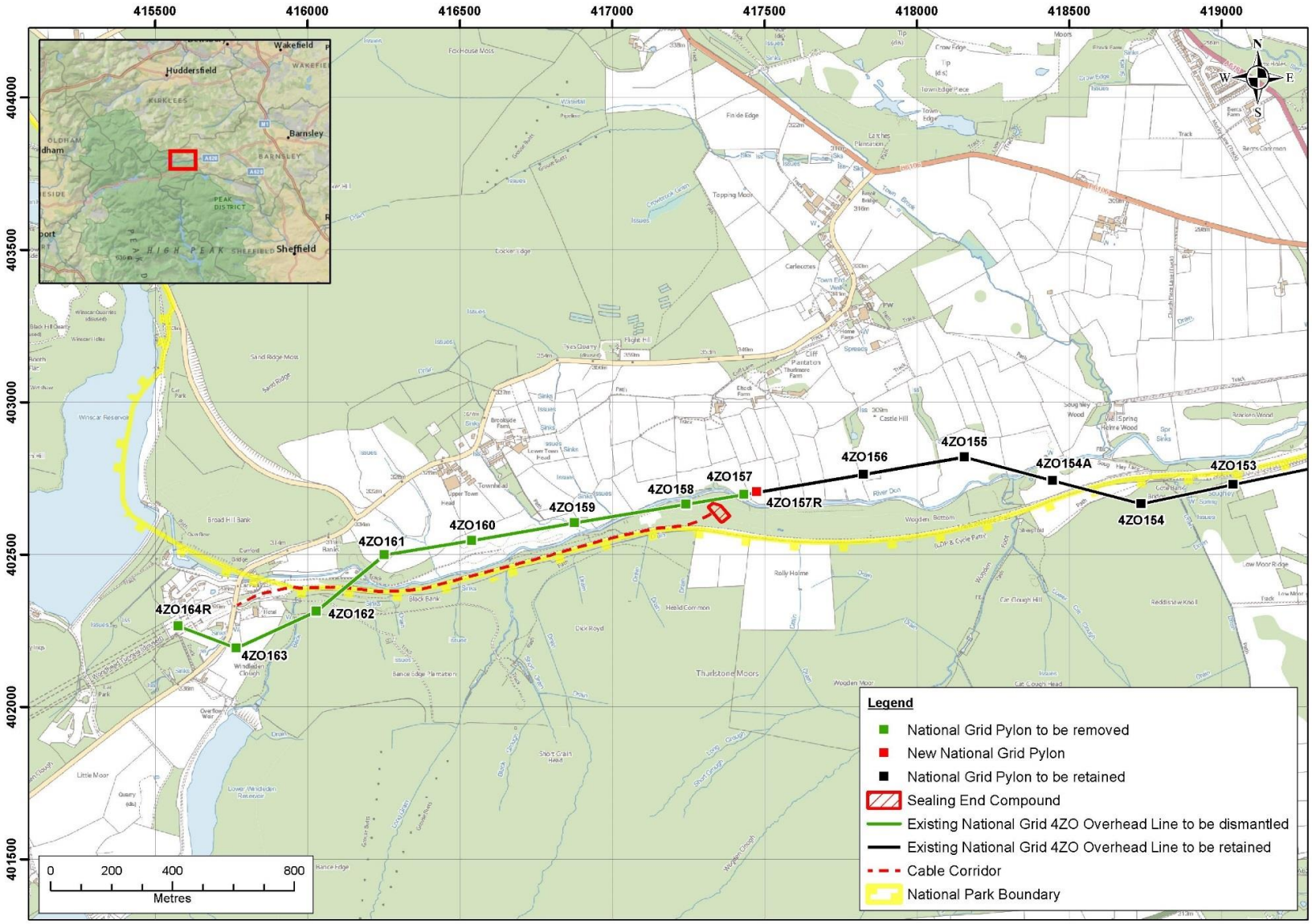
Public drop-in events were held in July 2016 in Penistone Town Hall, Dunford Parish Community Centre and a National Grid Mobile Unit at Dunford Bridge. Additional drop-in events were also held in December 2018, at accessible public venues in Dunford Bridge, Penistone and Crow Edge. The events were attended by members of the VIP team together with relevant professional advisers who updated the local community on the progress of the project and gave details given on the construction plans. Printed and online feedback forms were available at the events to provide feedback via the website or freepost at a later date. Comments received were used to help shape the planning application.



Public exhibition at the Pennine Sailing Club

Project Overview

The Proposed Project will remove a section of National Grid's existing electricity transmission line that runs through and adjacent to the Peak District National Park (see plan below). The overhead line to be removed runs from the eastern entrance of the Woodhead Tunnel in Dunford Bridge. It crosses the Peak District National Park boundary and continues north over the Upper Don River and the Trans Pennine Trail, south of the hamlet of Townhead towards Castle Hill, to Wogden Foot.


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National Grid Pylon to be removed
New National Grid Pylon
National Grid Pylon to be retained
Sealing End Compound
Existing National Grid 4ZO Overhead Line to be dismantled
Existing National Grid 4ZO Overhead Line to be retained
Cable Corridor
National Park Boundary

The Proposed Project will comprise the following main elements:

- Removal of the existing Sealing End Compound at Dunford Bridge, eight pylons and 2km of overhead line;
- An underground cable of approximately 1.8km along the Trans Pennine Trail from the entrance of the Woodhead Tunnel to a proposed new Sealing End Compound;
- Construction of a new Sealing End Compound at Wogden Foot and replacement tension pylon including a permanent access off the Trans Pennine Trail;
- Temporary laydown areas and access tracks to facilitate construction activities; and
- Construction and removal of a temporary Trans Pennine Trail diversion for use during the construction phase of the Proposed Project (the diversion will include construction of a permanent bridge and a temporary bridge).

Planning Process

National Grid is seeking to secure full planning permission by way of a planning application under the Town and Country Planning Act 1990 to Barnsley Metropolitan Borough Council and Peak District National Park Authority for the following development:

- Construction of a new Sealing End Compound (SEC) including permanent access;
- Construction of a temporary haul road from Brook Hill Lane including widened bellmouth;
- Construction of a temporary Trans Pennine Trail Diversion to be used for approximately 12 - 18 months; following construction approximately 410m of said diversion surface would be retained permanently along the stretch that provides private access to Yorkshire Water assets. This is along the route of an existing farm track; and
- Erection of two bridges (one temporary and one permanent) along the Trans Pennine Trail diversion.

All other works related to the Proposed Project, including that which falls within the Peak District National Park, constitute 'Permitted Development' under Schedule 2 of the Town and Country (General Permitted Development) (England) Order 2015, subject to the conditions in the order, are covered by an exemption under the Electricity Act or are considered not development as shown on the Consents overview drawing (Planning Drawing PKD_660952_001).

A summary of the relevant consenting regimes for the Proposed Project is provided in the table below.

Summary of Primary Consenting Regimes

Project Component	Consent Required
1 Cable Sealing End Compound **Approx. 80m x 40m (3200 sq.m)**	Full planning permission under Town and Country Planning Act 1990.
Underground XLPE cabling **Approx. 1.6km length**	Permitted Development under General Permitted Development Order (GPDO) 2015, Schedule 2, Part 15, Class B(a); with all restrictions complied with and conditions met.

Project Component	Consent Required
TPT diversion	Full planning permission under Town and Country Planning Act 1990. Traffic Regulation Order under Section 14 of the Road Traffic Act 1984
Bridges 1 and 2 (Bridge 1 being a permanent replacement of an existing bridge; Bridge 2 a temporary bridge to cross over the River Don)	Full planning permission under Town and Country Planning Act 1990.
Temporary northern access road and bellmouth	Full planning permission under Town and Country Planning Act 1990.
Replacement of existing section of overhead line to the proposed Sealing End Compound	Exempt from s37 consent of Electricity Act 1989, under The Overhead Lines (Exemption) (England & Wales) Regulations 2009; both the replacement line and new terminal pylon (below) are within stated tolerances, and cause no significant adverse environmental effects. Relevant authority to confirm exemption through a separate parallel notification process.
1 new replacement tension pylon	As above.
Temporary stoned haul roads and stoned laydown areas.	Permitted Development – GPDO 2015 Schedule 2, Part 4, Class A All restrictions and conditions met
Temporary fencing of Yorkshire Water assets along TPT diversion	Permitted Development – GPDO 2015 Schedule 2, Part 4, Class A All restrictions and conditions met

Alternatives

The National Grid Visual Impact Provision Peak District East Options Appraisal Study 2019 (submitted as part of this planning application) describes the options considered during project development between 2015 and 2018, and follows on from previous reports including the Peak District National Park (Eastern Section) Options Appraisal Study 2015 and National Grid Visual Impact Provision Landscape and Visual Impact Assessment of Existing Electricity Transmission Infrastructure in Nationally Protect Landscapes in England and

Wales – Technical Report (2014) and National Grid Visual Impact Provision Policy Document (2013).

The 2015 Options Appraisal considered alternative pylon design along the existing alignment (Option 1), an OHL along an alternative alignment (conventional or alternative pylon design) (Option 2) and underground cable corridors for either 50% (Option 3a) or 100% (Option 3b) of the 4ZO.2 subsection. For both the alternative pylon design along the existing alignment, and OHL along an alternative alignment (conventional or alternative pylon design) option, it was considered that the alternative structures would still be highly visible in the landscape, and following discussions with the project team, together with the feedback from stakeholder engagement it was agreed that these options would not be investigated further.

During the period 2015-2018 a further options appraisal was undertaken to consider project development of subsection 4ZO.2, Option 3A, as one of the projects prioritised to be taken forward by the SAG.

Of the options considered (Option 5 - cable route along the Trans Pennine Trail with Sealing End Compound on the southern side of the River Don) was considered to be the only practical and feasible engineering solution that was in line with the VIP guiding principles, would not increase system security and safety risk and would not have led to other major significant environmental or socio-economic effects. This option would facilitate the removal of eight pylons (one of which will be replaced) and approximately 2km of OHL, providing the maximum landscape and visual benefit of all options considered. Although this option required land take within one of the Local Wildlife Site's, locating the Sealing End Compound at Wogden Foot would also provide more options for screening from views from the north rather than a Sealing End Compound in open farmland on the northern side of the River Don. For this option a temporary diversion of the Trans Pennine Trail would be required on the northern side of the River Don.

The location of the SEC within Wogden Foot was also discussed with stakeholders to achieve a position that avoided land take within a particular area of grassland, maximised the potential screening opportunities from existing planting and minimised the total area of permanent land take and infrastructure within the Local wildlife Site.

Project Components

Installation of Cable Corridor

An underground cable (hereon referred to as the Cable Corridor) approximately 1.8km in length, will be installed beneath the route of the Trans Pennine Trail from the entrance of the Woodhead Tunnel to a proposed new Sealing End Compound.

Temporary fences will be erected along the Trans Pennine Trail, including at both ends, to clearly demark the construction working area. Members of the public will be temporarily diverted to the northern side of the River Don during construction of the Cable Corridor.

Construction of Sealing End Compound

A new permanent Sealing End Compound with an overall footprint of approximately 40m by 75m is required where the overhead line and Cable Corridor will connect to each other. The compound will include gantries, switchgear, sealing ends and support structures bounded by a perimeter security fence. A photo of a typical Sealing End Compound is shown below.

The Sealing End Compound will be located at the eastern end of the new underground Cable Corridor within Wogden Foot Local Wildlife Site. A replacement pylon will be required

north of the River Don with a short section of new overhead line to link the Sealing End Compound to the replacement pylon.



Typical Sealing End Compound

Trans Pennine Trail Diversion

During construction, the Trans Pennine Trail will be diverted along a temporary route north of the River Don to allow for the installation of the buried cable beneath the Trans Pennine Trail. The diversion will be approximately 1.6km in length and will be in place for up to 1.5 years. The diversion will be constructed to meet the needs of pedestrians, equestrians and cyclists, and in compliance with the gradient requirements of the Equalities Act 2010 (formerly the Disability Discrimination Act (DDA)) in all but two short sections.

Removal of Existing Infrastructure

As part of the Proposed Project, approximately 2km of existing 400kV overhead lines will be permanently removed, along with 8 pylons (one of which will be replaced). Access for the overhead line removal works and dismantling of pylons will be off the Trans Pennine Trail diversion, which will be used as an access track following completion of the Cable Corridor and new Sealing End Compound, with temporary access trackway laid off the diversion to the individual overhead line works areas. Temporary access trackways will generally be laid directly on the ground.

Upon removal of the existing overhead line, much of the material will be taken for recycling. The existing concrete pylon foundations will be removed to approximately 1.4m depth.

The removal of the existing Sealing End Compound will include removal of all above ground equipment, including compound fencing, earthing grid, the pylon, Sealing End Compound and all other plant. The tunnel shaft and vents will be capped and landscaped above. The area of the Sealing End Compound will be reinstated to grassland.



Typical Pylon Dismantling

Temporary Construction Compounds

In order to facilitate the works, temporary construction compounds will be established. Other associated works include temporary and permanent access roads.

Construction Programme

The overall construction period for the Proposed Project will be approximately 1.5 - 2.5 years. Removal of the existing overhead line will take place following installation and commission of the new Cable Corridor and construction of the new Sealing End Compound. The Trans Pennine Trail diversion will be used to facilitate overhead line removal and therefore will remain in situ until the completion of the removal works.

Environmental Effects and Mitigation

Experts from a wide range of disciplines have undertaken the assessment of likely environmental effects of the Proposed Project. Studies have been undertaken in accordance with scopes agreed with the appropriate statutory consultees and nature conservation bodies and following established standards and best practice guidance.

The Proposed Project and its associated mitigation measures have been designed to minimise adverse environmental effects identified by the Environmental Assessment process. The principal findings of the Environmental Assessment are summarised in the following sections.

Landscape and Visual

The existing VIP Subsection of 400 kV overhead line has previously been identified as having a high level of adverse landscape and visual effects. The removal of 2km of this overhead line (including 8 pylons and the existing Dunford Bridge Sealing End Compound

(SEC)) and the subsequent restoration of the landscape would give rise to a number of significant beneficial landscape and visual enhancements, particularly within the western end of the Upper Don Valley, around Dunford Bridge.

Construction activities associated with the Proposed Project would have some short term adverse effects on the character of the landscape and visual amenity of the Upper Don Valley. These effects would arise due to a combination of construction activities, including those associated with the 400kV Cable (Undergrounding and associated works and laydown areas) and proposed Wogden Foot SEC. Some tree removal along the Trans Pennine Trail would be required to facilitate construction. With the exception of tree loss, construction effects would be short term, temporary and reversible. Tree removal would be minimised as much as possible and tree protection measures would be put in place to ensure that all trees to be retained are protected. Replacement tree and scrub planting would comprise a more diverse and appropriate mix of species that would enhance and complement the landscape and ensure longevity of tree cover in the future. This would ensure that effects of construction would be mitigated as far as practicably possible in the medium to long term as planting matures.

The Proposed Project would sit within a typically highly valued area of landscape on the edge of the Peak District National Park. The relatively well contained topography of the Upper Don Valley would limit the extent of the operational landscape and visual effects of the proposed Wogden Foot SEC; new replacement pylon and four small link pillar boxes along the 400kV Cable (Undergrounding) corridor. The landscape currently has high levels of human influence, including the existing 400kV OHL and Dunford Bridge SEC, the elements of the Proposed Project would be viewed as much smaller features in the landscape than the VIP Subsection which they would replace. Although some tree cover would be permanently lost due to the 400kV Cable (Undergrounding) and Wogden Foot SEC this would not have a significant effect on the character of the landscape. Over time the replacement of native trees and shrubs in a number of places would help to assimilate the structures into the landscape and screen them from many viewpoints.

The proposed Wogden Foot SEC would have a localised adverse effect on the visual amenity experienced by a limited part of the local community to the south west of Carlecotes and users of PRoW 11. However, visual effects would reduce over time, once landscape proposals around the SEC mature. Furthermore, the adverse effects would be balanced against the beneficial effects of removing the VIP Subsection.

Ecology

An ecological assessment has been undertaken to identify and assess the potential construction, operational and decommissioning effects resulting from the Proposed Project on ecological features (designated sites, species and habitats).

An extensive number and range of ecological surveys have been undertaken over the past 3.5 years to collate robust knowledge of the ecological baseline conditions across the Proposed Project area and inform the ecological impact assessment. The evolving design of the Proposed Project has taken into account ecological constraints from the onset and also been informed by detailed stakeholder engagement meetings and workshops at key stages of the Project design. The assessment, conducted in accordance with CIEEM guidelines and considering current policy and legal compliance, has identified valued ecological features and has set out the predicted effects of each of the components of the Proposed Project upon them. In turn it has outlined appropriate mitigation and compensation measures to avoid, reduce or offset potentially significant adverse effects.

The Proposed Project will result in predicted effects upon two non-statutory sites; one of which; Wogden Foot Local Wildlife Site, would be significant without additional mitigation.

With mitigation measures embedded into the project phases and secured via the implementation of the Landscape and Ecological Management Plan (CEMP Appendix 2B.3) direct and indirect effects upon these sites have been avoided, reduced or mitigated such that the overall significance of residual effects will be Minor Adverse and therefore Not Significant.

The residual effects following the incorporation of mitigation measures on undesignated habitats are assessed as having a significance of Negligible or Minor Adverse, and therefore are also Not considered Significant.

Although the assessment concludes that there will be a number of Minor adverse ecological effects, particularly within Wogden Foot Local Wildlife Site, the integrity of the Local Wildlife Site and associated River Don/Trans Pennine Trail habitat corridor will not be undermined. The permanent habitat loss within Wogden Foot LWS associated with the components subject to planning total 0.28 ha and equate to approximately 2.2 % of the total area of the LWS (11.79ha). The Project design has sought to reduce its footprint as much as possible, particularly along the cable installation corridor and within Wogden Foot Local Wildlife Site. It also avoids significant effects upon statutory designated sites and Western Moors Local Wildlife Site LWS.

Minor residual effects upon habitat and species will be mitigated by measures adopted through the Landscape and Ecological Management Plan. This has been prepared for the Proposed Project to collate and expand on the ecological and landscape mitigation measures included in the Environmental Assessment Report. Measures included have been discussed with relevant stakeholders involved and agreement in principle sought from Barnsley Metropolitan Borough Council, Peak District National Park Authority, Yorkshire Wildlife Trust and Natural England. A period of post construction monitoring has been committed to within Wogden Foot Local Wildlife Site to ensure the habitats reinstated/created can in future return to the diverse mosaic habitat which Wogden Foot Local Wildlife Site is designated for, and provide valuable habitat for birds, invertebrates and other notable species.

There will be no significant ecological effects during the operation phase of the Proposed Project. There are potential benefits to be gained from the removal of the pylons by allowing habitats no longer beneath pylons and Overhead Line's to improve in condition and future disturbance be reduced. The decommissioned Sealing End Compound will be partially reinstated to species rich grassland which will provide local biodiversity enhancement. Where opportunities exist, measures to provide beneficial effects have been outlined.

National Grid is committed to ensuring that the Proposed Project delivers a net gain to biodiversity rather than only ensuring there is no net loss. From the start, we have sought to work closely with Barnsley Metropolitan Borough Council, the Peak District National Park Authority, Natural England, Yorkshire Wildlife Trust, the Trans Pennine Trail office and others to explore and identify opportunities both on and off site to compensate for habitats and species which may be adversely impacted by the Proposed Project. We are continuing to progress with proposals to assist in delivering net gain both on and off site with stakeholders and relevant local landowners.

Historic Environment

An archaeological and cultural heritage assessment has been undertaken to assess the potential construction, operational and decommissioning effects resulting from the Proposed Project on the archaeological features of the area. The Proposed Project is located within a multi period archaeological landscape. The assessment has been informed by information

on the history and development of the area gathered from a wide range of sources, including databases of known heritage assets, an archaeological watching brief undertaken during ground investigation works, a walk-over survey, historic mapping, published documentary sources, archive material and topographic data from a flown LiDAR survey.

The assessment has concluded that there would be no significant adverse effects on the historic environment arising from the Proposed Project. Construction phase impacts on the setting of listed buildings near to the project would be temporary and would cease on completion of the works. Permanent visual change within the setting of listed buildings associated with the construction of the new Sealing End Compound at Wogden Foot would be minor and adverse but would be offset by the removal of overhead lines within the same view, resulting in net beneficial effects.

Permanent direct impacts associated with temporary and permanent construction works would result in negligible effects upon the historic environment for which mitigation measures (watching brief, earthwork survey and condition survey) are specified.

Water Resources

A water resources assessment (supported by a detailed Flood Risk Assessment and Sustainable Drainage Systems Strategy) has been undertaken and surface water and groundwater receptors that have the potential to be impacted by the Proposed Project during the construction, operational and decommissioning phases.

The assessment identified that the Proposed Project has the potential to interact with the following water resources:

- River Don and its floodplain
- River Don tributaries;
- Numerous unmapped field drains and overland flow pathways;
- South Pennine Moors Special Area of Conservation and the Dark Peak Site of Special Scientific Interest;
- Don & Rother Millstone Grit and Coal Measures Water Framework Directive groundwater body;
- Licensed and unlicensed groundwater and surface abstractions located downgradient or downstream the project;
- Ponds; and
- Areas at risk of flooding from surface water and groundwater.



River Don

Impacts will be minimised by the adoption of best construction practices and specified mitigation measures to include, for example:

- All fuel and chemical storage will comply with relevant storage regulations;
- Suitable precautions will be taken to prevent spillages from equipment containing small quantities of hazardous substances;
- Permanent surface water/ agricultural drains will be re-installed to reinstate any pre-existing field drainage systems to pre-construction condition; and,
- Dewatering and discharge of water will be carefully controlled to prevent the risk of sediment laden run-off entering watercourses.

A Construction Environmental Management Plan will be implemented to manage environmental impacts during construction; this will include measures for controlling general pollution to surface and groundwaters. With the implementation of mitigation measures, no significant effects on water resources during the construction, operation and decommissioning phases are predicted.

Additional studies undertaken include a Flood Risk Assessment and a Sustainable Drainage System statement which form part of the planning application documentation.

Geology, Soils and Contaminated Land

A geology, soils and contaminated land assessment has been undertaken to assess the potential construction, operational and decommissioning effects resulting from the Proposed Project, and to identify measures required to protect the hydrogeological and geological environment.

The assessment reviewed the sensitivity of the underlying geology and potential environmental receptors informed by a baseline review, site walkover and the findings of an

intrusive site investigation. The site was identified to have sensitive environmental receptors, including valuable groundwater resources relating to the underlying geology. Potential sources of contamination were identified including areas of potential infilling and areas of historical industrial land use (railway and sidings). The ground investigation identified slight exceedances of the relevant assessment criteria for specified contaminants in both soils and groundwater; asbestos was also identified.

Impacts will be minimised by the adoption of best construction practices and specified mitigation measures to include, for example:

- Environment Agency guidance on the assessment of risks from potentially contaminated land will be followed in line with Contaminated Land Report 11;
- Work will stop if any previously unidentified contamination is encountered until the nature and concentration of the contaminant(s) are determined and appropriate risk control measures implemented; and
- Clay bungs or other vertical barriers will be constructed within trench excavations where deemed necessary to prevent the creation of preferential drainage pathways or to prevent the creation of preferential migration pathways for contaminants (where suspected).

A Construction Environmental Management Plan will be implemented and will include reference to relevant guidance such as the Environment Agency Guidance to "Protect groundwater and prevent groundwater pollution" published 14 March 2017. The CEMP will also reference relevant Pollution Prevention Guidelines as examples of best practice and the relevant Guidance for Pollution Prevention Documents.

The assessment concluded that with the implementation of mitigation measures, no significant impacts relating human health, soils or contaminated land are predicted during the construction, operation and decommissioning phases.

Agriculture and Land Use

An assessment of the potential effects on agriculture and land-use as a result of the construction, operation and decommissioning of the Proposed Project has been undertaken. The assessment has focused on the soil types present, the quality of the agricultural land and the farming practices being used. The majority of the land comprises pastoral farmland. The land is generally of poor quality, with topography and soil characteristics limiting the way the land can be used thus limiting its productivity. As such, the land is defined as a 'Less Favourable Area' for agriculture.

The main effects of the Proposed Project on agriculture and land-use relate to temporary effects on agricultural practices, and the permanent loss of 0.3ha of land, along with the potential for increased disturbance to livestock as a result of the temporary diversion of the Trans Pennine Trail. The design of the project, the adoption of best practice construction techniques and approaches, and compensation discussions with landowners will minimise any potential effects so that no significant effects on agriculture and land use are predicted.

Traffic and Transport

A traffic assessment has been undertaken to assess the potential effects to traffic during the construction, operational and decommissioning phases of the Proposed Project.

The main links providing access to and from the Proposed Project site include the A628, Goddard Lane, Windle Edge and Brook Hill Lane. The potentially significant environmental

effects of severance, driver delay, pedestrian delay, pedestrian amenity, along with fear and intimidation have been considered by comparing the construction traffic generated by the Proposed Project with existing traffic flows on the local road network, taking into account the highest predicted average daily traffic flows that will result from the Proposed Project. Based on the schedule of construction activities, it is estimated that the maximum two-way HGV flows are likely to be generated around October 2021.

The magnitude of change in total traffic is predicted to be less than 30% on all links with the exception of Goddard Lane and Windle Edge/Brook Hill Lane, where the total traffic flow will increase by 49.2% and 29.7% respectively. In terms of HGV movements, the percentage increase is much greater, which is due to the very low baseline numbers of 6 and 8 HGVs respectively, therefore any increase in HGVs would account for a large percentage change. For the detailed environmental assessment of traffic impacts, the Institute of Environmental Management and Assessment (IEMA) guidelines suggest the inclusion of highway links where traffic flows (total vehicles or HGVs) are predicted to increase by more than 30%. Both Goddard Lane and Windle Edge/Brook Hill Lane meet this criterion and have therefore been identified for further assessment.

Where existing baseline flows are very low, as is the case on Goddard Lane and Windle Edge/Brook Hill Lane, the addition of construction vehicles would in reality be less significant than that suggested by the percentage increase in HGVs. The assessment concluded that the Project will have a negligible adverse effect on severance and driver stress, a minor adverse effect on pedestrian and cyclist amenity and a major adverse effect on fear and intimidation. All effects would be temporary and limited to the construction phase.

As the Proposed Project will only be on a temporary basis, no physical traffic mitigation measures are planned. However, to ensure road safety and ensure adequate visibility for users of the local road network, PRoW users, and vehicles accessing and egressing the Access Points, a 20mph speed limit will be introduced along sections of Goddard Lane and Windle Edge/Brook Hill Lane between the access road entrance to Winscar reservoir (west of Access Point 2) and Access Point 7 for the duration of the works. Between the access road entrance to Winscar reservoir and the A628 a 40mph speed limit will be introduced. In addition, to manage adverse effects during construction, a Draft Outline Construction Traffic Management Plan has been produced which sets out how movements of all construction vehicles associated with the site will be managed and controlled to ensure any potential conflicts with other road/ PRoW users are minimised.

Accident data has shown that the current risk of accidents is low. With safety measures embedded into the design, the current accident rates are unlikely to change during the construction phase. The effects on road safety are therefore assessed as negligible and consequently not significant.

In terms of pubic rights of way, the Proposed Project would conflict with public rights of way at four locations, these will be managed by the contractor who would manage any closure points and set out diversions, as detailed in the Construction Traffic Management Plan.

Socio-Economics and Tourism

An assessment of the likely significant effects on socio-economic features associated with the construction, operation and decommissioning phases of the Proposed Project has been undertaken. This included consideration of the following:

- Tourism: potential impacts on tourism businesses and the tourism sector, such as changes in access and/or amenity;
- Recreation: potential impacts on recreational receptors, such as changes in access and/or amenity;

- Community amenity: potential amenity effects on community settlements and residents;
- Employment: direct and indirect employment generation on a local and regional basis; and
- Supply chain: expenditure within the local and national supply chain.

Construction of the Proposed Project has the potential to generate direct and indirect positive effects through the creation of new jobs. The majority of construction work would require the appointment of approved contractors. These highly-trained specialists are likely to be located throughout the UK and Europe with experience of moving from site to site as new projects are developed. Therefore, the positive employment and induced spending effects from these workers would be realised at a regional and national level rather than a local level. Local employment opportunities would be expected in sectors including site security, construction labouring, plant hire, haulage, landscaping, fencing and drainage. However, the effect on local employment is predicted to be minor beneficial and not significant.

Construction workers are likely to stay in local accommodation during the construction phase; this is expected to generate some short-term benefit to the local economy. There would also be further indirect economic benefits arising from expenditure by the work-force on subsistence and consumables in the local area. However the effect on local businesses and the supply chain is predicted to be minor beneficial and not significant.

A 1.6km temporary diversion of the existing Trans Pennine Trail will be required as part of the Proposed Project in order to allow for the installation of the GIL Corridor. The proposed diversion will exit the existing Trans Pennine Trail to the east of the Dunford Bridge car park and follow an existing farm track. The temporary diversion will be installed to the north of the River Don and parallel to the Trans Pennine Trail. Where possible the diversion will be designed to be compliant with the relevant gradient requirements of the Equality Act 2010 (formerly covered under the Disability Discrimination Act (DDA)), in order to be accessible to people with limited mobility, including wheelchair users. The diversion would be in place for approximately 1-1.5 years. A Trans Pennine Trail Management Plan will be in place throughout the duration of construction. The re-launching of the Trans Pennine Trail after the completion of the construction phase could indirectly act as a stimulus to tourism and attract more visitors to the area although this would be considered to be a minor beneficial impact (not significant).



Trans Pennine Trail

Overall, the socio economic assessment has concluded that no significant adverse effects are anticipated on tourism, recreation, community amenity, employment and supply chain during construction, operation and decommissioning phases.

Noise and Vibration

A combination of noise monitoring and predictive calculations have been undertaken to establish the existing noise climate and the change in noise levels predicted as a result of the Proposed Project during construction. The assessment methodology is based on the assessment guidance in the relevant British Standard (BS5228). Baseline noise survey locations and survey methodology were agreed with Barnsley Metropolitan Borough Council.

BS5228 identifies construction noise levels at which residential dwellings and other property types, such as schools are likely to experience significant effects. The method uses these limits to identify whether measures are needed to reduce construction noise in order to avoid effects on sensitive receptors, such as people living in close proximity to the construction activities. Mitigation measures to be implemented include using quieter plant and less intrusive construction methods, acoustic screening and locating noise plant as far as possible from receptor locations. Mitigation measures associated with Best Practicable Means will include the following:

- Working hours restricted to core hours so far as appropriate. Core hours are proposed to be between 0700 and 1900 Mondays to Fridays and between 0800 and 1700 on Saturdays and Sundays;
- Selection of quieter plant and less intrusive methods (such as hydraulic plant rather than percussive) where appropriate and practicable;
- Locating plant and equipment as far as practicably possible from receptor locations;
- Site hoarding with acoustic properties to be provided at compounds;
- Proper maintenance of all plant and equipment; and
- Noise and/or vibration monitoring where required.

There are few activities and locations where the predicted noise levels are more than the weekend noise limit of 60 dB(A). If adopting Best Practicable Means does not achieve the required sound reduction, work hours at these locations may need to be confined to weekdays.

Most construction activities are not significant sources of vibration. Activities such as earth-moving, crane activities, pylon removal and concrete pouring would produce relatively low levels of ground borne vibration (vibration that travel through the ground). Piling activities (the insertion of materials such as steel into the ground to create foundations) could produce noticeable levels of vibration, depending on the method used. Piling works are located away from residential receptors and noise and vibration impacts here would not be significant.

Electro Magnetic Fields

National Grid have provided an assessment of the likely significant health and environmental effects of electric and magnetic fields (EMFs) associated with the construction, operation and decommissioning of the Proposed Project to be submitted alongside the Environmental Report.

Whilst there are no statutory regulations in the UK limiting the exposure of the general public from EMFs the Government, acting on the advice of authoritative scientific bodies, has put in place appropriate measures to protect the public. These core measures are incorporated in National Policy Statement NPS EN-5 which give clear guidance on the EMF requirements for all electricity infrastructure projects.

The assessment concluded that the assets associated with the Proposed Project would be fully compliant with the Government policy. Specifically, all the EMFs produced would be below the relevant exposure limits. Therefore, no mitigation measures are necessary and there would be no significant EMF effects resulting from the Project.

Environmental Management during Construction

Mitigation measures set out in the Environmental Assessment Report will be secured, implemented and managed using best practice methods and legal obligations. A Construction Environmental Management Plan will be implemented for the Proposed Project. This will set out various management, survey and monitoring procedures that will be implemented on site to help prevent local disruption and minimise environmental impacts during construction.

Conclusion

The Proposed Project represents a major opportunity to mitigate the visual impact of existing electricity infrastructure within and adjacent to Peak District National Park and to conserve and enhance the natural beauty, wildlife and environmental heritage of the area.

The Environmental Assessment Report identifies potential effects on the environment which may occur as a result of the Proposed Project and sets out measures to avoid or minimise these effects.

Further Information

The planning application documents, including the Environmental Assessment Report and this Environmental Assessment Summary will also be available to download electronically from the Barnsley Metropolitan Borough Council Website.

The full Environmental Assessment Report, including this Environmental Assessment Summary, is available by writing to the address below at a cost of £290 (to cover production costs including a delivery charge) for a hard copy format or free on DVD.

Post: National Grid VIP Project
C/o Camargue
11 Waterloo Street
Birmingham
B2 5TB

or

Email: visualimpact@nationalgrid.com

Further hard copies of this Environmental Assessment Summary are available free of charge from the same address.