1 INTRODUCTION

1.1 The Visual Impact Provision

1.1.1 National Grid is funded by a price control mechanism which is agreed with, and set by Ofgem, the electricity and gas markets regulator. Ofgem agreed a set of price controls and incentives for the period from April 2013 to March 2021. The price controls and incentives include a provision of £500 million to mitigate the visual impact of existing electricity infrastructure in nationally protected landscapes in Great Britain. National Grid has referred to this as the Visual Impact Provision (VIP).

1.1.2 In 2012-13, National Grid prepared a draft VIP Policy setting out how the fund would be used and how stakeholders would be engaged in identifying opportunities for maximising benefits from it. After a public consultation on the draft between July and September 2013 the policy statement was presented to Ofgem for review. The policy statement made it clear that National Grid's objective is '*to achieve the maximum enhancement to the landscape from the available funds whilst ensuring that no significant adverse impacts arise as a result*'.

1.1.3 Following the results of a landscape and visual impact assessment[1], covering 571km of overhead line (OHL) within the scope of the VIP Project, those sections of OHL which had the greatest visual impact on the surrounding landscape were identified. This focused on 30 English and Welsh Areas of Outstanding Natural Beauty (AONB) and National Parks to identify suitable VIP Projects to take forward.

1.1.4 A national Stakeholder Advisory Group (SAG) was set up by National Grid in early 2015 to guide and advise National Grid in identifying and selecting VIP Projects to use the fund in the most efficient way and to deliver maximum benefit. in terms of enhancing the landscape. The SAG comprises organisations dedicated to conserving the landscape and countryside throughout England and Wales. The SAG helps National Grid to make decisions according to the guiding principles set out in the VIP policy document.

1.1.5 The SAG reviewed the landscape and visual assessment report and endorsed its findings, short listing 12 sections of OHL in eight AONBs and National Parks as having the most significant landscape and visual impact. Each of the short-listed AONBs and National Parks were studied to examine their ecology, archaeology, land ownership, geology and a range of other important factors including views obtained during stakeholder engagement. Local Stakeholder Reference Groups (SRG) were formed in the eight short listed designated landscapes.

1.1.6 An initial Options Appraisal report was prepared (May to July 2015)[2] for each of the 12 short listed sections of OHL to consider potential mitigation options. A further short list of the projects was prioritised for further detailed work by the SAG. The SAG considered a wide range of factors, and in September 2015 recommended that the following four projects be taken forward for potential engineering work:

- Dorset AONB;
- New Forest National Park;

[1] 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

[2] Snowdonia National Park-Options Appraisal, September 2015

- Peak District National Park; and
- Snowdonia National Park.

1.2 The Visual Impact Provision (VIP), Snowdonia Project

1.2.1 The VIP Snowdonia Project (here on referred to as the Proposed Project) represents a major opportunity to mitigate the visual impact of existing electricity infrastructure at Snowdonia National Park near Minffordd and to conserve and enhance the natural beauty, wildlife and environmental heritage of the area. The OHL in this area (OHL 4ZC.1 subsection) is judged to have:

- Landscape impacts of very high level of importance on the Ardudwy Coastal Hinterland and a part of Morfa Harlech landscape; and
- High level visual impacts with people using the Wales Coast Path regional trial, National Cycle Route 8, local rights of way and Open Access Land, due to close up and frequent views of the pylon overhead.

1.2.2 The Proposed Project will underground a 3.5km section of the existing 400kV (and 132kV) OHL within a cable tunnel from a location close to National Grid's existing Garth Sealing End Compound (SEC) on the western side of the Dwyryd Estuary to Cilfor on the eastern side of the Dwyryd Estuary. The Proposed Project is discussed in detail in Chapter 2 (Project Description) however it briefly comprises:

- A tunnel with a shaft at either end of the tunnel;
- A tunnel head house with a permanent access at either end of the tunnel;
- Electrical infrastructure laid within the tunnel;
- An underground buried cable to connect into the existing Garth SEC from the tunnel head house on the western side of the Dwyryd Estuary;
- Reconfiguration of equipment at the existing Garth SEC;
- A new SEC adjacent to the proposed tunnel head house on the eastern side of the Dwyryd Estuary;
- Removal and reinstallation of one pylon adjacent to the proposed new SEC on the eastern side of the Dwyryd Estuary;
- Removal of the OHL and ten pylons (including foundations removed to a depth stipulated in Chapter 2 Project Description);
- Partial removal of the foundations of the previously dismantled pylon 4ZC030 within the Marine Environment (as defined by Mean High Water Springs and agreed with Natural Resources Wales);
- Diversion of third-party assets to enable the above works to proceed; and
- Temporary access routes (with potential highways improvements) and construction compounds/ laydown areas to facilitate construction activities.

1.2.3 An overview map illustrating the Proposed Project is provided in Figure 1.1.

1.3 Planning Consents

1.3.1 National Grid is seeking to secure full planning permission for specific elements of the Proposed Project by way of a planning application under the Town and Country Planning Act 1990 to Snowdonia National Park Authority (also acting on behalf of Gwynedd Council) for the tunnel head houses (including a permanent access to these sites) and the

proposed new SEC on the eastern side of the Dwyryd Estuary. The Planning Application will allow for construction compounds associated with these works.

1.3.2 Shaft and tunnel construction in the terrestrial environment and the section of underground cable between the western tunnel head house and the existing SEC at Garth constitute permitted development under the Town and Country Planning (General Permitted Development Order) 1995 (as amended) Part 17 Class G. The construction and use of temporary access tracks used to facilitate construction activities will make use of National Grids permitted development rights.

1.3.3 Reconfiguration of Garth SEC is permitted development and OHL removal is utilising the existing consent held by National Grid.

1.3.4 Marine licence applications will be submitted to Natural Resources Wales for works within the marine environment of the Dwyryd Estuary (as defined by Mean High Water Springs) under the Marine and Coastal Access Act (MCAA) 2009 including the construction of the tunnel beneath the marine environment, laying of the cable within the tunnel, pylon foundation removal including the dismantling of pylons (4ZC030R and 4ZC031), and removal of the foundations of the previously dismantled pylon 4ZC030.

1.3.5 The Electricity Act 1989 sets out that, with certain conditions and exceptions, consent must be obtained for installing and maintaining any electric OHL. Proposed works on OHLs require a new consent unless they are permitted under an existing consent or under an available exemption. Under Section 37 of the Act, specific electricity works would require an application for consent to be submitted to the Department for Business, Energy and Industrial Strategy (BEIS). However, due to the technical specification of the works involved with the Proposed Project, National Grid are seeking notification from Snowdonia National Park Authority (also acting on behalf of Gwynedd Council) that the Proposed Project would be exempt from the Act as no significant residual adverse environmental effects have been predicted. The notification process is under The Overhead Lines (Exemption) (England and Wales) Regulations 2009.

1.3.6 Table 1.1 provides a summary of the different consenting regimes relevant to the Proposed Project. Figure 1.2 provides an overview of the parts of the Proposed Project applicable to each of the consenting regimes.

Table 1.1: Summary of Primary Consenting Regimes

Proposed Works	Consenting Requirement
Western side of the Dwyryd Estuary	
Western tunnel head house (including the associated construction compound) Permanent access	Planning permission required under Town and Country Planning Act (1990)
Section of underground buried cables to connect existing Garth SEC to western tunnel head house Tunnel shaft Tunnel (and cable within) from tunnel shaft to Mean High Water Spring Temporary access Reconfiguration of Garth SEC	Permitted development rights under Town and Country Planning (General Permitted Development) 1995. Part 17, Class G
OHL and pylon removal, associated access tracks and working areas (terrestrial)	Under existing consent - Electricity Act 1947/57
Estuary/ Marine	
Tunnel (and cable within) (marine) OHL and pylon removal, associated access tracks and working areas (marine)	Marine licence required under Marine and Coastal Access Act 2009
Tunnel construction	Permitted development rights under Town and Country Planning (General Permitted Development) 1995. Part 17, Class G
OHL and pylon removal, associated access tracks and working areas (marine)	Under existing consent - Electricity Act 1947/57
Eastern side of the Dwyryd Estuary	
Eastern tunnel head house (including the associated construction compound) SEC and permanent access track penent access	Planning permission required under Town and Country Planning Act (1990)

Proposed Works	Consenting Requirement
Tunnel shaft Tunnel (and cable within) from tunnel shaft to Mean High Water Spring Access to pylons 4ZC026 to 4ZC023 to form part of safe system of work during outages.	Permitted development rights under Town and Country Planning (General Permitted Development) 1995. Part 17, Class G
New pylon 4ZC027 and OHL works connecting to both the new SEC and up to pylon 4ZC026	Section 37 Exemption under Electricity Act 1989
OHL and pylon removal, associated access tracks and working areas (terrestrial)	Under existing consent - Electricity Act 1947/57

1.4 The Applicant

1.4.1 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.

1.4.2 National Grid is the only company licenced to transmit electricity in England and Wales. National Grid's Transmission Licence was granted under the Electricity Act 1989, Section 6 (1) (b).

1.4.3 When developing proposals for new network infrastructure, National Grid has a duty under the Electricity Act 1989 to do so in an efficient, co-coordinated and economical way. National Grid is also required, under Section 38 of the Electricity Act 1989, to comply with the provisions of Schedule 9 of the Act. Schedule 9 requires licence holders, in the formulation of proposals to transmit electricity, to:

Schedule 9(1)(a) "have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest"; and

Schedule 9(1)(b) "do what he reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects".

1.5 This Document

1.5.1 The Proposed Project has been Screened under The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (as amended) and to Natural Resources Wales under the Marine Works (Environmental Impact Assessment) (Amendment) Regulations 2017 which concluded that formal EIA would not be required as the Proposed Project is unlikely to have a significant adverse effect on the environment. Therefore, an Environmental Appraisal is provided in support of a planning application to Snowdonia National Park Authority (also acting as Lead Authority on behalf of the

Gwynedd Council) for the elements of the Proposed Project requiring planning permission. The Environmental Appraisal describes the process and outcomes in the consideration of environmental effects and is undertaken in a concise, and objective manner in order to provide stakeholders with sufficient information on mitigation requirements. This Environmental Appraisal is presented in three volumes:

- Volume 1: Environmental Appraisal;
    - Chapter 1 Introduction: introduces the Proposed Project and explains the underlying objectives of the proposal, outlines the consenting strategy, structure adopted and identifies the team responsible for undertaking environmental reporting.
    - Chapter 2 Project Description: provides a detailed description of the key design components and characteristics of the Proposed Project; and outlines the planned timescales for construction and implementation.
    - Chapter 3 Environmental Appraisal Process: summarises the screening and scoping process undertaken to establish the scope of the environmental documentation, the adopted approach to the environmental reporting and format of the individual technical appraisals, and modifications made to the environmental scope that have arisen during the development of the Proposed Project.
    - Chapter 4 Consultation: summarises stakeholder consultation undertaken during the environmental appraisal and the development of the Proposed Project.
    - Chapter 5 Planning Policy: summarises relevant national and local planning policy and includes an appraisal of the extent to which the Proposed Project conforms to relevant planning policy.
    - Chapter 6 to 17 Technical Appraisals: report the findings of the detailed appraisal.
    - Chapter 18 Cumulative Effects: describes the consideration of cumulative impacts that may arise owing to interaction with other developments (inter-project effects), and summarises combined effects arising as a result of the Proposed Project (intra-project effects).
    - Chapter 19 Signposting to those sections of the appraisal relevant to Health In Impact Assessment.
- Volume 2: Figures comprising a series of plans, figures and photographs that illustrate the relationship between the existing environment and the Proposed Project; and
- Volume 3: Technical Appendices containing detailed information supporting technical appraisals.

1.5.2 An Environmental Summary has been prepared as a separate document and provides a summary of the principal findings of the Environmental Appraisal.

1.6 Environmental Appraisal Team

1.6.1 RSK Environment Ltd (RSK) has undertaken the coordination of this Environmental Appraisal on behalf of National Grid. Technical appraisals have been undertaken by the following specialists:

- Planning Policy - RSK
- Landscape and Visual – Gillespie's
- Terrestrial Ecology - RSK
- Archaeology and Cultural Heritage – RSK
- Water Resources - Stantec
- Geology, Soils and Contaminated Land – AECOM
- Waste - Stantec
- Agriculture and Land Use - Arcadis

- Traffic and Transport – AECOM
- Socio-Economics and Tourism – Jacobs
- Noise and Vibration - Arcadis
- Marine (Ecology, Archaeology and Physical Processes) – Intertek/Cotswold Archaeology
- Cumulative - RSK
- Health in Impact Assessment - RSK

1.7 Consideration of Alternatives

1.7.1 A detailed Options Appraisal Report has been prepared for the planning submission and is provided in Appendix 1A of this Environmental Appraisal.