Grid Implementation Plan 2017-2022 Strategic Environmental Assessment Statement

EIRGRID

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Grid Implementation Plan 2017-2022

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Appendix A: Summary of Consultation Submissions

1. Introduction

1.1 Background

EirGrid plc. (EirGrid) is the national electricity Transmission System Operator (TSO). The transmission system relates to the high-voltage electricity network, also known as the national grid (or 'the grid'), which refers to 110 kilovolt (kV), 220 kV, 275 kV and 400 kV infrastructure. In its role as TSO in Ireland, EirGrid operates and maintains a safe, secure, reliable, economical and efficient transmission system, and develops key infrastructure projects, which are vital for the socio-economic development of the country with due regard for the environment. ESB Networks, as the Transmission Asset Owner (TAO), is charged with constructing the transmission assets as specified by the TSO. ESB also has the role of Distribution System Operator (DSO); the distribution system refers to the lower-voltage network of 38 kV and 10 kV infrastructure.

Electricity supply is essential, and a reliable electricity network is the means by which power is moved around the country, safely and reliably, from the point where it is generated to the places it is needed, powering homes and businesses, and contributing to economic growth. The development of transmission network infrastructure is therefore, of national strategic importance.

In 2008, EirGrid published the *Grid25 strategy,* a high-level strategy to outline how it intended to undertake the development of the grid in the short, medium and long-term, particularly in the context of connecting new sources of renewable electricity onto the grid to meet National and European renewable energy targets.

The associated *Grid25 Implementation Plan 2011-2016* (Grid25 IP) provided a strategic overview of how the early stages of the *Grid25 strategy* were to be implemented. In turn, the Grid25 IP was informed by an annual rolling operational document, the *Transmission Development Plan* (TDP), prepared by EirGrid under the terms of its licence, per Regulation 8(6) of the European Communities (Internal Market in Electricity) Regulations 2000 (S.I. 445 of 2000), and submitted for approval to the Commission for Regulation of Utilities (CRU – previously the Commission for Energy Regulation, CER). The annual TDP includes a list of grid development projects that EirGrid envisage will be undertaken over the following ten-year period. Each TDP is accompanied by an Environmental Appraisal Report (EAR) that assesses whether that TDP remains in accordance with the provisions of the relevant Strategic Environmental Assessment (SEA).

Each of these documents - the strategy, the Grid25 IP, and the TDP - provide a different level of scale and detail; from the long-term vision of the *Grid25 strategy* to the short and medium-term grid development policies and objectives set out in the Grid25 IP, to the specific envisaged projects outlined in the TDP. This is set out graphically in **Figure 1.1**. In 2017 EirGrid published an updated strategy, *Ireland's Grid Development Strategy; Your Grid, Your Tomorrow* (Appendix A) which replaces Grid25. The *Grid Implementation Plan 2017–2022* (Grid IP), which is the subject of this SEA, will sit alongside the 2017 Strategy.

EirGrid Strategy Statements (2017):

1. ***We will optimise the existing grid to minimise the need for new infrastructure.***
2. ***We will consider all practical technology options.***
3. ***Inclusive consultation with local communities and stakeholders will be central to our approach.***

The Grid IP identifies, at a strategic level, the current best understanding of those parts of the transmission system that are likely to be developed over the period 2017-2022 and identifies the issues, policies and objectives that will be addressed in developing the grid. It also takes account of the approved TDP 2016-2026, as this was the most up-to-date list of projects envisaged to be developed over the next decade during preparation of the Grid IP and SEA. It establishes the parameters and criteria for the core processes by which subsequent decisions will be made. The final Grid IP was approved in December 2018.

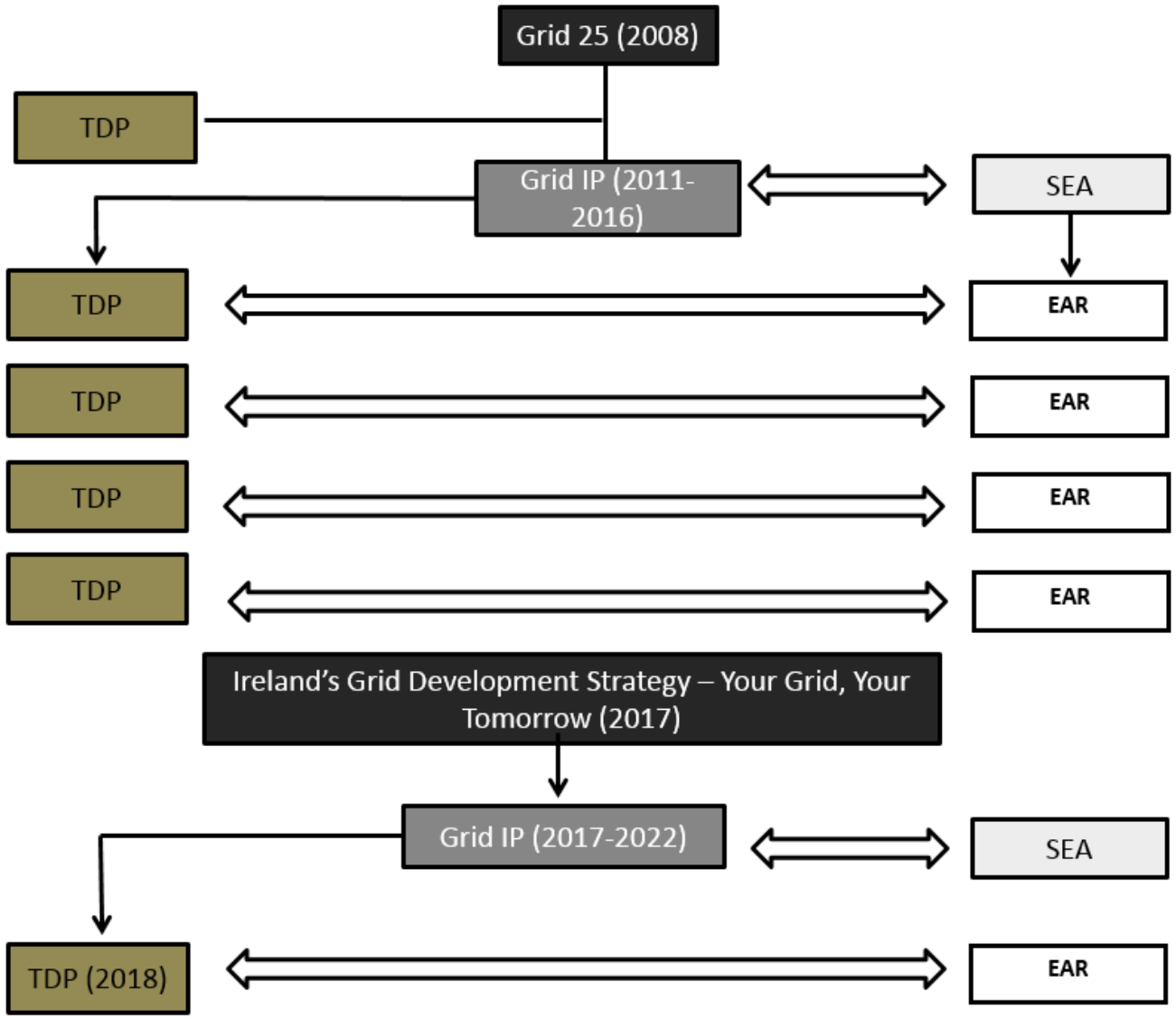

Figure 1.1**: SEA Structure (for pervious Grid25 strategy and associated Implementation Programme, SEA, EAR[1] and TDP and Ireland's Grid Development Strategy – Your Grid, Your Tomorrow (2017) and associated IP, SEA and EAR.**

1.2 Overview of the Grid Implementation Plan 2017-2022

The Grid IP is a high-level Plan which outlines how EirGrid envisages undertaking the development of the electricity transmission grid in the short, medium (over the five-year cycle of the Plan), and in the longer-term to support a sustainable and reliable electricity supply. The Grid IP brings together the high-level strategies outlined in EirGrid's *Ireland's Grid Development Strategy; Your Grid, Your Tomorrow* (2017) and the approved TDP 2016-2026, and details how electricity transmission infrastructure will be developed over the next five years.

TDPs produced over the next 5-year period will be subject to annual environmental assessment reports (EARs) in accordance with the framework set out in the SEA.

[1] The Environmental Appraisal Report is produced to accompany each TDP

1.3 Structure and Content of the Strategic Environmental Assessment Statement

This SEA Statement is the final output of the four-stage SEA process (as outlined in **Figure 1.2**). The purpose of this SEA Statement is to set out how the SEA and responses received during consultation have influenced the final Grid IP.

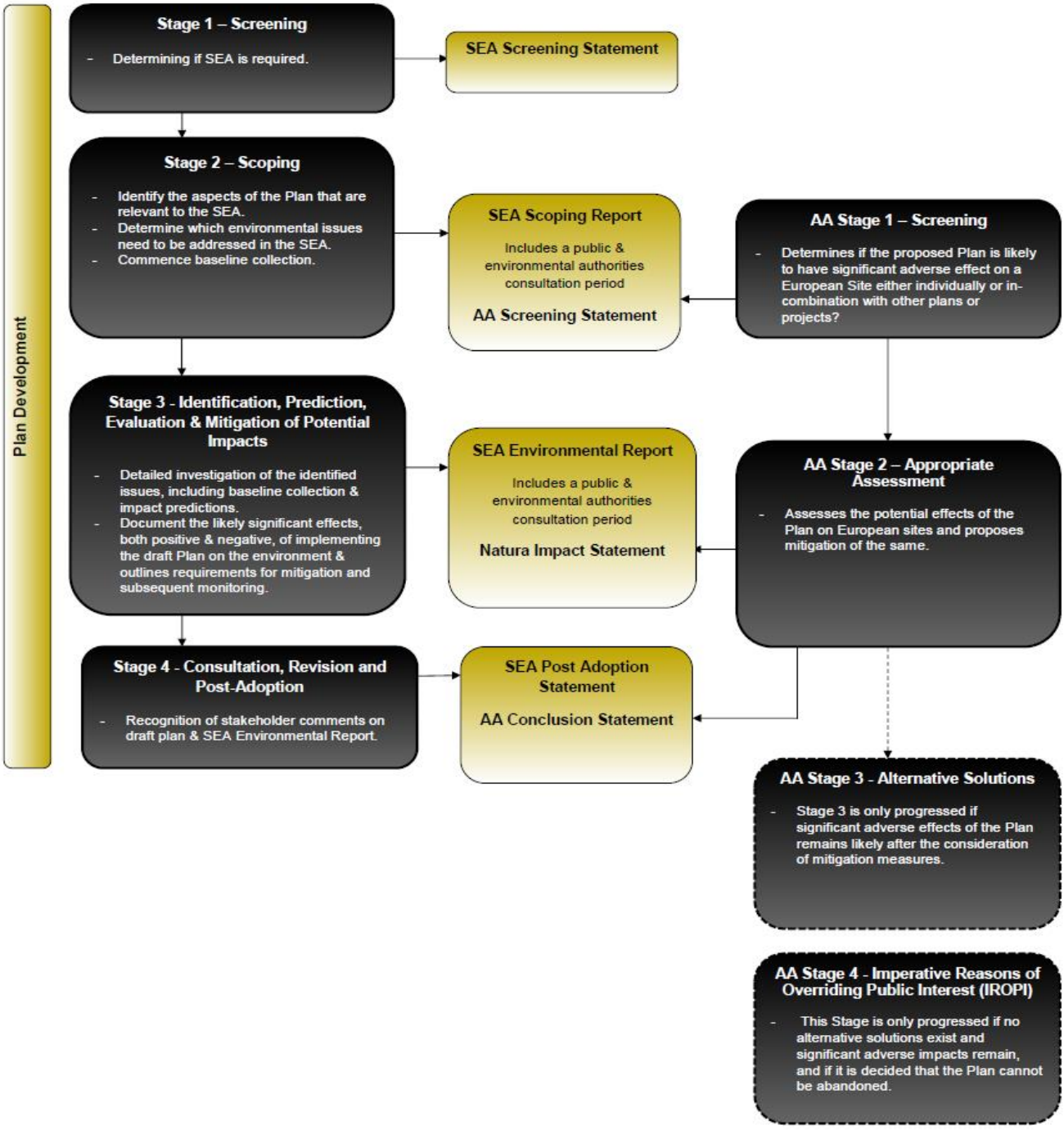

Figure 1.2: SEA/AA Stages and Key Deliverables

2. Summary of the Strategic Environmental Assessment Process

2.1 Screening

Stage 1 Screening (to determine whether SEA was required for the Grid IP, or not) was undertaken in mid-2016. The SEA Screening Statement is available on the EirGrid website (www.eirgridgroup.com).

A pre-screening check was carried out to determine if the Grid IP could be considered to be a plan/programme as defined in S.I. 435 of 2004 (as amended 2011) as those being required under legislative procedures and administrative provisions and falling within the criteria stipulated in Article 9(1).

This process concluded that the Grid IP falls under a sector covered by the SEA Directive, namely energy. The Grid IP sets out a framework for future development of Grid projects, some of which may require EIA. While the Plan does not set a framework for consent of those projects, it could be interpreted as setting the context for future projects. In addition, in the absence of further detailed assessment, it could not be ruled out that the Plan would significantly affect a Natura 2000 site/European Site.

Screening also determined the following factors which resulted in the decision to follow best practice and "screen in" the Grid IP for SEA:

- the draft Grid IP 2017-2022 is a national scale plan covering all regions in the country with potential transboundary implications;
- impacts on European sites could not be ruled out, given the Grid IP was at draft stage and the fact that there were uncertainties regarding potential implications of the policies, objectives and projects arising from the draft Grid IP;
- in the absence of further information or the integration of mitigation measures during the Screening stage, it was considered that the draft Gird IP could have potential to impact on European sites; as a result, in the absence of more detailed information on the Grid IP and projects listed therein during the Screening stage, the precautionary principle was applied;
- in accordance with Article 6(3) of the Habitats Directive, AA of the Grid IP was determined to be required. This is presented in the Natura Impact Statement (NIS); and
- as provisions of Article 9(1) of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations were largely met, it was determined that the SEA process should progress to Stage 2 – Scoping Stage.

EirGrid is not a government body, it is a semi-state company that reports to the CRU who perform their functions on behalf of the Department of Communications, Energy and Natural Resources (DCENR). EirGrid can be considered as the "competent authority" under the SEA Directive and Regulations 2004 (S.I. No. 435 of 2004) for the purpose of this Plan. The Plan however does not need to be formally adopted through a legislative procedure by the Government, rather through an internal adoption process by EirGrid.

2.2 Scoping and Statutory Consultation

Stage 2 of the SEA Process, scoping (established the spatial and temporal scope of the SEA and a decision-making framework that was used to evaluate impacts) was undertaken in late 2016. Scoping identified the aspects of the Plan that were relevant to the SEA, determined which environmental issues were required to be addressed in Stage 3 SEA Environmental Report and commenced the collection of baseline data.

Consultation began with the issue of the SEA Scoping Report to the following statutory Environmental Authorities:

- Environmental Protection Agency (EPA);
- Department of Housing, Planning, Community and Local Government (formerly the Department of the Environment, Community and Local Government);
- Department of Culture, Heritage and the Gaeltacht (formerly the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs);
- Department of Agriculture, Food and the Marine; and
- Department of Communications, Climate Action and Environment (formerly the Department of Communications, Energy and Natural Resources).

Due to the potential for transboundary effects, the following authorities were also consulted at the SEA Scoping stage:

- Northern Ireland Environment Agency (NIEA);
- National Assembly for Wales; and
- The Countryside Council for Wales.

The SEA Scoping Report is available on the EirGrid website (www.eirgridgroup.com).

2.3 Environmental Assessment and Environmental Report

The output of Stage 3 of the SEA process was the SEA Environmental Report. This was issued for public consultation in mid-2018.

The purpose of this SEA Environmental Report was to:

- identify, evaluate and describe the Likely Significant Effects (LSEs) on the environment of implementing the Grid IP;
- ensure that identified adverse effects are communicated, mitigated and that the effectiveness of mitigation is monitored; and
- provide opportunities for public and stakeholder involvement prior to the finalisation of the Grid IP.

2.4 Statutory Consultation of the Draft Plan

In line with SEA Regulations and as part of Stage 4 of the SEA Process, the draft Grid IP and this SEA Environmental Report were issued to the following statutory Environmental Authorities[2]:

- The EPA;
- Department of Housing, Planning, Community and Local Government;
- The Department of Culture, Heritage and the Gaeltacht;
- The Department of Agriculture, Food and the Marine;
- Department of Communications, Climate Action and Environment; and
- NIEA (transboundary related).

[2] Recent governmental changes may require amendments to the exact name convention of these environmental authorities. The EPA have recommended that until a Departmental Circular is issued with the new names of the Departments, that the existing circular is to be used.

In addition to the above statutory Environmental Authorities and Environmental Advisory Group (EAG) members, the following stakeholders were engaged:

- An Taisce;
- Birdwatch Ireland;
- Bord na Móna (BNM);
- Coillte;
- Department of Agriculture, Environment and Rural Affairs (Northern Ireland);
- Department of Transport, Tourism and Sport;
- Environmental Law Implementation Group (ELIG);
- ESBN;
- Fálite Ireland;
- Geological Survey of Ireland (GSI);
- Geological Survey of Northern Ireland (GSNI);
- Inland Fisheries Ireland (IFI);
- Inland Waterways Association of Ireland (IWAI);
- Irish Farmers Association;
- Irish Landscape Institute;
- Landscape Alliance Ireland;
- Office of Public Works (OPW);
- Regional Authorities[3];
- Réseau de transport d'électricité (Rte);
- Sustainable Energy Authority of Ireland (SEAI);
- Teagsac;
- Ministry of the Environment (ministère de l'environnement, de l'énergie et de la mer);
- National Assembly for Wales; and
- The Countryside Council for Wales.

An electronic copy of the draft Grid IP and the SEA Environmental Report were made available to the above stakeholders via email for review and comment. No significant effects have been identified in relation to France or the UK. However, these stakeholders were notified of the release of the draft Grid IP and associated SEA Environmental Report and NIS.

In accordance with articles 13 and 14 of S.I. No. 435 of 2004 (European Communities (Environmental Assessment of Certain Plans and Programmes)) Regulations 2004 (as amended (2011)) the draft Grid IP and associated

[3] Eastern and Midland Region – which comprises the combined territory of the counties of Dún Laoghaire–Rathdown, Fingal, Kildare, Laois, Longford, Louth, Meath, Offaly, South Dublin, Westmeath and Wicklow as well as the territory of the city of Dublin. Northern and Western Region – which comprises the combined territory of the counties of Cavan, Donegal, Leitrim, Galway, Mayo, Monaghan, Roscommon and Sligo as well as the territory of the city of Galway. Southern Region – which comprises the combined territory of the counties of Carlow, Clare, Cork, Kerry, Kilkenny, Limerick, Tipperary, Waterford and Wexford as well as the territory of the cities of Cork and Waterford.

environmental documents were made available for consultation for a 12-week period (30 April to 31 July 2018) with an additional 4-week period of extended consultation up to 31 August 2018.

Environmental Authorities for the purpose of SEA and AA were contacted directly. Newspaper notices advertising the consultation were published in the Irish Independent (3rd May) and the Sunday Business Post (6th May). Notice of the consultation was published on the EirGrid website with visibility on the 'home page' and also on corporate twitter feeds.

The draft Grid IP, Environmental Report and NIS documents were available at the following weblink: http://www.eirgridgroup.com/about/in-the-community/environment/

Submissions could be made by post, through an online survey and by email. Hard copies of the documents were also available to view at EirGrid offices during normal working hours upon request[4].

2.5 Appropriate Assessment and Natura Impact Statement

The Appropriate Assessment (AA) process was carried out in accordance with the following guidance documents:

- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (Department of Environment, Heritage and Local Government (DEHLG[5]), 2010);
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC Environment Directorate-General, 2000);
- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites - Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (The EC, 2002); and
- EPA Integrated Biodiversity Impact Assessment (EPA, 2013).

In addition, European Court of Justice judgements and relevant case law publications (EC, 2006; CVRIA, 2014) have informed the approach to AA and have been taken into consideration during the preparation of Screening for AA and the Natura Impact Statement (NIS) for the Plan.

The NIS dealt with Stage 2 of the AA process which assessed whether the Grid IP (or projects therein) were likely to have adverse effects on the integrity of European sites from those LSEs identified at Stage 1 (Screening).

Several key principles and mitigation measures as set out in Section 7 of the NIS were proposed to ensure that there will be no implications for the conservation objectives of European sites from the Grid IP (or projects therein). With these mitigation measures in place it was determined that there would be no adverse effects on the integrity of European sites from the Grid IP.

It is a requirement that a project level AA Screening, and subsequently an NIS (as required), will be undertaken for five projects identified during the AA process and that these projects will have to take the Plan level NIS into account. The project level AA will incorporate the findings of consultation and field surveys, where appropriate, to inform a detailed assessment and mitigation strategy. The final route, landing points and technology options for the projects will be informed by detailed environmental assessments and feasibility studies for each project. This will be done in line with EirGrid's new six-step Framework for Grid Development. It will be a requirement that in particularly sensitive areas, a minimum of one year of ornithological investigations to identify flight lines, numbers, local concentrations and evidence of ringed birds (which can be used to identify bird movements) will be

[4] During the course of the consultation, it came to the attention of EirGrid that there was a technical issue with the email address provided on some of the consultation media. If an automatic email response to a submission was not received, the public were requested to resubmit any observations. This was communicated through the same channels as the original notice of consultation i.e. newspaper notices, webpage and twitter updates, direct email where appropriate and the consultation period was extended to 31 August 2018

[5] Now the Department of the Environment, Community and Local Government (DECLG).

conducted. The identified mitigation will then be incorporated into the final detailed design of the projects to ensure the integrity of European sites in the region are maintained in the long-term.

The conclusion of the NIS for the Grid IP was that there will be no adverse effects on the integrity of any European site(s), either alone or in-combination with other plans or projects. This conclusion was based on adherence to the key principles for protecting European sites as detailed in the Grid IP (e.g. avoidance of impacts in the first instance). Where impacts cannot be avoided, appropriate and effective mitigation will be implemented at the project stage to ensure no adverse effects on the integrity of any European site(s).

2.6 Strategic Environmental Assessment Statement

This SEA Statement completes the four-stage SEA process. The SEA Statement, in compliance with the SEA Directive and transposing Regulations as amended, includes information that summarises:

- how environmental considerations have been integrated into the final Grid IP;
- how the environmental report, submissions and observations made to EirGrid on the draft Grid IP and SEA Environmental Report, and any transboundary consultations have been considered during the preparation of the IP;
- the reasons for choosing the Grid IP, as adopted, in the light of the other reasonable alternatives dealt with; and
- the measures decided upon to monitor the significant environmental effects of implementation of the Grid IP.

2.7 Adoption of the Grid Implementation Plan 2017-2022

In determining whether the Grid IP could give rise to significant effects on the environment, EirGrid has taken account of the iterative process of developing the Grid IP with influence from the SEA ER and the NIS, consultation with environmental authorities and public consultation. This second Grid IP (2017-2022) is primarily directed towards the manner in which projects are developed and implemented by EirGrid and builds upon the strategic actions developed in the earlier Grid 25 IP (2011–2016).

Two of the fundamental elements of the Grid IP have undergone separate, dedicated public and stakeholder consultation as part of their development.

Irelands Grid Development Strategy was developed with the input of stakeholder feedback following consultation on the draft Grid Development Strategy- your grid, your views, your tomorrow.

All TDPs prepared by EirGrid as part Condition 8(6) of the TSO licence (e.g. TDP 2016-2026, TDP 2017-2027) are open to public consultation as facilitated by the Commission for Regulation of Utilities (CRU).

Therefore, the Grid IP 2017-2022 is focused on ensuring that the most sustainable method of implementing the approved Grid Strategy and TDP is applied.

In adopting the Grid IP 2017 – 2022 and in accordance with S.I. No. 435 of 2004 (European Communities (Environmental Assessment of Certain Plans and Programmes)) Regulations 2004, EirGrid as competent authority has taken account of:

- the Environmental Report,
- the Natura Impact Statement,
- submissions and observations made to EirGrid in response to consultation (under article 13), and
- any consultations under article 14, during the preparation of the plan or programme, or modification to a plan or programme, and before its adoption.

The Grid IP 2017-2022 and all strategic environmental actions outlined therein was adopted by EirGrid on 7 December 2018.

3. Integration of Environmental Considerations into the Plan

3.1 How Environmental Considerations have been Implemented

This section details how both the SEA Environmental Report, and submissions and observations made to EirGrid on the SEA Environmental Report and NIS, have been considered during the preparation of the final Grid IP.

3.2 Submissions and Observations

The consultation period for the draft Grid IP, SEA Environmental Report and NIS lasted a total of 12 weeks, ending on 31 July 2018. Consultation was extended for an additional four weeks. The extended consultation period ended on 31 August 2018. A total of 14 submissions were received during the consultation process, and the resulting actions and updates are summarised in **0** of this SEA Statement.

3.3 Summary of Changes to the Grid IP

3.3.1 Policy and Objective Amendments

In response to feedback received during consultation, several amendments were made to the policies and objectives in EirGrid's IP, as summarised in **Table 3-1** below.

Table 3-1: Amendments to the Existing Policies and Objectives in the draft Grid IP as a Result of Consultation Feedback

Aspect	Policy/ Objective Number	Original Policy/ Objective	Amended Policy/ Objective
General	ENVP1	To uphold best environmental practice in the design and appraisal of transmission development projects.	To apply best environmental practice in the design and appraisal of transmission development projects.
	ENVP2	To develop EirGrid's approach to the protection of the environment in transmission development and make this publicly available.	To continue to develop EirGrid's approach to the protection of the environment in transmission planning and development, and fully integrate this approach throughout the procedures for transmission development and make this framework publicly available.
Biodiversity	ENVP4	To protect flora, fauna and habitats which have been identified in accordance with Articles 12 of the Habitats Directive, the Birds Directive, Wildlife Act 1976 (as amended), the Flora Protection Order (S.I. no. 84 of 1999) and the European Communities (Birds and Natural Habitats) Regulations 2011.	To protect flora, fauna and habitats (terrestrial and aquatic) which have been identified in accordance with Articles 12 of the Habitats Directive, the Birds Directive, Wildlife Act 1976 (as amended), the Flora Protection Order (S.I. no. 84 of 1999), the European Communities (Birds and Natural Habitats) Regulations 2011 and the Alien Species Regulation (EU) No. 1143/2014. This protection will be afforded at the earliest opportunity in the project development process i.e. option selection.
	ENVP5	To promote a pro-active good practice approach to tree and hedgerow management in grid development, with the aim of minimising the impact of transmission development on existing trees and hedgerows.	To promote a pro-active good practice approach to tree and hedgerow management in grid development, with the aim of avoiding in the first instance and minimising the impact of transmission development on existing trees and hedgerows.
	ENVP6	To protect and restore (where possible) trees, hedgerows and groups of trees which function as wildlife corridors, in accordance with Article 10 of the EU Habitats Directive.	To protect and restore (where possible) habitats which function as wildlife corridors, in accordance with Article 10 of the EU Habitats Directive.
Climate Change	ENVP7	To integrate measures to address climate change into grid development, by way of effective mitigation and adaptation responses, in accordance with current guidance and best practice.	To integrate measures to address climate change and climate change resilience into grid development, by way of effective mitigation and adaptation responses, in accordance with current guidance and best practice.
Noise	ENVP9	To facilitate new technologies on transmission infrastructure which minimise noise emissions.	To facilitate new technologies on transmission infrastructure which avoid in the first instance or minimise/mitigate significant noise emissions.
	ENVO6	To give careful consideration to the siting of transmission infrastructure so as to ensure that noise-sensitive receptors are protected from potential noise emissions.	To give careful consideration to the siting of transmission infrastructure so as to ensure that noise-sensitive receptors are avoided where possible and protected from potential noise emissions.
Landscape	ENVP11	To have regard to the objectives of the National Landscape Strategy in its transmission development projects.	To have regard to the objectives and actions of the National Landscape Strategy in its transmission development projects.
	ENVP12	To continue to protect and enhance landscapes through the sustainable planning and design of transmission infrastructure development.	To continue to protect and enhance landscapes and visual amenity through the sustainable planning and design of transmission infrastructure development.

Aspect	Policy/ Objective Number	Original Policy/ Objective	Amended Policy/ Objective
Cultural Heritage	ENVP14	To ensure that the special interest of protected structures, including their curtilages and settings, are protected to the greatest extent possible when considering site or route options for transmission infrastructure development.	To ensure that the special interest of protected structures, including their curtilages and settings, are avoided where possible / protected to the greatest extent possible when considering site or route options for transmission infrastructure development.
Water	ENVP16	That there is no increase in flood risk as a result of transmission development, and to ensure any flood risk to the development is appropriately managed.	**Now amalgamated to ENVP16** To have regard to the Guidelines for Planning Authorities on the Planning System and Flood Risk Management, and Technical Appendices, November 2009, published by the Department of the Environment, Community and Local Government as may be revised/updated when devising grid development projects, and in the preparation of grid development strategies and plans to ensure that there is no increase in flood risk as a result of transmission development, and to ensure any flood risk to the development is appropriately managed.
	ENVP16	To require the use of sustainable urban drainage systems in new developments where appropriate.	
	ENVP17	To have regard to the Guidelines for Planning Authorities on the Planning System and Flood Risk Management, and Technical Appendices, November 2009, published by the Department of the Environment, Community and Local Government as may be revised/updated when devising grid development projects, and in the preparation of grid development strategies and plans.	
	ENVP18	That development of transmission substations will not occur on sites which are below estimated flood levels for Zone A or Zone B.	
Tourism	ENVP 19	To consider the potential impact upon tourism in the development of transmission projects.	To consider the potential impact upon tourism in the development of transmission projects and to protect tourism resources through the appropriate and sustainable planning and design of transmission infrastructure development.
Technical	TP1	To promote and facilitate the sustainable development of a high-quality transmission grid to serve the existing and future needs of the country, in accordance with *Ireland's Development Strategy* 2016.	To promote and facilitate the sustainable development of a high-quality transmission grid to serve the existing and future needs of the country, in accordance with *Ireland's Grid Development Strategy*, legislative requirements, relevant guidance and best practice.
	TP2	To consider all practical technology alternatives in the development of its projects, including maximising use of the existing transmission grid.	To consider all practical technology alternatives and their associated environmental effects in the development of its projects, including maximising use of the existing transmission grid.
	TP3	To continue to be proactive in the development of emerging or innovative technical solutions for the development of the transmission grid.	To continue to be proactive in the development of emerging or innovative technical solutions for the development of the transmission grid with regard to the environment.
Planning and Consent	PCP1	To have regard to relevant legislation and guidelines in respect of planning and consenting of transmission infrastructure development projects and make provision for any policies for the provision of transmission infrastructure set out in these documents. In particular, to	To comply with relevant legislation and have regard to guidelines in respect of planning and consenting of transmission infrastructure development projects and make provision for any policies for the provision of transmission infrastructure set out in these

Aspect	Policy/ Objective Number	Original Policy/ Objective	Amended Policy/ Objective
		have regard to the National Planning Framework and future Regional Spatial and Economic Strategies.	documents. In particular to have regard to the National Planning Framework and future Regional Spatial and Economic Strategies.
Consultation	CEP3	To ensure consultation and engagement feedback is appropriately considered in decision making.	To ensure consultation and engagement feedback is appropriately considered in decision making and that this process is documented.
	CEP4	To facilitate formal complaints and to resolve such complaints in a timely manner.	To facilitate a formal complaints system and to resolve such complaints in a timely manner.

In response to feedback received during consultation, **Table 3-2** outlines the additional policies and objectives that were included in EirGrid's IP.

Table 3-2: New Policies and Objectives Adopted in the final Grid IP as a Result of Consultation Feedback

Aspect	Policy/ Objective Number	New Policy/ Objective
Landscape	ENVP13	To seek to avoid and reduce visual impact on residential receptors in the development of transmission projects
Water	ENVP17	To protect the water environment, water quality and aquatic ecology in accordance with the EU Water Framework Directive, in the development of its transmission projects.
Marine	ENVP20	To promote a pro-active good practice approach to marine management in grid development with the aim of minimising the impact of transmission development on the marine environment.
	ENVP21	To protect the marine environment, in accordance with any plans made under the EU Directive 2014/89/EU (Marine Spatial Planning).
Geology and Soils	ENVP22	To ensure that geological heritage features are protected to the greatest extent possible when considering site or route options for transmission infrastructure development.
General	ENVO1	To ensure that transmission development projects follow the standard approach to environmental assessment of transmission projects set out in the EirGrid topic specific guidelines: EMF & You, Power Lines and Your Health - Answering Your Questions and any future EirGrid guideline documents.

3.3.2 SEA Recommendations Amendments

In response to feedback received during consultation, an additional SEA recommendation was added to Section 13.3.5 of the Grid IP, as follows:

'The EirGrid Strategic Environmental Constraints Mapping will be reviewed against the current knowledge base during this cycle of the Grid IP. The system will be updated where necessary to take account of new development in this area'.

3.4 Summary of Changes to the SEA Environmental Report

The summary of changes made to the SEA Environmental Report, and the submissions to which they relate, and presented below in **Table 3-3**.

Table 3-3: Summary of Changes to the SEA ER and the Submissions to which they Relate

Section Requiring Amendment	Submission Topic	Relevant Submission ID	Summary of Amendment
Section 2.1 Why is the Grid Important?	National Planning Framework (NPF)	EIR9	New text has been added to the section in relation to why the grid network is so important and how this is backed up by the findings of the NPF. The NPF states energy is a key factor in the future growth and development of Ireland out to 2040. The NPF also highlights the need for interconnection to strengthen the grid. the NPF has set out the Transition to a Low Carbon and Climate Resilient Society as a National Strategic Outcome and a priority of the National Development Plan 2018-2027. Within this it notes that the National Climate Policy Position establishes the national objective of achieving transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050.
Section 4.2.1 Appropriate Assessment	Habitats Directive Requirements	EIR14	Text added to this section to outline that EirGrid are the competent authority as per the requirements of the Habitats Directive, and in their capacity as competent authority, EirGrid have employed a consultant to carry out AA to ensure independence of the Plan development and assessment process.
Section 6 Baseline Information	Evidence Based Environmental Studies	EIR9	Text has been added to link the evidence-based study to each environmental topic for which a study was produced. Cross references have been included under each applicable topic to its relevant study in Section 6.14 of the SEA Environmental Report.
	Key Interactions	EIR9	Text has been added to this section to clarify the key interactions between the Plan and each relevant environmental topic.
Section 6.2.2 Future Trends	Population	EIR9	Text has been added to this section to outline the expected population density increases in urban areas over the Plan period. The NPF predictions for additional jobs and housing by 2040 has also been factored into the future evolution of the baseline.
	Brexit	EIR14	Text has been added to the evolution of the economic baseline to highlight that Brexit could have a significant impact on the Irish economy.
Section 6.3.1 Current Conditions	Peatland Strategy	EIR9	Text has been added to this section in relation to the *National Peatland Strategy*, a *Draft Raised Bog SAC Management Plan*, and a *Raised Bog NHAs Review*, which will aim to protect and manage significant peatlands in Ireland
	Aquatic Ecology	EIR8	Aquatic ecology has been included in the baseline for biodiversity. A non -exhaustive list of aquatic factors, in addition to water quality and surface water hydrology has been included and these have been factored in the SEA.
Section 6.7.2 Future Trends	Equine Industry	EIR14	Text has been added to the evolution of the baseline for land use which outlines that potential for the growth of the equine industry in light of technological advances.
Section 6.8.1 Existing Condition	Air Pollution and Human Health	n/a	Additional text has been included in this section to outline the potential health risks associated with air pollution. The National Clean Air Strategy is now being developed and has subsequently been included in the baseline for this topic.
Section 6.11.1 Existing Condition	Tourist attractions	EIR6	'Beautiful scenery', 'good range of natural attractions' and 'natural, unspoilt environment' scored highly on the importance of environmental factors for considering Ireland for a holiday in the Fálite Ireland Visitor Attitudes Survey in that, 2016. Therefore, these factors are required to be considered in developing the transmission network.

Section Requiring Amendment	Submission Topic	Relevant Submission ID	Summary of Amendment
Section 6.13 Transboundary Issues	Transboundary effects	EIR1, EIR12	This section clarifies that the SEA considers, where relevant and/or appropriate, potential transboundary effects in Northern Ireland. In addition, mitigation which has been developed as part of this SEA can be applied for any potential transboundary effects in the same way they will be applied for effects in the Republic of Ireland. A summary of the environmental baseline for Northern Ireland has also been included in this section.
Section 7 Programmes, Plan and Policy Review	Programmes, Policies and Plans	EIR1, EIR14	The NPF was updated to a published date of 2018 and the Marine Spatial Planning Directive (2014/89/EC) and the Wind Energy Guidelines 2006 are included as relevant Plans and Policies to the SEO Themes of Water and Material Assets and Infrastructure, respectively.
Section 8 Key Environmental Issues	Environmental Issues Relevant to the Grid IP	EIR14	The impact of Brexit is now considered under the theme of Population, Human Health and the Economy.
		EIR12	The issue that cultural heritage sites may contain more extensive, previously unidentified below ground remains is now considered under the theme of Cultural Heritage, Archaeology and Architectural.
		EIR9	The need for the Grid IP to incorporate resilience of the network to the effects of climate change such as more extreme weather events including storms, high winds, lightning strikes, mudslides and wildfires is now considered under the theme of Climate Change.
Section 10.5 Appropriate Assessment	European Court of Justice Judgements	EIR5	Text has been included to clarify that judgements and case law have informed the approach to AA and were taken into consideration during the development of AA Screening and the NIS for the Grid IP.
Section 11.2 Inherent Mitigation	Transboundary Effect	EIR1, EIR12	Text has been added to clarify that all mitigation identified as part of the SEA process can be applied for transboundary effects in the same way it will be applied for projects in the Republic of Ireland.
	SEA Compliance/ Internal Procedures	EIR14	Text added outlining that EirGrid will develop an SEA compliance check within the six-step framework for grid development to facilitate the monitoring recommended as part of the SEA Environmental Report. Text has also been added clarifying that EirGrid have internal procedures that require screening for AA for all procedures including those that are deemed exempt development.
Section 11.3.1 Assessment of Objectives and Policies	Policies and Objectives	EIR6, EIR9	The assessment of the Grid policies and objectives has been updated to account for all amendments to policies and objectives resulting from feedback received from consultation. An assessment was also carried out for new policies and objectives which have been added to the Grid IP.
		n/a	Table 11.14 which outlines the key actions identified in the State of the Environment Report and the Grid IP Policies and Objectives that support them was updated to reflect the changes to the policies and objectives and to include any of the new policies and objectives, where applicable.
Section 11.4.1	Protection of species in the	EIR8	Text has been added to the project assessments for the Shannon Estuary Crossing and the North West Project to clarify that the progression of these projects through these processes will facilitate the avoidance of long term significant effects such as habitat

Section Requiring Amendment	Submission Topic	Relevant Submission ID	Summary of Amendment
Project Assessment	Habitats Directive, including European Eel		loss, effects on SPAs/SACs, effects on the species requiring protection under the Habitats Directive, including European Eel (now an endangered species).
	Shannon Integrated Framework	EIR9	Text outlining that the Shannon Estuary Crossing Project will need to adhere to the Shannon Integrated Framework Plan which sets out the overall strategy for the proper sustainable growth, development and environmental management of the Shannon Estuary Region
Section 12.1.2.3 Environmental Advisory Group (ER4)	Setting thresholds for monitoring indicators	EIR9	Text has been included as part of this recommendation that thresholds for specific monitoring indicators will be agreed between EirGrid and the EPA as part of the function of the EAG.
Section 12.1.2.4 Environmental Enhancements (ER5)	Guide/ tool kit for environmental enhancement	EIR9	Text has been added to this recommendation to recommend that a guide/ tool kit for natural environment enhancement/ mitigation should be developed by EirGrid and findings if the relevant Evidence Based Environmental Studies (EBES) could be used to inform this guide/tool kit.
Section 13 Monitoring Framework	Transboundary Effects	EIR1, EIR12	Text has been added to this section to clarify that all monitoring measures will apply to any transboundary effects.
Appendix B	Marine Spatial Planning	EIR1	The Maritime Spatial Planning Directive (2014/89/EU) has been considered as part of the relevant legislation considered in the SEA process.
	Environmental Impact Assessment Directive	EIR2	Text has been added to clarify that the EIA Directive (2014.52.EU) came into effect in Ireland in September 2018.
	UK Marine Policy Statement	EIR1	The UK Marine Policy Statement has been considered as part of the relevant plans and policies considered in the SEA process.
	National Development Plan	n/a	The National Development Plan has been considered as part of the relevant plans and policies considered in the SEA process.

3.5 Comments not requiring changes to the SEA or the Grid IP

During the consultation process, a small number of comments were received which have not resulted in changes to the SEA Environmental Report or the Grid IP. These comments were considered during an internal review process, and included the following:

- Requests to consider future or expected policy or plan modifications were noted for future action; these will be addressed, once published, through the regular Grid IP/SEA review process.

- Queries on the requirement for SEA, for other documents in the strategic hierarchy, and on EirGrid's role and responsibility for undertaking SEA and AA on the draft Grid IP; the requirements and responsibilities in relation to the relevant regulations are clarified in **Appendix A**.

- Queries on the SEA requirement for wind energy guidelines, and the design and planning process for wind farms or comments on government policy or targets; these comments are addressed in Appendix A, although it is noted that these are outside EirGrid's scope of operation and statutory remit.

- Requirement for greater detail on economic factors such as the rural economy and the implication of Brexit for assessment in the SEA ER and Grid IP; while some minor amendments are made in the SEA Environmental Report and Grid IP, the level of detail is considered appropriate and future actions such as implications of Brexit will be kept under review as part of the scenario planning.

Detailed responses outlining the reasons why these comments did not result in changes to the SEA Environmental Report or Grid IP are outlined in **Appendix A** of this report.

4. Reasons for Selecting the Final Plan

4.1 Introduction

The SEA Directive requires the SEA process to identify and describe 'reasonable alternative' means of achieving the Grid IP objectives to ensure that the most favourable option is taken forward in terms of technical, social and environmental aspects. Alternatives to the Grid IP were considered taking account of the objectives and geographical scope of the Grid IP and with a view to identify other potential ways that EirGrid could achieve an appropriate and sustainable approach to the planning and consenting of transmission projects.

In this regard, alternatives were considered across three levels; at the Plan level, scenario planning and project level alternatives. The assessment of alternatives for each of these approaches is presented in Section 11 of the SEA Environmental Report.

4.2 Alternatives Considered

4.2.1 Plan Alternatives

The Plan alternatives were identified as potential ways that EirGrid could achieve an appropriate and sustainable approach to the planning and consenting of transmission projects, and they were assessed on this basis. The following are considered to be reasonable alternatives to the Grid IP:

- **Alternative 1** – No implementation plan, with reliance on Ireland's Grid Strategy only;
- **Alternative 2** – Continuation of the application of the previous Plan - Grid 25 Implementation Plan; and
- **Alternative 3** – Grid Implementation Plan 2017-2022.

A no Plan, 'no development' alternative was initially considered. However, this was not deemed a reasonable alternative which would allow EirGrid to meet their legal obligations as a TSO and on this basis, was not considered further.

4.2.2 Scenario Planning

As part of the process to plan the development of the electricity transmission grid to meet future needs, EirGrid has developed a range of four scenarios which could potentially emerge and influence how electricity generation and consumption might change over time. The grid needs to be sufficiently flexible to enable it to manage the supply and demand patterns which emerge under each potential scenario, whilst still ensuring fulfilment of sustainability objectives. Scenario planning therefore aims to encourage flexible, robust and sustainable approaches to grid development. EirGrid sought feedback through public consultation on these four scenarios, and the consultation period ended in April 2017.

The aim of this scenario planning is to allow EirGrid to better plan the long-range needs of the Irish Transmission System out to 2040 and to demonstrate how the electricity grid enables the achievement of national and international policy objectives. The scenarios will be reviewed every two years and include any new information available. The four draft scenarios are summarised in **Table 4-1**.

Table 4-1: Planning Scenarios

Scenario	Description
Steady Evolution	Steady improvements in the economy and in technologies which generate electricity result in renewable electricity generation continuing to grow at a steady pace. New consumer technologies help to increase energy efficiency in homes and businesses.
Slow Change	Slow economic growth and a slow response to renewable policies results in little change in the way electricity is generated. The adoption of new technologies at residential, commercial and electricity generation levels has been slow due to a risk adverse approach. Ireland's 2030 emission targets are missed under this scenario.
Low Carbon Living	High economic growth encourages the creation and rollout of new technologies for low carbon electricity generation. A strong public demand to reduce GHG emissions, in addition to high carbon prices and incentives for renewables, creates a high level of renewable generation on the grid.
Customer Action	A strong economy leads to high levels of consumer spending ability. The public want to reduce greenhouse emissions therefore electricity consumers enthusiastically limit their energy use and generate their own energy. This results in many community led energy projects and a rapid adoption of electric vehicles and heat pumps in the home.

Scenario planning is an iterative and ongoing process in constant review and is independent of the IP and SEA, It is based on long range forecasting of possible adaptions required on the Grid to cope with changing context for energy use and policy. The current step of the scenario planning is a System Needs Assessment out to 2040 and is outside the timeframe of the IP and current SEA. However, as the process develops it will influence the identification of long range needs of the Grid.

EirGrid take a cyclic approach to scenario development. Involving stakeholders in the development cycle helps EirGrid to ensure the continuous improvement of planning scenarios.

The next scenario development cycle will begin in spring 2019.

4.2.3 Project alternatives

The EirGrid six-step framework provides a process for considering project alternatives including routing and technology but as this is a downstream action and alternatives for individual schemes are not assessed in the IP.

4.3 Evaluation of Alternatives

4.3.1 Methodology

The three plan alternatives were assessed against the SEA assessment criteria developed during the SEA process, as outlined in **Table 4-2**.

Table 4-2: SEO Objectives and SEA Assessment Criteria

SEO	Topic	Description
PHH1	**Population, Human Health & the Economy**	To minimise the proximity of development to concentrations of population and to mitigate potential effect of development in order to reduce actual and perceived environmental effects
B1	**Biodiversity (Flora & Fauna)**	Ensure compliance with the Habitats Directive with regard to protection of designated European Sites including Article 10.
B2		Avoid significant impacts on protected habitats, species, environmental features or other sustaining resources in and outside designated Wildlife Sites (including but not limited to NHAs and pNHAs).
L1	**Landscape & Visual Amenity**	Avoid significant adverse impacts on landscape character and designations
L2		Avoid or minimise adverse visual effects on residential receptors.

SEO	Topic	Description
CH1	Cultural Heritage	Avoid impacts upon archaeological heritage (including entries to the RMP) and architectural heritage (including entries to the RPS and NIAHs).
GS	Geology & Soils	To avoid or minimise effects on mineral resources or soils.
LU	Landuse	To avoid or minimise effects on existing land use.
W1	Water	Prevent impact upon the status of surface and groundwater in line with the objectives of the WFD as outlined in the River Basin Management Plan
MAI1	Material Assets & Infrastructure	Minimise effects upon the sustainable use of the land, mineral resources or soils.
MAI1		Minimise effects upon the existing and planned infrastructure.
TR1	Tourism	Minimise effects upon the tourism and recreation amenities.
CC1	Climate Change	Help to facilitate the achievement of higher level targets contained in the Government's Energy White Paper, 'Ireland's Transition to a Low Carbon Energy Future 2015-2030' and targets relating to the Kyoto Protocol.

Description of Effect	Effect
Likely to have a positive effect	+
Likely to have a negative effect	–
Effects are uncertain/there is insufficient information on which to determine effect	?
Likely to have a neutral effect	*
Likely to have a mixed positive & negative effect	+/ –
Likely to have a mixed negative & positive effect	–/+

Table 4-3 provides a high-level assessment of the Grid IP plan alternatives. The Plan alternatives were identified as potential ways that EirGrid could achieve an appropriate and sustainable approach to the planning and consenting of transmission projects and were assessed on this basis. These were:

1) No implementation plan with reliance on Irelands Grid Strategy - development without the framework of a plan covering targeted policy and objectives;

2) Continuation of Previous Plan- Grid 25 Implementation Programme - applying the policies and objectives from the previous plan; and

3) Grid Implementation Plan 2017- 2022 - applying new policies and objectives identified in draft Grid IP published for consultation and amended in response to comments.

The assessment concluded that the updated Grid IP was the preferred alternative. Whilst the implementation of the Grid IP could result in some negative environmental impacts in general the implementation of the Grid IP, in compliance with its specified policies and objectives, would likely result in overall stronger positive effects.

Table 4-3: Plan Alternatives Assessment

Alternative	SEOs											Consideration
	PHH1	B1	B2	L1	L2	CH1	W1	MAI1	MAI2	TR1	CC1	
1) No Plan - With reliance on the Grid Development Strategy	-/+	-/+	-/+	-/+	-/+	-/+	-/+	-/+	-/+	-/+	-/+	In the absence of the Grid IP, grid development would still occur, but it would not be framed by targeted policies and objectives designed to ensure sustainable grid development. This could result in a more ad hoc approach to grid development and there would be some uncertainty with regards achievement of the SEOs. There would be a mixture of positive and negative effects on the SEO's. Any development would be subject to planning/legal processes that would reduce potential environmental effects. However, this alternative does not take account of the environmental policies included in the Grid IP. These would have positive impacts in relation to protecting the environment with respect to future grid development.
Comparative assessment	Overall greater likelihood of conflict with SEOs compared to alternatives 2 and 3											
2) Continuation of Previous Plan- Grid 25 Implementation Programme	-/+	-/+	-/+	-/+	-/+	-/+	-/+	-/+	-/+	-/+	-/+	This alternative would involve development of the projects identified in the Grid IP by applying the policies and objectives from the previous plan. Applying the previous plan policies would not take account of 1) The strengthened policies developed through the SEA process and adopted in the Grid IP. 2) The progress and commitments made by EirGrid with regard to key areas such as social impact assessment, environmental assessment and public consultation for future development. 3) The recommendations and mitigation in the SEA Environmental Report for the Grid IP. The previous plan is recognized to include some policies and objectives for environmental protection and the planning/legal process would provide some basis for reducing environmental adverse effects. However, the development of proposed projects in the absence of updated policies and objectives would likely result in stronger negative effects or more protected project development timeframes.
Comparative assessment	Overall potential for greater conflict with SEOs compare to Alternative 2 (Updated Grid IP 2017 -2022)											

Alternative	SEOs											Consideration
	PHH1	B1	B2	L1	L2	CH1	W1	MAI1	MAI2	TR1	CC1	
3) New and updated Grid Implementation Plan incorporating Irelands Grid Strategy, updated and strengthened environmental policies and objectives and the TDP 2016 – 2026 plus major projects from TDP 2017 - 2027 i.e. 2017-2022 Plan (Preferred Alternative)	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	The Grid IP outlines the current understanding of the grid development over the next six years. This grid development has been guided by defined and relevant protective policies aimed at meeting EirGrid's legal, planning and licensing obligations. The fact that implementation of the Grid IP would have some adverse impacts is recognized as a negative. However, in general the implementation of Grid IP in compliance with policies and objectives would likely result in stronger positive effects.
Comparative assessment	Overall potential for conflict with SEO reduced and potential for meeting SEOs with strengthened commitment to consultation, scheme options assessment and evidence-based studies, mitigation guidelines and monitoring compared to Alternative 2.											

Given the nature of the Grid IP many of the differences between the previous and new updated plan relate to the strength of additional protection policies and objectives and also the emphasis on upgrading compared to new build and commitment for consultation and options assessment.

4.4 Final Preferred Plan

The Grid IP has been further strengthened following public consultation with the inclusion of additional protection policies and objectives. These changes are discussed in **Section 3.3**. The final Grid IP is the preferred Plan as the overall potential to conflict with Strategic Environmental Objectives is reduced and its potential to meet Strategic Environmental objectives has been strengthened. This is to be achieved through commitment to consultation, scheme options assessments and evidence-based studies and mitigation guidelines. A summary of the key differences between the previous and new Grid IP are outlined in **Table 4-4** below and an explanation for the preference in selecting the updated Grid IP is also included.

Table 4-4: Reasons for selecting the Grid IP

Grid IP 2011 – 2016 (Old Version)	Grid IP 2017 – 2022 (New Version)	Preferred Option to Take Forward
Estimated cost of the delivery of Grid25 in 2011 was €3.2bn	The estimated cost of the delivery of Grid25 in the current strategy is between €2.6 – 2.9bn[6]. This reflects the emphasis that EirGrid are now placing on refurbishing and upgrading current grid assets.	Grid IP 2017- 2022 – due to increased reliance on upgrading and refurbishing existing assets and the reduced environmental effects associated generally with these compared to new build.
In the lifespan of this plan 18 projects were completed which were not carried forward to the Grid IP 2017 – 2022	A total of 34 new projects have been brought forward in Grid IP 2017 – 2022 including the Celtic Interconnector Project and the Regional Solution, both of which aim to strengthen the electricity grid in Ireland to meet future requirements	Grid IP 2017- 2022 The new projects provide potential for long term customer benefits.
A mitigation measure was identified in the previous Grid IP to include '*full integration of planning and environmental considerations in EirGrid's transmission system planning*'	**The Framework for Grid Development**: replaces EirGrid's three phase approach to grid development to allow for greater stakeholder participation in the development of grid infrastructure projects. This is a six-step process for all EirGrid grid development projects which integrates the technical development of a project with enhanced engagement (with stakeholders, communities and landowners), environmental assessment and social assessment. It also provides enhanced governance points throughout the process.	Grid IP 2017- 2022 with a more robust, detailed and inclusive framework likely to lead to improved project outcomes in relation to the SEOs.
Grid 25 – "A Strategy for the Development of Ireland's Electricity Grid for a Sustainable and	**Revised Grid Strategy (2017): Irelands Grid Strategy**	Grid IP 2017- 2022 provides a framework which can limit environmental effects with

[6] This also includes the cost of the southern element of the North-South Interconnector, which had not been previously factored in the delivery of Grid25

Grid IP 2011 – 2016 (Old Version)	Grid IP 2017 – 2022 (New Version)	Preferred Option to Take Forward
Competitive Future", published by EirGrid in October 2008. This original strategy was developed to plan for the longer-term future strategic transmission development and reinforcement needs of the electricity transmission network. This Strategy was based on the likely demands for electricity in 2025. Grid 25aimed to develop a safe, secure, reliable and economic and efficient grid and placed an emphasis on building new lines at 400 kV and at 110 kV where appropriate. Building at 400 kV rather than 220 kV is more efficient and provides greater power carrying capability. Building one 400 kV circuit avoids the need for building a multiplicity of 220 kV and 110 kV lines and so has less long-term impact on the environment and on local communities.	This was developed with stakeholders and through public consultation and is based on the three broad strategy statements which differ significantly from the original Grid25 approach. It allows for a more inclusive consultation process with local communities and stakeholders. A new approach to engagement when developing the grid was developed. Consideration has been afforded to all practical technology options. EirGrid are committed to engaging with the public before identifying a preferred technology. This consultation will explain the transmission technology options, and then seek feedback from stakeholders. This will help EirGrid to determine the best transmission technology for future projects and ensure commitment to looking for alternative options that may avoid or reduce the need for new overhead lines. Allows for the continued maximisation of the use of the existing electricity grid with an aim to avoid constructing new lines or cables, where possible. This will be achieved by increasing the capacity of existing infrastructure, or by using new technologies. This strategy lowers costs and ensures that there will be potentially less impact on the environment and on local communities and is reflected in the greater reliance on existing infrastructure upgrading.	the emphasis on use of upgrading and also provide a basis for optimising individual scheme routes and design and technology use to minimise effects taking account of stakeholder views.
The previous Grid IP is not set up as effectively as the new Grid IP to respond to different energy planning scenarios.	**Development of Energy Scenarios** The Grid IP 2017- 2022 has examined potential future needs of the grid through developing four energy scenarios. The new Grid IP can provide a better framework to respond as different scenarios may evolve in the future. This also allows for reviews to be carried out to assess which scenario is developing as the most appropriate for future adaptation.	Grid IP 2017- 2022 provides a framework for coping with a range of different scenarios.

5. Recommendations, Mitigation and Monitoring Measures

5.1 SEA Recommendations

All grid development projects will be subject to inherent mitigation including EirGrid's six-step Development Framework, appropriate planning processes, and construction best practice as set out in Section 11.2 of the SEA Environmental Report. On a precautionary basis some unknown effects have been identified.

This section outlines the recommendations proposed in relation to grid development as part of the Grid IP. These SEA recommendations will contribute to EirGrid Strategy Statements and will complement the existing inherent mitigation as set out in Section 11.2 of the SEA Environmental Report. These recommendations will also facilitate effective monitoring of the SEA Objectives throughout the Grid IP plan cycle.

5.1.1.1 Review and update of the EirGrid Evidence Based Environmental Studies (ER1) and the EirGrid Environmental Guidelines (ER2)

As outlined in objective ENVO2 of the Grid IP, EirGrid intend "*To continue to prepare and/or update EirGrid evidence-based environmental guidelines, particularly in the context of new or updated evidence-based environmental information*" EirGrid are committed to the continuous review and update of their environmental studies and associated guidelines, where required. The EirGrid environmental studies will be reviewed against the current knowledge base during this cycle of the Grid IP. The studies will be updated where necessary to take account of new developments and new research in the field.

5.1.2 SEA Compliance Check (ER3) integrated into the Transmission Development Process

EirGrid will develop an SEA compliance check within the six-step framework for grid development to facilitate the SEA monitoring as outlined in Section 12 of this SEA Environmental Report. The SEA compliance check will be adapted for each stage of the six-step framework and will be proportionate to the project scale i.e. from projects that are exempted development to SID projects. This SEA compliance check will extend to Step 6 of the six-step framework for Grid development i.e. the construction phase. This process will be documented through a standardised compliance check template and the findings will be reported in the annual EirGrid EAR reports.

5.1.2.1 Environmental Advisory Group (ER4)

The Environmental Advisory Group (EAG) will continue to function during the second cycle of the Grid IP and will meet over the cycle of the Plan to discuss SEA monitoring, the EARs, and the progress of the recommendations as may be required. The annual EARs will be sent to all EAG members for information as part of the ongoing rolling Transmission Development Plans.

In addition, it is recommended that an agreement is to be made between EirGrid and the EPA (a member of the EAG) with regard to setting threshold levels for specific monitoring indicators, both in general and for specific projects as appropriate.

5.1.3 Environmental Enhancements (ER5)

In the development of new infrastructure and upgrading of existing infrastructure EirGrid will consider, where practicable, measures that could be taken to enhance the natural environment and to improve the biodiversity of the areas in which their facilities are located.

It is recommended that EirGrid consider developing a guide/ tool kit for natural environment enhancement/ mitigation which could be informed by the relevant Evidence Based Environmental Studies (EBES) and related guidelines. This tool could then assist in the identification of potential enhancement opportunities and management

measures. There are also the potential merits associated with piloting agreed measures across a range of habitat types, where appropriate, in consultation with key stakeholders.

This could involve ecological management of overhead lines that are adapted to local site conditions and take into consideration the local ecological and social objectives, functions and interests.

5.2 SEA Mitigation Specific to Grid Development

5.2.1 Bird Study in the Northwest Area (EM1)

Prior to the selection of the route and technology to be used for the two major infrastructure projects in the north-west, namely the North-West Project and North-Connaught projects - a study of migratory birds and their routes, will be undertaken to inform the selection of the route and/or technology to be used having regard for other constraints. Detailed ornithological surveys to identify flight lines, numbers, local concentrations and evidence of ringed birds (which can be used to identify bird movements) will be undertaken. This will inform the most appropriate route option and technology options to avoid significant impacts. This study will build upon any work undertaken to date for the North-West Project and will also have regard to potential cumulative effects from other projects in the region.

5.2.2 Alternatives Assessment and Cumulative Assessment (EM2) Mitigation

Alternative assessment is a fundamental part of the EirGrid six-step framework, including an assessment of the environmental impact of each technology option in order to understand the environmental implications of a proposed project. No further or specific mitigation measures or recommendations were proposed in the SEA.

This SEA Environmental Report has presented a non-exhaustive list of projects in addition to some of the larger projects outlined in the draft Grid IP, such as the Celtic Interconnector. A number of these projects or future projects could result in cumulative impacts with Grid development projects at the project level scale. EirGrid undertake cumulative impact assessment as part of their project assessment process such as EIA and AA. EirGrid will use best practice documents including the UK Planning Inspectorate Advice Note 17: Cumulative effects assessment relevant to nationally significant infrastructure projects (Planning Inspectorate, 2015) when undertaking EIA.

As part of the planning process, EirGrid will consult will local authorities in the form of county planning departments and with key infrastructure developers (such as TII, Irish Rail and Irish Water, and private wind farm developers), to gain an understanding of the projects proposed in an area that could result in cumulative effects with grid development.

5.3 Monitoring Measures

The SEA Directive requires that any significant environmental effects resulting from the implementation of plans and programmes are monitored. The SEA Environmental Report included draft proposals for consultation covering the monitoring of potential significant effects which might arise as a result of the implementation of the Grid IP.

The final monitoring framework provided in **Table 5-1**, has been developed for the Grid IP using the SEA objectives and indicators outlined in the SEA Environmental Report. The purpose of this monitoring is to:

- provide the evidence needed to monitor and manage the potential significant negative effects and unforeseen effects of the draft Grid IP during detailed project development; and
- monitor the baseline environmental conditions for all SEA objectives and inform the planned six-yearly update of the Grid IP when all available monitoring data will be reviewed.

The monitoring frequency for each indicator will vary depending on availability of data however, where available, these will be recorded annually. Monitoring will commence as soon as the final Grid IP is implemented. It is noted

that (EMM3) Environmental SEA Compliance Check will facilitate the SEA monitoring and will be adapted for each stage of the project development and project scale.

Any effects or issues identified during SEA monitoring will be used to inform the development of the next Grid IP. It is also important to note that the monitoring framework will also apply for any potential transboundary effects.

Table 5-1: SEA Objectives, Target and Indicators: Monitoring Framework

Theme	Objective	Target	Indicator	Source
Population, Human Health & the Economy	**PHH1:** To minimise the proximity of development to concentrations of population and to mitigate potential effect of development in order to reduce actual and perceived environmental effects.	**PHH1_T1:** Noise levels emanating from the proposed development following commissioning, when measured externally at a noise sensitive location shall not exceed recommended guideline values.	**PHH1_I1**: Maximum noise level emanating from the installation at the façade of any near sited residential properties shall not exceed levels specified in the EPA's Guidance Note for Noise (NG4).	**a)** Monitoring of the effects of development required under separate processes (such as planning conditions). **b)** As applicable review of: • Route/Option Selection Reports as appropriate. • Environmental Reports. • EISs. • Final project documents. • Complaints procedure.
		PHH1_T2: Ensure compliance with all authoritative international and national guidelines for Extremely Low Frequency (ELF) EMF exposure.	**PHH1_I2:** Compliance with all authoritative international and national guidelines for ELF EMF exposure.	
		PHH1_T3: Avoid where possible routing of overhead transmission line infrastructure within 50m of existing dwellings.	**PHH1_I3:** Number of existing dwellings within 50m of overhead transmission line development.	
Biodiversity, Flora & Fauna	**B1:** Ensure compliance with the Habitats Directive with regard to protection of designated European Sites including Article 10.	**B1_T1**: Maintenance of favourable conservation status for all habitats and species protected under the Habitat Directive potentially affected by the implementation of the draft Grid IP.	**BI_I1:** Number of EirGrid projects subject to Imperative Reasons of Overriding Public Interest (IROPI). **BI_I2:** Number of Adaptive Management requirements post project completion.	Review of: • Route/Option Selection Reports. • Environmental Reports. • EISs. • AA Screening Statements. • NISs. • Final project documents. • Derogation licences. • Monitoring proposals contained within the above.
		B1_T2: No significant ecological networks or parts thereof which provide functional connectivity to be lost without remediation resulting from development provided for by the draft Grid IP.		
	B2: Avoid significant impacts on protected habitats, species, environmental features or other sustaining resources in and outside designated Wildlife Sites (including but not limited to NHAs and pNHAs).	**B2_T1:** Avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources resulting from development provided for by the draft Grid IP.	**B2_I1:** Number of significant impacts post mitigation on relevant habitats, species, environmental features or other sustaining resources resulting from development provided for by the draft Grid IP.	
			B2_I2: Number of Adaptive Management requirements post project completion.	

Theme	Objective	Target	Indicator	Source
Landscape & Visual Amenity	**L1:** Avoid significant adverse impacts on landscape character and designations.	**L1_T1:** No avoidable impacts on the landscape resulting from development provided for by the draft Grid IP.	**L1_I1:** Number of significant impacts post establishment of mitigation from development provided for by the draft Grid IP.	**a)** Monitoring of the effects of development required under separate processes (such as planning conditions). **b)** Review of: • Route/Option Selection Reports. • Environmental Reports. • EISs. • Final project documents. • Complaints procedure
	L2: Avoid or minimise adverse visual effects on residential receptors.	**L2_T1:** No avoidable impacts on the landscape resulting from development provided for by the draft Grid IP.	**L1_I1:** Number of significant impacts post establishment of mitigation from development provided for by the draft Grid IP.	
Cultural Heritage - Archaeology & Architectural	**CH1:** Avoid impacts upon archaeological heritage (including entries to the RMP) and architectural heritage (including entries to the RPS and NIAHs).	**CH1_T1:** No developments occurring which result in full or partial loss to entries to the RMP and the context of the above within the surrounding landscape where relevant, resulting from development provided for by the draft Grid IP.	**CH1_I1:** Number of developments occurring which result in full or partial loss to entries to the RMP and the context of the above within the surrounding landscape where relevant, resulting from development provided for by the draft Grid IP.	**a)** Monitoring of the effects of development required under separate processes (such as planning conditions). **b)** Review of: • Route/Option Selection Reports. • Environmental Reports. • EISs. • Final project documents. • Ministerial consent for works.
		CH1_T2: No developments occurring which result in full or partial loss to entries to the RPSs/NIAHs and the context of the above within the surrounding landscape where relevant, resulting from development provided for by the draft Grid IP.	**CH1_I2:** Number of developments occurring which result in full or partial loss to entries to the RPSs/NIAHs and the context of the above within the surrounding landscape where relevant, resulting from development provided for by the draft Grid IP.	
Geology and Soils	**GSL1:** To avoid or minimise effects on mineral resources or soils.	**GSL_T1:** No avoidable impacts on mineral resources or soils resulting from development provided for by the draft Grid IP.	**GSL1_I1:** Number of significant impacts post establishment of mitigation from development provided for by the draft Grid IP.	**a)** Review of: • Route/Option Selection Reports. • Environmental Reports. • EISs. • Final project documents. • Complaints procedure.
Land use	**LU1**: To avoid or minimise effects on existing land use.	**LU1_T1:** No avoidable impacts on the landuse resulting from development provided for by the draft Grid IP.	**LU1_I1:** Number of significant impacts post establishment of mitigation from development provided for by the draft Grid IP.	**a)** Review of: • Route/Option Selection Reports. • Environmental Reports. • EISs.

Theme	Objective	Target	Indicator	Source
				• Final project documents. • Complaints procedure.
Water	**W1:** Prevent impact upon the status of surface and groundwater in line with the objectives of the WFD as outlined in the River Basin Management Plans.	**W1_T1:** Not to cause deterioration in the status of any surface ground water or affect the ability of any surface ground to maintain or achieve '*good*' status.	**W1_I1:** Classification of Overall Status as indicated by the EPA.	**a)** Data issued under the Water Framework Directive monitoring for Ireland (every 2 years). **b)** Monitoring of the effects of development required under separate processes (such as planning conditions). **b)** Review of: • Route/Option Selection Reports. • Environmental Reports. • EISs. • Final project documents.
			W1_I2: Number of significant impacts post establishment of mitigation from development provided for by the draft Grid IP.	
Material Assets & Infrastructure	**MAI1:** Minimise effects upon the sustainable use of the land, mineral resources or soils.	**MAI1_T1:** To minimise impacts on farming practices and the extent of soil compaction in greenfield sites.	**MAI1_I1:** The impact on farming practices and extent of soil compaction in greenfield sites.	**a)** Review of: • Route/Option Selection Reports. • Environmental Reports. • EISs. • Final project documents. • Complaints procedure.
			MAI1_I2: Number of significant impacts post establishment of mitigation from development provided for by the draft Grid IP.	
		MAI1_T2: To consider the use of existing transmission infrastructure before new build.	**MAI1_I2:** The use of existing transmission infrastructure before new build.	
	MAI2: Minimise effects upon the existing and planned infrastructure.	**MAI2_T1:** No significant impacts on existing and planned infrastructure.	**MAI2_I1:** Number of significant impacts post establishment of mitigation from development provided for by the draft Grid IP.	**a)** Review of: • Route/Option Selection Reports. • Environmental Reports. • EISs.
Tourism & Recreation	**TR1:** Minimise effects upon the tourism and recreation amenities.	**TR1_T1:** No significant impacts on tourism and recreation amenities.	**TR1_I1:** Number of significant impacts post establishment of mitigation from development provided for by the draft Grid IP.	**a)** Review of: • Route/Option Selection Reports. • Environmental Reports. • EISs. • Final project documents.

Theme	Objective	Target	Indicator	Source
Climate Change	**CC1:** Help to facilitate the achievement of higher level targets contained in the Government's Energy White Paper, '*Ireland's Transition to a Low Carbon Energy Future 2015-2030'* and targets relating to the Kyoto Protocol.	**CC_T1:** Contribute towards an increase in electricity generation from renewable energy (ultimately 40% by 2020).	**CC_I1:** Percentage electricity generation from renewable energy.	Consultations with EirGrid Operations Sustainable Power Systems/ Single Electricity Market Operator (SEMO) in EirGrid.

5.4 Implementation and Reporting Timeframes

EirGrid is responsible for the implementation of the monitoring framework. Implementation includes collating existing relevant monitored data, preparing preliminary and final monitoring evaluation reports and the publication of these reports. EirGrid will also be responsible for carrying out corrective actions, if necessary. A Steering Committee will be established within EirGrid to oversee the monitoring process.

Preliminary data on monitoring the likely significant environmental effects of implementing the IP will be used on an annual basis to inform the EAR of all new TDPs. EirGrid will report on the IP implementation and associated SEA and AA monitoring on an annual basis within each EAR. A stand-alone Monitoring Report on the likely significant environmental effects of implementing the IP will be prepared in order to inform the preparation of the next IP and accompanying SEA.

5.5 Thresholds

Thresholds levels for specific monitoring indicators, both in general and for specific projects will be agreed with the EPA, a member of the EAG.

6. Conclusion and Next Steps

Consultation was carried out on the draft Grid IP and SEA Environmental Report and NIS to receive feedback and to inform the finalization of the Grid IP.

Following the completion of the consultation period, all comments were reviewed to identify any changes required to the draft Grid IP, the SEA or the AA. The SEA Environmental Report and NIS have been updated in response to these comments. This SEA Statement was produced to document this process and includes a record of the comments received regarding the draft Grid IP and/SEA Environmental Report, and the actions taken.

The monitoring framework set out within the SEA Environmental Report will be used to assess the impacts of the implementation the Grid IP. This will also be used to inform any future revision of the Grid IP and as a framework for future annual TDP Environmental Appraisal Reports.

Appendix A: Summary of Consultation Submissions

Table A: Summary of Consultation Submissions in Relation to the Draft Grid IP, SEA Environmental Report and NIS

Submission ID	Organisation	Submission Summary	Response/ Action Taken
EIR1	Northern Ireland Environment Agency - Department of Agriculture, Environment and Rural Affairs (DAERA)	Marine aspects (including transboundary effects to be made clearer in challenges, policies and objectives. Include marine legislation in Appendix B.	The EU Directive on Maritime Spatial Planning and the UK Marine Policy Statement have been included in Appendix B of the SEA ER. EirGrid have formulated maritime policies as part of the updated Grid IP (refer to Section 4.4.10 of the Grid IP for detail.
		Assumes that mitigation will apply to Northern Ireland to avoid/ reduce transboundary impacts. Note that current state of the environment for NI is not included in the Env. Report.	All mitigation and recommendations outlined in the SEA ER will apply to any potential transboundary effects. Mitigation and recommendations will be carried out in the same manner for transboundary effects as will be carried out for potential effects in the Republic of Ireland. This has been clarified in the Inherent Mitigation section and the Monitoring Framework section of the SEA ER.
		HRA needs to demonstrate no impacts on seals (grey and harbour).	Only two projects within the Plan, namely the Regional Solution-Shannon crossing, and Celtic Interconnector have a Zone of Influence (ZoI) that could overlap with harbour seal (Phoca vitulina) and grey seal (Halichoerus grypus). Given the temporary nature of the works (e.g. laying of sea cables) associated with these projects, and the nature of this assessment (e.g. plan level NIS) a ZoI of 50km for marine mammals was considered sufficient to identify European sites potentially at risk. There are no SACs for either species of seal within 50km of either project, therefore there is no potential for direct impacts on breeding or haul out sites. However, given the mobile and potentially far ranging nature of these species there is potential for foraging individual to occur within the ZoI, for that reason mitigation measures including the need for marine mammal surveys was outlined in the NIS for the Shannon crossing (see Section 7.5.1, Box 7M). The NIS has been updated to include the same measures for the Celtic interconnection (see Section 7.4 Box J).
EIR2	Independent Party	Issues with the way consultation has been handled by EirGrid.	No action required. EirGrid have committed to future consultation as part of the Grid IP.
		More up to date data on the percentage annum renewable generated electricity should be used.	Data from the 2017 SEAI report which covers up to 2016 has been added. No report has been issued for 2017 data yet. Although there are raw statistics available on the SEAI website, it is considered best to continue to use publicised reports to inform the SEA process.

Submission ID	Organisation	Submission Summary	Response/ Action Taken
			When new data is officially published it will be captured and considered in the next review. EirGrid's plans will be subject to regular review and this will capture future updated data.
		Criticism that the report is outdated and has been sitting around for a long time before going to consultation (EU Directive 52 noted to be transposed in May 2017. This has only come into effect from September 2018).	No action required.
		NTS is too vague.	The NTS will not be re-published and will therefore will not be expanded on. It is best practice to keep the NTS concise and to include a simplified overview of the main report to provide the reader with an easy to read summary of the main report. The main report can then be read if the reader requires a greater level of detail on a topic.
		Referring to the CER and this is now the CRU - this should be updated.	No reference to the CER within the SEA ER. Grid IP outlines that the CER is the former name for the CRU.
		EU Directive 52 noted to be transposed in May 2017. This has only come into effect from September 2018.	Text has been added to outline that the EU Directive has come into effect in Ireland since September 2018. The SEA ER was published for consultation prior to September 2018.
EIR3	Geological Survey of Ireland	Mining search to identify any historic (abandoned) mine workings in close proximity to any proposed corridor is a pre-requisite for the North/ South Interconnector.	No action required - The North South Interconnector was not subject to SEA or AA assessment as part of this Plan as it had gone through the planning and approval process in 2016.
EIR4	Independent Party	Consultation process was not clear enough.	EirGrid have responded directly to the consultee to explain the consultation process issues.
EIR5	Sweetman Planning	Issue with consultation visibility online.	EirGrid have responded directly to the consultee to explain the consultation process issues.
		SEA ER does not take into account recent CJEU judgments (Case C-280/15, Case C-323/17, Case C-461/17)	Recent CJEU cases relate to the project level as opposed to the Plan level, notwithstanding this EirGrid will take all relevant case law into account in the development of projects. The NIS has outlined that the process will be cognisant of any relevant cases that arise.
EIR6	Fáilte Ireland	Suggested amendments to policies and objectives.	Policies and objectives have been re-assessed and updated following consultation. All changes are outlined in **Table 3-1** in this report.
EIR7	Independent Party	Do Nothing option is best.	No action required - this is not supported by the SEA assessment or other stakeholder comments.
EIR8	Inland Fisheries Ireland	Consider potential significant impacts on; Water quality, Surface water hydrology, Fish spawning and nursery areas, Passage of migratory fish, Areas of natural heritage	This non-exhaustive list has now been included for consideration as part of the baseline for biodiversity in the SEA ER.

Submission ID	Organisation	Submission Summary	Response/ Action Taken
		importance including geological heritage sites, Designated marine protected areas, Biological diversity, Ecosystem structure and functioning, Seabirds and marine mammals, Fish and shellfish cultivation, Sport and commercial fishing and angling, Amenity and recreational areas, Mineral and aggregate resources, Sediment transport and coastal erosion, Navigation, Other legitimate use of the sea.	
		European Eel is now endangered and additional protection measures have also been introduced in that regard. SEA should ensure that Habitats Directive species and the eel (and their ranges and habitats) are properly protected.	Text has been added in relation to the protection of eel in the individual project assessment tables, where applicable. This is particularly relevant to the Shannon Estuary Crossing where the potential for impact is greatest. Eel can be afforded protection as per the water quality requirements outlined in the WFD Directive. In addition, Eel management plans in Ireland should be consulted.
EIR9	EPA	It would be useful to refer to the relevant EBES associated with the different environmental criteria with each of the subsections of chapter 6, as appropriate.	Text has been added to link the evidence-based study for each section that a study was produced for and cross references to the summary in Section 6.14 of the SEA ER below the baseline section. Some text on key interactions between the Plan and environmental topics has also been included in the SEA ER.
		In Table 8.1 – Environmental Issues relevant to the draft Grid IP for the climate change theme, we recommend including an additional bullet point on the need for climate resilience should also be considered.	Bullet point included in the SEA ER.
		EirGrid should consider providing further information on the evolution of the Plan area, in the absence of the Plan.	Evolution of the baseline has been expanded as far as possible and relevant in terms of public available information.
		Monitoring Framework - Monitoring Framework (Section 13 Table 13.1) should be included in the final Plan. Consideration should be given, where relevant, to threshold levels for specific environmental parameters which would trigger remedial action There is merit in linking the SEA monitoring with any Plan-related monitoring, where possible. This will show how effective the SEA (and AA) mitigation measures are at protecting environmental sensitivities in implementing the Plan over its lifetime.	The updated Plan has incorporated the recommendations and monitoring framework sections of the SEA ER. Threshold levels that trigger action will be discussed with the EPA and a threshold level will be agreed between EirGrid and the EPA. This is now recommended as part of ER4 in the SEA ER.
		Consideration to the merits of preparing a Guide/ Tool Kit for natural Environment Enhancement / Management Measures.	A recommendation has been included in the SEA ER as part of ER5 to develop a guide/ tool kit to assist in the identification of potential enhancement opportunities and management measures.
		Relationship with NPF could be described in more detail, in terms of the impacts of continued economic and population growth and associated energy requirements on the existing and future grid infrastructure.	SEA ER updated in line with comments.

Submission ID	Organisation	Submission Summary	Response/ Action Taken
		National Peatland Strategy and associated National Raised Bog SAC management plan should also be considered. The reference to the draft Flood Risk Management Plans can now be updated to reflect that the finalised plans. With regards the regional grid development solution proposed in Table 11.9, including a link with the Shannon Integrated Framework Plan would be considered.	
		A distinction should be made between neutral effects and uncertain effects.	At SEA level, we have distinguished between neutral impacts (*) and uncertain impacts (?) in the assessment tables. It is important to note that SEA at Plan level carries a certain level of uncertainty. However, once each project is progressed to EIA, this uncertainty will significantly reduce, and environmental impacts will be fully assessed in greater detail before any project is progressed to the planning stage.
		Suggested amendments to policies and objectives.	Policies and objectives updated.
		Merits in including further information on the plan level alternatives. Useful to consider separating out the common elements to both alternative 2 and alternative 3. The use of scenario planning could also help inform how robust the preferred alternative will be in catering for any of the individual scenarios that may arise over the lifetime of the Plan.	Further detail on the plan level alternatives provided in the IP and Environmental Report and Table 4-4 of the SEA Statement. Alternative 2 is reliance on the provisions of the Grid 25 IP. This Plan was based on a much more ambitious Grid Development Model with significant new build infrastructure. The Grid 25 IP detailed policy and objectives designed to ensure best practice in the environmental, social and technical aspects of grid development. Strategic mitigation measures were designed to ameliorate significant effects with emphasis on gathering evidence to inform technical guidance. Alternative 3 is essentially the update of the Grid 25 IP reflecting the new Grid strategy, more up-to-date and targeted policies and objectives. It takes into account findings of the evidence-based studies and feedback from consultation on Grid projects such as Grid Link and Grid West, both of which have been discontinued with alternative solutions found for addressing Grid needs. The Grid Strategy has moved to an approach where utilization/upgrading of existing transmission infrastructure is explored, along with utilization of new technology options and greater public participation through the Framework for Grid Development.

Submission ID	Organisation	Submission Summary	Response/ Action Taken
			The use of scenario planning is a methodology devised by EirGrid to forecast potential long range (out to 2040) changes required on the Grid in response to various energy use patterns and energy policy. It is a longer-range method of planning than that proposed in the Grid IP 2017-2022. A process still in development, it will influence defining changes required on the Grid on a long-range basis. Scenario planning will undoubtedly influence future Grid Plans.
EIR9	EPA	Relationship with key relevant PPPs - Merits in including a figure/schematic showing links between the Plan and other relevant PPPs (incl. e.g. energy, land use planning, climate etc.) in Sec1 - Intro to the Plan. In Section 4- Our Approach to the Environment under Climate Change - the inclusion of a commitment to a climate resilient transmission system should be considered. Consideration should be given to capturing the development of the 12 commitments set out in the review of the public consultation process as an overall policy/ objective. Objective ENVO4 of the Plan refers to EirGrid's Climate Change Adaptation Plan... useful to describe how the climate change adaptation plan has informed the preparation of the Plan. Where infrastructural improvements are needed to improve climate resilience, this could be considered in the prioritisation of projects.	An overview of the relationship with other relevant Plans has been included in Section 1- Intro to the Plan. Climate resilience has been addressed in the IP and ENVP7 has been amended in the final IP to include this issue: To integrate measures to address climate change and climate change resilience into grid development, by way of effective mitigation and adaptation responses, in accordance with current guidance and best practice. The review of the public consultation process is based on the outcomes of the 12 commitments.
EIR10	Chartered Institute of Ecology and Environmental Management	Biodiversity policies need to explicitly acknowledge EirGrid's role in not allowing invasive spread.	EirGrid have now included invasive species in ENVP4 in the Grid IP.
		Amend ref to BirdWatch Ireland on page 42 to 'Colhoun & Cummins 2013' and in the ref's section on page 188 change ref to the same. Also, the link to this paper does not work. Use https://www.birdwatchireland.ie/LinkClick.aspx?fileticket=EjODk32LNcU%3D&tabid=178 instead.	Reference updated in the SEA ER.
EIR11	Lough An Leagh Heritage Group	No mention of NREAP, Grid 25 or Your Grid, Your Future - should all be subject to SEA. No SEA has been carried out for onshore wind energy. No assessment of whether renewable energy will work (cannot meet wind energy capacity as it stands) and no outline of costs of plans and how they will be financed. Why could EirGrid not carry out their own SEA?	It is important to note that EirGrid is not responsible for the NREAP, nor the Wind Energy Development Guidelines 2006. EirGrid is equally not responsible for any modifications to those guidelines or any SEA for those guidelines or modifications. EirGrid can only consider plans and programmes which are in existence and cannot speculate on future plans or programmes. There are no obligations for EirGrid to carry out SEA. This was carried out on a voluntary basis with EirGrid as the competent authority. In their capacity as the competent authority EirGrid are permitted to employ a consultant to carry out an independent SEA on their behalf.

Submission ID	Organisation	Submission Summary	Response/ Action Taken
			SEA is undertaken for plans and programmes. Both Grid25 and the subsequent Grid Strategy are strategy documents. This IP is the plan or programme which implements the strategy, and therefore is subject to SEA. A competent authority for the purpose of SEA is defined under S.I. No. 435 of 2004 as the authority which is, or the authorities which are jointly, responsible for the preparation of a plan or programme, or modification to a plan or programme. EirGrid is therefore the Competent Authority with respect to this Plan and is obliged to determine whether the Plan could give rise to significant effects on the environment. In *Screening* the need for SEA, EirGrid referred to Article 9(1) of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435 of 2004). It was considered that the Grid Implementation Plan (IP) 2017-2022 could be viewed to function as a "framework for future development consent" as it will *inter alia* **identify and pursue certain types of development** and/or give guidance for consent of development projects that fall within the categories set out in Annexes I and II to the EIA Directive. EirGrid had also committed to reviewing the need for SEA post the Grid 25 Implementation Programme 2011-2016. Therefore, while the IP does not set a framework for the *consenting* of Grid projects per se (function of relevant Planning Authority) it was considered good practice to undertake SEA for the purpose of this plan. Similarly, with respect to Appropriate Assessment under the Habitats Directive, the competent authority is EirGrid. Article 42 of the S.I. No. 477/2011 - European Communities (Birds and Natural Habitats) Regulations 2011, provides for the carrying out of Appropriate Assessment by a public authority. The notion "public authority" is defined in Article 2(1) of the 2011 Regulations and expressly includes in the list of public authorities at (z) EirGrid. The Appropriate Assessment Determination is presented in a standalone document as part of the overall approval process.

Submission ID	Organisation	Submission Summary	Response/ Action Taken
EIR12	Department for Communities - Historic Environment Division	Welcome the inclusion of a clear statement specific to the consideration of potential transboundary effects on the historic environment in Northern Ireland within the content of the report. In relation to Table 8.1 Page 78, Section on Cultural and Archaeological Heritage, first bullet point, HED would comment, that while visible, extant, or previously identified archaeological and cultural heritage sites may be often limited in physical extent, these may only be an obvious survivor in a wider area that may contain more extensive, previously unidentified, below ground archaeological remains.	Information has been included in the Transboundary baseline in the SEA ER.
EIR13	Eastern and Midland Regional Assembly	Any review of the Plan should take account of the forthcoming Regional Spatial and Economic Strategies when they are adopted to allow for greater cohesion and alignment of policy making between infrastructural investment and spatial planning and ensure a greater return on investment in the Grid infrastructure network. Recommended that EirGrid's Implementation Plan should be consistent with NPF policy in relation to the spatial settlement policy in the NPF.	Noted for future review. No action required.
EIR14	Reid Associates	The SEA process has not been compliant with the SEA Directive. The documentation does not set out who the competent authority is in respect to the SEA or the AA. It appears from reading the SEA that Jacobs are the competent authority and that EirGrid haven't considered this.	Jacobs are undertaking the SEA and AA on behalf of EirGrid, who are the competent authority under the SEA and Habitats Directives. A competent authority for the purpose of SEA is defined under S.I. No. 435 of 2004 as the authority which is, or the authorities which are jointly, responsible for the preparation of a plan or programme, or modification to a plan or programme. EirGrid is therefore the Competent Authority with respect to this Plan and is obliged to determine whether the Plan could give rise to significant effects on the environment. In *Screening* the need for SEA, EirGrid referred to Article 9(1) of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435 of 2004). It was considered that the Grid Implementation Plan (IP) 2017-2022 could be viewed to function as a "framework for future development consent" as it will *inter alia* **identify and pursue certain types of development** and/or give guidance for consent of development projects that fall within the categories set out in Annexes I and II to the EIA Directive. EirGrid had also committed to reviewing the need for SEA post the Grid 25 Implementation Programme 2011-2016. Therefore, while the IP does not set a framework for the *consenting*

Submission ID	Organisation	Submission Summary	Response/ Action Taken
			of Grid projects per se (function of relevant Planning Authority) it was considered good practice to undertake SEA for the purpose of this plan. Similarly, with respect to Appropriate Assessment under the Habitats Directive, the competent authority is EirGrid. Article 42 of the S.I. No. 477/2011 - European Communities (Birds and Natural Habitats) Regulations 2011, provides for the carrying out of Appropriate Assessment by a public authority. The notion "public authority" is defined in Article 2(1) of the 2011 Regulations and expressly includes in the list of public authorities at (z) EirGrid. The Appropriate Assessment Determination is presented in a standalone document as part of the overall approval process.
		The significance of the wind energy development and alternatives to wind energy in the need for grid infrastructure investment has not been factored into the SEA. Difficult to see, in the light of the haphazard approach to wind energy generation location, which is driven by subsidies rather than sustainable planning how the EirGrid Strategy statement to optimize the existing grid to minimize the need for new infrastructure can be achieved. There has been no overall study or evaluation of the real costs of renewable energy from wind and the extent of subsidies as provided for under the REFIT schemes has perpetuated this hap hazard dispersed approach which is unsustainable.	Wind Energy Guidelines are referenced in the SEA ER and included in Table 7.1. It is important to note that EirGrid is not responsible for the Wind Energy Development Guidelines 2006, nor the fact that these guidelines may or may not have been required to undergo an SEA. EirGrid is equally not responsible for any modifications to those guidelines or any SEA which may or may not apply to guideline modifications. EirGrid can only consider plans and programmes which are in existence and cannot speculate on future plans or programmes. EirGrid have no responsibility in granting planning consents for development involved in wind energy location. EirGrid does not formulate policies regarding the appropriateness of wind energy or other alternatives. It is not within EirGrid's jurisdiction to decide whether there is over reliance on wind energy or where wind energy should be located and therefore, it is not appropriate for EirGrid to comment on the allegation of a haphazard approach to wind energy generational location.
		The SEA Directive requires the consideration of alternatives and this of necessity requires specific and defined proposals in a concluded plan which approach is entirely lacking in the documentation. The proposals are vague, poorly designed and aspirational making it impossible to apply the obligations of the Directive.	TBC see EPA comments above.

Submission ID	Organisation	Submission Summary	Response/ Action Taken
		Narrow view of the rural economy in the SEA with little evidence or consideration of the assessment of land use and socio economic and environmental impacts on the equine industry. Section 11 of the SEA indicates that the majority of projects will be to modify, refurbish redevelop or uprate and these may be subject to planning or deemed exempt. However, whether existing poles are replaced by steel lattice towers or deemed exempt as such has significant environmental implications and significant repercussions for public understanding and consultation and participation in the process.	This is a high-level assessment of industries for the SEA stage. A more detailed assessment would be carried out at EIA stage. Additional text on equine industry has been added to baseline and text has been added to Section 11 to further clarify EirGrid's internal procedures which apply to all types of development and ensure that the environment is assessed, even in the case of exempt development.
		The decision of the United Kingdom Government to leave the EU furthermore has implications for consideration of alternatives arising from contingency plans which have not been considered and which is a serious omission.	Text has been added to the evolution of the economic baseline to highlight that Brexit could have a significant impact on the Irish economy. However, it is appropriate to base the document on the current situation. The approach to apply the current situation is supported both by judgements of the Court of Justice of the European Community and the Irish High Court. The UK Department for Business, Energy and Industrial Strategy issued a guidance document, '*Trading electricity if there is no Brexit deal*' in October 2018 in which the importance of the all island market is emphasised and the need to avoid the spilt of the market is outlined. In addition, to consider Brexit in transboundary consultation in the current situation would not be appropriate due to the speculative nature of this issue.

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