Galloper Wind Farm Project

Planning Statement

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Galloper Wind Farm Limited

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1 SUMMARY

1.1 The GWF project comprises the installation, operation and subsequent decommissioning of up to 140 wind turbine generators (WTG) with a maximum capacity of 504MW and associated infrastructure. The proposed wind farm will be located approximately 27km, at its closest point, from the Suffolk coast and encompasses an area of 183km^2.

The application

1.2 Section 31 of the Planning Act 2008 states that "development consent" is required under the Act to the extent that the development is or forms part of a nationally significant infrastructure project (NSIP). Section 15(3) of the Act states that generating stations are deemed an NSIP where they have an (installed) capacity of more than 100 MW, therefore including GWF which has a proposed capacity of up to 504MW. Section 16 of the 2008 Act identifies that above ground electric lines at or above 132kV are also NSIPs. The GWF application includes a very limited length of 400kV above ground lines which is considered to be a NSIP in its own right.

1.3 The draft development consent order covers:

(a) the offshore elements of the proposed development, being the WTGs, inter and intra array cables, offshore platforms, meteorological masts and the export cable to mean low water level; and

(b) the onshore elements, being the export cable above mean low water, transition bays, electricity substation comprising two compounds, other connecting cables, transmission sealing end compounds and overhead connections to existing transmission towers.

1.4 The proposed DCO includes a deemed marine licence under the Marine and Coastal Access Act 2009 which will authorise the marine activities associated with the proposed development.

1.5 No other works are included in the DCO application. However, outside of this application, Galloper Wind Farm Limited (GWFL) will be making the following applications for other consents and licences needed to construct and operate GWF:

(a) The Department for Energy and Climate Change (DECC) for safety zones around the construction works and operational wind farm under the provisions of the Energy Act 2004. This

application will be made once the DCO application has been determined;

(b) The International Maritime Organisation (IMO) for an extension to the Sunk Traffic Separation System. This application is already under consideration by the IMO and is awaiting ratification;

(c) The Marine Management Organisation (MMO) for a European Protected Species licence in relation to offshore foundation piling works, should piling be required. This application would be made once the DCO application has been determined and the foundations have been selected;

(d) The MMO for a dredging licence if gravity base structure (GBS) foundations are selected. This application will be made, if required, once the DCO application has been determined and the foundations have been selected; and

(d) Natural England for a European Protected Species licence in relation to reptile relocation. This application will also be made once the DCO application has been determined.

1.6 GWFL is not aware of any matters of principle that would prevent these from being granted. Where appropriate, updates on these applications will be made during the examination of the GWF application.

1.7 In addition, GWFL has submitted as part of its application to the IPC Heads of Terms for a section 106 unilateral undertaking with Suffolk Coastal District Council that secures a financial contribution towards the enhancement of the Suffolk Heath Area of Outstanding Natural Beauty (AONB).

The Planning Statement

1.8 This Planning Statement forms part of the application to the IPC for the DCO. The purpose of this document is to consider the application of the decision-making considerations and criteria in section 104 of the 2008 Act. As the Localism Act has received Royal Assent these matters will be applied by the Secretary of State when making his decision on the application, pursuant to a recommendation from the IPC. This process principally involves drawing together and applying the relevant policy tests (contained in both government statements and guidance) against which GWF will be judged.

1.9 This statement considers in turn the NPSs and, where relevant, other planning policy and guidance. Pursuant to the Town and Country

Planning Act 1990, planning policy and guidance applies to land-based schemes (down to mean low water level), subject to the over-riding status of the NPSs. Accordingly, relevant planning policy and guidance is considered to the extent it applies to the onshore elements of the proposed development.

1.10 This statement is informed by other documents forming part of the application, namely the Habitats Regulations Assessment and the Environmental Statement.

1.11 This statement is drafted on the assumption that it will be the Secretary of State that determines the application following a recommendation from either the IPC or its intended successor the Major Infrastructure Planning Unit within the Planning Inspectorate.

1.12 In determining a NSIP application the decision-maker must have regard to the following:

(a) Any relevant National Policy Statement;

(b) Any relevant marine policy document;

(c) Any local impact report submitted within the prescribed deadline;

(d) Any matters prescribed under The Infrastructure Planning (Decisions) Regulations 2010; and

(e) Any other matters that the decision-maker considers both important and relevant to their decision.

1.13 The decision-maker is required to determine the application in accordance with the NPSs, except to the extent that one or more of the matters set out in section 104 (4) to (8) apply.

Policy

National Policy Statements

1.14 The National Policy Statements (NPSs) are statements of policy which are provided for by the 2008 Act, and are intended specifically to guide the decisions of the IPC. The relevant NPSs, which have been formally designated, are the overarching energy policy statement, EN-1 the renewable energy policy statement (technology specific), EN-3, and the national policy statement for electricity networks infrastructure, EN-5 which provide the primary basis for decision making by the IPC.

National, regional and local planning policy

1.15 Outside of the NPSs there is pre-existing planning policy issued at national, regional and local level. This is referred to where it is relevant to issues arising for determination by the IPC of the GWF application. These policies are relevant for the onshore elements of the proposed development, above mean low water level.

1.16 It is envisaged that the National Planning Policy Framework (NPPF) will replace most national planning policies contained in Planning Policy Guidance and Planning Policy Statement documents and other guidance. As at the time of writing, the draft NPPF is at an early stage in the policy-making process.

1.17 Guidance is given in EN-1 on the interrelation between the NPSs and the pre-existing bodies of planning policy, in particular in terms of the approach that should be adopted by the IPC. The energy NPSs have taken account of PPSs and PPGs in England. For this reason existing national planning guidance is not considered in detail in this Statement.

1.18 In addition, in drawing up local impact reports, Local Planning Authorities (LPAs) will also have regard to pre-existing planning policy (including the development plan), and may refer to that, if it is relevant. In this way, although the policies in the NPS have primacy in the determination of applications for NSIPs by the decision maker, other planning policy may be considered and for that reason, it is addressed in this statement, where relevant to the issues raised.

Marine Planning Policy

1.19 The Marine and Coastal Access Act 2009 provides the statutory basis for a marine planning system for UK waters. The UK Marine Policy Statement (MPS) was adopted in March 2011 and relevant policies contained within it are referred to in this statement. The MPS reflects the carbon saving initiatives and policy support for renewable energy promoted by the energy NPSs. The MMO has started the development of marine plans in the East Inshore and East Offshore plan areas in April 2011. It is currently collecting data and information for the scoping stage of the marine planning process. Accordingly, there is no Marine Plan for the area in which GWF is proposed, and the MPS is the only applicable marine policy document to be taken into account.

Need for the project

1.20 The Government has identified in the energy NPSs that there is a requirement for a significant change in the UK's energy infrastructure in the near future to respond to the challenges of climate change,

future energy security and to maximise economic opportunities. The detail of this policy support for renewable energy is noted in this statement but in summary both EN-1 and EN-3 confirm that the need for the types of energy infrastructure covered by the NPSs has been demonstrated and that this need is urgent. EN-1 confirms that substantial weight should be given to the contribution that projects would make towards satisfying this urgent need when NSIP applications are being considered.

Site selection

1.21 EN-3 recognises the constraints that exist for extending offshore wind farms. GWF is located to the west and south of the Galloper Offshore Wind Farm which is currently under construction. The decision on the preferred site location took account of the TCE's pre-requisites for the extension projects.

1.22 The location and design of various elements of the project, and particularly the onshore works, were specifically selected to avoid or reduce potential effects on a number of key receptors in the vicinity, including local residents and the AONB. Although located within the AONB, the consultation exercise undertaken has confirmed that the proposed location for these works is preferred by the relevant consultees and the public.

Policy guidance on subject specific impacts

1.23 This statement has considered policy referable to subject specific impacts. In the case of each subject the relevant policies (both NPSs and any relevant national or local planning policies) are considered against the findings of the EIA and conclusions in relation to each subject are drawn.

1.24 The subjects considered are:

- Physical environment;
- Marine water and sediment quality;
- Offshore ornithology;
- Marine and intertidal ecology;
- Fish and shellfish resource;
- Marine mammals;
- Commercial fisheries;
- Shipping and navigation;
- Military and civilian aviation;
- Other human activities;
- Archaeology and cultural heritage;

- Seascape, landscape and visual character;
- Socio-Economics;
- Geology, hydrogeology, land quality and flood risk;
- Terrestrial ecology;
- Land-use, tourism and recreation;
- Traffic and transport;
- Noise;
- Air quality; and
- Electric and magnetic fields.

Overall conclusion on subject specific policy guidance

1.25 All of the above subject specific policy guidance has been addressed in the assessment material submitted with the application and GWF has been shown to be in compliance with the relevant NPSs and all other relevant policy guidance.

Conclusion

1.26 GWFL has taken account of all the matters specified in section 104(2) in preparing the application and this planning statement, including all matters which, as best it can judge, are likely to be included in any local impact report or likely to be regarded by the decision maker as relevant and important. This includes having regard to the duties on the decision maker specified in The Infrastructure Planning (Decisions) Regulations 2010 in relation to listed buildings, conservation areas, scheduled monuments, obstructions or danger to navigation, protection of the marine environment, interference with legitimate users of the sea and the United Nations Environmental Programme Convention on Biological Diversity.

1.27 Each of the duties and other matters which apply under section 104(4), (5), (6) and (8) have been considered and GWFL considers that none of them apply to this application. In this respect, particular consideration has been given to the UK's obligations under the Habitats Directive and its implementing Regulations.

1.28 In developing the project and preparing this application, GWFL has sought to take account of, and follow, all of the advice in the NPSs (including their prior drafts) in relation to the environmental assessment of the project, the advice on decision making, and the

advice on mitigation measures to avoid or reduce the impacts of the project. It is considered that the application is 'in accordance with' the relevant NPSs, in the terms intended by section 104(4).

1.29 In practice, the final judgment relates to section 104(7), as to whether the adverse impact of the proposed development would outweigh its benefits.

1.30 The key benefits of the scheme include up to 150,000MW/h each year of clean electricity, which will help to meet the UK's need for additional renewable energy capacity. The UK requires this extra capacity in order to meet its legally binding and international targets, contribute to the UK's energy security and contribute to economic growth. The nature of the project is such that it can be delivered quickly, thereby making a meaningful and early contribution.

1.31 As reported in the Environmental Statement, in general, impacts from the proposed development are not found to be significant. GWFLhas sought to minimise any potential impacts identified as far as possible given all other constraints.

1.32 The limited extent of the adverse effects identified confirm the suitability of the GWF site. Having regard to the benefits and adverse impacts considered above it is submitted that it is clear that the adverse impacts of the proposed development do not outweigh its benefits and the planning balance falls in favour of consenting the proposal.

2 THE APPLICANT

2.1 Galloper Wind Farm Limited (GWFL) represents a joint venture between SSE Renewables (SSER) and RWE Npower Renewables Ltd (RWE NRL).

2.2 SSER and RWE NRL have been awarded the rights to develop the Galloper Wind Farm (GWF) from The Crown Estate. The proposed wind farm has a capacity of up to 504 megawatts (MW) and is an extension to the existing Round 2 Greater Gabbard Offshore Wind Farm (GGOWF) which is currently under construction.

2.3 SSER is responsible for the development and construction of renewable energy projects across the UK, Ireland and Continental Europe. SSER is the UK's leading generator of renewable energy with over 2,200MW of renewable electricity generation capacity.

2.4 RWE NRL is the UK subsidiary of RWE Innogy and already operates the offshore wind farms North Hoyle (60MW) and Rhyl Flats (90MW) in North Wales. Overall, RWE Innogy operates renewable power plants with a total rated capacity of 2,200MW and invests approximately 1.1 billion Euros a year in the expansion of renewable energy within Europe.

3 DESCRIPTION OF WORKS

3.1 The GWF project comprises the installation, operation and subsequent decommissioning of up to 140 wind turbine generators (WTG) with a maximum capacity of 504MW and associated infrastructure. The proposed wind farm will be located approximately 27km, at its closest point, from the Suffolk coast and encompasses an area of 183km^2 within three areas (referred to as Area A, B and C).

3.2 Up to three export cables will be brought to shore at Sizewell, with a proposed substation to connect the project to the national electricity transmission system via existing transmission towers approximately 1km inland.

3.3 The development consent order (DCO) sought for GWF would authorise the construction and operation of the following key elements:

- Up to 140 WTG and supporting tower structures;
- WTG foundations with associated support and access structures;
- Offshore platforms to support offshore substation(s), collection station and potentially accommodation facilities;
- Meteorological mast(s);
- Subsea inter and intra-array and export cables;
- Cable landfall;
- Onshore transition bays;
- 132kV onshore GWF compound and 132kV/400kV onshore transmission compound, together the “GWF substation”;
- Onshore cabling from the landfall to the GWF substation;
- Directional drilling under roads, across foreshore habitats and potentially under other cables;
- Onshore cabling from the 132kV/400kV transmission compound to new sealing end compounds;

- Transmission sealing end compounds adjacent to existing electricity transmission towers (pylons); and overhead line connections to the towers;
- Alterations to existing electricity transmission towers;
- Temporary works and laydown areas;
- Permanent and temporary access roads;
- Onshore cabling from the 132kV/400kV transmission compound connecting into the existing Greater Gabbard Offshore Wind Farm (GGOWF) 132kV cables (which run from Sizewell B to the GGOWF substation); and
- Relocation of an existing communications mast.

3.4 The diagram on the following page (see Figure 1) shows a schematic representation of the high level components of GWF.

3.5 GWF will make an essential contribution to the generation of renewable energy within the UK's energy portfolio. Supplying approximately 1,700 gigawatt hours (GWh) of clean electricity each year, sufficient to power, on average 500,000 homes[1], GWF will make a vital contribution to the UK's 2020 targets. In addition, with the ability for construction to start in 2013 GWF will be delivered in advance of the bulk of the 'Round 3' offshore wind schemes.

3.6 Located immediately adjacent to GGOWF, which is currently in construction and also owned by SSE and RWE npower renewables, GWF benefits from a wealth of experience of the existing local offshore and onshore environment and physical conditions.

3.7 The inherent benefits of progressing an extension project have allowed GWFL to focus on issues already well-known to regulators and statutory bodies and to provide a high level of detail about the likely impacts of the project at the pre-application consultation stage.

3.8 GWFL will continue to benefit at the construction stage from lessons learned on the adjacent GGOWF site, which could enable it to

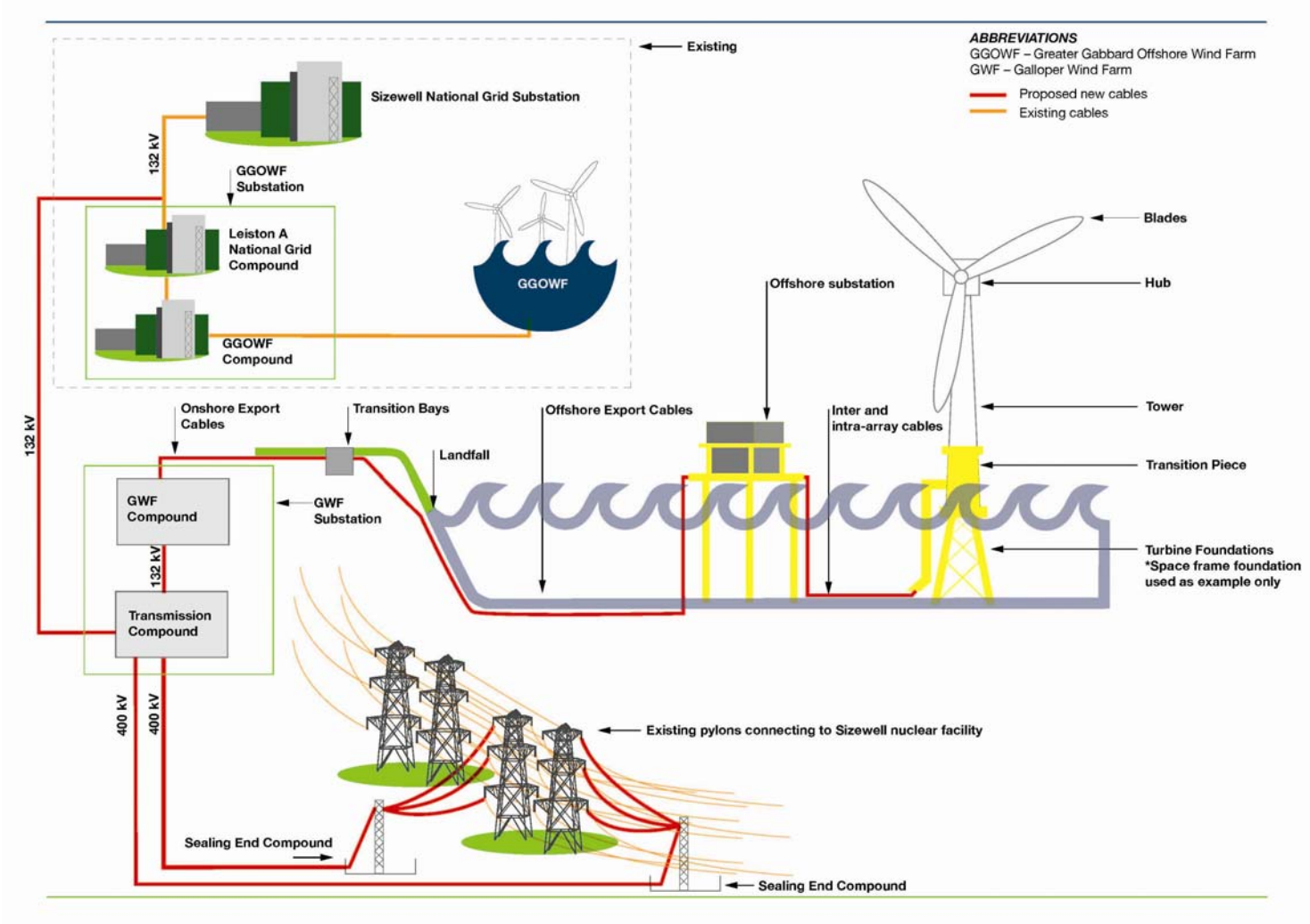
[1] Based on site specific data indicating a load factor of approximately 40% and using the annual UK household consumption of 3.3MWhrs.

become a leading project in identifying ways of driving down construction costs for offshore wind in advance of the development of the Round 3 projects.

3.9 The draft DCO also includes a deemed marine licence under the Marine and Coastal Access Act 2009 which authorises GWFL or its agents to carry out the following licensable marine activities pursuant to section 66(1) of the 2009 Act:

(a) the deposit at sea of specified substances and articles;
(b) the construction of works in or over the sea and/or on or under the sea bed; and
(c) sampling works required in connection with (a) and (b).

Figure 1 The Galloper Wind Farm Project (schematic)



3.10 These activities are subject to a series of detailed licence requirements that regulate the way in which the works are carried out, provide for the protection of users of the sea and secure a detailed programme of environmental surveying and monitoring.

3.11 No other works are included in the DCO application. However, outside of this application, GWFL will be making the following applications, to the relevant bodies, for other consents and licences needed to construct and operate GWF:

(a) The Department for Energy and Climate Change (DECC) for safety zones around the construction works and operational wind farm under the provisions of the Energy Act 2004. This application will be made once the DCO application has been determined;
(b) The International Maritime Organisation (IMO) for an extension to the Sunk Traffic Separation System. This application is already under consideration by the IMO and is awaiting ratification;
(c) The Marine Management Organisation (MMO) for a European Protected Species licence in relation to offshore foundation piling works, should piling be required. This application would be made once the DCO application has been determined and the foundations have been selected;
(d) The MMO for a dredging licence if gravity base structure (GBS) foundations are selected. This application will be made, if required, once the DCO application has been determined and the foundations have been selected; and
(e) Natural England for a European Protected Species licence in relation to reptile relocation. This application will also be made once the DCO application has been determined.

3.12 GWFL is not aware of any matters of principle that would prevent these from being granted. Where appropriate, updates on these applications will be made during the examination of the GWF application.

3.13 In addition, GWFL has submitted as part of its application to the Infrastructure Planning Commission (IPC) a draft Heads of Terms (Document 8.3) for a section 106 unilateral undertaking with Suffolk Coastal District Council (SCDC) securing a financial contribution towards the enhancement of the Suffolk Heath Area of Outstanding Natural Beauty (AONB).

4 NSIP DECISION MAKING

4.1 The IPC was established by the Planning Act 2008 (the "2008 Act") and provides the consenting regime applicable to nationally significant infrastructure projects (NSIPs). Section 31 of the 2008 Act states that "development consent" is required under the Act to the extent that the development is or forms part of an NSIP. Section 15(3) of the Act states that generating stations are deemed an NSIP where they have an (installed) capacity of more than 100 MW, therefore including GWF which has a proposed capacity of up to 504MW. Section 16 of the 2008 Act identifies that above ground electric lines at or above 132kV are also NSIPs. GWFL has considered carefully the potential exemptions that could apply to the above ground electric lines required for the GWF electricity connection, but has determined that it is appropriate to apply for the very limited length of 400kV above ground lines as a NSIP in its own right.

4.2 This Planning Statement is written following designation of the energy National Policy Statements (NPSs) and therefore at a point in time when the IPC is the formal decision-maker for NSIP applications. However, it is acknowledged that the recently enacted Localism Act contains provisions that will transfer decision-making powers to the Secretary of State. The IPC will, in effect, be replaced by the Major Infrastructure Planning Unit (MIPU) within the Planning Inspectorate. This Statement is drafted in the expectation that it will be the Secretary of State that determines the GWF application following a recommendation from MIPU.

4.3 Section 104 of the Planning Act 2008 sets out the basis on which the Commission (either a Panel or the Council) must make its decision on a NSIP application, and section 105 the basis on which the Secretary of State must make his decision. However, these sections only envisage a Secretary of State decision where there are no NPSs in place, and therefore the requirement to have regard to the NPSs and to determine in accordance with them is not included. This is remedied in the Localism Act which effectively transposes the requirements of section 104 onto the Secretary of State.[2]

[2] See section 128(2) of the Localism Bill which states that Schedule 13 of the Bill has effect. Schedule 13 amends s.104 (Decision of Panel and Council) and s.105 (Decisions of Secretary of State) of the Planning Act 2008.

4.4 There are two parts to the decision-making process for a NSIP. First, the decision-maker must have regard to the following:

(a) Any relevant NPS;
(b) Any appropriate marine policy documents;
(c) Any local impact report submitted within the prescribed deadline.

4.5 These reports are submitted after the application has been formally accepted and, by definition, no such reports are yet available for GWF. GWFL is confident that the impacts, which are likely to be addressed in these reports, have already been considered in detail in the application documentation, including this Planning Statement. However, GWFL will review such reports when they are available and is likely to respond to them as part of the examination of the application. These matters include:

(a) Any prescribed matters. These matters are prescribed under The Infrastructure Planning (Decisions) Regulations 2010 (the Decision Regulations). The relevant matters to the application are the obligations under Regulation 3A in relation to a deemed marine licence under the Marine and Coastal Access Act 2009 and Regulation 7 relating to matters such as biological diversity and listed buildings; and

(b) Any other matters that the decision-maker considers both important and relevant to their decision. Clearly it is a matter for the decision-maker to decide what it considers to be important and relevant. GWFL has endeavoured to address, within the application documentation, all such matters, and has benefited in doing so from the feedback received during the extensive pre-application consultation.

4.6 The decision-maker is also required to determine the application in accordance with the NPSs, except to the extent that one or more of the matters set out in section 104 (4) to (8) apply.

4.7 These are matters for the decision-maker to be satisfied on, and are designed to ensure that any decision is lawful in terms of international and domestic law. The one exception is the test in section 104(7) which requires consideration of whether the benefits of the proposed development are outweighed by its benefits. These tests are considered in Section 8 of this Statement.

5 STRUCTURE OF THIS STATEMENT

5.1 The remainder of this Statement is structured as follows:

(a) Section 5: Planning Policy Context. This section provides an overview of the relationship between the NPSs, mainstream planning policy and marine planning;

(b) Section 6: Planning Assessment. This section summarises and applies NPS, mainstream planning and marine planning policy in relation to the need for the project, site selection and consideration of alternatives and biodiversity;

(c) Section 7: Topic Specific Considerations. This section considers the policy and advice in the relevant NPSs and the Development Plan in relation to subject specific issues (physical environment, water quality etc) and summarises the performance of the project in light of the conclusions of the Environmental Statement (ES). This question is at the heart of whether the project is in accordance with the NPSs.

(d) Section 8: Conclusion. The section draws together the different stands within the Statement, and applies the various considerations and tests under section 104 to reach a judgment in relation to the planning balance in determining the application.

6 PLANNING POLICY CONTEXT

6.1 This section sets out the planning context applicable to the GWF application.

6.2 The 2008 Act, amongst other things, makes provision for the Government to designate NPSs. These establish the national need for a particular type of major infrastructure, together with a series of criteria relating to the benefits and impacts of a development, which the IPC will consider when making recommendations in relation to a NSIP application. The overarching aims of the NPS are to:

- Integrate environmental, social and economic objectives, including climate change commitments, for the delivery of sustainable development;
- Set out the national need for infrastructure development and set the policy framework for IPC decisions; and
- Provide a major step towards to the overall goal of speeding up the process of delivering infrastructure.

6.3 There are three NPSs, designated in July 2011, that hold particular relevance for offshore wind and its associated onshore development:

- Overarching NPS for Energy (EN-1);
- NPS for Renewable Energy Infrastructure (EN-3); and
- NPS for Electricity Networks Infrastructure (EN-5).

Overarching National Policy Statement for Energy (EN-1)

6.4 The overarching NPS sets out the Government's policy for delivery of major energy infrastructure. EN-1 is supplemented by a further five technology-specific NPSs: fossil fuel electricity generation (EN-2); renewable electricity generation (both onshore and offshore) (EN-3); gas supply infrastructure and gas and oil pipelines (EN-4); the electricity transmission and distribution network (EN-5); and, nuclear electricity generation (EN-6).

6.5 The NPSs set out the Government's energy and climate change objectives for the power sector, these are summarised as follows:

- To help deliver the UK's climate change commitments;

- To ensure that investment provides security of energy supply through a diverse and reliable mix of fuels and low carbon technologies;
- To further ensure that investment delivers an electricity grid with greater capacity and the ability to manage larger fluctuations in supply and demand;
- To ensure cost effective energy generation to help eliminate fuel poverty; and
- To contribute to sustainable development by seeking energy infrastructure development that helps reduce climate change while also minimising negative impacts on the local environment

6.6 GWF performs well against the above objectives. It is identified within the NPSs that the Government recognises there is a significant need for new major energy infrastructure. This will have to be met by projects progressing quickly, given that developments such as nuclear power stations have very long lead-in times. Furthermore, paragraph 3.4.1 of EN-1 recognises that around 30% of electricity generation could be from renewable sources by 2020, with a significant proportion of this sourced from onshore and offshore wind generation.

6.7 The continued development of offshore wind within the UK is of vital importance to helping ensure the UK is able to meet its binding energy targets. The UK Government is the first in the world to set legally binding targets to tackle climate change, including specific commitments to be reached by 2020 and 2050. GWF occupies an essential role in meeting interim 2020 goals, particularly as a scheme that can be delivered in the near-term and relatively close to shore, in advance of more logistically challenging 'Round 3' schemes.

6.8 GWF will make a vital contribution to the UK's targets, delivering up to 504MW of new installed renewable energy capacity and potentially providing enough power for an average equivalent of 500,000 homes.[3]

6.9 Through the potential for near-term delivery, GWF presents an excellent opportunity to make a significant contribution to the reduction in reliance on fossil fuels and to secure greater energy security.

[3] Based on site specific data indicating a load factor of approximately 40% and using the annual UK household consumption of 3.3MWhrs.

6.10 EN-1 also states at paragraph 4.1.2 that:

"Given the level and urgency of need for infrastructure of the types covered by the energy NPSs set out in Part 3 of this NPS, the IPC should start with a presumption in favour of granting consent to applications for energy NSIPs. That presumption applies unless any more specific and relevant policies set out in the relevant NPSs clearly indicate that consent should be refused. The presumption is also subject to the provisions of the Planning Act 2008 referred to at paragraph 1.1.2 of this NPS."

National Policy Statement for Renewable Energy Infrastructure (EN-3)

6.11 This NPS, taken together with EN-1, provides the primary basis for decisions by the IPC on applications it receives for renewable energy infrastructure. This covers any energy infrastructure for biomass and/or waste generating above 50MW, any offshore wind farm generating above 100MW, and any onshore wind farm generating more than 50MW.

6.12 EN-3 identifies, at paragraph 2.6.2 that offshore wind will make up a significant proportion of the UK's renewable generating capacity up to 2020 and towards 2050.

6.13 The NPS also identifies the ability for promoters to seek other consents within their application. With respect to offshore wind farms it notes that a marine licence can be sought under the Marine and Coastal Access Act 2009. EN-3 notes at paragraph 2.6.14 that the IPC should liaise closely with the MMO on the proposed terms of any marine licence.

6.14 Subsequently EN-3 sets out policies on the specific EIA considerations required of an offshore wind farm and how the IPC should consider them in its decision making process (2.6.58 – 2.6.210). The topics covered are:

- Biodiversity, comprising;
- Fish;
- Intertidal;
- Marine Mammals;
- Birds;
- Subtidal;
- Commercial Fisheries and Fishing;
- Historic Environment;

- Navigation and Shipping;
- Oil, Gas and other offshore infrastructure and activities;
- Physical Environment; and
- Seascape and Visual Effects.

6.15 GWFL's assessment outcomes and compliance with policy on these individual topics is addressed in section 7 of this Planning Statement.

National Policy Statement for Electricity Networks Infrastructure (EN-5)

6.16 This NPS, together with EN-1, is the primary decision-making guidance document for the IPC on nationally significant electricity network infrastructure in England and Wales. In the case of GWF, it is expected that EN-5 will be the primary policy document in relation to all onshore infrastructure landward of mean low water springs regardless of whether the aspect under consideration comprises associated development (as defined in the 2008 Act) to the offshore generating station, or part of the above ground electric line NSIP or its associated development.

6.17 The following types of nationally significant infrastructure are covered by EN-5:

- Above ground electricity lines of 132kV and above; and
- Other infrastructure for electricity networks that is associated with a NSIP.

6.18 EN-5 states at paragraph 2.6.1 that *"when considering impacts for electricity networks infrastructure, all of the generic impacts covered in EN-1 are likely to be relevant, even if they only apply during one phase of the development such as construction or only apply to one part of the development such as a sub-station."* However, the NPS also sets out at paragraph 2.6.1 additional technology-specific considerations on the following generic impacts considered in EN-1:

- Biodiversity and Geological Conservation;
- Landscape and Visual; and
- Noise and Vibration.

6.19 In addition, EN-5 sets out at paragraph 2.6.2 technology-specific considerations for Electric and Magnetic Fields (EMF), which is not considered in EN-1.

National, Regional and Local Policy and Guidance

6.20 In addition to the NPS being the primary decision-making documents for the IPC, paragraph 4.1.5 of EN-1 identifies that the IPC may consider other matters as relevant to its decision, which may include the relevant development plan and any local planning policy documents. It notes that the NPS have taken account of Planning Policy Statements (PPS) and older style Planning Policy Guidance (PPG) in England.

6.21 EN-1 also identifies that the IPC must have regard to any Marine Policy Statement prepared under the Marine and Coastal Access Act and any applicable marine plans in taking its decision (4.1.6).

6.22 It is noted in paragraph 4.1.6 of EN-1 that in the event of a conflict with existing planning policy, the NPS prevails for the purpose of IPC decision-making, given the national significance of the infrastructure proposed.

6.23 The onshore development, and the majority of the nearest coastline to the GWF WTGs lies within the boundary of Suffolk Coastal District Council (SCDC). The emerging Suffolk Coastal Local Development Framework (LDF) will set out the planning policies, proposals and actions for the future development of the District to 2027 and beyond and will replace the existing local plans. SCDC's LDF Core Strategy and Development Management Policies (Core Strategy) have been adopted as interim planning policy for determining planning applications and enforcement.

6.24 Other regional and local plans and strategies relevant to the onshore elements of GWF are:

- The East of England Plan (May 2008);
- Suffolk Structure Plan 2001 - saved policies from May 2008;
- Suffolk Coastal Local Plan – saved policies from September 2007; and
- Coastal Climate Change Strategy (2009).

East of England Plan

6.25 Within the East of England Plan there are a number of targets with are to be met for renewable energy generation which are relevant to GWF. In addition there are policies which are applicable to the onshore development proposed. Whilst it is acknowledged that the regional planning system is in a state of flux, the courts have confirmed that adopted Regional Spatial Strategies are to attract significant weight unless and until they are abolished, even taking into account the intention to abolish. [4]

Suffolk Structure Plan

6.26 Under the Planning and Compulsory Purchase Act 2004, the Suffolk Structure Plan 2001 as a whole ceased to be part of the Development Plan for Suffolk in 2007. 14 individual policies were saved as from 27 September 2007 and apply until the Local Development Frameworks prepared by District or Borough Councils are adopted. The only policy relevant to the GWF onshore works is T14 which addresses transport matters and requires a transport assessment to be undertaken in relation to all major development proposals.

Suffolk Coastal District Council Core Strategy

6.27 Suffolk Coastal's Core Strategy was adopted as interim planning policy for determining local planning applications and enforcement in March 2010. The Core Strategy (dated June 2010) is the first and pivotal part of the Local Development Framework, which sets out the Council's key planning policies and objectives.

6.28 As interim policy, the Core Strategy, and the policies it contains, should be taken into account when considering local planning applications. The Core Strategy sits alongside the saved policies from the existing Suffolk Coastal Local Plan, which together form the Development Plan for the area.

6.29 In light of the changes to the planning system which have been implemented by the new Coalition Government, the Core Strategy document is currently being reviewed through a process of public consultation.

6.30 The Core Strategy sets out an "Overarching Vision of Suffolk Coastal in 2026" by outlining 15 objectives under the following headings:

- Spatial and sustainability;
- Housing;
- The Economy;
- The Environment; and
- Community and well-being.

6.31 Under these Objectives are 18 Strategic Policies and 33 Development Management Policies, all of which have been put in place to achieve the vision and objectives set out in the Strategy.

Suffolk Coastal Local Plan

6.32 The Suffolk Coastal Local Plan sets out the Council's policies and proposals for the development and use of land within the District and includes detailed policies to guide planning decisions. It consists of 263 specific planning policies (prefixed AP) which sum up key parts of the Local Plan.

6.33 The Suffolk Coastal Local Plan was adopted by the Council in 1994 and was subject to a First Alteration which was adopted in 2001. A Second Alteration came into effect on 31 March 2006.

6.34 The Planning and Compulsory Purchase Act (2004) established a new system of local development planning in England, replacing local plans with LDF. Suffolk Coastal District Council is in the process of replacing the adopted Suffolk Coastal Local Plan with the new Suffolk Coastal LDF, however this has not yet been finalised. In September 2007 a direction was issued by the Secretary of State saving the majority of the Local Plan policies until the LDF has been adopted.

Coastal Climate Change Strategy

6.35 This document sets out the Climate Change Strategy for Suffolk Coastal District Council and the framework for action to combat climate change. The Climate Change Strategy sets out a framework for a continuous improvement process to reduce carbon emissions

[4] R (on the application of Cala Homes (South) Ltd) v Secretary of State for Communities and Local Government [2011] EWCA Civ 639

and ensure both the Council and the District are preparing for predicted changes to the climate and reducing our use of fossil fuels. The three objectives of the Strategy are to: reduce carbon dioxide emissions; prepare for a changing climate and reduce reliance on fossil fuels.

The Marine and Coastal Access Act

6.36 The Marine and Coastal Access Act 2009 (the 2009 Act) provides the statutory basis for a marine planning system for UK waters. As mentioned above, the IPC must have regard to the appropriate marine policy documents (if any) in deciding an application for DCO (s104(2)(aa) Planning Act 2008). Appropriate marine policy documents include Marine Policy Statements and Marine Plans.

6.37 The UK Marine Policy Statement (the MPS) was adopted in March 2011 and relevant policies contained within it are referred to below in paragraphs 6.1.50 to 6.1.55.

6.38 The UK MPS is the framework for preparing Marine Plans for each of the Marine Planning Areas. The MMO started marine planning in the East Inshore and East Offshore plan areas in April 2011 and is currently collecting data and information for the scoping stage of the marine planning process. Accordingly, there is no Marine Plan for the area in which GWF is proposed.

6.39 In addition, the Marine and Coastal Access Act (2009) created a new type of Marine Protected Area (MPA), called a Marine Conservation Zone (MCZ). The MCZ Project for the North Sea is being delivered by Net Gain, and for this area the draft MCZ (dMCZ) network is currently undergoing iterations to define the location of the designated sites.

7 PLANNING ASSESSMENT

Project Need

7.1 The Government has identified in EN-1 Part 2 (paragraph 4.4.3) that there is a requirement for a significant change in the UK's energy infrastructure in the near future to respond to the challenges of climate change, future energy security and to maximise economic opportunities.

7.2 The UK Low Carbon Transition Plan[5] addresses the consensus of scientists spanning over 130 countries that human activities are causing global climate change and that the effects of these additional greenhouse gases can already be seen today. The burning of fossil fuels, changes in land use and various industrial processes are adding heat trapping gases, particularly carbon dioxide (CO_2) to the atmosphere. There is now roughly 40% more CO_2 in the atmosphere than there was before the industrial revolution. Such high levels have not been experienced on earth for the last 800,000 years and in all likelihood not for the last 3,000,000. In addition, global average temperatures have risen by 0.75^{o}C since about 1900, with consequences for both the environment and peoples' lives.

The need to combat climate change

7.3 Government initiatives leading up to the issue of the NPSs have included:

(a) The 2006 Defra Climate Change Programme - this suggested obtaining 10% of the UK's electricity supply from renewable resources by 2010, an extension to 15% by 2015, and by 2020 to 20%;

(b) The Climate Change Act 2008 - section 1 imposes a target of cutting emissions by 80% by 2050 compared to 1990 levels;

(c) The Low Carbon Transition Plan - this aims to deliver emission cuts of 18% on 2008 levels by 2020 and over a one third reduction on 1990 levels[6] , and

[5] HMG 2009 The UK Low Carbon Transition Plan – National Strategy for Climate and Energy Page 23
[6] p. 4

(d) The Renewable Energy Strategy [7]- this explains how and why the UK will achieve 15% of its energy coming from renewable resources by 2020. [8]

7.4 The UK Government's five point programme for tackling climate change, outlined on Page 1 of the UK Low Carbon Transition Plan, includes:

(a) Building a low carbon UK;

(b) Protecting the public from the immediate risk of climate change;

(c) Preparing for the future by factoring climate risk into decision making;

(d) Limiting the severity of future climate change through a new international climate agreement; and

(e) Supporting individuals, communities and businesses to play their part.

7.5 The proposal of building a low carbon UK envisages that to play its part in reducing global emissions, Britain needs to become a low carbon country. The 2008 Climate Change Act made Britain the first country in the world to set legally binding "carbon budgets", aiming to cut UK emissions by 34% by 2020 and at least 80% by 2050 through investment in energy efficiency and clean technologies such as renewables, nuclear and carbon capture and storage.

7.6 The UK Low Carbon Transition Plan[9] sets out the Government's aim of delivering emission cuts of 18% on 2008 by 2020. Key steps include getting 40% of our electricity from low carbon sources by 2020, with policies to produce around 30% of our electricity from renewables by 2020, and substantially increasing the requirement for electricity suppliers to sell renewable electricity.

7.7 These themes have been developed in the designated energy NPSs. Paragraph 2.2.1 of EN-1 states that the Government is committed to meeting its legally-binding targets to cut greenhouse gas emissions by

[7] Cmnd paper 7686 July 2009
[8] p.4
[9] P. 4

at least 80% by 2050 compared to 1990 levels. Delivering that change is a major challenge, particularly within a market-based system and with severe constraints on public expenditure in the short term. Consequently, the NPS is intended to assist and develop a clear long-term policy framework for the development of energy projects to facilitate investment in the necessary new infrastructure by the private sector.

7.8 Paragraph 2.2.7 of EN-1 states that at current levels average global temperatures could rise by up to 6^{o}C by the end of the century and at paragraph 2.2.8 that the average global temperature rise will need to be kept at 2oC to minimise the worst effects of climate change. This would also require reduction of greenhouse gas emissions prior to 2020.

7.9 Paragraph 2.2.5 of EN-1 records that the present UK economy relies on fossil fuels. However, rather than continuing to support their significant role there is a need for the UK to wean itself off fossil fuels' high carbon energy mix. Illustrative 2050 pathways include situations where electricity generation would need to be virtually emission free, rather than it being a continuing CO2 emitter.

7.10 EN-1 paragraph 3.3.5 explains that the Government would like industry to bring forward many low carbon developments (including renewables) within the next 10 to 15 years to meet the twin challenges of energy security and climate change as we move towards 2050.

7.11 EN-1 paragraph 2.2.22 also indicates that these 2050 pathways show the need to electrify large parts of the industrial and domestic heat and transport sectors could double the demand for electricity over the next 40 years. To meet emissions targets, electricity being consumed will need to be almost exclusively from low carbon sources. The present situation is that around 75% of electricity in the UK is supplied by burning gas and coal.

7.12 Paragraph 3.2.3 of EN-1 explains the Government's belief that without significant amounts of new large-scale energy infrastructure, the objectives of its energy and climate change policy cannot be fulfilled. It also recognises that there will inevitably be some significant adverse impact as a result of this development. At the same time, the

Government considers the need for this new generating infrastructure will often be urgent and that the IPC should give substantial weight to considerations of need. It does however recognise that the weight attributed should be proportionate to a project's actual contribution to satisfy the need for new generation.

7.13 EN-1 paragraph 5.3.6 requires the IPC to take into account that failure to act now to permit new renewable capacity will result in significant adverse impacts to bio-diversity from failing to combat climate change.

7.14 With an installed capacity of up to 504MW, GWF would make a significant contribution to meeting the need for new renewable generating capacity. As an extension to an existing operating offshore wind farm it has the benefit of increased certainty over delivery and already has a grid connection for 2015 from National Grid. This, and the speed within which it can be delivered, allows additional weight to be attached to its contribution to the urgent need for this new capacity.

Security of energy supply

7.15 Page 28 of the UK Low Carbon Transition Plan addresses energy security. The action that the Government is taking to cut emissions in the energy sector is good for the security of our energy supplies. Global energy demand is forecast to increase by around 45% between 2006 and 2030 with almost 80% of this increase being satisfied by fossil fuels. Without action the UK will need to rely even more on imported fossil fuels and would have a significant exposure to global energy price fluctuations. In 2008 the UK imported about 25% of the gas that it used. Projections suggest that by 2020 this could rise to around 60%.

7.16 Paragraph 1.6 of the 2009 DUKES Report[10] states the UK has become a net energy importer.

7.17 Paragraph 3.3.5 of EN-1 stresses the importance and advantages to the UK of maintaining a diverse range of energy sources, so that the country is not overly reliant on any one technology or fuel. The aim is to bring forward many new low carbon developments, including

[10] DECC (2009) Digest of United Kingdom Energy Statistics.

renewables in the next 10-15 years. This translates specifically into support in paragraph 3.3.10 for the diversification and decarbonisation of electricity generation increasing dramatically the amount of renewable generating capacity. In the short to medium term, this increase in capacity is likely to come from onshore and offshore wind.

7.18 EN-3 section 2.6 deals specifically with offshore wind and at paragraph 2.6.1 states that offshore wind farms are expected to make up a significant proportion of the UK's renewable energy capacity by up to 2020 and towards 2050.[11]

7.19 The scale of the new renewable generation capacity anticipated is set out at EN-1 paragraphs 3.4.1 and 3.4.2 where it is stated that new projects need to come forward urgently to ensure we meet the target of 15% of total energy from renewable sources by 2020. The Committee on Climate Change May 2011 report is directed at moving to 30% renewable energy capacity by 2030, and at the same time points to the benefits of doing so by delivering up to half a million jobs by 2020 in the renewable sector, reducing our dependence on coal, oil and gas supplies, as well as factors such as reducing fossil fuel demand by around 10% and gas imports by 20-30%.

7.20 The UK Low Carbon Transition Plan identifies that reliance on imported energy is unsustainable. It puts the UK at financial and demand risk through increased global competition for resources, combined with increased national growth and reduction in generating capacity in the next decade.[12]

Extent of the need for new low carbon energy infrastructure

[11] HMG 2009 Renewable Energy Strategy, Page 10 : UK Government modelling suggests that by 2020 renewables could provide more than 30% of our electricity (compared to around 5.5% today), and more than two thirds of this could come from onshore and offshore wind.
[12] p.28

7.21 The UK Low Carbon Transition Plan states that 75% of the UK's electricity is generated from coal or gas and a transition has to be made from the existing generation capacity to renewables, nuclear or fossil fuels in order to achieve the 2050 climate change targets.[13]

7.22 Table 3.1 of EN-1 estimates that new electricity capacity of approximately 59GW by 2025 is required.

7.23 The UK is well suited to producing offshore wind with an estimated 33% of the total potential European offshore wind resource, making it one of the most globally attractive locations.[14] It is however pertinent to note that Round 3 of The Crown Estate's leasing of offshore wind farm sites, although aiming to deliver at least 25GW of installed capacity by 2020, is still less than half of the overall level of new low carbon generation capacity required by 2025.[15]

7.24 Whilst the totals identified are for all forms of low carbon electricity generation, given the urgent need for provision and the recognition that onshore and offshore wind will be significant providers of this new capacity in the short term further supports the significant contribution that GWF would make to achieving those targets.

7.25 EN-1 paragraph 2.1.1 reinforces that there is an urgent need for new energy infrastructure to contribute to a secure diverse and affordable energy supply. EN-3 paragraph 2.1.2 provides that in the light of the statements elsewhere in the NPS about the benefits of new renewable infrastructure, the IPC should act on the basis that need for infrastructure covered by EN-3 has been demonstrated.

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[13] p.54

[14] HMG 2009 Renewable Energy Strategy, Page 27, Box 1.2 : Wind power is currently one of the most developed and cost effective renewable electricity technologies. The UK has the largest potential wind energy resource in Europe. While offshore wind is technologically challenging and more expensive that onshore wind, it has a larger potential due to a stronger and more consistent wind resource out to sea, leading to higher power output per turbine and more hours spent generating each year.

[15] HMG 2009 Renewable Energy Strategy, Page 41 : Records that in the case of offshore wind ambitions are greater than levels of deployment currently show. Estimate of what is achievable is nearer to 20GW and the strategic and environmental assessment recently undertaken for offshore energy indicates that a further 25GW is feasible by 2020 in addition to that already deployed. In all cases, the estimated contributions for each technology in this lead scenario are in no sense an upper limit on ambitions.

7.26 In the UK Renewable Energy Road Map, July 2011, page 3 – The Minister's Foreword records that "*the UK leads the world in offshore wind, with more than 700 turbines already installed. Taken together, onshore and offshore wind provide enough power for more than 2.5 million homes but more can be done. The challenge is to bring costs down and bring deployment up."*[16] As is explained in paragraph 3.1.8, GWF is precisely the type of project that can develop ways meet this challenge.

Maximising Economic Opportunities

7.27 The UK Low Carbon Transition Plan includes the objective of helping make the UK a centre of green industry.[17]

7.28 The 2009 DUKES report states that in 2008 the energy industry contributed 4.8% of GDP and employed 157,700 people.[18]

7.29 The UK Low Carbon Transition Plan notes that the low carbon environmental sector currently employs around 880,000 people in the UK and is worth £106bn per year. It is estimated that employment levels could rise by 2020 if maximisation of the opportunity presented by being a world leader in low carbon technologies.[19][20]

7.30 In delivering these economic opportunities, offshore wind is seen as one of the key low carbon sectors.[21]

7.31 GWF represents an opportunity to attract additional investment in construction and operation of low carbon technology that will assist in achieving economic gains to the UK, and has the potential to be a leading project in driving down costs in offshore wind, in advance of the ambitious Round 3 schemes.

7.32 In addition, the East of England Development Agency Regional Economic Strategy aims to ensure the future well-being and success of all people in the East of England. The strategy recognises that the development of offshore wind creates valuable research and

[16] HMG 2009 Renewable Energy Strategy, Page 30 : Previously acknowledged that the UK needs to do a lot more. EU targets are to obtain 20% of EU's total energy consumption from renewable sources by 2020. The UK has committed to provide renewable sources for 15%

development opportunities in the East of England region. The proposed development of GWF will help to maintain the East of England's position among the English regions as the leading renewable energy producer to 2031 and beyond.

International Background to Climate Change Targets

7.33 These policy statements on need are directly linked to pre-existing international obligations. The Kyoto Protocol states that EU overall emission targets include the reduction of greenhouse gas emissions to 8% below 1990 levels by commitment the period 2008-2012.

7.34 Section 3 of the European Commission Green Paper proposed an energy policy for Europe, which recognises the use of renewable energy as contributing to limiting climate change, securing energy supply and creating employment in Europe.[22]

7.35 Article 13 of EC Directive 2009/28/EC imposes a binding target for 20% of overall EU energy consumption to be provided by renewable technologies by 2020.

7.36 GWF assists in achievement of all these international obligations.

The Renewables Obligation and Electricity Market Reforms

7.37 The Government has recently consulted on electricity market reform and published a white paper on new electricity market arrangements.[23]

7.38 There is nothing in the new arrangements that suggests any lack of long term support for offshore wind power. On the contrary, the arrangements

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of its total energy use by 2020 from renewable sources being the largest percentage increase point of any member of state.

[17] p.112

[18] p.11

[19] p.112

[20] HMG 2009 Renewable Energy Strategy, Page 15 : A stronger renewable industry is needed. The UK Government wishes to maximise UK economic and employment opportunities and in doing so putting the country at the forefront of global competition in the low carbon economy.

[21] p.113

[22] p.17

have been welcomed by the offshore development industry as providing support for projects such as GWF.

Regional Planning Policy Targets for Renewable Provision

7.39 Further indicators of need for new renewable energy capacity come from Policy ENG2 of the East of England Plan which sets renewable energy targets for the Eastern region being: 2010 – 1,192MW (820MW excluding offshore wind) and then rising to at least 4,250MW by 2020 (1,620MW excluding offshore wind). Whilst the East of England Plan states that sites outside of 12nm from shore cannot be considered to contribute to regional renewables targets, there is no doubt that GWF would make a significant contribution to the UK's overall targets to increase the amount of electricity generated from renewable sources.

7.40 The most recent statistics available, for 2010[24], show that the East of England's installed renewable capacity, including offshore wind, was just under 700MW. This is 58% of the target for 2010, and 16% of the 2020 target.

7.41 Despite the stated intention of the Coalition Government to revoke all Regional Strategies, including the East of England Plan, it is recognised that the relevant local statistics on demand and available supply in the region that have given rise to the renewable energy targets remain relevant considerations in the planning process. Whilst it is acknowledged that the majority of the GWT WTGs are located outside 12 nm, the capacity for new renewable generation described by the target figures in the East of England Plan is relevant to supporting the need for the development of GWF.

National, Regional and Local Planning Guidance Supporting Provision of Renewable Energy

7.42 PPS1 sets out overarching planning policies on the delivery of sustainable development through the planning process.[25] The key principle is that regional and local planning bodies should ensure policies contribute to global sustainability by addressing causes and

[23] Planning our electric future: a White Paper for secure, affordable, and low carbon electricity, July 2011, DECC
[24] https://restats.decc.gov.uk/cms/regional-renewable-statistics
[25] p.iv, ODPM Planning Policy Statement 1 (PPS1)

potential impacts of climate change through policies which promote the development of renewable energy resources. Paragraph 22 states development plan policies should seek to promote and encourage the use of renewable resources (for example by the development of renewable energy).

7.43 PPS22 sets out policies intended to stimulate positive planning which facilitates renewable energy developments[26] in line with UK Government objectives for renewable energy developments. It establishes that the wider environmental and economic benefits of all proposals for renewable energy projects are material considerations that should be given significant weight.[27] However, it is noted that this document does not apply to offshore renewables developments.

7.44 The draft National Planning Policy Framework (NPPF) promotes the delivery of sustainable development, being development which meets the needs of the present without compromising the ability of future generations to meet their own needs (paragraph 9). The draft sets out core principles which should be taken into account by all those engaged in the planning system, including that planning decisions should encourage the use of renewable resources (for example, by the development of renewable energy (paragraph 19)). The draft NPPF also sets out the Government's objective that planning should fully support the transition to a low carbon economy and to achieve this, the planning system should aim to actively support the delivery of renewable energy infrastructure (paragraph 148).

7.45 Policies in the East of England Plan set out considerations to shape local planning authorities' local plan policies and decisions.

7.46 In relation to renewable energy, policy ENG1: Carbon Dioxide Emissions and Energy Performance states that local authorities should encourage the supply of energy from decentralised, renewable and low carbon energy sources. It also requires local authorities to put in place planning policies that encourage and promote the incorporation of suitable technologies and reduce energy consumption and carbon emissions.

[26] P.6 "Government's Objectives"
[27] p.7 Key Principle iv

7.47 Policy AP98 of the Suffolk Coastal District Plan states that:

"In view of the environmental benefits associated with harnessing renewable energy sources, the District Council will support the development of renewable energy schemes provided that it can be shown that such development would not cause significant harm to interests of acknowledged importance in the local environment".

7.48 SCDC has recognised the need to act to reduce their reliance on fossil fuels and cut emissions of greenhouse gases by producing its own Climate Change Strategy and Action Plan (2009/2011). The Strategy and Action Plan sets the action, under Objective 3, *"to utilise non fossil fuel dependent technologies where feasible in our own estate and operations and to promote these within our local communities.*" It is therefore clear that there is a local imperative to use technologies, such as offshore wind, to meet the objective.

7.49 GWF is the type of renewable energy project at which the policy support in PPS1 and local policies is aimed.

Marine Policy Statements

7.50 The MPS reflects the carbon saving initiatives and policy support for renewable energy. It also recognises that the generation of energy from renewable sources has an overall beneficial effect on air quality, as compared with fossil fuels (MPS 2.6.2).

7.51 The MPS recognises that a secure, sustainable, affordable supply of energy is of central importance to the economic and social well being of the UK and contributing to securing the UK's energy objectives while protecting the environment will be a priority for marine planning (MPS 3.3.1).

7.52 The MPS also recognises that a significant part of the renewable energy required to meet the national and international energy/CO_2 emissions targets will come from marine sources, with offshore wind expected to provide the largest single contribution toward 2020 and beyond (MPS 3.3.3).

7.53 The MPS sets out what decision-makers examining and determining applications for energy infrastructure should take into account,

namely: the national level of need for energy infrastructure; the positive wider environmental, societal and economic benefits of low carbon electricity generation; that the renewable energy resources can only be exploited where the resource exists and where economically feasible; the potential for inward investment on energy related manufacturing and deployment activity and employment opportunities and regeneration of local and national economies, supporting the objective of developing the UK's low carbon manufacturing capability (MPS 3.3.4). These echo the matters set out in the NPSs.

7.54 The UK administrations have undertaken a large number of studies to assess the environmental implications and spatial interactions of increasing renewable energy deployment in UK waters. From these studies, it has been concluded that there are no overriding environmental reasons to prevent the achievement of our plans for offshore wind and sub-sea grid development to 2020, if mitigation measures are implemented to prevent, reduce and offset any significant adverse effects (MPS 3.3.17). As the most mature of the offshore renewable energy technologies, wind has the potential to have the biggest impact in the medium-term on security of energy supply and carbon emission reductions (MPS 3.3.19).

7.55 GWF is clearly in general accord with the policies and objectives of the MPS.

Alternatives

7.56 EN-1 notes (at paragraph 4.4.3) that the NPS does not specifically require a consideration of alternatives beyond that specified in law, however it does note an obligation to provide information about the main alternatives considered. In the case of Habitats Regulations Assessment, it notes that there are specific legislative requirements for the IPC to consider alternatives.

7.57 Section 5.3.7 notes that, as a general principle, development should aim to avoid significant harm to biodiversity and geological conservation interests, including the consideration of reasonable alternatives. Sections 5.7 and 5.9 also refer to the consideration of alternatives in relation to flood risk and landscape and visual impacts respectively.

7.58 Where there is a legislative or policy requirement to consider alternatives, at paragraph 4.4.3 EN-1 guides the IPC to consider the following, amongst others:

- The consideration of alternatives to be in a proportionate manner;
- Whether there is a realistic prospect of an alternative delivering the same capacity in the same timescale as the proposed development;
- Where there are likely to be limited alternatives, or all alternatives may ultimately be used (in the case of targeted or constrained developments), an application for one site should not be rejected on the basis that an alternative would have fewer adverse impacts; and
- Possible alternatives should be identified, wherever possible, before the application is submitted, to allow appropriate consultation and an appropriate evidence base.

7.59 Key alternatives considered by GWFL are reflected in Chapter 6 of the ES (Document 5.2.6):

- Offshore wind farm site boundary;
- Onshore substation location and connection to the national grid (and consequently onshore cable routing); and
- Nearshore routing and landfall.

7.60 The location and boundary of GWF have been driven by the scheme's proximity to GGOWF (necessarily so for an ‘extension’ project) and surrounding constraints such as shipping routes and water depths. The Crown Estate tender process also required extension projects to be of a similar scale to the existing scheme and hence GWF was proposed as 504MW, to match that of GGOWF.

7.61 EN-3 recognises, in paragraphs 2.6.46 and 2.6.47 the constraints that exist on extending existing offshore wind farms within areas identified by The Crown Estate. In particular that:

"Leases may be …subject to various constraining conditions, including the presence of an existing operational wind farm.
The IPC should be aware of the potential for applications for extensions to existing wind farms and that there may be constraints on such leases over which the applicant will have little or no control."

7.62 Given that GWF is an extension to the existing GGOWF, and The Crown Estate's pre-requisites for Round 1 and 2 extension projects, alternatives in relation to the location of the offshore works are extremely limited.

7.63 The Crown Estate's pre-requisites are:

- The proposed extension must share a substantial part of one or more boundaries with the original site;
- No maximum size of extension is set, however, the scale of the extension should be appropriate for the scale of the original site;
- The extension proposal should demonstrate synergies with the original site (e.g. of construction, operation, improvement of economics and / or grid connectivity);
- No extension will be permitted to encroach within a radius less than 5km of any nearby Round 1 or 2 sites, except with the express agreement of the tenant of the existing nearby site; and
- The proposed extension must not adversely affect delivery or operation of the original site or any neighbouring site.

7.64 In addition, the EIA for GWF has given due consideration to the context of the project in light of the Offshore Energy SEA, as well as taking into account any pertinent findings from the Round 2 SEA. For example, the recommendations from the Offshore Energy SEA are that offshore wind farm developments should not:

- Impinge on major commercial navigation routes, significantly increase collision risk or cause appreciably longer transit times;
- Interfere with civilian aviation including radar systems;
- Jeopardise national security for example through interference with radar systems or significant reductions in training areas; or
- Result in significant detriment to tourism, recreation and quality of life.

7.65 The SEA report also recommends that new rounds of offshore wind farms should be sited well away from the coast, generally outside 12 nautical miles and that monitoring and surveys related to bird and marine mammal impacts require a detailed and well planned approach. GWF does not significantly interfere with radar systems or have a detrimental impact on tourism, recreation and quality of life and the wind farm is largely outside of the 12 nautical mile limit.

7.66 GWF is considered to have a minor adverse impact (subject to the Sunk Traffic Separation System (TSS) extension being ratified in

November 2011) on the re–routeing of existing traffic. The change in ship–to–ship collision risk is also considered to be low and ship-to-structure collision is deemed moderate, although the extinguishment of rights of navigation and safety zones around the turbines will ensure that this is minimised as far as is reasonably practicable.

7.67 GWF's grid connection offer was received for connection at Sizewell, which has significant electrical transmission infrastructure by virtue of the existing nuclear facilities. GGOWF also connects via facilities in the Sizewell area. Whilst the suitability of the connection location has been confirmed by National Grid's offer it should also be noted that a connection at Sizewell restricts the wider proliferation of electrical infrastructure, including new overhead lines.

7.68 GGOWF makes landfall south of Sizewell village and the nuclear facilities, being constrained both by nuclear facility outfalls and occupied properties, as well as emerging proposals for a potential Sizewell C nuclear project. To the south of the GGOWF landfall there is limited potential to landfall the GWF cables to the south of a caravan park, a location which is in any event significantly closer to the Sandlings Special Protection Area (SPA).

7.69 In addition, a landfall south of the existing GGOWF cables would require a significantly more complex offshore crossing than the onshore crossing proposed in the application. The extent of foreshore works has been significantly refined following the pre-application consultation to address concerns raised by the public and ensure that the cable route boundary lies further away from local properties. Chapter 6 of the ES contains further details (Document 5.2.6, paragraph 6.14.9).

7.70 Section 5.7.13 of EN-1 identifies that projects should follow the sequential test and seek to be located in Flood Zone 1. The proposed substation site is located in Flood Zone 1 and hence the GWF proposal satisfies the sequential test and there is no need to apply the exception test. GWFL has received confirmation from the Environment Agency (see Consultation Report and ES Chapter 22) that they have no objection to the scheme on the basis of flood risk.

7.71 In considering the potential for impacts on highly valued landscapes such as AONB, paragraph 5.9.10 of EN-1 notes that the assessment

should consider the cost of, and scope for, developing elsewhere outside the designated area or meeting the need for it in some other way. The importance of the Suffolk and Coastal Heaths AONB within which the onshore proposals lie has been recognised by GWFL. Extensive non-statutory consultation was carried out by both GWFL and National Grid in advance of formal consultation on sites both within and outside the AONB to understand views of both statutory consultees and the public on the preferred location for these works. Ten sites were considered, from which a shortlist of three was identified for further consideration.

7.72 The outcome of this early consultation was a strong preference from both local authorities and public towards avoiding the proliferation of electrical infrastructure outside the Sizewell area, either at the existing nuclear facilities or adjacent to the existing GGOWF substation. Sites outside the AONB were dismissed by consultees as being less favourable than those inside the AONB.

7.73 Having identified a suitable site in the AONB the onshore works, in line with wishes from both relevant local authorities, have been designed to minimise the proliferation of electrical infrastructure by locating the works immediately adjacent to the GGOWF facilities. Furthermore an extensive earthworks proposal has been developed and modified in response to comments from those authorities. Officers from both authorities have agreed that the proposals shown in the application represent the minimum required to achieve successful screening of the development.

7.74 Through careful consideration and consultation on the location of the substation, its micrositing, and proposed landform and screening mitigation GWF considers that it has met the requirement of the NPS with respect to landscape and visual impacts and the special importance of the AONB designation. In particular due consideration has been given to the strong views of consultees to avoid sites further west, this being the only option to avoid the AONB, with a consequent increase in cable kilometres and proximity to greater numbers of residences. A financial contribution to the enhancement of the AONB is also being offered as part of the proposal.

Biodiversity

7.75 The policies on biodiversity set out in NPSs EN-1 (section 5.3) and EN-3 (section 2.6.58) are relevant to all potential impacts of the proposed developments on ecology. These policies are summarised below and are relevant to all the assessments undertaken by GWF of potential ecological impacts. These assessments are reported at Chapters 8 (Nature Conservation Designations), 10 (Marine Water and Sediment Quality), 11 (Offshore Ornithology), 12 (Marine and Intertidal Ecology), 13 (Fish and Shellfish Resource), 14 (Marine Mammals), and 23 (Terrestrial Ecology).

7.76 Paragraphs 5.3.1 and 5.3.2 of EN-1 acknowledge the wide range of legislative provisions at the international and national level that can impact on planning decisions affecting biodiversity.

7.77 Paragraph 2.6.63 of EN-3 notes that schemes may have adverse effects on biodiversity, which can include temporary disturbance, however, the presence of wind turbines can also have positive benefits to ecology and biodiversity.

7.78 GWF has undertaken assessments on the potential impacts of the proposed development on biodiversity, which are reported in the ES Chapters listed above. The assessments have been undertaken in accordance with the guidance on biodiversity contained in EN-1 and EN-3. In the course of these assessments, the appropriate bodies were consulted.

7.79 Paragraph 5.3.6 of EN-1 states that the IPC's decision-making process should have regard to the aim of Government's biodiversity strategy, taking into account the context of the challenge of climate change and that failure to address this challenge will result in significant adverse impacts on biodiversity.

7.80 Paragraphs 5.3.7 and 5.3.8 note that as a general principle development should aim to avoid significant harm to biodiversity including through mitigation and consideration of reasonable alternatives. Where significant harm cannot be avoided, then appropriate compensation measures should be sought. In taking decisions the IPC should ensure that appropriate weight is attached to designated sites of international, national and local importance; protected species; habitats and other species of principal importance

for the conservation of biodiversity and geological interests within the wider environment.

7.81 Paragraph 2.6.70 of EN-3 recognises that mitigation may be possible in the design of the development and construction techniques to be used. Paragraph 2.6.71 notes that ecological monitoring is likely to be appropriate during construction and operation, which will inform appropriate mitigation and future projects.

7.82 The IPC should consider the effects on biodiversity and ecology taking into account all information made available to it. Paragraph 2.6.69 of EN-3 states that the designation of an area as Natura 2000 site does not necessarily restrict the construction or operation of offshore wind farms in or near that area.

7.83 Core Strategy Policies SP14 and DM27 address biodiversity. SP 14 seeks to protect and enhance biodiversity and geodiversity through a framework based upon a network of designated sites, corridors and links, rivers, estuaries and the costs and identified habitats and species. Policy DM27 states that "development will not be permitted where there is an unacceptable impact on biodiversity and geodiversity" having regard to a number of specified criteria.

7.84 As set out in EN-1, paragraph 4.3.1, the IPC must have regard to its duties under the Habitats and Birds Directives (as implemented in the UK) and the applicant will need to provide the IPC with such information as may reasonably be required to determine whether an Appropriate Assessment is required and if so, with such information so as to enable the IPC to conduct the Appropriate Assessment.

7.85 The Environmental Impact Assessment carried out for GWF considers the relevant nature conservation designations (see Document 5.2.8). A number of designated sites of local, national and international nature conservation importance have been considered in the assessment carried out. The majority of these are some distance from the GWF.

7.86 Of the nine European sites considered, the only likely significant effect identified was on the Alde-Ore Estuary SPA population of lesser black-

backed gull. No other designated sites are likely to be affected by the GWF during any of the development phases.

7.87 Offshore ornithological monitoring is secured by the marine licence, this requires that such monitoring is carried out during the construction and operation of the GWF in accordance with a methodology agreed with the MMO.

7.88 The Habitats Regulations Assessment (Document 6.3) provides the information required by the IPC to enable it to satisfy its duties under the Habitats and Birds Directives. This concludes that there is no likely significant effect on all but one of the European sites relevant to the GWF. In relation to the Alde-Ore Estuary SPA, the Report to Inform the Appropriate Assessment concludes that the nature conservation objectives for this SPA will not be compromised and there will be no effect on the integrity of the SPA in relation to the lesser black-backed gull, which is the basis for its designation, as a result of the proposed development, either alone or in combination with other projects.

8 TOPIC SPECIFIC CONSIDERATIONS

8.1 Introduction

8.2 This section considers the compliance of each topic area within the ES with the requirements of the NPS and, in relation to the onshore works, the Development Plan as described in section 7 above and the balance of beneficial and adverse impacts. In doing so section 4.1.2 of EN-1 guides the IPC to start with a presumption in favour of granting consent for energy NSIPs. That presumption applies unless more specific and relevant policies in the NPS clearly indicate that the consent should be refused. In addition, as noted in paragraph 4.1.6 of EN-1, in the event of a conflict with existing planning policy, the NPS prevails for the purpose of IPC decision-making.

8.3 Physical environment

NPS applicability

8.4 The generic impacts of renewable energy infrastructure on the offshore physical environment are considered in NPS EN-3. Paragraph 2.6.192 sets out the ways in which offshore energy infrastructure can affect elements of the physical environment which includes waves and tides, scour effect, sediment transport and suspended solids.

Applicant's Assessment

8.5 GWFL has undertaken an assessment of the potential impacts of the proposed development on the offshore physical environment in accordance with EN-3 and this assessment is set out in Chapter 9 of the ES (Document reference 5.2.9).

8.6 The assessment concludes that no significant adverse residual impacts are anticipated on any elements of the offshore physical environment during the construction, operation or decommissioning phases of the GWF, either alone or cumulatively with other activity, plans or projects. Evidence available to date from the existing and adjacent GGOWF supports this conclusion.

Mitigation

8.7 In accordance with paragraph 2.6.197 of EN-3, mitigation of potential impacts on the offshore physical environment has been considered. Visual or bathymetric surveys will be undertaken at selected locations within the GWF site to assess the magnitude and extent of scour formation and development, and the effectiveness of any scour protection. It is expected that specific detail on scour monitoring would be established with the MMO post consent and at least four months prior to construction.

8.8 Such details would be the subject of a scour protection management plan, the requirement for which is set out in the draft Marine Licence.

8.9 If GBS foundations are selected then an application will be made to the MMO for a dredging licence. This application would be made once the DCO application has been determined and the foundations have been selected.

8.10 In view of the absence of significant adverse impacts on the offshore physical environment, no other mitigation has been identified.

IPC decision making

8.11 In accordance with EN-3 (paragraph 2.6.196), the methods of construction proposed are such as to reasonably minimise the potential for impact on the offshore physical environment.

8.12 It is considered that the GWF proposal is in accordance with the policies in EN-3 relating to the offshore physical environment.

8.13 **Marine water and sediment quality**

NPS applicability

8.14 EN-1 highlights the potential for adverse effects on the water environment, including coastal waters as a result of infrastructure development (paragraph 5.15.1). EN-3 (paragraph 2.6.189) also notes that offshore energy infrastructure can affect marine water quality through the disturbance of seabed sediments or the release of contaminants, with subsequent indirect effects on habitats, biodiversity and fish stocks.

Applicant's assessment

8.15 GWFL has undertaken an assessment of the potential impacts of the proposed development on marine water and sediment quality in accordance with the policies in EN-1 and EN-3. This assessment is set out in Chapter 10 of the ES (Document reference 5.2.10).

8.16 The assessment concludes that no significant adverse residual impacts are anticipated on marine water and sediment quality during the construction, operation or decommissioning phases of the GWF, either alone or cumulatively with other activity, plans or projects.

Mitigation

8.17 In accordance with EN-1 (paragraph 5.15.8-9), mitigation of potential impacts on marine water and sediment quality has been considered. Accordingly, mitigation measures have been put forward in relation to accidental spillages. This includes a marine pollution contingency plan to address the risks, methods and procedures to deal with any spills and collision incidents during construction and operation of the authorised scheme (in relation to all activities carried out below MHWS).

8.18 The requirement for a marine pollution contingency plan is set out in the draft Marine Licence.

8.19 In view of the absence of any other adverse impacts on marine water and sediment quality, no further mitigation has been identified.

IPC decision making

8.20 Pursuant to paragraph 5.15.7 of EN-1, the decision-maker should consider whether appropriate requirements should be attached to any DCO in order to mitigate adverse effects on the water environment.

8.21 It is considered that the decision to grant the DCO for the proposed development would be in accordance with the policies in EN-1 relating to water quality.

8.22 Offshore ornithology

NPS applicability

8.23 EN-1 sets out policies in relation to generic biodiversity impacts (section 5.3). Further policy specific to offshore wind is set out in EN-3 (paragraphs 2.6.58-2.6.71) and specifically in relation to birds in paragraphs 2.6.100-2.6.110. Paragraph 2.6.101 identifies the ways in which offshore wind farms have the potential to impact on birds. This includes collision, habitat loss, disturbance, displacement and impacts on flight lines.

Applicant's assessment

8.24 GWFL has undertaken an assessment of the potential impacts of the proposed development on offshore ornithology in accordance with the

relevant policies of EN 1 and EN-3. The assessment is reported in Chapter 11 of the ES (Document reference 5.2.11).

8.25 The assessment focuses on species of principal concern and concludes that the majority of effects on these species will be of minor adverse or negligible significance.

8.26 After considering relevant mitigation measures, the highest residual impacts are associated with three species of seabird during the construction and operation phases, which are assessed as being of moderate but tolerable adverse significance. Chapter 11 of the ES notes that for an impact to be described as tolerable it should be demonstrated that any losses should be within the regenerative capacity of the reference population or habitat to be absorbed, and result in the population or habitat extent remaining viable over the long-term.

8.27 GWFL further assessed the potential impacts on the lesser black-backed gull population of the Alde-Ore Estuary SPA from which it is evident that there would be no significant impact on integrity either in isolation or in-combination with other wind farms.

8.28 The assessment concludes that when mitigation measures are implemented, there will be no significant impacts to any species of international, national or regional scale, nor on any Natura 2000 site.

Mitigation

8.29 Pursuant to the policies in EN-1 and EN-3 regarding mitigation of impacts on biodiversity and birds, appropriate and effective mitigation for the GWF has been proposed and those mitigation measures specifically targeted at offshore seabirds is set out in Chapter 11 of the ES (Document reference 5.2.11).

8.30 Requirements for ornithological surveys are set out in the draft Marine Licence.

IPC decision-making

8.31 The IPC should ensure that appropriate weight is attached to designated sites of international, national or local importance (EN-1, paragraph 5.3.8) although in accordance with paragraph 2.6.69 of EN-3, the designation of an area as a Natura 2000 site does not necessarily restrict the construction or operation of offshore wind farms in or near that area. Further, (as set out in section 8.174) paragraph 5.3.6 of EN-1 provides that the Government's biodiversity strategy is to be set in context of climate change and the impacts of climate change on biodiversity.

8.32 It is considered that the decision to grant the DCO for the proposed development would be in accordance with the policies in EN-1 and EN-3 relating to offshore ornithology.

8.33 **Marine and intertidal ecology**

NPS applicability

8.34 Policies relevant to offshore wind farm impacts on marine and intertidal ecology are set out in EN-3 and are to be considered alongside the policies on generic biodiversity impacts in EN-1 and the offshore wind-specific biodiversity policy in EN 3.

Applicant's assessment

8.35 GWFL has undertaken an assessment of the potential impacts of the proposed development on marine and intertidal ecology in accordance with the policies in EN-1 and EN-3. This assessment is set out in Chapter 12 of the ES (Document reference 5.2.12).

8.36 No significant adverse residual impacts are anticipated over the construction, operation or decommissioning phases of GWF either alone or cumulatively with other activity, plans or projects on marine and intertidal ecology. The conclusions drawn are in line with those predicted for the adjacent GGOWF project, as would be expected given the similar ecological characteristics and proposed project envelopes that were assessed.

8.37 The assessment identifies the potential for a minor adverse residual impact on subtidal Sabellaria spinulosa during the operation phase, although best practice will be followed to minimise any impacts.

Mitigation

8.38 The mitigation policies for intertidal and subtidal habitats in paragraphs 2.6.88 and 2.6.119 of EN-3 have been considered and are reflected in the assessment. GWFL will undertake pre-construction surveys to establish the presence of any Annex I habitat (such as Sabellaria spinulosa reef), enabling the micrositing of particular works should it be necessary. Cables will be buried where conditions allow.

8.39 The requirement for any further monitoring will be established with the regulator and relevant stakeholders prior to construction. This is reflected in the provisions of the draft Marine Licence.

IPC decision making

8.40 In accordance with paragraph 2.6.85 of EN-3, the cable installation will be designed and carried out sensitively taking into account intertidal habitat. Further, sensitive subtidal environmental aspects have been identified and will be taken into account in the cable works (paragraph 2.6.116 of EN-3).

8.41 Paragraph 2.6.87 and 2.6.118 of EN-3 state that where offshore export cables are to be armoured and buried at a sufficient depth (at least 1.5m) to minimise heat effects, the effects of heat on sensitive species are unlikely to be a reason for the IPC to have to refuse to grant consent for the proposed development. GWFL will submit a cable burial plan to the MMO prior to construction commencing, as per the draft Marine Licence.

8.42 With regard to intertidal ecology, the temporary nature of the works to be carried out within the intertidal area should be taken into account (paragraph 2.6.86 of EN 3).

8.43 It is considered that the decision to grant the DCO for the proposed development would be in accordance with the policies in EN-1 and EN-3 relating to marine and intertidal ecology.

8.44 **Fish and shellfish resource**

NPS applicability

8.45 Policies on offshore wind farm impacts relevant to fish are set out in paragraphs 2.6.72 - 2.6.77 of EN-3 and are to be considered alongside the policies on generic biodiversity impacts in EN-1 and the offshore wind-specific biodiversity policy in EN 3. The policies relevant to marine and intertidal ecology are discussed in section 7.5. Whilst there are no specific policies relating to shellfish in the NPSs, the policies considered below have been applied equally to both fish and shellfish.

Applicant's assessment

8.46 An assessment of the potential impacts of the proposed development on the fish and shellfish resource has been undertaken in accordance with the relevant assessment policies in EN-1 and EN-3 and this assessment is set out in Chapter 13 of the ES (Document reference 5.2.13).

8.47 No significant adverse residual impacts are anticipated over the construction, operation or decommissioning phases of GWF either alone or cumulatively with other activity, plans or projects on the fish or shellfish resource. The conclusions drawn are in line with those predicted for the adjacent GGOWF project, as would be expected given the similar ecological characteristics and proposed project envelopes that were assessed.

8.48 The assessment identifies the potential for a minor adverse to negligible residual impact due to noise and vibration during construction (from piling activity).

8.49 The assessment identifies the potential for a minor adverse residual impact due to the effect of EMF during operation.

Mitigation

8.50 In accordance with paragraphs 2.6.76 and 2.6.77 of EN-3, mitigation of impacts on the fish and shellfish resource has been considered. Mitigation in the form of soft start piling will be incorporated into construction procedures, should piling occur. Further precautionary mitigation is applied through the commitment to restrict piling activity to no piling in array area C during the relevant peak sole spawning

season (the maximum period being 1st April to 15th May), unless otherwise agreed in writing with the MMO and no piling in the course of construction shall take place in array area B during the relevant peak herring spawning season (the maximum period being 1st November to 31st December), unless otherwise agreed in writing with the MMO.

8.51 A detailed cable laying plan will be submitted to the MMO prior to construction commencing.

8.52 Provisions relevant to both noise and EMF impacts are included in the draft Marine Licence.

IPC decision making

8.53 It is considered that the decision to grant the DCO for the proposed development would be in accordance with the policies in EN-1 and EN-3 relevant to fish and shellfish resource.

8.54 **Marine mammals**

NPS applicability

8.55 Policies specific to marine mammals in the context of offshore wind farm development are set out in paragraphs 2.6.90 to 2.6.99 of EN-3. These are considered alongside the more general policies on biodiversity in EN-3 (in the context of offshore wind) and in EN-1 (in the context of energy development), as referred to in section 5.

Applicant's assessment

8.56 GWFL has undertaken an assessment of the potential impacts of the proposed development on marine mammals in accordance with the relevant assessment policies in EN-1 and EN-3 and this assessment is set out in Chapter 14 of the ES (Document reference 5.2.14).

8.57 No significant adverse residual impacts are anticipated over the construction, operation or decommissioning phases of GWF either alone or cumulatively with other activity, plans or projects on marine mammals.

8.58 The assessment identifies the potential for minor adverse impacts on harbour porpoise (potential lethal effect and physical injury from piling noise), all marine mammals (behavioural response from noise) and on pinnipeds (collision risk) during the construction phase.

8.59 The assessment has identified the potential for cumulative impacts if the construction timescales of the closest offshore wind farm developments overlap. However, given the relatively low numbers of mammals within the area and the application of best practice mitigation, the favourable conservation status of regional, national and international marine mammal populations is unlikely to be adversely affected by the proposed development.

Mitigation

8.60 In accordance with paragraphs 2.6.97-2.6.99 of EN-3, mitigation of impacts on marine mammals has been considered and is set out in Chapter 14 of the ES. Lethal effect and physical injury impacts are mitigated by the use of a Marine Mammal Observer / Passive Acoustic Monitoring Operator and through the adoption of mechanical soft starts to any piling activity. Mitigation of pinniped collision risk includes raised awareness and the development of a marine mammal mitigation protocol (MMMP).

8.61 An EPS licence will be required to cover the risk of disturbance to cetacean species during piling works, if these occur.

8.62 The requirement to establish a MMMP is included in the draft Marine Licence.

IPC decision making

8.63 The proposed methods for construction will, in accordance with paragraph 2.6.94 of EN-3, be designed so as to reasonably minimise significant disturbance effects on marine mammals.

8.64 Suitable noise mitigation measures will be agreed as a condition of the marine licence and as a result noise impacts on marine mammals is not a reason for refusal, as set out in paragraph 2.6.94 of EN-3.

8.65 Paragraph 2.6.96 of EN-3 notes that fixed submerged structures are likely to pose little collision risk for marine mammals and the IPC is not likely to have to refuse to grant a DCO on such grounds.

8.66 In light of the above, it is considered that the decision to grant the DCO for the proposed development would be in accordance with the policies in EN-1 and EN-3 relating to marine mammals.

8.67 Commercial fisheries

NPS applicability

8.68 The potential impacts of offshore wind farms on commercial fisheries are considered in EN-3, with the relevant policies set out at paragraphs 2.6.121-2.6.136 of EN-3.

Applicant's assessment

8.69 GWFL has undertaken an assessment of the potential impacts of the proposed development on the commercial fisheries in accordance with EN-3 and this assessment is set out in Chapter 15 of the ES (Document reference 5.2.15).

8.70 No significant adverse residual impacts are anticipated over the construction, operation or decommissioning phases of GWF either alone or cumulatively with other activity, plans or projects on commercial fisheries.

8.71 The assessment identifies the potential for minor adverse residual impacts during construction due to temporary loss of access to fishing grounds and from seabed objects and obstructions.

8.72 The assessment identifies the potential for minor adverse residual impacts during operation due to restricted access to fishing grounds (Belgian, Dutch and French trawl fleets).

8.73 Potential impacts on fishing vessel safety during all phases are assessed as being as low as is reasonably practicable. The assessment of safety related impacts is risk based, as defined in Chapter 16 of the ES (shipping and navigation).

8.74 No significant residual cumulative impacts on commercial fisheries are anticipated.

Mitigation

8.75 In accordance with EN-3 2.6.134, mitigation of impacts on commercial fishing has been considered. Measures put forward include fisheries liaison (which would include pre-construction discussions with relevant representatives of the fishing industry to agree specific mitigation steps) and locating and recovering any lost objects and levelling of any large spoil mounds upon completion of construction.

Mitigation of safety related matters includes appropriate lighting of the structures, in compliance with the IALA standards and the additional requirements of MGN 371.

8.76 Provisions relevant to commercial fishing are included in the draft Marine Licence and include the appointment and responsibilities of a fisheries liaison officer.

IPC decision making

8.77 In accordance with EN-3, the IPC can be satisfied that the site selection process (as detailed in Chapter 6 of the ES) has been undertaken in a way as to reasonably minimise adverse effects on fish stocks (paragraph 2.6.132). Further, through the final design of the wind farm GWF will seek to minimise any loss of fishing opportunity, taking into account effects of other marine interests.

8.78 It is considered that the decision to grant the DCO for the proposed development would be in accordance with the policies in EN-3 relating to commercial fisheries.

8.79 Shipping and navigation

NPS applicability

8.80 NPS EN-3 (paragraph 2.6.147-2.6.175) includes specific guidance on the assessment of navigation and shipping impacts. EN-3 highlights the importance of thorough consultation and stakeholder engagement, and sets out other guidance on the assessments to be undertaken by the applicant for a DCO.

Applicant's assessment

8.81 Chapter 16 of the ES (Document reference 5.2.16) sets out the assessment undertaken by GWF of the potential impacts of the proposed development on shipping and navigation. The assessment was undertaken in accordance with EN-3. Impacts associated with collision risk were assessed using a risk based system, which is defined in Chapter 16 of the ES. All other impacts were assessed on the standard significance levels.

8.82 No significant adverse residual impacts are anticipated over the construction, operation or decommissioning phases of GWF either alone or cumulatively with other activity, plans or projects on shipping and navigation.

8.83 The primary potential impacts identified during all phases are associated with the risk of collisions. These impacts are considered to be as low as reasonably possible with the application of a range of mitigation measures.

8.84 The assessment identifies the potential for minor adverse residual impacts during operation from the re-routeing of shipping, interference with marine radar and with search and rescue operations. The potential for cable route interaction impacts is also identified (risk based score of 6 – broadly acceptable).

8.85 There is the potential for cumulative impacts with the East Anglia offshore wind farm Project One, although it is considered that any impacts would not be significant.

Mitigation

8.86 In accordance with 2.6.174 of EN-3, mitigation of impacts on shipping and navigation has been considered and is set out in Chapter 16 of the ES. For collision risk, measures put forward include operating procedures, marking and lighting, compliance with MCA MGN 371, notices to mariners and the use of safety zones. Safety zones (500m and 50m during construction and operation respectively) will be applied for under the provisions of the Energy Act 2004. Mitigation of cable route interaction impacts includes cable burial and periodic inspection / surveying of the route.

8.87 It should be noted that an application has been made for the extension of the Sunk TSS in order to manage the traffic passing in the vicinity of GWF, significantly mitigating any impacts that arise as a result of the GWF. The site boundary was also modified to minimise any re-routeing impact on the east-west traffic.

8.88 Provisions relevant to shipping and navigation are included in the draft Marine Licence.

IPC decision making

8.89 It is considered that the decision to grant the DCO for the proposed development would be in accordance with the policies in EN-3 relating to shipping and navigation. This, however, only relates to the area within territorial waters.

8.90 Further, the IPC will be able to (in accordance with paragraph 2.6.173 of EN-3) include provisions in the DCO as to the extinguishment of rights of navigation as these have been requested as part of the application.

8.91 **Military and civil aviation**

8.92 Section 5.4 of EN-1 identifies that civil and military aerodromes, aviation technical sites, and other types of defence interests (both onshore and offshore) can be affected by new energy development. EN-1 summarises what should be included in an assessment if the proposed development may have an effect on civil and military aviation.

Applicant's assessment

8.93 GWFL has undertaken an assessment of the potential impacts of the proposed development on military and civil aviation in accordance with EN-1 and this assessment is set out in Chapter 17 of the ES (Document reference 5.2.17).

8.94 No impacts are identified over the construction, operation or decommissioning phases of GWF either alone or cumulatively with other activity, plans or projects on military and civil aviation.

Mitigation

8.95 In view of the complete absence of impacts on military and civil aviation, no mitigation has been identified beyond the standard aviation management measures that will be carried out in accordance with CAA requirements.

IPC decision making

8.96 It is considered that the decision to grant the DCO for the proposed development would be in accordance with the policies in EN-1 relating to military and civil aviation.

8.97 Other human activities with marine components

NPS applicability

8.98 NPS EN-3 sets out policies relevant to oil gas and other offshore infrastructure activities. No relevant policies are contained in EN-1 or EN-5.

Applicant's assessment

8.99 In line with paragraphs 2.6.179 - 2.6.181, GWF has undertaken an assessment of marine human activities and this is set out in Chapter 18 of the ES (Document 5.2.18).

8.100 The assessment concludes that the majority of potential impacts associated with other human activities will be negligible or there will be no impact. Impacts associated with damage to existing subsea cables

are assessed as being of negligible significance and the potential impact associated with unexploded ordinance is minor adverse. The impacts identified are the same for all stages of the project. If necessary, this aggregate area can be avoided be avoided altogether and the width of the export cable route has specifically allowed for this."

8.101 The only cumulative impact identified is upon the aggregate dredging activity undertaken at Shipwash 507/5, which has been assessed as potentially being of minor adverse significance.

8.102 In line with the recommendations of paragraph 2.6.181 of EN-3, GWF will continue to engage with other operators throughout the construction, operation and decommissioning phases, including where appropriate the ongoing progression of commercial agreements.

Mitigation

8.103 Pursuant to paragraph 2.6.187 of EN-3, discussions between GWF and relevant consultees have been progressed as far as possible prior to submission (see IPC decision-making, below).

8.104 Safety zones are proposed as part of the application and the details of these are set out in the Safety Zone Statement (Document 7.2). These will ensure the safety of both GWF and other marine users during construction and operation of the scheme.

IPC decision making

8.105 The IPC can be satisfied that the GWF proposal has sought wherever possible to minimise disruption or economic loss and to avoid any adverse effect on safety to other offshore industries, as advised in paragraph 2.6.184 of EN-3.

8.106 This is evidenced by the letters of comfort obtained from all the relevant cable operators. The IPC have confirmed in section 51 advice that such assurance will be sufficient at consent stage, given the challenges of reaching commercial agreements significantly in advance of construction works.

8.107 It is considered that the proposed development is in accordance with the policies in EN-3 on other marine activities.

8.108 **Archaeological and cultural heritage**

NPS applicability

8.109 NPS EN-1 addresses archaeology and cultural heritage in section 5.8 (historic environment); EN-3 addresses further historic environment considerations for offshore energy infrastructure in sections 2.6.137 - 2.6.146; EN-5 gives no additional consideration to archaeology and cultural heritage.

Development Plan Policies

8.110 The Core Strategy (paragraphs 3.139-142) recognises the importance of buildings and places as contributing to people's quality of life and that the District contains a rich historic legacy in terms of its archaeology amongst other things.

8.111 Suffolk Coastal Local Plan policy AP7 sets out detailed requirements as to the steps that are required to be taken for development that might affect sites that are known to or are likely to contain archaeological remains. As a pre-cursor, a professional archaeological assessment is to be undertaken to establish the likelihood of remains being encountered and their importance.

Applicant's assessment

8.112 The ES conducted all assessments in line with the guidance set out in EN-1 and EN-3. These are set out in Chapter 19 of the ES (Document 5.2.19).

8.113 The assessment concludes that the GWF proposal will have minor adverse effects on onshore archaeological material during the construction phase.

8.114 The assessment concludes that in relation to offshore features of archaeological interest, the impact of the proposed development will be of negligible significance during all stages of the project. The assessment anticipates there will be a minor adverse impact of construction and operation of the proposed development on the Suffolk Heritage Coast. No further impacts have been identified in respect of decommissioning. No potential cumulative impacts have been identified.

Mitigation

8.115 With respect to onshore archaeological material, a written scheme of archaeological investigation, secured by a requirement in the DCO will be developed with Suffolk Coastal District Council and Suffolk County Council.

8.116 Paragraph 2.6.145 of EN-3 advises that important heritage assets offshore are best protected by the implementation of exclusion zones. The deemed Marine Licence secures a programme of archaeological investigation to be agreed with the MMO in consultation with Suffolk Coastal District Council and English Heritage prior to offshore construction works commencing which includes site investigation and survey, the use of exclusion zones and recording and reporting obligations

IPC decision-making

8.117 Consideration will be given to the policies in section 5.8 of EN-1 regarding recording and the desirability of conserving heritage assets in the progression of the design of the proposed development.

8.118 In accordance with paragraph 2.6.144 of EN-3 the known heritage assets and their status will be taken into account in further design of the offshore works.

8.119 It is considered that no further requirements will be necessary in respect of preservation of the historic environment, both on and offshore, other than those set out in the draft DCO.

8.120 It is considered that the GWF proposal is in accordance with the policies set out in EN-1 and EN-3 in respect of the onshore and offshore historic environments and that the onshore works accord with the requirements of Local Plan policy.

8.121 Seascape landscape and visual character

NPS applicability

8.122 NPS EN-1 addresses landscape (including seascape and townscape) and visual effects in section 5.9; EN-3 further addresses seascape and visual effects of offshore wind farms in sections 2.6.198 - 2.6.210; specific landscape and visual considerations which apply to electricity networks infrastructure are included in EN-5 section 2.8.

Development Plan Policy

8.123 Core Strategy Policy SP15 sets out that "the policy of the Council will be to protect and enhance the various landscape character areas within the district, either through opportunities linked to development or through other strategies". This includes the landscape of the AONB.

8.124 In relation to the design of the substation works, policy DM21 Design: Aesthetics is relevant in that it promotes good design for buildings and states that "proposals that comprise poor visual design and layout or otherwise seriously detract from their surroundings will not be permitted."

8.125 Policy AP12 of the Suffolk Coastal District Plan states, with respect to the Area of Outstanding Natural Beauty:"The District Council will not grant planning permission for any proposed development which would have a significant adverse impact on the landscape. Only proven national interest and lack of alternative sites can justify an exception. Where development proceeds because of proven national interest, the removal and mitigation of any adverse effects of the development on the landscape and its wildlife will be required in the event of that development becoming redundant at a later date."

Applicant's Assessment

8.126 The applicant's assessment of impacts on seascape, landscape and visual character was undertaken in line with the policies set out in paragraphs 5.9.5-5.9.7 of EN-1. In accordance with paragraph 5.9.5, accepted guidance has been used, as detailed in Chapter 20 of the ES. The relevant development plan policies were also been considered in carrying out the assessment.

8.127 The additional guidance in paragraphs 2.6.202 - 2.6.206 of EN-3 was also taken into account.

8.128 EN-5 includes generic guidance for the assessment of landscape and visual impacts concentrating on the impact of new overhead power lines (paragraphs 2.8.4-2.8.6). It advises developers follow a set of common sense principles, the 'Holford Rules', when designing new overhead line routes. EN-5 does not contain specific guidance for the assessment of other onshore development associated with energy infrastructure such as substations. Although the only above ground line associated with GWF is from the sealing end compounds to the

overhead transmission lines, the general principles of the Holford Rules were used when considering the location of the onshore substation.

8.129 In recognition of the importance of the Suffolk and Coastal Heaths AONB designation, and the requirement in paragraph 5.9.10 of EN-1 and policy AP12 of the Suffolk Coastal Local Plan, GWFL carried out extensive non-statutory consultation on sites both within and outside the AONB to understand the views of both statutory consultees and the public on the location of the onshore works.

8.130 Ten alternative sites were originally considered for the GWF compound, which were subsequently narrowed down to three and this process found that there was a strong preference to locate the onshore works close to existing generating and transmission infrastructure in the coastal area of the AONB, to limit wider proliferation. This process identified that there was not strong support locally for moving significantly westwards to seek opportunities outside the AONB. A similar exercise was completed by National Grid which also found a strong preference for their transmission compound close to the existing generating and transmission infrastructure within the AONB.

8.131 The seascape, landscape and visual assessment is reported in Chapter 20 of the ES (Document 5.2.20). The impacts of the proposed development, including any impacts on tourism and recreation related to landscape or visual effects are considered in Chapter 24 of the ES, and in section 8.195.

8.132 The predicted impacts on landscape and visual character are set out in Chapter 20 of the ES. For the AONB, the effects of construction activity along the cable corridor have been assessed as moderate to major, and within the substation footprint have been assessed as major during the construction phase. The substation, sealing end compound gantries and screening landform will represent a major impact on the AONB. It is noted, however, the context for these elements is the existing infrastructure at GGOWF and the adjacent pylons and overhead wires and the Sizewell Power Stations.

8.133 During the operational phase, the impact of the substation is predicted to be major-moderate from distances of up to 500m after 15 years of

vegetation growth. Beyond this distance the effects will reduce fairly rapidly to be negligible with distance.

8.134 There are likely to be cumulative adverse landscape and visual impacts associated with GGOWF, Sizewell A and B and the proposed development of Sizewell C. It is considered that the impacts of Sizewell C will be much greater than those caused by GWF.

8.135 The overall significance of the seascape effects during the construction phase is predicted to be negligible. During the operational phase, the presence of turbines is predicted to have minor to negligible adverse impacts on landscape and visual receptors.

8.136 Impacts during the decommissioning phase are likely to be of negligible significance.

8.137 It is anticipated that the overall cumulative effect of the proposed GWF in combination with the existing and consented wind farms of the study area will be low to negligible.

Mitigation

8.138 Paragraphs 5.9.21 - 5.9.23 of EN-1 set out potential mitigation measures for energy infrastructure such as reducing the scale of a project, appropriate siting, design, and landscaping works to reduce landscape and visual effects.

8.139 The onshore works proposed have incorporated all of the mitigation measures set out in EN-1, including excavations to reduce the floor level, and therefore the maximum height, of the substation; locating taller structures to the south-east quarter of the compound; and landscaping proposals including a screening landform, woodland planting and hedgerow improvements.

8.140 With respect to the offshore elements of the scheme, EN-3 recognises that neither the design nor scale of individual wind turbines can be changed without significantly affecting the electricity generated (paragraph 2.6.210). In accordance with paragraph 2.6.210, when finalising the number and layout of the turbines, GWFL will take

account of the guidance that the scheme should be designed appropriately to minimise harm, taking into account other constraints.

8.141 Paragraphs 2.8.10 and 2.8.11 of EN-5 set out potential mitigation measures for electricity networks. Although directed toward mitigation of overhead lines, the principles of undergrounding, avoiding building new overhead lines if appropriate, and the inclusion of landscaping proposals have been followed in the GWF onshore development proposals.

IPC decision making

8.142 Paragraph 5.9.8 of EN-1 notes that virtually all nationally significant energy infrastructure projects will have effects on the landscape. In accordance with the policy, design of the onshore elements of GWF has taken account of the potential impacts on the landscape, seeking to minimise harm, having regard to other constraints.

8.143 In relation to nationally significant infrastructure within designated areas, paragraph 5.9.9 of EN-1 advises the IPC to have regard to the statutory purpose for which a landscape has been designated to give substantial weight should be given to the conservation of the natural beauty of the landscape and countryside.

8.144 Paragraph 5.9.10 advises that the IPC may grant development consent in designated areas in exceptional circumstances. In accordance with this policy, it is considered that the GWF proposal is in the public interest and that this is supported by:

- the need for the development to meet national renewables targets;
- an assessment of alternative locations outside the AONB; and
- an assessment of the effects on the environment, the landscape and recreational opportunities.

8.145 In consenting the proposed development subject to the requirements proposed in the draft DCO, the IPC would be complying with paragraph 5.9.11, to ensure that projects consented in designated areas are carried out to high environmental standards.

8.146 In the context of visual impact, the IPC can conclude, in consideration of the guidance in paragraph 5.9.18 and on the basis of the

application documents and the proposed requirements in the draft DCO, that the benefits of the project outweigh the visual effects on sensitive receptors.

8.147 The supporting evidence to their application includes consideration of the location of the onshore substation in the vicinity of existing onshore infrastructure and the existing and proposed Sizewell Power Stations.

8.148 Overall it is considered that the GWF proposal complies with the policies contained in NPSs EN-1, EN-3 and EN-5, and is not contrary to the relevant development plan policies, on seascape, landscape and visual character.

8.149 Socio-economics

NPS applicability

8.150 NPS EN-1 addresses socio-economic impacts in section 5.12. EN-3 and EN-5 do not include additional consideration of socio-economic impacts.

Development Plan Policies

8.151 Objective 9 - Climate Change of the Core Strategy aims to mitigate the effects of climate change. Paragraph 3.109 states that the Suffolk Coastal area can contribute towards the generation of renewable energy, including wind turbines and landing points to serve off-shore provision and that the Core Strategy will generally encourage the generation of renewable energy but seek to protect the environmental assets of the area. Objective 4 - Economic Development supports the growth and regeneration of the local economy, building on those elements which are of sub-regional, regional and national significance.

Applicant's Assessment

8.152 The socio-economic impacts of the proposed development have been assessed and these are set out in Chapter 21 of the ES (Document

5.2.21). The assessment has been carried out in accordance with paragraphs 5.12.2 - 5.12.4 of EN-1. Paragraph 5.12.3 includes reference to the impacts on local services. The workforces associated with the construction, operation and decommissioning of GWF are not considered to be sufficiently large enough to lead to a significant change in population dynamics or impacts upon local services.

8.153 Paragraph 5.12.5 of EN-1 notes that other impacts may be related, for example tourism. With regards to GWF, the impacts of tourism are also assessed, but these are considered in Chapter 24 of the ES and at section 8.195.

8.154 The assessment concludes that the capital investment anticipated for the GWF project represents a negligible impact at the scale of the regional economy from project expenditure. A negligible impact upon direct and indirect employment in the region is expected during construction, operation and decommissioning of the wind farm. The cumulative impact of the proposed development with other offshore wind farms proposed for the region is expected to be of minor beneficial significance.

8.155 Despite the conclusions drawn from the assessment, it is noted that in respect of capital investment and employment during all phases of the project the impact is expected to be positive. Capital investment in the East of England is predicted to be between £18-20 million; approximately 337 people are likely to be employed during construction and decommissioning; and an estimated 50 jobs will be created relating to maintenance of the proposal.

Mitigation

8.156 Paragraph 5.12.9 of EN-1 refers to mitigation in relation to adverse socio-economic impacts of the development, created, for example by the visual impacts of a project, which should be considered by the IPC. The landscape and visual impacts and related impacts on tourism are considered in Chapter 24 and referred to in section 8.195.

IPC decision making

8.157 It is concluded that the GWF proposal is in accordance with the socio-economic policies set out in EN-1 and the high level Development

Plan objectives that seek to encourage the development of renewable energy and economic growth.

8.158 Geology, hydrogeology, land quality and flood risk

NPS applicability

8.159 NPS EN-1 sets out policies on generic impacts of energy development on geological conservation (section 5.3), flood risk (section 5.7), land use (section 5.10), waste management (section 5.14) and water quality and resources (section 5.15). The potential impacts of GWF on geology, hydrogeology, land quality and flood risk are considered in relation to these policies. Neither EN-3 or EN-5 contain any additional policies on these topics. However, EN-3 notes that offshore wind farms are less likely to be affected by flooding than other forms of energy generation (paragraph 2.3.4) though it requires consideration of resilience to storms. In light of this, EN-1 is considered the primary NPS in relation to geology, hydrogeology, land quality and flood risk, other than confirming resilience to storms in accordance with EN-3.

Development Plan policies

8.160 Core Strategy Policy DM24 requires new development to incorporate sustainable urban drainage systems and techniques. Policy DM28 states that proposals for new development in Flood Zones 2 or 3 will not be permitted unless the sequential test set out in PPS25 is satisfied.

8.161 Policies AP92, AP93 and AP94 in the Local Plan address water resources, hydrogeology and flood risk. AP92 relates to areas at risk of flooding and that new development will not be permitted in areas at risk from flooding. AP93 relates to the availability and capacity of sewage treatment works and surface water drainage associated with the development. AP94 relates to surface water and aquifer protection and that development will not be permitted within areas that pose an unacceptable risk to the availability or quality of the water resources.

Applicant's assessment

8.162 The applicant's assessment of potential impacts of GWF on geology, hydrogeology, land quality and flood risk are set out in Chapter 22 of the ES (Document 5.2.22).

8.163 GWF undertook its assessment of geology in accordance with paragraph 5.3.3 of EN-1.

8.164 A Flood Risk Assessment (FRA) is included with this application (Document 6.5), which was undertaken in accordance with paragraphs 5.7.4-5.7.5 of EN-1. The FRA also complied with policies in the Practice Guide to PPS 25. There is further consideration of flood risk in Chapter 22 of the ES. In line with paragraph 5.7.7 of EN-1, a draft version of the FRA was consulted upon with the Environment Agency (EA). The location of the onshore substation works are within Flood Zone 1 and as a result it has not been necessary to apply the sequential test or the exception test to the location of those works. The EA has confirmed that they have no objection to the scheme on the basis of flood risk.

8.165 In accordance with paragraph 5.10.8 of EN-1, the assessment reported in Chapter 22 of the ES identifies any effects of the GWF proposal upon soil quality and considers the risk posed by land contamination.

8.166 Chapter 22 of the ES also sets out an assessment of the likely volumes arising from the proposed development and the arrangements proposed for managing that waste, in accordance with paragraph 5.14.1 - 5.14.2 of EN-1.

8.167 GWF has assessed the impacts of the proposed development on onshore water quality, water resources and the physical characteristics of the water environment, in accordance with paragraphs 5.15.2 of EN-1. 5.15.3 of EN-1 sets out a number of parameters which should be described in the ES. In most cases these are not relevant as GWF: will not directly affect any water bodies and will not require any discharges to a water body; will not require any water abstraction; is located approximately 200m from the nearest surface water drain and will not result in any modification to an existing water body; and is located over 1km from the nearest main river and 200m from the nearest surface water land drain. The potential impacts upon source protection zones (SPZs) are considered in Chapter 22. GWF's assessment of water quality in

relation to marine waters is set out in Chapter 10 of the ES and is considered at section 8.13.

8.168 Impacts on local geology have been assessed as negligible.

8.169 No flood risk impacts have been identified in Chapter 22 of the ES. A drainage strategy will be implemented incorporating sustainable drainage systems (SUDS) to ensure that a Greenfield runoff rate is maintained at the site.

8.170 The assessment concludes that there will be negligible impacts on land quality due to the adherence to a Construction Code of Practice which adheres to the EA Pollution Prevention Guidance (PPG) notes, as well as general good construction practice.

8.171 Drawing the various strands of the assessments reported in Chapter 22 together, it is concluded the potential impacts on hydrology and hydrogeology are negligible due to the adherence to a Construction Code of Practice.

8.172 The generation of waste during the construction and operation phases has been assessed as negligible. A Site Waste Management Plan in conformity with the Construction Code of Practice will be developed before construction works commence. On this basis the effect of waste generated as part of the onshore decommissioning has been assessed as negligible.

8.173 No cumulative impacts have been identified.

Mitigation

8.174 In light of the assessment of potential impacts on geology, flood risk, land quality and hydrogeology it is considered that the IPC need not consider any further mitigation measures otherwise those set out in the ES (as is advised by paragraph 5.15.8 of EN-1). The Construction Code of Practice, to be secured by requirement of the DCO will help codify the mitigation proposed in relation to hydrogeology and land quality.

IPC Decision making

8.175 Paragraph 5.3.6 of EN-1 recognises the need to protect geological conservation interests in the context of the climate change challenge. No harm has been identified in respect of geological conservation interests. The IPC may take into account the net benefits of nationally significant low carbon energy infrastructure development to geological conservation interests.

8.176 In accordance with paragraphs 5.3.7-5.3.8, the IPC, in making its decision, should note that the development avoids significant harm to designated geological sites of international, national and local importance.

8.177 The IPC can be satisfied that the proposed development is considered not to cause any flood risk.

8.178 In accordance with paragraph 5.14.7 of EN-1, the IPC can be satisfied that an effective system for managing waste arising from all stages of the project is proposed. Further, the requirements proposed in the draft DCO are considered to be sufficient to secure compliance with the waste management proposed.

8.179 The IPC may be satisfied that the requirements proposed as part of the draft DCO secure mitigation of any adverse impacts of the GWF proposal on the water environment (as advised in paragraph 5.15.7 of EN-1).

8.180 It is concluded that the GWF proposal is in accordance with the policies of EN-1 with respect to geology, hydrogeology, land use and flood risk.

8.181 Terrestrial ecology

NPS applicability

8.182 NPS EN-1 addresses terrestrial ecology in section 5.3 (Biodiversity and geological conservation). The biodiversity-related policies contained in EN-3 do not refer to terrestrial ecology. Section 2.7 of EN-5 gives additional consideration to the effects of overhead lines on birds. Given that the only additional above ground electricity line is of a minor nature when compared to new overhead lines the additional considerations in EN-5 are not considered relevant to the proposed development.

Development Plan Policies

8.183 Policies AP14, AP15 and AP17 in the Local Plan address terrestrial ecology and AP98 includes consideration of ecology.. AP15 relates to designated areas and habitats, which are not relevant to the onshore works proposed. AP14 states that development will not be permitted where it results in the loss of significant alteration of important habitats, or the threat to rare or vulnerable species or to local or national BAP species or habitats. AP17 states that the retention, improvement and management of existing trees, hedgerows and woodland will be encouraged and that conditions may be imposed upon planning permissions where there is a requirement to retain and/or plant trees. AP98 is the renewable energy policy and identifies that the Local Authority will have particular regard for the impact of the development on ecologically important areas.

Applicant's assessment

8.184 GWF undertook its assessment of the potential impacts of the proposed development on terrestrial ecology in line with the recommendations of EN-1 (paragraphs 5.3.3 and 5.3.4). The assessment is set out in Chapter 23 of the ES (Document 5.2.23).

8.185 During construction there is the potential for a major adverse impact associated with roosting bats using a small number of trees within the wooded area (Sizewell Wents). There are anticipated to be moderate adverse impacts upon the Suffolk Shingle Beaches County Wildlife Sites and upon reptiles associated with the woodland edge and hedgerow habitats. There are also predicted to be minor adverse

impacts upon Sizewell Marshes SSSI (and birds species utilising the SSSI) and damage to pasture, woodland and hedgerow habitats.

8.186 Impacts during the decommissioning phase will be similar to those detailed for construction.

8.187 The assessment concludes that there will be no impact to any important ecological receptors during the operational phase of the onshore electrical connection.

8.188 No significant cumulative impacts have been identified over any of the development phases.

8.189 After mitigation, the majority of potential residual impacts have been assessed as negligible or there will be no impact. Minor residual impacts have been assessed on indirect noise disturbance to designated sites, loss of pasture habitat and loss of woodland. The noise disturbance to designated sites will only occur during the construction phase of the onshore infrastructure. The pasture habitat is of relatively limited biodiversity value and is impacted due to the requests from the local community and Local Authorities to include a screening landform in this area to reduce the impact on the AONB. The impact on woodland will reduce to negligible as the new woodland planting establishes. No or negligible effects have been assessed with regard physical damage to designated sites or on protected species.

Mitigation

8.190 Chapter 23 of the ES also sets out the mitigation measures proposed, many of which are an integral part of the proposed development and thus in accordance with paragraph 5.3.18.

8.191 A European Protected Species licence will be obtained for any works to trees supporting roosting bats to ensure that features are carefully removed without any harm to bats. A reptile translocation exercise will be undertaken for the woodland edge and hedgerow habitats within the footprint of the GWF substation to ensure that no reptiles are harmed during the works. In addition directional drilling activities secured by the Code of Construction Practice will ensure that

vegetated shingle and dune habitats as well as hedgerows lining the roads will be completely avoided during construction.

IPC decision making

8.192 Paragraph 5.3.6 of EN-1 states that the IPC should have regard to the aim of the Government's biodiversity strategy while taking account of the context of the challenge of climate change (see also section 8.174 above).

8.193 No significant harm to terrestrial ecology is predicted, a consideration of the IPC pursuant to paragraph 5.3.7 of EN-1.

8.194 It is considered that the GWF proposal is in accordance with the policies of EN-1 and does not conflict with the relevant development plan policies which relate to terrestrial ecology.

8.195 Land-use, tourism and recreation

NPS applicability

8.196 NPS EN-1 addresses land use and recreation in section 5.10. Tourism is addressed in section 8.79. Neither EN-3 or EN-5 directly address onshore land use, tourism and recreation effects therefore EN-1 is the sole applicable NPS for the proposed onshore development. EN-3 offshore wind-specific policies on shipping and navigation include offshore recreational uses of the sea. These are considered at section 9 above along with the relevant assessments.

Local planning policy

8.197 Core Strategy identifies tourism as an important element of the district economy (Policy SP8). It is also recognised that areas such as the AONB are attractions in their own right.

8.198 Local Plan policy AP66 also recognises that proposals for development in the countryside should not diminish the quality of the landscape and that particular care should be exercised in the location of proposed development within the AONB.

Other legislation

8.199 The Marine and Coastal Access Act 2009, the Countryside and Rights of Way Act 2000 and the Wildlife and Countryside Act 1981 provide the legislative regime governing the provision and use of public rights of way and rights to roam. Whilst no impacts on land-based public rights of way are anticipated, should any interference of such rights be necessary, these will be dealt with in accordance with the relevant legislation.

Applicant's assessment

8.200 Paragraphs 5.10.5 to 5.10.8 of EN-1 set out guidance and requirements for the assessment of impacts on land use. Paragraph 5.12.3 specifies that an assessment on socio-economic impacts may include effects on tourism. Paragraphs 2.6.153-2.160 of EN-3 cover the assessment of navigation impacts.

8.201 The assessments on land-use, tourism and recreation have been undertaken in accordance with the NPS policies and are set out in Chapter 24 of the ES (Document 5.2.24)

8.202 Overall, a negligible residual impact on agricultural activities is anticipated during installation of the substation and cable corridor and no operational impacts are anticipated.

8.203 A residual minor adverse impact on woodland and grassland is anticipated during construction of the substation, though this will reduce to negligible within subsequent years owing to re-establishment of habitats.

8.204 An impact of negligible significance is predicted on public rights of way. No impact is anticipated on the Heritage Coast designation.

8.205 No impacts on tourism are anticipated during any phases of the development's lifetime.

8.206 Impacts during the decommissioning phase are considered to be of negligible significance and no significant cumulative impacts have been identified over any of the development phases.

Mitigation

8.207 The mitigation measures proposed in relation to land use, recreation and tourism are set out in Chapter 24 of the ES. In accordance with paragraph 5.10.19, GWFL will seek to minimise effects on land-use by the application of good design principles. As far as possible the location of the onshore substation has sought to minimise the effects on the AONB and a thorough consideration of alternatives has been undertaken. In addition, whilst not considered to be mitigation, a financial contribution towards the enhancement of the AONB has been proposed and will be secured through the requirements of the DCO and a section 106 agreement. Heads of terms for the s106 are set out in Document 8.3.

IPC decision making

8.208 It is considered that the GWF proposal does not conflict with the policies in EN-1 and EN-3 relating to land-use, tourism and recreation.

8.209 **Traffic and transport**

NPS applicability

8.210 NPS EN-1 contains generic requirements for assessment of impacts arising from traffic associated with the design, construction and operation of renewable energy infrastructure. EN-3 only makes reference to traffic and transport, with respect to offshore wind, in noting the potential onshore activities associated with construction and decommissioning. NPS EN-5 does not make any reference to traffic and transport impacts. EN-1 is therefore the only NPS considered relevant to onshore traffic and transport impacts, encompassing the need to EN-3 in this respect.

Local planning policy

8.211 Local transport policies, including saved policy T14 stress the need for new development proposals to consider how travel can be minimised and how journeys can be made other than by private car. In addition, that developments which involve the movement of substantial volumes of bulk material must provide or have access to rail or waterbourne handing facilities for the majority of traffic.

Applicant's assessment

8.212 In accordance with paragraph 5.13.3 of EN-1, GWFL undertook a Transport Assessment following the generic guidelines set out in the Department for Transport's document 'Guidance on Transport Assessment' (2007) and in consultation with the relevant Highway Authority. The assessment was also informed by Planning Policy Guidance (PPG) 13 'Transport' (2011). The assessment is set out in Chapter 25 of the ES (Document 5.2.25).

8.213 The assessment concludes that a minor adverse impact is anticipated in relation to reduced amenity for pedestrians during the most intensive periods of lorry deliveries during the construction phase, though this impact will be reduced to negligible with the implementation of the traffic management plan proposed.

8.214 The assessment has identified a potentially moderate adverse cumulative impact upon pedestrian amenity and a minor adverse cumulative impact upon pedestrian severance if the GWF peak construction traffic were to overlap with the Sizewell B Dry Fuel Store construction phase and the Sizewell A decommissioning phases. Whilst it is extremely unlikely that the peak traffic associated with those developments will actually overlap, it is proposed that a construction traffic management plan would be agreed with the highways authority to ensure that is the case. As such, a minor adverse cumulative residual impact associated with pedestrian severance, and a negligible cumulative residual impact associated with pedestrian amenity is expected.

8.215 Section 5.13.4 of EN-1 states that, where appropriate, the proposal should include a travel plan and consider sustainable modes of transport. Chapter 25 of the GWF ES finds that there is no realistic opportunity to provide alternative means of transport. Accordingly, GWFL does not propose a travel plan but does intend to implement,

with the approval of the relevant Local Authority, an onshore outline CCOP (Document 5.3.1) which will contain any reasonable measures that can be taken to limit the impact of the remaining works assessed as negligible. The CCOP contains details on general provisions, the Construction Traffic Management Plan and construction site access.

Mitigation

8.216 In accordance with paragraph 5.13.11 of EN-1, the IPC may attach requirements to a consent where there is likely to be substantial HGV traffic. The requirements proposed in the draft DCO would secure the Construction Code of Practice, which is to be drawn up in consultation with the highway authority.

IPC decision making

8.217 The impact of GWF on traffic will be relatively benign and temporary. As such GWFL finds the proposed onshore works to be in accordance with the requirements of EN-1 (and implicitly EN-3) with respect to traffic and transport.

8.218 **Noise and vibration**

NPS applicability

8.219 NPS EN-1 addresses potential noise and vibration impacts. EN-3 pays limited attention to airborne noise with respect to offshore wind, except to note the potential impact of noise with respect to land based works and traffic (paragraph 2.6.4). This Planning Statement addresses underwater noise separately with respect to relevant receptor chapters of the ES, in the context of those relevant (EN-3 section 2.6.63). EN-5 mostly addresses noise only in respect of overhead lines (OHL). Such noise is considered to be of no relevance to GWF given the minor nature of the OHL associated with the scheme and its proximity to two parallel OHL already serving Sizewell nuclear facility. However, paragraph 2.9.7 of EN-5 recognises the potential of noise impacts from other equipment, specifically substation equipment.

Development Plan Policies

8.220 Policy DM23 from the Core Strategy includes a requirement for SCDC to have regard to the effects of noise and disturbance from new development on residential amenity and states that "development will only be acceptable where it would not cause an unacceptable loss of amenity to adjoining or future occupiers of the development."

8.221 Policy AP98 from the Local Plan is the renewable energy policy and identifies that the Local Authority will have particular regard for impacts such as noise and vibration.

Applicant's Assessment

8.222 GWFL has assessed the potential noise impacts of the proposal and this is set out in Chapter 26 of the ES (Document 5.2.26). As noted above, specific impacts on animals are considered in the relevant sections of the ES.

8.223 The assessment was undertaken in accordance with the guidance in section 5.11 of EN-1, and it is proportionate to the effects that are likely to be experienced. The assessment also includes ancillary activities that could have a noise or vibration impact, specifically those related to construction traffic.

8.224 The ES acknowledges the existence of BS 4142, but notes that it is not appropriate to use in assessing noise levels because of the background levels measured at some properties. By way of alternative, GWF has agreed night-time noise limits with SCDC that are used as a benchmark for the assessment.

8.225 The assessment concludes that all predicted construction noise levels, during daytime working hours, for the substation site, along the onshore cable corridor and by construction traffic are predicted to be lower than the 65dB noted in BS5228. Accordingly, these are anticipated to be of negligible significance.

8.226 A potentially significant short-term impact has been identified in relation to the nearest properties to the cable landfall and substation site. The timing of such activities will be agreed with SCDC and residents will be informed of planned activities that may extend into unsociable hours.

8.227 During the operation of the substation, an impact of negligible significance is anticipated in relation to noise levels at the nearest properties to the substation.

8.228 Provided GWF and GGOWF achieve their agreed operational noise limits, there will not be a cumulative noise impact.

8.229 Vibration effects are not considered to be relevant to the proposals.

Mitigation

8.230 Mitigation measures are detailed in Chapter 26 of the ES. The measures proposed in relation to the substation have been developed in line with consultee comments. The proposed landform provides attenuation to a level acceptable to, and agreed with, SCDC for the operational phase of the works.

8.231 Paragraph 5.11.11 of EN-1 notes that the IPC should consider whether mitigation measures should be included over and above that set out in the application. It is considered that no further mitigation measures are needed.

IPC Decision Making

8.232 In accordance with paragraph 2.9.10 of EN-5 the IPC can be satisfied that the evidence presented in the GWF application has been the subject of the relevant assessment methodologies and that the appropriate mitigation options have been considered and adopted.

8.233 Further, in accordance with paragraph 5.11.8 of EN-1, the scheme demonstrates good design in the minimisation of noise impacts.

8.234 Noise requirements in the draft DCO have been proposed which are measurable at defined locations, as agreed with SCDC, which can be considered by the IPC in light of paragraph 5.11.10 of EN-1.

8.235 GWFL finds the proposed onshore works to be accordance with the policies of EN-1 and EN-5 with respect to noise and vibration. In

addition that there is no conflict with the relevant development plan policies.

8.236 Air quality

NPS applicability

8.237 NPS EN-1 addresses air quality in section 5.2 and dust in section 5.6; EN-3 gives no consideration to air quality impacts with respect to offshore wind; EN-5 gives no consideration to air quality. As such EN-1 is the only NPS considered relevant to decision-making in respect of the potential impacts of the GWF proposal on air quality impacts.

Applicant's assessment

8.238 The ES conducted all assessments in line with the recommendations in paragraphs 5.6.4-5.6.6 and paragraph 5.2.7 of EN-1, except for that relating to eutrophication impacts. Eutrophication is considered irrelevant to GWF as the proposals will not result in the production of nutrient enriching output, which the NPS notes is only relevant to some forms of energy infrastructure (paragraph 5.2.3).

8.239 The assessment is set out in Chapter 27 of the ES (Document 5.2.27). Chapter 25 of the ES considers potential impacts on traffic and transport (see section 8.209).

8.240 The assessment concludes that the onshore construction activities have the potential to generate dust, though overall the impacts are considered to be negligible during the construction phase. A negligible impact upon air quality is predicted for vehicle exhaust emissions. Similar impacts are anticipated during the decommissioning phase and would be of negligible significance.

8.241 No significant air quality impacts are anticipated during the operation of GWF.

8.242 No significant cumulative impacts have been identified over any of the development phases.

Mitigation

8.243 An outline Construction Code Of Practice (CCOP) is included with this application (Document 5.3.1) which will be secured by requirements proposed in the Draft DCO (Document 3.1), in accordance with paragraph 5.6.9 of EN-1, and will, in accordance with paragraphs 5.6.10 and 5.2.11, help codify mitigation.

8.244 Given that the findings of GWF's assessment of air quality impacts, it is considered that no further controls will be required beyond those proposed in the draft DCO.

IPC Decision Making

8.245 The IPC can be satisfied, in accordance with paragraph 5.6.7 of EN-1, that the assessment of the potential for dust to have a detrimental impact on amenity has been carried out and that all reasonable steps have been taken and will be taken to minimise any such detrimental impacts.

8.246 The GWF ES assessed all residual air quality impacts as negligible or lower and, in light of paragraph 5.2.9, should not attract substantial weight by the IPC in its determination of the application.

8.247 It is considered that the GWF proposal complies with the policies in EN-1 regarding air quality.

8.248 Electric and magnetic fields (EMF)

NPS applicability

8.249 Section 2.10 of NPS EN-5 explains how EMFs arise from generation, transmission, distribution and use of electricity. Electric fields are easily blocked by fences, shrubs and buildings. In contrast, most materials do not readily block magnetic fields.

8.250 EMFs are considered in relation to offshore elements of the GWF proposal in sections 7.5 and 7.6 in the context of policies contained in NPS EN-3.

8.251 Section 2.10 of NPS EN-5 predominantly considers the EMFs produced by overhead power lines. As such, these are only of some

relevance to GWF given the minor nature of the overhead lines associated with the scheme.

Applicant's assessment

8.252 GWFL has undertaken an assessment of the potential impacts of EMFs from the proposed GWF substation and associated infrastructure. This is set out in Chapter 28 of the ES (Document 5.2.28).

8.253 It is not anticipated that any EMFs will arise during the construction process, prior to energisation. During the operational life of GWF, the EMFs generated by the substation and associated equipment will not result in any measurable change in background EMF when measured from the closest residential property. The EMF values will be well below the ICNIRP UK public exposure guidance levels. As such there will be no significant effect to human health attributable to EMF. No impacts will arise during the decommissioning phase as no EMF will be generated following the end of electricity production. No cumulative impacts are predicted for EMF during the operation of GWF.

Mitigation

8.254 Paragraph 2.10.15 of EN-5 confirms that where it can be shown that an overhead line will comply with the current public exposure guidelines and the policy on phasing, no further mitigation should be necessary. By analogy, no mitigation is necessary.

IPC decision making

8.255 On the basis that the EMF values have been shown to be well below the ICNIRP guidance levels it is considered that the GWF proposal is in accordance with policies in EN-5 relating to EMFs.

9 CONCLUSION

Section 104 Planning Act 2008

9.1 As explained in section 4, Section 104 sets out the basis on which a decision on an NSIP application must be made by the IPC where, as here, the relevant NPSs have been designated.

9.2 In determining a NSIP application the IPC (and, after the relevant provisions of the Localism Act take effect, the Secretary of State) must have regard to the following:

(a) Any relevant National Policy Statement;
(b) Any relevant marine policy document;
(c) Any local impact report submitted within the prescribed deadline;
(d) Any matters prescribed under The Infrastructure Planning (Decisions) Regulations 2010;
(e) Any other matters that the IPC considers both important and relevant to their decision.

9.3 The fundamental obligation on the decision-maker, under section 104(3), is to grant the application if it is "in accordance with" the NPSs, except to the extent that one or more of the matters set out in section 104 (4) to (8) applies.

9.4 This Statement has sought to draw together the necessary information and analysis to assist the decision-maker in applying section 104.

National Policy Statements

9.5 The central feature of any NSIP decision will be the NPSs. In developing the project and preparing this application, GWFL has sought to ensure the application is in accordance with the NPS by taking account of, and following, all of the advice in the NPSs (including their prior drafts) in relation to the environmental assessment of the project, the advice on decision-making, and the advice on mitigation measures to avoid or reduce the impacts of the project.

9.6 Clearly the project itself is an offshore wind farm project of the type supported by EN-1 and EN-3. The urgent need for such projects is identified in EN-1 (paragraph 3.4.5). EN-1 makes it clear that substantial weight should be given to the contribution which NSIP applications will make towards satisfying this need (paragraph 3.1.4). The overall need case has been summarised in section 6.1.

9.7 Paragraph 4.1.2 of EN-1, which explains the general approach to assessing and determining applications, sets out the essence of the approach:

"Given the level and urgency of need for infrastructure of the types covered by the energy NPSs set out in Part 3 of this NPS, the IPC should start with a presumption in favour of granting consent to applications for energy NSIPs. That presumption applies unless any more specific and relevant policies clearly indicate that consent should be refused. The presumption is also subject to the provisions of the Planning Act (specifically section 104(4) to (8))"

9.8 This is another way of saying that the presumption in favour of consent applies where the application is "in accordance with" the relevant NPSs. GWFL considers that the application is indeed "in accordance with" the relevant NPSs for the reasons already given, and none of the more specific policy considerations within the NPSs "clearly indicate that consent should be refused". (The project is also entirely consistent with the UK Marine Policy Statement adopted in March 2011.) The test for those specific policy considerations is a demanding one (i.e. "clearly indicate"), which is consistent with the burden of overcoming the presumption in favour of development supported by an urgent national need.

9.9 In reaching this judgement about the project, this Statement has considered policy referable to subject specific impacts, as set out in

section 7. In the case of each subject the relevant policies (both in NPSs and any relevant national or local planning policies) have been considered against the findings of the EIA and conclusions in relation to each subject have been drawn. The subjects which have been considered are:

- Physical environment;
- Marine water and sediment quality;
- Offshore ornithology;
- Marine and intertidal ecology;
- Fish and shellfish resource;
- Marine mammals;
- Commercial fisheries;
- Shipping and navigation;
- Military and civilian aviation;
- Other human activities;
- Archaeology and cultural heritage;
- Seascape, landscape and visual character;
- Socio-Economics;
- Geology, hydrogeology, land quality and flood risk;
- Terrestrial ecology;
- Land-use, tourism and recreation;
- Traffic and transport;
- Noise;
- Air quality; and
- Electric and magnetic fields.

9.10 The location and design of various elements of the project, and particularly the onshore works, were specifically selected to avoid or reduce potential effects on a number of key receptors in the vicinity, including local residents and the AONB. Although located within the AONB, the consultation exercise undertaken has confirmed that the proposed location for these works is preferred by the relevant consultees and the public. The EIA and pre-application consultation carried out by GWFL have confirmed the site selection process and demonstrate that GWF is in compliance with the guidance in the relevant NPSs and all other relevant policy guidance.

Section 104(2) and the Decisions Regulations

9.11 GWFL has taken account of all the matters specified in section 104(2) in preparing the application and this Statement, including all matters which, as best it can judge, are likely to be included in any local

impact report or likely to be regarded by the decision maker as relevant and important. This includes having regard to the various duties on the decision maker specified in The Infrastructure Planning (Decisions) Regulations 2010 in relation to listed buildings, conservation areas, scheduled monuments, obstructions or danger to navigation, protection of the marine environment, interference with legitimate users of the sea and the United Nations Environmental Programme Convention on Biological Diversity. These are considered in turn.

9.12 As is addressed in section 9 in relation to the historic environment, the project does not affect a listed building, conservation area or a scheduled monument or the setting of any such feature. Accordingly, the duties under Regulation 3 of the Decision Regulations are not engaged.

9.13 In relation to Regulation 3A of the Decisions Regulations, the following points are made:

(a) The application comprises the installation of up to 140 WTG, inter-array cabling and up to 3 export cables, also up to 5 offshore platforms and 3 meteorological masts. These works will inevitably have an effect upon navigation and legitimate users of the sea during both construction works and operation. However, through the provisions of the deemed marine licence suitable provisions will be in place to minimise the effects on navigation and other users of the sea and to ensure that the WTG and associated works do not cause a danger to navigation. Following consultation with the Marine and Coastguard Agency (MCA) Order requirement 7 of the draft DCO secures an active safety management system and emergency contingency plans to be in place before the development commences. It should also be noted that it is GWFL's intention to apply for safety zones around structures and construction works under the Energy Act 2004 to ensure the safety of construction and maintenance vessels and other vessels navigating in the area and that rights of navigation will be extinguished over the final locations of the wind turbines.

(b) In respect of the protection of the marine environment, the deemed marine licence includes a wide-ranging programme of surveying and monitoring prior to and during construction, and when the WTG are operational. These provisions will ensure

that the marine environment, the living resources it support and human health will be suitably protected during the construction and operation of the proposal. The only substances and articles that the marine licence permits to be deposited on the seabed are those that form part of the proposed development, or are required to mitigate potential impacts (for example scour protection). On this basis it is considered that there are no practically available alternative methods of dealing with these substances or articles.

9.14 In relation to Regulation 7 of the Decision Regulations, the IPC is required to have regard to the United Nations Environmental Programme Convention on Biological Diversity 1992. The UK's obligations under this Convention are delivered through the UK Biodiversity Action Plan (BAP). The potential impact on biodiversity has been considered in section 9. No adverse impact on the UK BAP has been identified during the EIA for the project. The proposal is not located within a SPA, although it is recognised that there may be effects on the lesser black-backed gull which is one of the species for which Alde-Ore Estuary SPA was designated. A Habitats Regulations Assessment (Document 6.3) has been carried out for the proposal which concludes that there will be no adverse effect on the conservation status of, and therefore integrity of, the SPA supporting this species as a result of GWF.

9.15 The tests under Section 104 (4) to (8) are matters for the decision-maker to be satisfied do not apply. Considering these in the context of GWF:

- Subsection (4): there is no basis for concluding that to grant the DCO would lead to the United Kingdom being in breach of any of its international obligations.
- Subsection (5): there is no basis for concluding that to grant the DCO would lead to the decision-maker being in breach of any duty imposed on it by or under any enactment.
- Subsection (6): there is no basis for concluding that to grant the DCO would be unlawful by virtue of any enactment.
- Subsection (7) is applies if the IPC is satisfied that the adverse impact of the proposed development would outweigh its benefits. It is considered further below.
- Subsection (8): this is not considered to be relevant, as the decision would be in accordance with the relevant NPSs.

9.16 When considering these tests, as discussed in section 9 under biodiversity and noted in paragraph 10.15, it is worth highlighting that the Habitats Assessment Report concludes that there will be no adverse impact on the integrity of any European site. On this basis of this assessment there is no reason to withhold consent under section 61 of The Conservation of Habitats and Species Regulations 2010 or section 25 of The Offshore Marine Conservation (Natural Habitats, etc) Regulations 2007.

9.17 For the reasons already explained, it is considered that the application is "in accordance with" the relevant NPSs. The final judgement, therefore, relates to whether, under section 104(7), the adverse impact of the proposed development would outweigh its benefits.

9.18 The key benefits of the scheme are as follows:

- GWF could generate up to 1,700 gigawatt (GW) hours of clean electricity per year.
- 1,700 GW hours of electricity is sufficient to meet the total electricity needs of up to 500,000 households.
- There is an urgent need for additional renewable energy capacity in the UK.
- The additional capacity from the GWF would contribute to energy security in the UK and to the development of the UK's low carbon energy sector.
- GWF would make an important contribution to meeting the UK's international and legal obligations to reduce greenhouse gas emissions and its aim of generating 30% of the UK's electricity from renewable sources by 2020.
- As an extension project, GWF can be delivered quickly in comparison to Round 3 schemes, thereby making a significant and early contribution to the UK's targets.
- The proposed contribution towards the enhancement of the Suffolk and Coastal Heaths AONB would provide benefit to the local area.
- The proposal is in accordance with the NPSs and the onshore elements do not conflict with the development plan for SCDC.

9.19 The findings of the EIA are reported in the ES (Document references 5.1 to 5.3.22) and have been summarised in Section 10 of this

Planning Statement. In general, impacts from the proposed development are not found to be significant, with the exception of those related to the onshore works. As has been explained GWFL has sought to minimise those impacts as far as possible given the existing infrastructure and clear preference demonstrated to avoid the proliferation of these works. In relation to the offshore works, despite the restrictions of The Crown Estate's leasing process, no significant impacts are predicted. On this basis the decision-maker can conclude that there is no reasonable alternative site for either the WTG or the onshore works that would have avoided such impacts.

9.20 Subject to the content of any local impact reports and any significant new information or issues which may emerge during the examination, and having regard to the benefits and adverse impacts considered above it is submitted that it is clear that the adverse impacts of the proposed development do not outweigh its benefits and the planning balance falls in favour of consenting the proposal.