

Contents

List of Tables	iii
Abbreviations and Acronyms	iv
Process and Methodology	1
4.1 Introduction	1
4.2 EIA Regulations	1
4.2.1 Introduction.....	1
4.2.2 Transitional Arrangements.....	1
4.2.3 Information Requirements.....	1
4.3 The EIA Process	5
4.3.1 Scoping	5
4.3.2 Pre-submission Meetings and Consultation.....	7
4.3.3 GateCheck.....	7
4.3.4 Gap Analysis.....	8
4.4 Approach to Environmental Impact Assessment	8
4.4.1 Design Envelope	8
4.4.2 Worst Case Scenario.....	8
4.5 Elements of the Development Assessed	8
4.5.1 Identification of Impacts.....	9
4.6 Assessment of Impacts	10
4.6.1 Information Gaps and Limitations.....	11
4.6.2 Impact Interactions	11
4.7 Cumulative Impact Assessment (CIA)	11
4.7.1 Requirement for Cumulative Assessment.....	11
4.7.2 Cumulative Projects.....	12
4.7.3 Onshore Wind Farms.....	15
4.7.4 Other Coastal Projects.....	15
4.7.5 Other Onshore Projects.....	15
4.8 Mitigation and Monitoring	15
4.8.1 Introduction.....	15
4.8.2 Embedded Mitigation.....	15
4.8.3 Additional Mitigation.....	16
4.8.4 Monitoring.....	16

4.8.5 European Protected Species..... 16

4.9 Assessment of Residual Effects..... 16

References..... 17

List of Tables

Table 4.1: Matters for inclusion in EIA Report in accordance with the requirements of The Electricity Works EIA Regulations	2
Table 4.2: Matters for inclusion in the EIA Report in accordance with the requirements of The Marine Works EIA Regulations	3
Table 4.3: Breakdown of component parts and separation	9
Table 4.4: Magnitude of impact.....	10
Table 4.5: Significance of effects	11

List of Figures

Figure 4.1: Scoping of the EIA	6
--------------------------------------	---

Abbreviations and Acronyms

AOWFL	Aberdeen Offshore Wind Farm Limited
BOWL	Beatrice Offshore Wind Limited
CIA	Cumulative Impact Assessment
EC	European Commission
EIA	Environmental Impact Assessment
ES	Environmental Statement
HVAC	High Voltage Alternating Current
ICOL	Inch Cape Offshore Limited
km	Kilometres
m	Metres
MORL	Moray Offshore Renewables Limited
MS-LOT	Marine Scotland Licensing Operations Team
MW	Megawatts
NNG	Neart na Gaoithe
OnTW	Onshore Transmission Works
OSP	Offshore Substation Platform
WTG	Wind Turbine Generator

Process and Methodology

4.1 Introduction

- 1 This chapter describes the methodology used for undertaking the Environmental Impact Assessment (EIA) the findings of which are reported in this EIA Report.

4.2 EIA Regulations

4.2.1 Introduction

- 2 On the 16 May 2017 *The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017* and *The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017* came into force, transposing the requirements of the 2014 amendment (2014/52/EU) to the Environmental Impact Assessment (“EIA”) Directive. Both sets of regulations (as amended) are hereinafter referred to together as “the 2017 EIA Regulations”.

4.2.2 Transitional Arrangements

- 3 As the Scoping Report for this application was submitted on 28 April 2017, the 2017 EIA Regulations therefore now apply under the transitional arrangements.
- 4 These transitional arrangements mean that:
 - For consultation and publicity requirements, additional information provisions and decision notices the 2017 EIA Regulations will apply.
 - The application for a Section 36 consent and marine licence will require an EIA Report
 - The scope and level of detail of information to be contained within the EIA Report is as required by The Electricity Works 2000 regulations and The Marine Works 2007 regulations for Scotland.
- 5 This EIA Report therefore has been assessed and written to meet the level of detail required of The Electricity Works 2000 and The Marine Works 2007, whilst also taking into account the additional transitional arrangements (as noted above).

4.2.3 Information Requirements

- 6 Tables 4.1 and 4.2 summarise where the information required by the transitional arrangements can be found in this EIA Report.

Table 4.1: Matters for inclusion in EIA Report in accordance with the requirements of The Electricity Works EIA Regulations

Requirement	Location of Information in this EIA Report
Part I	
1. Description of the development, including in particular:	<i>Chapter 7</i>
a description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases;	<i>Chapter 7</i>
a description of the main characteristics of the production process, for instance, nature and quantity of the materials used;	<i>Chapter 7</i>
an estimate by type and quantity, of expected residues and emissions (water, air, and soil pollution, noise, vibration, light, heat, radiation etc.) resulting from the operation of the proposed development.	<i>Chapter 7 and 9</i>
2. A description of the aspects of the environment likely to be significantly affected by the development, including, in particular:	<i>Chapters 8 to 17</i>
population;	<i>Chapters 14 to 17</i>
fauna and flora;	<i>Chapters 9 and 10</i>
soil;	<i>Scoped out (unlikely to lead to significant effect), see Scoping Opinion for scope of assessment</i>
water;	<i>Scoped out (unlikely to lead to significant effect), see Scoping Opinion for scope of assessment</i>
air and climatic factors;	<i>Chapter 8</i>
material assets, including the architectural and archaeological heritage;	<i>Chapters 13 and 10</i>
landscape;	<i>Chapter 12</i>
the inter-relationship between the above factors.	<i>Chapters 8 to 17</i>
3. A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary or cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development resulting from:	<i>Chapters 8 to 17</i>

Requirement	Location of Information in this EIA Report
the existence of the development;	<i>Chapters 8 to 17</i>
the use of natural resources;	<i>Chapters 8 to 17</i>
the emission of pollutants, the creation of nuisances and the elimination of waste;	<i>Chapters 8 to 17</i>
and the description by the applicant or appellant of the forecasting methods used to assess the effects on the environment.	<i>Chapters 4 and 8 to 17</i>
4. A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.	<i>Chapters 8 to 17</i>
5. A non-technical summary of the information provided under Paragraphs 1 –5 of this Part.	<i>Non-Technical Summary</i>
6. An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant or appellant in compiling the required information.	<i>Chapters 9 to 17</i>

Table 4.2: Matters for inclusion in the EIA Report in accordance with the requirements of The Marine Works EIA Regulations

Requirement	Location of Information in this EIA Report
Part I	
1. A description of the project and of the regulated activity, including details of the following matters—	<i>Chapters 1 and 7</i>
(a) the location, size and nature of the project and the regulated activity;	<i>Chapters 1 and 7</i>
(b) the quantity and nature and source of the materials to be used in the course of the project and the regulated activity;	<i>Chapter 7</i>
(c) the quantity, nature and source of any items or materials to be deposited in the sea in the course of the project and the regulated activity; and	<i>Chapter 7</i>
(d) the working methods to be used in the course of the project and the regulated activity.	<i>Chapter 7</i>

Requirement	Location of Information in this EIA Report
2. A description of the aspects of the environment likely to be significantly affected by the project and the regulated activity, including—	<i>Chapters 8 to 17</i>
(a) human beings, fauna and flora;	<i>Chapters 9 to 12 and 14</i>
(b) soil, water, air, climate and the landscape;	<i>Chapters 8 and 12</i>
(c) material assets and the cultural heritage; and	<i>Chapter 13</i>
(d) the interaction between any two or more of the things mentioned in the preceding sub-paragraphs.	<i>The Impact Interactions Sections of Chapters 9 to 17</i>
3.—(1) A description, complying with sub-paragraph (2), of the likely significant effects of the project and the regulated activity on the environment resulting from—	<i>The Impact Interactions Sections of Chapters 9 to 17</i>
(a) the nature of the activities to be carried out and the manner in which they are to be carried out;	<i>Chapter 7</i>
(b) the use of natural resources;	<i>The Impact Interactions Sections of Chapters 9 to 17</i>
(c) the emission of pollutants;	<i>The Impact Interactions Sections of Chapters 9 to 17</i>
(d) the creation of nuisances; and	<i>The Impact Interactions Sections of Chapters 9 to 17</i>
(e) the elimination of waste.	<i>The Impact Interactions Sections of Chapters 9 to 17</i>
(2) The description should cover each of the following categories of effect—	<i>Chapters 9 to 17</i>
(a) direct and indirect effects;	<i>The Impact Interactions Sections of Chapters 9 to 17</i>
(b) secondary effects;	<i>The Impact Interactions Sections of Chapters 9 to 17</i>
(c) cumulative effects;	<i>The Cumulative Impacts Sections of Chapters 9 to 17</i>

Requirement	Location of Information in this EIA Report
(d) short-term, medium-term and long-term effects;	<i>The Impact Interactions Sections of Chapters 9 to 17</i>
(e) permanent and temporary effects; and	<i>The Impact Interactions Sections of Chapters 9 to 17</i>
(f) positive and negative effects.	<i>The Impact Interactions Sections of Chapters 9 to 17</i>
4. The forecasting methods used by the applicant to assess the main effects that the project and the regulated activity are likely to have on the environment.	<i>Chapter 4 and the Assessment Methodology Sections from Chapters 9 to 17</i>
5. A description of the measures envisaged to prevent, reduce and offset any significant adverse effects of the project and the regulated activity on the environment.	<i>Chapters 9 to 17</i>
6. An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects of those alternatives and the project as proposed.	<i>Chapter 6</i>
7. A non-technical summary of the information provided under paragraphs 1 to 6.	<i>Non-Technical Summary</i>
8. Any difficulties, such as technical deficiencies or lack of knowledge, encountered in compiling any information of a kind specified in paragraphs 1 to 6.	<i>Chapters 9 to 17</i>

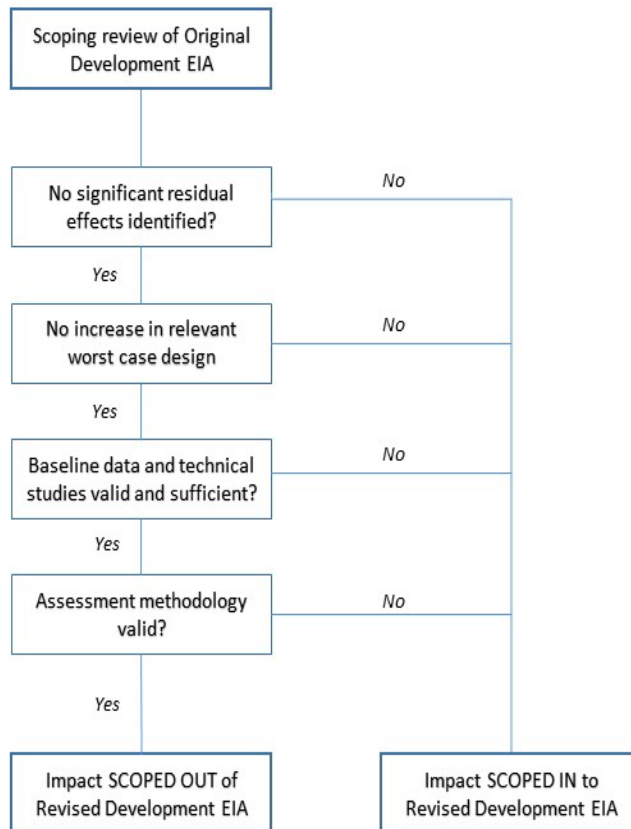
4.3 The EIA Process

4.3.1 Scoping

- 7 Scoping is a voluntary part of the EIA process which seeks to identify the potential effects which are likely to be significant and to exclude (scope out) impacts which are not considered to be significant.
- 8 A Scoping Report for the Development was submitted on 28 April 2017. The Scoping Report identified areas where the EIA should focus and set out the methods that would be used in the assessment.
- 9 The Scoping Report utilised existing baseline information, including information and assessment outcomes (where they remain valid) for Inch Cape 2013 Environmental Statement (ES).

- 10 This approach, as summarised in Figure 4.1, intended to focus the Development EIA on those potential impacts that are most likely to give rise to significant effects (or where uncertainty exists in relation to the validity of the previous assessments) and thereby avoid revisiting assessments where the conclusions reached previously in the Inch Cape 2013 can be shown to be applicable to the Development through the scoping process.

Figure 4.1: Scoping of the EIA



- 11 Scoping meetings were held with MS-LOT and key stakeholders to discuss in more detail the content of the Scoping Report and the scope of the EIA. Where meetings have been held, these have been identified and discussed in the consultation table of each individual impact assessment chapter.
- 12 Further consultation has been undertaken between the applicant and relevant stakeholders. Minutes from all consultations were approved by all parties and submitted to MS LOT as part of the consultation process. Where consultations have been carried out these have been identified and discussed in the consultation table of each individual technical impact assessment chapter, together with an indication of how this information has been used in the preparation of this EIA Report.

Scoping Opinion

- 13 MS-LOT provided their formal Scoping Opinion in July (for all topics other than marine mammals and ornithology) and August 2017 (for marine mammals and ornithology), formal clarifications to refine the scope of assessment continued until March 2018.
- 14 The assessments carried out within this EIA Report are based on the Scoping Opinion and subsequent clarifications, details of which are provided in the individual scoping consultation tables in *Chapters 9 to 17*. The impact assessments take into account current knowledge and methods of assessment.
- 15 As a consequence of the process taken during the scoping of the EIA, it was agreed that all potential impacts to benthic ecology and metocean and coastal processes be scoped out of the EIA, as it was agreed that the impacts were unlikely to lead to a significant effect.
- 16 For all other topics, the scope of the assessment and what has been ‘scoped in’ and agreed to be ‘scoped out’ is identified within each chapter (*Chapter 9 through to 17*).

4.3.2 Pre-submission Meetings and Consultation

- 17 In advance of the formal application submission, and after the EIA for each technical chapter was drafted, meetings were held with key consultees (and MS-LOT when available) to discuss the content of the EIA (pre-submission meetings). These meetings were held to advise and discuss how the advice received through the scoping process had been dealt with in the EIA Report. These round-table meetings offered an opportunity to discuss any particular issues on the EIA with relevant consultees and to identify whether all elements of the assessment were adequately addressed. The outcomes of these meetings were minuted and agreed with all parties, summaries of which, where relevant, have been included in the chapters for each EIA topic.

4.3.3 GateCheck

- 18 On completion of pre-submission meetings further refinements to the EIA Report were made, and a draft EIA Report submitted to MS-LOT in May 2018 for their gatecheck process.
- 19 Marie Scotland provided a response to the submitted documentation in July 2018, the outcome of this gatecheck process has been documented in individual chapters, where relevant, and any further refinements addressed, where required, in the final EIA Report.

4.3.4 Gap Analysis

- 20 A 'gap analysis' spreadsheet was submitted with the application for gatecheck. This spreadsheet identified all the consultees responses during the scoping of the EIA and how each is dealt with.
- 21 The gap analysis was then updated with all the comments received from gatecheck noting how these had been addressed. This was submitted alongside the application.

4.4 Approach to Environmental Impact Assessment

4.4.1 Design Envelope

- 22 As the design of the Development requires further refinement, which will continue as more information about the site and technical requirements of technology is known, the use of a Design Envelope approach has been taken in this EIA Report. Details of the design envelope is described in *Chapter 7: Description of Development*.

4.4.2 Worst Case Scenario

- 23 The concept of assessing a worst-case scenario under a Design Envelope approach is common practice in EIAs when the design of the development has not been finalised.
- 24 For each impact assessment, the worst-case scenario design parameters will be selected from the range of potential possible design options. Each impact assessment carried out has identified those parameters that will lead to the greatest effect on the particular receptor(s) identified. The approach to the worst-case scenario has been agreed through consultations with Marine Scotland Licensing Operations Team (MS-LOT) and their advisors. This process will ensure that the assessment for each topic has been carried out on the design parameters that would have the greatest effect on the environment. Therefore, when the development's design is further refined the assessment of effects will remain valid. Further information on the Design Envelope is provided in *Chapter: 7*.

4.5 Elements of the Development Assessed

- 25 In order to most efficiently and effectively undertake the assessments required, each technical chapter has been split spatially to account for the works within the Development Area and the Offshore Export Cable Corridor as shown in *Chapter 1: Introduction*, Figure 1.2.
- 26 Splitting the works spatially, rather than by component, will best allow assessments to take account of baseline conditions and the effects of similar activities and development. A breakdown of the Development's components allocated to these areas is listed in Table 4.3 below.

Table 4.3: Breakdown of component parts and separation

Development Area	Offshore Export Cable Corridor
Wind Turbine Generators (WTGs) Inter-array Cables Inter-platform Cables Offshore Substation Platforms (OSPs) Initial sections of the Offshore Export Cable All other temporary and permanent works associated with the Wind Farm.	Offshore Export Cables Midline Cable Joint (s) Export Cable Landfall

4.5.1 Identification of Impacts

27 During the scoping process, potentially significant environmental effects were identified using the following methodology:

- Identification of potential receptors and baseline conditions through review of the *Inch Cape Offshore Limited (ICOL) 2013 ES* consultations, further desk based and field studies.
- Identification of the worst-case scenario in relation to specific receptors within the Design Envelope.
- Identification of any embedded mitigation and purpose of any relevant consent conditions to be taken into account during the baseline assessment.
- Prediction of activities that, during the different stages of the Development, may result in potential significant environmental impacts.
- Characterisation of potential impacts including likelihood of occurrence.
- Assessment of the sensitivity of receptors and magnitude of potential impacts.
- Consideration of the relationship between receptors and impacts taking account of embedded mitigation measures.
- Assessment of cumulative impacts.
- Consideration of additional mitigation if applicable.
- Assessment of whether residual effects (after the additional mitigation) may be significant.

28 The specific assessment methodology has been adapted for assessing impacts on some receptors following consultation with MS LOT and key stakeholders. Specific industry best practice guidelines such as *Guidelines for Ecological Impact Assessment in Britain and Ireland- Marine and Coastal* (Institute of Ecology and Environmental Management, 2010) have been followed where appropriate. Individual assessments in *Chapters 9- 17* identify guidance and methodologies used.

4.6 Assessment of Impacts

29 The approach the EIA team has taken to making balanced assessments will be guided by both EIA specialists and technical specialists using available data, new data (where required), experience and expert judgement. In order to provide a consistent framework and system of common tools and terms, where appropriate, a matrix approach has been used to frame and present the judgements made. However, it should be noted that for each topic of the EIA, the latest guidance or best practice has been used and therefore definitions of sensitivity and magnitude of impact may be tailored to each topic. The impact assessment will consider the potential for impacts during the construction, operation (and maintenance) and decommissioning.

The significance of effects has been attributed by correlating the magnitude of the change arising from the Development with the sensitivity of the receptor under consideration. Categorisation of magnitude of change will vary for specific receptors/technical assessments but has broadly followed the principles of Table 4.4 below in so far as it is relevant.

Table 4.4: Magnitude of impact

High	Total loss or major alteration to key elements/features of the baseline conditions
Moderate	Partial loss or alteration to one or more key elements/features of the baseline conditions
Low	Minor shift away from the baseline conditions
Negligible	Very slight change from baseline conditions

30 In EIA, the sensitivity of the resource or receptor must be defined. The specific scale of sensitivity is dependent on the discipline but in general it may be defined in terms of quality, value, rarity or importance of the receptor being assessed but also relates to how vulnerable or tolerant an ecological receptor is to the type of impact being assessed. The scale of sensitivity is classed as 'Low', 'Moderate' or 'High'. In carrying out individual assessments, a more specific scale of increasing sensitivity has been defined where this is appropriate. Where this has occurred, it will be clearly outlined within the technical chapter. Guidance has also been taken from the value attributed to elements through designation or protection under law. Expert judgement is particularly important when determining the sensitivity of receptors. For instance, an Annex II species (under the Habitats Directive) would have a high value, but if it was highly tolerant of an impact or had high recoverability it would follow that the sensitivity in this instance should reflect the ecology rather than default to protected status taking precedence.

31 The consideration of magnitude of potential impact and sensitivity of the receptor will determine an expression, often qualitative, for the significance of the residual positive and negative effects. This is demonstrated in Table 4.5: Significance of effects (below).

- 32 The significance of an impact results from the interaction between its magnitude (which is related to the extent of the physical change, its spatial extent, duration and frequency) and the value of the resource or the number and sensitivity of the receptor which might be affected.

Table 4.5: Significance of effects

Magnitude of Impact	Sensitivity of resource/receptor		
	Low	Moderate	High
Negligible	Negligible/Minor	Minor	Minor/Moderate
Low	Minor	Minor/Moderate	Moderate
Moderate	Minor/Moderate	Moderate	Moderate/Major
High	Moderate	Moderate/Major	Major

- 33 For the purposes of this assessment those residual positive and negative effects indicated as Major and Moderate/Major are considered significant.

4.6.1 Information Gaps and Limitations

- 34 Due to the nature of EIA, scientific understanding and the design parameters outlined in *Chapter 7*, a number of assumptions are required to complete the necessary assessments. These are contained, where relevant, in each topic chapter and the assumptions are based upon industry standards, consultation with relevant bodies and professional expertise.

4.6.2 Impact Interactions

- 35 Interactions between different impacts of the Development (or, where relevant, between impacts of the Development and different impacts from another project(s) in the area) on the same receptor are assessed in each topic chapter. The approach to the assessment of cumulative effects of the Development and Onshore Transmission Works (OnTW) spatially and with other projects in the area is described in *Section 4.6* below.

4.7 Cumulative Impact Assessment (CIA)

4.7.1 Requirement for Cumulative Assessment

- 36 Separate consideration of the Development and OnTW with other relevant projects is required. Each technical chapter includes a list of all appropriate proposed projects that may have cumulative effects with the Development and OnTW. This list of proposed projects has been identified through consultation with relevant stakeholders.

- 37 European Commission (EC) Guidelines for the *Assessment of Indirect and Cumulative Impacts as well as Impact Interactions* (1999) provides a definition of cumulative and in combination effects which has been used in this document.

"Cumulative impacts are impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project".

- 38 The approach to the cumulative assessment of each topic area is set out in the relevant chapters.

4.7.2 Cumulative Projects

- 39 Based on the applicant's understanding of the status and scope of various projects at the time of commissioning this EIA Report, a range of other projects, both onshore and offshore were identified as potentially having a cumulative impact when considered with the Development and OnTW. The main projects considered are described below. It should be noted that some chapters have included consideration of alternative projects which have particular relevance to the receptors considered.

- 40 As the baseline and status for cumulative projects are ever evolving a cut-off date of November 2017 was used to allow the EIA and CIA to progress. ICOL appreciates and acknowledges that the status of some of these projects may have changed since this date and note however that the individual status of projects has not been updated in the EIA Report due to the time restrictions associated with the assessment.

Firth of Forth and Tay Wind Farms

- 41 At the time of writing, consent has been granted for two other offshore wind projects (Near na Gaoithe (NNG) and Seagreen) in the Firth of Forth. Both projects were subject to the same legal challenge as ICOL and therefore have not currently progressed their consents. NNG has submitted a new application for consent with a revised design envelope, whilst Seagreen has currently submitted a Scoping Report, therefore it's envisaged that they too will submit a new application for a revised design envelope.

- 42 As all developers have a valid consent, and could commence with the development of these designs, consideration of the CIA with these two projects was required. Following advice from MS LOT, and as identified in the Scoping Opinion, the CIA should consider the design envelope from the NNG and Seagreen projects that are deemed to create the greatest level of cumulative significance (e.g. the CIA will only assess the impacts from either the consented NNG projects, or the new NNG application - which ever scheme is deemed to have the greatest significance of cumulative effects with the Development).

- 43 For each technical chapter the worst-case scenario project to be assessed cumulatively has been identified on a topic by topic basis.

NNG**2014 Consent**

- 44 The NNG Offshore Wind Farm site is located approximately 15.5 kilometres (km) from Fife Ness and 16 km from the Isle of May. The development site lies in the outer Firth of Forth and covers an area of 105 km².
- 45 The NNG export cable will be High Voltage Alternating Current (HVAC). The export cable is expected to run southwards from the site and make landfall at Thorntonloch beach to the south of Torness Power Station
- 46 A NNG development was granted consent in 2014 for up to 75 wind turbines, with a maximum tip height of 197 metres (m).

2017 Application

- 47 A new application was registered by Marine Scotland in March 2018 for a revised development. The revised development lies at the same location as the consented scheme; this application was for a maximum of 54 Wind Turbine Generators (WTGs) to a maximum tip height of 208 m. At the time of writing the application was still to be determined.

Seagreen**2014 Consent**

- 48 The Firth of Forth Alpha and Bravo development areas are located approximately 27 km (Alpha) and 38 km (Bravo) from the Angus coast. The development sites lie in the outer Firth of Forth and cover an area of 391 km² (Alpha 197 km², Bravo 194 km²).
- 49 Both projects were granted consent in 2014 for up to 75 wind turbines each, with a total capacity of up to 525 megawatts (MW).

2017 Application

- 50 A Scoping report was submitted in May 2017 for revised developments. The revised developments lie at the same location as the consented scheme, this application was for a maximum of 120 WTGs to a maximum tip height of 280 m. It is expected that the new application be submitted in 2018.

Other Offshore Wind Farms**Aberdeen Offshore Wind Farm (as-built parameters to be considered)**

- 51 The consented project will consist of up to 11 WTGs, generating up to 8.4 MW each, located immediately off Aberdeen. It is being developed by Aberdeen Offshore Wind Farm Limited (AOWFL) and construction will be completed during 2018.

Hywind Demonstration Site

- 52 Statoil floating (moored floating spar type structure) wind farm off the Scottish coast. The project is located near Buchan Deep, approx. 25-30 km off the coast of Peterhead in Aberdeenshire. It consists of five WTGs with 30 MW capacity.

Beatrice Offshore Wind Farm (consent plan parameters to be considered)

- 53 The Beatrice Offshore Wind Farm, to be developed by Beatrice Offshore Wind Limited (BOWL), will consist of up to 84 WTGs, two Offshore Substation Platforms (OSPs) and generate no less than 588 MW. The project, in the Moray Firth, commenced construction in 2017 and will be fully commissioned and operational in early 2019.

Telford, Stevenson and MacColl Offshore Wind Farms (as-consented parameters to be considered)

- 54 Three adjacent consented projects, developed by Moray Offshore Renewables Limited (MORL), in the Moray Firth. The projects will have a total capacity of up to 1,116 MW and will consist of up to 186 WTGs. The projects are yet to enter construction and accurate project timelines are not currently known.

MORL Western Development Area

- 55 Proposed by MORL, and at the scoping stage, the project will consist of up to 90 WTGs with a total capacity of up to 750 MW located in the Moray Firth.

Kincardine Floating Offshore Windfarm (parameters as-consented to be considered)

- 56 A pilot-scale offshore wind farm project utilizing floating foundation technology. Proposed by Kincardine Offshore Wind Limited (KOWL), the project is located south-east of Aberdeen approximately 15 km from the coastline. The project is yet to enter construction.

Beatrice Wind Farm Demonstrator Project

- 57 Two 5 MW WTGs in the Moray Firth, operational since 2007.

Forthwind Wind Farm Demonstrator Project - Phase 1

- 58 Consented in December 2016, a two turbine project located 1.5 km offshore of Methil in the Firth of Forth with a capacity of up to 18 MW.

Forthwind Wind Farm Demonstrator Project – Phase 2

- 59 Proposed by Forthwind, and at the scoping stage, the project will consist of up to nine WTGs with a total capacity of up to 65 MW located in the Firth of Forth.

Offshore Renewable Energy Catapult Levenmouth

60 This project, is located in the Firth of Forth approximately 20 m from the Energy Park in Methil. The single turbine project has a capacity of 7 MW.

4.7.3 Onshore Wind Farms

61 The cumulative impacts associated with all other relevant onshore wind farms have been considered within the technical chapters where required.

4.7.4 Other Coastal Projects

62 The cumulative impacts associated with all other relevant coastal projects have been considered within the technical chapters where required.

4.7.5 Other Onshore Projects

63 No other onshore projects have been identified as requiring consideration.

4.8 Mitigation and Monitoring

4.8.1 Introduction

64 As applied by the 2017 EIA Regulations, Schedule 4 Part 1(4) of the *Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000* requires this EIA to provide;

“A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment”.

65 The impacts of the Development have been considered and minimised, where possible, throughout the development process (avoidance of environmental impacts as far as possible) and the identification of embedded mitigation (e.g. those mitigations that are designed into the Development), these are discussed in more detail in *Section 4.7.2*. The embedded mitigation measures considered in the assessments are listed in each technical chapter. Any additional mitigation has also been identified where further measures were required to reduce the impacts of the Development on the environment.

4.8.2 Embedded Mitigation

66 Embedded mitigation, consisting of mitigation measures that are identified and adopted as part of the evolution and the design or measures otherwise incorporated as controls on the construction, operation and decommissioning of the Development will be included as considerations in assessing significance during the EIA process. The embedded mitigation measures are generally regarded as industry standard or best practice.

67 As well as the mitigation measures, ICOL proposes to commit to the purpose of the relevant consent conditions granted for the Inch Cape 2014 Consent, as they relate to this application. Where the purpose of a consent condition is being proposed these have been identified in each relevant technical chapter.

68 ICOL recognises that the Licensing Authority may wish to apply different or amended conditions to any consents that may ultimately be granted for this application, but would expect the main requirements, where still relevant, demonstrated by these conditions to remain a requirement in some form.

69 As these mitigation measures are embedded into the design of the Development (e.g. the Development will not commence without these), the embedded mitigation forms part of the baseline assessment

4.8.3 Additional Mitigation

70 Additional mitigation is any mitigation that is over and above industry standard or best practice and identified as a result of the EIA process to reduce or eliminate any effects that are predicted to be significant. These additional mitigation measures will be adopted as part of the Development commitments and will most likely form part of the consent conditions issued by the Scottish Ministers. Additional mitigation is included in each technical chapter where relevant.

71 Any additional mitigation proposed is then taken into account, following the initial impact assessment, in advance of considering residual effects.

4.8.4 Monitoring

72 Monitoring if required is intended to contribute to the wider industry understanding of the impacts of offshore wind farm projects. A monitoring scheme will be developed and agreed with the regulatory bodies post consent determination. Where monitoring for a particular element is being proposed it is included in each technical chapter.

4.8.5 European Protected Species

73 The potential for impacts on European Protected Species has been assessed in technical chapters as required. European Protected Species licences will be applied for from Marine Scotland and/or Scottish Natural Heritage following the grant of consent.

4.9 Assessment of Residual Effects

74 Following consideration of the effectiveness of all mitigation measures, a further assessment has been undertaken and any remaining significant effects have been identified.

References

European Commission (1999). *Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions*. Available at: <http://ec.europa.eu/environment/archives/eia/eia-studies-and-reports/pdf/guidel.pdf> [Accessed 03/04/2018]

Great Britain Parliament (2007). *The Marine Works (Environmental Impact Assessment) Regulations 2007*. Available at: <http://www.legislation.gov.uk/ukxi/2007/1518/contents/made> [Accessed 03/04/2018]

Institute of Ecology and Environmental Management (2010). *Guidelines for Ecological Impact Assessment in Britain and Ireland - Marine and Coastal*. Available at: http://www.ieem.net/data/files/Resource_Library/Technical_Guidance_Series/EcIA_Guidelines/Final_EcIA_Marine_01_Dec_2010.pdf [Accessed 03/04/2018]

Scottish Parliament (2000). *The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000*. Available at: <http://www.legislation.gov.uk/ssi/2000/320/contents/made> [Accessed 03/04/2018]

Scottish Parliament (2017). *The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017*. Available at: <http://www.legislation.gov.uk/ssi/2017/101/contents/made> [Accessed 03/04/2018]

Scottish Parliament (2017). *The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017*. Available at: <http://www.legislation.gov.uk/ssi/2017/115/contents/made> [Accessed 03/04/2018]

The Council of the European Communities (1992). *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) as amended*. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1992L0043:20070101:EN:HTML> [Accessed 03/04/2018]

Inch Cape Offshore Wind Farm 2013 Environmental Statement (ES) at: <http://www.gov.scot/Topics/marine/Licensing/marine/scoping/InchCape> [Accessed 03/04/2018]