

Seagreen Phase 1 Offshore Scoping Opinion - Summary of Key Responses

Relevant chapter group of chapters	Where in Scoping Opinion Doc	Issue	Specific Stakeholder raising issue
Ornithology	section 12.1 (page 69)	The Firth of Forth Ramsar should also be listed as an SPA	RSPB
Ornithology	section 12.1 (page 69)	Some goose roost SPAs such as Slammanan Plateau (bean goose) and the Upper Solway Flats and Marshes (Svalbard barnacle goose) should also be included due to potential impacts on passage species.	RSPB
Ornithology	Section 1 (page 25)	Need to be mindful of the time constraints of certain surveys, i.e. those which require multiple seasons of investigation in order to robustly define parameters over and above natural variation	RSPB
		The baseline assessment should identify the following features and processes in the environment:	
		• Sediments (e.g. composition, contaminants and particle size);	
		• Hydrodynamics (waves and tidal flows);	
		• Sedimentary environment (e.g. sediment re-suspension, sediment transport pathways, patterns and rates and sediment deposition);	
		• Sedimentary structures (e.g. protected banks);	
		• Typical suspended sediment concentrations.	
Coastal Processes	Section 11.1 (page 67)	Need to carefully consider passage birds in the EIA, including whether the baseline information is sufficient to evaluate the movement of passage species, to enable confident assessment of the potential impact of barrier effects	SEPA
Ornithology	Section 1 (page 26)	Barrier effects could be significant to passage and breeding seabirds as well as passage waterfowl. We think that the developer needs to more fully evaluate barrier effects (particularly cumulatively) through the EIA.	SNH & JNCC
Ornithology	Section 1 (page 30 & 33)		SNH & JNCC
Marine Intertidal and Terrestrial Ecology	Annex 1 Section 4 (page 35)	Sandy substrates are potentially important and may have substantial faunal abundance / biomass and important ecological functions. The EIA should fully assess the potential impacts on this habitat type (biotope).	SNH & JNCC
Marine Intertidal and Terrestrial Ecology	Annex A (page 21)	Marine Ecology should be termed Benthic Ecology	SNH & JNCC
		Value of extent lost or disturbed should be considered relevant to the particular habitat distribution within the development area (which will vary in vulnerability), and the effects on the processes which serve to maintain the habitat features and its associated communities. This should consider other infrastructure such as substations, cables, stabilisation materials and the impacts of operations such as anchoring of vessels.	
Marine Intertidal and Terrestrial Ecology	Section 4 (page 36)	We recommend that bottlenose dolphin (BND) from the Moray Firth SAC are addressed, even though the SAC itself is located further than 200km from the proposed zone of development	SNH & JNCC
Marine Mammals	Section 2 (page 33)		SNH & JNCC
General	Section 4 (page 5)	Refer to PAN 51: Planning, Environmental Protection and Regulation	Marine Scotland
Water and Sediment Quality	Section 4 (page 5)	Refer to PAN 50: Controlling the Environmental Effects of Surface Mineral Workings	Marine Scotland
Project description	Section 4 (page 5)	PAN 45: 2002 Renewable Energy Technologies may be relevant	Marine Scotland
Archaeology and Cultural Heritage	Section 4 (page 5)	PAN 42: Archaeology—Planning Process and Scheduled Monument Procedures may be relevant	Marine Scotland
Airborne Noise and Vibration	Section 4 (page 5)	PAN 56: Planning and Noise	Marine Scotland
General	Section 4 (page 5)	PAN 58: Environmental Impact Assessment	Marine Scotland
Archaeology and Cultural Heritage	Section 4 (page 5)	PAN 60: Planning for Natural Heritage	Marine Scotland
Shipping and Navigation	Section 4 (page 5)	PAN 62: Radio Telecommunications	Marine Scotland
Radar, Aviation and Ministry of Defence (MOD)	Section 4 (page 5)	Refer to PAN 62: Radio Telecommunications	Marine Scotland
Project description	Section 4 (page 5)	PAN 68: Design Statements may be relevant	Marine Scotland
Marine Intertidal and Terrestrial Ecology	Section 4 (page 5)	PAN 69: Planning and Building Standards Advice on Flooding May be relevant	Marine Scotland
Traffic and Access	Section 4 (page 5)	PAN 75: Planning for Transport should be considered	Marine Scotland
Marine Intertidal and Terrestrial Ecology	Section 4 (page 5)	PAN 79: Water and Drainage should be considered	Marine Scotland
Shipping and Navigation	Section 4 (page 5)	Marine Guidance Note 371 (M)	Marine Scotland
General	Section 4 (page 5)	The Highland Structure Plan should be considered	Marine Scotland
General	Section 4 (page 5)	West Highland and Islands Local Plan (WHILP).	Marine Scotland
ZAP	Annex 1 (page 15)	Need to highlight that development is constrained by the fixed limits of the zone, and therefore mitigation is also restricted within this area (i.e. the relocation of development away from sensitive areas is limited)	SNH & JNCC
		The concept of economic benefit as a material consideration is explicitly confirmed in the consolidated SPP.	
		This fits with the priority of the Scottish Government to grow the Scottish economy and, more particularly, with our published policy statement —Securing a Renewable Future: Scotland's Renewable Energy], and the subsequent reports from the Forum for Renewables Development Scotland (FREDS), all of which highlight the manufacturing potential of the renewables sector.	
Socio-economics	Section 6 (page 5)		Marine Scotland
		The application should include relevant economic information connected with the project, including the potential number of jobs, and economic activity associated with the procurement, construction operation and decommissioning of the development.	
Socio-economics	Section 6 (page 5)		Marine Scotland
		the ES should also be submitted in a user-friendly PDF format which can be placed on the Scottish Government website. A description of the methodology used in assessing all impacts should be included.	
General	Section 6 (page 5)	This should be written in simple non-technical terms to describe the various options for the proposed development and the mitigation measures against the potential adverse impacts which could result.	Marine Scotland
Non Technical Summary	Section 7 (page 6)		Marine Scotland

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		<p>Within an ES it is important that all mitigating measures should be:</p> <ul style="list-style-type: none"> - Clearly stated; - Fully described with accuracy; - assessed for their environmental effects; - assessed for their effectiveness; - Their implementation should be fully described; - How commitments will be monitored; and - If necessary, how they relate to any consents or conditions. 	
Approach to EIA	Section 7 (page 6)	The EIA must address uncertainty so that there is a clear explanation of the potential impact of each different layout and design scenario . Any subsequent components/scenario's procured after the ES is submitted would be subject to further environmental assessment and public consultations period if deemed to be significant.	Marine Scotland
Approach to EIA	Section 7 (page 6)	The EIA must address this uncertainty so that there is a clear explanation of the potential impact of each of the different scenarios. It should be noted that any subsequent components/scenario's procured after the ES is submitted would be subject to further environmental assessment and public consultations period if deemed to be significant.	Marine Scotland
Project description	Section 7 (page 6)	National policy for the historic environment is set out in:	Marine Scotland
Archaeology and Cultural Heritage	Section 8 (page 7)	<ul style="list-style-type: none"> • Scottish Planning Policy Planning and the Historic Environment at: http://www.scotland.gov.uk/topics/built-environment/planning/National-planning-policy/themes/historic • The Scottish Historic Environment Policy (SHEP) sets out Scottish Ministers strategic policies for the historic environment and can be found at: http://www.historic-scotland.gov.uk/index/heritage/policy/shep.htm 	Marine Scotland
Archaeology and Cultural Heritage	Section 8 (page 7)	Scheduled monuments should be preserved in situ and within an appropriate setting and confirms that developments must be managed carefully to preserve listed buildings and their settings to retain and enhance any features of special architectural or historic interest which they possess.	Scottish Government
Archaeology and Cultural Heritage	Section 8 (page 7)	both direct impacts on the resource itself and indirect impact on its setting must be addressed in any Environmental Impact Assessment (EIA) undertaken for this proposed development (http://www.historic-scotland.gov.uk/managing-change-consultation-setting.pdf .)	Marine Scotland
Archaeology and Cultural Heritage	Section 8 (page 7)	A suitably qualified archaeological/historic environment consultants must advise on, and undertake the detailed assessment of impacts on the historic environment and advise on appropriate mitigation strategies.	Historic Scotland
Archaeology and Cultural Heritage	Section 8 (page 7)	Information on the location of all archaeological/historic sites held in the National Monuments Record of Scotland, including the locations and, where appropriate, the extent of scheduled monuments, listed buildings and gardens and designed landscapes can be obtained from www.PASTMAP.org.uk	Marine Scotland
Archaeology and Cultural Heritage	Section 8 (page 7)	Data on scheduled monuments, listed buildings and properties in the care of Scottish Ministers can also be downloaded from Historic Scotland's Spatial Data Warehouse at http://hsewsf.sedsh.gov.uk/pls/htmldb/f?p=500:1:8448412299472048421::NO	Marine Scotland
Archaeology and Cultural Heritage	Section 8 (page 7)	For further information on data sets and for spatial information on gardens and designed landscapes and World Heritage Sites which are not currently included in Historic Scotland's Spatial Data Warehouse please contact hsgimanager@scotland.gsi.gov.uk . Historic Scotland would also be happy to provide any further information on all such sites.	Historic Scotland
Archaeology and Cultural Heritage	Section 9 (page 8)	the impact on navigational issues for both Commercial and Recreational craft, viz.	Historic Scotland
Shipping and Navigation	Section 9 (page 7 and 74)	<ul style="list-style-type: none"> • Collision Risk • Navigational Safety • Risk Management and Emergency response • Marking and lighting of Tidal Site and information to mariners • Effect on small craft navigational and communication equipment • Weather and risk to recreational craft which lose power and are drifting • In adverse conditions • Evaluation of likely squeeze of small craft into routes of larger • Commercial vessels. • Visual intrusion and noise 	Maritime & Coastguard Agency
Marine Intertidal and Terrestrial Ecology	Section 10 (page 8)	The ES must take account wildlife legislation and guidance namely, Coast Protection Act 1949 section 34, Council Directives on The Conservation of Natural Habitats and of Wild Flora and Fauna, and on Conservation of Wild Birds (commonly known as the Habitats and Birds Directives), the Wildlife & Countryside Act 1981, the Nature Conservation (Scotland) Act 2004, the Protection of Badgers Act 1992, the 1994 Conservation Regulations, Scottish Executive Interim Guidance on European Protected Species, Development Sites and the Planning System and the Scottish Biodiversity Strategy and associated Implementation Plans	
Marine Intertidal and Terrestrial Ecology	Section 10 (page 8)	SG Guidance must be given serious consideration to/recognition of meeting the three fundamental tests set out in this Guidance. It may be worthwhile for applicants to give consideration to this immediately after the completion of the scoping exercise	Marine Scotland

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Marine Intertidal and Terrestrial Ecology	Section 10 (page 8)	It needs to be categorically established which species are present on the site, and where, before the application is considered for consent. The presence of protected species such as Schedule 1 Birds or European Protected Species must be included and considered as part of the application process, not as an issue which can be considered at a later stage.	Marine Scotland
Ornithology	Section 10 (page 8)	It needs to be categorically established which species are present on the site, and where, before the application is considered for consent. The presence of protected species such as Schedule 1 Birds or European Protected Species must be included and considered as part of the application process, not as an issue which can be considered at a later stage.	Marine Scotland
Water and Sediment Quality	Section 11 (page 9)	Consult with SEPA (at an early stage) as the regulatory body responsible for the implementation of the Controlled Activities Regulations (CAR), to identify 1) if a CAR license is necessary and 2) clarify the extent of the information required by SEPA to fully assess any license application.	Marine Scotland
Water and Sediment Quality	Section 11 (page 9)	SEPA produce the following relevant guidelines: SEPA's guidance note PPG6: Working at Construction and Demolition Sites, PPG5: Works in, near or liable to affect Watercourses, PPG2 Above ground storage tanks, and others, all of which are available on SEPA's website at http://www.sepa.org.uk/guidance/ppg/index.htm	Marine Scotland
Water and Sediment Quality	Section 11 (page 9)	Prevention and clean-up measures should also be considered for construction, operation and decommissioning	SEPA
Water and Sediment Quality	Section 11 (page 9)	Consultation with the local fishery board is encouraged at an early stage	Marine Scotland
Water and Sediment Quality	Section 11 (page 9)	The ES should identify location of and protective/mitigation measures in relation to all private water supplies within the catchments impacted by the scheme, including modifications to site design and layout. Be aware of available CIRIA guidance on the control of water pollution from construction sites and environmental good practice (www.ciria.org).	Marine Scotland
Fish and Shellfish Resources	Section 11 (page 10)	Design guidance is also available on river crossings and migratory fish (SE consultation paper, 2000) at http://www.scotland.gov.uk/consultations/transport/rcmf-00.asp .	Marine Scotland
Traffic and Access	Section 12 (page 10)	Provide information relating to the preferred route options for delivering equipment etc. via the trunk road network	Marine Scotland
Traffic and Access	Section 12 (page 10)	Consider access issues, particularly those impacting upon the trunk road network; in particular, potential stress points at junctions, approach roads, borrow pits, bridges, site compound and batching areas	Marine Scotland
General	Section 13 (page 10)	The applicant should confirm whether any proposals made within the Environmental Statement, e.g. for construction methods, mitigation, or decommissioning, form part of the application for consent.	Marine Scotland
Consultation	Section 13 (page 10)	Issue ESs directly to consultees. Consultee address lists can be obtained from the Energy Consents Unit. The Energy Consents Unit also requires 8 hardcopies to be issued internally to Scottish Government consultees. Developer must publish their proposals in accordance with part 4 of the Environmental Impact Assessment (Scotland) Regulations 2000.	Marine Scotland
Seagreen	Section 13 (page 10)	Energy consents information and guidance, including the specific details of the adverts to be placed in the press can be obtained from the Energy Consents website; http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Energy-Consents	Marine Scotland
Seagreen	Section 13 (page 11)	Where s36 applications are located in areas where Gaelic is spoken, developers are encouraged to adopt best practice by publicising the project details in both English and Gaelic (see also Energy consents website above). Marine Scotland submit a detailed Ordinance Survey plan showing the site boundary and all turbines, access tracks and onshore supporting infrastructure in a format compatible with the Scottish Government's Spatial Data Management Environment (SDME), along with appropriate metadata.	Marine Scotland
Seagreen	Section 13 (page 11)	An explanation of any experiences or practical difficulties encountered when collating/recording information not included in the Environmental Statement should be provided, complete with an indication of when an	Marine Scotland
General	Annex 1 (page 14)	It is highly relevant to consider Seagreen's ZAP report as this summarises the work on zonal characterisation and the (baseline) data available for this zone	SNH & JNCC
ZAP	Annex 1 (page 14)	We recommend that the two reports are more fully integrated so that it is clear which aspects of zonal characterisation and research will be used to inform the Phase 1 EIA for the Alpha and Bravo wind farms.	SNH & JNCC
Approach to EIA	Annex 1 (page 15)	It is important to highlight the much larger scale and geographic spread of Round 3 compared to Rounds 1 and 2 of development.	SNH & JNCC
Socio-economics	Initial responses page 7	The development should take into account the impact on navigation to their ports both on the Forth and the Tay. Such concerns should also include the deployment of construction vessels and any ongoing maintenance craft.	Forth Ports
Project description	Page 63	The justification for option one should be provided with regard to options that would have less of an impact on the marine environment. Opportunities to share cable routes from other STW offshore windfarm developments should also be explored	SEPA

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Nature Conservation Designations	Annex 1 (page 15)	The range of interests and potential impacts that may need to be considered in relation to the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (applying to the offshore zone beyond 12 nautical miles) and to the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (applying to Scottish territorial waters). These regulations protect Natura (European) sites – a network of designated sites across Europe which are internationally important for threatened habitats and species – encompassing Special Protection Areas (SPAs) designated for a range of important bird species, and Special Areas of Conservation (SACs) which include a variety of sensitive or rare marine habitats. We strongly recommend that the inter-relationships between these interests are fully considered.	SNH & JNCC
Requirement for Appropriate Assessment	Annex 1 (page 15)	The range of interests and potential impacts that may need to be considered in relation to the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (applying to the offshore zone beyond 12 nautical miles) and to the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (applying to Scottish territorial waters). These regulations protect Natura (European) sites – a network of designated sites across Europe which are internationally important for threatened habitats and species – encompassing Special Protection Areas (SPAs) designated for a range of important bird species, and Special Areas of Conservation (SACs) which include a variety of sensitive or rare marine habitats. We strongly recommend that the inter-relationships between these interests are fully considered.	SNH & JNCC
Ornithology	Annex 1 (page 16)	A key concern is the potential effects on birds during all phases of development encompassing displacement, indirect effects (through impacts on prey species) and collision mortality – both at a project-level and cumulatively.	SNH & JNCC
Marine Mammals	Annex 1 (page 16)	A key concern is the potential effects on marine mammals from noise during construction – both at a project-level and cumulatively.	SNH & JNCC
Fish and Shellfish Resources	Annex 1 (page 16)	A key concern is the potential effects on fish, including those that are important as prey species for birds and marine mammals – both at a project-level cumulatively.	SNH & JNCC
Cumulative impacts assessment	Annex 1 (page 16)	We will continue to liaise with FTOWDG over this work to ensure that it can be used to help answer the questions that will be posed during the consenting process.	SNH & JNCC
Consenting regime	Annex 1 (page 16)	There is a role for consenting authorities, developers and consultees to increase the understanding of the effects of offshore wind farms as well as securing best practice in future developments.	SNH & JNCC
Ornithology	Annex 1 (page 16)	It is not clear what will be undertaken to inform Phase 1 development (e.g. of the proposed actions to address data gaps relating to ornithological interests).	SNH & JNCC
Project description	Annex 1 (page 17)	It may be necessary to reduce site boundaries in some cases to reduce risk to the environment.	SNH & JNCC
Ornithology	Annex 1 (page 17)	Management of risks (e.g. collision risk to bird species) could, if other mitigation is insufficient, necessitate restrictions on the capacity of development within the Zone. Request further clarification of the GIS constraints mapping approach undertaken to date In particular we would appreciate clarity on: • How data is expressed within the mapping tool in their GIS; e.g. has aerial survey data been incorporated into the tool? • How has uncertainty / lack of data been incorporated into decision making?	SNH & JNCC
GIS	Annex 1 (page 18)	• How has weighting been applied to each layer, particularly, but not exclusively, including ornithology and	SNH & JNCC
Project description	Annex 1 (page 20)	The ES should contain discussion of the main alternatives they considered for location of the developments with an explanation of the reasons for their final choice of project location, taking into account environmental We are satisfied that the Rochdale Envelope principle will be applied, to ensure that the consent is sufficient to encompass the worst-case scenario of potential impacts, where multiple options exist for an aspect of the project plan.	SNH & JNCC
Approach to EIA	Annex 1 (page 20)	It is challenging to consider all possible design scenarios within the ES in order to maintain sufficient flexibility within the consent.	SNH & JNCC
Approach to EIA	Annex 1 (page 20)	Issues raised at this scoping stage of EIA should also be considered in their project design stages, as there may be opportunities / necessity to influence design as way of ensuring sufficient mitigation for potentially significant impacts	SNH & JNCC
Approach to EIA	Annex 1 (page 20)	As decision on turbine design will not be made until consents are in place - we emphasise that the environmental merits of different foundations should be considered, if for example, it is deemed that there is a significant risk to marine mammal populations from the piling of monopile turbines, therefore from a consenting perspective it may be in the interest of the developer to focus on installation techniques which avoid / reduce these impacts (this may be required by the consent)	SNH & JNCC
Marine Mammals	Annex 1 (page 20)	As decision on turbine design will not be made until consents are in place - we emphasise that the environmental merits of different foundations should be considered, if for example, it is deemed that there is a significant risk to marine mammal populations from the piling of monopile turbines, therefore from a consenting perspective it may be in the interest of the developer to focus on installation techniques which avoid / reduce these impacts (this may be required by the consent)	SNH & JNCC
Marine Intertidal and Terrestrial Ecology	Annex 1 (page 20)	Details of regulatory requirements and good practice advice for the applicant can be found on our website at www.sepa.org.uk/planning.aspx	SNH & JNCC
General	Page 65		SEPA

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Consultation	Section 5 (page 5)	SNH has produced a service level statement (SLS) for renewable energy consultation. This statement provides information regarding the level of input that can be expected from SNH at various stages of the EIA process. Annex A of the SLS details a list of references, which should be fully considered as part of the EIA process. (www.snh.org.uk)	Marine Scotland
Approach to EIA	Annex 1 (page 15)	Considering the levels of uncertainty in the EIA process we are advising that EIA is undertaken in the context of risk management and we identify the need to consider what level of confidence in the data it will be realistically possible to achieve, and how this will be presented to enable conclusions to be reached.	SNH & JNCC
Approach to EIA	Annex 1 (page 21)	There is currently high uncertainty in defining thresholds of significance for certain sensitive receptors will necessitate a qualitative appraisal of results in most cases	SNH & JNCC
Approach to EIA	Annex 1 (page 21)	close consultation with relevant experts to ensure that there is on-going agreement between the developer, SNCAs and Marine Scotland as to what is deemed to be significant, in proportion to the anticipated effects. We recommend that an holistic approach to EIA is taken, identifying potential links between environmental features and the potential for indirect impacts. It may be useful to consider whether there is a way to „map effects, diagrammatically?	SNH & JNCC
Approach to EIA	Annex 1 (page 21)	It is relevant to consider within the EIA the potential changes to the baseline environmental processes and pathways, e.g. through climate change, which will have an effect on how impacts are predicted, assessed and monitored.	SNH & JNCC
General	Annex 1 (page 21)	We don't feel that the impacts of decommissioning have been fully scoped into the EIA process, with assumptions being made as to the comparability of impacts of the construction phase, and deferring assessment until a subsequent EIA. it is necessary to consider the worst case scenario of impacts arising during decommissioning, particularly where the impacts will differ from that during construction	SNH & JNCC
Approach to EIA	Annex 1 (page 22)	Decommissioning impacts to marine mammals, will not include piling but may involve other noise sources (e.g. cuttings or explosives) which needs to be assessed pre-emptively to ensure that removal is feasible without significant environmental impact.	SNH & JNCC
Marine Mammals	Annex 1 (page 22)	It is necessary to clarify whether there is any „repowering' planned for the development, to ensure that the effects of this are also considered and do not hinder operations through consenting at a later stage	SNH & JNCC
Project description	Annex 1 (page 22)	It is necessary to clarify whether there is any „repowering' planned for the development, to ensure that the effects of this are also considered and do not hinder operations through consenting at a later stage	SNH & JNCC
Approach to EIA	Annex 1 (page 22)	We recommend that the Whale and Dolphin Conservation Society (WDCCS) are also consulted at this stage. It may also be appropriate to consult with Natural England, if there are impacts which are anticipated within their area of jurisdiction.	SNH & JNCC
Marine Mammals	Annex 1 (page 23)	Request that greater information is provided in further iterations of the Cumulative Studies Report, on the standardisation of methods and data sharing across the developers to facilitate better cumulative impact assessment (CIA).	SNH & JNCC
Cumulative impacts assessment	Annex 1 (page 23)	It is important that the developer submits sufficient information to enable Marine Scotland to undertake a HRA post-application, prior to making a decision on consenting.	SNH & JNCC
Requirement for Appropriate Assessment	Annex 1 (page 24)	Where tracking studies have been suggested (e.g. Gannet), it is important to consider the overall objectives of the assessment to ascertain whether it is informative or not. For example, if without the study, the assumption that a certain bird species is from a nearby SPA, would a tracking study to establish this connectivity be helpful in this case?	SNH & JNCC
Ornithology	Annex 1 (page 24)	Simultaneous collection of environmental data will enable these variables to be included as co-variables in subsequent estimations of abundance and density (using distance sampling techniques), to increase the accuracy and precision of these estimates.	SNH & JNCC
Marine Mammals	Annex 1 (page 26)	Simultaneous collection of environmental data will enable these variables to be included as co-variables in subsequent estimations of abundance and density (using distance sampling techniques), to increase the accuracy and precision of these estimates.	SNH & JNCC
Marine Intertidal and Terrestrial Ecology	Annex 1 (page 26)	Do not agree that migrating birds would generally pass over at heights well above the wind turbine rotors and would require further evidence to support this assumption	SNH & JNCC
Ornithology	Annex 1 (page 26)	Impacts to passage species may potentially be addressed through the collaborative working being undertaken by FTOWDG.	SNH & JNCC
Ornithology	Annex 1 (page 26)	It may be appropriate to amend previous collision risk modelling methodologies to better enable the prediction of effects and therefore recommend that there is a discussion between Seagreen, SNH, JNCC and RSPB focussing on the proposed collision risk assessment, to ensure there is agreement across all parties prior to	SNH & JNCC
Ornithology	Annex 1 (page 26)	It is imperative that further research is undertaken to produce evidence-based values on avoidance rates of bird species. A precautionary approach will need to be taken on this issue until better evidence is available	SNH & JNCC
Requirement for Appropriate Assessment	Annex 1 (page 27)	It would be appropriate to consider the available modelling techniques for assessing population level impacts, to enable answering of HRA questions.	SNH & JNCC
Ornithology	Annex 1 (page 27)	caution against relying heavily on a 1% population level for deciding on whether a receptor is significant or not and recommend that there is consideration of other factors such as total population size and status, spatial distribution, behaviour etc.	SNH & JNCC

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Ornithology	Annex 1 (page 27)	We would be cautious about stating a generic threshold without presentation of the wider information to make an informed judgement on the significance of impacts on a species-by-species basis.	SNH & JNCC
Ornithology	Annex 1 (page 27)	It is important that adequate consideration has been given to the compatibility of data collection methods between Zone 2 and the other sites (this is not yet clear)	SNH & JNCC
Ornithology	Annex 1 (page 27)	Data from all FTOWDG sites should be included in the power analysis	SNH & JNCC
Ornithology	Annex 1 (page 27)	SNH and JNCC welcome discussion over which other projects / industries may need to be considered in relation to cumulative and in-combination effects on bird interests. We advise that not all cumulative/ in-combination impacts are unique to wind farms, (i.e. disturbance/ displacement and indirect effects) and as such it is necessary to include other industries (e.g. aggregates, shipping traffic) in this assessment.	SNH & JNCC
Ornithology	Annex 1 (page 27)	The Garthe and Hüppop paper on species sensitivity to wind farm development should be updated so that it is relevant to UK waters. This requires a collaborative approach between nature conservation agencies and other seabird experts.	SNH & JNCC
Ornithology	Annex 1 (page 28)	Montrose Basin and Firth of Forth should be included as SPA and not solely Ramsar as stated in scoping.	SNH & JNCC
Nature Conservation Designations	Annex 1 (page 28)	Need to include more detail within the ES in regard to future designations. This was not sufficiently covered in the scoping.	SNH & JNCC
Nature Conservation Designations	Annex 1 (page 28)	Considering the level of detail required to answer the questions of the appropriate assessment with an acceptable level of certainty, it is imperative that necessary data collection is started as early as possible, and should be considered when defining the objectives of any site based assessment. It may therefore be important for those aspects which are already underway (e.g. ornithological and marine mammal surveys) to be reviewed against a potential HRA scope (such as that arising from the cumulative assessment studies), to clarify whether there is further work needed.	SNH & JNCC
Ornithology	Annex 1 (page 28)	Observations are only carried out when the sea state is 4 or less and that these are the data to be used in analysis (in line with COWRIE guidance)	SNH & JNCC
Ornithology	Annex 1 (page 28/29)	Require further consultation on methodologies	SNH & JNCC
Ornithology	Annex 1 (page 29)	Analysis of aerial data collected to establish population estimates would be useful to inform the EIA / ZAP process.	SNH & JNCC
Requirement for Appropriate Assessment	Annex 1 (page 29)	A separate report should be compiled for each SPA with a focus on the conservation objectives at each site and the assessment requirement of maintaining site integrity.	SNH & JNCC
Ornithology	Annex 1 (page 29)	COWRIE has commissioned lot of reports but has not authored any as is stated in the scoping report (table 6.2.4)	SNH & JNCC
Ornithology	Annex 1 (page 29)	Proposed cabling and associated infrastructure from cabling during construction, de-commissioning and cumulatively may potentially be significant to ornithological interests and should not be scoped out at this stage	SNH & JNCC
Ornithology	Annex 1 (page 29)	How would the suggested data collection in the ZAP document (A3.6) be of use in answering the questions of EIA and AA.	SNH & JNCC
Marine Mammals	Annex 1 section 2 (page 31)	There is considerable concern regarding the impacts to marine mammals	SNH & JNCC
Marine Mammals	Annex 1 section 2 (page 31)	When determining the efficacy of the Scoping Report in clarifying the issues to be addressed in EIA, an appraisal of the baseline information needs to be made	SNH & JNCC
Marine Mammals	Annex 1 section 2 (page 31)	Refer to the report published by SMRU which details the relevance of existing marine mammal data for impact assessment, and consequent data needs.	SNH & JNCC
Marine Mammals	Annex 1 section 2 (page 31)	It is necessary to assess the robustness of the incidental data (recorded as part of the bird surveys) in providing relative / absolute abundance estimates, for further assessment and to enable identifying of what further data is needed.	SNH & JNCC
Marine Mammals	Annex 1 (page 31)	It may also be relevant for the data gathered at a zonal level to be added to the Joint Cetacean Protocol database to build a wider scale data source, and we recommend that the developer approach JNCC to discuss this.	SNH & JNCC
Marine Mammals	Annex 1 section 2 (page 31)	Impacts need to be assessed in line with EPS legislation, and the baseline data collection should also be considered with regard to the specific questions of Favourable Conservation Status (FCS) for EPS licensing which need to be answered with a certain level of confidence, to a) enable the development to proceed without contravention of the EPS legislation and b) to enable the regulator to fulfil their duties (at the UK level) of reporting on the FCS of EPS	SNH & JNCC
Marine Mammals	Annex 1 section 2 (page 32)	FTOWDG propose to undertake a noise modelling study incorporating all of the STW and R3 development. This may inform EIA	SNH & JNCC
Marine Mammals	Annex 1 section 2 (page 32)	It is important to clarify to what extent development within Zone 2 will be considered in this assessment within further cumulative effects assessment documents, as this is not referred to in the Scoping Report.	SNH & JNCC
Marine Mammals	Annex 1 section 2 (page 32)	The work undertaken by Bailey & Thompson on Bottlenose Dolphin in the Moray Firth has shown behavioural responses to disturbance at up to 40km.	SNH & JNCC
Marine Mammals	Annex 1 section 2 (page 32)	Changes in the abundance of prey may not arise solely due to displacement of these prey species – it is possible that there could be direct injury to prey species and / or impacts to their preferred spawning habitats.	SNH & JNCC

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Marine Mammals	Annex 1 section 2 (page 32)	Consider the potential noise impacts on marine mammals and birds through effects on prey, with the potential cumulative impacts of multiple projects affecting multiple spawning seasons with a risk to reproductive success.	SNH & JNCC
Marine Mammals	Annex 1 Section 2 (page 33)	We would welcome discussion with the developer over which other projects / industries may need to be considered in relation to cumulative and in-combination effects on marine mammals. We also think that an evaluation of barrier effects (particularly cumulatively) through the EIA should occur, before dismissal as non-significant	SNH & JNCC
Marine Mammals	Annex 1 Section 2 (page 33)	Operational disturbance to marine mammals should also consider vessel movement associated with maintenance, etc, rather than just from the turbines themselves	SNH & JNCC
Marine Mammals	Annex 1 Section 2 (page 33)	It is also relevant to more thoroughly consider the draft guidance on deliberate disturbance of European Protected Species (EPS), as this provides advice to developers on how to assess their projects on the context of these requirements	SNH & JNCC
Coastal Processes	Annex 1 Section 3 (page 33)	There are a number of pressures and constraints along the coast between Arbroath and Barry Links (detailed below) and we would therefore strongly urge early consideration as to the specific location of the cable landfall and associated infrastructure, including the substation and grid connection	SNH & JNCC
Coastal Processes	Annex 1 Section 3 (page 33)	Erosion has been the dominant force along this coastline to date, although there are a few areas of accretion and land claim. The coastline is influenced by the varying presence of an inter- and subtidal rock platform and a relatively gentle rise into the interior.	SNH & JNCC
Coastal Processes	Annex 1 Section 3 (page 34)	Constraints to do with the railway could direct the options selection towards designated sites in the area, including Barry Links SSSI and area of Geological Conservation Review (GCR) and the Firth of Tay and Eden Estuary SAC and SPA at the southern limit of the cable corridor, or to East Haven SSSI or Elliot Links SSSI further north.	SNH & JNCC
Coastal Processes	Annex 1 Section 3 (page 34)	Cable landfall could (potentially) interrupt sediment moving towards Barry Links SSSI & GCR, and potentially the Firth of Tay and Eden SAC and SPA. This would need to be mitigated / minimised by sensitive design options.	SNH & JNCC
Coastal Processes	Annex 1 Section 3 (page 34)	SNH has commissioned research into sediment movements at Barry Links, and can make this available. Defra's 1997 work has been superseded by UKCP09, which provides a more detailed analysis, see http://ukclimateprojections-uk.defra.gov.uk . Although broadly similar to the earlier work, these newer projections reflect how understanding has moved on and present more detail.	SNH & JNCC
Coastal Processes	Annex 1 Section 3 (page 34)	Strongly urge that the cable landfall point and associated land-based infrastructure is sustainably designed and located with regard to future climate change.	SNH & JNCC
Coastal Processes	Annex 1 Section 3 (page 34)	Much of this coast has experienced longstanding erosion problems and, given tidal observations and climate projections, it is likely that these management concerns will worsen during the lifetime of this wind farm development. Given the developed nature of this coastal zone, it would be prudent to safeguard the land-based elements of this proposal from the likely effects of climate change. A Shoreline Management Plan has been drawn up for this section of coast and, while dated, it may be helpful for reference. (Caledonian Geotech, 1987. Tayside Regional Council, Coastal Erosion Study, Phase 2. Final Report).	SNH & JNCC
Coastal Processes	Annex 1 Section 3 (page 34)	It is too early in the process to dismiss the potential cumulative and in-combination effects of cable routes and associated land-based infrastructure	SNH & JNCC
Coastal Processes	Annex 1 Section 3 (page 35)	If cable and grid connection requirements are not planned and considered more strategically, then there remains a potential for cumulative impacts on a range of natural heritage interests.	SNH & JNCC
Marine Intertidal and Terrestrial Ecology	Annex 1 Section 4 (page 35)	Scottish Government have published guidance that includes a draft list of Priority Marine Features for which MPAs may be an appropriate mechanism	SNH & JNCC
Nature Conservation Designations	Annex 1 Section 4 (page 35)	The MPA process is likely to be running on a parallel timescale to the applicant's project development and its formal consenting. We will seek to keep them updated on our input to the progress of MPAs, where relevant, and we also welcome their intention to engage in this process.	SNH & JNCC
Fish and Shellfish Resources	Annex 1 Section 5 (page 36)	Impacts on fish should be considered in the context of species of conservation concern, and those which are important for sustaining other important species (e.g. birds and marine mammals).	SNH & JNCC
Fish and Shellfish Resources	Annex 1 Section 5 (page 36)	The issue of important prey species is complex as it requires establishing ecological links with a level of confidence which enables quantitative assessment of effects via key species, which is even more challenging at the level of assessment required under HRA	SNH & JNCC
Fish and Shellfish Resources	Annex 1 Section 5 (page 37)	There is a need to consider information gathered for certain receptors (e.g. key prey species such as sandeels) in the context of other species, as this may further enable conclusions to be drawn on the significance of direct and indirect impacts.	SNH & JNCC
Fish and Shellfish Resources	Annex 1 Section 5 (page 37)	Fish of conservation concern include qualifying interests of adjacent SACs (i.e. Atlantic salmon, sea lamprey and river lamprey) and species listed as a priority on UKBAP, ICES and IUCN Red lists (i.e. European eels).	SNH & JNCC
Requirement for Appropriate Assessment	Annex 1 Section 5 (page 37)	Fish of conservation concern include qualifying interests of adjacent SACs (i.e. Atlantic salmon, sea lamprey and river lamprey) and species listed as a priority on UKBAP, ICES and IUCN Red lists (i.e. European eels).	SNH & JNCC
Fish and Shellfish Resources	Annex 1 Section 5 (page 37)	Fish of conservation concern include qualifying interests of adjacent SACs (i.e. Atlantic salmon, sea lamprey and river lamprey) and species listed as a priority on UKBAP, ICES and IUCN Red lists (i.e. European eels).	SNH & JNCC

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Fish and Shellfish Resources	Annex 1 Section 5 (page 37)	A recent review by Marine Scotland (Malcolm et. al., in prep) summarises available information on the migratory routes and behaviour of Atlantic salmon, sea trout and European eel which may help inform assessment of the movement of some key species on the east coast of Scotland	SNH & JNCC
Fish and Shellfish Resources	Annex 1 Section 5 (page 37)	Although there is some understanding of the timing of river and sea lamprey migration, there is little known about their behaviour and movements once in the marine environment.	SNH & JNCC
Fish and Shellfish Resources	Annex 1 Section 5 (page 37)	Potential impacts on other fish species of conservation concern should also be considered, including European eel, shad, sea trout and spurling	SNH & JNCC
Fish and Shellfish Resources	Annex 1 Section 5 (page 37)	European eel is a conservation priority due to a 95% drop in its population over the last 20 years; it is considered by ICES to merit emergency action and is listed as „critically endangered‘ on the IUCN Red list. Very little is known about their migration pathways – either as juveniles or adults. The draft report from Marine Scotland reviews the data available in relation to European eel migration routes and behaviour.	SNH & JNCC
Fish and Shellfish Resources	Annex 1 Section 5 (page 37)	Allis and Twaite shad are listed on Annex II of the Habitats Directive and on the UKBAP Priority List and also protected under Schedule 5 of the Wildlife and Countryside Act. Shad are found in shallow coastal waters and estuaries, although they migrate up rivers to spawn. In Scotland, they are found all around the coast, although the only known (Scottish) spawning site is located in the River Cree, which flows into the Solway Firth.	SNH & JNCC
Fish and Shellfish Resources	Annex 1 Section 5 (page 37)	Sea trout is a UKBAP Priority species which supports a number of fisheries in Scotland, many of these fisheries have undergone significant declines in the last 25 years. The draft report from Marine Scotland reviews the data available in relation to sea trout migration routes and behaviour.	SNH & JNCC
Fish and Shellfish Resources	Annex 1 Section 5 (page 38)	Sparling are included in the UK BAP Priority Species list. They are found in coastal waters and estuaries and migrate into large clean rivers to spawn. Sparling was previously known to occur in a number of Scottish rivers, including the Rivers Forth and Tay. However, they have now disappeared from almost all of these rivers, with a small number of rivers, including the Forth and Tay, being notable exceptions.	SNH & JNCC
Fish and Shellfish Resources	Annex 1 Section 5 (page 38)	Noise (including vibration) will be produced during construction of the foundation design The levels of noise production that can be expected should be set-out and, using published literature, the impact, if any, this will have on fish movements and behaviour should be considered	SNH & JNCC
Fish and Shellfish Resources	Annex 1 Section 5 (page 38)	A SNH report (Gill et al., in prep) considers the current state of knowledge with regard to the potential impacts of noise, associated with marine renewable energy, on Atlantic salmon, sea trout and European eel.	SNH & JNCC
Fish and Shellfish Resources	Annex 1 Section 5 (page 38)	Once the turbines are installed and operational, there is the potential for the development to generate noise over the longer term (for example, that generated by the gears of the turbines). The levels of noise that are expected to be generated should be set-out, and the impact this may have on fish should be considered.	SNH & JNCC
Seascape, Landscape and Visual Character	Annex 1 Section 5 (page 38)	SNH is in the process of reviewing the available guidance in order to draw up a list of recommendations for carrying out seascape, landscape and visual assessment in Scotland.	SNH & JNCC
		SNH recommend that SLVIA is carried out with reference to the following:	
		• The Guidelines for Landscape and Visual Impact Assessment.’ (LI-IEMA, 2002).	
		• Siting and Designing windfarms in the landscape’. SNH, Version 1, December 2009.	
		http://www.snh.gov.uk/docs/A317537.pdf Referred to below as SDWL.	
		• Visual Representation of Windfarms: Good Practice Guidance. SNH 2007.	
		http://www.snh.gov.uk/docs/A305436.pdf Referred to below as the VRW.	
		• Cumulative Effect of Windfarms. SNH 2005. http://www.snh.gov.uk/docs/A305440.pdf	
		• An assessment of the sensitivity and capacity of the Scottish seascape in relation to windfarms (SNH Commissioned Report 103, 2005). Referred to below as SNH’s seascapes report.	
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 39)	• http://www.snh.org.uk/pdfs/publications/commissioned_reports/F03AA06.pdf	SNH & JNCC
		SNH make the following recommendations:	
		• Wind farm design should be resolved through an iterative EIA process, ensuring that the schemes in this development cluster are complementary and respect design principles.	
		• That there is a liaison meeting between the Forth & Tay Offshore Wind Developers’ Group (FTOWDGD) and SNH to discuss SLVIA for each proposal, and cumulatively, prior to work being commissioned.	
		• That Chartered Landscape Architects, preferably a team of two, carry out (cumulative) SLVIA.	
		• That developers, preferably co-ordinated through FTOWDGD, make contact with Natural England in respect of cross-border impacts.	
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 39)	• That a cumulative SLVIA is co-ordinated jointly via FTOWDGD	SNH & JNCC
		It is important to:	
		• Balance developments of a similar design and image, to limit visual confusion,	
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 40)	• Establish new patterns and scales of installations that respect their surroundings	SNH & JNCC

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Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 40)	Wind farm design should be resolved through an iterative EIA process, ensuring that the proposals in the outer Firths of Forth & Tay are complementary and respect landscape design principles. Each individual wind farm within the Round 3 zone will need to be considered and designed in the context of the further planned development in this zone, as well as in the context of the other FTOWDG proposals. The overall configuration of the wind farms needs to relate to one another, with a clear, balanced relationship between each design / layout.	SNH & JNCC
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 40)	cumulative SLVIA is co-ordinated jointly for the Forth & Tay offshore wind farms via FTOWDG. FTOWDG and SNH need to agree a common methodology and approach to this issue In respect of this Round 3 zone, cumulative landscape and visual impacts will arise for each individual wind farm proposal in the zone in combination with: a. Other offshore wind farm proposals in the same zone. (Zone 2) b. Other offshore wind farm proposals in the same region. (The outer Firths of Forth & Tay) c. Other onshore wind farms approved/in the planning system.	SNH & JNCC
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 40)	Seascape units are of only limited use in appraising real development proposals. Indeed, fieldwork is a fundamental part of SLVIA.	SNH & JNCC
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 40)	Attention is drawn to the Sections 4.7.4 and 4.7.5 of the SNH Seascapes Commissioned Report 103, 2005	SNH & JNCC
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 41)	For the cumulative visual impact assessment, SNH recommend an initial zone of theoretical visibility (ZTV) for cumulative study out to a radius of 50km, noting that onshore patterns of wind farm development will be relevant to the study	SNH & JNCC
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 41)	Viewpoints should be selected after negotiation with Marine Scotland, SNH and the relevant planning authorities and public consultation.	SNH & JNCC
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 41)	Viewpoint selection should be based on the identification of potentially sensitive receptors (people, places and activities) and potentially significant views, locations or landscapes, taking into account the likely impacts of the development. View points will ideally be the same for EIA assessment as they will be for CIA Viewpoints should be selected to cover a range of view types and heights to provide: View type a) Areas of high landscape or scenic value; b) A full representation of views from a range of distances, aspects, landscape character types and visual receptors; c) All aspects of the proposed development, d) Visual composition e) The variety of images that offshore wind farms will present from coastal areas as well as important coastal hilltops f) A range of distances. g) A range of elevations. h) Sequential along specific routes. i) The full range of different types of views j) Views of other wind farms (on and offshore) k) Aerial views of offshore wind farms, where they lie on a principal low-level flightpath approach to a major terminus	SNH & JNCC
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 41)	All viewpoint information should be presented in a table and cross-referred to a ZTV map on which all of the numbered viewpoints are plotted.	SNH & JNCC
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 42)	In addition to representative viewpoints, it is important to consider viewpoints that are already important vantage points within the landscape, for example local visitor attractions	SNH & JNCC
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 42)	The viewpoint list should shorten as VIA progresses, focusing on the viewpoints which best illustrate the most significant impacts, or which best aid wind farm design. however, further or alternative viewpoints may need to be considered throughout the VIA process.	SNH & JNCC
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 43)	Any (cumulative) SLVIA report should provide the following information to reference each visualisation: the precise location of the viewpoint (including 12 figure OS grid reference and a brief description), its orientation to and distance from the proposed development, the viewpoint height, nature of view (width of view in degrees and bearing of key foci within view) and conditions of assessment – including date, time of day, weather conditions and visual range. It is helpful if this information is presented alongside each visualisation including a small insert map (based on a 1:50,000 OS base map) to show the viewpoint's detailed location and direction.	SNH & JNCC

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		The characteristics visible from each viewpoint that are sensitive to wind farm development should be described and assessed, particularly in relation to the changes the development would cause. Factors such as season, weather, air clarity, movement, orientation to prevailing winds, elevation of the wind farm in relation to the viewer, and any screening elements may be relevant. The design and layout of the turbines and other components of the wind farm, as it would appear from each viewpoint, should also be described and assessed. Details of the types of receptors, and an assessment of their sensitivity, should be included.	SNH & JNCC SNH & JNCC
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 43)		
Seascape, Landscape and Visual Character	Annex 1 Section 6 (page 43)		
Requirement for Appropriate Assessment	Annex 1 (Annex C of response) (page 44)	For information in HRA see pages Annex C and D to the SNH JNCC response 44 to 57 this details which sites need to be considered and which species JNCC (with Countryside Council for Wales and Natural England) have produced guidance (the protection of marine European Protected Species from injury and disturbance: Guidance for the marine area in England and Wales and the UK offshore marine area, JNCC, CCW and Natural England, 2010) which is currently in draft form awaiting approval, and outlines how developers, regulators and courts assess: a) the likelihood of an offence being committed; b) how this can be avoided; and c) if it can't be avoided, the conditions under which If there is a risk of injury or disturbance of EPS that cannot be removed or sufficiently reduced by using alternatives and/or mitigation measures, then the activity may still be able to go ahead under licence, but this should be a last resort.	SNH & JNCC
EPS	Annex 1 (Annex E of SNH/ JNCC response (Page 58)	It is expected that many activities at sea will not require a licence to exempt them from regulations 41(1)(a) and (b) and 39(1)(a) and (b) of the HR and OMR, respectively, since their potential for injury and/or disturbance can be effectively mitigated or because the characteristics of the disturbance will fall below the threshold of an offence.	SNH & JNCC
EPS	Annex 1 (Annex E of SNH/ JNCC response (Page 58)	We would encourage you to consider producing a single ES which covers all aspects of the proposed development. This will enable a full assessment of the potential effects of the development as a whole, rather than assessing certain details of the development individually.	SNH & JNCC
Approach to EIA	Page 62	The ES should contain plans giving detailed information on the site layout, including details of all onshore and offshore components such as access tracks, buildings, cabling and marine devices.	SEPA
Project description	Page 62	The Scoping Report does not place sufficient emphasis on effects at the site level, as here they are represented as minor, presumably due to the scale of effects decreasing at a smaller spatial scale (Table 4.2 in the scoping)	SEPA
Approach to EIA	Annex 1 (page 21)	There may be a need to address the cumulative effects of devices/arrays on coastal processes depending upon array density and location with respect to existing renewable and coastal developments	SNH & JNCC
Coastal Processes	Page 62	For information the latest classification results at http://www.sepa.org.uk/water/river_basin_planning.aspx . Information on the current status of Scotland's surface waters can be found on the water body data sheets on the the River Basin Management Planning (RBMP) Web Mapping Application available on SEPA's website at (http://213.120.228.231/rbmp/)	SEPA
Water and Sediment Quality	Page 63	To allow for the RBMP classification to be updated and the assessment of cumulative impacts within the Deil's Head to Carnoustie, and Scurdie Ness to Deil's Head water bodies footprint information for the cable corridor and transition pit should be provided in the ES.	SEPA
Water and Sediment Quality	Page 63	There is a need for a location / sensitivity specific judgement of significance, relative to the extent of the feature.	SEPA
Approach to EIA	Annex 1 (page 21)	In order to meet the objectives of the Water Framework Directive, the on shore components of the development should be designed wherever possible to avoid engineering activities in the water environment. Engineering activities such as culverts, bridges, watercourse diversions, bank modifications or dams avoided wherever possible	SNH & JNCC
Water and Sediment Quality	Page 63	Culverts are a frequent cause of local flooding, particularly if the design or maintenance is inadequate	SEPA
Water and Sediment Quality	Page 63	A site survey of existing water features and a map of the location of all proposed engineering activities in the water environment should be included in the ES or planning submission. A systematic table detailing the justification for the activity and how any adverse impact will be mitigated should also be included. The table should be accompanied by a photograph of each affected waterbody along with its dimensions.	SEPA
Water and Sediment Quality	Page 64	Sensitive water uses, such as bathing waters and shellfish growing waters, and associated potential impacts should be assessed. The proximity to existing discharges and designated areas (ie estuarine abstractions and cooling water discharges), should also be assessed.	SEPA
Water and Sediment Quality	Page 64	it may be necessary to submit a detailed description of the actions to be taken to prevent the introduction of non-native marine species from ballast water transfers or hull-fouling. Further guidance that is based on IMO (www.imo.org/index.htm) and OSPAR guidance is available at http://www.mcga.gov.uk/c4mca/mgn_363.pdf . It might be useful for the developer to refer to the joint SOAEFD, DoT/MSA and SNH collaborative project which sampled ballast water docking at Scottish Ports (Macdonald, E. and Davidson, R. 1997. Ballast water project - final report, spring 1997. Fisheries Research Services Report No. 3/97.	SEPA
Marine Intertidal and Terrestrial Ecology	Page 64	All submissions should include information on likely timing and duration of the project, possible long-term locational and/or operational impacts and short-term construction impacts.	SEPA
Marine Intertidal and Terrestrial Ecology	Page 65		
Marine Intertidal and Terrestrial Ecology	Page 65		

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Air Quality	Page 65	Excavation works, particularly through drilling and blasting, may cause nuisance to adjacent land users due to the generation of dust and noise. Comments from the local authority environmental health officers should be sought on the potential nuisance to adjacent land users during the construction and decommissioning phases of the project.	SEPA
Approach to EIA	Page 65	Systematically identify all aspects of site work that might impact upon the environment, potential pollution risks associated with the proposals and identify the principles of preventative measures and mitigation. This will form a Project Environmental Management Process (PEMP). A draft Schedule of Mitigation should be produced as part of this process. This should cover all the mitigation measures identified to avoid or minimise environmental effects.	SEPA
Approach to EIA	Page 65	The Schedule of Mitigation should include a timetable of works that takes into account all environmental sensitivities, such as fish spawning, which have been raised by SEPA, SNH or other stakeholders.	SEPA
General	Page 65	Timing should also be planned to avoid construction of roads, dewatering of pits and other potentially polluting activities during periods of high rainfall. We can provide useful information such as rainfall and hydrological data through our Access to Information Team.	SEPA
General	Page 65	A Construction Environmental Management Document (CEMD) is a key management tool to implement the Schedule of Mitigation. We recommend that the principles of the CEMD are set out in the ES drawing together and outlining all the environmental constraints and commitments, proposed pollution prevention measures and mitigation as identified in the ES.	SEPA
Marine Intertidal and Terrestrial Ecology	Page 65	A baseline assessment of existing intertidal and subtidal habitats and species should be submitted as part of the ES. More details can be found at www.ukbap.org.uk/UKPlans.aspx?ID=35 .	SEPA
Marine Intertidal and Terrestrial Ecology	Page 65	Please note that living populations of Native Oysters (<i>Ostrea edulis</i>) have been found recently in the Firth of Forth (http://www.marlin.ac.uk/speciesfullreview.php?speciesID=3997). There is a need to ensure that this UKBAP species aren't present where works are proposed in the marine environment.	SEPA
Fish and Shellfish Resources	Page 65	Please note that living populations of Native Oysters (<i>Ostrea edulis</i>) have been found recently in the Firth of Forth (http://www.marlin.ac.uk/speciesfullreview.php?speciesID=3997). There is a need to ensure that this UKBAP species aren't present where works are proposed in the marine environment.	SEPA
Marine Intertidal and Terrestrial Ecology	Page 65	Information be submitted detailing how the development will contribute to sustainable development. Opportunities to enhance marine habitats in line with Water Framework Directive and The Nature Conservation (Scotland) Act 2004 objectives and Scottish Planning Policy guidance should be explored	SEPA
Marine Intertidal and Terrestrial Ecology	Page 65	During the construction phase, it is important that good working practice is adopted and that habitat damage is kept to a minimum and within defined acceptable parameters. These should be controlled through an environmental management plan	SEPA
Water and Sediment Quality	Page 65	For marine and transitional Special Areas of Conservation (SAC) and Special Protected Areas (SPA), these are WFD Protected Areas. Therefore, their objectives are also RBMP objectives.	SEPA
Coastal Processes	Page 65	The baseline assessment should identify the following features and processes in the environment: <ul style="list-style-type: none"> • Sediments (e.g. composition, contaminants and particle size); • Hydrodynamics (waves and tidal flows); • Sedimentary environment (e.g. sediment re-suspension, sediment transport pathways, patterns and rates and sediment deposition); • Sedimentary structures (e.g. protected banks); • Typical suspended sediment concentrations. 	SEPA
Approach to EIA	Annex 1 (page 21)	Ensure that „magnitude“ includes consideration of the other criteria listed in 4.3.1; i.e. temporal extent, reversibility, etc; and for clarity it would be appropriate to separate environmental effects in to the development phases (construction, operation and decommissioning).	SNH & JNCC
Cumulative impacts assessment	Page 65	When assessing in-combination and cumulative impacts consider the following projects: The Dundee Biomass project. This project is led by Forth Energy Limited Dundee Coastal Study. The project is led by Dundee City Council. Mott MacDonald	SEPA
Requirement for Appropriate Assessment	Page 69	Projects may affect designated sites that are a considerable distance away and will require a Habitats Regulations Appraisal.	RSPB
Cumulative impacts assessment	Page 69	The Methil Onshore wind farm should also be included for consideration in the cumulative and in combination impact assessment. In addition, any onshore wind farms in the vicinity, either consented or proposed, should be included.	RSPB
Nature Conservation Designations	Page 69	The Firth of Forth Ramsar should also be listed as an SPA	RSPB
Nature Conservation Designations	Page 69	Some goose roost SPAs such as Slammanan Plateau (bean goose) and the Upper Solway Flats and Marshes (Svalbard barnacle goose) should also be included due to potential impacts on passage species.	
Ornithology	Page 70	We consider that further aerial surveys would be of value, particularly as the use of boat-based surveys to provide baseline data for a zone of this size may prove impractical and appear likely to run risk of incomplete surveys.	RSPB

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Ornithology	Page 70	The use of radar should also be considered. Radar studies should be targeted and cover relevant time periods to allow assessment of impacts on passage seabirds and migratory waders, ducks and geese etc. There is a potential role for Doppler radar which might possibly give an indication of size and wing beat frequency, thus perhaps enabling more specific identification to families/ even species	RSPB
Ornithology	Page 70	Mitigation could include: design of the wind farm layout, turbine height and/or operational limitations such as shut-down periods, colouring of blades	RSPB
Ornithology	Page 70	The potential draw of any lighted structures to birds should be considered. Consideration should be given to the outputs of any research that may help to identify suitable mitigation, which may become available during preparation of the ES.	RSPB
General	Page 70	RSPB Scotland would wish to see details of the full carbon balance budget for the proposed development detailed in the ES. This may include, for example, the amount of carbon required for equipment manufacturing and any CO2 which may escape from the seabed.	RSPB
Radar, Aviation and Ministry of Defence (MOD)	Page 71	Unlike many similar developments the location of the Firth of Forth development is such that I do not believe there would be a significant impact upon helicopter operations associated with existing offshore platforms.	CAA
Radar, Aviation and Ministry of Defence (MOD)	Page 71	There are no existing promulgated helicopter routes local to the area in question.	CAA
Radar, Aviation and Ministry of Defence (MOD)	Page 71	The relative perspectives of both the Ministry of Defence (MoD) and NATS should be established and any related concerns addressed.	CAA
Radar, Aviation and Ministry of Defence (MOD)	Page 71	Some or all of the wind turbines will need to be equipped with aviation warning lighting. The legal requirement for aviation obstruction lighting on offshore wind turbines is formally documented within the UK Air Navigation Order 2009 (Article 220 refers), http://www.caa.co.uk/docs/33/CAP393.pdf (p158)	CAA
Radar, Aviation and Ministry of Defence (MOD)	Page 71	International aviation regulatory documentation requires that the rotor blades, nacelle and upper 2/3 of the supporting mast of wind turbines that are deemed to be an aviation obstruction should be painted white, unless otherwise indicated by an aeronautical study.	CAA
Radar, Aviation and Ministry of Defence (MOD)	Page 71	International aviation regulatory documentation requires that the rotor blades, nacelle and upper 2/3 of the supporting mast of wind turbines that are deemed to be an aviation obstruction should be painted white, unless otherwise indicated by an aeronautical study.	CAA
Radar, Aviation and Ministry of Defence (MOD)	Page 72	There is a requirement for the windfarm to be charted for aviation purposes. In addition to the requirements of Scottish Government Circular 2/2003, it is recommended that the Defence Geographic Centre be kept fully apprised of the windfarm's development	CAA
Radar, Aviation and Ministry of Defence (MOD)	Page 72	Consultation with the CAA should be conducted such that charts can be updated in a timely fashion and the turbines can be collectively promulgated to the aviation community as aviation obstacles. The appropriate CAA point of contact is Mr Mark Smailes	CAA
Radar, Aviation and Ministry of Defence (MOD)	Page 73	Wind turbines can impact upon PSR, Voice communications and navigational aids. There is predicted to be an impact on our CNS infrastructure and thus our operations	NERL
Radar, Aviation and Ministry of Defence (MOD)	Page 73	NERL offer a technical and operational assessment service which could be commissioned by the developer. In order to complete these assessments, NERL would require further details of the proposed development.	NERL
Radar, Aviation and Ministry of Defence (MOD)	Page 73	NERL wish to engage with the developer to ascertain the extent of the potential impact of the proposed wind farm. NERL are able to offer a service which can be tailored to meet the developer's needs	NERL (NATS En Route)
Shipping and Navigation	Page 74	A Navigational Risk Assessment will need to be submitted in accordance with MGN 371 (and 372) and the OTI/OFT/MCA Methodology for Assessing Windfarms Particular attention should be paid to cabling routes and burial depth and, subject to the traffic volumes, an anchor penetration study may be necessary Reference should be made to any Marine Environmental High Risk Areas (MEHRAS) established on adjacent coastlines. Developers need to be aware that the radar effects of OWF on ship's radars are an important issue and subject to further discussion within the radar sub group of NOREL The radar effects will need to be assessed on a site specific basis taking into consideration previous reports on the subject available on the MCA website at:	Maritime & Coastguard Agency
Shipping and Navigation	Page 74	http://www.mcga.gov.uk/c4mca/mcga07-home/shipsandcargoes/mcgashipsregsandguidance/mcga-windfarms/offshorerenewable-energy_installations.htm .	Maritime & Coastguard Agency
Shipping and Navigation	Page 74	We would advise that any formal recommendations for lighting and marking will be given through the Coast Protection Act 1949 – Section 34 process. We would require that the CPA application would include a Navigational Risk Assessment in accordance with the requirement of MCA Marine Guidance Notice 371	Northern Lighthouse Board
Shipping and Navigation	Page 74	Encourage a workshop approach to the development of this NRA	Northern Lighthouse Board
Shipping and Navigation	Page 74	It is important to understand the departure and arrival ports of transiting vessels as any deviation around this development or accumulation of developments may have an impact on both shipping and port operations. We would suggest routes 2, 7 and 9 should be preserved.	Northern Lighthouse Board
Shipping and Navigation	Page 74	We would suggest routes 2, 7 and 9 should be preserved.	Northern Lighthouse Board
Shipping and Navigation	Page 74	The Statutory Sanction of the Commissioners of Northern Lighthouses must be sought to deploy, exhibit and subsequently remove any proposed navigational lighting or buoy stations required within any conditions of the consent to establish the demonstrator device or for any preparatory work.	Northern Lighthouse Board

Seagreen Phase 1 Offshore Scoping Opinion - Summary of Key Responses

Radar, Aviation and Ministry of Defence (MOD)	Page 80	The MoD may object due to the possible impacts to Radar and their ATC watchman radars impacts could include the desensitisation of radar in the vicinity of the turbines, and the creation of "false" aircraft returns which Air Traffic Controllers must treat as real.	Ministry of Defence
Radar, Aviation and Ministry of Defence (MOD)	Page 80	Impacts to the Air Defence radar at Buchan and Brizlee Wood may be unacceptable	Ministry of Defence
Radar, Aviation and Ministry of Defence (MOD)	Page 80	The turbines will be within Leuchars' training airspace and will unacceptably affect military activities. These are areas made available for Military Operational Low Flying Training. Within Tactical Training Areas, military fast jets and Hercules aircraft may operate down to a height of 100ft separation distance from the ground and other obstacles. The proliferation of obstacles within this area, therefore, is not only a safety hazard but also severely impacts on the utilisation of the area for this essential Low Flying Training.	Ministry of Defence
Fish and Shellfish Resources	Page 82	Important salmon populations in the vicinity of the site include the Eskes, Tay, Forth and Tweed	Association of Salmon Fishery Boards
Fish and Shellfish Resources	Page 82	The proposed developments should be conducted in full consultation with the local District Salmon Fishery Boards and Fishery Trusts. The Trusts may have a particular interest in assessing potential impacts and monitoring the interactions between fish and developments such as these.	Association of Salmon Fishery Boards
Fish and Shellfish Resources	Page 82	Effects arising from construction <ul style="list-style-type: none"> • What effect would the construction processes have on fish? • Physiological and behavioural effects of underwater noise and vibration resulting from construction operations • Direct effects on fish of water quality changes through suspension of sediment in the water column disturbed during construction • Indirect effects of water quality changes through effects on food sources available to salmon and sea trout • Will the effects of noise and mechanical disruption be assessed prior to construction and would on-going monitoring be put in place if the project is approved and completed? 	Association of Salmon Fishery Boards
Fish and Shellfish Resources	Page 83	Operational Effects <ul style="list-style-type: none"> • Physiological and behavioural effects of underwater noise and vibration resulting from turbine operation • Are there likely to be electrical or magnetic fields associated with the installation and operation and will these have a discernable effect on salmon? • Indirect effects on fish of permanent changes in habitat • Whilst salmon use the area primarily as a migration route and are unlikely to remain there for lengthy periods, the habits of sea trout are rather different and this species may use the area more extensively as a feeding area before migration into freshwater systems. Accordingly there may be a risk of more prolonged interaction with sea trout in relation to the site. 	Association of Salmon Fishery Boards
Shipping and Navigation	Page 83	The RYA would expect that recreational boating should be considered under Shipping and Navigation (including the NRA) as well as in Tourism and Recreation.	Royal Yacht Association (RYA)
Approach to EIA	Page 83	The RYA would expect that recreational boating should be considered under Shipping and Navigation (including the NRA) as well as in Tourism and Recreation.	Royal Yacht Association (RYA)
Tourism and Recreation	page 84	We are concerned by the suggestion of 'Safety Zones' and would welcome the opportunity to discuss the implications of this with you further. the creation of safety zones around the individual operational wind turbines that exclude small craft are unlikely to increase their navigational safety and would therefore be unnecessary, impracticable and disproportionate	Royal Yacht Association (RYA)
Tourism and Recreation	page 84	Any safety zones should be supported by regular Notices to Mariners informing all sea users of the location and type of works being undertaken.	Royal Yacht Association (RYA)

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		<p>The RYA attached their position statement on offshore wind farms (which is not included with the marine Scotland scoping opinion) but to summarise there concerns relate to</p> <p>1. Navigational safety</p> <ul style="list-style-type: none"> • Collision risk • Risk management and emergency response • Marking and lighting • Effect on small craft navigational and communication equipment • Weather <p>2. Location</p> <ul style="list-style-type: none"> • Loss of cruising routes • Squeeze into commercial routes • Effect on sailing and racing areas • Cumulative effects • Visual intrusion and noise <p>3. End of life</p> <ul style="list-style-type: none"> • Dereliction • Decommissioning 	
Tourism and Recreation	page 85	4. Consultation	Royal Yacht Association (RYA)
Shipping and Navigation	Page 86	The application must include a full Navigation Risk Assessment in line with MGN 371	Ports and Harbours
Archaeology and Cultural Heritage	Page 86	Recommend that potential impact to undesignated wrecks should be assessed with appropriate involvement of archaeological expertise as these could be subject to potential direct impacts	Historic Scotland
Archaeology and Cultural Heritage	Page 86	Relevant Council Archaeology Services should be consulted	Historic Scotland
Archaeology and Cultural Heritage	Page 86	indirect impacts to historic assets on the seabed or at the coast edge within the proposed development area and possibly beyond which may be caused by alteration to tidal currents and sedimentary regimes, and by changes to the chemical balance of the water and seabed sediments, should be assessed.	Historic Scotland
Archaeology and Cultural Heritage	Page 86	encourage archaeological analysis of the geological borehole data which we understand is to be gathered for the study area.	Historic Scotland
Archaeology and Cultural Heritage	Page 87	Results of all archaeological assessments could be archived through the Royal Commission on the Ancient and Historical Monuments of Scotland.	Historic Scotland
Archaeology and Cultural Heritage	Page 87	A cumulative impact assessment should be undertaken and relevant industry guidance on this matter; Cowrie 2008, 'Guidance for assessment of Cumulative Impacts on the Historic Environment from Offshore Renewable Energy'.	Historic Scotland
Archaeology and Cultural Heritage	Page 88	Please refer to the advice contained in our technical guidance note on setting. This documents is available at: http://www.historic-scotland.gov.uk/managing-change-consultation-setting.pdf	Historic Scotland
Traffic and Access	Page 88	Require further information with regards to traffic flows to provide detailed comments but having reviewed the report and the attached plans, we would provide the following comments.	Transport Scotland
Traffic and Access	Page 88	The Environmental Statement should provide information relating to the preferred route options for the movement of heavy loads and any anticipated construction staff movements via the trunk road network during the construction period.	Transport Scotland
Traffic and Access	Page 88	information must be supplied identifying potential environmental impacts on the trunk road once the development is operational, together with appropriate mitigation measures.	Transport Scotland
Traffic and Access	Page 88 and Page 41 in initial response	Potential trunk road related environmental impacts such as noise, air quality, safety etc should be assessed. In the case of the Environmental Statement, the methods adopted to assess the likely traffic and transportation impacts on traffic flows and transportation infrastructure, should comprise:	Transport Scotland
Traffic and Access	Page 89 and Page 41 in initial response	<ul style="list-style-type: none"> • Determination of the baseline traffic and transportation conditions, and the sensitivity of the site and existence of any receptors likely to be affected in proximity of the trunk road network; • Review of the development proposals to determine the predicted construction and operational requirements; and • Assessment of the significance of predicted impacts from these transport requirements, taking into account impact magnitude (before and after mitigation) and baseline environmental sensitivity. 	Transport Scotland
Airborne Noise and Vibration	Page 89	Operational traffic noise and construction traffic noise should be assessed by considering the increase in traffic flows and following the principles of CRTN. Referee to the Design Manual for Roads and Bridges (DMRB) Vol.11 and PAN 56	Transport Scotland

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Traffic and Access	Page 89 and Page 41 in initial response	Where a significant change in road traffic characteristics has been identified as a result of the proposed development, changes in air quality at a worst case scenario sensitive receptor adjacent to the trunk road will require further assessment. Refer to the Environmental Protection UK Development Control: Planning for Air Quality publication. (significant traffic change is: 5% change on a roads with more than 10,000 AADT, a road alignment change, a change of 200 AADT of HDVs a daily average speed change of 10 km/hr or peak hour speed change of 20 km/hr or more)	Transport Scotland
Air Quality	Page 89	Where a significant change in road traffic characteristics has been identified as a result of the proposed development, changes in air quality at a worst case scenario sensitive receptor adjacent to the trunk road will require further assessment. Refer to the Environmental Protection UK Development Control: Planning for Air Quality publication. (significant traffic change is: 5% change on a roads with more than 10,000 AADT, a road alignment change, a change of 200 AADT of HDVs a daily average speed change of 10 km/hr or peak hour speed change of 20 km/hr or more)	Transport Scotland
Tourism and Recreation General	Page 90 Page 91	Have potential concerns with the disruption to navigation of small craft during construction & to any possible landfall infrastructure if there was potential for that to interfere with navigation, tidal flows or access to beaches. For those reasons we would welcome being kept informed of progress with this proposed wind farm & on the list of stakeholders wishing to participate in future consultations. Within the EIA all useful sources of existing surveys and studies need to be specified.	Scotland Canoe Association Marine Scotland
Fish and Shellfish Resources	Page 91	This area is likely to contain sandeels, which are a primary food of the seabirds in the area, therefore, an assessment of the impact of this development on the availability and accessibility of sandeels, to the seabirds, should be conducted	Marine Scotland
Cumulative impacts assessment	Page 91	This area is likely to contain sandeels, which are a primary food of the seabirds in the area, therefore, an assessment of the impact of this development on the availability and accessibility of sandeels, to the seabirds, should be conducted	Marine Scotland
Ornithology	Page 92	Species of note in the area are cetaceans, otters and birds listed in Annex 1, Schedule 1 and UKBAP, which should be included in surveys to establish absence/presence in the area and the possible degree of disturbance and potential impacts, either permanent or temporary.	Marine Scotland
Marine Mammals	Page 92	Species of note in the area are cetaceans, otters and birds listed in Annex 1, Schedule 1 and UKBAP, which should be included in surveys to establish absence/presence in the area and the possible degree of disturbance and potential impacts, either permanent or temporary.	Marine Scotland
Marine Intertidal and Terrestrial Ecology	Page 92	The intertidal survey should include an assessment of the likely disturbance to breeding and feeding birds and otters. It should also identify areas that are of particular importance to these species, and therefore should be avoided, if possible, by the development works. The sub-tidal survey should also include a visual element as specified above, to identify possible habitats or species of conservation importance.	Marine Scotland
Project description	Page 92	The Environmental Statement should provide enough information for the developer to be able to recommend sites for the cable landfall and a preferred route (s) for the cable that avoid areas within SSSIs and SACs; and/or that would cause unacceptable levels of negative interactions with otters, birds and important habitats.	Marine Scotland
Marine Mammals	Page 92	Details of any noise pollution due to construction and its possible effects on cetaceans/pinnipeds/fish will also be required. Noise assessments should take into consideration background noise, including vibration produced from ships" engines, piling, hammers and auguring operations during the construction of turbine foundations.	Marine Scotland
Fish and Shellfish Resources	Page 92	Details of any noise pollution due to construction and its possible effects on cetaceans/pinnipeds/fish will also be required. Noise assessments should take into consideration background noise, including vibration produced from ships" engines, piling, hammers and auguring operations during the construction of turbine foundations.	Marine Scotland
Fish and Shellfish Resources	Page 92	The proposed development will need to consider potential impacts on migratory fish including salmon, sea trout, lamprey and sandeels during all phases of the project.	Marine Scotland
Fish and Shellfish Resources	Page 92	In cases where there is uncertainty over potential impacts it may be necessary for the developer to implement a monitoring strategy to assess the impacts on salmonid fish populations	Marine Scotland
Fish and Shellfish Resources	Page 93	Although none of the species identified (in the scoping report) are unique to the area, the development could have a significant impact either during construction or from the physical presence i.e. noise and vibration, loss of habitat or EMFs during operation.	Marine Scotland
Fish and Shellfish Resources	Page 93	The fisheries sensitivity maps were compiled from a variety of sources, in some cases historical data and although they are a useful source of information, they are only indicative.	Marine Scotland
Fish and Shellfish Resources	Page 93	It is likely that for several species, particularly cod and sandeels, there is more recent and/or site specific information available.	Marine Scotland
Fish and Shellfish Resources	Page 93	Species ecology and migratory behaviour should be considered for example, nerring spawn on gravel beds and eggs will be very sensitive to sediment cover at this time. Sprat will migrate into the Firth of Forth in winter but are more widely dispersed within the North Sea at other times. The desk studies proposed should inform a more detailed appraisal of species in the area and any survey work undertaken should be designed to cover the range of sensitivities for species present in the area, considering whether they are present for either part or	Marine Scotland

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Fish and Shellfish Resources	Page 93	We note that the scoping report identifies considerable uncertainty associated with export cable routes and the significance of EMF impacts (page 67). Given the potential for cumulative and in combination effects in the area, we suggest that these should remain in scope until such times as more definitive studies have been carried out.	Marine Scotland
Commercial Fisheries	Page 94	A more up to date analysis could be derived using VMS and landings data for vessels greater than 15m. However it is unclear whether these data would be available for EIA purposes. Also as noted in the report, this would not capture the detailed distribution of fishing activity by the smaller (under 15 m) vessels which fish in the area, particularly in ICES rectangle 4ZE7. Shellfish fisheries are currently the most valuable fisheries in the area and a large proportion of the landings are taken by smaller boats.	Marine Scotland
Commercial Fisheries	Page 94	Cumulative and in-combination assessment should address the extent of temporary or permanent loss of access to fishing grounds and possible effects of displaced fishing effort.	Marine Scotland
Commercial Fisheries	Page 94	Displaced effort may have direct economic effects, associated with increased steaming time, vessel costs and reduced catches if vessels have to compete with others in limited space (although in this case it would seem alternative fishing opportunities for small, locally based boats to displace elsewhere are likely to be limited). highlight two additional sources of information - ABPMer have prepared a report on the value of fisheries COWRIE FISHVALUE-07-08 and Daniel Dunstone published the Development of spatial information layers for commercial fishing and shellfishing in UK waters to support strategic siting of offshore wind farms on the 5th March 2009 on the Cowrie website.	Marine Scotland
Commercial Fisheries	Page 94	Cumulative and in combination effects should make the link between natural fish ecology and commercial fisheries. As indicated above, cumulative impacts could be considerable and the possible effects on coastal (fishing) communities might warrant a mention in the socio-economic section.	Marine Scotland
Cumulative impacts assessment	Page 95	The cumulative and in-combination assessment of impacts on the marine mammals and seabirds of the European designated sites will be an important consideration within the EIA process.	Marine Scotland
Requirement for Appropriate Assessment	Page 95	Marine Scotland are currently considering a possible strategy for assessing cumulative and in combination effects and will return to this matter as soon as possible	Marine Scotland
Cumulative impacts assessment	Page 95	refer back to the „ZAP“ which presents greater detail on the gaps in marine mammal knowledge and actions which are necessary to enable an accurate EIA.	Marine Scotland
Marine Mammals	Page 95	Scoping comments in relation to information requirements on diadromous fish of freshwater fisheries interest See Appendix A of the document	Marine Scotland
Fish and Shellfish Resources	Page 97	No objection would be raised by either Edinburgh or Aberdeen Airport. However it cannot be assumed that any response to consultation under Planning Circular 02/2003 will necessarily coincide with the informal advice given now.	BAA Airports Limited
Radar, Aviation and Ministry of Defence (MOD)	Initial responses page 2	Impacts on operational fishing fleets from Fife's East Neuk ports should be considered, particularly Pittenweem. The report does not appear to make reference to the East Neuk fishing industry	Fife Council Development services
Commercial Fisheries	Initial responses page 4	Anstruther and Tayport harbours have in recent years developed as leisure sailing ports with pontoons and other onshore facilities. Other East Neuk ports such as Elie are also popular sailing bases	Fife Council Development services
Tourism and Recreation	Initial responses page 5	opportunity to comment on the selection of view points within East Fife would be welcomed at a later stage. Prominent view points within St Andrews need to be considered as well as points in the Fife Ness Area and higher topography points within Fife where cumulative issues with onsite installations may be relevant	Fife Council Development services
Seascape, Landscape and Visual Character	Initial responses page 5	Impact on the Port of Rosyth in terms of possible future development of European shipping routes should also be considered as this is a strategic consideration for Scotland and Fife	Fife Council Development services
Shipping and Navigation	Initial responses page 5	Any chapter relating to construction and maintenance base site selection must discuss the Ports of Methil and Burntisland as options	Fife Council Development services
Project description	Initial responses page 6		
Seagreen	Initial responses page 6	Fishermen (UK,European and nomadic) should be engaged in face-to-face meetings held at multiple locations. A number of contacts have been provided in this response that are not covered by Seagreen's contacts list.	Forth Estuary Forum
Fish and Shellfish Resources	Initial responses page 6	Tourism officers of local councils, SEPA and Visit Scotland should consult with freshwater fishery organisations regarding salmon that may traverse the site.	Forth Estuary Forum
Fish and Shellfish Resources	Initial responses page 6	The importance of the proposed site for Sand eel spawning will have to be addressed.	Forth Estuary Forum
Commercial Fisheries	Initial responses page 6	The importance of the proposed site for Sand eel spawning will have to be addressed.	Forth Estuary Forum
Shipping and Navigation	Initial responses page 6	High quality, time sensitive navigational data will need to be collected, rather than an average over several years of existing data (Marine Scotland Compliance will have data)	Forth Estuary Forum
Fish and Shellfish Resources	Initial responses page 6	More info on elasmobranchs may be required and the effect of EMF on these as well as on fish and shellfish populations	Forth Estuary Forum
Shipping and Navigation	Initial responses page 6	Note: Exposed clay from trenching can be a safety hazard for small boat trawlers.	Forth Estuary Forum
Seascape, Landscape and Visual Character	Initial responses page 6	When it comes to onshore works, it will be important to collaborate with other developers to ensure methodologies of assessment are the same (particularly with regard to cumulative visual impact)	Forth Estuary Forum
Cumulative impacts assessment	Initial responses page 6	When it comes to onshore works, it will be important to collaborate with other developers to ensure methodologies of assessment are the same (particularly with regard to cumulative visual impact)	Forth Estuary Forum

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Shipping and Navigation	Initial responses page 7	Seasonal activity at ports should be taken into account.	Forth Estuary Forum
Commercial Fisheries	Initial responses page 7	Note: <10m fishing boats are not equipped with radar.	Forth Estuary Forum
Ornithology	Initial responses page 7	Fife Ornithology Club should be contacted for info on Fife geese.	Forth Estuary Forum
Ornithology	Initial responses page 7	It may be pertinent to check the migration areas for Svalbard Geese.	Forth Estuary Forum
Commercial Fisheries	Initial responses page 7	If there was to be a proven economic impact on the fishery would there be a way to help fisherman diversify into new fisheries? If certain areas are out of bounds could other areas be re-opened instead? Will it still be possible to creel in areas with buried cables? Where will gravel for back-filling areas come from? Note: Generic questions could also be asked by the fishermen	Forth Estuary Forum
Shipping and Navigation	Initial responses page 7	The development should take into account the impact on navigation to their ports both on the Forth and the Tay. Such concerns should also include the deployment of construction vessels and any ongoing maintenance craft.	Forth Estuary Forum
Approach to EIA	Page 62	Background information that will help inform the ES process is available from European Marine Energy Centre (EMEC). The EMEC has produced guidelines to assist developers in considering the range and scale of impacts that may result from the testing of devices. These guidelines are available at www.emec.org.uk/index.asp .	SEPA
Shipping and Navigation	Initial responses page 7	Forth Ports will be interested in seeing the results of the navigation study discussed at the stakeholder seminar and are more than willing to assist in this study	Forth Ports
Shipping and Navigation	Initial responses page 7	Forth Ports are fully supportive of the windfarm development and are available to contribute to the planning and construction process both from a navigation point of view and the utilisation of port facilities.	Forth Ports
Seagreen	Initial responses page 7	Forth Ports are fully supportive of the windfarm development and are available to contribute to the planning and construction process both from a navigation point of view and the utilisation of port facilities.	Forth Ports
Project description	Initial responses page 7	The ES should not include measures which would conflict with the requirements of the Health and Safety at Work etc. Act 1974 and its relevant statutory provisions.	Health & Safety Executive
Radar, Aviation and Ministry of Defence (MOD)	Initial responses page 8	There may be some effect on the Leuchars radar service to Dundee Airport.	Highlands and Islands Airports
Radar, Aviation and Ministry of Defence (MOD)	Initial responses page 8	Consultation and technical studies will be required to fully understand the potential effects on air traffic and radar systems.	Highlands and Islands Airports
Radar, Aviation and Ministry of Defence (MOD)	Initial responses page 22	JRC does not foresee any potential problems based on known interference scenarios and the data provided by Seagreen. However, if any details of the windfarm change, particularly the disposition or scale of any turbines, it will be necessary to re-evaluate the proposal. This clearance pertains only to the date of its issue as the use of the spectrum is dynamic, the use of the band is changing on an ongoing basis. Seagreen is advised to seek re-coordination prior to submitting a planning application, as this will negate the possibility of an objection being raised at that time as a consequence of any links assessment between the enquiry and finalisation of the project. The following should be contacted for scanning telemetry systems operating in the 457-458 MHz paired with 463-464 MHz band: • Atkins Ltd- windfarms@atkinsglobal.com • Join Radio Company- peter.swan@jrc.co.uk	Joint Radio Company
Radar, Aviation and Ministry of Defence (MOD)	Initial responses page 27	For self-coordinated links operating in the 64-66GHz, 71-76GHz and 81-86GHz bands a list of current links can be found at http://www.ofcom.org.uk/radiocomms/ifi/licensing/classes/fixed/	
Radar, Aviation and Ministry of Defence (MOD)	Initial responses page 27	OfCOM do not forward enquiries to the BBC. Regarding assessment with respect to TV reception, the BBC has an online tool http://www.bbc.co.uk/reception/info/windfarm_tool.html	Ofcom
Shipping and Navigation	Initial responses page 28	The RNLI have forwarded the scoping document to the Inspector of Lifeboats in Scotland who will brief the lifeboat stations whose areas of coverage are affected by the proposals. This may generate further comment from RNLI volunteers	RNLI
Shipping and Navigation	Initial responses page 28	The whole site area lies within the RNLI's coverage (100 nautical miles from the UK coast)	RNLI
Tourism and Recreation	Initial responses page 28	The site area is transited by larger leisure craft and 'these do not appear to be covered in the scoping document	RNLI
Shipping and Navigation	Initial responses page 28	The site area is transited by larger leisure craft and 'these do not appear to be covered in the scoping document	RNLI
Shipping and Navigation	Initial responses page 28	The RNLI would like to raise concern over increased potential for casualties due to the impacts on the major shipping routes and more particularly on those areas visited by the commercial fishing industry	RNLI
Commercial Fisheries	Initial responses page 29	The RNLI would like to raise concern over increased potential for casualties due to the impacts on the major shipping routes and more particularly on those areas visited by the commercial fishing industry	RNLI
Shipping and Navigation	Initial responses page 29	RNLI's services should not be counted when preparing safety management plans for the construction, operation or decommissioning of the windfarm	RNLI

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Fish and Shellfish Resources	Initial responses page 31	SANA have concerns regarding the likely impact of noise and increased ship traffic and also regarding potentially large changes in scouring and deposition of soft sea bed caused by turbine placement that could change sand eel spawning dynamics and even encourage fish and bird predation due to vorticing in tidal streams. Further research on these issues is vital	Scottish Anglers National Association Limited
Fish and Shellfish Resources	Initial responses page 31	SANA also have major concerns about the impact of EMFs around subsea cables on the migratory behaviour of salmon. Underlying research is 'patchy and inconclusive'	Scottish Anglers National Association Limited
Fish and Shellfish Resources	Initial responses page 31	In view of uncertainties surrounding the potential negative impact of offshore windfarms on the migratory patterns of Atlantic Salmon SANA believe that the developers must produce a convincing account of the mitigating measures that they propose to take, accompanied by peer reviewed evidence of the efficacy of such measures	Scottish Anglers National Association Limited
Fish and Shellfish Resources	Initial responses page 31	SANA believe that developers of offshore renewable should also be required to pay for ongoing monitoring of impacts on wild salmonids	Scottish Anglers National Association Limited
Traffic and Access	Initial responses page 31	Scottish Enterprise has been developing the National Renewables Infrastructure Plan for the Scottish Government looking at the infrastructure requirements of offshore renewables at port and harbour locations. This is available at: http://www.scottish-enterprise.com/your-sector/energy/energy-background/energy-reports/energyrenewable-energy-reports.aspx	Scottish Enterprise Energy Team
Shipping and Navigation	Initial responses page 31	Scottish Enterprise has been developing the National Renewables Infrastructure Plan for the Scottish Government looking at the infrastructure requirements of offshore renewables at port and harbour locations. This is available at: http://www.scottish-enterprise.com/your-sector/energy/energy-background/energy-reports/energyrenewable-energy-reports.aspx	Scottish Enterprise Energy Team
Fish and Shellfish Resources	Initial responses page 39	Research on whether or not the EMFs around subsea cables are likely to disrupt the migratory patterns of salmon is 'patchy and inconclusive'. NASCO has asked ICES to advise on the potential impacts of the development of renewable energy on Atlantic Salmon. The Sea Trout Group predicts that this will not be ready before early summer 2011	Sea Trout group
Fish and Shellfish Resources	Initial responses page 39	Concerned about the impact of noise and increased shipping transport on fish during the construction phase. Potentially large changes in scouring and deposition of soft sea bed caused by the placement of the turbines could change sand eel spawning dynamics and could encourage fish and bird predation because of vorticing in the tidal streams. Further research is urgently required in order to determine what numbers of sea trout currently feed in the areas concerned and what affect this could have on them.	Sea Trout group
Fish and Shellfish Resources	Initial responses page 39	Developers of offshore renewables should pay for ongoing monitoring of the effects of offshore windfarms on salmonids. Seagreen should produce a convincing account of proposed mitigation measures (accompanied by peer-reviewed evidence of the efficacy of such measures) before proceeding with the development.	Sea Trout group
Marine Mammals	Initial responses page 42	WDCS are involved in discussions on marine renewable energy at a national level through stakeholder processes (incl. The Offshore Forum, Scottish Marine Strategy Stakeholder Forum and Offshore Renewable Energy Environment Forum (OREEF). There website is regularly updated	Whale & Dolphin Conservation Society
Marine Mammals	Initial responses page 42	WDCS have serious concerns about the effects of marine renewables on cetaceans in Scottish waters. They feel that large gaps in knowledge still remain.	Whale & Dolphin Conservation Society
Marine Mammals	Initial responses page 42	WDCS have in the past been concerned about the quality of project EIA's. They feel it imperative that EIAs are subject to periodic scrutiny, especially at the early stages of the marine renewable energy industry.	Whale & Dolphin Conservation Society
Marine Mammals	Initial responses page 42	The protected population of bottlenose dolphins from the Moray Firth SAC use the Firth of Forth. The WDCS believes that an appropriate assessment should be undertaken given the protected status of this species.	Whale & Dolphin Conservation Society
Marine Mammals	Initial responses page 42	The intense impulse noise caused by pile driving may disrupt the behaviour of marine mammals at distances of many tens of kms with hearing potentially impaired at close ranges. Only mitigation measures proven to be effective should be used. WDCS strongly urges that more environmentally benign forms of turbine installation are used than pile driving.	Whale & Dolphin Conservation Society
Marine Mammals	Initial responses page 43	WDCS feel that it is essential that appropriate marine environment impact assessments and baseline monitoring are carried out before construction begins. They also believe that in-field monitoring should continue during development and post-development.	Whale & Dolphin Conservation Society
Marine Mammals	Initial responses page 43	All data collected should be transparently reported to SNH so that adaptive management can be applied	Whale & Dolphin Conservation Society
Marine Mammals	Initial responses page 43	Assessment of cumulative and in-combination effects of these developments with other industries operating in the marine environment (e.g.oil and gas exploration) require thorough investigation.	Whale & Dolphin Conservation Society
Coastal Processes	page 62	Impoundments and tidal barrages are considered to have the potential to have the biggest impact upon coastal processes and hydromorphology and the habitats and species that these support. As such, there may be a need to carry out hydrodynamic modelling to predict the impacts of the structure/s on water quality during construction and coastal processes in the longer term.	SEPA