



Hydrocarbons Environmental Impact Assessment Guidance Note Environmental Planning Department

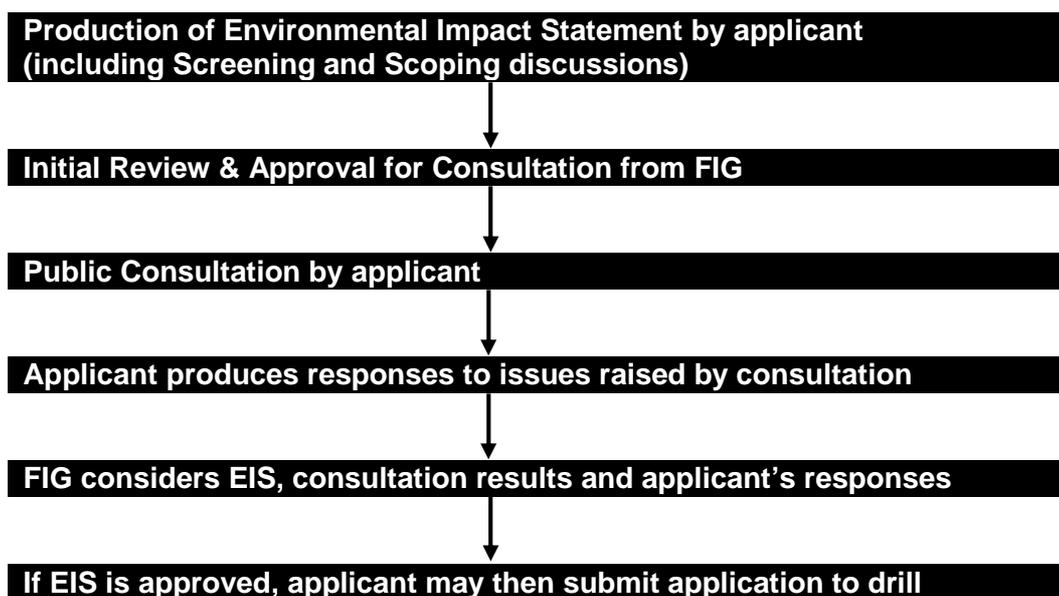
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1.0 INTRODUCTION

Purpose/Status of Document

- 1.1 This guidance is intended to inform Environmental Impact Statements (EIS) produced in support of applications for regulated hydrocarbon activity. The legislation sets out some detail as to what an EIS should contain and how it should be approached. This guidance provides supplementary detail and has been formally adopted as an annex to the Falkland Islands Government Guidance Note 02/13: Approvals required for offshore operations in the Falkland Islands
- 1.2 The overall process for the review of an EIS is set out below (a more detailed version of this diagram, with estimated timescales for each stage, is included at the end of section 2).

Figure 1: Summary of Process



Policy Context

- 1.3 The Hydrocarbons Development Policy Statement adopted by the Falkland Islands Government in July 2013 sets out the following eight policy goals for guiding hydrocarbons developments.
- Hydrocarbons in Falkland Islands waters belong to the people of the Falkland Islands and their exploitation must be to the benefit of the people of the Falkland Islands, both those of today and future generations.
 - The Falkland Islands Government will maintain constant supervision and control over all hydrocarbon activities within the Falkland Islands Designated Area.

- Petroleum discoveries must be efficiently managed and exploited to maximise economic recovery and to ensure the development of a long-term industry presence that will benefit the Islands for decades to come.
- Development of the hydrocarbons industry must ensure the protection and conservation of the Falkland Island's environment and biodiversity.
- Development of the hydrocarbons industry must take into consideration existing commercial activity and promote the development of local business capacity.
- The exploitation of finite natural resources will be used to develop lasting benefits to society across the whole of the Falkland Islands.
- Transparency and accountability must be present throughout the hydrocarbon development process from all parties involved.
- The Falkland Islands will only consider onshore hydrocarbon facilities if they are considered to be in the best interests of the Falkland Islands, and can be proven to satisfy all of the above policy goals.

Legislative Background

- 1.4 The 2011 amendment to the Offshore Minerals Ordinance (hereafter 'the Minerals Ordinance') repealed sections 64-67, substituting them with reworded versions of the original Ordinance and additional conditions, most notably an automatic and obligatory requirement for an EIA/S to be submitted for any application for permission to drill a regulated well¹ in controlled waters.
- 1.5 Section 64A of the Minerals Ordinance provides that EIA and EIS are required for an application to drill a regulated well in controlled waters, and that an applicant for permission to drill a regulated well in controlled waters must comply with the requirements of section 64C(1) before making the application to drill². Section 64C(1) sets out the requirements for an EIA and EIS, and section 64C(2) goes on to say that an application to drill for which an EIA and EIS are required must not be determined until the applicant has complied with subsection (1).
- 1.6 Before consultation may begin, the EIS will be assessed against this legislation to consider whether it meets requirements of schedule 4 of the Minerals Ordinance, which details the contents of environmental impact statements. The legislation sets out the time period and minimum standards for the consultation.
- 1.7 After the consultation and response process, further consideration will be undertaken about whether the EIS and the applicant's responses to the consultation process provide sufficient information in order to determine the environmental risks of an application to drill. This will be based on whether or not the EIS sufficiently:
- describes the project;
 - describes the relevant aspects of the environment;
 - identifies potential environmental impacts;
 - assesses the level of risk;
 - identifies realistic mitigation and accurately estimates the level of its effectiveness; and
 - identifies and assesses residual risk.
- 1.8 This process will not consider whether the environmental risks are acceptable, merely that the EIS satisfactorily identifies and assesses those risks (although it may also identify certain conditions that could be attached to any subsequent consent to drill in connection with implementation of the EIS/risk mitigation).

¹ "regulated well" means a well that (a) is not a test well; (b) would be drilled for the purposes of (or in connection with) one or more of the following - (i) exploring for petroleum; (ii) establishing the existence of petroleum in a particular location; (iii) appraising the quantity, characteristics or quality of the petroleum in a particular location; and (iv) extracting petroleum.

² Governor (Executive Council) may grant an exemption for requirement for new EIA (if requirements of s67A(1) are met)

- 1.9 Section 66 of the Minerals Ordinance allows requests for further information if there are concerns with the adequacy of the EIS.
- 1.10 Once an EIS has been consulted on, an application to drill may then formally be submitted. In light of this further documentation (see paragraph 4.3), separate consideration will be undertaken about whether the residual risks identified are acceptable (in light of other documentation provided) in making a final decision on whether or not to grant consent to drill. It should be noted that a decision that an EIS is compliant with the legislation does not prevent the refusal of an application to drill.
- 1.11 A series of Petroleum Operator Notices have been published, and it is a usual license condition that these are complied with.

Falkland Islands Government (FIG) Structure

- 1.12 The Falkland Islands are a British Overseas Territory. This means that the supreme authority is vested in Her Majesty the Queen in accordance with the Constitution. The Governor is advised by an Executive Council, comprising three elected Members of the Falkland Islands Legislative Assembly, FIG's Chief Executive and Financial Secretary, and is attended by the Attorney General and the Commander of the British Forces South Atlantic Islands.
- 1.13 As a matter of policy, any recommendations to Executive Council in relation to matters covered by this Guidance Note will normally be considered by the Mineral Resources Committee. This committee comprises two MLAs, the Chief Executive, the Attorney General and the Director of Mineral Resources. Meetings are arranged as required (subject to the availability of committee members) and papers must be circulated at least 3 working days prior to the meeting. MRC papers in relation to EIS are generally considered in the public part of the meeting, although Executive Council papers are confidential unless, once they have been considered, it is decided to make them public.
- 1.14 There are a number of departments with involvement in aspects of the EIA process, as summarised below.
- The Department of Mineral Resources (DMR) regulates the Falkland Islands offshore hydrocarbons industry. The Department obtains specialist advice from a number of UK Government organisations, such as: the Department of Energy and Climate Change, the Health and Safety Executive, and the British Geological Survey. The Department has limited executive powers, and makes recommendations for approvals to Executive Council usually through the Mineral Resources Committee. Ultimate approval for a number of Mineral Resources-related matters, such as the granting of licences and changes of licence ownership will be made by Executive Council and in some cases the Secretary of State for the Foreign and Commonwealth Office must also give consent.
 - The Environmental Planning Department (EPD) is responsible for leading on the assessment of EIS and making a recommendation to Executive Council as to whether they are fit for purpose.
 - Other departments such as Fisheries, Public Works and Agriculture (Biosecurity) play a key role in assessing the detail within EIS and other related documents and providing comments to DMR and/or EPD.
- 1.15 Executive Council has agreed roles and responsibilities (see paper 156/15) in relation to the review of EIS, Oil Spill Contingency Plans, Waste Management Plans and the Development of Legislation and Guidance. The detail in relation to EIS is reflected in section 2 of this guidance. The responsibilities in relation to the other key documents are summarised below. The roles are however, caveated by staff availability due to both departments' small size. It is therefore intended to put in place procedures and guidelines so that any one department may fulfil the role of the other where staff absences require it.

- 1.16 **Oil Spill Contingency Plans (OSCP) and financial responsibility.** DMR shall be responsible for co-ordinating the review of OSCPs in conjunction with the Department of Natural Resources (including Fisheries), EPD and UK agencies as may be required. DMR shall arrange for a targeted consultation of documents and review applicant responses to comments to ensure they have been addressed accordingly. DMR shall further be responsible for submission of approval recommendation to Executive Council via Mineral Resources Committee.
- 1.16 In addition to any other comment, EPD shall provide specific comment on the OSCP as it applies to endangered species or sensitive wildlife areas if required. DMR shall be responsible for the review of insurance and other financial arrangements in order to determine the financial capability of applicants to deliver a given OSCP.
- 1.18 **Waste Management Plans (WMP).** Given the recent appointment of the Waste Management Co-ordinator nominally based within EPD (although working across several departments), it makes sense for the review, consultation and approval via Mineral Resources Committee of WMP to be carried out by EPD. However, the input from DMR and PWD will be required, and in any cases of doubt the final recommendation shall be made by the DPW.

Public Consultation and External Reviewers (Technical Experts)

- 1.19 A key part of the process is public consultation, which provides an opportunity for interested organisations and members of the public to make written comments in relation to the potential environmental impacts of a project. Respondents to this consultation may include the following:
- members of the public;
 - private businesses;
 - Falkland Islands Government departments;
 - UK Government Departments (e.g. the Foreign and Commonwealth Office, with advice from the Department of Energy and Climate Change) and other public bodies (e.g. the Joint Nature Conservation Committee);
 - Falklands-based Non-Governmental Organisations (e.g. Falklands Conservation or the Museum and National Trust); and
 - Overseas NGOs (e.g. the Royal Society for the Protection of Birds).
- 1.20 It is helpful if those commenting on the EIS can identify the parts of the document they have reviewed and, of those parts they have reviewed, any parts which they wish to raise concerns about. This avoids any misunderstandings where it is assumed that the absence of comment on an area of the document means the person commenting has reviewed it and has no concerns, when they have actually not reviewed it. If reviewers have any queries in relation to the document, they are encouraged to contact the applicant directly to request clarification during the consultation period (and to then refer to that clarification in their consultation response). This can be more efficient than to wait until the end of the consultation period and use the formal response as a mechanism to request clarification of issues.
- 1.21 EPD may choose to directly appoint an external technical expert to review documents (using funding provided by DMR). Any comments received from the technical expert will be identified as such, as it is noted that the section 64C part (4) B of the Minerals Ordinance requires the Governor to have regard to any representations made by a technical expert, where the EIS has been sent to such an expert for review. However, the comments from the expert reviewer will normally be included in the single FIG response to ensure a single and consistent set of issues from FIG are presented to the applicant.

- 1.22 It is acknowledged that direct communication between the technical expert and the applicant can be helpful to resolve any areas where clarification is required to inform the review. EPD will ensure that, if a technical expert is used, they have not been directly involved in the production of the EIS. Applicants may contact the intended technical expert at the scoping stage subject to prior agreement with EPD. In all cases, any communication with the technical expert should be by e-mail and each e-mail should be copied to EPD.
- 1.23 Falklands Conservation (FC) is an independent charity working within the Falkland Islands. FIG has a Memorandum of Understanding (MoU) with FC and currently provides an annual subvention. This includes FC providing FIG with advice on environmental matters and independent scrutiny of large developments. FC will be invited to comment during the public consultation phase as an independent charity. EPD may ask FC for further comments/advice under the MoU in relation to comments received during the consultation or the applicant's response to any such comments. EPD will make it clear on what basis FC is being asked to comment.

2.0 SUMMARY OF PROCESS

2.1 The legislation requires the applicant to deliver to the Falkland Islands Government (FIG) an EIS that contains at least the information required by Schedule 4 (s64C(1)(b)), as summarised below.

- **Consultation process** (timings, publicity, response to representations)
- **Project description:** Including: land and seabed requirements; main characteristics of production processes and an estimate of the expected residues and emissions resulting from the operation.
- **Measures to protect the environment:** Measures to eliminate, remedy, and/or offset significant adverse impacts on the environment.
- **Requirement for data:** Data required to identify and assess the main effects that the project is likely to have on the environment.
- **Environmental Effects:** Aspects of the environment likely to be significantly affected by the project, including: human population, fauna, flora, soil and seabed, fresh or seawater, aquifers, air, climatic factors, landscape and seascape, tangible property, architectural and archaeological heritage; and the interactions between any of those factors.
 - Additionally, any EIS must include effects on the environment arising from: the existence of the project itself, emission of pollutants, creation of nuisances, and the elimination of waste.
 - The ordinance clarifies that an effect includes an effect whether it is: direct, indirect, secondary or cumulative; short, medium or long-term; permanent or temporary; and positive or negative.
- **Forecasting Methods:** Details of the forecasting methods used to assess the effects on the environment of the project to which it relates
- **Remediation:** Measures envisaged upon termination of the project to eliminate, reduce, remedy, or offset significant adverse impacts on the environment associated with the project.
- **Alternatives:** An outline of the main alternatives that were studied by the applicant and the main reasons for the applicant's choice (taking into account the environmental effects).
- **Non-technical summary:** A layman's summary of all the above
- **Difficulties encountered:** Difficulties, including technical issues and lack of know-how, encountered the applicant in compiling the required information.

Screening & Scoping

2.2 Applicants are encouraged to approach the DMR as early as possible where there is any doubt over the need for EIA (screening). Where EIA is required, FIG departments (and potentially other stakeholders) will provide informal comments on likely key issues and potential sources of information (scoping). However such comments do not prejudice the later stages of the process. As part of the scoping process, it is helpful for the applicant to provide an overview of a project or plan.

2.3 Although previous submissions have resulted in a limited number of responses to the public consultation, the scoping stage can be a valuable opportunity to proactively engage with key stakeholders, be that the public, NGOs or FIG departments. Rather than getting stakeholders in a room with a 'blank sheet' and asking their concerns, this should be structured around the proposed scope of the EIA with regard to potential impacts. A 'pre-read' before consultation meetings can be helpful.

2.4 Where key messages from the Scoping stage inform content included or excluded from the document or other fundamental aspects of the approach, the applicant may wish to refer (briefly) to these discussions within the EIS (with use of appendices as necessary for more detailed information).

Initial Review

- 2.5 Upon receipt of an EIS the first stage of the review is to consider whether the EIS contains sufficient information such that it appears to comply with the above and so public consultation can commence. This review is carried out by the EPD, with input from the DMR and Fisheries. The review results in a recommendation being made to Executive Council (via the Mineral Resources Committee).
- 2.6 An assessment sheet has been prepared according to the requirements stipulated in Schedule 4 of the Ordinance and is used to inform the assessment (see appendix 1). Applicants will be asked to complete a copy of this sheet themselves and submit it along with the EIS, as this can speed up the initial review process by providing 'sign-posting' for reviewers.
- 2.7 This review can also be used as a process to try to identify any other fundamental flaws in the EIS which might have potentially delayed the process at a later stage by creating a requirement for further information (and consultation), or by preventing approval of the application to drill based on concerns arising from the EIS. Thus the applicant may be requested to amend their EIS prior to the approval for consultation.
- 2.8 It should be noted that this initial assessment of the EIS does not oblige Executive Council to approve any subsequent application to drill, nor does it limit Executive Council's powers to subsequently request information in connection with the EIS. It is simply noted that a broad approach was taken to try and identify any concerns about the EIS at this early stage; i.e. beyond merely checking that it complies with the minimum standards set out in the legislation.

Public Consultation

- 2.9 The legislation requires the applicant to carry out a public consultation period lasting 42 days and commencing with the consultation process and timings being published in the Falkland Islands Gazette. It is for the Governor to agree commencement of the consultation period (subject to agreeing that EIS is approved as the basis for consultation) and some elements of the consultation. The consultation will normally include the following:
- a notice to be issued in the Gazette (which refers to the publication of the EIS and describes the consultation process);
 - a paper copy of the EIS to be available in Stanley for the public to inspect without charge during at least normal government office hours (the Governor may direct that paper copies are also made available at one or more other places in the Falkland Islands, ie Executive Council may wish to give instructions on this)
 - a paper copy of the non-technical summary to be provided without charge and as soon as possible to each member of the public who requests one during the consultation period
 - electronic copies of the EIS and non-technical summary to be provided on request as above
 - initial announcement of publication of the EIS on FIRS
 - further weekly radio announcements of publication of the EIS;
 - notice in the Penguin News every week during the 42 day consultation period;
 - the announcements and notices referred to above must also advise the public about; (a) their right to make representations; (b) how to make those representations; and (c) the closing date for representations; and
 - public presentations in Stanley which explain the information available and how to comment³.

³ These presentations are not a legal requirement but are good practice. Because comments on the consultation documents must be made in writing to the Department of Mineral Resources, the presentations should make clear that verbal comments during the presentation will not be registered as formal consultation comments, and explain the correct process for making such comments.

- 2.10 Although responses can be in any format, the applicant may wish to provide a response form setting out their preferred format of responses (including whether this is paper/electronic).
- 2.11 DMR shall be responsible for the administration of the statutory consultation process and publication of a Gazette notice, and shall liaise with applicants on consultation requirements. Public comments made to the EIS shall be collated by DMR, who will also be responsible in engaging the UK Department of Climate Change and other UK regulatory authorities as required in order to provide comment for the EIS.
- 2.12 Any consultation responses are received by the DMR and passed to the applicant as they are received. As it is the applicant's consultation, FIG departments (including EPD and DMR) will normally provide written responses during the consultation period. FIG departments will be clear on the areas of the document they have reviewed, in order to avoid overlap in comments and where possible a single response will be provided from EPD.

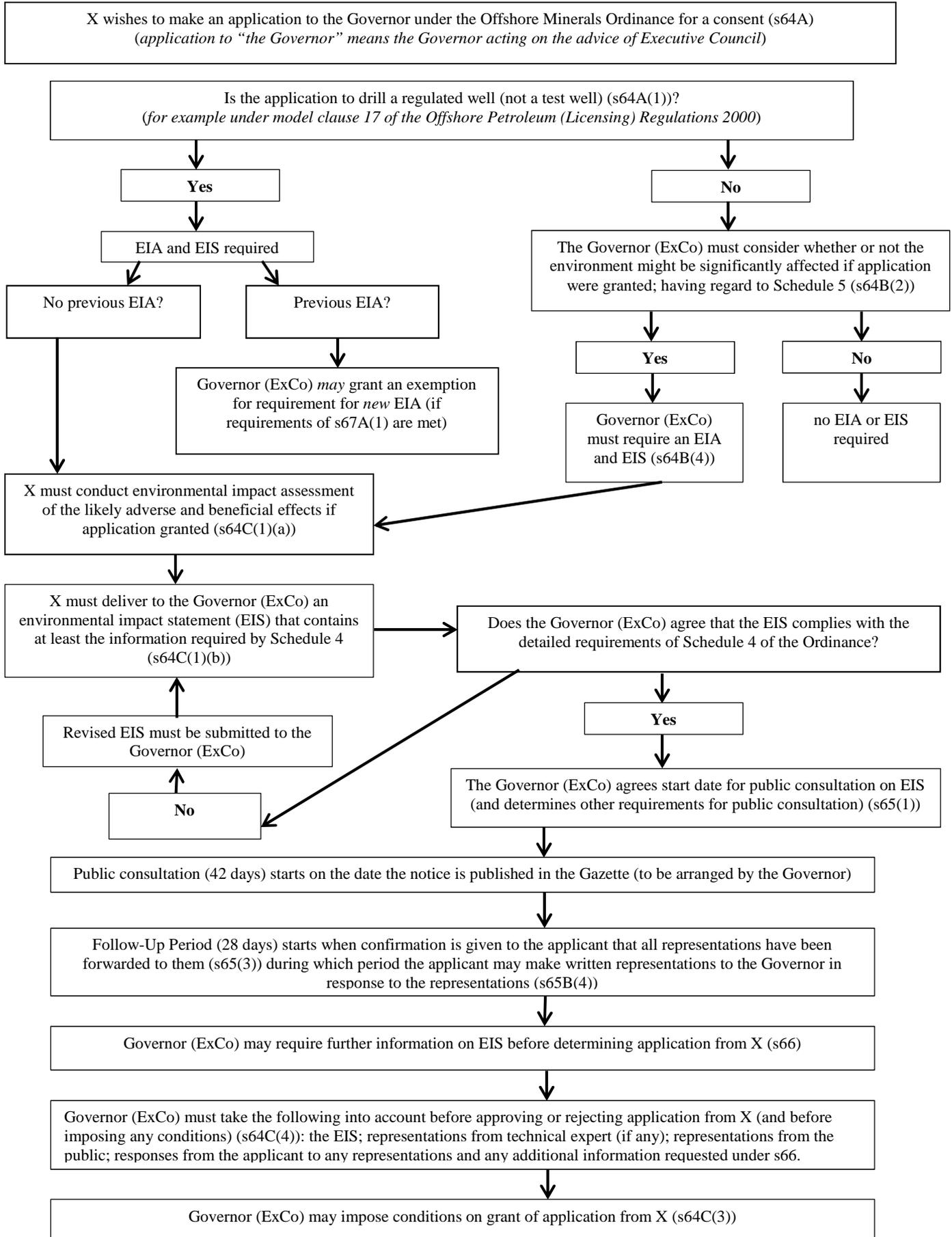
Response to Comments Received

- 2.13 Upon receipt of the consultation responses (or closure of the consultation period, whichever is later) the applicant has up to 28 days to respond. This response could take the form of an addendum to the EIS or a table of responses and comments. The legislation does not allow for the approval of a 'new' EIS, however in order to ensure that the final approved EIS is a useful document revised EIS will normally be requested which incorporates any changes (and conditions attached to any final consent to drill will normally stipulate which version of the EIS is to be used as the basis for mitigation).
- 2.14 EPD shall be responsible for the review of stakeholder comments and consequent responses from applicants in order to determine whether consultation concerns have been appropriately addressed by the applicant. EPD will therefore be responsible for direct communications with applicants and stakeholders in evaluating the contents of an EIS. It can therefore be helpful to meet with EPD during the 28 day period to identify any issues which are considered particularly important, or any areas where contradictory responses are received. EPD may also, informally, request further information from the applicant when carrying out their final review (this is to avoid delays whereby EPD formally recommend to Executive Council that they do not accept the EIS and request further information – see paragraph 1.9).
- 2.15 EPD will consider the updated response and, where they consider it necessary, may go back to respondents to seek advice on whether they feel their concerns have been adequately addressed. However, there will not normally be further general consultation.

Final Review

- 2.16 EPD shall be responsible for the review of EIAs and for the recommendation (as to whether or not they should be approved as fit-for-purpose) or otherwise to Executive Council via the Mineral Resources Committee. This recommendation shall set out whether or not the EIS complies with the legislation and may also suggest conditions which might be attached in the event that a consent to drill applications subsequently supported. This recommendation will not, however, indicate whether the level of environmental risk is appropriate as that decision is made in light of the application to drill.

Figure: Process Diagram



3.0 CONTENT OF EIS

Purpose of an Environmental Impact Statement

- 3.1 Section 64C(4) of the Minerals Ordinance states that when considering an application which requires an environmental impact assessment, the Environmental Impact Statement, any representations from the public or technical experts contracted by FIG, any responses from the applicant to those representations and any additional information formally requested should be taken into account. An EIS is therefore not an academic scientific paper, but a tool required by legislation (and therefore potentially open to judicial review) to facilitate three important outcomes:
- the environmental impacts of a proposal being reviewed by technical experts;
 - the general public having the opportunity to comment on the environmental impacts of a proposal; and
 - the final decision maker taking environmental considerations (and comments made) into account.
- 3.2 The EIS should focus on complying with the requirements of the legislation. Schedule 4 sets out the required components (see paragraph 2.1). It should be noted that the schedule indicates that the document should consider ‘the environmental features likely to be affected by (the development)’ (section 1(3)(a)(ii)) and set out measures to ‘eliminate or reduce significant adverse effects on the environment’ (section 2(a)).
- 3.3 The legislation allows for an EIS to be submitted for a larger development and used to support an application to drill in relation to a smaller development, but does not allow for addendums to be submitted where additional development is proposed to that set out in the EIS (although the legislation does, in some limited cases, allow exemptions). Applicants may therefore wish for example to include a wider range/level of activity in an EIS than they initially intend to apply for consent to carry out, to avoid having to submit additional EIS part-way through an exploration and appraisal drilling campaign. Once approved, an EIS will normally be considered fit-for-purpose for 5 years, unless evidence becomes available in the interim that its findings are no longer valid or there is a material change to the activity. If a wholesale review of an EIS is carried out prior to the 5-year limit, that EIS will be considered valid for the next 5 years.

Scope

- 3.4 Schedule 4 Section 4(2) sets out a list of environmental topics which must be considered if they are relevant to the particular characteristics of the project or the environmental features likely to be affected by it. The legislation uses the word ‘including’ therefore does not prevent environmental topics not included in the list from being considered if they are relevant. The topics set out in the legislation are listed below.
- Human Population
 - Landscape and seascape
 - Architectural and archaeological heritage
 - Tangible property
 - Fauna and flora
 - Soil, (including seabed and subsoil)
 - Water (including sea and aquifers)
 - Air
 - Climatic factors
- 3.5 However, consideration when the scoping of an EIS is not only the list of environmental factors in the legislation (which should not be taken to be exhaustive) but which environmental factors could be significantly adversely affected (to ensure a focused EIS).

'Significance' is not defined in the legislation and so could be a useful component of scoping discussions.

3.6 It is acknowledged that some socio-economic issues have an environmental component and so are potentially relevant. The legislation requires consideration of impacts on human population. This could include:

- human health (physical and mental);
- health and safety issues;
- light and noise pollution in populated areas;
- visual/landscape impact, loss of a sense of tranquility and/or loss of 'dark skies';
- impacts on general amenity; and
- impact on environmental aspects which provide economic benefit (for example impact on commercial fish stocks) – part of the provisioning ecosystem service.

3.7 Consideration must also be given to how tangible property is scoped. This could be defined as including infrastructure impacts, with the emerging National Infrastructure Plan providing useful context on issues and topics that would fall under 'infrastructure'. This could include:

- impacts on utility and service quality, security and availability (for example increased demand on potable water); and
- wear-and-tear on the road network.

3.8 It may be helpful to include a chapter which specifically deals with human population and tangible property impacts (which may subsume any sections on landscape/seascape and architectural/archaeological heritage). However, consideration of socio-economic issues which do not have an environmental component is not generally necessary or helpful, as this can complicate the document and process. Examples of issues which are unlikely to be relevant include:

- tax revenues;
- wages/cost of living;
- threats and opportunities for local businesses;
- land value/rents; and
- availability of housing and services/facilities (e.g. hospital and school capacity).

3.9 However, separate and complimentary economic and social impact assessments could be produced. If such complimentary assessments are produced, then they need to be clearly and logically scoped. The production of an assessment (either within the EIS or as a stand-alone document) which only assesses positive economic impacts is unlikely to meet the preceding guidance.

Environmental Information

3.10 The most important component of the EIS is the risk assessment and the purpose of the baseline section is to inform the risk assessment. Therefore, a comprehensive description of the environment is unlikely to be required. Instead, the EIS should set out the relevant baseline environmental characteristics and draw clear conclusions. If the data included in the baseline is not referred to specifically in the risk assessment then its inclusion should be questioned. Where data and descriptions of taxa are included, the reason for this and how it is used to inform the assessment should be clear.

3.11 Where a detailed baseline survey is required, this needs to be undertaken before the EIS is submitted, so that the findings can inform the EIS. Where surveys and studies are used to inform the EIS, these should be referenced but do not need to be repeated in full (or

even summarized in detail) – the key and relevant findings should be succinctly summarised the study referenced. Where surveys and studies have been produced by the applicant and are not publically available, the applicant may need to make them available on request (and state this within the EIS).

- 3.12 DMR shall be responsible for internal consultation of PON 3 plans in as far as they relate to eventual EIAs (e.g. benthic baseline surveys) and for discussing survey plans with operators following appropriate internal consultation.

Data Gaps

- 3.13 Schedule 4 of the Minerals Ordinance requires the EIS to describe the project and the environmental features likely to be affected by it “to the extent that the applicant might reasonably be required to compile the information (having regard to current knowledge and methods of assessment)”. In other words, the applicant should not be accountable for data gaps that could not reasonably have been filled, but more for the way in which they address the gaps in the RA. Therefore the presence of justifiable data gaps does not make an EIS unfit-for-purpose, as long as these are acknowledged and explained. When carrying out the risk assessment data gaps can be taken into account (see paragraph 3.18).
- 3.14 The Gap Analysis group has begun a formal assessment and review of critical gaps in environmental knowledge which require research prior to oil development and extraction. It is hoped this work will feed into the next round of EIS submissions in support of hydrocarbons development. However, if data is required to understand an environmental impact and that data is not yet available, the fact that a process exists to provide that data in the future is not a relevant consideration for deciding whether or not the EIS is fit-for-purpose. This is because the EIS is intended to inform a decision on whether or not to grant a permit to drill, therefore all the necessary information to make that decision needs to be available before the decision is made. However, as set out in paragraph 3.13 data gaps can be addressed in other ways if they cannot be filled.
- 3.15 EIS should not compare Carbon Emissions only to UK total emissions. If oil development is to go ahead FIG need to know how the industry will increase emissions in comparison to other local sectors. Therefore an assessment of atmospheric emissions compared with FI emission figures is required (figures can be provided by EPD).

Risk Assessment

- 3.16 Perhaps the most important element of the EIS is the risk assessment. The EIS should clearly set out the methodology used so that reviewers can run impacts through every step of the risk themselves and see how it works. A key consideration is also that the EIS is internally consistent.
- 3.17 EIS should comply with best practice/standards (such as IEEM 2010 and 2006). The methodology should set out definition of categories of the likelihood of an event, the severity of impact and the resultant risk categories (based on likelihood x severity).
- 3.18 Definitions of different levels of risk, severity, likelihood and certainty could be drawn from well-established international EIA guidelines (although may need to be refined to make them relevant to the local context). They should be applied consistently throughout the document. It can be helpful to consider the level of certainty in the assessment of the risk, for example where there are data gaps a risk may be increased to reflect the higher degree of uncertainty (and work on a worst-case scenario/precautionary approach). Where a certainty component is included it should be clearly explained.
- 3.19 The definitions of categories should not include purely political, social or economic issues. Paragraphs 3.6 – 3.9 discuss socio-economic issues with an environmental component.

However, a distinction should be made between, for example, risks on flora and fauna which are important due to the impact on such socio-economic issues, and impacts on flora and fauna which are ecologically valuable (i.e. rare) species.

Mitigation

- 3.20 Having established the initial risk, mitigation should then be identified. A risk which is low because it is unlikely but has a high severity is different to one which is low because it is likely but has a low severity. Similarly, mitigation that reduces likelihood is different to mitigation that reduces severity. A clearly explained and transparent assessment (which includes the pre and post mitigation scores and components) needs to form the central part of the main document. It is important within this to be clear about what safeguards (if any) are assumed to exist to give the initial risk score, and which safeguards are then part of the mitigation that results in the residual risk score (which should be one of the definitions of risk previous set out). It may be appropriate for some risks to consider the full worst case scenario. For longer term projects, regular monitoring of impacts will be expected as part of mitigation proposals.
- 3.21 In order to comply with the legislation, EIS should set out how off-setting measures have been considered which could further reduce a residual impact. EIS should not equate impacts with a low significance as being the same as having no net impact and within this context consideration of potential cumulative impacts may be important.
- 3.22 Mitigation and off-setting measures should not be hypothetical or unrealistic, but measures which the applicant is proposing to use and is confident will be practicable and effective within the local context (and 'normal' industry practice should be explained and counted towards the initial risk score, rather than proposed as additional mitigation). Whilst the EIS is not itself necessarily the basis for implementing or enforcing the mitigation, it should demonstrate that the proposed mitigation is realistic. Furthermore, if mitigation or offsetting measures are potentially available but not proposed, the EIS could explain why they are not proposed (e.g. if they are not practicable in the local context). Policy guidance for proposed offset projects is given in Appendix 2.
- 3.23 Because the Falkland Islands are a frontier location with a small population and limited local capacity to respond to infrastructure pressures or emergency events, it is important that the EIS contains sufficient information to enable reviewers to consider whether proposed mitigation measures are realistic (and to acknowledge that more work is required in EIS to show that mitigation is realistic/practicable, then might be required in established regions such as the North Sea).
- 3.24 A key risk is oil spill. Although the production of an Oil Spill Contingency Plan (OSCP) is normally a license condition, the approval of the EIS without understanding the broad approach to how a spill event would be responded to (noting that the mitigation should in the first instance reduce the likelihood of such an event as much as possible) and has previously lead to considerable delays in the approval of EIS. Applicants may therefore wish to provide a draft OSCP as an appendix to the EIS or to submit the two documents for approval simultaneously.

Presentation

- 3.25 Having regard to the preceding advice in relation to the purpose and scope of an EIS, they do not need to be long and complicated documents, as it is important that they are as simple and easy to use as possible, and the information included is relevant. With this in mind, page/paragraph numbering should be straightforward, Plain English used, and abbreviations and technical terms only used if necessary (and clearly explained). EIS should also be clear and accurate, using unambiguous language.

- 3.26 The inclusion of a Non-Technical Summary is a legislative requirement. The aim is to provide a very brief document which a layperson is able to read and understand and which therefore facilitates stakeholder and public engagement. However, it is also important that the whole EIS is drafted to be as accessible as possible. Use of appendices for supporting information is often appropriate (e.g. for information which is descriptive or repeated).

Standardised Baselines and Risk Assessment Methodologies

- 3.27 The production of standardised baselines and/or risk assessment methodologies may be considered in the future, however even if they are supported and produced, individual EIS may need to tailor these to consider project or locational specific considerations (for the baseline this may mean additional targeted survey work to look at specific sites and only including the aspects of the standardized baseline that are relevant).

4.0 IMPLEMENTATION OF THE EIS AND COMPLIMENTARY REGIMES

- 4.1 Paragraph 64 (C) of the Minerals Ordinance states at sub-paragraph 3, “If an environmental impact assessment and an environmental impact statement are required for an application and the Governor grants that application –
- (a) the Governor may impose conditions on the consent for one or more of the following purposes —
- (i) to eliminate or reduce significant adverse effects on the environment of the project and the infrastructure associated with the project;
 - (ii) if possible, to remedy those effects; and
 - (iii) to offset them; and
- (b) the Governor may impose those conditions even if there is no other power to do so”.

- 4.2 However, section 64 C (4) of the Minerals Ordinance is set out below. In particular, it should be noted that this sets out various issues which must be considered before an application to drill is approved. Therefore any consideration of conditions at the EIS approval stage is only of potential conditions, and should not be seen as in anyway prejudging whether or not any application to drill based on the EIS will be supported.

When considering an application for which an environmental impact assessment and an environmental impact statement are required, the Governor must take the following into account before deciding whether or not to grant it and whether or not to impose conditions —

- (a) the environmental impact statement;*
- (b) if the Governor has sent the environmental impact statement to a technical expert for review, the representations made by that technical expert;*
- (c) representations from the public (and representations in reply from the applicant) submitted to the Governor in accordance with section 65B; and*
- (d) if the Governor has requested additional information or evidence under section 66, that additional information or evidence.”*

- 4.3 Furthermore, it is important to avoid double regulation if possible, as this can result in unnecessary bureaucracy and confusion. It is noted that separately to the EIS other key documents to be produced include those set out below. Nevertheless, the inclusion of sufficient relevant information within the EIS to support the Risk Assessment is crucial (see paragraphs 3.23 and 3.24) and where much of a separate document is relevant, there may be merit in submitting it in its entirety.

- Safety Case (safety equivalent of the EIS) prepared by the rig owner rather than the operator
- PON4 Application – well design (geological and mechanical issues)
- Emergency Response Plan (and related to that, the Management Interface Document)
- Oil Spill Contingency Plan⁴
- Waste Management Plan
- PON1 – reporting requirements (limited environmental element but does include chemical use)

- 4.4 Current policy also requires an Environmental Management Plan, to be included as part of the EIA. Although this is not a statutory or license requirement, it is likely to form a key part of future legislation. An environment management plan should go beyond a generic description of the corporate environmental management system. It should include quantifiable, measurable targets of emissions, discharges and impacts; and those targets should be linked to the risk assessment to ensure that the environmental risk is kept as low as reasonably practicable. Fuller guidelines in this respect will be published as and

⁴ An OSCP is not specifically required by the legislation but is a usual standard conditional requirement of licenses.

when the requirement is adopted into legislation, but operators are encouraged to proactively adopt the principle of quantifiable performance standards and suitable monitoring systems until such a time as they are made legislative requirements.

- 4.5 Where elements of an operation have gained permission under the Planning Ordinance and as part of this an Environmental Impact Assessment has been completed it may be appropriate to cross reference assessment work rather than to repeat it in detail. It is important to be clear about what elements of an operation are to be assessed/controlled under any planning permission and which under a consent to drill (especially where conditions requiring documents are attached). A 'document map' can often be a helpful addition to the EIS to clarify this.
- 4.6 A guidance note on the EIA Regulations which form part of the planning legislation is available separately. Where elements of proposals will require an EIA under planning as well as the Minerals Ordinance, early discussions are encouraged between the applicant and the EPD about how this process can most effectively be managed.
- 4.7 In general terms, a consent to drill may provide a hydrocarbons operator with a potential defence to some criminal charges under environmental legislation (in particular some offences under the Conservation of Wildlife and Nature Ordinance and the Marine Mammals Ordinance). The significance of the EIS to this is that it should identify risk of environmental impact, and set out the company's intentions to mitigate those risks and ensure compliance with policy and legislation. If harm is subsequently caused which could amount to an offence under the Conservation of Wildlife and Nature Ordinance, to rely on the defence the company would need to show that it acted reasonably in seeking to avoid the relevant harm; and one potential way it could do that may be by showing that it has implemented the mitigation measures referred to in the EIS.
- 4.8 It is important for everyone concerned for the EIS to identify relevant legislation (and policy), any standards contained within that legislation and how the mitigation measures proposed will ensure those standards are complied with.

Monitoring

- 4.9 Where a consent to drill is granted, conditions may be applied requiring monitoring and reporting during and/or after the campaign to confirm whether any projections within the EIS were accurate and any proposed mitigation effective. It is therefore helpful for the EIS to contain a separate targeted section explaining how it will be implemented and monitored, and how the need for any corrective action identified and actioned. Any proposed offsetting should be included in this section to allow monitoring and review processes to align within the EIS.

Appendix 1: Initial/self-assessment form

Paragraphs	Content	Pages and Sections	Notes
Project Description			
1.1,1.2	Description of the project, including details of the location, design and size		
1.4 (a)*	Details of land seabed requirements		
1.4 (b)*	A description of the production processes, including the nature of the materials used. This should also include CHARM or ONCS classification of chemicals where chemical and cementing plans have been finalised.		
1.4 (c)*	An estimate of emissions to air, water and land, including: cuttings, chemicals, waste, oily water, drilling muds, noise, light, vibration and radiation		
Measures to protect environment			
2 (a) (b) (c)	Description of measures to reduce significant adverse effects on the environment and, where possible, reduce and offset those impacts, including details of any offsetting projects		
Requirement for Data			
3	Data required to identify and assess the main effects of the project on the environment		
Environmental Effects			
4 (2)*	Specific aspects of the environment likely to be significantly affected by the project to which it relates, including: <ul style="list-style-type: none"> - Human Population - fauna -flora - soil (including seabed and subsoil) - water (including sea and aquifers) - climatic factors landscape and seascape tangible property - architectural and archaeological heritage interactions between any of the above 		
4 (3)*	Likely significant effects on the environment arising from: <ul style="list-style-type: none"> - the existence of the project itself - the use of natural resources - the creation of nuisances - the elimination of waste 		
Forecasting Methods			
5(2)*	Details of the forecasting methods used to assess the effects on the environment of the project to which it relates		
Remediation			
6	Measures to eliminate or reduce significant adverse effects on the environment of the project and its infrastructure, and, where possible, remedy and offset Details of proposed offset project as per Appendix 2		

Paragraphs	Content	Pages and Sections	Notes
Alternatives			
7	An outline of the main alternatives (if any) that were studied by the applicant, and the reason for the applicant's choice, taking into account the environmental effects		
Non-technical Summary			
8	Non-technical summary of paragraphs 1 to 7		
Difficulties encountered			
9 (2)	A description of technical difficulties, lack of data and lack of know-how in encountered by the applicant in compiling the information		
General			
	Has the document been proof-read and does it show a high standard of factual accuracy?		
	Does the document acknowledge data gaps and shortcomings?		
	Does the document show a clear strand of logic that underpins the initial impact evaluation, the mitigation and the final residual impact?		

Appendix 2: Offsetting Project Guidelines

The scope of proposed offsets must be reasonably proportional to the calculated emissions projections and likely possible cumulative impacts. The below sets out a flexible approach towards offsetting whereby like-for-like offsetting will not be an essential criterion, given the uncertainty surrounding some impacts.

The EIA must clearly define and calculate impacts (severity, sensitivity, likelihood, confidence) and adhere to the Mitigation Hierarchy, demonstrating how impacts are avoided, mitigated, and finally how the residual impact will be offset to achieve carbon neutrality and no net loss, or net gain of biodiversity. A precautionary approach must be taken to account for uncertainty, as well as a consideration of the cumulative effect that some impacts may have. This should be clearly stated within the EIA.

Proposed offsets must:

- **Describe the proposed project** – locally based projects will be prioritised over international schemes. All projects must be realistic, practicable and effective.
- **Demonstrate a link** between the residual impact and the selected offset type, like-for-like if possible, or trading-up to achieve better. If there is no clear link, then the selected project should demonstrate how it will achieve carbon neutrality or No Net Loss/Net Gain. This should be based on EIA residual impacts, National and International legislation, and Falkland Islands policy (i.e. Biodiversity Strategy, IUCN threat categories, Kyoto Agreement, Islands Plan)
- **Be as quantitative as possible** - if a metric calculation or system is proposed and viable, this will be seen as favourable (i.e. habitat hectares, use of multipliers, scales of magnitude)
- Clearly state how the project will be **additional** to current projects/schemes/funding sources
- **Describe the costs** of implementing, monitoring and evaluating the offset for the full life of the project, demonstrating financial capability before the impact and considering potential future costs.
- **Provide a timeline** for the project to be delivered in relation to the proposed development, from initiation to completion. This should include a schedule of monitoring that will tie in to EIS review periods, and should highlight indicators to show progress/success.
- **Provide a level of redundancy** – all projects are anticipated to carry a level of risk, which should be accounted for when describing why a particular offset was selected

Operators would be expected to launch or fund a minimum of one programme or initiative for both Carbon and Biodiversity Offsetting. The proposed schemes may fall under any of the described categories in the table below, but are not limited to these. Research should not be a primary form of offsetting as it does not compensate directly for any impacts, but there is scope for contributions through research once practical forms of offsetting have been achieved to the best practical and realistic level.

This offsetting guidance aims to be simple, flexible and effective to give direction to pilot schemes working towards carbon neutrality and No Net Loss/Net Gain of biodiversity for the Falkland Islands.

Propose AT LEAST one Environmental Offset (<i>not limited to this list</i>)	Propose AT LEAST one Carbon Offset (<i>not limited to this list</i>)
Habitat Restoration/Protection Invasive Species Control Ecosystem Resilience and Protection (<i>including against accidental impacts</i>) Addressing FI Biodiversity Framework Threats Threats to IUCN species/habitat	Renewable Energy Improved Energy Efficiency Fuel Emissions Reductions Improving waste management Carbon sinks Voluntary Carbon credits (<i>i.e. Gold Standard</i>) Alternative Technology