

1. INTRODUCTION

This chapter describes the purpose of this report, provides a brief description of the project background, summarises the legislative authorisation requirements, and describes the structure of the report and the opportunity for comment.

1.1 PURPOSE OF THIS REPORT AND OPPORTUNITY TO COMMENT

This Final Environmental Impact Report (EIR) has been compiled and distributed for review and comment as part of the Scoping and Environmental Impact Assessment (hereafter referred to as "EIA") process that is being undertaken for the proposed exploration well drilling programme in Licence Block 2B off the West Coast of South Africa.

This report summarises the EIA process undertaken and provides an overview of the proposed project and affected environment. It also presents the findings of the specialist studies and provides an assessment of the impacts of the proposed project. The compilation of this report has been informed by comments received from Interested and/or Affected Parties (I&APs) on the Draft EIR. It should be noted that all significant changes to the Draft EIR are underlined and in a different font (Times New Roman) to the rest of the text.

I&APs are asked to comment on the Final EIR (see Section 1.6). All comments received will be submitted to the Department of Environmental Affairs (DEA), together with the Final EIR, for consideration and decision-making as part of the application for Environmental Authorisation in terms of Chapter 5 of the National Environmental Management Act, 1998 (No. 107 of 1998) (NEMA), as amended.

1.2 PROJECT BACKGROUND

Thombo Petroleum Ltd (hereafter referred to as "Thombo") is the operator and holder of an existing Exploration Right for Block 2B in terms of the Mineral and Petroleum Resources Development Act, 2002 (No. 28 of 2002) (MPRDA), as amended. The licence block covers an area of approximately 4 359 km², and is situated between latitudes 30°S and 31°S on the continental shelf in water depths of less than 200 m (see Figure 1.1).

As part of the process of applying for the Exploration Right, an Environmental Management Programme (EMPr) was compiled and approved for the undertaking of a three-dimensional (3D) seismic survey within a portion of the licence block. Under the aforementioned Exploration Right and approved EMPr, Thombo subsequently undertook a 3D seismic survey during January and February 2013 over an area of primary interest (i.e. the A-J graben), which was approximately 689 km² in extent.

Based on analysis of the seismic data, Thombo is now proposing to drill an exploration well in the area of primary interest (see Figure 1.1) in order to fully appraise the hydrocarbon potential of the geological structure or "prospect". In the event that the well is successful, it is envisaged that up to four additional wells could be drilled. This report thus considers the drilling of up to five possible exploration wells.

1.3 AUTHORISATION REQUIREMENTS

The proposed exploration well drilling programme requires authorisation in terms of both the MPRDA and NEMA. These two regulatory processes are summarised below and presented in more detail in Chapter 2.

In terms of Section 102 of the MPRDA, Thombo is required to amend its approved EMPr to which its Exploration Right relates, and submit it to the Petroleum Agency of South Africa (PASA) for consideration and subsequent approval by the Minister of Mineral Resources (or the delegated authority).

The Environmental Impact Assessment (EIA) Regulations 2010¹, promulgated in terms of Chapter 5 of NEMA, require that Environmental Authorisation is obtained from the competent authority (namely DEA) to carry out the proposed exploration well drilling programme. In order for DEA to consider the application for Environmental Authorisation an EIA process must be undertaken.

CCA Environmental (Pty) Ltd (CCA) has been appointed by Thombo to compile the EMPr Addendum and undertake the EIA process. In order to avoid duplication, where possible, the MPRDA and NEMA processes have been combined and undertaken in parallel.

1.4 TERMS OF REFERENCE

CCA's terms of reference are as follows:

1. To compile an EMPr Addendum in order to meet the requirements of Section 39 and Regulation 52 of the MPRDA;
2. To undertake the EIA for the proposed exploration well drilling programme in Block 2B in accordance with the EIA Regulations 2010 promulgated in terms of Sections 24(5), 24M and 44 of NEMA; and
3. To combine the MPRDA and NEMA processes, where possible, to avoid duplication but meet the legal requirements of both Acts.

1.5 STRUCTURE OF THIS REPORT

This report consists of eight chapters and five appendices, the contents of which are outlined below.

Section	Contents
Executive Summary	Provides a summary of the Final EIR
Chapter 1	Introduction Describes the purpose of this report, provides a brief description of the project background, summarises the legislative authorisation requirements, presents the terms of reference of the EIA, and describes the structure of the report and the opportunity for comment.
Chapter 2	Legislative requirements and study process Outlines the key environmental legislative requirements applicable to the proposed project, outlines the EIA methodology and I&AP consultation process followed in the EIA process.
Chapter 3	Project description Describes the need and desirability for the proposed project, provides general project information, an overview of the proposed exploration well drilling programme and a description of the project alternatives.
Chapter 4	Description of the affected environment Describes the existing biophysical and social environment that could be affected by the proposed project.
Chapter 5	Impact description and assessment Describes and assesses the potential impacts of the proposed project on the affected environment. It also presents mitigation or optimisation measures that could be used to reduce the significance of any negative impacts or enhance any benefits, respectively.

¹ Note: The EIA Regulations 2010 have subsequently been replaced by the EIA Regulations 2014. The EIA Regulations 2014, however, make provision for transitional arrangements in order to accommodate applications submitted in terms of the previous regulations. Further details of the transitional arrangements are presented in Section 2.1.3.

Section	Contents
Chapter 6	Conclusion and recommendations Provides conclusions to the EIA and summarises the recommendations for the proposed project.
Chapter 7	Environmental Management Programme for well drilling Provides an Environmental Management Programme for the proposed exploration drilling activities.
Chapter 8	References Provides a list of the references used in compiling this report.
Appendices	Appendix 1: DEA acceptance of the FSR Appendix 2: Public Participation <ul style="list-style-type: none"> Appendix 2.1: I&AP database Appendix 2.2: Written comments received on the FSR <u>Appendix 2.3: Notification letters</u> <u>Appendix 2.4: Written comments received on the Draft EIR / EMPr Addendum</u> <u>Appendix 2.5: Comments and Responses Report</u> Appendix 3: Specialist studies <ul style="list-style-type: none"> Appendix 3.1: Convention for assigning significance ratings to impacts Appendix 3.2: Oil spill and drill cuttings modelling Appendix 3.3: Fisheries Assessment Appendix 3.4: Marine Faunal Assessment <u>Appendix 4: Financial Provision</u> Appendix 5: Thombo's Health, Safety and Environmental Policy Appendix 6: Undertaking by the applicant

1.6 OPPORTUNITY TO COMMENT

This Final EIR has been distributed for a 40-day comment period from **28 April to 9 June 2016** (which makes provision for the public holidays on 1 and 2 May 2016) in order to provide I&APs with an opportunity to comment on any aspect of the proposed project and the findings of the EIA process. Copies of the full report have been made available on the CCA website (www.ccaenvironmental.co.za) and at the following locations:

Location	Name of facility	Physical address
Vredendal	Vredendal Library	37 Church Street, Vredendal
Springbok	Springbok Library	Namakwa Street, Springbok

Any comments on the Final EIR should be directly to DEA and copied to CCA by **no later than 9 June 2016**. Contact details of both DEA and CCA are presented below.

<u>Director: Integrated Environmental Authorisations</u> <u>Department of Environmental Affairs</u> <u>Private Bag X447</u> <u>PRETORIA, 0001</u> <u>Tel: (012) 399 9416 / 9000</u> <u>Fax to E-mail: 086 601 6892</u> <u>E-mail: cmusemburi@environment.gov.za</u> <u>Attention: Ms Constance Musemburi</u> <u>DEA Reference: 14/12/16/3/3/2/734</u>	<u>CCA Environmental (Pty) Ltd</u> <u>Unit 39 Roeland Square, 30 Drury Lane,</u> <u>CAPE TOWN, 8001</u> <u>PO Box 10145, CALEDON SQUARE, 7905</u> <u>Tel: (021) 461 1118/9</u> <u>Fax: (021) 461 1120</u> <u>E-mail: jeremy@ccaenvironmental.co.za</u> <u>Attention: Jeremy Blood</u>
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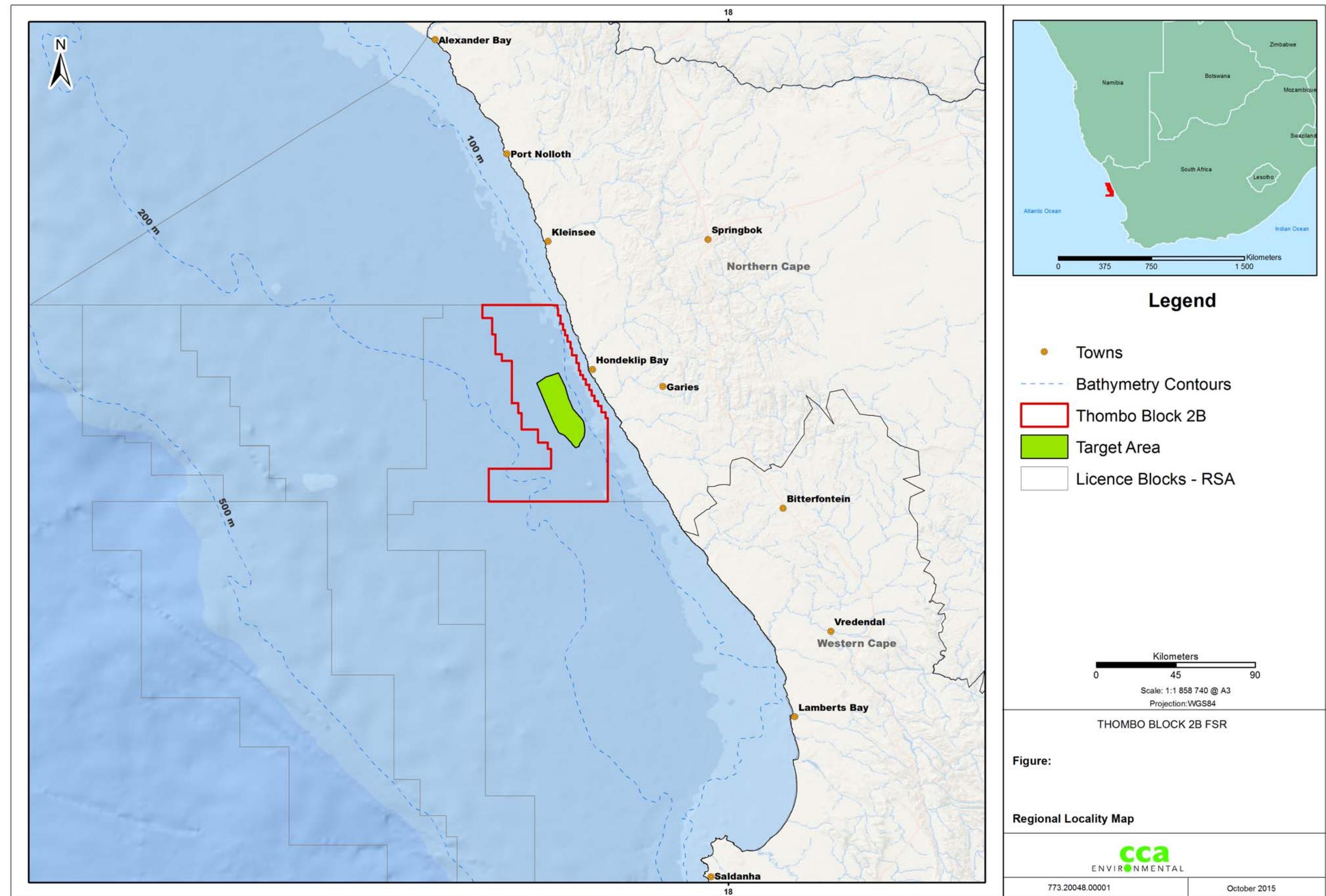


Figure 1.1: Locality of Block 2B off the West Coast of South Africa. The area of primary interest for well drilling and surrounding licence blocks are also shown.

2. EIA APPROACH AND METHODOLOGY

This chapter outlines the key legislative requirements and guiding principles underpinning the EIA and EMPr Addendum processes and outlines the methodology and I&AP consultation process followed in the EIA.

2.1 LEGISLATIVE REQUIREMENTS

2.1.1 OVERVIEW OF THE “ONE ENVIRONMENTAL SYSTEM”

In 2007 / 2008, DEA and the Department of Mineral Resources (DMR) agreed that environmental regulation would be removed from the scope of the MPRDA and would be regulated under NEMA, which will give rise to a “*One Environmental System*” for the country relating to mining and related activities. The implementation of this was given effect by the National Environmental Management Amendment Act, 2008 (No. 62 of 2008) (NEMAA) and the Mineral and Petroleum Resources Development Amendment Act, 2008 (No. 49 of 2008) (MPRDAA).

In terms of Section 14(2) of the NEMAA, any provision relating to prospecting, mining, exploration and production would only come into operation on a date 18 months after the date of commencement of Section 2 of NEMAA or the MPRDAA, whichever is the later. As the MPRDAA was the later enactment coming into effect on 7 June 2013, any provision relating to prospecting, mining, exploration and production and related activities would come into effect on 8 December 2014. This meant that the requirement for both an Environmental Authorisation under NEMA for triggered listed activities and an EMPr under the MPRDA were to remain in place until 8 December 2014.

The 18 month period was, however, deleted by the promulgation of the National Environmental Management Laws Amendment Act, 2014 (No. 25 of 2014) (NEMLA 3) on 2 September 2014. Thus any provision relating to prospecting, mining, exploration and production and related activities in NEMAA also effectively came into effect on this date. However, as the effective implementation of the “*One Environmental System*” was dependent on various related regulations being in place, DEA issued a media statement on 3 September 2014 in which it stated that the South African Government had taken a decision to only implement the “*One Environmental System*” from 8 December 2014, when the whole suite of legislation and subordinate legislation necessary for the implementation of the “*One Environmental System*” is in effect.

The “*One Environmental System*” is now in place. Notwithstanding this, both NEMAA and NEMLA 3 make provision for transitional arrangements in order to accommodate applications submitted to the competent authority before 8 December 2014, such as the current EIA and EMPr Addendum processes. These provisions are as follows:

- In terms of Section 12(2) of NEMAA, an application for authorisation that is submitted in terms of Chapter 5 of NEMA and that is pending when NEMAA comes into effect must, despite the amendment of NEMA, be dispensed with in terms of Chapter 5 of NEMA as if Chapter 5 had not been amended; and
- In terms of Section 26 of NEMLA 3, an application for an Exploration Right in terms of the MPRDA that is pending when MPRDAA comes into effect must be dispensed with as if MPRDA had not been amended.

Thus, applications for Environmental Authorisation under NEMA and an Exploration Right under the MPRDA will continue as previously undertaken.

2.1.2 MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002

In terms of the MPRDA, an Exploration Right must be approved prior to the commencement of exploration activities. A requirement for obtaining an Exploration Right is that an EMPr² for the operation must be compiled in terms of Section 39 of the MPRDA and submitted to PASA for consideration and approval by the Minister of Mineral Resources (or the delegated authority).

As noted earlier, Thombo has an existing Exploration Right and an approved EMPr for the undertaking of a 3D seismic survey within a portion of the licence block. The approved EMPr on which the current Exploration Right is based must, however, be amended to take account of the changes proposed for this project, as described in Chapter 3. In terms of Section 102 of the MPRDA, an EMPr may be amended with the written consent of the Minister (or the delegated authority).

Thus an EMPr Addendum is required for the proposed exploration well drilling in Block 2B in terms of Section 102 of the MPRDA in order to meet the requirements of Section 39 and Regulation 52 (GN No. R527) of the MPRDA.

In terms of Section 39(3)³ of the MPRDA an EMPr must:

- (a) Establish baseline information concerning the affected environment to determine protection, remedial measures and environmental management objectives;
- (b) Investigate, assess and evaluate the impact of the proposed project on:
 - (i) The environment; and
 - (ii) Any national estate referred to in Section 3(2) of the National Heritage Resources Act, 1999 (No. 25 of 1999), with the exception of the national estate contemplated in Section 3(2)(i)(vi) and (vii) of that Act.
- (d) Describe the manner in which the Applicant intends to:
 - (i) Modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;
 - (ii) Contain or remedy the cause of pollution or degradation and migration of pollutants; and
 - (iii) Comply with any prescribed waste standard or management or practices.

In terms of Regulation 52(2) of the MPRDA an EMPr must include the following:

- (a) A description of the environment likely to be affected by the proposed project;
- (b) An assessment of the potential impacts of the proposed project on the environment, socio-economic conditions and cultural heritage, if any;
- (c) A summary of the assessment of significance of the potential impacts, and the proposed mitigation and management measures to minimise adverse impacts and benefits;
- (d) Financial provision;
- (e) Planned monitoring and performance assessment of the EMPr;
- (f) Closure and environmental objectives;
- (g) A record of the public participation undertaken and the results thereof; and
- (h) An undertaking by the Applicant regarding the execution of the EMPr.

² In terms of Section 79(4)(b) of the MPRDA an Environmental Management Programme is a requirement for an Exploration Right. However, in terms of Section 69(2)(vii) “prospecting rights must be construed as reference to exploration rights” and a prospecting right requires an Environmental Management Plan in terms of Section 16(4)(a). Although the EMPr will be referred to a Programme, it will include the contents of a Plan.

³ Section 39(7) of the MPRDA states that “the provisions of subsection (3)(b)(ii) and subsection (3)(c) do not apply to applications for reconnaissance permissions, prospecting rights or mining permits.” Since “prospecting rights must be construed as reference to exploration rights” (in terms of Section 69(2)(vii)), these sections are not applicable to the amendment application.

2.1.3 NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998

Section 2 of NEMA sets out a range of environmental principles that are to be applied by all organs of state when taking decisions that significantly affect the environment. Included amongst the key principles is that all development must be socially, economically and environmentally sustainable and that environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably. NEMA also provides for the participation of I&APs and stipulates that decisions must take into account the interests, needs and values of all I&APs.

Chapter 5 of NEMA outlines the general objectives and implementation of Integrated Environmental Management (IEM), which provides a framework for the integration of environmental issues into the planning, design, decision-making and implementation of plans and development proposals. Section 24 provides a framework for granting of environmental authorisations. In order to give effect to the general objectives of IEM, the potential impacts on the environment of listed activities must be considered, investigated, assessed and reported on to the competent authority. Section 24(4) provides the minimum requirements for procedures for the investigation, assessment and communication of the potential impact of activities.

The EIA Regulations 2010 promulgated in terms of Chapter 5 of NEMA, and published in Government Notice (GN) No. R543, provides for the control of certain listed activities. These activities are listed in GN No. R544 (Listing Notice 1), R545 (Listing Notice 2) and R546 (Listing Notice 3) of 18 June 2010, and are prohibited until Environmental Authorisation has been obtained from the competent authority, in this case DEA⁴. Such Environmental Authorisation, which may be granted subject to conditions, will only be considered once there has been compliance with GN No. R543.

GN No. R543 sets out the procedures and documentation that need to be complied with when applying for environmental authorisation. A *Basic Assessment* process must be applied to an application if the authorisation applied for is in respect of an activity or activities listed in GN No. R544 and / or R546 and an *EIA* process must be applied to an application if the authorisation applied for is in respect of an activity or activities listed in GN No. R545. The proposed project includes activities contained in both Listing Notice 1 and 2 (see Table 2.1), thus it is necessary that a full EIA process is undertaken in order for DEA to consider the application in terms of NEMA.

It should be noted that subsequent to the commencement of the EIA in terms of the EIA Regulations 2010, the regulations have been replaced by the EIA Regulations 2014, which were published on 4 December 2014 and came into effect on 8 December 2014. The EIA Regulations 2014, however, make provision for transitional arrangements in order to accommodate applications submitted in terms of the previous regulations and which are pending when the EIA Regulations 2014 took effect, despite the repeal of the previous regulations. Such applications must, in terms of Regulation 53(1), be dispensed with in terms of the EIA Regulations 2010, as if these regulations had not been repealed. In addition, in terms of Regulation 53(3) where an application is pending and new activities are now applicable under the EIA Regulations 2014, these must be dispensed with in terms of the previous regulations on condition that all impacts associated with the newly identified activities have also been considered and adequacy assessed.

Listed activities in terms of the EIA Regulations 2014 applicable to the proposed well drilling programme are presented in Table 2.2. All the potential impacts associated with the newly listed activities have been considered and adequately assessed in this EIA.

⁴ DEA is the competent authority since the proposed project occurs offshore within the State-controlled Exclusive Economic Zone (EEZ). The offshore EEZ does not fall within the borders of any province of South Africa.

Table 2.1: List of applicable activities in terms of the EIA Regulations 2010.

Activity No.	Activity Description	Description of activity in relation to the proposed project
GN No. R544		
16	<i>Construction or earth moving activities in the sea, an estuary, or within the littoral active zone or a distance of 100 m inland of the high-water mark of the sea or an estuary, whichever is the greater, in respect of:</i> (iv) <i>rock revetments or stabilising structures including stabilising walls.</i>	Components of drilling infrastructure (particularly the pipes / casings inside the wellbore) are considered to be stabilising structures. Refer to Section 3.4.3.3 for a description of the proposed well drilling procedure, including the installation of pipe casings in the wellbore.
18	<i>The infilling or depositing of any material of more than 5 m³ into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 5 m³ from:</i> (ii) <i>the sea; ...</i>	The proposed exploration well drilling would result in various forms of disturbance to the seafloor that would result in more than 5 m ³ of sediment being disturbed. Disturbance would be from: <ul style="list-style-type: none">• Placement of drilling equipment on the seafloor;• Drilling the well and removal of rock cuttings, sediment and drill core; and• Disposal of drill cuttings. Refer to Section 3.4.3.6 for the anticipated well design and cuttings volumes and Section 3.4.9.2 for drilling cuttings discharge to sea.
GN No. R545		
3	<i>The construction of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 m³.</i>	The proposed drilling operation would make use of infrastructure which would handle and potentially store oil, gas and/or fuel (diesel). The combined capacity of storage (including the oil / gas in the pipes and casings inside the wellbore) would exceed 500 m ³ . Refer to Section 3.4.2 for a description of the proposed drilling unit options and Section 3.4.3.3 for a description of the proposed pipe casings, which would effectively store or handle hydrocarbons.
4	<i>The construction of facilities or infrastructure for the refining, extraction or processing of gas, oil or petroleum products with an installed capacity of 50 m³ or more per day, ...</i>	The proposed project would result in the extraction of rock particles (termed "cuttings") which, if successful, would contain traces of oil and gas. Furthermore, if hydrocarbons are encountered during the drilling operation, the well would be flow-tested. The infrastructure that would be established for these activities would have a design throughput exceeding 50 m ³ per day. Refer to Section 3.4.3.3 for a description of the proposed well drilling procedure, including the extraction of cuttings and Section 3.4.6 for a description of well (flow) testing.
6	<i>The construction of facilities or infrastructure for the bulk transportation of dangerous goods:</i> (i) <i>in gas form, outside an industrial complex, using pipelines, exceeding 1 000 m in length, with a throughput capacity more than 700 tons per day;</i> (ii) <i>in liquid form, outside an industrial complex, using pipelines, exceeding 1 000 m in length, with a throughput capacity more than 50 m³ per day; ..</i>	The proposed project would make use of drilling infrastructure (e.g. pipes, casings etc.) which, if successful, would transport oil and/or gas to the drilling unit. Due to the anticipated depth of the proposed wells, this infrastructure would exceed 1 000 m in length. The designed throughput capacity of this infrastructure could exceed the thresholds specified in the listed activity. Refer to Section 3.4.3.3 for a description of the proposed pipe casings, which would effectively transport hydrocarbons to the drilling unit.

Activity No.	Activity Description	Description of activity in relation to the proposed project
14	<i>The construction of an ..., anchored platform or any other permanent structure on or along the seabed,...</i>	<p>The proposed drilling operations would result in the placement of drilling equipment (i.e. a wellhead) on the seabed. In the case that a well is unsuccessful, the wellhead equipment would be removed. However, if a well proves commercially viable, the wellhead would remain in place until such time as the well is brought into production.</p> <p>Refer to Section 3.4.3.3 for a description of well drilling procedure, including the installation of wellheads, which, if successful, would be suspended on the seafloor, and pipe casings, which would be abandoned in the wellbore.</p>

Note: Prior to 8 December 2014, Activity 21 in GN No. R545 (Listing Notice 2) relating to "any activity which requires an Exploration Right or renewal thereof" in terms of the MPRDA had not come into force (see Section 2.1.1). Since GN No. R545 has been repealed by the promulgation of the EIA Regulations 2014, this activity is no longer applicable.

Table 2.2: List of applicable activities in terms of the EIA Regulations 2014.

Activity No.	Activity Description	Description of activity in relation to the proposed project
Listing Notice 1 (GN No. R983)		
22	<i>The decommissioning of any activity requiring:</i> <i>(i) a closure certificate in terms of Section 43 of the MPRDA; or</i> <i>(ii) a ... exploration right, where the throughput of the activity has reduced by 90% or more over a period of 5 years excluding where the competent authority has in writing agreed that such reduction in throughput does not constitute closure.</i>	<p>In terms of Section 43(3) of the MPRDA, a closure certificate must be applied for upon, <i>inter alia</i>:</p> <ul style="list-style-type: none"> • the lapsing of an Exploration Right; or • the relinquishment of any portion of the licence area. <p>Based on the results of the well drilling programme, a decision would be made as to whether to suspend or abandon the wells. The possible abandonment of wells could result in a decision by Thombo to relinquish the licence area or a portion thereof.</p> <p>Refer to Section 3.4.7 for a description of well suspension and abandonment.</p>
Listing Notice 2 (GN No. R984)		
4	<i>The development of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 m³.</i>	This activity is similar to Activity 3 in GN No. R545 (see Table 2.1).
7	<i>The development and related operation of facilities or infrastructure for the bulk transportation of dangerous goods:</i> <i>(i) in gas form, outside an industrial complex, using pipelines, exceeding 1 000 m in length, with a throughput capacity more than 700 tons per day;</i> <i>(ii) in liquid form, outside an industrial complex, using pipelines, exceeding 1 000 m in length, with a throughput capacity more than 50 m³ per day; ..</i>	This activity is similar to Activity 6 in GN No. R545 (see Table 2.1)

Activity No.	Activity Description	Description of activity in relation to the proposed project
14	<p><i>The development and related operation of:</i></p> <p><i>(ii) anchored platform; or</i></p> <p><i>(iii) any other permanent structure on or along the sea bed...</i></p>	<p>This activity is similar to Activity 14 in GN No. R545 (see Table 2.1)</p>
18	<p><i>Any activity including the operation of that activity which requires an exploration right as contemplated in Section 79 of the MPRDA, including associated infrastructure, structures and earthworks.</i></p>	<p>The proposed exploration well drilling programme requires an Exploration Right. The application for the Exploration Right is being undertaken in terms of the transitional arrangements listed under NEMAA and NEMLA 3 (see Section 2.1.1).</p> <p>Refer to Section 3.4 for a detailed description of the proposed well drilling programme including, <i>inter alia</i>, drilling unit options, drilling equipment and procedure and onshore support infrastructure.</p>
22	<p><i>Any activity including the operation of that activity associated with the primary processing of a petroleum resource including winning, extraction, classifying, concentrating, water removal, but excluding the refining of gas, oil or petroleum products in which case Activity 5 in this Notice applies.</i></p> <p>[Note: No hydrocarbon products would be refined, thus Activity 5 is not applicable].</p>	<p>This activity is similar to Activity 4 in GN No. R545 (see Table 2.1).</p> <p>Refer to Section 3.4.3.3 for a description of the proposed well drilling procedure, including the extraction of cuttings and Section 3.4.6 for a description of well (flow) testing.</p>

2.1.4 NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008

The National Environmental Management: Waste Act, 2008 (No. 59 of 2008) (NEM:WA) regulates all aspects of waste management and has an emphasis on waste avoidance and minimisation. NEM:WA creates a system for listing and licensing waste management activities. Listed waste management activities above certain thresholds are subject to a process of impact assessment and licensing. Activities listed in Category A require a Basic Assessment, while activities listed in Category B require an EIA.

As there has been uncertainty as to the applicability of NEM:WA with regards to operations offshore this issue was raised with DEA. They subsequently responded that NEM:WA is not applicable to offshore oil and gas operations. The proposed onshore activities would not trigger the need for a Waste Management Licence.

2.1.5 NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT, 2004

The National Environmental Management: Air Quality Act, 2004 (No. 39 of 2004) (NEM:AQA) regulates all aspects of air quality, including prevention of pollution, providing for national norms and standards and including a requirement for an Atmospheric Emissions Licence for listed activities, which result in atmospheric emissions and have or may have a significant detrimental effect on the environment. Activities that require an Atmospheric Emission Licence are listed in GN No. 893 (22 November 2013), published in terms of Section 21(1)((b) of the NEM:AQA. In terms of Section 22 of NEM:AQA no person may conduct a listed activity without an Atmospheric Emission Licence.

Although DEA: Air Quality Management Services has indicated that the offshore incineration of waste is a listed activity (Category 8.1) and requires an Atmospheric Emission Licence, Thombo has indicated that they

would bring all waste to shore for disposal. Thus no offshore incineration of waste would be undertaken as part of the proposed project.

2.1.6 OTHER RELEVANT LEGISLATION

In addition to the foregoing, Thombo would need to ensure compliance with the provisions of other relevant international and national legislation and conventions, which includes, amongst other, the following:

International Marine Pollution Conventions

- International Convention for the Prevention of Pollution from Ships, 1973/1978 (MARPOL);
- Amendment of the International Convention for the Prevention of Pollution from Ships, 1973/1978 (MARPOL) (Bulletin 567 – 2/08);
- International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC Convention);
- United Nations Convention on Law of the Sea, 1982 (UNCLOS);
- Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (the London Convention) and the 1996 Protocol (the Protocol);
- International Convention relating to Intervention on the High Seas in case of Oil Pollution Casualties (1969) and Protocol on the Intervention on the High Seas in Cases of Marine Pollution by substances other than oil (1973);
- Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal (1989); and
- Convention on Biological Diversity (1992).

Other International Legislation

- International Commission on Radiological Protection (ICRC);
- International Atomic Energy Agency (IAEA) Regulations for the Safe Transport of Radioactive Material, 1984;

Other South African legislation

- Carriage of Goods by Sea Act, 1986 (No. 1 of 1986);
- Dumping at Sea Control Act, 1980 (No. 73 of 1980);
- Hazardous Substances Act, 1983 and Regulations (No. 85 of 1983);
- Marine Living Resources Act, 1998 (No. 18 of 1998);
- Marine Traffic Act, 1981 (No. 2 of 1981);
- Marine Pollution (Control and Civil Liability) Act, 1981 (No. 6 of 1981);
- Marine Pollution (Prevention of Pollution from Ships) Act, 1986 (No. 2 of 1986);
- Marine Pollution (Intervention) Act, 1987 (No. 65 of 1987);
- Maritime Safety Authority Act, 1998 (No. 5 of 1998);
- Maritime Safety Authority Levies Act, 1998 (No. 6 of 1998);
- Maritime Zones Act, 1994 (No. 15 of 1994);
- Merchant Shipping Act, 1951 (No. 57 of 1951);
- Mine Health and Safety Act, 1996 (No. 29 of 1996);
- National Environmental Management: Biodiversity Act, 2004 (No. 10 of 2004);
- National Environmental Management: Integrated Coastal Management Act, 2008 (No. 24 of 2008);
- National Environmental Management: Protected Areas Act, 2003 (No. 57 of 2003);
- National Heritage Resources Act, 1999 (No. 25 of 1999);
- National Nuclear Energy Regulator Act, 1999 (No. 47 of 1999);
- National Ports Act, 2005 (No. 12 of 2005);

- National Water Act, 1998 (No. 36 of 1998);
- Northern Cape Nature Conservation Act (No. 9 of 2009);
- Nuclear Energy Act, 1999 (No. 46 of 1999);
- Occupational Health and Safety Act, 1993 (No. 85 of 1993) and Major Hazard Installation Regulations;
- Sea-Shore Act, 1935 (No. 21 of 1935);
- Sea Birds and Seals Protection Act, 1973 (No. 46 of 1973);
- Ship Registration Act, 1998 (No. 58 of 1998);
- South African Maritime Safety Authority Act, 1998 (No. 5 of 1998);
- South African Maritime Safety Authority Levies Act, 1998 (No. 6 of 1998); and
- Wreck and Salvage Act, 1995 (No. 94 of 1995).

2.1.7 GUIDELINES AND POLICIES

The guidelines and policies listed below have or will be taken into account during the EIA and EMPr Addendum processes.

Table 2.3: Guidelines and policies relevant to the proposed project.

Guideline	Governing body	Applicability
IEM Guideline Series (Guideline 5): Companion to the EIA Regulations 2010 (October 2012)	DEA	This guideline was consulted to inform the applicability of listed activities to the proposed project.
Scoping, Integrated Environmental Management, Information Series 2 (2002)	DEA	This guideline was consulted to obtain guidance on how to implement scoping.
IEM Guideline Series (Guideline 9): Draft guideline on need and desirability in terms of the EIA Regulations 2010 (October 2012)	DEA	This guideline was consulted to inform the need and desirability of the proposed project.
Stakeholder Engagement, Integrated Environmental Management, Information Series 3 (2002)	DEA	These public participation guidelines were consulted to ensure that an adequate public participation process is undertaken.
IEM Guideline Series (Guideline 7): Public participation in the EIA process (October 2012)		
Guidelines – Consultation with I&APs (December 2011)	PASA	
Specialist Studies, Integrated Environmental Management, Information Series 4 (2002)	DEA	This guideline was consulted to ensure adequate development of terms of reference for specialist studies.
Impact significance, Integrated Environmental Management, Information Series 5 (2002)	DEA	This guideline was consulted to inform the assessment of significance of impacts of the proposed project.
Cumulative Effects Assessment, Integrated Environmental Management, Information Series 7 (2004)	DEA	This guideline was consulted to inform the consideration of potential cumulative effects of the proposed project.
Criteria for determining Alternatives in EIA, Integrated Environmental Management, Information Series 11 (2004)	DEA	This guideline was consulted to inform the consideration of alternatives.
Environmental Management Plans, Integrated Environmental Management, Information Series 12 (2004)	DEA	This guideline was consulted to ensure that the Environmental Management Programme has been adequately compiled.
Environmental Impact Reporting, Integrated Environmental Management, Information Series 15 (2004)	DEA	This guideline was consulted to inform the approach to impact reporting.

2.2 EIA PROCESS

2.2.1 EIA OBJECTIVES

The EIA process has the following important objectives:

- To dovetail the processes required in terms of the NEMA and the MPRDA;
- To provide a reasonable opportunity for I&APs to be involved in the study;
- To ensure that all potential key environmental issues and impacts that would result from the proposed project are identified;
- To identify feasible alternatives related to the project proposal;
- To assess potential impacts of the proposed project alternatives during the different phases of project development;
- To present appropriate mitigation or optimisation measures to minimise potential impacts or enhance potential benefits, respectively; and
- Through the above, to ensure informed, transparent and accountable decision-making by the relevant authorities.

The EIA process consists of a series of steps to ensure compliance with these objectives and the EIA Regulations 2010 as set out in GN No. R543. The process involves an open, participatory approach to ensure that all impacts are identified and that decision-making takes place in an informed, transparent and accountable manner.

2.2.2 ASSUMPTIONS AND LIMITATIONS

The EIA assumptions and limitations are listed below:

- The EIA assumes that CCA has been provided with all relevant project information and that it was correct, technically feasible and valid at the time it was provided;
- Specialists were provided with all the relevant project information in order to produce accurate and unbiased assessments;
- There will be no significant changes to the project description or surrounding environment between the completion of the Final EIR and implementation of the proposed project that could substantially influence findings, recommendations with respect to mitigation and management, etc.; and
- Certain details regarding the proposed well drilling programme were not available at the time of report writing, e.g. the actual specific locations of the wells, drilling unit / vessels to be used, exact timing of well drilling, etc.).

These assumptions and limitations, however, are not considered to have any negative implications in terms of the credibility of the results of the EIA or the required management actions included in this report.

2.2.3 EIA PROCESS

A flowchart indicating the EIA process is presented in Figure 2.1.

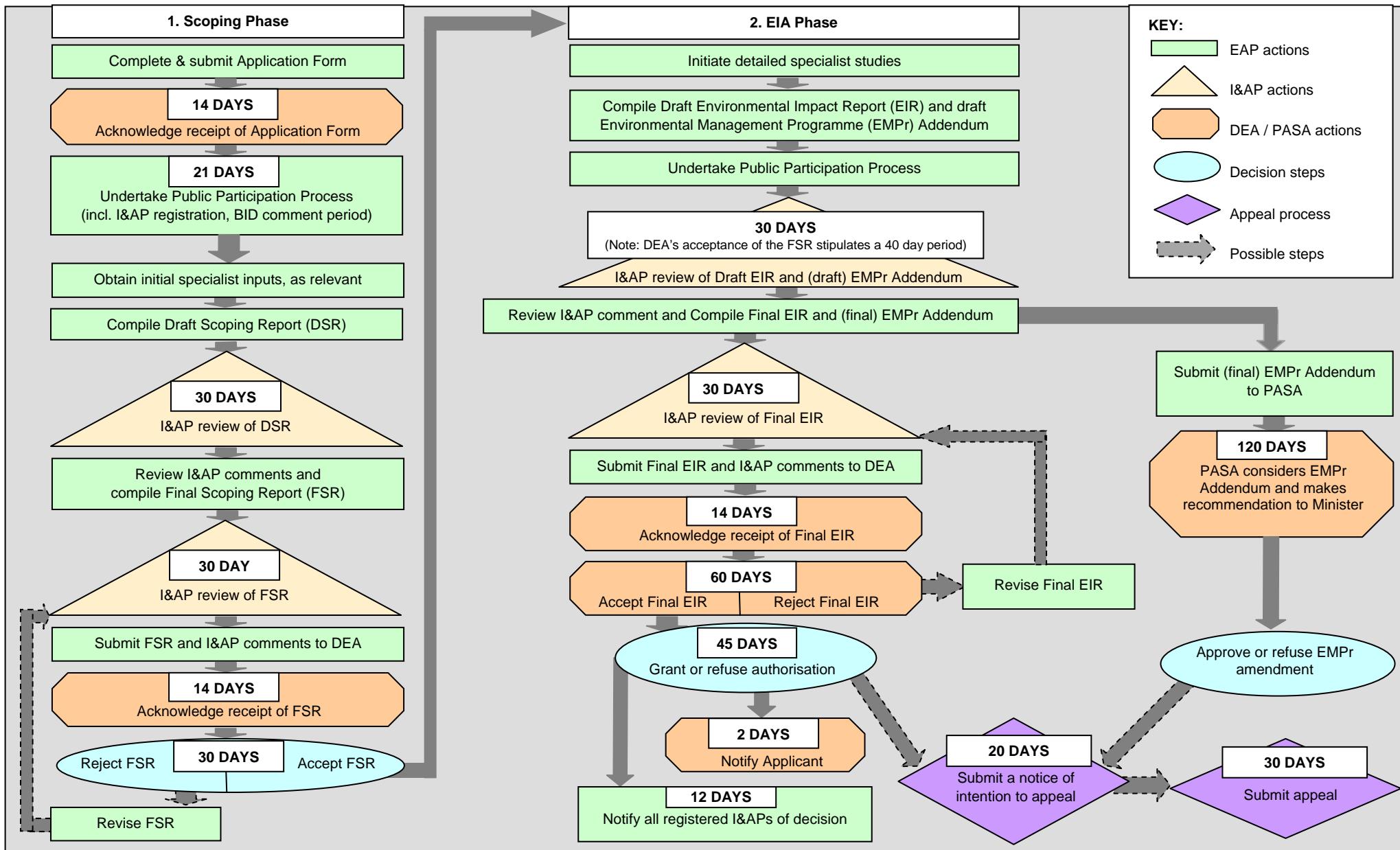


Figure 2.1: Flow diagram showing the EIA process (including EMPr addendum process).

2.2.3.1 Scoping Phase

The Scoping Phase undertaken followed the requirements of NEMA and the EIA Regulations 2010, as set out in GN No. R543. This involved a process of notifying I&APs of the proposed project and EIA process in order to ensure that all potential key environmental impacts, including those requiring further investigation, were identified. Steps undertaken during this phase are summarised in Box 2.1.

The key issues and concerns identified by the project team, with I&AP input, during the Scoping Phase are summarised in Box 2.2. This information provided the basis on which the specialist studies and associated terms of references were determined.

The Final Scoping Report (FSR), which was prepared in compliance with Section 28(1) of the EIA Regulations 2010, was accepted by DEA on 5 August 2015 (see Appendix 1). DEA's acceptance of the FSR stated that the next phase of the EIA may proceed as outlined in the Plan of Study for EIA, which was included in the FSR.

Box: 2.1: Tasks undertaken during the Scoping Phase.

1. Project registration

An "Application Form for Environmental Authorisation" was submitted to DEA on 27 August 2014 to register the proposed project. The submitted application was accepted on 16 September 2014.

2. Initial public participation process

The initial public participation process involved the following:

- Identification of I&APs: A preliminary I&AP database of authorities, Non-Governmental Organisations, Community-based Organisations and other key stakeholders was compiled using the existing database for Block 2B, as well as other databases of previous studies undertaken in West Coast offshore region. Additional I&APs were added to the database based on responses to the advertisements and notification letters. To date 227 I&APs have been registered on the project database (see Appendix 2.1).
- Distribution of Background Information Document (BID): A notification letter and BID were distributed for a 21-day registration and comment period from 29 August to 19 September 2014. The purpose of the letter and BID was to convey information on the proposed project and to invite I&APs to register on the project database and provide initial comment.
- Advertisements: Advertisements announcing the proposed project, the availability of the BID and the I&AP registration / comment period were placed in regional (Cape Times and Die Burger) and local (Plattelander and Namakwalander) newspapers.

Only one written submission was received during the initial public participation process. This submission was from the South African Inshore Fishing Industry Association requesting to be registered on the project database.

3. Compilation and review of Draft Scoping Report (DSR)

The DSR was distributed for a 30-day review and comment period from 12 November to 12 December 2014. Tasks undertaken included:

- DSR availability: Copies of the DSR were made available on the CCA website and at venues in Vredendal and Springbok. Copies of the DSR were also sent directly to key authorities and key stakeholders.
- I&AP notification: A notification letter was sent to all I&APs registered on the project database.

4. Authority meetings

Authority meetings were held with:

- Namakwa District Municipality, Nama-Khoi Municipality and Richtersveld Municipality on 25 February 2015; and
- Northern Cape Provincial Coastal Committee on 26 February 2015.

At these meetings CCA provided an overview of three proposed oil and gas projects located off the West Coast, including Thombo's proposed exploration well drilling in Block 2B, and provided stakeholders the opportunity to raise any issues or concerns regarding the proposed projects.

5. Compilation and review of FSR

The preparation of the FSR was informed by comments received during the DSR comment period. A total of eight written submissions were received during this period, relating to the potential impact on fishing activities, historical wrecks, employment and skills development, port and landfill capacity in Saldanha and I&AP registration. All comments were collated and responded to into an Issues and Responses Trail, which was appended to the FSR.

The FSR was distributed for a 30-day review and comment period from 13 May to 12 June 2015. Notification and distribution of the FSR was as per that undertaken for the DSR.

6. Submission of FSR and associated comments to DEA

A total of six written submissions were received during the FSR review and comment period (see Appendix 2.2). The FSR, together with all comments received on the FSR, was submitted to DEA on 17 June 2015 for consideration and acceptance.

All comments received on the FSR have been collated, and responded to, in a Comments and Responses Report (see Appendix 2.5).

Box 2.2: Key issues identified by the project team, with I&APs input, during the Scoping Phase.

Potential impact on marine ecology:

- Emissions from the combustion of fuel, as well as the burning of wastes and flaring;
- Normal discharges to sea, including sewage, galley waste, and deck and machinery space drainage;
- Localised disturbance of marine fauna due to noise and lighting from the drilling unit and support vessels;
- Physical damage to the seabed and sediment disturbance due to drilling activities and placement of infrastructure on the seafloor;
- Smothering of relatively immobile or sedentary benthic species or biochemical effects (e.g. direct toxicity and bioaccumulation) due to the discharge of cuttings, drilling fluid and cement during well drilling;
- Increased biodiversity and biomass on wellhead due the increased amount of hard substrate available for colonisation by benthic organisms;
- Introduction of alien invasive marine species through vessels and equipment transfer and ballast water discharge; and
- Accidental release of oil.

Potential impact on fishing:

- Loss of access to fishing grounds;
- Disruption of fishing activities due to presence of drilling unit and drilling infrastructure on the seafloor; and
- Accidental release of oil.

Potential impact on other marine mining and exploration operations:

- Disruption of activities as a result of statutory activity safety zone.

Potential impact on marine transport routes:

- Interference with shipping routes as a result of statutory activity safety zone.

Physical damage to shipwrecks:

- Disturbance of shipwrecks due to drilling activities and the installation of subsea infrastructure on the seabed.

Potential socio-economic impacts:

- Employment and business opportunities;
- Skills development; and
- Generation of direct revenues.

2.2.3.2 EIA Phase

Specialist studies

Three specialist studies were undertaken to address the key issues that required further investigation and detailed assessment, namely: (1) oil spill and drill cuttings modelling, (2) the impact on commercial fishing, and (3) the impact on marine fauna. A list of the specialists and their details are provided in Table 2.4.

Oil spill and drill cuttings modelling used available metocean data to model the extent and concentration of various discharge scenarios (including drilling cuttings and hydrocarbon spills). The other two specialist studies involved the gathering of data relevant (including the results of the modelling study) to identifying and assessing environmental impacts that may occur as a result of the proposed project. These impacts were then assessed according to pre-defined rating scales (see Appendix 3.1). Specialists also recommended appropriate mitigation or optimisation measures to minimise potential impacts or enhance potential benefits, respectively.

Table 2.4: List of specialist studies and specialists.

No.	Specialist study	Specialist/s	Qualifications	Company	Appendix
1	Oil spill and drill cuttings modelling	Mr Stephen Luger	MSc (Engineering), University of Cape Town	Prestedge Retief Dresner Wijnberg (PRDW)	3.2
2	Fishing	Mr Dave Japp	MSc (Ichthyology and Fisheries Science), Rhodes University	Capricorn Marine Environmental (Pty) Ltd	3.3
		Ms Sarah Wilkinson	BSc (Hons) (Botany), University of Cape Town		
3	Marine fauna	Dr Andrea Pulfrich	PhD (Fisheries Biology), Christian-Albrechts University, Kiel, Germany	Pisces Environmental Services (Pty) Ltd	3.4

Compilation and review of Draft EIR

The Draft EIR was prepared in compliance with Section 31(2) of the EIA Regulations 2010. The specialist studies and other relevant information / assessments have been integrated into the Draft EIR. The Draft EIR has also been informed by DEA's acceptance of the FSR (see Appendix 1) and I&AP comments received during the FSR comment period (see Appendix 2.2).

The Draft EIR was distributed for a 40-day review and comment period from 5 February to 16 March 2016 in order to provide I&APs with an opportunity to comment on any aspect of the proposed project and the findings of the EIA process. Public participation tasks undertaken during this phase are summarised in Box 2.3 and all supporting information is presented in appendices to this report.

A total of eight written submissions were received during the Draft EIR review and comment period (see Appendix 2.4). Written submissions were received from the following I&APs:

Authorities and Organs of State	Organisations
<ul style="list-style-type: none"> DEA: Integrated Environmental Authorisations (Sabelo Malaza) DEA: Coastal Conservation Strategies (Ramakulukusha Moses) Northern Cape Government: Department of Environmental and Nature Conservation (DE&NC) (L. Tools-Bernado) DE&NC (Onwabile Ndzumo) Saldanha Bay Municipality (Municipal Manager and Nazeema Duarte) South African Heritage Resources Agency (SAHRA) (John Gribble) South African National Biodiversity Institute (SANBI) (Kerry Sink) 	<ul style="list-style-type: none"> De Beers Marine (Lesley Roos)

All comments received have been collated, and responded to, in an updated Comments and Responses Report (see Appendix 2.5). A summary of the key issues / comments raised is provided below:

- The Saldanha Bay Municipality raised concerns regarding the possible introduction of non-indigenous invasive marine species due to ballast water discharge. This issue is addressed in Section 5.3.6;
- SAHRA and De Beers Marine requested various amendments to the heritage and marine mining sections, respectively, all of which have been implemented;
- SANBI enquired whether the proposed project overlapped with the proposed Namaqua National Park Marine Protected Area (MPA), which was gazetted for declaration on 3 February 2016; and
- DE&NC raised issues relating to and requested further information on the public participation process, the proposed Namaqua National Park MPA, management of alien invasive species and the proposed pre-drilling sonar survey.

Box 2.3: Tasks undertaken during the Draft EIR review and comment period.

1. Draft EIR availability

Copies of the Draft EIR were made available on the CCA website (www.ccaenvironmental.co.za) and at the Vredendal and Springbok libraries for the duration of the review and comment period (5 February to 16 March 2016).

2. I&AP notification

A notification letter was sent to all I&APs registered on the project database. The letter informed them of the release of the Draft EIR and where the report could be reviewed (see Appendix 2.3 for letter and proof of distribution). To facilitate the commenting process, a copy of the Draft EIR Executive Summary and a Comment Form were enclosed with each letter.

Copies of the Draft EIR were also sent directly to the following key authorities and key stakeholders (see Appendix 2.3 for letters and proof of distribution):

No.	Organisation	Contact person
1	Department of Agriculture, Forestry and Fisheries	Deon Durholtz
2	Department of Environmental Affairs: Integrated Environmental Authorisations	Millicent Solomons
3	Department of Environmental Affairs: Integrated Coastal Management	Lindelani Mudau
4	Kamiesberg Local Municipality	Joseph Cloete
5	Matzikama Local Municipality	Mark Bolton
6	Nama Khoi Local Municipality	Russell Hartley
7	Namakwa District Municipality	Chris Fortuin
8	Northern Cape Government: Department of Environmental Affairs and Nature Conservation: Environmental Management	Tsholofelo Leburu
9	Petroleum Agency of South Africa	Phumla Ngesi
10	Richtersveld Local Municipality	Dalene Farmer
11	Saldanha Bay Local Municipality	Louis Scheepers
12	South African Heritage Resources Agency: Maritime & Underwater Cultural Heritage	John Gribble
13	West Coast District Municipality	Henry Prins

Compilation and review of Final EIR

This Final EIR has been prepared in compliance with Section 31(2) of the EIA Regulations 2010 (see Table 2.5) and has been informed by comments received on the Draft EIR (see Appendix 2.4 and 2.5).

This report aims to present all information in a clear and understandable format, suitable for easy interpretation by I&APs and authorities, and to provide a further opportunity to comment on the proposed project and findings of the EIA process (see Section 1.6 for details of the comment period).

Written comments on the Final EIR that are copied to CCA will be submitted to DEA, together with the Final EIR, for consideration and decision-making.

Completion of the EIA Phase

The following steps are envisaged for the remainder of the EIA process (see Figure 2.1):

- After DEA has reached a decision, all I&APs on the project database will be notified of the outcome of the application and the reasons for the decision; and
- A statutory appeal period in terms of the National Appeal Regulations (GN No. R993) will follow the issuing of the decision.

Table 2.5: Requirements of an Environmental Impact Report in terms of the EIA Regulations 2010.

Section 31(2)	Content of Environmental Impact Report	Completed (Y/N or N/A)	Location in Final EIR
(a)	(i & ii) Details and expertise of EAP who prepared the report.	Y	page ii
(b)	Detailed description of the proposed activity.	Y	Chapter 3
(c)	A description of the property on which the activity is to be undertaken and the location of the activity on the property, or if it is:	N/A	Section 3.2.2
	(i) a linear activity, a description of the route of the activity; or	N/A	
	(ii) An ocean-based activity, the co-ordinates where the activity is to be undertaken.	Y	
(d)	A description of the environment that may be affected by the activity and the manner in which the physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed activity.	Y	Chapter 4
(e)	Details of the public participation process conducted in terms of sub-regulation 1, including:		
	(i) Steps undertaken in accordance with the plan of study;	Y	Sections 1.6 & 2.2.3.2
	(ii) A list of all persons or organisations and organs of state that were registered as interested and affected parties;	Y	Appendix 2.1
	(iii) A summary of comments received from and a summary of issues raised by registered I&APs, the date of receipt of these comments and the response of the EAP to those comments; and	Y	Appendix 2.5
	(iv) Copies of any representations and comments received from registered I&APs.	Y	Appendix 2.2 & 2.4
(f)	A description of the need and desirability of the proposed activity.	Y	Section 3.1
(g)	A description of identified potential alternatives to the proposed activity, including advantages and disadvantages that the proposed activity or alternatives may have on the environment and the community that may be affected by the activity.	Y	Section 3.3, 3.4 & 3.4.10
(h)	An indication of the methodology used in determining the significance of potential environmental impacts.	Y	Appendix 3.1
(i)	A description and comparative assessment of all alternatives identified during the EIA process.	Y	Chapter 5 & Section 6.1.3
(j)	A summary of the findings and recommendations of any specialist report or report on a specialised process.	Y	Chapter 5 & 6
(k)	A description of all environmental issues that were identified during the EIA process, an assessment of the significance of each issue and an indication of the extent to which the issues could be addressed by the adoption of mitigation measures.	Y	Box 2.2 & Chapter 5

(l)	An assessment of each identified potentially significant impact, including: (i) Cumulative impacts; (ii) The nature of the impact; (iii) The extent and duration of the impact; (iv) The probability of the impact occurring; (v) The degree to which the impact can be reversed; (vi) The degree to which the impact may cause irreplaceable loss of resources; and (vii) The degree to which the impact can be mitigated.	Y	Chapter 5
(m)	A description of any assumptions, uncertainties and gaps in knowledge.	Y	Section 2.2.2
(n)	A reasoned opinion as to whether the activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation.	Y	Sections 6.1.4 & 6.2
(o)	An environmental impact statement which contains: (i) A summary of the key findings of the EIA; and (ii) A comparative assessment of the positive and negative implications of the proposed activity and identified alternatives.	Y	Section 6.1.1 to 6.1.3
(p)	A draft environmental management programme containing the aspects contemplated in Regulation 33.	Y	Chapter 7
(q)	Copies of specialist reports and reports on specialised processes complying with Regulation 32.	Y	Appendices 3.2 to 3.4
(r)	Any specific information that may be required by the competent authority. DEA listed information requirements in their Letter of Acceptance of the FSR. Information included:	Y	Appendix 1
	• Comments from all relevant stakeholders, including but not limited to Northern Cape Government: Department of Environment and Nature Conservation, Department of Agriculture Fisheries and Forestry, local authorities and DEA: Oceans and Coasts Directorate.	Y ⁵	Appendix 2.4
	• Proof of correspondence with various stakeholders.	N/A	Appendix 2.3
	• An amended application form must be submitted with the EIR. The listed activities included in the FSR do not correspond with the listed activities provided in the application form. The application form only lists the EIA Regulations 2010 as being triggered while the FSR lists the EIA Relations 2014. Furthermore, listed activities must not be included in the application form as a precautionary measure (avoid using the word "may" in describing the activity).	Y	A revised application form will be submitted to DEA with the Final EIR
	• The description of the proposed development in the FSR is inadequate as it does not describe the full extent of the proposed development including associated infrastructure. No detailed information (e.g. capacity and location of facilities) regarding the storage and handling of a dangerous good has been provided.	Y	Sections 3.4.3.3, 3.4.4, 3.4.6 and 3.4.8.1
	• Details of the future plans for the site and infrastructure after decommissioning in 20 -30 years.	Y	Section 3.4.7
	• Possible impacts and effects of the development on all aspects indicated in the FSR must be assessed in the EIA process.	Y	Chapter 5
	• Specialist assessments must clearly show how the assessment of alternatives identified informed the outcome of the EIA process.	Y	Chapter 5 & Section 6.1.3
	• A construction and operational phase Environmental Management Programme.	Y	Chapter 7
	• A3 regional map	Y	Figure 1.1

⁵ Although all the authorities were notified and provided with an opportunity to comment, written comments were not received from all of them.

	<ul style="list-style-type: none">• Letter from pertinent heritage authority if Section 38 of the National Heritage Resources Act, 1999 (NHRA) if applicable.	N/A	-
(s)	Any other matters required in terms of Sections 24(4)(a) and (b) of the Act. (This refers to Environmental Authorisations and procedures for the investigation, assessment and communication of the potential consequences or impacts of activities on the environment that the authority needs to consider when reviewing an Application).	Y	-