

## Lyndle Naidoo

---

**From:** Lyndle Naidoo  
**Sent:** Wednesday, 04 November 2020 12:28  
**To:** SMbanjwa@environment.gov.za; MTshangela@environment.gov.za;  
MAMakwarela@environment.gov.za; JWiti@environment.gov.za; Lyndon Mardon  
**Cc:** Nicola Rump  
**Subject:** RE: REQUEST FOR COMMENT: Climate Change Assessment for Proposed Coega Gas to Power EIA

Good day all,

Herewith please refer to the below for the latest version of the ToR for the specialist studies:

### 6.5 Draft Terms of Reference for Specialist Studies

The generic terms of reference for each specialist study are to:

- Describe the existing baseline characteristics of the study area and place this in a regional context;
- Identify and assess potential impacts resulting from the Project (including impacts associated with the construction, operation, and [if appropriate] closure phases of the project), using SRK's prescribed impact rating methodology;
- Identify and describe potential cumulative impacts resulting from the proposed development in relation to proposed and existing developments in the surrounding area;
- Recommend mitigation measures to avoid or minimise impacts and/or optimise benefits associated with the proposed Project; and
- Recommend and draft a monitoring campaign, if applicable.

The precise scope of specialist studies will be defined during the Initiation Phase and presented in the Scoping Report. Nevertheless, preliminary Terms of Reference for specialist studies are provided below.

#### 6.5.1 Air Quality

The specific terms of reference for the specialist study are:

- Conduct a baseline assessment;
- Describe sources of emissions and compile an emissions inventory for the project;
- Undertake dispersion modelling for key pollutants identified as part of the emissions inventory;
- Predict ambient concentrations, rendered as isopleths on a base map of the surrounding area;
- Assess impacts during construction, operation and decommissioning phases of the projects;
- Identify 'abnormal' operating conditions (e.g. start-up & maintenance) that may lead to air emissions;
- Make recommendations of management and mitigation measures (including optimal height of stacks) associated with impacts from the proposed power plants; and
- Include assessment of cumulative impacts on air quality, with reference to the additional emissions each power plant will add.

### 6.5.3 Climate Change

The proposed Terms of Reference for this study are as follows:

- Determine the Greenhouse Gas (GHG) inventory of the project for project construction and operational phases with respect to direct and indirect emissions. In this context:
  - Determine the project boundaries;
  - Identify sources of greenhouse gas emissions and priority pollutants;
  - Calculate the project's carbon footprint; and
  - Provide guidance on reporting and verification;
  - Analyse the project's greenhouse gas emissions including upstream and downstream sources of greenhouse gas emissions;
  - Where information is not available in this regard, develop a set of assumptions to inform the upstream and downstream greenhouse gas emissions;
  - Assessment of the impact of carbon tax as a result of the project
- Climate change impact assessment:
  - Determine a climate change baseline for the project;
  - Determine the impact of the project's greenhouse gas emissions (carbon dioxide, methane and nitrous oxide) on climate change; and
  - Comparison of impacts against project alternatives;
  - Identify and assess climate change impacts, including cumulative impacts of the project
- Climate change vulnerability of the project:
  - Potential impact of climate change on the project in terms of available climate data;
  - Potential climate change impacts for the region of operation in terms of project risks, the social context, project value chain and broader environmental risks.
- Analysis of project alternatives and potential mitigation / adaptation measures.

Kind regards,

**Lyndle Naidoo** MSc

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001


P O Box 21842, Port Elizabeth, 6000

Tel: +27-(0)41-5094800; Fax: +27-(0)41-5094850

Direct: +27-(0)41-5094838; Email: [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

 Please consider the environment before printing this e-mail.

---

**From:** Lyndle Naidoo

**Sent:** Tuesday, 03 November 2020 16:08

**To:** SMbanjwa@environment.gov.za; MTshangela@environment.gov.za; MAMakwarela@environment.gov.za; JWiti@environment.gov.za; Lyndon Mardon <Lyndon.Mardon@deda.gov.za>

**Cc:** Nicola Rump <NRump@srk.co.za>

**Subject:** RE: REQUEST FOR COMMENT: Climate Change Assessment for Proposed Coega Gas to Power EIA

Good day all,

Just following up on the request for input and comment on the Climate Change Assessment for the Proposed Coega Gas to Power EIA. Please find attached the draft Terms of Reference (ToR) for the Climate Change Assessment proposed for the Coega Gas to Power Environmental Impact Assessment. We have been requested by the Coega Development Corporation to forward the ToR to you for your input and comment.

We hope to receive your input and comment at your earliest convenience.

Kind regards,

**Lyndle Naidoo** MSc

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

Tel: +27-(0)41-5094800; Fax: +27-(0)41-5094850

Direct: +27-(0)41-5094838; Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Wanda Marais <[WMarais@srk.co.za](mailto:WMarais@srk.co.za)>

**Sent:** Wednesday, 22 April 2020 13:18

**To:** [SMbanjwa@environment.gov.za](mailto:SMbanjwa@environment.gov.za); [MTshangela@environment.gov.za](mailto:MTshangela@environment.gov.za); [MAMakwarela@environment.gov.za](mailto:MAMakwarela@environment.gov.za); [JWiti@environment.gov.za](mailto:JWiti@environment.gov.za); Lyndon Mardon <[Lyndon.Mardon@dedea.gov.za](mailto:Lyndon.Mardon@dedea.gov.za)>

**Cc:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>; Tanya Speyers <[TSpeyers@srk.co.za](mailto:TSpeyers@srk.co.za)>

**Subject:** REQUEST FOR COMMENT: Climate Change Assessment for Proposed Coega Gas to Power EIA

**Importance:** High

Good afternoon all,

**REQUEST FOR COMMENT: Climate Change Assessment for Proposed Coega Gas to Power EIA**

Please find attached the draft Terms of Reference (ToR) for the Climate Change Assessment proposed for the Coega Gas to Power Environmental Impact Assessment. We have been requested by the Coega Development Corporation to forward the ToR to you for your input and comment.

Kindly forward your thoughts and recommendations for consideration by the applicant.

Kind Regards

**Wanda Marais** B Proc

Public Participation Practitioner



SRK Consulting (South Africa) (Pty) Ltd

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-509-4809; **Fax:** +27-(0)41-509-4850

**Email:** [wmarais@srk.co.za](mailto:wmarais@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*



## Lyndle Naidoo

---

**From:** Lyndle Naidoo  
**Sent:** Wednesday, 04 November 2020 07:22  
**To:** Buyiswa Humani  
**Cc:** Air Pollution; Nicola Rump  
**Subject:** RE: Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

Good day Buyiswa,

Thank you for your email. We look forward to receiving your input.

Kind regards,

**Lyndle Naidoo** *MSc*  
Environmental Scientist  
ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001  
P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Buyiswa Humani <bhumani@mandelametro.gov.za>

**Sent:** Tuesday, 03 November 2020 18:58

**To:** Lyndle Naidoo <LNaidoo@srk.co.za>

**Cc:** Air Pollution <Airpoll@mandelametro.gov.za>

**Subject:** RE: Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

**EXTERNAL**

Good day Lyndle

I acknowledge receipt of your emails. Inputs will be forwarded before the end of this week  
We have been struggling lately working under abnormal conditions due to escalating covid-19 cases.

I have tried contacting you without luck both on office and mobile number.

Kind contact me from 0660434311 should a need arise.

Kind Regards,

Buyiswa Deliwe

Manager:Environmental Health

Air Pollution & Noise Control Section

Public Health Directorate

Nelson Mandela Bay Municipality

Tel: 041 5065215

Fax:041 5061596

Email:[bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za)

### Disclaimer

Before acting on the contents of this e-mail, the recipient should verify that the originator has the appropriate authority and any person neglecting to obtain such verification will be acting entirely at his/her own risk.

Please further note that any confidential, private or privileged information contained in the message is subject to legal privilege.

>>> Lyndle Naidoo <[L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)> 2020/10/30 10:32 AM >>>

Good day Buyiswa,

Just following up on the previous email sent with regards to the dispersion modelling plan of study report.

We hope to receive your input at your earliest convenience.

Kind regards,

**Lyndle Naidoo** MSc

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

Tel: +27-(0)41-5094800; Fax: +27-(0)41-5094850

Direct: +27-(0)41-5094838; Email: [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Lyndle Naidoo  
**Sent:** Tuesday, 20 October 2020 13:55  
**To:** Buyiswa Humani <[bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za)>  
**Cc:** Air Pollution <[Airpoll@mandelametro.gov.za](mailto:Airpoll@mandelametro.gov.za)>; Clinton Camelion <[ccamelion@mandelametro.gov.za](mailto:ccamelion@mandelametro.gov.za)>; Gcobisa Mhlonyane <[gmhlonyane@mandelametro.gov.za](mailto:gohlonyane@mandelametro.gov.za)>; Kobus Slabbert <[kslabbert@mandelametro.gov.za](mailto:kslabbert@mandelametro.gov.za)>; Msimelelo Buhlungu <[mbuhlung@mandelametro.gov.za](mailto:mbuhlung@mandelametro.gov.za)>; Patrick Nodwele <[pnodwele@mandelametro.gov.za](mailto:pnodwele@mandelametro.gov.za)>; Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>  
**Subject:** RE: Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

Good day Buyiswa,

Just following up on the previous email sent with regards to the dispersion modelling plan of study report.

We hope to receive your input at your earliest convenience.

Kind regards,

**Lyndle Naidoo** *MSc*  
Environmental Scientist  
ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001  
P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Lyndle Naidoo  
**Sent:** Friday, 09 October 2020 18:20  
**To:** 'Buyiswa Humani' <[bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za)>  
**Cc:** Air Pollution <[Airpoll@mandelametro.gov.za](mailto:Airpoll@mandelametro.gov.za)>; Clinton Camelion <[ccamelion@mandelametro.gov.za](mailto:ccamelion@mandelametro.gov.za)>; Gcobisa Mhlonyane <[gmhlonyane@mandelametro.gov.za](mailto:gohlonyane@mandelametro.gov.za)>; Kobus Slabbert <[kslabbert@mandelametro.gov.za](mailto:kslabbert@mandelametro.gov.za)>; Msimelelo Buhlungu <[mbuhlung@mandelametro.gov.za](mailto:mbuhlung@mandelametro.gov.za)>; Patrick Nodwele <[pnodwele@mandelametro.gov.za](mailto:pnodwele@mandelametro.gov.za)>; Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>  
**Subject:** RE: Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

Good day Buyiswa,

Thank you for your response. We look forward to receiving your input.

Kind regards,

**Lyndle Naidoo** *MSc*  
Environmental Scientist  
ECAPE PLZ

SRK Consulting (South Africa) (Pty) Ltd.


Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001  
P O Box 21842, Port Elizabeth, 6000

Tel: +27-(0)41-5094800; Fax: +27-(0)41-5094850

Direct: +27-(0)41-5094838; Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

 Please consider the environment before printing this e-mail.

---

**From:** Buyiswa Humani <[bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za)>

**Sent:** Friday, 09 October 2020 17:09

**To:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>

**Cc:** Air Pollution <[Airpoll@mandelametro.gov.za](mailto:Airpoll@mandelametro.gov.za)>; Clinton Camelion <[ccamelion@mandelametro.gov.za](mailto:ccamelion@mandelametro.gov.za)>; Gcobisa Mhlonyane <[gmdlonyane@mandelametro.gov.za](mailto:gmdlonyane@mandelametro.gov.za)>; Kobus Slabbert <[ksslabbert@mandelametro.gov.za](mailto:ksslabbert@mandelametro.gov.za)>; Msimelelo Buhlungu <[mbuhlungu@mandelametro.gov.za](mailto:mbuhlungu@mandelametro.gov.za)>; Patrick Nodwele <[pnodwele@mandelametro.gov.za](mailto:pnodwele@mandelametro.gov.za)>

**Subject:** RE: Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

**EXTERNAL**

Good day Lyndle

Reference is made to your email below.

Please be advised that our comments will be sent by next week latest. We are working between COVID-19 and normal operations hence delays in certain areas of our work.

*Kind Regards,*

*Buyiswa Deliwe*

*Manager: Environmental Health*

*Air Pollution & Noise Control Section*

*Public Health Directorate*

*Nelson Mandela Bay Municipality*

*Tel: 041 5065215*

*Fax: 041 5061596*

*Email: [bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za)*

**Disclaimer**

Before acting on the contents of this e-mail, the recipient should verify that the originator has the appropriate authority and any person neglecting to obtain such verification will be acting entirely at his/her own risk.

Please further note that any confidential, private or privileged information contained in the message is subject to legal privilege.



>>> Lyndle Naidoo <[L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)> 2020/10/09 09:26 AM >>>

Good day,

Just following up the previous email sent with regards to the dispersion modelling plan of study report.

We hope to receive your input at your earliest convenience.

Kind regards,

**Lyndle Naidoo** *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001


P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

 Please consider the environment before printing this e-mail.

---

**From:** Lyndle Naidoo

**Sent:** Friday, 18 September 2020 07:37

**To:** 'Buyiswa Humani' <[bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za)>

**Cc:** 'Air Pollution' <[Airpoll@mandelametro.gov.za](mailto:Airpoll@mandelametro.gov.za)>; 'Kobus Slabbert' <[kslabbert@mandelametro.gov.za](mailto:kslabbert@mandelametro.gov.za)>; Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>

**Subject:** RE: Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

Good day,

Just following up the previous email sent with regards to the dispersion modelling plan of study report.

We hope to receive your input at your earliest convenience.

Kind regards,

**Lyndle Naidoo** *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

 Please consider the environment before printing this e-mail.

---

**From:** Lyndle Naidoo

**Sent:** Monday, 07 September 2020 08:18

**To:** 'Buyiswa Humani' <[bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za)>

**Cc:** 'Air Pollution' <[Airpoll@mandelametro.gov.za](mailto:Airpoll@mandelametro.gov.za)>; 'Kobus Slabbert' <[kslabbert@mandelametro.gov.za](mailto:kslabbert@mandelametro.gov.za)>; Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>

**Subject:** RE: Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

Good day,

Just following up the previous email sent with regards to the dispersion modelling plan of study report.

We hope to receive your input at your earliest convenience.

Kind regards,

**Lyndle Naidoo** MSc

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeralil, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

 Please consider the environment before printing this e-mail.

---

**From:** Lyndle Naidoo

**Sent:** Tuesday, 11 August 2020 07:05

**To:** Buyiswa Humani <[bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za)>

**Cc:** Air Pollution <[Airpoll@mandelametro.gov.za](mailto:Airpoll@mandelametro.gov.za)>; Kobus Slabbert <[kslabbert@mandelametro.gov.za](mailto:kslabbert@mandelametro.gov.za)>; Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>

**Subject:** RE: Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

Good day Buyiswa,

Thank you for your email.

We look forward to receiving your input.

Kind regards,

Lyndle Naidoo *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

Tel: +27-(0)41-5094800; Fax: +27-(0)41-5094850

Direct: +27-(0)41-5094838; Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Buyiswa Humani <[bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za)>

**Sent:** Friday, 07 August 2020 16:45

**To:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>; Wanda Marais <[WMarais@srk.co.za](mailto:WMarais@srk.co.za)>

**Cc:** Air Pollution <[Airpoll@mandelametro.gov.za](mailto:Airpoll@mandelametro.gov.za)>; Kobus Slabbert <[kslabbert@mandelametro.gov.za](mailto:kslabbert@mandelametro.gov.za)>; Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>

**Subject:** RE: Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

**EXTERNAL**

Good day Lyndle and Wanda

We acknowledge receipt of your emails.

Please be advised that Environmental Health Sub-Directorate have been responding to the Covid-19 pandemic and other services have been hold.We are in the process of phasing in other normal Environmental Health activities.

We will revert back to you as soon as possible.

*Kind Regards,*

*Buyiswa Deliwe*

*Manager:Environmental Health*

*Air Pollution & Noise Control Section*

*Public Health Directorate*

*Nelson Mandela Bay Municipality*

*Tel: 041 5065215*

*Fax:041 5061596*

*Email:[bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za)*

## Disclaimer

Before acting on the contents of this e-mail, the recipient should verify that the originator has the appropriate authority and any person neglecting to obtain such verification will be acting entirely at his/her own risk. Please further note that any confidential, private or privileged information contained in the message is subject to legal privilege.

>>> Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)> 8/7/2020 10:20 AM >>>  
Good day,

Just following up the previous email sent with regards to the dispersion modelling plan of study report as per the email below.

We hope to receive your input at your earliest convenience.

Kind regards,

**Lyndle Naidoo** MSc

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

Tel: +27-(0)41-5094800; Fax: +27-(0)41-5094850

Direct: +27-(0)41-5094838; Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Lyndle Naidoo

**Sent:** Friday, 31 July 2020 14:12

**To:** 'bhumani@mandelametro.gov.za' <[bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za)>; 'phowes@mandelametro.gov.za' <[phowes@mandelametro.gov.za](mailto:phowes@mandelametro.gov.za)>; 'jblack@mandelametro.gov.za' <[jblack@mandelametro.gov.za](mailto:jblack@mandelametro.gov.za)>; 'kslabbert@mandelametro.gov.za' <[kslabbert@mandelametro.gov.za](mailto:kslabbert@mandelametro.gov.za)>

**Cc:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>

**Subject:** RE: Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

Good day,

Just following up the previous email sent with regards to the dispersion modelling plan of study report as per the email below.

We hope to receive your input at your earliest convenience.

Kind regards,

**Lyndle Naidoo** MSc

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

Tel: +27-(0)41-5094800; Fax: +27-(0)41-5094850

Direct: +27-(0)41-5094838; Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Lyndle Naidoo

**Sent:** Monday, 27 July 2020 10:17

**To:** [bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za); [phowes@mandelametro.gov.za](mailto:phowes@mandelametro.gov.za); [jblack@mandelametro.gov.za](mailto:jblack@mandelametro.gov.za); [kslabbert@mandelametro.gov.za](mailto:kslabbert@mandelametro.gov.za)

**Cc:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>

**Subject:** RE: Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

Good day,

Just following up the previous email sent with regards to the dispersion modelling plan of study report as per the email below.

We hope to receive your input at your earliest convenience.

Kind regards,

**Lyndle Naidoo** MSc

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

Tel: +27-(0)41-5094800; Fax: +27-(0)41-5094850

Direct: +27-(0)41-5094838; Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Lyndle Naidoo

**Sent:** Friday, 17 July 2020 11:45

To: 'bhumani@mandelametro.gov.za' <[bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za)>; 'phowes@mandelametro.gov.za' <[phowes@mandelametro.gov.za](mailto:phowes@mandelametro.gov.za)>; 'jblack@mandelametro.gov.za' <[jblack@mandelametro.gov.za](mailto:jblack@mandelametro.gov.za)>; 'kslabbert@mandelametro.gov.za' <[kslabbert@mandelametro.gov.za](mailto:kslabbert@mandelametro.gov.za)>

Cc: Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>

Subject: RE: Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

Good day,

Just following up the previous email sent with regards to the dispersion modelling plan of study report as per the email below.

We hope to receive your input at your earliest convenience.

Kind regards,

Lyndle Naidoo *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

Tel: +27-(0)41-5094800; Fax: +27-(0)41-5094850

Direct: +27-(0)41-5094838; Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Lyndle Naidoo

**Sent:** Friday, 10 July 2020 10:34

**To:** [bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za); [phowes@mandelametro.gov.za](mailto:phowes@mandelametro.gov.za); [jblack@mandelametro.gov.za](mailto:jblack@mandelametro.gov.za); [kslabbert@mandelametro.gov.za](mailto:kslabbert@mandelametro.gov.za)

**Cc:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>

**Subject:** RE: Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

Good day,

Just following up the previous email sent with regards to the dispersion modelling plan of study report as per the email below.

We hope to receive your input at your earliest convenience.

Kind regards,

Lyndle Naidoo *MSc*

Environmental Scientist

ECAPE PLZ

SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001  
P O Box 21842, Port Elizabeth, 6000

Tel: +27-(0)41-5094800; Fax: +27-(0)41-5094850

Direct: +27-(0)41-5094838; Email: [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

 Please consider the environment before printing this e-mail.

---

**From:** Wanda Marais <[WMarais@srk.co.za](mailto:WMarais@srk.co.za)>

**Sent:** Sunday, 31 May 2020 18:49

**To:** [bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za); [phowes@mandelametro.gov.za](mailto:phowes@mandelametro.gov.za); [jblack@mandelametro.gov.za](mailto:jblack@mandelametro.gov.za); [kslabbert@mandelametro.gov.za](mailto:kslabbert@mandelametro.gov.za)

**Cc:** Tanya Speyers <[TSpeyers@srk.co.za](mailto:TSpeyers@srk.co.za)>

**Subject:** FW: Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

**Importance:** High

Good day,

We eagerly await your feedback herein.

Kind Regards

Wanda

---

**From:** Wanda Marais

**Sent:** Tuesday, 19 May 2020 12:02

**To:** [bhumani@mandelametro.gov.za](mailto:bhumani@mandelametro.gov.za); [phowes@mandelametro.gov.za](mailto:phowes@mandelametro.gov.za); [jblack@mandelametro.gov.za](mailto:jblack@mandelametro.gov.za); [kslabbert@mandelametro.gov.za](mailto:kslabbert@mandelametro.gov.za)

**Cc:** Tanya Speyers <[TSpeyers@srk.co.za](mailto:TSpeyers@srk.co.za)>; Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>

**Subject:** Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report

**Importance:** High

Good afternoon all,

**Proposed Coega 3000MW Integrated Gas-to-Power Project: Dispersion modelling plan of study report**

SRK Consulting has been appointed to conduct the EIA process for the proposed Coega 3000MW Integrated Gas-to-Power Project. Hereto attached please find the Dispersion modelling plan of study report compiled by uMoya-Nilu, the air quality specialists for the Gas to Power Project.

We would be please to received comment and / or approval of the attached from the NMBM: Air Quality & Noise Control. Please let me know if you wish any other representatives from the directorate to be added to our project IAP database.

We hope to receive your input at your earliest convenience.

Kind Regards

**Wanda Marais** B Proc  
Public Participation Practitioner



SRK Consulting (South Africa) (Pty) Ltd

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

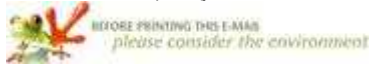
P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-509-4809; **Fax:** +27-(0)41-509-4850

**Email:** [wmarais@srk.co.za](mailto:wmarais@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*





**From:** [christophe.crillon@engie.com](mailto:christophe.crillon@engie.com)  
**To:** [Lyndle Naidoo](mailto:Lyndle.Naidoo)  
**Cc:** [seshni.naidoo@engie.com](mailto:seshni.naidoo@engie.com); [Nicola Rump](mailto:Nicola.Rump); [sherwin.harris@engie.com](mailto:sherwin.harris@engie.com)  
**Subject:** RE: NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape  
**Date:** Monday, 12 October 2020 09:16:19

---

**EXTERNAL**

Thanks Lyndle

**Christophe CRILLON**

ENGIE Africa  
[christophe.crillon@engie.com](mailto:christophe.crillon@engie.com)  
P +33 (0)1 56 65 46 53  
M +33 (0)6 47 96 71 63

---

**De :** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>

**Envoyé :** dimanche 11 octobre 2020 12:20

**À :** HARRIS Sherwin (ENGIE Southern Africa) <[sherwin.harris@engie.com](mailto:sherwin.harris@engie.com)>

**Cc :** CRILLON Christophe (ENGIE Africa) <[christophe.crillon@engie.com](mailto:christophe.crillon@engie.com)>; NAIDOO Seshni (ENGIE Southern Africa) <[seshni.naidoo@engie.com](mailto:seshni.naidoo@engie.com)>; Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>

**Objet :** RE: NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

Good day Sherwin,

Herewith the direct link: <https://docs.srk.co.za/en/za-cdc-coega-3000-mw-gas-power-project-eias>

Kind regards,

**Lyndle Naidoo** *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

 Please consider the environment before printing this e-mail.

---

**From:** [sherwin.harris@engie.com](mailto:sherwin.harris@engie.com) <[sherwin.harris@engie.com](mailto:sherwin.harris@engie.com)>

**Sent:** Sunday, 11 October 2020 11:17

**To:** Lyndle Naidoo <[L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)>

**Cc:** [christophe.crillon@engie.com](mailto:christophe.crillon@engie.com); [seshni.naidoo@engie.com](mailto:seshni.naidoo@engie.com)

**Subject:** RE: NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

**EXTERNAL**

Dear Lyndle,

Trust that you are well.

Please may you share the direct link to access the docs.

Best Regards

**Sherwin Harris**

Power & Gas

ENGIE Africa

Mobile: +27 71 403 6075

---

**From:** Lyndle Naidoo <[L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)>

**Sent:** Friday, October 9, 2020 3:58 PM

**Subject:** NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

Dear Authorities, Stakeholders & Interested and Affected Parties,

**NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape**  
**DEFF Reference No: not yet available**

Please find attached the Executive Summaries of the Draft Scoping Reports (DSRs) for the overall proposed CDC Coega 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape, which consists of the following projects, each of which is subject to a separate EIA and application process:

1. Zone 10 South 1000 MW Power Plant;
2. Zone 10 North 1000 MW Power Plant;
3. Zone 13 1000 MW Power Plant;
4. Gas infrastructure.

Application forms for the four projects listed above have been submitted to the National Department of Environment, Forestry and Fisheries (DEFF) for consideration, along with the DSRs, which will be amended in response to the comments received and released as Final Scoping Reports (FSRs) which will be submitted to DEFF for approval.

Comments on the DSRs will assist to ensure that all potential environmental impacts related to the listed activities will be addressed in the Plan of Study for EIA. The complete Draft Scoping

Reports can be accessed as in printed form at the Ward 53 Councillor's office in Motherwell, and at SRK's Port Elizabeth office (by appointment). Electronic copies are available for download from SRK Consulting's webpage via the 'Public Documents' link <https://www.srk.com/en/public-documents> , or can be made available from SRK Consulting upon request.

A 30 day comment period is provided as per the legislated timeframes. **Comments should be submitted in writing, clearly indicating which project / report the comment relates to, by 12h00 on 9 November 2020 to:**

Lyndle Naidoo at SRK Consulting  
PO Box 21842, Port Elizabeth, 6000  
Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)  
Fax: (041) 509 4850

**Kind regards,**

**Lyndle Naidoo** *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

ENGIE Mail Disclaimer: <http://www.engie.com/disclaimer/>

ENGIE Mail Disclaimer: <http://www.engie.com/disclaimer/>

**From:** [Andrea Shirley](#)  
**To:** [Nokoyo Davey](#); [Lyndle Naidoo](#)  
**Cc:** [Babalwa Layini](#)  
**Subject:** RE: NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape  
**Date:** Monday, 12 October 2020 10:05:56

---

**EXTERNAL**

This email originates from an external source. Stop and think before you click!

Dear Thabo

Thank you for your response.

Lyndle, you are welcome to liaise with the CDC in this regard.

Sincerely,

---

**From:** Nokoyo Davey [mailto:NokoyoD@daff.gov.za]  
**Sent:** Monday, 12 October 2020 08:55  
**To:** Lyndle Naidoo <LNaidoo@srk.co.za>  
**Cc:** Babalwa Layini <BabalwaL@daff.gov.za>; Andrea Shirley <Andrea.Shirley@coega.co.za>  
**Subject:** RE: NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

Good morning Lyndle

Thank you very much for copying Forestry this invitation to comment on this project. I think I mentioned to you that I am on my way out of the department with last date of duty being 31<sup>st</sup> October 2020 therefore all communications of this nature must be forwarded to my colleague Babes (copied here) for swift and proper attention. I mean within given deadlines.

Coming to the topic – we have Mrs Andrea Shirley who is the in house environmentalist at Coega IDZ attending to all matters pertaining to protected trees in there but we welcome direct communication on matters of this nature. You are kindly advised to work with her also she already has in possession licenses granted for disturbing/destroying protected trees granted by this office.

Regards

Thabo

---

**From:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>  
**Sent:** 11 October 2020 01:24 PM  
**Subject:** NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

**EXTERNAL EMAIL: This email originated outside of "DALRRD/DAFF Environment".  
CAUTION: Do not click on links or open attachments unless you recognize the sender and know the content is safe.**

Dear Authorities, Stakeholders & Interested and Affected Parties,

**NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape  
DEFF Reference No: not yet available**

Please find attached the Executive Summaries of the Draft Scoping Reports (DSRs) for the overall proposed CDC Coega 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape, which consists of the following projects, each of which is subject to a separate EIA and application process:

1. Zone 10 South 1000 MW Power Plant;
2. Zone 10 North 1000 MW Power Plant;
3. Zone 13 1000 MW Power Plant;
4. Gas infrastructure.

Application forms for the four projects listed above have been submitted to the National Department of Environment, Forestry and Fisheries (DEFF) for consideration, along with the DSRs, which will be amended in response to the comments received and released as Final Scoping Reports (FSRs) which will be submitted to DEFF for approval.

Comments on the DSRs will assist to ensure that all potential environmental impacts related to the listed activities will be addressed in the Plan of Study for EIA. The complete Draft Scoping Reports can be accessed as in printed form at the Ward 53 Councillor's office in Motherwell, and at SRK's Port Elizabeth office (by appointment). Electronic copies are available for download from SRK Consulting's webpage via the 'Public Documents' link <https://www.srk.com/en/public-documents>, or can be made available from SRK Consulting upon request.

A 30 day comment period is provided as per the legislated timeframes. **Comments should be submitted in writing, clearly indicating which project / report the comment relates to, by 12h00 on 9 November 2020 to:**

Lyndle Naidoo at SRK Consulting  
PO Box 21842, Port Elizabeth, 6000  
Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)  
Fax: (041) 509 4850

**Kind regards,**

**Lyndle Naidoo** *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

 Please consider the environment before printing this e-mail.

**From:** [Adrian Vardy](#)  
**To:** [Lyndle Naidoo](#)  
**Subject:** RE: NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape  
**Date:** Monday, 12 October 2020 08:52:46

---

**EXTERNAL**

Please ensure that you include [natasha@dynamicfood.com](mailto:natasha@dynamicfood.com) and [heinreich@dynamicfood.com](mailto:heinreich@dynamicfood.com) in copy on all mails on this topic.

Thank you,  
Adrian Vardy

---

**From:** Lyndle Naidoo <LNaidoo@srk.co.za>  
**Sent:** 11 October 2020 01:17 PM  
**Subject:** NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

Dear Authorities, Stakeholders & Interested and Affected Parties,

**NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape  
DEFF Reference No: not yet available**

Please find attached the Executive Summaries of the Draft Scoping Reports (DSRs) for the overall proposed CDC Coega 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape, which consists of the following projects, each of which is subject to a separate EIA and application process:

1. Zone 10 South 1000 MW Power Plant;
2. Zone 10 North 1000 MW Power Plant;
3. Zone 13 1000 MW Power Plant;
4. Gas infrastructure.

Application forms for the four projects listed above have been submitted to the National Department of Environment, Forestry and Fisheries (DEFF) for consideration, along with the DSRs, which will be amended in response to the comments received and released as Final Scoping Reports (FSRs) which will be submitted to DEFF for approval.

Comments on the DSRs will assist to ensure that all potential environmental impacts related to the listed activities will be addressed in the Plan of Study for EIA. The complete Draft Scoping Reports can be accessed as in printed form at the Ward 53 Councillor's office in Motherwell, and at SRK's Port Elizabeth office (by appointment). Electronic copies are available for download from SRK Consulting's webpage via the 'Public Documents' link <https://www.srk.com/en/public-documents>, or can be made available from SRK Consulting upon request.

A 30 day comment period is provided as per the legislated timeframes. **Comments should be submitted in writing, clearly indicating which project / report the comment relates to, by 12h00 on 9 November 2020 to:**

Lyndle Naidoo at SRK Consulting

PO Box 21842, Port Elizabeth, 6000

Email: [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)

Fax: (041) 509 4850

**Kind regards,**

**Lyndle Naidoo** *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.



**From:** [Ansa Coetzee](#)  
**To:** [Lyndle Naidoo](#)  
**Cc:** [Joy du Plessis](#)  
**Subject:** RE: NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape  
**Date:** Monday, 12 October 2020 09:26:15  
**Attachments:** [image004.png](#)  
[image005.png](#)  
[image006.png](#)  
[image306509.png](#)  
[image545772.png](#)  
[image631355.png](#)  
[Company Profile 2020.pdf](#)

---

**EXTERNAL**

Good day

Hope all is well with you

Thank you for your email, please find attached our company profile.

Hope to hear from you soon

Thank you

Kind Regards

## Ansa Coetzee

Sales & Admin Co-Ordinator

Port Elizabeth

+27 41 453 8996

[AnsaC@sanitech.co.za](mailto:AnsaC@sanitech.co.za)



### Integrated Hygiene & Sanitation Solutions

[www.sanitech.co.za](http://www.sanitech.co.za)

**Sanitech**

We are  
**WACO**



Find us on Facebook and LinkedIn

---

**From:** Joy du Plessis <[Joyd@sanitech.co.za](mailto:Joyd@sanitech.co.za)>

**Sent:** Monday, 12 October 2020 07:34

**To:** Ansa Coetzee <[AnsaC@sanitech.co.za](mailto:AnsaC@sanitech.co.za)>

**Subject:** FW: NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

Kind Regards

## Joy du Plessis

Operations Administrator

Port Elizabeth

+27 41 453 8996

+27 83 447 9347



[Loyd@sanitech.co.za](mailto:Loyd@sanitech.co.za)

## Integrated Hygiene & Sanitation Solutions

[www.sanitech.co.za](http://www.sanitech.co.za)

**Sanitech**

We are  
**WACO**



Find us on Facebook and LinkedIn

**From:** Lyndle Naidoo <[L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)>

**Sent:** Sunday, 11 October 2020 13:08

**Subject:** [EXTERNAL] NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

Dear Authorities, Stakeholders & Interested and Affected Parties,

**NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS:  
CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape  
DEFF Reference No: not yet available**

Please find attached the Executive Summaries of the Draft Scoping Reports (DSRs) for the overall proposed CDC Coega 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape, which consists of the following projects, each of which is subject to a separate EIA and application process:

1. Zone 10 South 1000 MW Power Plant;
2. Zone 10 North 1000 MW Power Plant;
3. Zone 13 1000 MW Power Plant;
4. Gas infrastructure.

Application forms for the four projects listed above have been submitted to the National Department of Environment, Forestry and Fisheries (DEFF) for consideration, along with the DSRs, which will be amended in response to the comments received and released as Final Scoping Reports (FSRs) which will be submitted to DEFF for approval.

Comments on the DSRs will assist to ensure that all potential environmental impacts related to the listed activities will be addressed in the Plan of Study for EIA. The complete Draft Scoping Reports can be accessed as in printed form at the Ward 53 Councillor's office in Motherwell, and at SRK's Port Elizabeth office (by appointment). Electronic copies are available for download from SRK Consulting's webpage via the 'Public Documents' link <https://www.srk.com/en/public-documents>, or can be made available from SRK Consulting upon request.

A 30 day comment period is provided as per the legislated timeframes. **Comments should be submitted in writing, clearly indicating which project / report the comment relates to, by 12h00 on 9 November 2020 to:**

Lyndle Naidoo at SRK Consulting  
PO Box 21842, Port Elizabeth, 6000  
Email: [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)  
Fax: (041) 509 4850

Kind regards,  
Lyndle Naidoo *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

 Please consider the environment before printing this e-mail.

This message contains confidential information and is intended only for [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za). If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately if you have received this e-mail by mistake and delete this e-mail from your system. Finally, the recipient should check this email and any attachments for the presence of viruses. The company accepts no liability for any damage caused by any virus transmitted by this email. Please consider the environment before printing this e-mail.2020-10-12.

**From:** [Nokoyo Davey](#)  
**To:** [Lyndle Naidoo](#)  
**Cc:** [Babalwa Layini](#); [Andrea.Shirley@coega.co.za](mailto:Andrea.Shirley@coega.co.za)  
**Subject:** RE: NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape  
**Date:** Monday, 12 October 2020 08:55:34

---

**EXTERNAL**

Good morning Lyndle

Thank you very much for copying Forestry this invitation to comment on this project. I think I mentioned to you that I am on my way out of the department with last date of duty being 31<sup>st</sup> October 2020 therefore all communications of this nature must be forwarded to my colleague Babes (copied here) for swift and proper attention. I mean within given deadlines.

Coming to the topic – we have Mrs Andrea Shirley who is the in house environmentalist at Coega IDZ attending to all matters pertaining to protected trees in there but we welcome direct communication on matters of this nature. You are kindly advised to work with her also she already has in possession licenses granted for disturbing/destroying protected trees granted by this office.

Regards

Thabo

---

**From:** Lyndle Naidoo <LNaidoo@srk.co.za>  
**Sent:** 11 October 2020 01:24 PM  
**Subject:** NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

**EXTERNAL EMAIL: This email originated outside of "DALRRD/DAFF Environment".  
CAUTION: Do not click on links or open attachments unless you recognize the sender and know the content is safe.**

Dear Authorities, Stakeholders & Interested and Affected Parties,

**NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape  
DEFF Reference No: not yet available**

Please find attached the Executive Summaries of the Draft Scoping Reports (DSRs) for the overall proposed CDC Coega 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape, which consists of the following projects, each of which is subject to a separate EIA and application process:

1. Zone 10 South 1000 MW Power Plant;
2. Zone 10 North 1000 MW Power Plant;
3. Zone 13 1000 MW Power Plant;
4. Gas infrastructure.

Application forms for the four projects listed above have been submitted to the National

Department of Environment, Forestry and Fisheries (DEFF) for consideration, along with the DSRs, which will be amended in response to the comments received and released as Final Scoping Reports (FSRs) which will be submitted to DEFF for approval.

Comments on the DSRs will assist to ensure that all potential environmental impacts related to the listed activities will be addressed in the Plan of Study for EIA. The complete Draft Scoping Reports can be accessed as in printed form at the Ward 53 Councillor's office in Motherwell, and at SRK's Port Elizabeth office (by appointment). Electronic copies are available for download from SRK Consulting's webpage via the 'Public Documents' link <https://www.srk.com/en/public-documents> , or can be made available from SRK Consulting upon request.

A 30 day comment period is provided as per the legislated timeframes. **Comments should be submitted in writing, clearly indicating which project / report the comment relates to, by 12h00 on 9 November 2020 to:**

Lyndle Naidoo at SRK Consulting  
PO Box 21842, Port Elizabeth, 6000  
Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)  
Fax: (041) 509 4850

**Kind regards,**

**Lyndle Naidoo** *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

**From:** [Nicola Rump](#)  
**To:** [Lyndon Mardon](#); [Andries Struwig](#); [Dayalan Govender](#)  
**Cc:** [Abbigale Van Nierop](#); [Lyndle Naidoo](#)  
**Subject:** RE: CDC Coega 3000 MW Gas to Power project - Draft Scoping Reports for review / comment  
**Date:** Tuesday, 13 October 2020 12:08:20

---

Hi Lyndon,

Thank you for letting me know, this system is a bit new for me so apologies for that. You should now have received another link / email allowing you to access the documents – please let me know if you have any further difficulties.

Kind regards,  
Nicola

---

**From:** Lyndon Mardon <[Lyndon.Mardon@dedea.gov.za](mailto:Lyndon.Mardon@dedea.gov.za)>  
**Sent:** Tuesday, 13 October 2020 08:17  
**To:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>; Andries Struwig <[Andries.Struwig@dedea.gov.za](mailto:Andries.Struwig@dedea.gov.za)>; Dayalan Govender <[Dayalan.Govender@dedea.gov.za](mailto:Dayalan.Govender@dedea.gov.za)>  
**Cc:** Abbigale Van Nierop <[AVanNierop@srk.co.za](mailto:AVanNierop@srk.co.za)>; Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>  
**Subject:** RE: CDC Coega 3000 MW Gas to Power project - Draft Scoping Reports for review / comment

**EXTERNAL**

Hi Nicola

Your system has denied me access to the draft documents.

Lyndon Mardon

---

**From:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>  
**Sent:** Friday, 09 October 2020 16:43  
**To:** Andries Struwig <[Andries.Struwig@dedea.gov.za](mailto:Andries.Struwig@dedea.gov.za)>; Dayalan Govender <[Dayalan.Govender@dedea.gov.za](mailto:Dayalan.Govender@dedea.gov.za)>; Lyndon Mardon <[Lyndon.Mardon@dedea.gov.za](mailto:Lyndon.Mardon@dedea.gov.za)>  
**Cc:** Abbigale Van Nierop <[AVanNierop@srk.co.za](mailto:AVanNierop@srk.co.za)>; Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>  
**Subject:** CDC Coega 3000 MW Gas to Power project - Draft Scoping Reports for review / comment

Dear Andries, Jeff and Lyndon,  
please find herewith the Onedrive link where full copies of the Draft Scoping Reports have been uploaded for your review as commenting authority. The applications for all four projects were submitted to DEFF today. Alternatively you can access the reports via the public documents link on SRK's website. The comment period runs for 30 days, ending on 9<sup>th</sup> November 2020.

[https://srk-my.sharepoint.com/personal/rump\\_srk\\_co\\_za/Documents/Documents/CDC%20Coega%203000%20MW%20Gas%20to%20Power%20Project%20DSRs](https://srk-my.sharepoint.com/personal/rump_srk_co_za/Documents/Documents/CDC%20Coega%203000%20MW%20Gas%20to%20Power%20Project%20DSRs)

Please let me know if you have any difficulties accessing the documents.

Kind regards,  
**Nicola Rump (MSc) CEAPSA**  
Principal Environmental Scientist



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-509-4800; **Fax:** +27-(0)41-509-4850

**Email:** [nrump@srk.co.za](mailto:nrump@srk.co.za); **Skype:** nicola.rump.srk

[www.srk.co.za](http://www.srk.co.za)

In light of the lockdown SRK staff will be working remotely using the company's technological infrastructure and resources to ensure that work and project activities proceed as seamlessly as possible. SRK staff will continue to be responsive to client queries and requests during the lockdown period. Our preferred method of communication is email and if unsuccessful I can be contacted on 0824252751.

This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.

Please consider the environment before printing this e-mail

'Everything in this email and its attachments relating to the official business of the Eastern Cape Provincial Government and the Department of Economic Development Environmental Affairs and Tourism is proprietary to the ECPG and DEDEAT. It is confidential, legally privileged and protected by law. The person addressed in the email is the sole authorized recipient. Should you receive it in error, immediately notify the sender of the error and delete the e-mail. Any unauthorized dissemination or copying of this e-mail (or any attachment to this e-mail) or the wrongful disclosure of the information here in contained is prohibited. Also note that this form of communication is not secure, it can be intercepted, and may not necessarily be free of errors and viruses in spite of reasonable efforts to secure this medium'; and fall back to action Wrap if the disclaimer can't be inserted.

**From:** [Thomas Blystad](#)  
**To:** [Lyndle Naidoo](#)  
**Cc:** [Nicola Rump](#)  
**Subject:** Re: Project No: 553652: Coega Gas to Power: Zone 10 South - Executive Summary  
**Date:** Wednesday, 21 October 2020 18:38:32

---

**EXTERNAL**

Lyndle,

With reference to the Proposed Coega Integrated Gas-to-Power Project: Gas Infrastructure Draft Scoping Report, I would highly appreciate being registered as an Interested Party so that I am able to follow the process and participate in any public hearing which I assume you will arrange.

Please confirm, many thanks.

Kind regards,

Thomas Blystad  
Blystad Energy Management

Mobile: +44 77 85 25 85 15  
[Email: thomas.blystad@blystadenergy.com](mailto:thomas.blystad@blystadenergy.com)  
[www.blystadenergy.com](http://www.blystadenergy.com)

The information contained in or attached to this e-mail contain confidential information. If you have received it in error you should notify the sender immediately by reply e-mail and delete the message from your system.

On 21 Oct 2020, at 14:26, Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)> wrote:

Good day Thomas,

Here with the link to the project:

<https://docs.srk.co.za/en/za-cdc-coega-3000-mw-gas-power-project-eias>

Kind regards,  
Lyndle Naidoo MSc  
Environmental Scientist  
ECAPE PLZ

SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001  
P O Box 21842, Port Elizabeth, 6000  
Tel: +27-(0)41-5094800; Fax: +27-(0)41-5094850  
Direct: +27-(0)41-5094838; [Email: LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)  
[www.srk.co.za](http://www.srk.co.za)

This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone

other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.

Please consider the environment before printing this e-mail.

-----Original Message-----

From: Thomas Blystad <[thomas.blystad@blystadenergy.com](mailto:thomas.blystad@blystadenergy.com)>

Sent: Monday, 12 October 2020 12:40

To: Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>

Subject: Project No: 553652: Coega Gas to Power: Zone 10 South - Executive Summary

EXTERNAL

With reference to your Executive Summary of above referenced project, on page vi you are staying as follows:

"The report can also be accessed as an electronic copy on SRK Consulting's webpage via the 'Public Documents' link <https://www.srk.com/en/public-documents> <<https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.srk.com%2Fen%2Fpublic-documents&data=02%7C01%7CLNaidoo%40srk.co.za%7C91653d8f315b4b28576e08d86e9b1ef4%7Cc86799ae43604de58ed6fb4d739001eb%7C0%7C0%7C637380960407406810&sdata=GYXu9wSxuH7%2B6AcAd0EksdTHakydQcexJuC2SEi2164%3D&reserved=0>> "

This link does not contain the Scoping Report so I would appreciate if you could forward it to me by email.

Many thanks.

Yours,

Thomas Blystad  
Blystad Energy Management

Mobile: +44 77 85 25 85 15

Email: [thomas.blystad@blystadenergy.com](mailto:thomas.blystad@blystadenergy.com)  
<<mailto:thomas.blystad@blystadenergy.com>>  
[www.blystadenergy.com](http://www.blystadenergy.com)

The information contained in or attached to this e-mail may contain confidential information. If you have received it in error you should notify the sender immediately by reply e-mail and delete the message from your system.





**From:** [Nicola Rump](#)  
**To:** [Tim Foxen](#)  
**Cc:** [Lyndle Naidoo](#)  
**Subject:** RE: Request for I&AP status  
**Date:** Tuesday, 27 October 2020 12:03:01

---

Dear Mr Foxen,

The correct person to submit comments or queries relating to the CDC's gas to power projects (4 applications in total) is Lyndle Naidoo (cc'ed herein). Your comments should be submitted in writing (preferably email) by 9<sup>th</sup> November. A public webinar is not planned for the project at this stage, however the Draft Scoping reports can be accessed via the link, <https://docs.srk.co.za/en/za-cdc-coega-3000-mw-gas-power-project-eias> . We will register you as an IAP for the projects, meaning that you will receive updates and correspondence relating to the project periodically.

Kind regards,

**Nicola Rump (MSc) CEAPSA**

Principal Environmental Scientist



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-509-4800; **Fax:** +27-(0)41-509-4850

**Email:** [nrump@srk.co.za](mailto:nrump@srk.co.za) ; **Skype:** nicola.rump.srk

[www.srk.co.za](http://www.srk.co.za)

In light of the lockdown SRK staff will be working remotely using the company's technological infrastructure and resources to ensure that work and project activities proceed as seamlessly as possible. SRK staff will continue to be responsive to client queries and requests during the lockdown period. Our preferred method of communication is email and if unsuccessful I can be contacted on 0824252751.

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail

---

**From:** Tim Foxen <tfoxen@monetgas.com>

**Sent:** Tuesday, 27 October 2020 09:46

**To:** Nicola Rump <NRump@srk.co.za>

**Subject:** Re: Request for I&AP status

**EXTERNAL**

Hi Ms Rump,

I am best reached at 066 434 7639, to follow up on my phone call to you this morning.

Thank you.

Tim Foxen

---

**From:** Tim Foxen <[tfoxen@monetgas.com](mailto:tfoxen@monetgas.com)>  
**Date:** Tuesday, 27 October 2020 at 09:00  
**To:** "[nrump@srk.co.za](mailto:nrump@srk.co.za)" <[nrump@srk.co.za](mailto:nrump@srk.co.za)>  
**Subject:** FW: Request for I&AP status

Good day,

Please see the email below for which no response was received as of yet. . Please advise on where to correctly direct the correspondence and for response to the request.

Sincerely, *Tim Foxen*

Senior Advisor, Monetizing Gas Africa Inc.  
Cape Town, South Africa +27(0)66 434 7639  
[www.monetgas.com](http://www.monetgas.com)  
[tfoxen@monetgas.com](mailto:tfoxen@monetgas.com) (Tim Foxen)



---

**From:** Tim Foxen <[tfoxen@monetgas.com](mailto:tfoxen@monetgas.com)>  
**Date:** Monday, 26 October 2020 at 08:50  
**To:** "[karmstrong@srk.co.za](mailto:karmstrong@srk.co.za)" <[karmstrong@srk.co.za](mailto:karmstrong@srk.co.za)>  
**Cc:** Ebrahim Takolia <[etakolia@monetgas.com](mailto:etakolia@monetgas.com)>, Rodney MacAlister <[rmacalister@monetgas.com](mailto:rmacalister@monetgas.com)>  
**Subject:** Request for I&AP status

Greetings,

I represent Monetizing Gas Africa(MGA). MGA develops gas to power facilities in southern Africa and therefore has an interest in this project. I would like to be added as an Interested and Affected Party to SRK's ongoing environmental review process for the Coega Gas to Power Project: Gas Infrastructure. We understand the public comment period for the draft scoping report goes through 9 November.

Please also advise if a public webinar has/will take place on this project.

Sincerely, *Tim Foxen*

Senior Advisor, Monetizing Gas Africa Inc.

Cape Town, South Africa +27(0)66 434 7639

[www.monetgas.com](http://www.monetgas.com)

[tfoxen@monetgas.com](mailto:tfoxen@monetgas.com) (Tim Foxen)



**Monetizing Gas Africa**

Investing in the future of natural gas

**From:** [Nicola Rump](#)  
**To:** [Tim Foxen](#)  
**Cc:** [Lyndle Naidoo](#); [Thomas Blystad](#); [Robert Løseth](#); [Rodney MacAlister](#); [Ebrahim Takolia](#)  
**Subject:** RE: Request for I&AP status  
**Date:** Tuesday, 03 November 2020 12:39:23  
**Attachments:** [image001.png](#)  
[image002.png](#)

---

Dear Mr Foxen,

The comments and responses referred to result from public participation that was conducted in 2016 for the CDC gas to power project. At that stage the Department of Energy was running a separate EIA process for the FSRU and related port infrastructure. These components have subsequently been incorporated into the CDC's Gas infrastructure EIA and the DoE's separate EIA process has been terminated.

Kind regards,  
Nicola

---

**From:** Tim Foxen <tfoxen@monetgas.com>  
**Sent:** Tuesday, 03 November 2020 11:10  
**To:** Nicola Rump <NRump@srk.co.za>  
**Cc:** Lyndle Naidoo <LNaidoo@srk.co.za>; Thomas Blystad <thomas.blystad@blystadenergy.com>; Robert Løseth <robert.loseth@blystadenergy.com>; Rodney MacAlister <rmacalister@monetgas.com>; Ebrahim Takolia <etakolia@monetgas.com>  
**Subject:** Re: Request for I&AP status

**EXTERNAL**

Dear SRK representatives,

MGA is considering submitting comments on the gas infrastructure draft scoping report. In order to understand facts relevant to these comments, would you kindly answer the following concerning the second SRK response pasted in below:

What is the name and status of the "EIA process initiated by the Department of Energy" pertaining to either the LNG berth and FSRU?

| Comments relating to design |  |  |
|-----------------------------|--|--|
| Dr P Martin                 | Which organisations are envisaged to build and operate the facilities? Will a build and operate tender type process be followed? | It is assumed that a procurement process would follow an environmental authorisation. The description of the development is therefore deliberately general in terms of technology providers. |
| Dr P Martin                 | How does proposed Floating Power Plant & LNG berth fit into the scenario?  | The floating power plant is independent of the Gas to Power project. The LNG berth and   |

| Commentator | Issues raised | Response (SRK, unless specified otherwise)  |
|-------------|---------------|---|
|             |               | associated Floating Storage and Regasification Unit form part of a separate, but interrelated, EIA process initiated by the Department of Energy. |

Sincerely, *Tim Foxen*

Senior Advisor, Monetizing Gas Africa Inc.  
Cape Town, South Africa +27(0)66 434 7639

[www.monetgas.com](http://www.monetgas.com)

[tfoxen@monetgas.com](mailto:tfoxen@monetgas.com) (Tim Foxen)



**Monetizing Gas Africa**

Investing in the future of natural gas

---

**From:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>

**Date:** Tuesday, 27 October 2020 at 12:03

**To:** Tim Foxen <[tfoxen@monetgas.com](mailto:tfoxen@monetgas.com)>

**Cc:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>

**Subject:** RE: Request for I&AP status

Dear Mr Foxen,

The correct person to submit comments or queries to relating to the CDC's gas to power projects (4 applications in total) is Lyndle Naidoo (cc'ed herein). Your comments should be submitted in writing (preferably email) by 9<sup>th</sup> November. A public webinar is not planned for the project at this stage, however the Draft Scoping reports can be accessed via the link, <https://docs.srk.co.za/en/za-cdc-coega-3000-mw-gas-power-project-eias> . We will register you as an IAP for the projects, meaning that you will receive updates and correspondence relating to the project periodically.

Kind regards,

**Nicola Rump (MSc) CEAPSA**

Principal Environmental Scientist

 **srk consulting**

SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-509-4800; **Fax:** +27-(0)41-509-4850

**Email:** [nrump@srk.co.za](mailto:nrump@srk.co.za) ; **Skype:** nicola.rump.srk

[www.srk.co.za](http://www.srk.co.za)

In light of the lockdown SRK staff will be working remotely using the company's technological infrastructure and resources to ensure that work and project activities proceed as seamlessly as possible. SRK staff will continue to be responsive to client queries and requests during the lockdown period. Our preferred method of communication is email and if unsuccessful I can be contacted on 0824252751.

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

 Please consider the environment before printing this e-mail

---

**From:** Tim Foxen <[tfoxen@monetgas.com](mailto:tfoxen@monetgas.com)>

**Sent:** Tuesday, 27 October 2020 09:46

**To:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>

**Subject:** Re: Request for I&AP status

**EXTERNAL**

Hi Ms Rump,

I am best reached at 066 434 7639, to follow up on my phone call to you this morning.

Thank you.

Tim Foxen

---

**From:** Tim Foxen <[tfoxen@monetgas.com](mailto:tfoxen@monetgas.com)>

**Date:** Tuesday, 27 October 2020 at 09:00

**To:** "[nrump@srk.co.za](mailto:nrump@srk.co.za)" <[nrump@srk.co.za](mailto:nrump@srk.co.za)>

**Subject:** FW: Request for I&AP status

Good day,

Please see the email below for which no response was received as of yet. . Please advise on where to correctly direct the correspondence and for response to the request.

Sincerely, *Tim Foxen*

Senior Advisor, Monetizing Gas Africa Inc.

Cape Town, South Africa +27(0)66 434 7639

[www.monetgas.com](http://www.monetgas.com)

[tfoxen@monetgas.com](mailto:tfoxen@monetgas.com) (Tim Foxen)



**Monetizing Gas Africa**

Investing in the future of natural gas

---

**From:** Tim Foxen <[tfoxen@monetgas.com](mailto:tfoxen@monetgas.com)>  
**Date:** Monday, 26 October 2020 at 08:50  
**To:** "karmstrong@srk.co.za" <[karmstrong@srk.co.za](mailto:karmstrong@srk.co.za)>  
**Cc:** Ebrahim Takolia <[etakolia@monetgas.com](mailto:etakolia@monetgas.com)>, Rodney MacAlister <[rmacalister@monetgas.com](mailto:rmacalister@monetgas.com)>  
**Subject:** Request for I&AP status

Greetings,

I represent Monetizing Gas Africa(MGA). MGA develops gas to power facilities in southern Africa and therefore has an interest in this project. I would like to be added as an Interested and Affected Party to SRK's ongoing environmental review process for the Coega Gas to Power Project: Gas Infrastructure. We understand the public comment period for the draft scoping report goes through 9 November.

Please also advise if a public webinar has/will take place on this project.

Sincerely, *Tim Foxen*

Senior Advisor, Monetizing Gas Africa Inc.  
Cape Town, South Africa +27(0)66 434 7639  
[www.monetgas.com](http://www.monetgas.com)  
[tfoxen@monetgas.com](mailto:tfoxen@monetgas.com) (Tim Foxen)





## Lyndle Naidoo

---

**From:** Frans Stapelberg <frans@milltrans.co.za>  
**Sent:** Wednesday, 04 November 2020 07:21  
**To:** Lyndle Naidoo  
**Subject:** RE: REMINDER OF NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

### EXTERNAL

Thanks: I have no problem with that

### Frans Stapelberg

Port Elizabeth Branch



TEL: 041 404 2000

FAX: 041 461 1059

[frans@milltrans.co.za](mailto:frans@milltrans.co.za)

[www.milltrans.co.za](http://www.milltrans.co.za)

---

**From:** Lyndle Naidoo [mailto:LNaidoo@srk.co.za]  
**Sent:** 03 November 2020 02:41 PM  
**Subject:** REMINDER OF NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

Dear Authorities, Stakeholders & Interested and Affected Parties,

**REMINDER OF NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS:  
CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape**

**DEFF Reference No:**

- Gas Infrastructure – 14/12/16/3/3/2/2013
- Zone 13 power plant – 14/12/16/3/3/2/2012
- Zone 10 South power plant – 14/12/16/3/3/2/2011
- Zone 10 North power plant - 14/12/16/3/3/2/2010

**This email serves as a reminder that comments should be submitted in writing, clearly indicating which project / report the comment relates to, by 12h00 on 9 November 2020 to:**

Lyndle Naidoo at SRK Consulting  
PO Box 21842, Port Elizabeth, 6000  
Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)  
Fax: (041) 509 4850

Kind regards,

**Lyndle Naidoo** MSc  
Environmental Scientist  
ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.


Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001  
P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

 Please consider the environment before printing this e-mail.

---

**From:** Lyndle Naidoo

**Sent:** Sunday, 11 October 2020 13:08

**Subject:** NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega  
Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

Dear Authorities, Stakeholders & Interested and Affected Parties,

**NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega  
Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape  
DEFF Reference No: not yet available**

Please find attached the Executive Summaries of the Draft Scoping Reports (DSRs) for the overall proposed CDC Coega 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape, which consists of the following projects, each of which is subject to a separate EIA and application process:

1. Zone 10 South 1000 MW Power Plant;
2. Zone 10 North 1000 MW Power Plant;
3. Zone 13 1000 MW Power Plant;
4. Gas infrastructure.

Application forms for the four projects listed above have been submitted to the National Department of Environment, Forestry and Fisheries (DEFF) for consideration, along with the DSRs, which will be amended in response to the comments received and released as Final Scoping Reports (FSRs) which will be submitted to DEFF for approval.

Comments on the DSRs will assist to ensure that all potential environmental impacts related to the listed activities will be addressed in the Plan of Study for EIA. The complete Draft Scoping Reports can be accessed as in printed form at the Ward 53 Councillor's office in Motherwell, and at SRK's Port Elizabeth office (by appointment). Electronic copies are available for download from SRK Consulting's webpage via the 'Public Documents' link <https://www.srk.com/en/public-documents>, or can be made available from SRK Consulting upon request.

A 30 day comment period is provided as per the legislated timeframes. **Comments should be submitted in writing, clearly indicating which project / report the comment relates to, by 12h00 on 9 November 2020 to:**

Lyndle Naidoo at SRK Consulting  
PO Box 21842, Port Elizabeth, 6000

Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

Fax: (041) 509 4850

Kind regards,

**Lyndle Naidoo** MSc

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

Tel: +27-(0)41-5094800; Fax: +27-(0)41-5094850

Direct: +27-(0)41-5094838; Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

## Lyndle Naidoo

---

**From:** Lyndle Naidoo  
**Sent:** Wednesday, 04 November 2020 11:57  
**To:** SherinaS@l2b.co.za  
**Cc:** Nicola Rump  
**Subject:** RE: Floating Power Plant in Port of Ngqura - Gas to Power Plants  
**Attachments:** 553652\_CDC Gas To Power\_ Zone 10 South\_DSR\_Executive Summary\_20201006\_reduced.pdf; 553652\_CDC Gas To Power\_ Zone 10 North\_DSR\_Executive Summary\_20201006\_reduced.pdf; 553652\_CDC Gas To Power\_ Gas Infra\_DSR\_Executive Summary\_20201006\_reduced.pdf; 553652\_CDC Gas To Power\_ Zone 13\_DSR\_Executive Summary\_20201006\_reduced.pdf

Hi Sherina,

Please find attached the Executive Summaries of the Draft Scoping Reports (DSRs) for the overall proposed CDC Coega 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape, which consists of the following projects, each of which is subject to a separate EIA and application process:

1. Gas Infrastructure – 14/12/16/3/3/2/2013
2. Zone 13 power plant – 14/12/16/3/3/2/2012
3. Zone 10 South power plant – 14/12/16/3/3/2/2011
4. Zone 10 North power plant - 14/12/16/3/3/2/2010

Herewith the link to the project folder: <https://docs.srk.co.za/en/za-cdc-coega-3000-mw-gas-power-project-eias>

Kind regards,

Lyndle Naidoo *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Sherina Shawe <SherinaS@l2b.co.za>

**Sent:** Wednesday, 04 November 2020 11:49

**To:** Nicola Rump <NRump@srk.co.za>; Lyndle Naidoo <LNaidoo@srk.co.za>

**Subject:** Re: Floating Power Plant in Port of Ngqura - Gas to Power Plants

**EXTERNAL**

Hi Nicola  
Thank you so much.

I had registered when I first found out about it and I had confirmed this with Wanda in March.

Unfortunately I have not received anything since then.

Hi Lyndle

Please can you send me the link with the relevant reports :)

Thank you again, have a super day!

Kind regards,



Our Business is about growing Yours. Find out Who is building What, When & Where.

## Sherina Shawe | Regional Content Researcher Projects

T : +27 86 083 6337 | F: +27 33 343 5882 | E: [SherinaS@L2B.co.za](mailto:SherinaS@L2B.co.za) | W: [www.L2B.co.za](http://www.L2B.co.za)



**L2B: Comprehensive, Online Business Leads for the Construction Industry.**

---

This e-mail is for the intended addressee only. If you have received it in error, please notify the sender by e-mail. View our Privacy Policy [here](#).

On 2020/11/04 11:42, Nicola Rump ([NRump@srk.co.za](mailto:NRump@srk.co.za)) wrote:

Morning Sherina,

I assume you have been included as an IAP for this project (now called CDC gas to power project). If so, you will receive updates as and when appropriate, and would have received a link to download the relevant documents from our website – please refer to the email sent to IAPs with notification of the DSRs. If not, please liaise with Lyndle to be registered as an IAP.

Kind regards,  
Nicola

---

**From:** Sherina Shawe <[SherinaS@l2b.co.za](mailto:SherinaS@l2b.co.za)>  
**Sent:** Wednesday, 04 November 2020 10:55  
**To:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>  
**Subject:** Floating Power Plant in Port of Ngqura - Gas to Power Plants

**EXTERNAL**

Good Morning Nicole

I hope you are well.

Please can you tell me the status of this EIA?  
Have there been any reports submitted since we last spoke? if so - Please may I have a copy?

I look forward to hearing from you :)

Kind regards,



Our Business is about growing Yours. Find out Who is building What, When & Where.

## Sherina Shawe | Regional Content Researcher Projects

T : +27 86 083 6337 | F: +27 33 343 5882 | E: [SherinaS@L2B.co.za](mailto:SherinaS@L2B.co.za) | W: [www.L2B.co.za](http://www.L2B.co.za)



**L2B: Comprehensive, Online Business Leads for the Construction Industry.**

---

This e-mail is for the intended addressee only. If you have received it in error, please notify the sender by e-mail. View our Privacy Policy [here](#).

On 2020/03/09 12:15, Wanda Marais ([WMarais@srk.co.za](mailto:WMarais@srk.co.za)) wrote:

Hi Sherina,

I am well thanks, hope you are too.

I have added you to the database for future notifications. There are no reports yet.

Kind Regards

Wanda

---

**From:** Sherina Shawe <[SherinaS@l2b.co.za](mailto:SherinaS@l2b.co.za)>  
**Sent:** Monday, 09 March 2020 11:56  
**To:** Wanda Marais <[WMarais@srk.co.za](mailto:WMarais@srk.co.za)>  
**Subject:** Floating Power Plant in Port of Ngqura - Gas to Power Plants

Good Afternoon Wanda

I hope you are well.

Please may I be added to the I&AP for this project and if any reports have been conducted, please can you send them to me or send me a link :).

Much appreciated, have a super day!

--

Kind Regards

Sherina Shawe  
Regional Content Researcher  
Private Projects

Leads 2 Business ([www.L2B.co.za](http://www.L2B.co.za))

Tel: 0860 836337  
0860 TENDER  
Fax: 033 3435882

This e-mail is for the intended addressee only. If you have received it in error, please notify the sender by e-mail. Dissemination or copying is prohibited unless permitted by the sender, and then only by the intended addressee. Whilst reasonable measures are used to guard against the transmission of malicious code, no liability is accepted for its transmission. If this e-mail is not related to the business of Cedrus Internet Solutions (Pty) Ltd, it is sent by the above mentioned in their individual capacity and not on behalf of Cedrus Internet Solutions (Pty) Ltd.

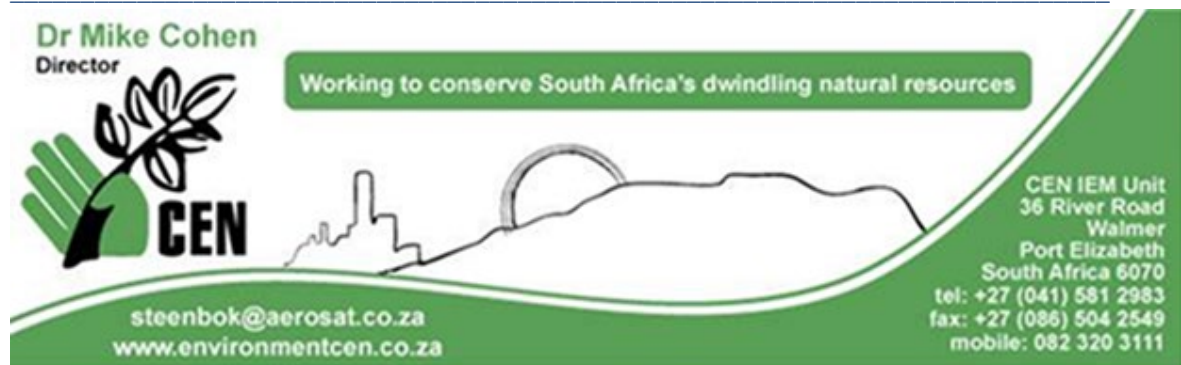
Please note that any views expressed in this email may be those of the originator and do not necessarily reflect those of Cedrus Internet Solutions (Pty) Ltd. --

**From:** [Mike Cohen](#)  
**To:** [Lyndle Naidoo](#)  
**Cc:** [Nicola Rump](#)  
**Subject:** RE: REMINDER OF NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape  
**Date:** Thursday, 05 November 2020 09:58:39  
**Attachments:** [image006.png](#)  
[image002.png](#)

---

**EXTERNAL**

Thanks Lindie



---

**From:** Lyndle Naidoo <LNaidoo@srk.co.za>  
**Sent:** 04 November 2020 10:29  
**To:** Mike Cohen <steenbok@aerosat.co.za>  
**Cc:** Nicola Rump <NRump@srk.co.za>  
**Subject:** RE: REMINDER OF NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

Good day Mike,

The overview of how the projects fit together are provided in the executive summaries. Kindly also refer to Chapter 1 of the DSRs. There isn't any other document currently available that gives more detail on the interaction between the various projects.

Herewith the direct link to the project <https://docs.srk.co.za/en/za-cdc-coega-3000-mw-gas-power-project-eias>

Kind regards,

**Lyndle Naidoo** *MSc*  
Environmental Scientist  
ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001  
P O Box 21842, Port Elizabeth, 6000  
**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850  
**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)



[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

 Please consider the environment before printing this e-mail.

---

**From:** Mike Cohen <[steenbok@aerosat.co.za](mailto:steenbok@aerosat.co.za)>

**Sent:** Tuesday, 03 November 2020 15:17

**To:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>

**Subject:** RE: REMINDER OF NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

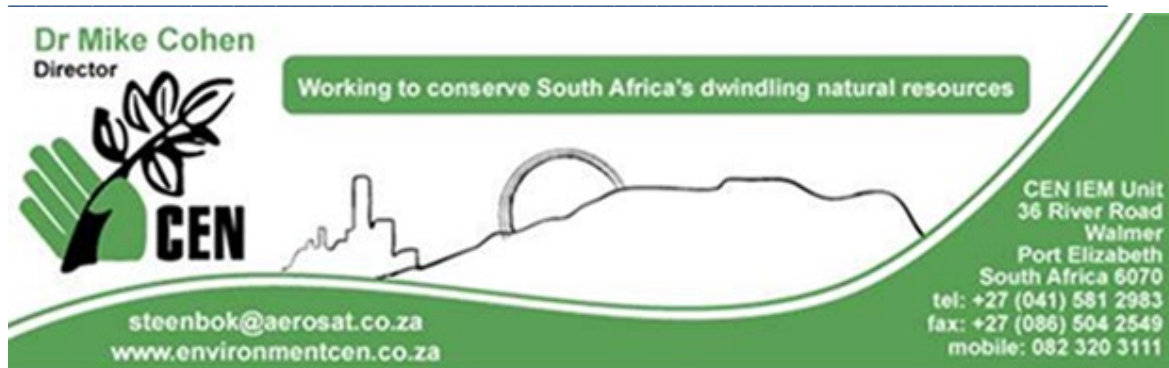
**EXTERNAL**

Hi Lyndle

Do you have a document that ties the various projects together – This is only for interest

Best regards

Mike



---

**From:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>

**Sent:** 03 November 2020 14:30

**Subject:** REMINDER OF NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

Dear Authorities, Stakeholders & Interested and Affected Parties,

**REMINDER OF NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape**  
**DEFF Reference No:**

- Gas Infrastructure – 14/12/16/3/3/2/2013
- Zone 13 power plant – 14/12/16/3/3/2/2012
- Zone 10 South power plant – 14/12/16/3/3/2/2011
- Zone 10 North power plant - 14/12/16/3/3/2/2010

**This email serves as a reminder that comments should be submitted in writing, clearly indicating which project / report the comment relates to, by 12h00 on 9 November 2020 to:**

Lyndle Naidoo at SRK Consulting  
PO Box 21842, Port Elizabeth, 6000  
Email: [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)  
Fax: (041) 509 4850

**Kind regards,**

**Lyndle Naidoo** *MSc*  
Environmental Scientist  
ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001  
P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Lyndle Naidoo

**Sent:** Sunday, 11 October 2020 13:02

**Subject:** NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

Dear Authorities, Stakeholders & Interested and Affected Parties,

**NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS:  
CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape  
DEFF Reference No: not yet available**

Please find attached the Executive Summaries of the Draft Scoping Reports (DSRs) for the overall proposed CDC Coega 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape, which consists of the following projects, each of which is subject to a separate EIA and application process:

1. Zone 10 South 1000 MW Power Plant;
2. Zone 10 North 1000 MW Power Plant;
3. Zone 13 1000 MW Power Plant;
4. Gas infrastructure.

Application forms for the four projects listed above have been submitted to the National Department of Environment, Forestry and Fisheries (DEFF) for consideration, along with the DSRs, which will be amended in response to the comments received and released as Final Scoping Reports (FSRs) which will be submitted to DEFF for approval.

Comments on the DSRs will assist to ensure that all potential environmental impacts related to the

listed activities will be addressed in the Plan of Study for EIA. The complete Draft Scoping Reports can be accessed as in printed form at the Ward 53 Councillor's office in Motherwell, and at SRK's Port Elizabeth office (by appointment). Electronic copies are available for download from SRK Consulting's webpage via the 'Public Documents' link <https://www.srk.com/en/public-documents> , or can be made available from SRK Consulting upon request.

A 30 day comment period is provided as per the legislated timeframes. **Comments should be submitted in writing, clearly indicating which project / report the comment relates to, by 12h00 on 9 November 2020 to:**

Lyndle Naidoo at SRK Consulting  
PO Box 21842, Port Elizabeth, 6000  
Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)  
Fax: (041) 509 4850

**Kind regards,**

**Lyndle Naidoo** *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

**From:** [Lyndle Naidoo](#)  
**To:** ["Tim Foxen"](#)  
**Subject:** RE: Gas Infrastructure Comments 14/12/16/3/3/2/2013  
**Date:** Tuesday, 10 November 2020 12:54:00

---

Good day Tim,

Yes the comments will be made available to the public and authorities with the FSR, as per the EIA regulations. The comments will be appended to the report both as copies of the original comments, as well as tabulated with corresponding responses, which will be made available to all IAPs and on our website. The comment period for the DSR is however closed so we cannot accept additional comments at this stage, however if you would like to retract some / all of your comments, please send us that request in writing, together with a revised copy of the comments with the retracted comments / statements deleted. We will need this by tomorrow please.

**Kind regards,**

**Lyndle Naidoo** *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Tim Foxen <tfoxen@monetgas.com>  
**Sent:** Tuesday, 10 November 2020 07:01  
**To:** Lyndle Naidoo <LNaidoo@srk.co.za>  
**Subject:** Re: Gas Infrastructure Comments 14/12/16/3/3/2/2013

**EXTERNAL**

Good morning Lyndle,

One of my colleagues, at BEM, wants to know if the comments that are made public are merely paraphrased but not directly redistributed/posted on a website? Sorry to bother you about that, but I erred in assuming that the attachment is fully public (the written narrative is not the concern). In fact, that attachment has already been shared with Transnet, CDC and the IPP Office, but not the general public, i.e. on a website. If possible, may I either delete or provide an alternate attachment?

Tim Foxen

---

**From:** Lyndle Naidoo <[L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)>  
**Date:** Monday, 09 November 2020 at 11:36  
**To:** Tim Foxen <[tfoxen@monetgas.com](mailto:tfoxen@monetgas.com)>  
**Cc:** Robert Løseth <[robert.loseth@blystadenergy.com](mailto:robert.loseth@blystadenergy.com)>, Rodney MacAlister <[rmacalister@monetgas.com](mailto:rmacalister@monetgas.com)>, Ebrahim Takolia <[etakolia@monetgas.com](mailto:etakolia@monetgas.com)>, Thomas Blystad <[thomas.blystad@blystadenergy.com](mailto:thomas.blystad@blystadenergy.com)>  
**Subject:** RE: Gas Infrastructure Comments 14/12/16/3/3/2/2013

Good day Tim,

Comments received, thank you.

**Kind regards,**

**Lyndle Naidoo** *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

 Please consider the environment before printing this e-mail.

---

**From:** Tim Foxen <[tfoxen@monetgas.com](mailto:tfoxen@monetgas.com)>  
**Sent:** Monday, 09 November 2020 11:35  
**To:** Lyndle Naidoo <[L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)>  
**Cc:** Robert Løseth <[robert.loseth@blystadenergy.com](mailto:robert.loseth@blystadenergy.com)>; Rodney MacAlister <[rmacalister@monetgas.com](mailto:rmacalister@monetgas.com)>; Ebrahim Takolia <[etakolia@monetgas.com](mailto:etakolia@monetgas.com)>; Thomas Blystad <[thomas.blystad@blystadenergy.com](mailto:thomas.blystad@blystadenergy.com)>  
**Subject:** Gas Infrastructure Comments 14/12/16/3/3/2/2013

**EXTERNAL**

Lyndle,

Please see attached comments from Monetizing Gas Africa , supported by Blystad Energy

Management. Also attached, and referenced in the comments, are General Requirements for LNG-fueled Power Barges.

Sincerely, *Tim Foxen*

Senior Advisor, Monetizing Gas Africa Inc.

Cape Town, South Africa +27(0)66 434 7639

[www.monetgas.com](http://www.monetgas.com)

[tfoxen@monetgas.com](mailto:tfoxen@monetgas.com) (Tim Foxen)



---

**From:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>

**Date:** Tuesday, 03 November 2020 at 14:28

**Subject:** REMINDER OF NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

Dear Authorities, Stakeholders & Interested and Affected Parties,

**REMINDER OF NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape**

**DEFF Reference No:**

- Gas Infrastructure – 14/12/16/3/3/2/2013
- Zone 13 power plant – 14/12/16/3/3/2/2012
- Zone 10 South power plant – 14/12/16/3/3/2/2011
- Zone 10 North power plant - 14/12/16/3/3/2/2010

**This email serves as a reminder that comments should be submitted in writing, clearly indicating which project / report the comment relates to, by 12h00 on 9 November 2020 to:**

Lyndle Naidoo at SRK Consulting  
PO Box 21842, Port Elizabeth, 6000  
Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

Fax: (041) 509 4850

Kind regards,

**Lyndle Naidoo** MSc

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

 Please consider the environment before printing this e-mail.

---

**From:** Lyndle Naidoo

**Sent:** Sunday, 11 October 2020 12:59

**Subject:** NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

Dear Authorities, Stakeholders & Interested and Affected Parties,

**NOTICE OF EIA PROCESS COMMENCEMENT AND COMMENT PERIOD ON DRAFT SCOPING REPORTS: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape**  
**DEFF Reference No: not yet available**

Please find attached the Executive Summaries of the Draft Scoping Reports (DSRs) for the overall proposed CDC Coega 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape, which consists of the following projects, each of which is subject to a separate EIA and application process:

1. Zone 10 South 1000 MW Power Plant;
2. Zone 10 North 1000 MW Power Plant;
3. Zone 13 1000 MW Power Plant;
4. Gas infrastructure.

Application forms for the four projects listed above have been submitted to the National Department of Environment, Forestry and Fisheries (DEFF) for consideration, along with the DSRs, which will be amended in response to the comments received and released as Final Scoping Reports (FSRs) which will be submitted to DEFF for approval.

Comments on the DSRs will assist to ensure that all potential environmental impacts related to

the listed activities will be addressed in the Plan of Study for EIA. The complete Draft Scoping Reports can be accessed as in printed form at the Ward 53 Councillor's office in Motherwell, and at SRK's Port Elizabeth office (by appointment). Electronic copies are available for download from SRK Consulting's webpage via the 'Public Documents' link <https://www.srk.com/en/public-documents> , or can be made available from SRK Consulting upon request.

A 30 day comment period is provided as per the legislated timeframes. **Comments should be submitted in writing, clearly indicating which project / report the comment relates to, by 12h00 on 9 November 2020 to:**

Lyndle Naidoo at SRK Consulting  
PO Box 21842, Port Elizabeth, 6000  
Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)  
Fax: (041) 509 4850

**Kind regards,**

**Lyndle Naidoo** *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.



**From:** [Andries Struwig](#)  
**To:** [Lyndle Naidoo](#)  
**Cc:** [Nicola Rump](#); [Dayalan Govender](#); [Lyndon Mardon](#)  
**Subject:** RE: Request for Extension to Comment--Energy Projects  
**Date:** Wednesday, 11 November 2020 17:09:37  
**Attachments:** [Scoping Report Template DEFEAT comment.pdf](#)

---

**EXTERNAL**

Good afternoon Ms Naidoo

Please find attached the second document as referred to in the email below.

Thank you.

**Andries Struwig**  
**Manager: EQM**  
**Cacadu Region**

---



Province of the  
**EASTERN CAPE**  
ECONOMIC DEVELOPMENT,  
ENVIRONMENTAL AFFAIRS AND TOURISM

Andries Struwig Pr. Sci. Nat.  
Tel: 041 508 5840 • Mobile: 079 503 1762  
Cnr of Athol Fugard Terrace & Castle Hill, Central  
Port Elizabeth, 6001  
P/Bag X5001, Greenacres, South Africa, 6057  
<http://www.dedea.gov.za/>  
<mailto:andries.struwig@dedea.gov.za>

---

**From:** Andries Struwig  
**Sent:** Wednesday, 11 November 2020 16:22  
**To:** Lyndle Naidoo <LNaidoo@srk.co.za>  
**Cc:** Nicola Rump <NRump@srk.co.za>; Dayalan Govender <Dayalan.Govender@dedea.gov.za>  
**Subject:** RE: Request for Extension to Comment--Energy Projects

Good afternoon Ms Naidoo

Further to the email below I attach the PDF document for the 1000MW gas to powerplant in Zone 13 of the SEZ. Please note the following:

- Comments are included in the document as sticky notes.
- Perusal of the three draft Scoping Reports has indicated that they are very similar in content. I have therefore made detailed comment on the SR for the Zone 13 site and these are relevant to all three draft Scoping Reports. In addition I have made further comments that are specifically relevant to the two sites in Zone 10 within the draft Scoping Report for the Zone 10 north site. I will be sending this in a separate email due to the size of the files. The SR for the Zone 10 south site is in essence similar to the one for the Zone 10 north site and I have thus not made separate comments in this SR.

In addition the following needs to be highlighted specifically.

- It is concerning that the documentation references this as an overall Coega Power Project with the different components being interlinked. Yet there are three separate applications and furthermore the LNG to Gas Hub is not addressed at all.
- The seemingly generic nature of the assessment process is also concerning – this is due to the fact that there are no specific details available as to the specifics of the powerplants.

The location of two of the powerplants immediately adjacent to coast and within the littoral active zone is problematic. There should have been alternative locations identified for these.

- There are a lot of assumptions and uncertainties due to the fact that this project is seemingly dependent on the outcome of other assessments and applications notably the marine intake and outfall project and the gas infrastructure project.
- The details with regard to the water situation seems to be based on old information. Furthermore the whole issue of water use / demand and supply is not properly addressed / explained. The Nelson Mandela Bay is severely constraint when it comes to water and with climate change it is foreseen that it will stay this way. Use of potable water from the municipal supply system for industrial use should not even be considered as it is not sustainable- yet all three Scoping Reports references the possibility municipal supply. Unless the source of such supply is return effluent it should not be considered as an option. Furthermore it is mentioned that desalinated water will be obtained from the desalination plant associated with the aquaculture project. This is meaningless without actually explaining in detail the proposed demand and supply i.e. what is the capacity of this desalination plant and will it be able to provide in the anticipated demand for all three proposed powerplants. If seawater is to be used such as being proposed for the two powerplants in Zone 10, again the volumes needs to be explained in the context of the proposed capacity of the marine intake bearing in mind that this intake will not only be there to supply the three powerplants.
- It is evident from statements in the three scoping reports that no carbon capture and storage is proposed for the bigger project. The question is why this is not considered as one would have thought it should be considered. Furthermore it this would be a requirement how will it influence the viability of the project.
- The comments and response report references comments made on a BID that dates from 2016. One would have thought that there would be an up to date BID circulated that would be more relevant. As such comments and responses contained in the comments and response report that relate to the BID is old and out of date.

Trust that you find this in order.

**Andries Struwig**  
**Manager: EQM**  
**Cacadu Region**



Province of the  
**EASTERN CAPE**  
ECONOMIC DEVELOPMENT,  
ENVIRONMENTAL AFFAIRS AND TOURISM

Andries Struwig Pr. Sci. Nat.  
Tel: 041 508 5840 • Mobile: 079 503 1762  
Cnr of Athol Fugard Terrace & Castle Hill, Central  
Port Elizabeth, 6001  
P/Bag X5001, Greenacres, South Africa, 6057  
<http://www.dedea.gov.za/>  
<mailto:andries.struwig@dedea.gov.za>

---

**From:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>

**Sent:** Monday, 09 November 2020 16:57

**To:** Andries Struwig <[Andries.Struwig@dedea.gov.za](mailto:Andries.Struwig@dedea.gov.za)>

**Cc:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>; Dayalan Govender <[Dayalan.Govender@dedea.gov.za](mailto:Dayalan.Govender@dedea.gov.za)>

**Subject:** RE: Request for Extension to Comment--Energy Projects

Good day Mr Struwig,

That will not be a problem, thank you. We look forward to receiving your comments.

Kind regards,

Lyndle Naidoo *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

Tel: +27-(0)41-5094800; Fax: +27-(0)41-5094850

Direct: +27-(0)41-5094838; Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Andries Struwig <[Andries.Struwig@dedea.gov.za](mailto:Andries.Struwig@dedea.gov.za)>

**Sent:** Monday, 09 November 2020 14:00

**To:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>

**Cc:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>; Dayalan Govender <[Dayalan.Govender@dedea.gov.za](mailto:Dayalan.Govender@dedea.gov.za)>

**Subject:** RE: Request for Extension to Comment--Energy Projects

**EXTERNAL**

Good day Ms Naidoo

We have recently been providing comment on PDF reports as sticky notes within the document itself. These are easy to copy and paste into any response report that are to be compiled and also makes it easier to make substantive comment without it taking up too much time to write up as a word document.

I trust that under the circumstances this will be acceptable.

Thank you.

**Andries Struwig**  
**Manager: EQM**  
**Cacadu Region**



Province of the  
**EASTERN CAPE**  
ECONOMIC DEVELOPMENT,  
ENVIRONMENTAL AFFAIRS AND TOURISM

Andries Struwig Pr. Sci. Nat.

Tel: 041 508 5840 • Mobile: 079 503 1762

Cnr of Athol Fugard Terrace & Castle Hill, Central

Port Elizabeth, 6001

P/Bag X5001, Greenacres, South Africa, 6057

<http://www.dedea.gov.za/>

<mailto:andries.struwig@dedea.gov.za>

**From:** Lyndle Naidoo <[L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)>  
**Sent:** Monday, 09 November 2020 13:21  
**To:** Dayalan Govender <[Dayalan.Govender@dedea.gov.za](mailto:Dayalan.Govender@dedea.gov.za)>  
**Cc:** Andries Struwig <[Andries.Struwig@dedea.gov.za](mailto:Andries.Struwig@dedea.gov.za)>; Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>  
**Subject:** RE: Request for Extension to Comment--Energy Projects

Good day Mr Govender,

As discussed with Ms Nicola Rump, given the Department's importance to the EIA process, we are willing to accept comments made by DEDEAT after the cut-off date but request that these are please provided in Word format as well as PDF format to allow us to capture them more quickly. Kindly please submit these comments by **12<sup>th</sup> November 2020** at the latest to allow us to submit the FSRs within the project timeframes.

**Kind regards,**

**Lyndle Naidoo** *MSc*  
Environmental Scientist  
ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001  
P O Box 21842, Port Elizabeth, 6000  
**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850  
**Direct:** +27-(0)41-5094838; **Email:** [L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)  
[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Dayalan Govender <[Dayalan.Govender@dedea.gov.za](mailto:Dayalan.Govender@dedea.gov.za)>  
**Sent:** Monday, 09 November 2020 11:07  
**To:** Lyndle Naidoo <[L.Naidoo@srk.co.za](mailto:L.Naidoo@srk.co.za)>  
**Cc:** Andries Struwig <[Andries.Struwig@dedea.gov.za](mailto:Andries.Struwig@dedea.gov.za)>  
**Subject:** Request for Extension to Comment--Energy Projects

**EXTERNAL**

Dear Mam

Can I request an extension to comment on these projects.

Our IT system has been very erratic so my colleagues have had problems accessing and reviewing the documents.

They have finally succeed in doing so now and are busy with the reviews.

Regards

**Dayalan Jeff Govender**  
**Regional Manager: Environmental Affairs**  
**Sarah Baartman/Nelson Mandela Bay Region**

---

Tel: 041 508 5811 • Fax: 041 508 5865, 071 674 9710  
Cnr of Athol Fugard Terrace & Castle Hill, Central  
Port Elizabeth, 6001  
P/Bag X5001, Greenacres, South Africa, 6057



Province of the  
**EASTERN CAPE**

ECONOMIC DEVELOPMENT,  
ENVIRONMENTAL AFFAIRS AND TOURISM

<http://www.dedea.gov.za/>

[Dayalan.Govender@dedea.gov.za](mailto:Dayalan.Govender@dedea.gov.za)

'Everything in this email and its attachments relating to the official business of the Eastern Cape Provincial Government and the Department of Economic Development Environmental Affairs and Tourism is proprietary to the ECPG and DEDEAT. It is confidential, legally privileged and protected by law. The person addressed in the email is the sole authorized recipient. Should you receive it in error, immediately notify the sender of the error and delete the e-mail. Any unauthorized dissemination or copying of this e-mail (or any attachment to this e-mail) or the wrongful disclosure of the information here in contained is prohibited. Also note that this form of communication is not secure, it can be intercepted, and may not necessarily be free of errors and viruses in spite of reasonable efforts to secure this medium'; and fall back to action Wrap if the disclaimer can't be inserted.

'Everything in this email and its attachments relating to the official business of the Eastern Cape Provincial Government and the Department of Economic Development Environmental Affairs and Tourism is proprietary to the ECPG and DEDEAT. It is confidential, legally privileged and protected by law. The person addressed in the email is the sole authorized recipient. Should you receive it in error, immediately notify the sender of the error and delete the e-mail. Any unauthorized dissemination or copying of this e-mail (or any attachment to this e-mail) or the wrongful disclosure of the information here in contained is prohibited. Also note that this form of communication is not secure, it can be intercepted, and may not necessarily be free of errors and viruses in spite of reasonable efforts to secure this medium'; and fall back to action Wrap if the disclaimer can't be inserted.

'Everything in this email and its attachments relating to the official business of the Eastern Cape Provincial Government and the Department of Economic Development Environmental Affairs and Tourism is proprietary to the ECPG and DEDEAT. It is confidential, legally privileged and protected by law. The person addressed in the email is the sole authorized recipient. Should you receive it in error, immediately notify the sender of the error and delete the e-mail. Any unauthorized dissemination or copying of this e-mail (or any attachment to this e-mail) or the wrongful disclosure of the information here in contained is prohibited. Also note that this form of communication is not secure, it can be intercepted, and may not necessarily be free of errors and viruses in spite of reasonable efforts to secure this medium'; and fall back to action Wrap if the disclaimer can't be inserted.

# Proposed Coega 1000 MW Gas-to-Power Plant – Zone 10 (North)

## Draft Scoping Report

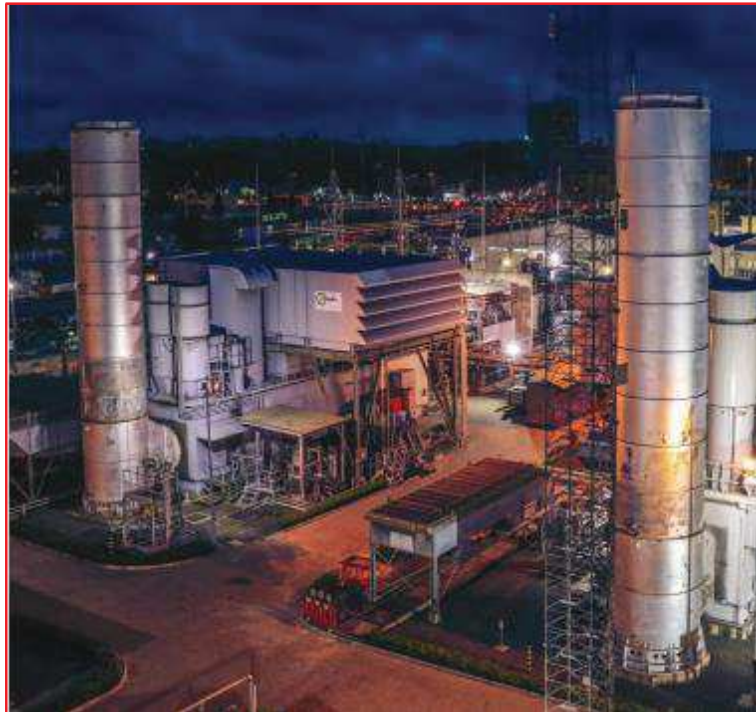
Report Prepared for



**Coega Development Corporation**

Report Number 553652/Z10-N/1

DEFF ref no: not yet available



Report Prepared by



October 2020

# **Proposed Coega 1000 MW Gas-to-Power Plant – Zone 10 (North) Draft Scoping Report**

## **Coega Development Corporation**

### **SRK Consulting (South Africa) (Pty) Ltd.**

Ground Floor Bay Suites  
1a Humewood Rd.  
Humerail  
Port Elizabeth 6001  
South Africa  
e-mail: portelizabeth@srk.co.za  
website: www.srk.co.za

Tel: +27 (0) 41 509 4800

Fax: +27 (0) 41 509 4850

**SRK Project Number 553652**

**October 2020**

#### **Compiled by:**

Nicola Rump  
Principal Environmental Scientist

Abby van Nierop  
Environmental Scientist

Email: nrump@srk.co.za

#### **Authors:**

N Rump & A van Nierop

#### **Peer Reviewed by:**

Chris Dalgliesh  
Director,  
Principal Environmental Scientist

# Table of Contents

|   |           |
|---|-----------|
| Disclaimer.....   | ix        |
| <b>1. Background and Introduction .....</b>   | <b>1</b>  |
| 1.1. Background to the study .....  | 1         |
| 1.2 Details and expertise of the environmental assessment practitioners (EAPs) .....                  | 2         |
| 1.3 Statement of SRK Independence .....   | 2         |
| 1.4 Assessment of the Scoping Report.....   | 2         |
| 1.5 Legal Requirements Pertaining to the Proposed Project.....  | 6         |
| 1.5.1 National Environmental Management Act (Act No. 107 of 1998) (NEMA) .....                        | 6         |
| 1.5.2 NEMA EIA Regulations .....  | 7         |
| 1.5.3 National Environmental Management: Air Quality Act (Act No. 39 of 2004) (NEM:AQA) ....          | 10        |
| 1.5.4 National Greenhouse Gas Emission Reporting Regulations (GNR 275 of 2017).....                   | 10        |
| 1.5.5 National Environmental Management: Integrated Coastal Management Act (Act No. 24 of 2008) ..... | 11        |
| 1.5.6 National Environmental Management: Biodiversity Act (Act No. 10 of 2004).....                   | 11        |
| 1.5.7 Electricity Regulation Act (Act no. 4 of 2006).....   | 12        |
| 1.5.8 National Heritage Resources Act (Act No. 25 of 1999).....                                       | 12        |
| 1.5.9 National Water Act (Act No. 36 of 1998).....  | 13        |
| 1.6 Planning Policy Framework .....   | 13        |
| 1.6.1 Integrated Energy Plan 2016 .....   | 13        |
| 1.6.2 Integrated Resources Plan (2010-2030).....  | 13        |
| 1.7 Approach to the Scoping Study .....   | 14        |
| 1.8 Purpose of this Draft Scoping Report .....  | 16        |
| 1.9 Assumptions and Limitations .....   | 17        |
| 1.10 Structure of this report.....  | 18        |
| 1.11 Content of Report.....   | 19        |
| <b>2 Description of the Project.....</b>  | <b>22</b> |
| 2.1 Context.....  | 23        |
| 2.2 Need and desirability.....  | 25        |
| 2.2.1 Analysis of Need and Desirability of the Project .....  | 25        |
| 2.2.2 Alignment with Energy Initiatives .....   | 28        |
| 2.2.3 Land Use Planning Policy Framework .....  | 28        |
| 2.3 Location and site description of the proposed project .....                                       | 28        |
| 2.4 Key Terminology .....   | 30        |
| 2.4.1 Liquefied Natural Gas (LNG).....  | 30        |
| 2.4.2 Open Cycle vs Combined Cycle .....  | 30        |
| 2.4.3 Gas engines vs gas turbines.....  | 31        |
| 2.4.4 Cooling technologies .....  | 32        |
| 2.5 Detailed Project Description.....   | 33        |
| 2.5.1 Power Plant Technology Options.....   | 33        |



|          |   |           |
|----------|---|-----------|
| 2.5.2    | Cooling technology options .....                            | 35        |
| 2.5.3    | Power Plant .....   | 36        |
| 2.5.4    | Power evacuation .....                                      | 36        |
| 2.5.5    | Cold vent system .....                                      | 37        |
| 2.5.6    | Safety and fire protection .....                            | 37        |
| 2.5.7    | Cooling Water .....   | 37        |
| 2.5.8    | Water Balance: Process Water .....                          | 37        |
| 2.5.9    | Waste generation and management .....                       | 38        |
| 2.5.10   | Emergency Response .....                                    | 38        |
| 2.5.11   | Labour and Employment .....                                 | 38        |
| 2.6      | Project Alternatives .....                                  | 38        |
| 2.6.1    | Activity Alternatives .....                                 | 39        |
| 2.6.2    | Site Alternatives .....                                     | 39        |
| 2.6.3    | Layout and Alignment Alternatives .....                     | 40        |
| 2.6.4    | Technology Alternatives .....                               | 40        |
| 2.6.5    | No-Go alternative .....                                     | 41        |
| 2.7      | Phasing .....   | 42        |
| <b>3</b> | <b>Description of the Affected Environment.....</b>         | <b>43</b> |
| 3.1      | Climate .....   | 43        |
| 3.2      | Geology .....   | 44        |
| 3.3      | Topography .....  | 45        |
| 3.4      | Land Use .....  | 45        |
| 3.5      | Surface and Ground Water .....                              | 47        |
| 3.6      | Ecology .....   | 47        |
| 3.6.1    | Vegetation .....  | 47        |
| 3.6.2    | Fauna .....   | 52        |
| 3.7      | Protected Areas .....                                       | 54        |
| 3.7.1    | Addo Elephant National Park and Marine Protected Area ..... | 54        |
| 3.8      | Sense of Place .....  | 55        |
| 3.9      | Regional Water Supply .....                                 | 55        |
| 3.10     | Ambient Noise .....   | 58        |
| 3.11     | Ambient Air Quality .....                                   | 58        |
| 3.12     | Heritage Resources .....                                    | 60        |
| 3.12.1   | Archaeological Resources .....                              | 60        |
| 3.12.2   | Palaeontological resources .....                            | 61        |
| <b>4</b> | <b>Stakeholder Engagement .....</b>                         | <b>63</b> |
| 4.1      | Objectives and Approach .....                               | 63        |
| 4.2      | Public Participation Activities .....                       | 63        |
| 4.2.1    | Availability of the Draft Scoping Report .....              | 64        |
| 4.2.2    | Registered IAPs and Issues Raised .....                     | 64        |
| <b>5</b> | <b>Identification of Potential Impacts .....</b>            | <b>75</b> |

5.1 Key environmental and social concerns identified during the PPP .....75

5.2 Key Environmental Issues and Impacts .....75

5.2.1 Air quality impacts .....76

5.2.2 Noise impacts .....76

5.2.3 Impacts on heritage resources .....77

5.2.4 Terrestrial ecological impacts .....77

5.2.5 Socio-economic impacts .....77

5.2.6 Traffic impacts .....77

5.2.7 Waste management impacts .....78

5.2.8 Visual impacts/Sense of Place .....78

5.2.9 Stormwater and erosion impacts .....78

5.2.10 Impacts on surface and groundwater .....78

5.2.11 Climate change impacts .....78

5.2.12 Safety risks .....79

5.2.13 Construction related impacts .....79

5.3 Potential Mitigation Measures .....79

**6 Draft Plan of Study for EIA .....81**

6.1 National Web Based Environmental Screening Tool .....81

6.2 Specialist Studies .....82

6.3 Impact Rating Methodology .....83

6.4 Cumulative Impacts .....85

6.4.1 Introduction .....85

6.4.2 Scope of the Cumulative Assessment .....86

6.4.3 Area of Influence .....87

6.4.4 Identification of VECs .....88

6.4.5 Past, Existing and Planned Activities that may affect VECs .....88

6.5 Draft Terms of Reference for Specialist Studies .....89

6.5.1 Air Quality .....89

6.5.2 Quantitative Risk Assessment .....89

6.5.3 Climate Change .....90

6.5.4 Noise .....90

6.5.5 Traffic .....91

6.6 EIA Process Schedule .....91

**7 The Way Forward .....92**

**8 References .....94**

Appendices .....96

Appendix A: CV's of Key Professionals .....97

Appendix B: EIA Application Form .....98

Appendix C: On-site and E - Notices .....99

Appendix D: Newspaper Notice .....100

Appendix E: Background Information Document .....101

|   |     |
|---|-----|
| Appendix F: Presentation to ELC on 20 August 2020 ..... | 102 |
| Appendix G: Proof of IAP Notification .....             | 103 |
| Appendix H: IAP Correspondence on BID .....             | 104 |
| Appendix I: Layout drawings .....                       | 105 |
| Appendix J: Site Photographs .....                      | 106 |
| SRK Report Distribution Record .....                    | 107 |

## List of Tables

|   |    |
|---|----|
| Table 1-1: NEMA Listed Activities (2014 EIA regulations, as amended) applicable to the Proposed Zone 10 North Power Plant .....                 | 8  |
| Table 2-1: The Case for Coega's Gas Readiness - Fast Facts (CDC, 20 July 2015).....   | 24 |
| Table 2-2: Property details.....  | 28 |
| Table 3-1: Annual average monitored concentrations of SO <sub>2</sub> , NO <sub>2</sub> and PM <sub>10</sub> at Saltworks monitoring station 60 |    |
| Table 4-1: Registered Interested and Affected Parties and Stakeholders .....  | 64 |
| Table 4-2: Issues Raised by Interested and Affected Parties, as relevant to the Zone 10 North Power Plant, on BID distributed in 2016.....      | 69 |
| Table 4-3: Comments Raised by Stakeholders at the Coega ELC Meeting on 20 August 2020 .....   | 72 |
| Table 5-1: Typical mitigation measures .....  | 80 |
| Table 6-1: Site sensitivity verification .....  | 81 |
| Table 6-2: Criteria used to determine the Consequence of the Impact.....  | 83 |
| Table 6-3: Method used to determine the Consequence Score.....  | 84 |
| Table 6-4: Probability Classification .....   | 84 |
| Table 6-5: Impact Significance Ratings .....  | 84 |
| Table 6-6: Impact status and confidence classification .....  | 84 |
| Table 6-7: Past, existing and future activities and projects .....  | 88 |
| Table 6-8: Programme of activities and target dates.....  | 91 |

## List of Figures

|   |    |
|---|----|
| Figure 1-1: Site Locality Plan showing all components of the CDC gas to power project .....   | 3  |
| Figure 1-2: Site Locality Plan, showing all components of the CDC gas to power project .....  | 4  |
| Figure 1-3: Site locality map for Zone 10 North power plant.....  | 5  |
| Figure 1-4: Environmental Impact Assessment (EIA) Process .....   | 17 |
| Figure 2-1: Schematic of scope of the gas to power project EIAs (Carnegie Energie, 2019).....   | 22 |
| Figure 2-2: Fuel combustion and Life-cycle GHG Emissions for Existing Power plant technology (Source: (Transnet SOC Ltd, 2015)) ..... | 27 |
| Figure 2-3: Coega SEZ zone layout .....   | 29 |
| Figure 2-4: Schematic showing inputs and outputs for open cycle gas turbine or engine technology (Carnegie Energie, 2019).....        | 31 |
| Figure 2-5: Schematic showing inputs and outputs for combined cycle gas turbine or engine technology (Carnegie Energie, 2019).....    | 31 |

|   |    |
|---|----|
| Figure 2-6: Summary of key differences between gas turbine and engine technology (Carnegie Energie, 2019) .....   | 32 |
| Figure 2-7: Footprint and water demand for three cooling methods (Source: (Mott Macdonald, 2016) .....  | 33 |
| Figure 2-8: Example of a typical Combined Cycle Internal Combustion Engine setup (Source: Wartsila) .....   | 35 |
| Figure 2-9: Layout of a typical Combined Cycle Internal Combustion Engine setup, (Source: Wartsila) .....   | 35 |
| Figure 2-10: Water Balance Diagram Source: (Carnegie Energie, 2019).....  | 37 |
| Figure 3-1: Average of daily minimum, maximum and mean temperatures (°C) and average monthly precipitation (mm) at Port Elizabeth Airport for the period 1961 – 1990..... | 43 |
| Figure 3-2: Annual wind roses for Port Elizabeth Airport, Amsterdamplein, Motherwell and Saltworks for 2009-2011 .....  | 44 |
| Figure 3-3: Geology of the Zone 10 North site area .....  | 46 |
| Figure 3-4: Vegetation types within the Zone 10 North site area (Mucina & Rutherford, 2006) .....   | 49 |
| Figure 3-5: STEP vegetation within the Zone 10 North site area .....  | 50 |
| Figure 3-6: Water use (2011) and predicted growth in water demand in the Algoa Water Supply Scheme (DWS, n.d.) .....  | 56 |
| Figure 3-7: Terrestrial and marine environmental sensitivities in the Zone 10 North site area .....   | 57 |
| Figure 3-8: 1-hr average SO <sub>2</sub> monitored concentrations at Saltworks monitoring station .....   | 59 |
| Figure 3-9: 24-hour average SO <sub>2</sub> monitored concentrations at Saltworks monitoring station .....  | 59 |
| Figure 3-10: 1-hr average NO <sub>2</sub> monitored concentrations at Saltworks monitoring station .....  | 59 |
| Figure 3-11: 24-hr average PM <sub>10</sub> monitored concentrations at Saltworks monitoring station.....   | 60 |
| Figure 3-12: Sensitive heritage sites in the Coega SEZ relative to gas to power project infrastructure .....  | 62 |

## List of Abbreviations

|        |   |
|--------|---|
| +ve    | Positive  |
| BID    | Background Information Document                                       |
| CBA    | Critical Biodiversity Areas   |
| CCGT   | Combined Cycle Gas Turbine  |
| CDC    | Coega Development Corporation   |
| DAFF   | Department of Agriculture, Forestry and Fisheries                     |
| DEA    | Department of Environmental Affairs (National) (now DEFF)             |
| DEDEAT | Department of Economic Development, Environmental Affairs and Tourism |
| DEFF   | Department of Environment, Forestry and Fisheries (formerly DEA)      |
| DHSWS  | Department of Human Settlements, Water and Sanitation                 |
| DMRE   | Department of Mineral Resources and Energy                            |
| DSR    | Draft Scoping Report  |
| EA     | Environmental Authorisation   |
| EAP    | Environmental Assessment Practitioner                                 |
| EIA    | Environmental Impact Assessment                                       |
| EIR    | Environmental Impact Report   |
| EMPr   | Environmental Management Programme                                    |
| FSR    | Final Scoping Report  |
| FSRU   | Floating Storage Regasification Unit                                  |
| GHG    | Greenhouse Gas  |
| HRSG   | Heat Recovery Steam Generators  |
| IAPs   | Interested and Affected Parties                                       |
| IDP    | Integrated Development Plan   |
| IEP    | Integrated Energy Plan  |
| IPP    | Independent Power Producer  |
| IRP    | Integrated Resources Plan   |
| IUCN   | International Union for Conservation of Nature                        |
| LNG    | Liquefied Natural Gas   |
| MPA    | Marine Protected Area   |
| MVA    | Megavolt ampere   |
| MW     | Megawatt  |
| NEMA   | National Environmental Management Act                                 |
| NEMBA  | National Environmental Management: Biodiversity Act                   |
| NEMPAA | National Environmental Management: Protected Areas Act                |
| NMBM   | Nelson Mandela Bay Municipality                                       |
| OEM    | Original Equipment Manufacturers                                      |
| ORV    | Open Rack Vaporiser   |
| PPP    | Public Participation Process  |
| SAHRA  | South African Heritage Resource Agency                                |
| SANS   | South African National Standards                                      |
| SCV    | Submerged Combustion Vaporiser  |
| SDF    | Spatial development Framework   |

|      |  |
|------|--|
| SEZ  | Special Economic Zone                          |
| SSC  | Species of Special Concern                     |
| STEP | Subtropical Thicket Ecosystem Planning Project |
| ToR  | Terms of Reference                             |
| WI   | Wobbe Index                                    |
| -ve  | Negative                                       |

## Glossary of Terms

|                                      |   |
|--------------------------------------|---|
| Auto – refrigeration                 | The process in which LNG is kept at its boiling point, so that any added heat is countered by energy lost from boil off.  |
| Base Load Power Plant                | A power plant that provides a continuous supply of electricity and is only turned off during maintenance.   |
| Berth                                | Designated location in port/harbour for the mooring of vessels  |
| Steam Cycle Blowdown                 | Water intentionally wasted from a boiler to avoid concentration of impurities during continuing evaporation of steam.   |
| Breakwater                           | Structures constructed on coasts as part of coastal defence or to protect an anchorage from the effects of both weather and longshore drift   |
| Combined Cycle Gas Turbine           | A turbine that utilises natural gas to generate electricity and the by-products (waste heat) of this process to power steam engines and generate further electricity.   |
| Closed Cycle Gas Turbine             | A turbine that uses gas for the working fluid and recirculates the gas within the system.   |
| Environment                          | The external circumstances, conditions and objects that affect the existence and development of an individual, organism or group. These circumstances include biophysical, social, economic, historical and cultural aspects.   |
| Floating Power Barge                 | A special purpose ship on which a power plant is installed to serve as a power generation source.   |
| Floating Storage Regasification Unit | Floating vessel that receives liquefied natural gas and converts this to its gaseous form on board.   |
| Independent Power Producer           | Independent Power Producer is an entity, which is not a public electric utility, but which owns and or operates facilities to generate electric power for sale to a utility, central government buyer and end users.  |
| Jetty                                | A structure that projects from the land out into the water  |
| Liquefied Natural Gas                | Natural gas that has been converted to liquid form.   |
| Liquefaction                         | The process by which natural gas is converted into liquid natural gas   |
| Mid-Merit Power Plant                | A 'load following' power plant. The power plant adjusts its power output as demand for electricity fluctuates.  |
| Natural Gas                          | A hydrocarbon gas that is usually obtained from underground sources, often in association with petroleum and coal deposits. Natural gas generally contains a high percentage of methane and inert gases.  |
| Open Cycle Gas Turbines              | A turbine that uses gas for the working fluid and does not reuse the exhaust by-products of the process but releases these outside of the system.   |
| Peaking Power Plant                  | Power plants that generally run only when there is a high demand, known as peak demand, for electricity.  |
| Port                                 | A location on a coast or shore containing one or more harbours where ships can dock and transfer people or cargo to or from land  |
| Quay                                 | A structure on the shore of a harbour where ships may dock to load and unload cargo. Includes one or more berths and may include piers, warehouses or other facilities necessary for handling the ships.  |
| Regasification                       | The process by which LNG is heated, converting it into its gaseous state.   |
| Terminal                             | The set of facilities at a port where loading and unloading of cargo/container takes place. Terminals are named on the basis of the type of cargo that can be handled by them. Some of the most common types of terminals are container terminal, bulk cargo terminal, LNG terminal |
| Ullage                               | The empty space in large tanks used to store liquids.   |

## Disclaimer

The opinions expressed in this Report have been based on the information supplied to SRK Consulting (South Africa) (Pty) Ltd. (SRK) by Coega Development Corporation (CDC). SRK has exercised all due care in reviewing the supplied information. Whilst SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them. Opinions presented in this report apply to the site conditions and features as they existed at the time of SRK's investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this Report, about which SRK had no prior knowledge nor had the opportunity to evaluate.



# 1. Background and Introduction

## 1.1. Background to the study

The Coega Development Corporation (CDC) proposes to develop a gas to power project, including three power plants and associated infrastructure, within the Coega Special Economic Zone (SEZ) (see Figure 1-1 and Figure 1-3 for site locality) and have appointed SRK Consulting (South Africa) (Pty) Ltd (SRK) to conduct an Environmental Impact Assessment (EIA) in terms of the National Environmental Management Act (NEMA).

The overall project would broadly involve the following components:

- A Liquefied Natural Gas (LNG) terminal, consisting of a berth with off-loading arms within the Port of Ngqura, cryogenic pipelines, storage and handling facilities and re-gasification modules;
- Three Gas to Power plants, each with a 1000 MW generation capacity (specific generation technologies may vary);
- Gas pipelines for the transmission, distribution and reticulation of natural gas within the Coega SEZ and Port of Ngqura; and
- Electricity transmission lines to evacuate electricity to the previously approved 400 kV lines in the SEZ.

The ultimate/ overall proposed project will comprise of three power plants with power generation capacities of 1000 MW each. A total power generation capacity of up to 3000 MW will therefore be available once the full extent of the project has been developed (which may be spread over a number of phases), the timing of which is unknown at this stage and is dependent on the CDC securing successful clients for the development of each component.

Four separate EIA applications have been lodged for the project (each of the three power plants and one for the gas infrastructure). This approach allows for the transfer of discrete projects and associated authorisations to developers following a bidding process.

As developers and their chosen technologies have not yet been identified, various technologically feasible options are applied for in each EIA, and the assessment presented will be based on the worst case option for each impact. The aim of this approach is to identify the envelope limits within which the project impacts will fall, and which will be acceptable to the receiving environment with implementation of mitigation measures where relevant.

**This Draft Scoping Report (DSR) deals with the northern-most power plant in Zone 10 of the Coega SEZ.**

In accordance with the requirements of the NEMA 2014 EIA regulations, as amended, the proposed project requires a full Scoping and EIA process to be conducted. The Scoping Study includes a Public Participation Process (PPP), aimed at identifying issues and concerns of Interested and Affected Parties (IAPs). The objective of the Scoping Study is to identify those issues and concerns that must be investigated in more detail, and which will be reported in a subsequent Environmental Impact Report (EIR). As part of the Scoping stage, a Plan of Study is proposed for the EIA process that identifies specialist studies required in order to flag environmental sensitive/ no-go areas at an early stage in project planning. This allows, where possible and necessary, environmentally sensitive areas to be accommodated in the project layout. The report presents the findings of the scoping study and

offers an opportunity for key stakeholders and IAPs to review the issues identified, and to make further comments.

## 1.2 Details and expertise of the environmental assessment practitioners (EAPs)

The qualifications and experience of the key independent Environmental Assessment Practitioners (EAPs) undertaking the EIA are detailed below, and Curriculum Vitae are in Appendix A. An Affirmation (as required in terms of the NEMA EIA regulations, 2014), is provided with the application form in Appendix B.

### **Environmental Assessment Practitioner: Nicola Rump, MSc, EAPSA**

Nicola Rump is a Principal Environmental Scientist in SRK's Port Elizabeth office and has been involved in environmental management for the past 12 years working on South African and international projects including EIAs and ISO 14001 auditing for a variety of activities. Her experience includes Basic Assessments, Environmental Impact Assessments, Environmental Management Plans, Environmental Auditing and Stakeholder Engagement. Nicola is the Environmental Assessment Practitioner for this Environmental Impact Assessment process.

### **EIA Co-ordinator: Abby van Nierop (BSc Hons)**

Abby van Nierop is an Environmental Scientist in the Port Elizabeth office. Abby has been involved in environmental management for the past 7 years. Her expertise includes assistance with Environmental Impact Assessments (EIAs), Basic Assessments, Environmental Management Programmes (EMPRs), Water Use Applications (WUAs), environmental compliance auditing and as a Public Participation Co-ordinator.

### **Internal Reviewer: Chris Dalgliesh, MPhil, BBusSc (Hons), Registered EAP No 2019/413**

Chris Dalgliesh is a Director and head of SRK's Environmental Department in Cape Town. He has more than 33 years environmental consulting experience covering a broad range of projects, including EIA and ESIA (EMPR), environmental and social due diligence, socio-economic impact assessments, stakeholder engagement, strategic environment assessments and management plans, state of environment reporting, environmental management frameworks, site safety reports for the nuclear industry, natural resource management and waste management.

## 1.3 Statement of SRK Independence

Neither SRK nor any of the authors of this Report have any material present or contingent interest in the outcome of this Report, nor do they have any pecuniary or other interest that could be reasonably regarded as being capable of affecting their independence or that of SRK.

SRK's fee for conducting this EIA process is based on its normal professional daily rates plus reimbursement of incidental expenses. The payment of that professional fee is not contingent upon the outcome of the Report(s) or the EIA process.

## 1.4 Assessment of the Scoping Report

Before proceeding to the EIA phase, the Scoping Report and Plan of Study for EIA are assessed by the Department Environment, Forestry and Fisheries (DEFF).



Figure 1-1: Site Locality Plan showing all components of the CDC gas to power project

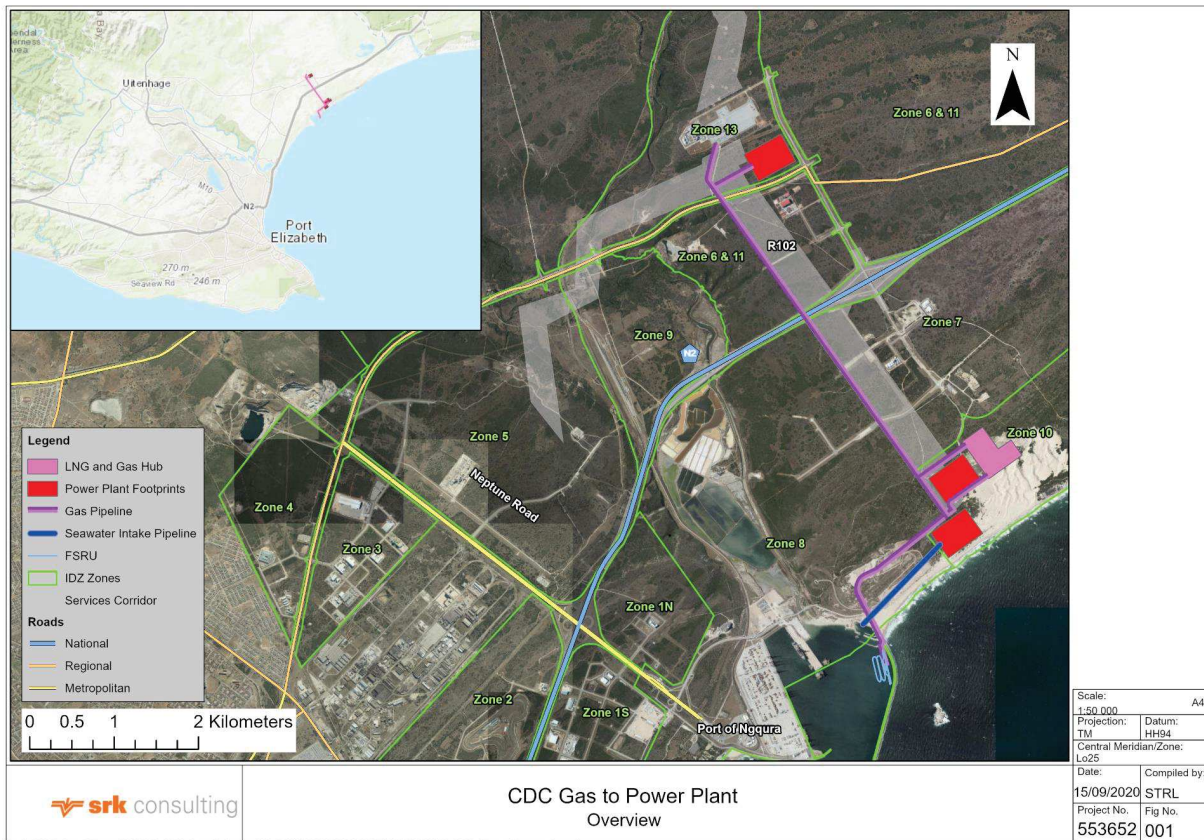


Figure 1-2: Site Locality Plan, showing all components of the CDC gas to power project

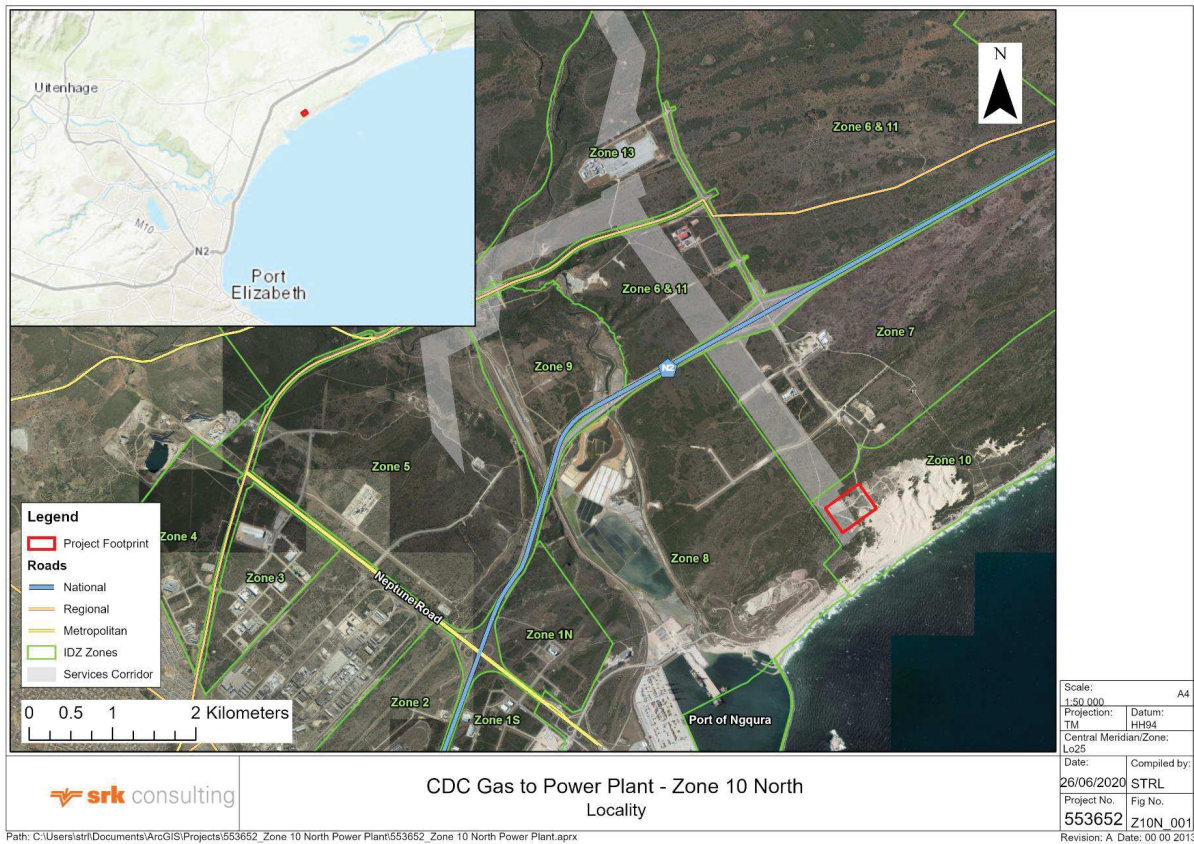


Figure 1-3: Site locality map for Zone 10 North power plant

In the spirit of cooperative governance, DEFF will consult with other relevant organs of state before making a decision. These organs of state could include:

- Department of Economic Development, Environmental Affairs and Tourism (DEDEAT);
- Department of Human Settlements, Water and Sanitation (DHSWS);
- Eastern Cape Provincial Heritage Resources Authority (ECPHRA);
- Department of Mineral Resources and Minerals (DMRE).

SRK has previously distributed Background Information Documents (BIDs) to relevant organs of state listed above. Each of these organs of state would be given an opportunity to comment on this report as part of the formal public participation process.

## 1.5 Legal Requirements Pertaining to the Proposed Project

The environmental legislation which is applicable to the authorisation of the proposed project is summarised in this section.

### 1.5.1 National Environmental Management Act (Act No. 107 of 1998) (NEMA)

NEMA provides for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of the State, as well as to provide for matters connected therewith. Section 2 of NEMA establishes a set of principles that apply to the activities of all organs of state that may significantly affect the environment. These include the following:

- Development must be sustainable;
- Pollution must be avoided or minimised and remedied;
- Waste must be avoided or minimised, reused or recycled;
- Negative impacts must be minimised; and
- Responsibility for the environmental health and safety consequences of a policy, project, product or service exists throughout its life cycle.

Section 28(1) states that:

*“Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring.”*

If such degradation/pollution cannot be prevented, then appropriate measures must be taken to minimise or rectify such pollution. These measures may include:

- Assessing the impact on the environment;
- Informing and educating employees about the environmental risks of their work and ways of minimising these risks;
- Ceasing, modifying or controlling actions which cause pollution/degradation;
- Containing pollutants or preventing movement of pollutants;
- Eliminating the source of pollution; and
- Remedying the effects of the pollution.

## Legal requirements for this project

### 1.5.2 NEMA EIA Regulations

Sections 24 and 44 of NEMA make provision for the promulgation of regulations that identify activities that may not commence without an EA issued by the competent authority (DEFF). In this context, the 2014 EIA Regulations, as amended in 2017 GN R326, promulgated in terms of NEMA, govern the process, methodologies and requirements for the undertaking of EIAs in support of EA applications. Listing Notices 1-3 in terms of NEMA list activities that require EA ("NEMA listed activities").

GN R326 of the EIA Regulations lays out two alternative authorisation processes. Depending on the type of activity that is proposed, either a Basic Assessment (BA) process or a S&EIR process is required to obtain EA. Listing Notice 1<sup>1</sup> lists activities that require a BA process, while Listing Notice 2<sup>2</sup> lists activities that require S&EIR. Listing Notice 3<sup>3</sup> lists activities in certain sensitive geographic areas that require a BA process.

The regulations for both processes – BA and S&EIR - stipulate that:

- Public participation must be undertaken as part of the assessment process;
- The assessment must be conducted by an independent EAP;
- The relevant authorities respond to applications and submissions within stipulated time frames;
- Decisions taken by the authorities can be appealed by the proponent or any other Interested and Affected Party (IAP); and
- A draft EMP must be compiled and released for public comment.

GN R326 sets out the procedures to be followed and content of reports compiled during the BA and S&EIR processes.

The NEMA National Appeal Regulations<sup>4</sup> make provision for appeal against any decision issued by the relevant authorities. In terms of the Regulations, an appeal must be lodged with the relevant authority in writing within 20 days of the date on which notification of the decision (EA) was sent to the applicant or IAP (as applicable). The applicant, the decision-maker, interested and affected parties and organ of state must submit their responding statement, if any, to the appeal authority and the appellant within 20 days from the date of receipt of the appeal submission.

Table 1-1 lists the NEMA listed activities in terms of the 2014 EIA regulations, as amended, that are triggered by the Zone 10 North Power Plant. Where applicable, the relevant similar activities that have been previously authorised via separate EIA processes (and therefore are excluded from this application) are indicated.

---

<sup>1</sup> GN R327 of 2017

<sup>2</sup> GN R325 of 2017

<sup>3</sup> GN R324 of 2017

<sup>4</sup> GN R993 of 2014, as amended by GN R2015 of 2015.

**Table 1-1: NEMA Listed Activities (2014 EIA regulations, as amended) applicable to the Proposed Zone 10 North Power Plant**

|   |  |
|---|--|
|   |  |
| R327 Activity 11: The development of facilities or infrastructure for the transmission and distribution of electricity- (ii) inside urban areas or industrial complexes with a capacity of 275 kilovolts or more excluding the development of bypass infrastructure for the transmission and distribution of electricity where such bypass infrastructure is — (a) temporarily required to allow for maintenance of existing infrastructure; (b) 2 kilometres or shorter in length; (c) within an existing transmission line servitude; and (d) will be removed within 18 months of the commencement of development | An authorisation is in place for several powerlines within the SEZ, including 400 kV lines in the services corridor depicted in Figure 1-2.  |
| R327 Activity 16: The development and related operation of facilities for the desalination of water with a design capacity to produce more than 100 cubic metres of treated water per day.  | On-site facilities for demineralisation of water prior to use as processing water are proposed. Approximately 33.7 m <sup>3</sup> /h of demineralised water will be required.  |
| R327 Activity 17: Development- (iii) within the littoral active zone; (v) if no development setback exists, within a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater; in respect of — (e) infrastructure or structures with a development footprint of 50 square metres or more — but excluding— (dd) where such development occurs within an urban area.   | The powerplant in Zone 10 (North) will have a footprint of up to 181,000 m <sup>2</sup> and will be constructed within 100 m inland of the high water mark. In the event that DEFF deem that the SEZ fall outside of an urban area, then this activity will be triggered.  |
| R327 Activity 18: The planting of vegetation or placing of any material on dunes or exposed sand surfaces of more than 10 square metres, within the littoral active zone, for the purpose of preventing the free movement of sand, erosion or accretion, excluding where - (i) the planting of vegetation or placement of material relates to restoration and maintenance of indigenous coastal vegetation undertaken in accordance with a maintenance management plan; or (ii) such planting of vegetation or placing of material will occur behind a development setback.   | The Zone 10 (North) power plant will have a footprint of approximately 181,000 m <sup>2</sup> (18.1 ha) within the littoral active zone/dunes and will therefore require stabilisation measures. The CDC's Standard Vegetation Specification for Construction (dated 2005) will be adhered to, however specific measures to address revegetation of coastal vegetation will be required. |
| R327 Activity 19A: The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from- (ii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater but excluding where such   | Excavations (in excess of 5 m <sup>3</sup> ) will be required for the Zone 10 (north) power plant. This will take place within the littoral active zone.   |



|  |  |
|--|--|
|  |  |
| infilling, depositing, dredging, excavation, removal or moving- (a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; or (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies.  |  |
| <u>R327 Activity 24:</u> The development of a road— (i) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or (ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres; but excluding a road— (a) which is identified and included in activity 27 in Listing Notice 2 of 2014; (b) where the entire road falls within an urban area; or (c) which is 1 kilometre or shorter. | The equivalent similar activity is authorised in the 2007 Rezoning EA for the SEZ, and therefore will not be applied for or assessed in this EIA.  |
| <u>R327 Activity 27:</u> The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.   | The power plant will require the clearing of vegetation. It is anticipated that this will be up to approximately 181,000 m <sup>2</sup> . The equivalent/similar activity is authorised in the 2007 Rezoning EA for the SEZ, and therefore clearing of vegetation will not be applied for or assessed in this EIA. |
| <u>R325 Activity 2:</u> The development and related operation of facilities or infrastructure for the generation of electricity from a non-renewable resource where the electricity output is 20 megawatts or more   | The Zone 10 (North) power plant will have a generation capacity of 1000 MW of electricity.   |
| <u>R325 Activity 4:</u> 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 cubic metres.   | The proposed power plant is expected to require storage of backup fuel in the form of diesel (8,000 m <sup>3</sup> ) or fuel oil (8,000 m <sup>3</sup> ).  |
| <u>R325 Activity 6:</u> The development of facilities or infrastructure for any process or activity which requires a permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent  | The development of the power plant will require an Atmospheric Emission License (AEL) in terms of as NEM:AQA (Act 39 of 2004) for the burning of gas.  |
| <u>R324 Activity 12:</u> The clearance of an area of 300 square metres or more of indigenous vegetation a. Eastern Cape iii. Within the littoral active zone or 100 metres inland from the high water mark of the sea, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas;   | The proposed development of the power plant in Zone 10 North will require the clearing of vegetation within the littoral active zone. In the event that DEFF deem that the SEZ fall outside of an urban area, then this activity will be triggered.  |

|   |  |
|---|--|
|   |  |
| R324Activity 14: The development of — infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs— (b) in front of a development setback excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour in a. Eastern Cape ii. Inside urban areas: (cc) Areas seawards of the development setback line | The Zone 10 (North) power plant will have a footprint of more than 10 m <sup>2</sup> . In the event that DEFF deem that the SEZ fall outside of an urban area, then this activity will be triggered. |

**Legal requirements for this project**



**1.5.3 National Environmental Management: Air Quality Act (Act No. 39 of 2004) (NEM:AQA)**

NEM:AQA stipulates that activities listed as having a potential negative impact on air quality require authorisation in the form of an AEL. A S&EIR, as described in the EIA Regulations made under section 24(5) of the NEMA, is required. The following activities listed are relevant to the proposed activities:

- Sub- category 1.4: Gas combustion (including gas turbines burning natural gas) used primarily for steam raising or electricity generation;
- *Sub-category 1.5: Reciprocating Engines - liquid and gas fuel stationary engines used for electricity generation; and*
- *Sub-category 2.4: Storage and Handling of Petroleum Products.*

**Legal requirements for this project**



**1.5.4 National Greenhouse Gas Emission Reporting Regulations (GNR 275 of 2017)**

The National Greenhouse Gas Emission Reporting Regulations have been promulgated in terms of NEM:AQA for the purpose of introducing a single national reporting system for the transparent reporting of greenhouse gas emissions. The regulations apply to the categories of emission sources listed in Annexure 1 to the regulations and include electricity production exceeding 10 MW. Tier 1 reporting is required as a minimum, with a five year grace period applicable before reporting of the lower tiers.

**Legal requirements for this project**



### 1.5.5 National Environmental Management: Integrated Coastal Management Act (Act No. 24 of 2008)

According to Section 2 of the NEM: ICMA, the objects of this Act are:

- To determine the coastal zone of the Republic;
- To provide, within the framework of the National Environmental Management Act, for the co-ordinated and integrated management of the coastal zone by all spheres of government in accordance with the principles of co-operative governance;
- To preserve, protect, extend and enhance the status of coastal public property as being held in trust by the State on behalf of all South Africans, including future generations;
- To secure equitable access to the opportunities and benefits of coastal public property; and
- To give effect to the Republic's obligations in terms of international law regarding coastal management and the marine environment.

Section 13 of the NEM: ICMA states that any natural person in the Republic:

- Has a right of reasonable access to coastal public property; and
- Is entitled to use and enjoy coastal public property.

Section 69(1) of the Act states that no person may discharge effluent that originates from a source on land into coastal waters except in terms of a general discharge permit or a coastal waters discharge permit issued under this section by the Minister after consultation with the Minister responsible for water affairs in instances of discharge of effluent into an estuary.

#### Legal requirements for this project



### 1.5.6 National Environmental Management: Biodiversity Act (Act No. 10 of 2004)

This Act provides for the management and conservation of South Africa's biodiversity within the framework of the NEMA. In terms of the Biodiversity Act, the developer has a responsibility for:

- a. The conservation of endangered ecosystems and restriction of activities according to the categorisation of the area (not just by listed activity as specified in the EIA regulations).
- b. Application of appropriate environmental management tools in order to ensure integrated environmental management of activities thereby ensuring that all developments within the area are in line with ecological sustainable development and protection of biodiversity.
- c. Limit further loss of biodiversity and conserve endangered ecosystems.

The objectives of this Act are:


- d. To provide, within the framework of the NEMA, for –
  - i The management and conservation of biological diversity within the Republic;
  - ii The use of indigenous biological resources in a sustainable manner.


# Summary of Comments on Scoping Report Template DEDEAT comment (002).pdf

---

Page: 22

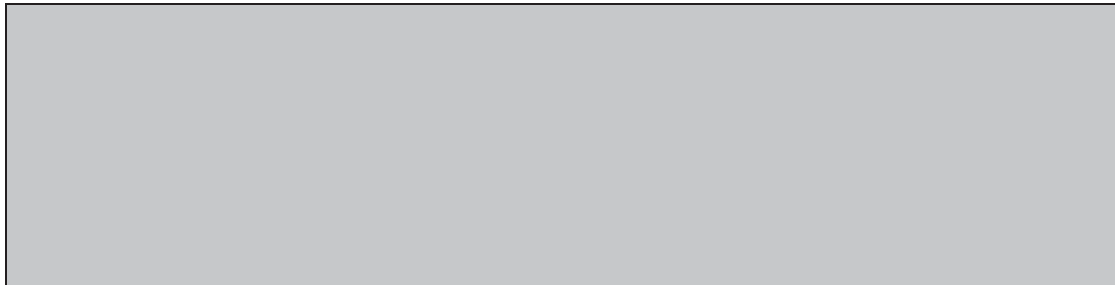
---

 Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 15:16:54  
Will there be no sea water abstraction i.e. what is the source of the cooling water? One of the activities mentioned relates to desalination?

 Number: 2 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 15:11:12  
This seems to be dependent on the marine outfall pipeline that the CDC has applied for. What would happen if this does not materialize?  
Can this project exist without this pipeline.

The Act's permit system is further regulated in the Act's Threatened or Protected Species Regulations (GN 255), which were promulgated in March 2015, the National List of threatened ecosystems (GN 1002) promulgated in December 2011 and the Alien Invasive Species regulations (GNR 598) of August 2014.

### **Legal requirements for this project**



#### **1.5.7 Electricity Regulation Act (Act no. 4 of 2006)**

This act provides the national regulatory framework for the electricity supply industry; to make the National Energy Regulator the custodian and enforcer of the national electricity regulatory framework; to provide for licences and registration as the manner in which generation, transmission, distribution, reticulation, trading and the import and export of electricity are regulated; to regulate the reticulation of electricity by municipalities; and to provide for matters connected therewith.

The objectives of this Act are to:

- a. achieve the efficient, effective, sustainable and orderly development and operation of electricity supply infrastructure in South Africa;
- b. ensure that the interests and needs of present and future electricity customers and end users are safeguarded and met, having regard to the governance, efficiency, effectiveness and long term sustainability of the electricity supply industry within the broader context of economic energy regulation in the Republic;
- c. facilitate investment in the electricity supply industry;
- d. facilitate universal access to electricity;
- e. promote the use of diverse energy sources and energy efficiency;
- f. promote competitiveness and customer and end user choice; and
- g. facilitate a fair balance between the interests of customers and end users, licensees, investors in the electricity supply industry and the public.

#### **1.5.8 National Heritage Resources Act (Act No. 25 of 1999)**

The protection and management of South Africa's heritage resources is controlled by the National Heritage Resources Act 25 of 1999. The enforcing authority for this act is the South African Heritage Resources Agency (SAHRA).

In terms of the Act, historically important features such as graves, trees, archaeological artefacts/sites and fossil beds are protected. Similarly, culturally significant symbols, spaces and landscapes are also afforded protection. In terms of Section 38 of the NHRA, SAHRA can call for a Heritage Impact Assessment (HIA) where certain categories of development are proposed. The Act also makes provision for the assessment of heritage impacts as part of an EIA process and indicates that if such an assessment is deemed adequate, a separate HIA is not required.

The Act requires that:

*“...any person who intends to undertake a development categorised as the ... or any development or other activity which will change the character of a site exceeding 5 000 m<sup>2</sup> in extent or involving three or more existing erven or subdivisions thereof must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development...”*

### **Legal requirements for this project**



## **1.5.9 National Water Act (Act No. 36 of 1998)**

The National Water Act 36 of 1998 provides for the promotion of efficient, sustainable and beneficial use of water in the public interest; for the facilitation of social and economic development; for the protection of aquatic and associated ecosystems and their biological diversity; and for the reduction and prevention of pollution and degradation of water resources. The Act also provides for emergency situations where pollution of water resources occurs. Section 21 of the Act describes activities that will require prior permitting before these activities may be implemented, including any changes to the river course and banks, changes to water flows and the discharge of water containing waste.

### **Legal requirements for this project**



## **1.6 Planning Policy Framework**

### **1.6.1 Integrated Energy Plan 2016**

The development of a National Integrated Energy Plan (IEP) was envisaged in the White Paper on the Energy Policy of the Republic of South Africa of 1998 and, in terms of the National Energy Act, 2008 (Act No. 34 of 2008), the Minister of Energy is mandated to develop and, on an annual basis, review and publish the IEP in the Government Gazette.

The purpose of the IEP is to provide a roadmap of the future energy landscape for South Africa which guides future energy infrastructure investments and policy development. The IEP considers the national supply and demand balance and proposes alternative capacity expansion plans based on varying sets of assumptions and constraints. While infrastructural matters are briefly discussed, the IEP does not explicitly consider supply and demand at specific geographical locations within the country, nor does it take into account infrastructure bottlenecks at specific locations. These are covered in detail in the Integrated Resources Plan (IRP) and the Gas Utilisation Master Plan (GUMP).

Natural Gas is identified in the IEP as presenting the most significant potential in the energy mix, particularly the use of natural gas in CCGTs in the electricity sector, Gas-to-Liquid (GTL) plants in the liquid fuel sector and for direct thermal applications in the industrial and residential sectors.

### **1.6.2 Integrated Resources Plan (2010-2030)**

The Integrated Resource Plan (IRP) 2010-30 was first promulgated in March 2011. It was indicated at the time that the IRP should be a “living plan”. The Department of Energy has since updated the IRP and published the IRP 2019.

The primary objective of the IRP 2010 is to determine the long-term electricity demand and detail how this demand should be met in terms of generating capacity, type, timing and cost. The accuracy of the IRP is improved by regular reviews and updates as and when things change or new information becomes available as with the current 2019 version.

Following the promulgation of the IRP 2010–2030, the DoE implemented the IRP by issuing Ministerial Determinations in line with Section 34 of the Electricity Regulation Act No. 4 of 2006. These Ministerial Determinations give effect to the planned infrastructure by facilitating the procurement of the required electricity capacity.

A determination dated 18 August 2015 (GN 732) was issued for the development of 3,126 MW of Gas (including CCGT/natural gas) and OCGT/diesel. A further determination dated 27 May 2016 was issued for an additional 600 MW.

The key amendments or additions as relating to gas power in the IRP (2019) are as follows:

1. IPPs have commissioned 1 005 MW from two OCGT peaking plants;
2. The Electricity demand as projected in the promulgated IRP 2010–2030 did not materialise due to a number of factors which resulted in lower demand. The electricity demand figures have thus been updated; and
3. The decision was taken to support the development of gas infrastructure and in addition to the new gas to power capacity (Additional 3000 MW), to convert existing diesel-fired power plants (Peakers) to gas.

## 1.7 Approach to the Scoping Study

The approach taken in this study is guided by the principles of Integrated Environmental Management (IEM) as described in the IEM guidelines published by the Department of Environmental Affairs and Tourism in 1992 (now known as DEFF). The approach is therefore guided by the principles of transparency, which are aimed at encouraging decision-making. The underpinning principles of IEM are:

- Informed decision making;
- Accountability for information on which decisions are made;
- A broad interpretation of the term “environment”;
- Consultation with IAPs;
- Due consideration of feasible alternatives;
- An attempt to mitigate negative impacts and enhance positive impacts associated with the proposed project;
- An attempt to ensure that the social costs of the development proposals are outweighed by the social benefits;
- Regard for individual rights and obligations;
- Compliance with these principles during all stages of the planning, implementation, and decommissioning of the proposed development or activity; and
- Opportunities for public and specialist input in the decision-making process.

The study has also been guided by the requirements of the EIA Regulations set out in terms of the NEMA.

The study will also be guided by the requirements of the EIA Regulations, 2014 (see Section 1.5), which are more specific in their focus and define the detailed approach to the S&EIR process, as well as relevant guidelines published by the DEA and DEA&DP, including:

- DEA&DP's EIA Guideline and Information Document Series (DEA&DP, 2013), which includes guidelines on Generic ToR for EAPs and Project Schedules, Public Participation, Alternatives, Need and Desirability, Exemption Applications and Appeals, an information;
- DEA's Public Participation Guideline in terms of NEMA EIA Regulations (DEA, 2017); and
- DEA's Guideline on Need and Desirability (DEA, 2017a).

The EIA process consists of two key phases, Scoping, and Environmental Impact Reporting, as depicted in in Figure 1-4 below. The overall aim of the Scoping Phase is to determine whether there are environmental issues and impacts that require further investigation in the detailed EIA. More specifically, the objectives of the Scoping Phase for this EIA are to:

- Develop a common understanding of the proposed project with the authorities and IAPs;
- Identify stakeholders and notify them of the proposed activity and processes;
- Provide stakeholders with the opportunity to participate in the process and identify issues and concerns associated with the proposed activity;
- Identify potential environmental impacts that will require further study in the impact assessment phase of the EIA process; and
- Develop terms of reference for any studies that will be conducted in the impact assessment phase.

SRK was originally appointed by the CDC and conducted an initial round of pre-application public participation activities for the consolidated gas to power project in 2016, details of which are included below. Subsequent changes in the project, approach to the EIA process (most notably the splitting into four separate applications), lapsing of SRK's appointment, and additional technical studies undertaken, resulted in delays in commencement of the formal EIA process. Comments received during the 2016 public participation activities, as relevant to the Zone 10 North power plant, have been recorded and responded to in Table 4-2 and original comments are provided in Appendix H. To ensure compliance with the EIA regulations, legally prescribed public participation activities are being repeated as part of the current application.

The activities that have been conducted to date as part of this Scoping Study are as follows:

- Advertisements of the development as an e-notice on the CDC notice board on 8 October 2020 (Appendix C);
- Placement of an onsite poster on 2 June 2020, affixed to the gate of the sand mining area in zone 10 (Appendix C);
- Distribution of the Background Information Document (BID) from 22 January 2016 to identified IAPs, including relevant ward councillors, stakeholders and neighbouring residents. A copy of the BID is attached in Appendix E, and the list of notified IAPs and commenting institutions is given in Table 4-1: Registered Interested and Affected Parties and Stakeholders ;
- Collation of public and IAP comments on the BID, including responses to these issues;
- Presentation of the project to the Coega Environmental Liaison Committee (ELC) on 20 August 2020 (see copy of presentation in Appendix F), and recording of comments raised during this meeting, which are captured and responded to in Table 4-3; and
- Preparation of a DSR (this Report), including comments from IAPs, and application form (see Appendix B), and submission thereof to DEFF.

The following activities are still to be conducted in the Scoping Study:

- Newspaper advertisement notifying IAPs of the project;



- Making a copy of the report available for download via the Public Documents link on SRK's website and distribution of the Executive Summary to all IAPs registered for this project;
- Provision of a 30 day comment period on the DSR (this report);
- Collation of public and IAP comments on the DSR, and incorporation of these into the Final Scoping Report (for submission to DEFF).

Pre-application consultations were held with the DEA (now DEFF) on 22 May and 12 June 2019, during which a summary of the proposed development and approach to the EIA process was discussed. Minutes of these meetings are appended to the Application form in Appendix B.

## **1.8 Purpose of this Draft Scoping Report**

The Scoping process is aimed at identifying the issues and/ or impacts that may result from the proposed activities in order to inform the Impact Assessment phase of the EIA process. The Final Scoping Report (FSR) will form the basis of the Terms of Reference (ToR) for specialist studies, and it is therefore important that all issues and potential impacts that may be associated with the proposed development be identified and recorded. The purpose of the DSR is to identify key issues that require further assessment, and possibly refinement of the development proposal, prior to the commencement of the regulated EIA process with its prescribed timeframes.

The EIA process thus far has focussed on developing a more detailed description of the development proposal (which is expanded on in Section 2), and on identifying the potential impacts. The aim of this Draft Scoping Report is to identify the issues and concerns of Stakeholders and IAPs.

IAPs are encouraged to review the DSR to ensure that their issues and concerns with the proposed development are captured in the Final Scoping Report. All comments received will be included in the Final Scoping Report, which will be submitted to the DEFF for acceptance.

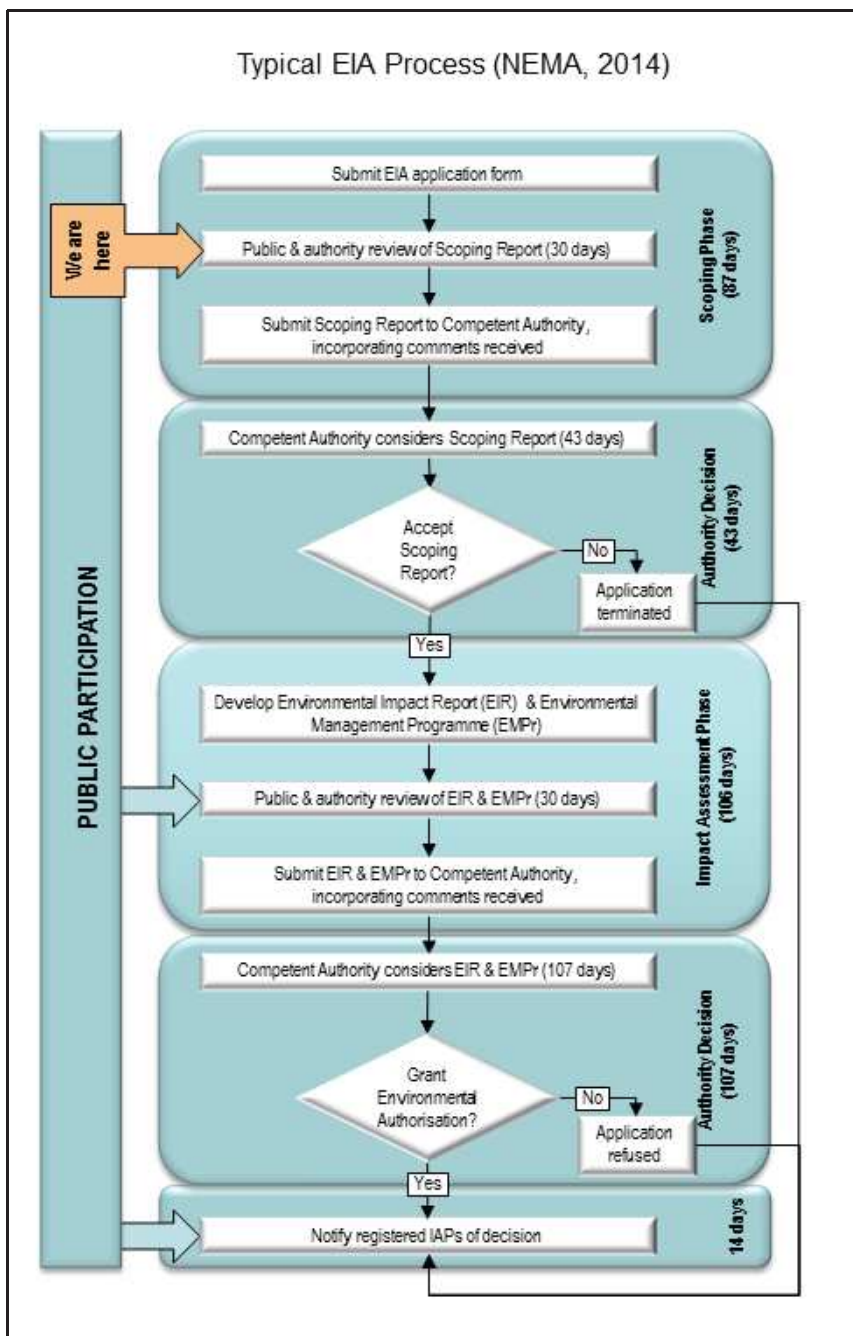


Figure 1-4: Environmental Impact Assessment (EIA) Process

### 1.9 Assumptions and Limitations

The scope of the EIA is limited to project as described in Chapter 2. The scope of EIA excludes any consideration of:

- Sources of gas – we assume LNG would be imported from suitably authorised sources;
- An evaluation of different energy sources as part of the energy generation mix. It is assumed, based on the IRP, that this has been decided at a strategic level, and it is assumed this included an assessment of environmental factors. Apart from describing the motivation (or need) for gas generated power as part of the energy mix, this assessment will not consider relative merits of different energy sources;

- The transmission of electricity from the power plants to the Grassridge and/or Dedisa substations – it is understood that the bulk powerlines required for this are already authorised (DEA Ref: 12/12/20/781) and therefore will not be assessed as part of this EIA;
- Activities (or the equivalent listed activities at the time) previously authorised via separate EIA processes for the whole SEZ, including the clearing of vegetation, rezoning of land, and installation of bulk services infrastructure. Relevant listed activities are listed in Table 1-1 with reasons as to why they are not being applied for; and
- The evacuation of power from Grassridge and/or Dedisa substations to consumers.

As is standard practice, the report is based on a number of assumptions and is subject to certain limitations. These are as follows:

- That, due to the cost of preparing detailed designs and plans, such detailed design/ planning information would only be developed in the event of environmental authorisation being granted. As such, it is anticipated that, as is typically the case in an EIA process, the EIA will assess broad land uses and concept designs;
- That the project as described in this report is viable from an engineering design perspective, as well as economically, and that the project has been correctly scoped to align with other infrastructure that is outside the scope of this EIA such as the CDC Marine Pipeline Servitude EIA;
- That a worst case scenario approach is adopted in assessing the various aspects of the project so that the impacts assessed will cover whatever option is put forward by the chosen bidder.

Notwithstanding these assumptions, it is our view that this DSR provides a good description of the potential issues associated with the proposed development, and a reasonable Plan of Study for EIA.

## 1.10 Structure of this report

This report is divided into eight chapters:

|                  |   |
|------------------|---|
| <b>Chapter 1</b> | <b>Background and Introduction</b>  |
|                  | Introduces the Scoping Study, and the legal context, for the proposed gas to power project.   |
| <b>Chapter 2</b> | <b>Description of Project</b>   |
|                  | Describes the various components of, and the motivation for, the proposed gas to power project.   |
| <b>Chapter 3</b> | <b>Description of the Affected Environment</b>  |
|                  | Provides an overview of the affected biophysical and socio-economic environment in the Zones 10 of the Coega SEZ, as well as the broader context. |
| <b>Chapter 4</b> | <b>Stakeholder Engagement</b>   |
|                  | Describes the Public Participation Process (PPP) followed, and the issues & concerns that have been raised by IAPs.                               |
| <b>Chapter 5</b> | <b>Identification of Potential Impacts</b>  |
|                  | Describes the potential positive and negative environmental impacts of the proposed zone 10 North Power Plant.                                    |
| <b>Chapter 6</b> | <b>Draft Plan of Study for EIA</b>  |

Provides a plan on how SRK proposes to address the identified potential impacts in the EIA phase.

**Chapter 7 The Way Forward**

Describes the next steps in the scoping process.

**Chapter 8 References**

**Appendices** Supporting information is presented in various appendices.

## 1.11 Content of Report

The EIA Regulations, 2014 (Government Notice (GN) 982, Appendix 2) prescribe the required content in a Scoping Report. These requirements and the sections of this Scoping Report in which they are addressed, are summarised in Table 1-1.

**Table 1-1: Content of Scoping Report as per EIA Regulations, 2014**

|               |  |                            |
|---------------|--|----------------------------|
| (1) (a)       | Identify the relevant policies and legislation relevant to the activity  | Section 1.5                |
| (1) (b)       | Motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;   | Section 2.2                |
| (1) (c)       | Identify and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking process   | Section 2.6                |
| (1) (d)       | Identify and confirm the preferred site, through a detailed site selection process, which includes an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified alternatives focusing on the geographical, physical, biological, social, economic, and cultural aspects of the environment  | Section 2.6.1              |
| (1) (e)       | Identify the key issues to be addressed in the assessment phase  | Section 5                  |
| (1) (f)       | Agree on the level of assessment to be undertaken, including the methodology to be applied, the expertise required as well as the extent of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site | Section 6                  |
| (1) (g)       | Identify suitable measures to avoid, manage or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored.  | To be assessed in the DEIR |
| (2)           | A scoping report must contain the information that is necessary for a proper understanding of the process, informing all preferred alternatives, including location alternatives, the scope of the assessment, and the consultation process to be undertaken through the environmental impact assessment process, and must include:  |                            |
| (2) (a) (i)   | Details of the EAP who prepared the report:  | Section 1.2                |
| (2) (a) (ii)  | Details of the expertise of the EAP, including a curriculum vitae  | Appendix A                 |
| (2) (b) (i)   | The location of the activity, including the 21 digit Surveyor General code of each cadastral land parcel   | Section 2.3                |
| (2) (b) (ii)  | The physical address and farm name   | Section 2.3                |
| (2) (b) (iii) | Where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;  | Section 2.3                |

|                    |   |  |
|--------------------|---|--|
| (2) (c) (i) & (ii) | A plan which locates the proposed activity or activities applied for at an appropriate scale, or, if it is a linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken. Or if on land where the property has not been defined, the coordinates within which the activity is to be undertaken; | Appendix B   |
| (2) (d)            | A description of the scope of the proposed activity, including:   |  |
| (2) (d) (i)        | All listed and specified activities triggered   | Table 1-1  |
| (2) (d) (ii)       | A description of the activities to be undertaken, including associated structures and infrastructure  | Section 2  |
| (2) (e)            | A description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process;                         | Section 1.6  |
| (2) (f)            | A motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location;   | Section 2.2  |
| (2) (h)            | A full description of the process followed to reach the proposed preferred activity, site and location within the site, including:  |  |
| (2) (h) (i)        | Details of all the alternatives considered  | Section 2.6  |
| (2) (h) (ii)       | Details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs;   | Section 4  |
| (2) (h) (iii)      | A summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;  | Section 4.2.2  |
| (2) (h) (iv)       | The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;  | Section 3  |
| (2) (h) (v)        | The impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts—<br>(aa) can be reversed;<br>(bb) may cause irreplaceable loss of resources; and<br>(cc) can be avoided, managed or mitigated                                  | Section 5<br>Assessment of these to be detailed in the Draft EIR |
| (2) (h) (vi)       | The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives;   | Section 6.3  |
| (2) (h) (vii)      | Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects  | Section 5  |
| (2) (h) (viii)     | The possible mitigation measures that could be applied and level of residual risk   | To be provided in the Draft EMPr                                 |
| (2) (h) (ix)       | The outcome of the site selection matrix  | Not applicable   |
| (2) (h) (x)        | If no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such and   | Section 2.6.1  |
| (2) (h) (xi)       | A concluding statement indicating the preferred alternatives, including preferred location of the activity  | Throughout Section 2.6   |
| (2) (i)            | A plan of study for undertaking the environmental impact assessment process to be undertaken, including:  | Section 6  |

|                |   |                                  |
|----------------|---|----------------------------------|
| (2) (i) (i)    | A description of the alternatives to be considered and assessed within the preferred site, including the option of not proceeding with the activity   | Sections 2.6.3 & 2.6.5           |
| (2) (i) (ii)   | A description of the aspects to be assessed as part of the environmental impact assessment process;   | Sections 5 & 6.5                 |
| (2) (i) (iii)  | Aspects to be assessed by specialists   | Section 6.5                      |
| (2) (i) (iv)   | A description of the proposed method of assessing the environmental aspects, including a description of the proposed method of assessing the environmental aspects including aspects to be assessed by specialists      | Section 6.3                      |
| (2) (i) (v)    | A description of the proposed method of assessing duration and significance   | Section 6.3                      |
| (2) (i) (vi)   | An indication of the stages at which the competent authority will be consulted  | Figure 1-4 and Section 7         |
| (2) (i) (vii)  | Particulars of the public participation process that will be conducted during the environmental impact assessment process; and  | Sections 4 & 7                   |
| (2) (i) (viii) | A description of the tasks that will be undertaken as part of the environmental impact assessment process   | Figure 1-4 and Section 7         |
| (2) (i) (ix)   | Identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored   | To be provided in the Draft EMPr |
| (2) (j)        | An undertaking under oath or affirmation by the EAP in relation to  |                                  |
| (2) (j) (i)    | The correctness of the information provided in the report   | Appendix B                       |
| (2) (j) (ii)   | The inclusion of comments and inputs from stakeholders and interested and affected parties; and   | Section 4.2                      |
| (2) (j) (iii)  | Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties;   | Section 4.2 and Appendix C- H    |
| (2) (k)        | An undertaking under oath or affirmation by the EAP in relation to the level of agreement between the EAP and interested and affected parties on the plan of study for undertaking the environmental impact assessment; | Appendix B                       |
| (2) (l)        | Where applicable, any specific information required by the competent authority; and;  | -                                |
| (2) (m)        | Any other matter required in terms of section 24(4)(a) and (b) of the Act.  | -                                |

## 2 Description of the Project

This chapter describes the key characteristics of the northern Zone 10 Gas to Power Plant, and associated infrastructure, within the Coega SEZ.

At the outset, it is important to note that this description is deliberately non-specific in terms of the proprietary technologies that would be required. As the specific technology providers have not yet been selected, the approach in this report is to describe each of the components of the development using typical standard Gas to Power plant design information.

One of the objectives of the Scoping Phase is therefore to identify instances (if any) where more specific design information might be required. It is envisaged that one of the outputs of the impact assessment process would be to record recommended thresholds and/or specifications in the Final EIR for DEFF to consider when deciding whether to authorise the project.

Where the different technologies that reasonably might be procured for this project have differing potential impacts, the worst case<sup>5</sup> scenario will be selected for predicting the significance of environmental impacts. The basis of the design for the power plant, is that it would operate at 100% capacity 80 % of the time and the assessment of environmental impacts will be based on the quantities associated with this design basis.

The project description is sequenced to “follow” the delivery of the regasified LNG at the power plant to power evacuation to the previously authorised, but not yet constructed 400 kV lines in the Coega SEZ. How this project fits into the CDC’s overall Gas to Power project is depicted in the generic schematic (of the overall project) shown in Figure 2-1. Several key terms are described below (Section 2.4) as an introduction to the gas to power process.

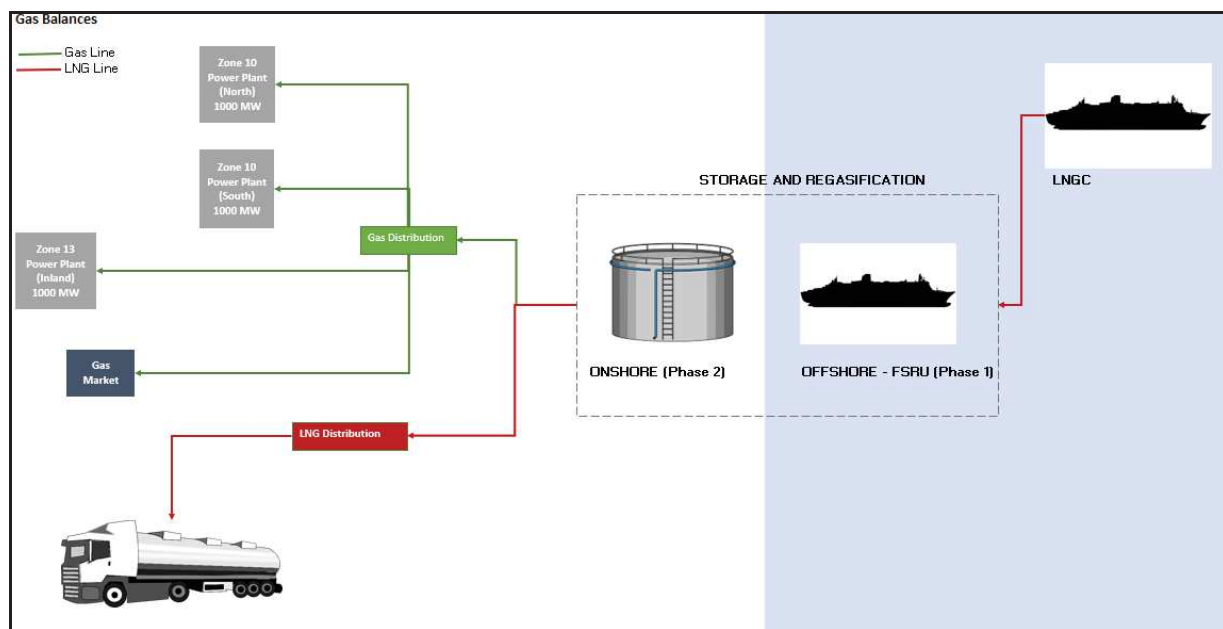


Figure 2-1: Schematic of scope of the gas to power project EIAs (Carnegie Energie, 2019)

<sup>5</sup> Note that the use of the term ‘worst case’ in this report refers to the option that would result in the highest significance rating of negative impacts, or the lowest significance rating of positive impacts.

## 2.1 Context

A number of national policy documents, present the case for natural gas as a significant contributor to South Africa's energy mix (see Section 1.6).

In support of the vision for the South African gas programme, the DMRE is developing an LNG to Power Independent Power Producer Procurement Programme (IPPPP). The LNG to Power IPPPP aims to identify and select successful bidders and enable them to develop, finance, construct and operate a gas-fired power generation plant at each of the two ports, Ngqura and Richards Bay. The LNG to Power IPP Programme will provide the anchor gas demand on which LNG import and regasification facilities can be established at the Ports of Ngqura and Richards Bay. This will provide the basis for LNG import, storage and regasification facilities to be put in place that can be available for use by other parties for LNG import and gas utilisation development. Therefore, Third Party Access will be a fundamental aspect of the LNG to Power IPPPP. This will enable the development of gas demand by third parties and the associated economic development. The DoE released a Preliminary Information Memorandum (PIM) in early October 2015, outlining the scope of the LNG to power projects.

The following pre-feasibility studies were undertaken/considered for the development of a Gas to Power project in Coega:

1. CCGT Plant identified during the EIA for the Aluminium smelter;
2. Power lines from the proposed CCGT site locality to Dedisa and Grassridge substations authorised in 2006 (Ref: 12/12/20/781);
3. 2004 – CSIR EIA started for a 1600 MW LNG Terminal and CCGT plant. Process stopped at Scoping stage;
4. 2009 – Worley Parsons PFS for 3200 MW CCGT power plant in Coega IDZ linked to LNG terminal;
5. 2016 – PRDW Pre-feasibility Report (FEL2) (DoE and TNPA): Importing of up to 3.96 mtpa into the Port of Ngqura; and
6. 2016 – Mott-MacDonald IPP LNG-to-Power project (DoE), for 2000 MW at Richards Bay and 999 MW at Coega.

Following these pre-feasibility studies, the CDC undertook an expression of interest (EOI) process, inviting responses from interested parties who have the requisite experience to deliver the project including:

- Receiving, storing and re-gasifying LNG;
- Delivering LNG to a modular power plant;
- Design, procurement, construction and operation of the power plant;
- Power transmission at 400kV to the main SEZ sub-station; and
- The option of sourcing and transporting the LNG.

The gas to power project site selection process considers the following criteria (CDC, 23 September 2015):

- The availability of fuel for the operational life of a power plant of at least 20 years. The level of confidence for these fuel reserves needs to be high and it must be feasible to transport the fuel to the proposed power plant in a reliable and cost-effective manner. The quality parameters of the gas must be acceptable and fairly constant over the life of the proposed



power plant. If power plant is not located at the source of the gas, then infrastructure to transport gas to the site must be available.

- Sufficient quantities of water must be available at the site, or it must be relatively straightforward to transfer to the site. The cost of the water must not be prohibitive. In most instances gas to power plants are built next to sea. The availability of seawater is also required for regasification of the LN
- Suitable and sufficient land on which to build the proposed power plant must be available as close as possible to the fuel source and to the users of electricity and should be able to help anchor the grid and reduce transmission losses where necessary;
- The distance to the national transmission system has to be evaluated. The cost of integrating into the existing network, the strengthening of that network and whether the upgrading of this network is compatible with the regional transmission system expansion plans; and
- The area where the proposed power plant is to be located must preferably be an area where the air quality is not already degraded. Whilst it is possible to mitigate atmospheric pollution, it is still preferable to avoid already highly stressed locations.

The advantages of the Coega SEZ as a location for the proposed development, according to the CDC, are summarised in Table 2-1.

**Table 2-1: The Case for Coega’s Gas Readiness - Fast Facts (CDC, 20 July 2015)**

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

---

Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 15:44:03

How is it decided that the land is suitable? One would not think that siting such a plant within or in close proximity of the littoral active zone would be suitable.

---

Number: 2 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 15:46:53

The SEZ as a suitable location is not under dispute. The specific sites chosen in Zone 10 i.e. the north and south sites are however questionable. I am sure that there is more than enough suitable land available that is not immediately adjacent to the coastline of within the littoral active zone. Why are such not considered.

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

the project. The latter might relate to the applicant's project motivation, while the "need" relates to the interests and needs of the broader public. In this regard, an important NEMA principle is that environmental management must ensure that the environment is "held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage" (DEA, 2014).

There are various proxies for assessing the need and desirability of a project, notably national and regional planning documents which enunciate the strategic needs and desires of broader society and communities: project alignment with these documents must therefore be considered and reported on in the EIA process. With the use of these documents or - where these planning documents are not available - using best judgment, the EAPs (and specialists) must consider the project's strategic context, or justification, in terms of the needs and interests of the broader community (DEA&DP, 2013).

The consideration of need and desirability in EIA decision-making therefore requires the consideration of the strategic context of the project along with broader societal needs and the public interest (DEA, 2014). However, it is important to note that projects which deviate from strategic plans are not necessarily undesirable. The DEA notes that more important are the social, economic and ecological impacts of the deviation, and "the burden of proof falls on the applicant (and the EAP) to show why the impacts...might be justifiable" (DEA, 2017).

The social component of need and desirability can be assessed using regional planning documents such as SDFs, IDPs and EMFs to assess the project's social compatibility with plans. These documents incorporate specific social objectives and emphasise the need to promote the social well-being, health, safety and security of communities, especially underprivileged and/or vulnerable communities.

*The proposed gas to power plant will create employment opportunities during the construction and operation phases and provide power to the national energy grid during the operation phase, improving energy security at a national level and indirectly facilitating further development opportunities in the area. The project would therefore constitute a strategic investment that will generate benefits through the provision of power, in a more environmentally sustainable manner than coal fired power generation.*

The *economic* need and desirability of a project can be assessed using *national*, provincial, district and local municipal planning documents to assess the project's economic compatibility with plans. These documents describe specific economic objectives and emphasise the need to:

- Improve job creation opportunities;
- Ensure appropriate economic growth;
- Concentrate on sustainable job creation, using existing economic strategies as a basis, particularly business and infrastructure development;
- Encourage trade and investment through improved energy availability and security;
- Provide adequate and appropriate infrastructure to stimulate economic growth;

*The proposed project is aligned with the above objectives, which effectively support the development of the gas to power plant as a means to ensure economic growth and energy provision.*

It is essential that the implementation of social and economic policies takes cognisance of strategic *ecological* concerns such as climate change, food security, as well as the sustainability in supply of natural resources and the status of our ecosystem services. Sustainable development is the process that is followed to achieve the goal of sustainability (DEA, 2014).

Sustainable development implies that a project should not compromise natural systems. In this regard, the Best Practicable Environmental Option (BPEO) is that which provides the most benefit and causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term.

NEMA and the EIA Regulations, 2014 call for a hierarchical approach to the selection of development options, as well as impact management which includes the investigation of alternatives to avoid, reduce (mitigate and manage) and/or remediate (rehabilitate and restore) negative (ecological) impacts (DEA, 2014).

In support of this, the applicant’s motivation for the project is presented in Table 2-1. In essence, the power plant is needed to address current and projected energy shortfall at a national level , as well as stimulate local employment and the economy.

Gas fired power generation is among the current alternative sources of energy which has been shown to be an efficient and, in comparison with coal fired power plants, a relatively clean method of thermal power generation. The primary fuel type being considered is natural gas, although provision is also made for the storage and use of other fuel types (i.e. diesel and fuel oil), as a backup fuel, and possibly for initial periods, should gas supply be delayed for any reason (CDC, 23 September 2015).

A study comparing the life cycle emissions of natural gas and coal used for the generation of electricity in the United States of America revealed that, using existing power generation technology, natural gas is a cleaner energy source (Jamarillo, et al., 2007). This is illustrated in Figure 2-1, where the ranges of GHG emissions for coal, natural gas and LNG are compared.

GHG emissions from the combustion of natural gas ranges from 340 – 590 kg CO<sub>2</sub> equivalent/MWh. This is much lower than that of coal which ranges from 900 – 1180 kg CO<sub>2</sub> equivalent/MWh. This differential persists when the entire life cycle is taken into account. Furthermore, when the liquefaction, shipping and regasification processes involved with LNG are included, on average natural gas still remains cleaner than the coal alternative.

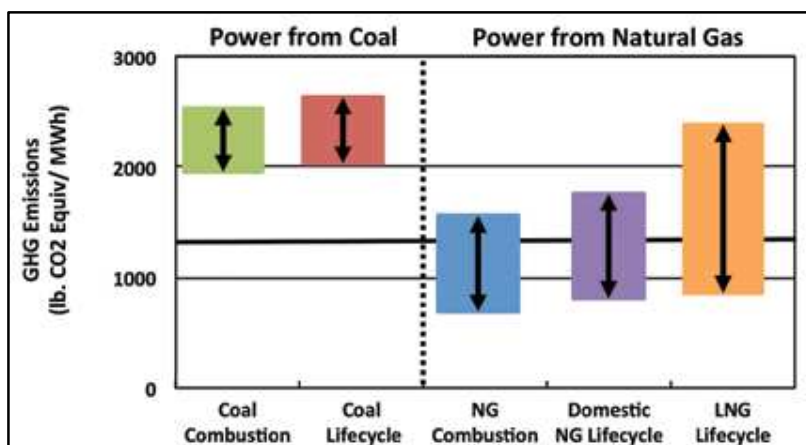


Figure 2-2: Fuel combustion and Life-cycle GHG Emissions for Existing Power plant technology (Source: (Transnet SOC Ltd, 2015))

### 2.2.2 Alignment with Energy Initiatives

The Gas to Power project is consistent with energy initiatives, and specifically the objectives of (CDC, 20 July 2015):

- Research & Knowledge Building;
- Public Awareness;
- Triggering the gas sector in the Eastern Cape; and
- Identification of Local industry participation & development

Furthermore, the current predicted spread of shale gas is predominantly in the Eastern Cape and the Northern Cape and if shale gas is to be developed then the Eastern Cape would be at the forefront of this (CDC, 23 September 2015) with resulting opportunities for long term integration.

### 2.2.3 Land Use Planning Policy Framework

The proposed development is situated within the Coega SEZ and the Port of Ngqura and is consistent with land use planning objectives that the Coega Development Corporation has defined for the SEZ.

## 2.3 Location and site description of the proposed project

The proposed power plant is located in the Coega SEZ at the northern end of Zone 10 (Figure 1-3), west of the authorised Aquaculture Development Zone in Zone 10, and overlapping with the area currently used for sand mining. A map showing the various zones of the Coega SEZ relative to the proposed development sites is provided in Figure 2-3 for reference. The specific property portions which are listed in Table 2-2: Property details .

**Table 2-2: Property details**

|  |                           |
|--|---------------------------|
|  | Erf 351                   |
|  | C07600230000035100000     |
|  | Coega                     |
|  | 33°47'8.05"S 25°42'23.88" |

---

Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 15:58:37

See previous comment re location of the two powerplants within Zone 10. There seems to be more than enough land available elsewhere in the SEZ that will still not be too far from the coastline.

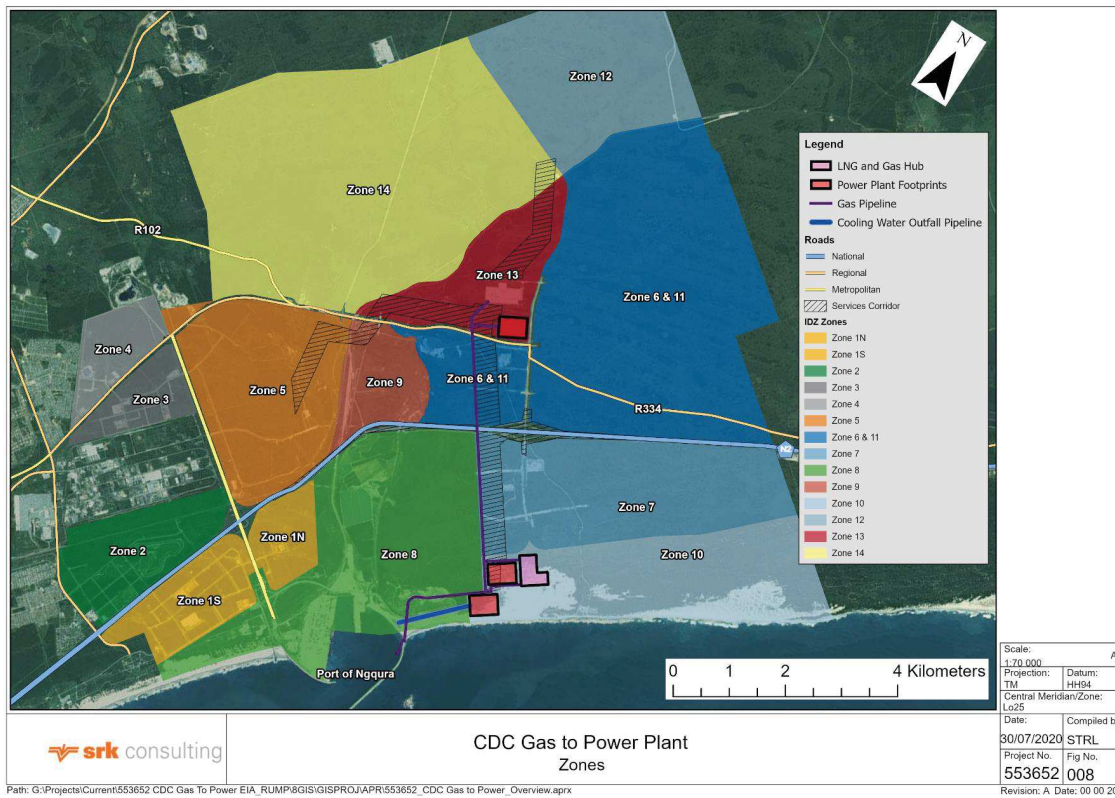


Figure 2-3: Coega SEZ zone layout



## 2.4 Key Terminology

As gas to power projects are relatively unknown in South Africa, this section presents a short non-technical description of key terms and acronyms used throughout this report.

### 2.4.1 Liquefied Natural Gas (LNG)

Natural gas used for energy generation is primarily methane, with low concentrations of other hydrocarbons, water, carbon dioxide, nitrogen, oxygen and some sulphur compounds. LNG is natural gas which has been cooled below its boiling point (-161°C) in a process known as liquefaction. The process of liquefaction involves extracting most of the impurities in raw natural gas. The remaining natural gas is primarily methane with only small amounts of other hydrocarbons and consequently is widely considered a clean fossil fuel.

The quality of LNG is determined by means of gas specifications, and in particular the Wobbe Index (WI) (an indicator of the interchangeability of fuel gases). Imported gas, particularly from different sources, may need to be treated to achieve the same quality. Blending with nitrogen would make the LNG leaner, or alternatively if already too lean, the gas would need to be blended with liquid petroleum gas (LPG). Assuming all imported LNG falls within the range of allowable WI for Gas Turbines, conditioning via Nitrogen or LPG would be required to control the rate of change of WI when swapping between LNG sources. Gas Turbines typically allow a relatively wide WI band, however approx. 0,5% WI change per second. To achieve this rate of change, approximately. 1.7 tonnes of LPG and 1.3 tonnes of Nitrogen (worst case + buffer capacity) would be required to change over between fuel specs. This conditioning of the LNG would take place at the LNG and gas hub, prior to the gas being transmitted to each power plant.

### 2.4.2 Open Cycle vs Combined Cycle

The term open cycle refers to a power generation configuration in which the heat in exhaust gases is not utilised for energy production (Figure 2-4). The term combined cycle refers to a power generation configuration in which the exhaust gases from an engine can be used to power a second engine, usually this occurs by way of a heat exchanger. The CCGT/OCGE process is depicted in Figure 2-5 below.

#### Open Cycle Gas Turbine/ Engine (OCGT / OCGE)

A simple open cycle gas turbine or engine consists of a compressor, combustion chamber and a turbine (or engine). A compressor sucks in air from the atmosphere and increases its temperature and pressure. Fuel in the form of gas is pumped into the combustion chamber and mixes with the compressed air. The gas/air mixture is ignited and produces hot gas. This hot gas is passed through turbine blades (or main axis in the case of an engine) of the generator and electricity is generated. The waste heat/gas from the process is released to the atmosphere. This contains carbon dioxide and water vapour, as well as other substances such as nitrogen, nitrogen oxides, sulphur oxides

#### Combined Cycle Gas Turbine/ Engine (CCGT / CCGE)

The combined cycle gas turbine or engine works in the same way as the open cycle except that instead of being released to the atmosphere, the exhaust is sent through a heat exchanger that extracts heat from the exhaust before it is returned to the compressor ([http://cset.mnsu.edu/engagethermo/systems\\_gtpp.html](http://cset.mnsu.edu/engagethermo/systems_gtpp.html)).

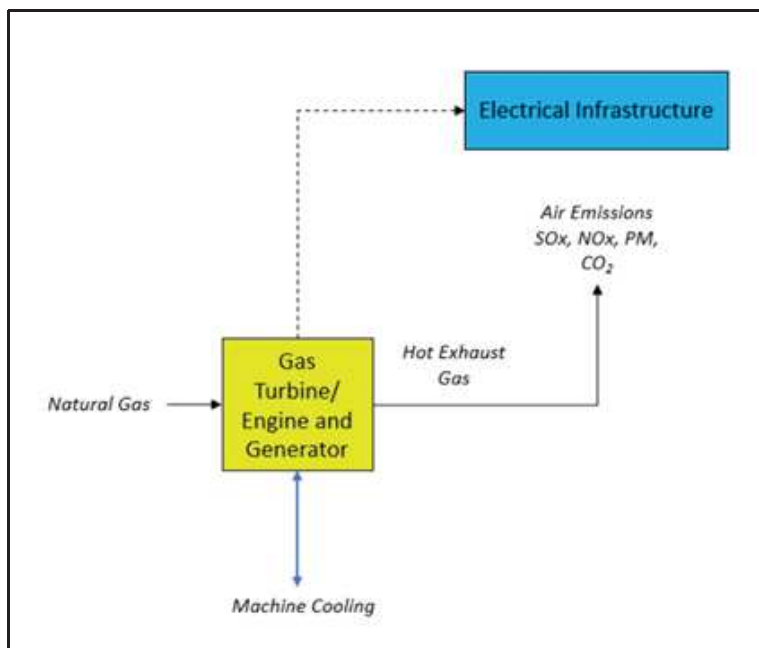


Figure 2-4: Schematic showing inputs and outputs for open cycle gas turbine or engine technology (Carnegie Energie, 2019)

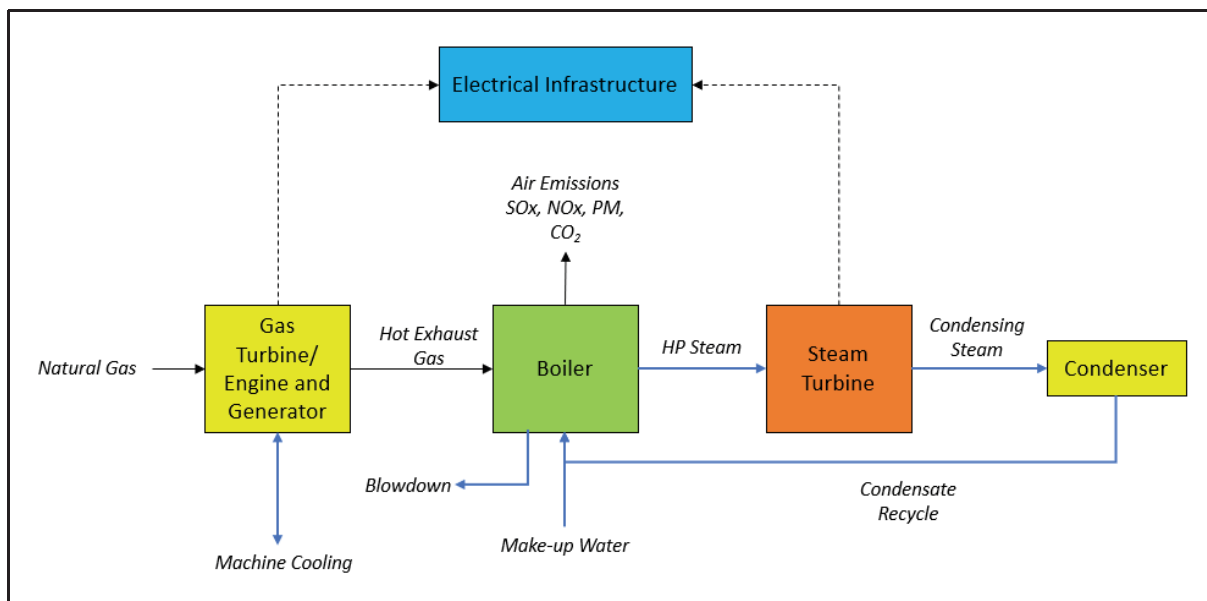
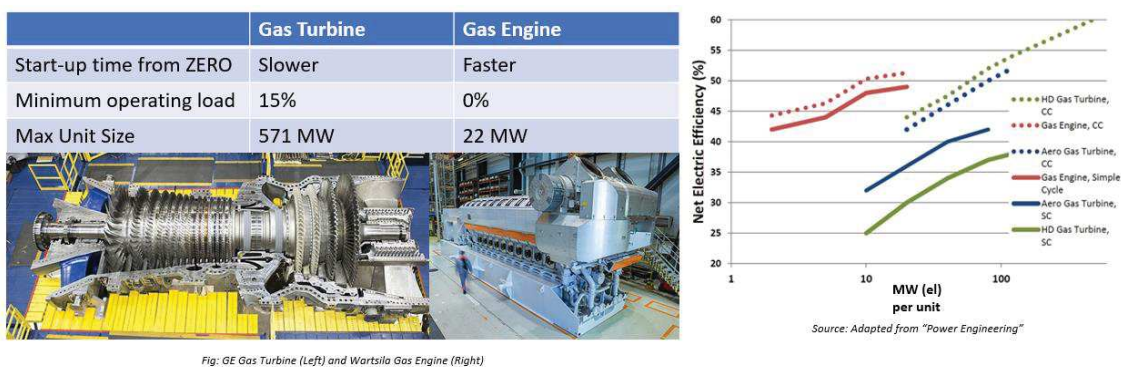


Figure 2-5: Schematic showing inputs and outputs for combined cycle gas turbine or engine technology (Carnegie Energie, 2019)

### 2.4.3 Gas engines vs gas turbines

A summary of the key differences between gas turbine and engine technologies is provided in Figure 2-6. On the whole, combined cycle gas turbines are more efficient than gas engines at baseload and mid-merit production capacities, however gas engines allow greater flexibility and have greater efficiencies in terms of changing load and rapid start up. While the maximum unit size of engines is limited to 22 MW capacity, multiple engine units could be connected in series to meet the capacity requirements.



**Figure 2-6: Summary of key differences between gas turbine and engine technology (Carnegie Energie, 2019)**

Some general principles in the selection of power generation technology and assessment thereof in this EIA are:

- Choice of generator and open or combined cycle technology affects efficiency of power output, and responsiveness to demand fluctuations
- Fuel volumes, and gas infrastructure specifications, are based on open cycle gas turbine operating at 100% daily load factor at an 80% annual despatch factor, i.e. base load; and
- The combined cycle gas turbine requires the most water ( $\pm 800 \text{ m}^3/\text{day}$ ). Source of this water will be from municipality or the desalination plant already authorised as part of the adjacent Aquaculture Development Zone (once developed).

#### 2.4.4 Cooling technologies

The choice of cooling system directly impacts the technical performance of the plant (electrical output), capital and operational cost, and environmental impacts. The trade-offs to reducing source water consumption are higher costs and lower electrical efficiencies. The optimal cooling system is typically influenced by environmental considerations for the abstraction of seawater, and the permissible temperature rise before discharge back to the marine environment. The relative footprint and water demand requirements for the main cooling technologies available are illustrated in Figure 2-7.

Even though all thermoelectric plants use water to generate steam for electricity generation, not all use water for cooling. The four fundamental technology options for cooling are:

1. Once through seawater cooling;
2. Mechanical draft wet cooling towers;
3. Natural draft wet cooling towers; and
4. Air cooled condenser.

Further explanation of the differences between the cooling technologies is provided below.

The design of wet cooling towers could be based on either mechanical draft or natural draft. Mechanical draft towers are currently the most common type of evaporative cooling towers installed with power plants. This maximises the efficiency of the tower however it has greater cost implications. In these towers, air flow through the tower is induced by a mechanical fan located on the top of the towers. Wet mechanical draft cooling towers will require less seawater abstraction.

Natural draft cooling towers are sometimes installed in large power plants and are typically limited to large plants exceeding 500 MWe capacity of steam. Natural draft cooling towers were not considered a feasible option as they are best suited to areas of the world with lower dry-bulb ambient temperatures and are not recommended for sites where space is limited or where there are restrictions on the visual impact of the plant (Mott Macdonald, 2016). The power plant with mechanical draft cooling tower will

---

Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 16:08:56

Why is space deemed to be a limitation if large parts of the SEZ in Zone 7 and ZOne 6 & 11 is still indeveloped. Why would the visual impact be a limitation in the context of an industrial area.

have a footprint and water demand between the option with seawater cooling and air-cooled condenser.

Air Cooled Condensers condense turbine exhaust steam inside finned tubes that are externally cooled by ambient air (instead of seawater). Due to the relatively low heat transfer coefficients, the heat exchange area required by ACCs is high, increasing footprint and capital costs.

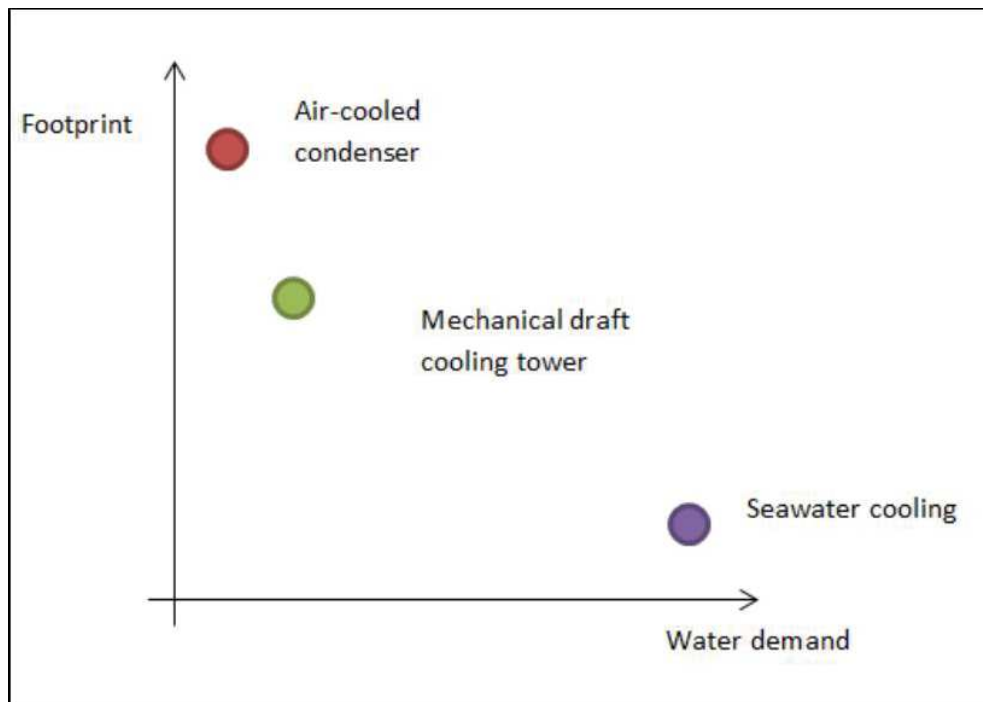


Figure 2-7: Footprint and water demand for three cooling methods (Source: (Mott Macdonald, 2016))

## 2.5 Detailed Project Description

The precise combination of generating technology, i.e. gas turbines or combustion engines and combined cycle or open cycle, is unknown and it is expected that the power plant could employ a range of these technologies.

In terms of footprint of the proposed development, as would typically be depicted in a site layout plan, the actual size and arrangement of the various elements will only be determined during a detailed design phase. Spacing between components and equipment may vary. A footprint area of 18.1 ha has been allocated for the Zone 10 North power plant.

The facilities would be permanently staffed 24 hours per day, 365 days per year. For the purposes of this assessment it will be assumed that the power plant will operate at maximum capacity 80% of the time, which in terms of air emissions would provide a worst case scenario.

### 2.5.1 Power Plant Technology Options

#### Key components

The various components of a gas turbine or engine power plant are as follows:

- Power island, comprising of the power plant and electrical infrastructure. The power plant comprises of a Gas Turbine / engine, and in the case of a combined cycle plant will also include a Heat Recovery Steam Generator (HRSG), and Steam Turbine / engine;

- Cooling water system (for a combined cycle plant), including the technology for cooling of steam, and the source of cooling water;
- Associated services, including the storage and treatment of process water through a demineralisation process;
- Turbine / engine power house;
- Control and electrical building;
- Chemical storage facilities;
- Emergency back-up generator facilities;
- Transitional phase / back up fuel storage;
- Central control room, warehouse and admin buildings;
- Waste water storage and treatment facilities; and
- Firefighting systems.

## Gas Turbines

The basic operation of the gas turbine involves the intake of atmospheric air and input into a compressor consisting of multiple rows of fan blades. The compressor elevates the air pressure. Fuel is then injected into the high-pressure environment causing ignition creating a high velocity gas. The compressor fans are connected to a turbine by a shaft. This high-temperature high-pressure gas enters the turbine causing the shaft to rotate and generates mechanical energy.

## Combustion Engines

Combustion engines employ the expansion of hot gases to push a piston within a cylinder, converting the linear movement of the piston into the rotating movement of a crankshaft to generate power. Modern combustion engines used for electric power generation are internal combustion engines in which an air-fuel mixture is compressed by a piston and ignited within a cylinder in much the same way as a car engine.

The size and power of a combustion engine is a function of the volume of fuel and air combusted. Thus, the size of the cylinder, the number of cylinders and the engine speed determine the amount of power the engine generates. By boosting the engine's intake of air using a blower or compressor – called supercharging – the power output of the engine can be increased.

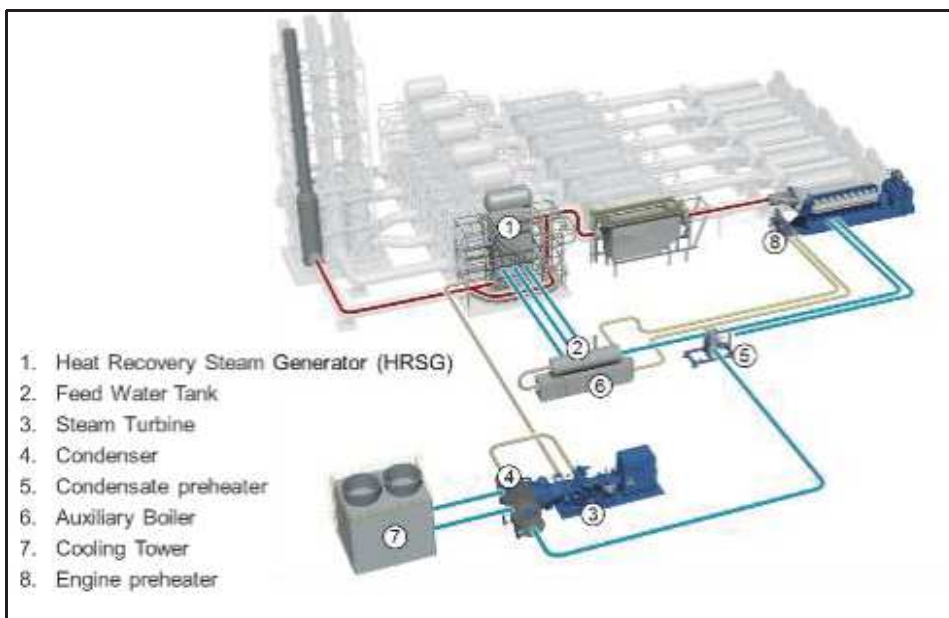
For electric power generation, four-stroke engines are predominantly used. During the intake stroke, the premixed air and fuel is drawn into the cylinder as the piston moves down to “bottom dead centre” position. During the compression stroke in gas engines, the air-fuel mixture is compressed by the piston and ignited by a spark from a plug. Auto-ignition in gas engines is prevented with proper limits on the compression ratio.

A picture and layout of a typical combined cycle internal combustion engine setup are provided in Figure 2-8 and Figure 2-9.

In a combined cycle gas engine power plant (CCGE), each combustion engine generator set has an associated HRSG. Bypass valves are used to control the admission of steam to the steam turbine when an engine set is not operating. One engine can be used to preheat all the HRSG exhaust gas boilers with steam to keep the HRSGs hot and enable fast starting. Combined Cycle power plants combine the advantages of high efficiency in simple cycle and the modularity of multiple engines supplying the steam turbine.



**Figure 2-8: Example of a typical Combined Cycle Internal Combustion Engine setup (Source: Wartsila)**



**Figure 2-9: Layout of a typical Combined Cycle Internal Combustion Engine setup, (Source: Wartsila)**

### 2.5.2 Cooling technology options

Due to the proximity of the Zone 10 North site to the sea, the CDC's technologically preferred solution is to use seawater for the power plant cooling water. The environmental feasibility of seawater cooling for the gas to power plants depends on authorisation of the Marine Pipeline Servitude, which is the subject of a separate EIA process running concurrently with this EIA process. The cooling technology options listed above were considered in terms of their technical, financial and environmental feasibility, taking into account the environmental limitations for cooling water discharge via the marine pipeline servitude. Based on the outcomes of these feasibility studies it was determined that the other wet cooling types would be less feasible and that wet mechanical draft seawater cooling is proposed for the zone 10 North power plant. The demand for sea water for this power plant will therefore be based

---

Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 16:13:50

The preferred solution by the CDC may not necessarily be the best solution. Assume that various options / solutions will be considered and assessed. Furthermore consider comments re alternative locations for these two powerplants.



on this scenario and this information provided to the Marine Pipeline Servitude EIA process. Should seawater cooling not be possible, air cooling should remain an option for this power plant.

Mechanical draft wet cooling towers require less seawater abstraction (around 1,900 m<sup>3</sup>/h against 56,000 m<sup>3</sup>/h for once through cooling) than once through cooling thereby reducing the cost of seawater intake and outfall. The mechanical draft wet cooling tower differs from the natural draft wet cooling towers in that it makes use of a fan to blow air across the fill to increase evaporative cooling. This maximises the efficiency of the tower however it has greater cost implications. Due to the evaporative process involved, wet mechanical draft cooling will result in seawater discharge of slightly higher salinity.

Air Cooled Condensers condense turbine exhaust steam inside finned tubes that are externally cooled by ambient air (instead of seawater). Due to the relatively low heat transfer coefficients, the heat exchange area required by ACCs is high, increasing footprint and capital costs.

### 2.5.3 Power Plant

The Zone 10 North power plant site will occupy 18.1 ha and have generating capacity of 1,000 MW.

Key project facilities/components for the power plant includes:

- Cooling by way of either Wet mechanical draft cooling or Air Cooled Condensers (ACC)/ cooling towers (in the case of turbines), or radiators (in the case of engines). Exhaust gases will be released via a stack, which is expected to be 40 - 60 m in height. The final height would depend on recommendations in the air dispersion model.
- Plant process water would be sourced from either municipal water or seawater (from the authorised desalination plant in the Aquaculture Development Zone). Facilities for the treatment (demineralisation) of water are necessary to supply the plant. Demineralisation would take place at the power plant. It is anticipated that 33.7 m<sup>3</sup>/hour of municipal water would be required or alternatively 67.3 m<sup>3</sup>/h of seawater (which would go through a desalination process), to provide the necessary process water.
- Construction is expected to take approximately 36 months and the overall investment per powerplant is in the order of USD 550 million.
- No carbon capture and storage is proposed. Gas turbines considered in this project will be fitted with dry low NO<sub>x</sub> (DLN) combustor to meet the required national standards for NO<sub>x</sub> emissions to the atmosphere. Dry Low NO<sub>x</sub> (DLN) combustor systems are currently included in most standardised gas turbine packages. The EPC Contractor generally guarantees NO<sub>x</sub> emissions at a maximum 25ppm though actual emissions are lower than this and can reach a single digit (Source: (Mott Macdonald, 2016)). Water injection is expected to be adopted to control NO<sub>x</sub> emission when firing on diesel.
- Storage of back-up fuel will be required. A maximum of 2 x 4,000 m<sup>3</sup> tanks for storage of liquid petroleum fuels is anticipated (Carnegie Energie, 2019). The backup fuel utilized on site will be either fuel oil or diesel.

### 2.5.4 Power evacuation

The power plant will transfer power into the 400 kV powerlines located in the power line servitude depicted in the services corridor shown in Figure 1-2.

---

Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 16:14:28  
Case in point.

---

Number: 2 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 16:16:58  
Does process water include the cooling water or is two different things.

### 2.5.5 Cold vent system

The power plant will have its own independent overpressure protection and venting systems and fire and gas and depressurisation regimes. The design of the project is expected to be in accordance with a philosophy of minimum venting in order to protect the environment without compromising safety. During normal operation, there will be no flow of vapour from the facilities into the vent system.

### 2.5.6 Safety and fire protection

The power plant site will be secured with a fence and access control. A 2000 m<sup>3</sup> firewater tank will be installed on site. The NFPA 15 Standard for Water Spray Fixed Systems for Fire Protection will be followed.

### 2.5.7 Cooling Water

Calculations by Carnegie Energie show that approximately 1,900 m<sup>3</sup>/h of sea water will be required for cooling purposes for a 1000 CCGT MW power plant. The resultant increase in temperature is anticipated to be up to 8°C higher than the ambient seawater temperature. These estimates will however be confirmed in the next iteration of the DSR once the modelling report for the cooling water is available.

### 2.5.8 Water Balance: Process Water

The water requirements of the power plant will be met from one of two sources, i.e. either from the desalination of seawater or municipal water. Approximately 33.7 m<sup>3</sup>/h of municipal water will be required as opposed to 67.3 m<sup>3</sup>/h of seawater (which would need to be treated via a desalination process off-site prior to on-site demineralisation). Effluent from water treatment (demineralisation) of process water will need to be neutralised before being discharged.

The steam cycle will need to periodically blowdown water in order to remove any build-up of impurities in the boiler. Should cooling towers be used, then the water in the cooling towers would need to be continually blown down to control the build-up of dissolved salts in the circulating water system. This water will be channelled back to the sea water discharge pipeline for disposal. The temperature of this blowdown water is estimated to be in the region of 95°C, at a flow rate of approximately 26m<sup>3</sup>/hr.

All blowdown and process water effluent will be directed to the proposed Marine Pipeline Servitude for discharge, the impacts of which are addressed via the CDC's EIA process for that project

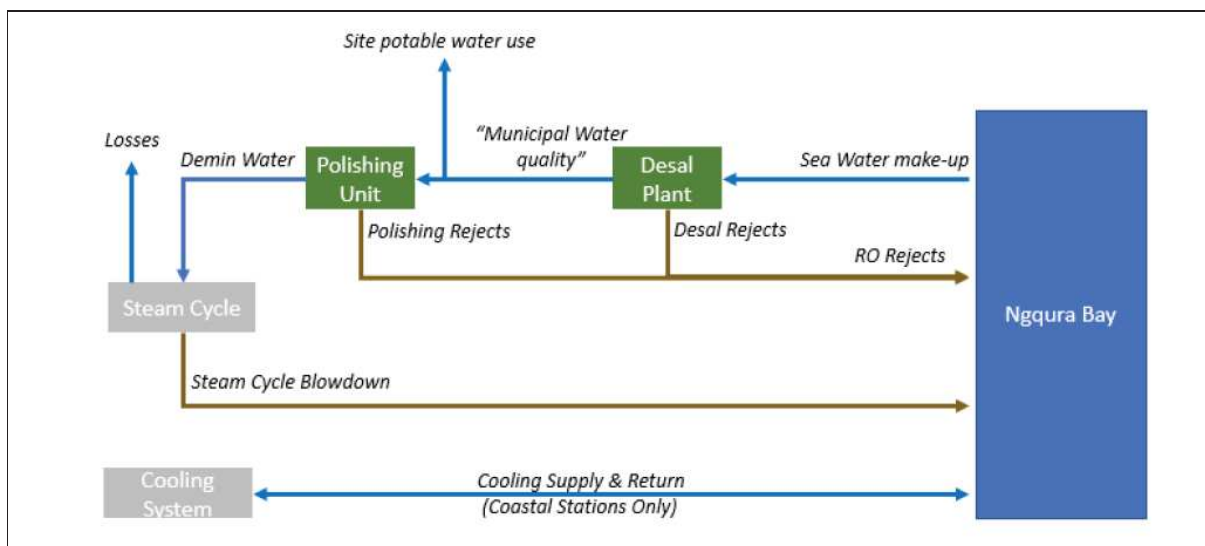




Figure 2-10: Water Balance Diagram Source: (Carnegie Energie, 2019)

---

 Number: 1      Author: Andries.Struwig      Subject: Sticky Note      Date: 10/11/2020 16:22:35  
This is worrying especially if this is proposed to be discharged via a marine outfall pipeline.

---

 Number: 2      Author: Andries.Struwig      Subject: Sticky Note      Date: 10/11/2020 16:23:04  
Alternatives for discharge if not via a marine outfall pipeline.

## 2.5.9 Waste generation and management

During construction, waste types typically associated with large infrastructure will be generated, and disposed of at a landfill site in terms of the legal requirements. During operation, the following waste streams are expected:

- Used generator and turbine lubricant oil, which will be collected on site and removed in drums by a specialist contractor for appropriate disposal;
- Small volumes of oily sludge recovered from on-site surface water treatment –
- Spent gas turbine fabric air filter and lube oil filter cartridges;
- Dried powder / sludge and spent resins from on-site effluent treatment / demineralisation;
- Solid domestic waste (office consumables etc.);
- Scrap metals, plastic and packaging, which will be recycled where possible;
- Waste solvents and grease from cleaning of workshop equipment; and
- Spent laboratory chemicals from water testing and treatment.

Solid waste will be collected and stored on site in a properly designed facility, prior to regular collection and disposal by a registered contractor. Registration of the storage facility in terms of Category C of the Waste Management Activities may be required, should anticipated storage capacity exceed 100 m<sup>3</sup> of general waste or 80 m<sup>3</sup> of hazardous waste. This will be done post-authorisation once the relevant design details for the waste storage facility are known.

Sewage and stormwater will be treated on-site to meet the required standards prior to discharge to CDC's bulk services infrastructure. Domestic sewage will need to be pumped to a sewage treatment plant. Depending on timing this would either be the future Coega WWTW or the existing Fishwater Flats WWTW.

## 2.5.10 Emergency Response

The CDC has an Emergency Response Plan to deal with emergency situations arising from operations in the SEZ, and should the power plant qualify as a Major Hazard Installation (MHI), a detailed site specific Emergency Response Plan will be required. The Plan would incorporate emergency scenarios such as explosions, fire, structural failure and hazardous spills, and outline response procedures. The Emergency Response Plan is implemented in collaboration with emergency response organisations including National and Regional disaster management, emergency medical services.

## 2.5.11 Labour and Employment

Employment opportunities are estimated to amount to 2030 jobs over the construction period (approximately 3 years) while it is anticipated that approximately 200 jobs would be created during operation for a 1000 MW plant. Thirty percent of these positions (for both construction and operation) would be allocated to local unskilled labourers and seventy percent by skilled individuals.

## 2.6 Project Alternatives

The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of which alternatives are appropriate needs to be informed by the specific circumstances of the activity and its environment.

Appendix 2 Sections 2 (1) (h) (i) and (x) Appendix 3 Sections 3 (1) (h) (i) and (ix) of the EIA Regulations, 2014 require that S&EIR processes must identify and describe alternatives to the proposed activity



that were considered, or motivation for not considering alternatives. Different types or categories of alternatives can be identified, e.g. location alternatives, type of activity, design or layout alternatives, technology alternatives and operational alternatives.

Not all categories of alternatives are applicable to all projects. However, the consideration of alternatives is inherent in the detailed design and the identification of mitigation measures, and therefore, although not specifically assessed, alternatives have been and will be taken into account in the design and S&EIR processes.

The discussion of alternatives in this section aims to demonstrate the process followed during the early planning stages of the Gas to Power project and which have led to the project description as outlined above. It is recognised that this section does not explicitly address the environmental attributes of location alternatives, nor the impacts and risks of each alternative in a comparative format as suggested by Appendix 2 of the EIA regulations. Where decisions on preferred alternative have been based, or influenced, by environmental considerations, these are mentioned. In the most part, however, considerations have been based on strategic grounds (i.e. the selection of the Port of Ngqura as one of the locations) or technical or financial feasibility.

### 2.6.1 Activity Alternatives

No activity alternatives are considered as part of this EIA since it is assumed that the land use planning for the allocations of the various zones within the Coega SEZ took various activity alternatives into account in determining the appropriate potential land uses for the project site.

### 2.6.2 Site Alternatives

The feasibility study compiled by Worley Parsons identified the following key considerations in the selection of appropriate sites for the development of a gas to power plant:

- Proximity of the plant site to the fuel source and fuel storage;
- Proximity of the plant site to the transmission system grid;
- Proximity of the plant site to the cooling water and or other water supply source;
- Access to the plant site from major roads, railways and harbours;
- Availability of adequate land for the power plant. Including possible future expansion options; and
- Land/ground that would require minimal preparation for civil works.

The selection of the proposed site at the Port of Ngqura within the Coega SEZ follows investigations that progressively considered a range of sites at national and local levels. This process of site selection is summarised below.

#### National site selection process

Shell investigated various options for locating LNG receiving terminals along the South African coast. Together with the National Ports Authority (NPA), sites were investigated at Saldanha Bay, Cape Town, Mossel Bay, Port Elizabeth and Coega. The Shell investigation concluded that Coega was the most viable option for locating a LNG receiving terminal, and approached the national utility Eskom and national gas infrastructure company iGas to evaluate the pre-feasibility of a project to develop LNG receiving and regasification facilities, and a gas pipeline infrastructure at Coega, premised on the development of a CCGT power plant.

---

Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 16:29:05

It would have been appropriate to address location alternatives within the SEZ for the two powerplants in Zone 10 especially given their siting next to the coast and within a littoral active zone.

---

Number: 2 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 16:30:38

These are exactly the same as for the powerplant in Zone 13 which implies that site alternatives within Zone 7 and Zone 11 would also work.



### ***Identification of Power plant locations***

The CDC have undertaken rezoning EIAs and developed an open space management plan and a development framework plan for the Coega SEZ several years ago. These documents identify no-go areas taking into account elements such as environmental and geotechnical constraints. They also specify particular land uses for the zoned areas. The intention of developing the SEZ at Coega is to concentrate industrial developments in a single location so that the provision of services can be optimised, and to take advantage of the proximity of the deep water harbour at the Port of Ngqura for the bulk transport of goods.

The Coega SEZ has various elements in place in order to expedite the development of Gas to Power plants in the SEZ including the establishment of demarcated zones for development and the RoD for the services corridor (which includes 400 kV lines) between the Dedisa substation and Zone 10. The Dedisa Peaking powerplant has also been earmarked for future conversion from diesel to gas and the services corridor allows for the establishment of gas pipeline infrastructure, which feeds directly into the Dedisa Peaking powerplant.

As part of the Coega SEZ planning process, and taking into account the key siting requirements, the CDC has identified two parcels of land that could potentially accommodate the proposed gas to power project. The first parcel of land stretches from Zone 8 (gas infrastructure) to Zone 10 (North and south power plants and Gas & LNG hub), and the second is found within Zone 13 of the SEZ (Figure 1-2).

Zone 10 was earmarked as it is located adjacent to the ocean and in close proximity to the deep sea port where the LNG will be delivered. An existing and approved 240 m wide servitude connects the area to the Dedisa substation (4 km away) which is designed to evacuate power to the national grid. Two 132 kV lines have already been established in the corridor, while provision has been made for a further three 400 kV lines between the Zone 10 power plants and the substation. The proximity of these power plants to the ocean creates the potential for once-through cooling with seawater.

The proposed site alternatives within the SEZ were identified on the basis of their proximity to the key siting elements and development planning zones and are therefore the most viable locations for a gas to power due to their proximity to the port and proposed related infrastructure for LNG storage and transmission, electricity distribution infrastructure (Dedisa substation and 400 kV powerlines) and services infrastructure (e.g. the proposed marine pipeline servitude). Zone 10 is seen as particularly favourable due to its proximity to the sea, with the result that wet cooling using seawater becomes a technically and economically viable option.

### **2.6.3 Layout and Alignment Alternatives**


Detailed layout for the power plant will not be available during the EIA process, however conceptual layouts have been developed for each of the power plants as well as the overall gas infrastructure. A layout for the Zone 10 North power plant is provided in Appendix I.

### **2.6.4 Technology Alternatives**

Given the CDC's requirement that any authorisation received will allow for various technology options as opposed to a single preferred technology, a "worst case" scenario approach will be adopted for the purposes of environmental assessment in the EIA process. The Input / Output model for each power plant will be based on the consideration that has the greater environmental impact (i.e. worst case scenario). For this the following criteria are relevant:

- Power generation technology - Open Cycle Gas Engine (OCGE) vs Open Cycle Gas Turbine (OCGT) vs Combined Cycle Gas Turbine (CCGT):
  - OCGT has the lowest efficiency (power output per unit of gas). Gas volumes used will therefore be based on those required for OCGT;
  - CCGT requires the most steam generation, and therefore demineralised process water for this purpose. The demineralised water demand will therefore be based on the amount required for CCGT. Furthermore, CCGT has the highest cooling demand, thus the cooling water requirements are based on this; OCGE has a marginally greater footprint requirement than OCGT. The space requirements for each power plant will therefore be based on that for OCGE
- Operating conditions:
  - For the purposes of the EIA it is assumed that all power plants will operate at 100% capacity, 80% of the time, i.e. above intended mid-merit range. Based on this the following have been calculated:
    - Gas volumes required
    - Air emissions
    - Water volumes required (seawater and demineralised water)
- Cooling technology:
  - Wet mechanical cooling is technically and financially preferred for the Zone 10 (North) power plant. The demand for sea water for this power plant will therefore be based on this scenario and this information provided to the Marine Pipeline Servitude EIA process;
  - Air cooling would require more space. The space requirements for each power plant (including those in zone 10, in case seawater cooling is not possible for whatever reason) will be based on those for Air Cooling.

### Cooling technology Alternatives


The cooling technology options  in Section 2.5.2 were considered and are proposed as alternatives, the technically preferred and feasible alternative for the Zone 10 North power plant being wet mechanical draft cooling, or failing this, air cooling. Other cooling technologies have been found to be financially, technically and / or environmentally unfeasible (in terms of heated water discharge). The assessment of these other cooling technology alternatives is therefore considered outside the scope of this EIA process.

### 2.6.5 No-Go alternative

The no development option assumes the sites allocated within the SEZ would remain vacant until developed for other industrial activities. Although another Gas to Power plant is proposed in Richard's Bay, the no development alternative assumes that this project would not be substituted by a similar project at a different location. Consequently, impacts on greenhouse gas emissions, energy security, and macro-economics at a national scale would not materialise.

The no-go alternative will be used as a baseline throughout the assessment process against which potential impacts will be compared and will be assessed in the EIR.

---

 Number: 1      Author: Andries.Struwig      Subject: Sticky Note      Date: 10/11/2020 16:38:04  
This has already been commented on elsewhere.

## 2.7 Phasing

Implementation timeframes would be dependent on a developer being secured and the power plant obtaining a generating licence from the DMRE through the IPPPP.

Depending on when generating licenses are obtained, development of the power plants could occur simultaneously or sequentially. Although there is the possibility that one or more of the power islands do not obtain generating licenses, for the purposes of assessing cumulative impacts, it is assumed that the Dedisa power plant, together with all three proposed power plants, will.

Due to typical extended manufacturing lead times of the steam-cycle components, the power plant may be operated as open cycle mode for initial periods before being operated as combined cycle, i.e. initially with lower efficiency.

The installation and commissioning of gas infrastructure equipment could also take longer than the commissioning of the power plants (estimated at 3 years for construction), which may mean that diesel or furnace oil would be required for an intermediate period for operation of the power plants.

---

### 3 Description of the Affected Environment

The study area has been described in great detail in the various studies already undertaken for the Coega SEZ and the Port of Ngqura. What follows is a brief description of the biophysical characteristics of the study site. A map showing the various zones of the Coega SEZ relative to the proposed development sites is provided in Figure 2-3 for reference.

This chapter presents an overview of the biophysical environment in which the proposed project is located, to:

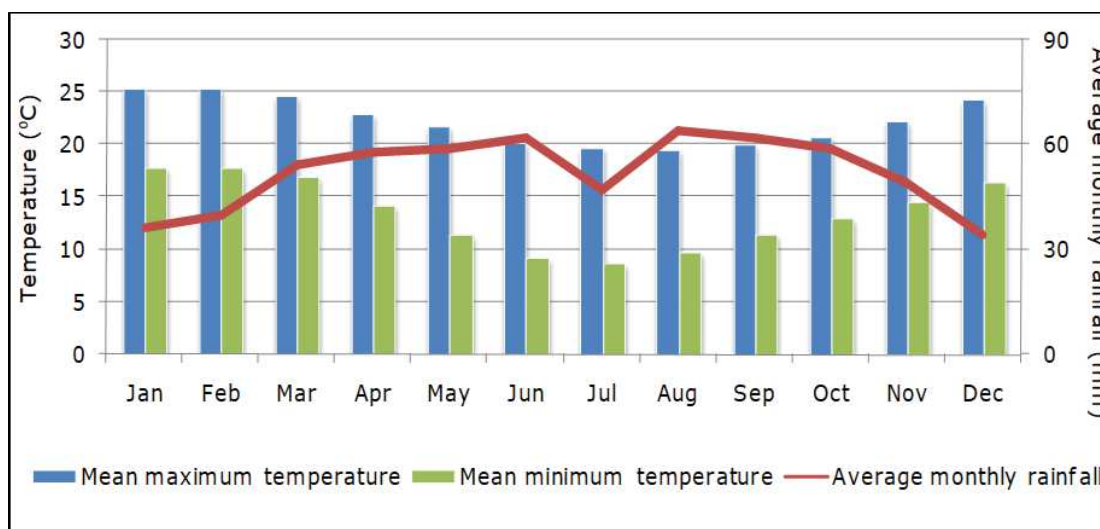
- Understand the general sensitivity of and pressures on the affected environment;
- Inform the identification of potential issues and impacts associated with the proposed project, which will be assessed during the Impact Assessment Phase;
- Identify gaps in available information to inform specialist study requirements; and
- Start conceptualising practical mitigation measures.

#### 3.1 Climate

The Eastern Cape Province has a complex climate. There are broad variations in temperature, rainfall and wind patterns, mainly as a result of movements of air masses, altitude, mountain orientation and the proximity of the Indian Ocean.

The Port Elizabeth region has a warm temperate climate and the temperature range is not extreme, although high temperatures can occur during summer. Averages of daily minimum, maximum and mean temperatures for the period 1961 – 1990 are presented in Figure 3-1 with accompanying wind. Very high temperatures may be experienced during berg wind conditions when maximum temperatures may exceed 30°C.

Rain occurs throughout the year, brought about by convective summer rain and winter rain associated with the passage of frontal systems. The area receives an annual average rainfall of 624 mm. Monthly average rainfall data for Port Elizabeth Airport for the period 1961 – 1990 is presented in Figure 3-1

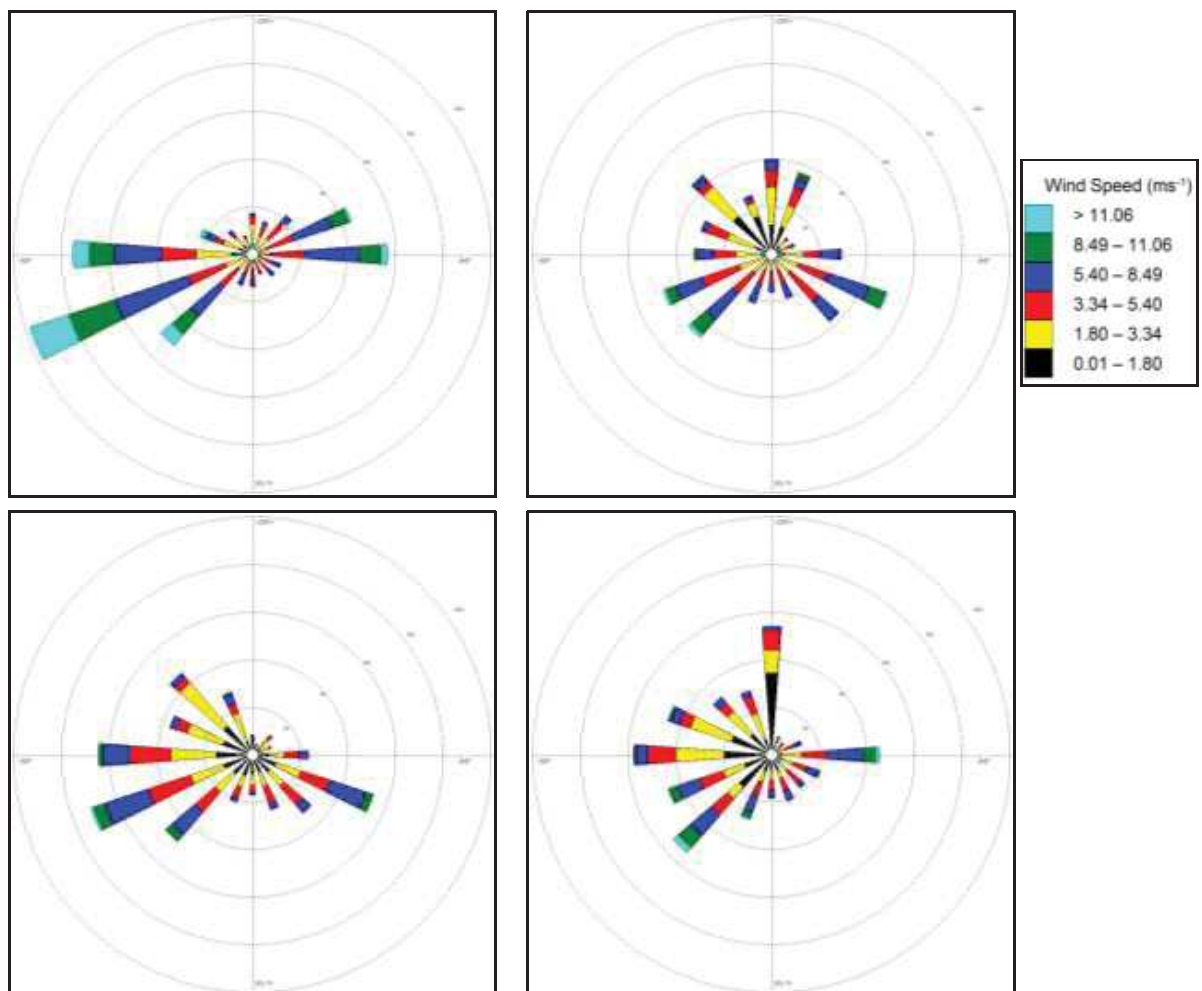


**Figure 3-1: Average of daily minimum, maximum and mean temperatures (°C) and average monthly precipitation (mm) at Port Elizabeth Airport for the period 1961 – 1990**

Prevailing wind tends to follow the coastline and the prevailing winds in the Port Elizabeth area are west-southwesterlies and east-northeasterlies. Wind roses are presented for Port Elizabeth Airport, Amsterdamplein (in the Coega SEZ), Motherwell and Saltworks in Figure 3-2.

The airport at Port Elizabeth is the most climatologically representative of the sites and is well exposed to the prevailing synoptic-scale winds, showing a high frequency of winds from the sector west to southwest (more than 50% of all winds). These are also the strongest winds. There is some occurrence of wind from the northeast and east at this site. The annual average wind speed here is 5.7 m/s.

The winds at Amsterdamplein, Motherwell and Saltworks (all in the Coega area) also indicate the occurrence of reasonably strong west to southwesterly synoptic scale winds. At Amsterdamplein, winds are fairly, equally spread from the southwest, southeast, northwest, north and north-northeast, with an average wind speed of 4 m/s. At Motherwell, winds are predominantly from the northwest to southwest and east-southeast, with an average wind speed of 3.4 m/s. At Saltworks, winds are mainly from the west-northwest to southwest, north and east, also with an average wind speed of 3.4 m/s.



**Figure 3-2: Annual wind roses for Port Elizabeth Airport, Amsterdamplein, Motherwell and Saltworks for 2009-2011**

## 3.2 Geology

The bedrock around Port Elizabeth is characterised by the Peninsula Formation sandstones of the Table Mountain Group. This formation consists of coarse-grained super-mature quartzitic sandstone

and is relatively resistant to erosion. It forms the bedrock of Algoa Bay and emerges as outcrops in the bay as the islands of St Croix, Jahleel, Bird and Brenton. The areas between these islands are filled with recent marine deposits (Alexandria Formation), which directly overlie the mudstones of the Kirkwood Formation. The geology of the Coega SEZ is characterised by coastal limestone, overlaid by calcareous sands blown onshore.

The Coega SEZ is underlain by a wide spectrum of sedimentary rocks spanning an age range of some 470 million years. These sediments are assigned to the Palaeozoic Table Mountain Group, the Mesozoic Uitenhage Group and the Caenozoic Algoa Group. Levels of bedrock exposure within the Coega SEZ are generally very low due to extensive cover by superficial drift (e.g. soil, alluvium, in situ weathering products) as well as by surface calcrete (pedogenic limestone) (Almond 2010).

The Coega Fault extends west of the Groendal dam eastwards towards the coast, dipping at between 30° and 60° for about 120 km. It is a normal tensional fault with a vertical southward throw of 500 m to 100 m.

### 3.3 Topography

The SEZ is situated on a coastal platform that descends towards the sea in a series of gentle steps parallel to the existing coastline. This platform has been incised by the Coega River, which flows towards the sea across the western and south-western parts of the SEZ. The site in Zone 10 is largely covered by dunes and rises to approximately 60 m above sea level.

### 3.4 Land Use

The Coega SEZ consists of approximately 11,000 hectares of sector specific zoned land with purpose built infrastructure and is earmarked for industrial development. Land uses in the Coega SEZ presently consist of infrastructure, harbour facilities, industrial & commercially developed land, and vacant land. Vacant land is destined for a combination of future industrial land and open spaces, as per the CDC's Open Space Management Plan (OSMP). The OSMP has identified environmental no-go areas that are to be protected from development. These no-go areas have varying functions from natural areas, where emphasis is on conservation of areas to protect special vegetation types and preserve ecological processes, to recreational and visually attractive open space areas for relief in the built environment, screening off industrial buildings and softening the development.

The sites identified for the proposed plant lie within Zone 10 of the Coega SEZ, which has been designated for the use of the mariculture and aquaculture industries, in addition to the power plants.

Parts of Zone 10 are located within a Critical Biodiversity Area (CBA) as per the NMB Conservation and assessment Plan (2010). The land management objective for land designated as CBAs is to manage such areas for biodiversity conservation purposes and incorporate these into the protected area system (SRK 2010).

This should be explained in the context that Zone 13 is actually the zone identified for the energy sector.



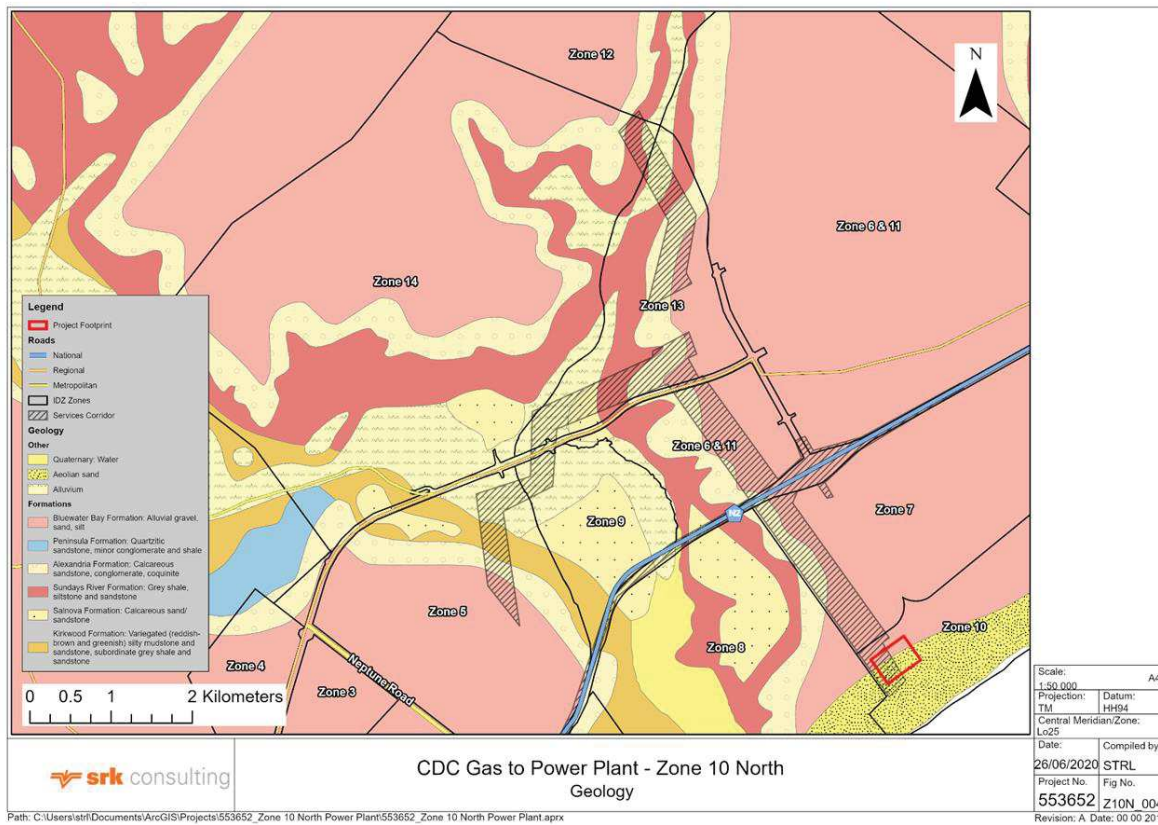


Figure 3-3: Geology of the Zone 10 North site area

### 3.5 Surface and Ground Water

The Coega River, which is a relatively small sand-bed river, is the most significant surface water feature associated with the Coega SEZ and flows to the west of the project site. The Coega catchment area is approximately 45 km long, 15 km wide and has a total area of about 550 km<sup>2</sup>. The Coega River classification, based on preliminary river classification guidelines, ranges from moderately modified (i.e. C classification) in the upper reaches to critically modified (i.e. F classification) in the lower reaches at the salt works facility.

The SEZ is underlain by calcrete, sand and gravel deposits that overlie low permeability clays. These clays limit the vertical infiltration of rainwater and induce a horizontal groundwater flow towards the Coega River channel. Consequently, rapid run-off takes place following precipitation. Due to the limited infiltration of rainfall, a significant fluctuation in groundwater level does not occur, although groundwater levels can fluctuate by 3-4 metres with rainfall. Any contaminants originating from the planned industrial development could infiltrate the sandy subsurface but would eventually emanate in seepage in the Coega River and beach environments.

No wetlands or other surface water features have been identified on or near the power plant site.

### 3.6 Ecology

#### 3.6.1 Vegetation

Mucina and Rutherford (2006) developed the National Vegetation map (2012) as part of a South African National Biodiversity Institute (SANBI) funded project: According to Mucina and Rutherford, , Coega falls within the Albany Thicket Biome with the vegetation type of the area consisting largely of Coega Bontveld which is also known as Grass Ridge Bontveld (Vlok & Euston-Brown, 2002).

During recent search and rescue operations in zone 10 of the SEZ, the critically endangered *Ledebouria coriacea* (not previously listed for the area) was found.

#### ***Bontveld with grassy fynbos***

This vegetation type is often found on moderately undulating plains and is characterised by scattered circular clumps of bush up to 3 m high and 5 m in diameter, dispersed in grassland or mixed grass and low shrub community with scattered open patches rich in succulent species. It is restricted to shallow stony soils on ridges strongly influenced by an underlying calcareous substrate. This uncommon soil and geological structure, along with the local climate, has given rise to a unique, semi-arid habitat that includes several rare and endangered localised endemics, and a host of Species of Conservation Concern (SCC), often in the form of small succulents and geophytes.

Thicket clumps are generally restricted to doline karsts created through the dissolution of limestone aggregations by rainfall and groundwater creating round depression which accumulate deeper soils allowing the establishment and growth of bigger thicket shrubs. Succulent patches are generally located on calcrete outcrops with shallow soils and a significant gravel component. Grassy shrubland comprises the remainder of the vegetation unit.

The bush clumps are dominated by *Euclea undulata*, and contain typical Thicket dominants such as *Ehretia rigida*, *Maytenus procumbens*, *Polygala myrtifolia*, *Scutia myrtina*, *Searsia incisa*, *S. pallens*, *S. pterota* and *Sideroxylon inerme*. Robust succulent species such as *Aloe africana*, *Aloe ferox*, *Euphorbia caerulescens* and *Euphorbia grandidens* also occur within the bush clumps. The Shrubby Grassland is dominated by *Themeda triandra* and *Eustachys paspaloides* (grasses), *Passerina rigida*, *Ficinia truncata*, *Berkheya heterophylla*, *Pteronia incana*, *Osteospermum polygaloides* and

Jamesbrittenia microphylla with characteristic fynbos components including Acmadenia obtusata, Achyranthemum recurvatum, Disparago tortilis and Muraltia squarrosa. Open succulent patches are distinctive and include several protected and/or endangered highly localised species such as Bergeranthus addoensis, Euphorbia globosa, E. meloformis, E. stellata, Lampranthus productus Orthopterum coegana, Rhombophyllum romboidium, Ruschia cymbifolia, R. orientalis, R. recurva, and Trichodiadema intonsum. Several bulbous and geophytic species are commonly found within the ecotones between the various vegetation components, including Boophone disticha, Cyrtanthus spiralis, Drimia elata, Hypoxis zeyheri, Massonia hirsuta, Oxalis algoensis and Pachypodium succulentum.

The baseline target for Coega Bontveld conservation is 25%. The final target is 4814.2 ha and the final trimmed target is 27.5% according to the NMBM Final Conservation Assessment (2010). The ecosystem threat status of the vegetation unit is Vulnerable

### **Mesic Thicket Clumps**

A wide diversity of tree species dominate the woody thicket clumps, with the most commonly occurring including *Puttelickia pyracantha*, *Pterocelastrus tricuspidatus*, *Hippobromus caffra*, *Olea capensis* and *Euclea crispa*. Shrubs such as *Diospyros dicrophyllus* and the succulent *Aloe ferox* are common species with grass *Panicum deustum* commonly occurring in the understorey. Thicket clumps are irregularly scattered within the Bontveld and grassy Fynbos. The canopy height tends to be between 1m and 3m high and is impenetrable. Thicket varies from closely spaced bush clumps to dense pockets having an open canopy with dense (often spiny) undergrowth.

Herbaceous ground cover species include *Delosperma spp*, *Carpobrotus dimidiatus*, *Aizoon rigidum* and *Mesembryanthemum aitonis*. Herbaceous species within the thicket clumps include *Asparagus africanus*, *Asparagus densiflorus*, *Hypoxis hemerocallidea* and *Pelargonium reniforme*. Climber species include *Viscum obscurum*, *Rhoicissus digitata*, *Rhoicissus rhomboidea*.

### **Cape Seashore Vegetation**

The environment is characterised by mobile sand and high salt loading. The vegetation cover of this area is very low. The dominant species on these foredunes were *Scaevola plumieri*, *Gazania rigens* and *Tetragonia decumbens*. *Chrysanthemoides monilifera subsp. rotundata* was also abundant. According to Campbell (2007) the cape seashore vegetation had a low diversity on the site and was invaded by woody aliens as this vegetation type is sensitive to disturbance.

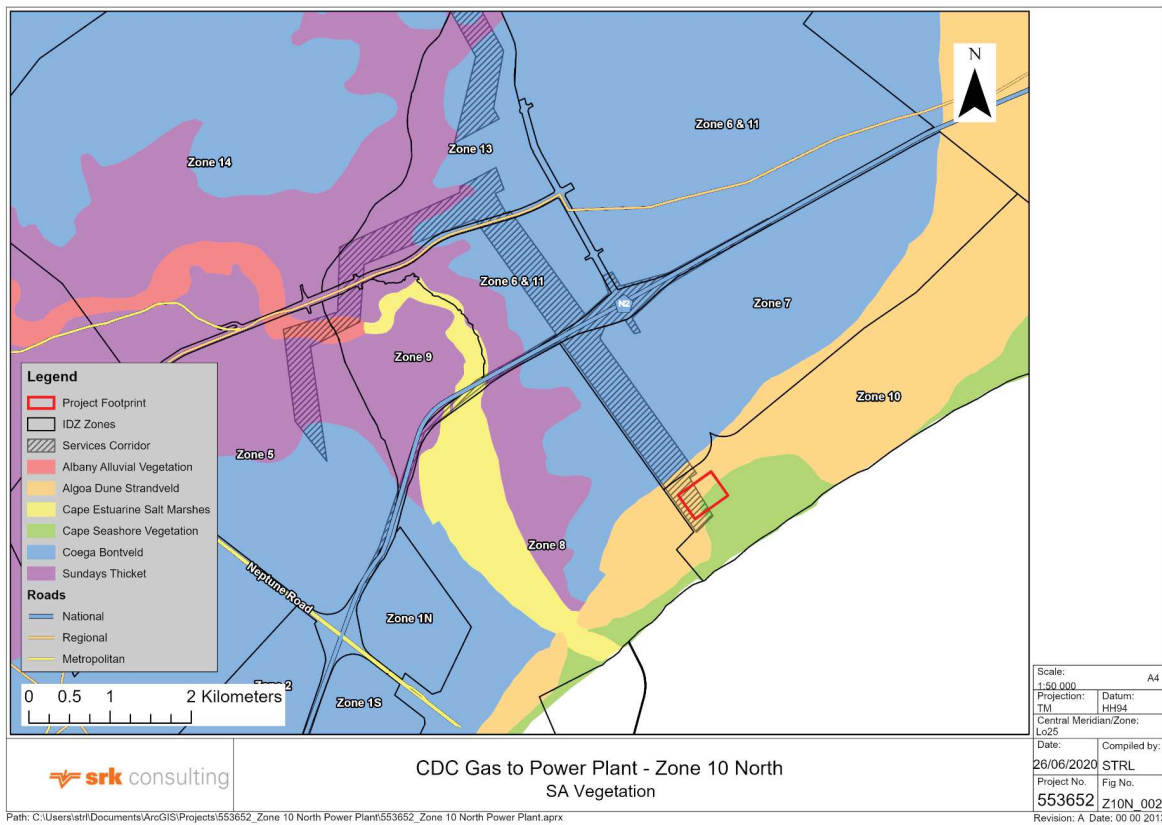


Figure 3-4: Vegetation types within the Zone 10 North site area (Mucina & Rutherford, 2006)

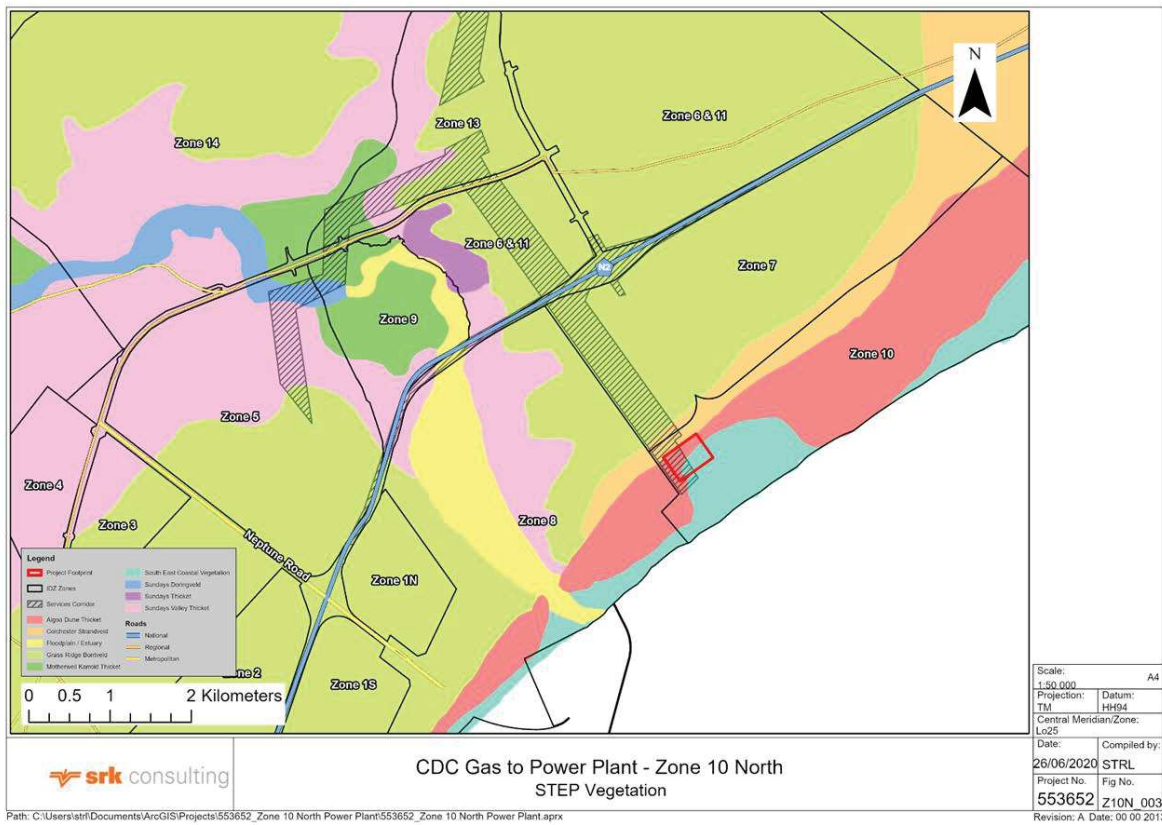


Figure 3-5: STEP vegetation within the Zone 10 North site area

### **Albany Dune Strandveld**

Albany Dune Strandveld is found inland of the mobile sand belt. The Dune Strandveld becomes swamped by high mobile sands in the west and the vegetation is limited to the inland slip face of the high dune. Natural elements of vegetation occur among exotic species that have colonised the dune ridge following artificial stabilisation of the dunes along the central and eastern south of the site.

Most of the plant diversity is found in pockets of uninfested Woodland. Where sands are shallow over calcrete, the indigenous component is dominated by stunted wild olive (*Olea exasperata*) bushes. Where the sands are slightly deeper, candlewood (*Teroceclatrus tricuspoidatus*) also dominates. The mature Dune Strandveld is dominated by milkwood (*Sideroxylon inerme*), *Brachylaena discolor* and *Rhus crenata* thumb.

Much of the Albany Dune Strandveld areas were found to be infested with rooikrans (*Acacia Cyclops*). Very little intact, mature Dune Strandveld was found.

### **Nelson Mandela Bay Conservation Assessment and Plan**

The Nelson Mandela Bay Conservation Assessment identifies the vegetation in the Coega area as, Colchester Strandveld, Grass Ridge Bontveld and Sundays Valley Thicket. Zone 10 falls along sandy beach, Algoa Dune Thicket and Colchester Strandveld vegetation units.

#### **Algoa Dune Thicket**

The Algoa Dune Thicket occurs from about the mouth of the Tsitsikamma River eastwards, up to the Sundays River mouth. Its structure and dynamics are similar to those of the Gouritz Dune Thicket, but it differs in having a richer assemblage of species woody present in the Thicket vegetation. Some of these are localised endemics (e.g. *Gymnosporia elliptica*) or nearendemics (e.g. *Aloe africana*, *Rapanea gilliana*, etc.) that only also occur in the Albany Dune Thicket. The Algoa Dune Thicket mosaic units also contain many highly localised endemics, several of which are critically endangered or already extinct e.g. *Aspalathus cliffortiifolia*, *Lampranthus algoensis*, *Pentaschistis longipes*, *Selago polycephala*, *Selago zeyheri*, etc., due to urban development and invasion by alien vegetation in this region.

The baseline target<sup>6</sup> for Algoa Dune Thicket conservation is 17%. The final target<sup>7</sup> is 223.1 ha and the final trimmed target is 44.3% according to the NMBM Final Conservation Assessment (2010). The vegetation unit is listed as vulnerable.

#### **Colchester Strandveld**

Colchester Strandveld occurs when Algoa Dune Thicket forms a mosaic with Strandveld vegetation. Colchester Strandveld vegetation is described as poorly developed Thicket clumps in matrix vegetation consisting of graminoids e.g. *Cynodon dactylon*, and a few shrubs i.e. *Azima tetraacantha*, *Chrysanthemoides monilifera* (*Osteospermum moniliferum*) *Lycium cinereum*, *Lycium ferocissimum*, *Nylandtia spinose* (*Muraltia spinosa*), *Rhus crenata* (*Searsia crenata*), *Sideroxylon inerme* subsp. *inerme* and *Zygophyllum morgsana* (Vlok and Euston-Brown, 2002). It is found on aeolianite / calcareous sandstone / sand, and is assigned a Threat status: Vulnerable (SRK Consulting, 2010; NMBM Bioregional Plan, 2015).

<sup>6</sup> The baseline target for biodiversity pattern is the minimum percentage of the historical distribution of a vegetation type that must be conserved in order to facilitate its long-term persistence.

<sup>7</sup> The final target for biodiversity pattern is the minimum percentage and hectareage of the (current) remaining distribution of a vegetation type that must be conserved in order to facilitate its long-term persistence, which is calculated using the baseline target. The final target is trimmed to 100% where it is greater than 100% of the remaining distribution of a vegetation type.

The baseline target for Colchester Strandveld conservation is 17%. The final target is 571.2 ha and the final trimmed target is 39.1% according to the NMBM Final Conservation Assessment (2010).

### Coega Open Space Management Plan

The OSMP sets out the uses of the open space areas within the Coega SEZ. The OSMP informed the preparation of the Management Guidelines for the various open space uses identified on the plan, to identify the actions required to implement the Management Guidelines. Both the NMBM's SCA and Draft Bioregional Plan (Dec 2010) incorporated mapping from the Coega OSMP (PH3\_UD\_MPLAN\_OPEN SPACE PLAN Rev 9 of 23/01/2004) but, do not incorporate updates to the Coega OSMP system as reflected in the Environmental and Planning legislative framework for the Coega SEZ. The Zone 10 North power plant lies approximately 300 m northwest of the Damara Tern breeding area (OSMP) (see Figure 3-7).

## 3.6.2 Fauna

There is a general lack of pristine terrestrial habitats in the Coega region. This means that some components of the terrestrial fauna have been severely impacted by previous human activity, particularly the loss of vegetation, invasion of alien vegetation, local extinction of large mammals, and varied industrial developments.

### Birds

Two Important Bird Areas (IBAs) lie offshore of the proposed development. The Bird island cluster lies approximately 50 km offshore while the St Croix island cluster lies approximately 5 km offshore. The St Croix island cluster includes the islands of St Croix, and Jahleel. St. Croix Island is home to a large breeding colony of African penguins. Bird Island supports the largest breeding colony of Cape gannets in the world (over 160 000 birds) as well as other birds such as African penguins and rare roseate terns.

Fourteen seabird, several shorebird and 33 terrestrial bird species have been recorded on the Algoa Bay Islands (St Croix Island cluster and bird Island cluster) and eight seabird species currently breed there. Globally threatened species are African Penguin (11 304 breeding pairs; Crawford et al. 2012), Cape Cormorant (284 breeding pairs; Crawford et al. 2012), Cape Gannet (83 000 breeding pairs; Crawford et al. 2012) and African Black Oystercatcher (55 breeding pairs; SANParks census). Regionally threatened species are Caspian Tern *Sterna caspia* and Roseate Tern (90–100 breeding pairs; Crawford et al. 2012). The species reaching the 1% or more congregatory threshold are Kelp Gull *Larus dominicanus* and Antarctic Tern, while Swift Tern *Thalasseus bergii* (130 breeding pairs; Crawford et al. 2012) and Ruddy Turnstone *Arenaria interpres* are thought to reach the 0.5% or more congregatory threshold.

Due to its varied habitats, the Coega terrestrial region has diverse avifauna and over 150 species are resident or common visitors to the region (CES, 1997). Most diversity occurs in the thicket clumps. A number of terrestrial birds are of conservation concern. Threatened occasional visitors to the region include the blue crane (*Anthropoides paradiseus*), Stanley's bustard (*Neotis denhami*), the Martial eagle (*Polemaetus bellicosus*) and the African marsh harrier (*Circus ranivorus*). All are considered Vulnerable in South Africa (Barnes, 2000). According to the DEFF online screening tool report, the Black Harrier, *Circus maurus* is also recorded for the area.

As part of the CDC / SEZ environmental monitoring plan several sensitive, as well as Red Data listed, bird species have been observed within the coastal region close to the study area. Species with conservation concern observed included the Damara Tern (*Sterna balaenarum*) and the African

---

Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 16:45:58

It would be a given that if the Zone 10 powerplants are to be located on the sites as indicated that this Damara Tern Breeding Site will cease to exist.



Oystercatcher (*Haematopus moquini*). The Red Data book (Barnes, 2000) has these species listed as Endangered and Near Threatened respectively. BirdLife International has reevaluated these species' Red Data status, using the latest set of IUCN criteria to rate their threat categories. The Damara Tern has been rated as Near Threatened, a lower risk category than in 2000, while the African Oystercatcher retains its rating as Near Threatened (Birdlife International, 2012). Other species such as the Spotted Thick-knee (*Burhinus capensis*) and Kelp Gull (*Larus dominicanus*) both rated as Least Concern (Birdlife International, 2012) utilise the coastal area, with nesting sites within the Cerebos and Port areas. This observation by the CDC Environmental Control Officer (ECO) was noted in the FSR of the Kalagadi Manganese smelter plant (CES, 2008).

Other terrestrial species of conservation concern in a regional context include the secretary bird (*Sagittarius serpentaris*) and the Knysna woodpecker (*Campethera notata*). Both are considered Near Threatened in South Africa (Barnes, 2000). No breeding populations of these terrestrial species are known in the Coega region, and with the exception of Stanley's bustard all are uncommon visitors.

### **Reptiles**

The Eastern Cape is home to 133 reptile species including 21 snakes, 27 lizards and eight chelonians (tortoises and turtles). More than half of the Eastern Cape's endemic reptile species occur in the Algoa Bay area, giving the region a high conservation value (Branch, 1988). The majority of these are found in Mesic Succulent Thicket and riverine habitats. The list of reptiles of special concern is very significant since it includes five endemic species (two of which are endangered), eight CITES-listed species banned from International Trade in Endangered Species, one rare species and four species at the periphery of their range. More than a third of the species are described as relatively tolerant of disturbed environments, provided migration corridors of suitable habitat are maintained to link pristine habitats.

Reptile diversity in the Coega PPP region is high, with 46 species known or likely to occur (Branch, 1988a; Branch 1998). This includes 24 snakes, 18 lizards, and 4 chelonians (CES 2006). They represent almost a third of all reptiles recorded from the Eastern Cape.

St Croix Island holds populations of the Algoa Bay endemic Tasman's girdled lizard *Cordylus tasmani* and the spotted thick-toed gecko *Pachydactylus maculatus*.

### **Amphibians**

Amphibians are well represented in sub-Saharan Africa, from which approximately 600 species have been recorded. A relatively rich amphibian fauna occurs in the Eastern Cape, where a total of 32 species and sub-species occur. This represents almost a third of the species known from South Africa. Knowledge of amphibian species diversity in the Coega region is limited and based on collections housed in national and provincial museums. It is estimated that as many as 17 species may occur. However, none of these species are endemic or of conservation concern.

### **Mammals**

Large game makes up less than 15% of the mammal species in South Africa and a much smaller percentage in numbers and biomass. In developed and farming areas, such as the CDC, this percentage is greatly reduced, with the vast majority of mammals present being small or medium sized. Of the 62 mammal species known or expected to occur in the Coega area, none are now considered endemic to the coastal region. The conservation status of South African mammals has recently been re-assessed. The conservation status of some has been downgraded, with the African

wild cat, Aardvark, Honey badger and Duthie's golden mole no longer considered threatened. The . The White-tailed rat (*Mystromys albicaudatus*) has not been recorded from the Coega region, whilst Duthie's golden mole is known to be present in the zone 10 coastal area, as is the Hairy-footed gerbil (*Gerbillurus paebe*) which is also unthreatened. The conservation status of two species remains indeterminate (Data Deficient), and the only two terrestrial mammals of conservation concern in the region are the Blue duiker (Vulnerable) and Honey Badger (Near Threatened) (Friedmann & Daly, 2004).

In South Africa, there are currently three national plague surveillance sites, one of these being Coega. The last reported outbreak of plague occurred in Coega, Eastern Cape Province, in 1982, with 13 cases and 1 death. Measures to monitor and manage rodent populations in the port area, are therefore in place.

### **Terrestrial Invertebrates**

The distribution of the terrestrial invertebrates found along the coast depends to a large degree on the extent and composition of the natural vegetation. One grasshopper species (*Acrotylos hirtus*) is endemic to the dunefields. Of nearly 650 butterfly species recorded within the borders of South Africa, 102 are considered of conservation concern and are listed in the South African Red Data Book for Butterflies. Two have become extinct, whilst three rare butterflies are known from a number of scattered localities in the Coega region.

The small blue lycaenid butterfly *Lepidochrysops bacchus* is known from four localities in the Eastern Cape. One of these is reported to occur in the "general area" of the Coega SEZ, but not within the port area. Another rare small copper lycaenid, *Poecilimitis pyrois*, has a similar distribution to *Lepidochrysops bacchus*, extending from the southwestern Cape to Little Namaqualand. An isolated eastern race, *P.p. hersaleki*, was described from Witteklip Mountain (Lady's Slipper) to the west of Port Elizabeth. It has also been recorded from St Albans and from the Bavianskloof Mountains. There is currently no evidence that this rare butterfly occurs in the Coega area, or that a suitable habitat for the eastern race exists in the port area (CES, 1997).

According to the DEFF online screening tool report, two additional species of conservation concern, *Chrysoritis thysbe whitei* and *Aloeides clarki* (the Coega Copper) are recorded for the area, and during recent search and rescue operations in Zone 10 the threatened Eastern Cape Golden Baboon Spider (*Harpactira tigrine*) was found.

## **3.7 Protected Areas**

### **3.7.1 Addo Elephant National Park and Marine Protected Area**

SANParks initiated a planning process in 2000 to investigate the expansion of the Addo Elephant National Park (AENP), situated in the Eastern Cape, South Africa. The Bird and St. Croix island groups and a small Marine Protected Area around Bird Island, which protects a large variety of marine life, were proclaimed part of the Park in 2005. Bird Island is home the world's largest breeding colony of Cape gannets St Croix Island is home to the largest breeding colony of African penguins.

The Addo Elephant National Park Marine Protected Area has recently been gazetted and is shown in Figure 3-7. The purpose for declaring this Marine Protected Area is:

- To contribute to a national and global representative system of marine protected areas, by providing protection for species, habitats and ecosystem processes in a biodiversity hotspot, to form a contiguous conservation area between marine, estuarine and terrestrial habitats;
- To facilitate fisheries management by protecting spawning stock, allowing stock recovery, enhancing stock abundance in adjacent areas, in particular linefish and abalone stocks; allowing the development of sustainable aquaculture in a confined area; and
- For the protection of fauna and flora or a particular species of fauna or flora and the physical features on which they depend, including the African penguin and cape gannet.



The proposed protected area consists of several zones with different land use recommendations including restrictions on fishing activities, vessels and recreation activities.

### 3.8 Sense of Place

As per the Coega Development Zone Architectural Guidelines it is noted that the various operations to be established in the Core Development Area will result in tall or large structure that have a visual impact. The visual impact will be difficult to mitigate and the residual impact is regarded as high, as it will affect a wide area, will be permanent and will definitely occur. The current mitigation plan as per the CDC is that wherever possible, land-use planning has aimed to reduce the residual impact in such structures. Heavy industry has generally been located in the centre of the SEZ and screened from the N2. While it is some distance from the N2, any screening effects especially for any viewers along the coast, or from offshore (e.g. tourists visiting the MPA), would be limited for the Zone 10 north power plant site. Smaller scale industries are located in the western side of the SEZ.

### 3.9 Regional Water Supply

This section is an extract from the reconciliation strategy for the Algoa Water Supply System (AWSS), as reported on the DWS web site (DWS, n.d.).

Potable water is supplied to the Nelson Mandela Bay municipal area, including the Coega SEZ, from the Algoa Water Supply System. This supply system extends from the Kouga River system in the west to the Sundays River system in the east. The Algoa Water Supply System provides water to the Gamtoos Irrigation Board, the NMBM, the Coega SEZ, and several smaller towns within the Kouga Municipality area. The purpose of the Reconciliation Strategy is to determine the current water balance situation and to develop various possible future water balance scenarios up to 2040. The strategy was completed in 2010 and was subsequently updated in April 2011 due to emergency interventions planned as a result of the drought at the time, as well as revised Coega SEZ water requirements at the time. No further updates are available.

The total usage of water from the Algoa Water Supply System in 2011/12 was 149.7 million m<sup>3</sup>/a. This comprises urban use by NMBM and various small towns, Coega Industrial Development Zone potable use, agricultural water use, losses from the Kouga/Loerie canal, and ecological water requirements. Current estimated water consumption for NMBM is approximately 300 MI/day.

The combined yield of the Algoa Water Supply Scheme sources, at an assurance of supply of 98% (1:50 year assurance of supply) is 164.4 million m<sup>3</sup>/a. Figure 3-6 shows the availability of surplus water at the time of the study and that any significant increase in use would put the system at risk. If anything this situation has worsened, as the area has experienced severe drought conditions for the last few years, with dam levels dwindling rapidly.

The higher the growth in water requirements, the higher the risk of insufficient water supply would be, especially if large users in the Coega SEZ were to be established prior to supply interventions coming

---

Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 16:49:57  
This serves as added motivation not to locate the powerplants at the proposed locations in Zone 10.

into effect. The interventions which were identified to increase the available supply to the supply area of the Algoa Water Supply Scheme include:

- Nooitgedagt Low-Level Scheme, which is currently in its second phase of implementation, would add an additional 160 ML/day to the Algoa Water Supply Scheme;
- Groundwater Development – most notably the Coega Kop wellfield (adding 20 ML), construction of which recently started; and
- Re-use of water treated to industrial standards – Fish Water Flats WWTW.

While progress has been made with these interventions as listed above, water supply to the NMBM area is currently constrained and is likely to remain so for the foreseeable future, partly due to the lead time involved in construction of projects and supporting infrastructure to treat and supply the required volumes of water into the NMBM's bulk water supply network.

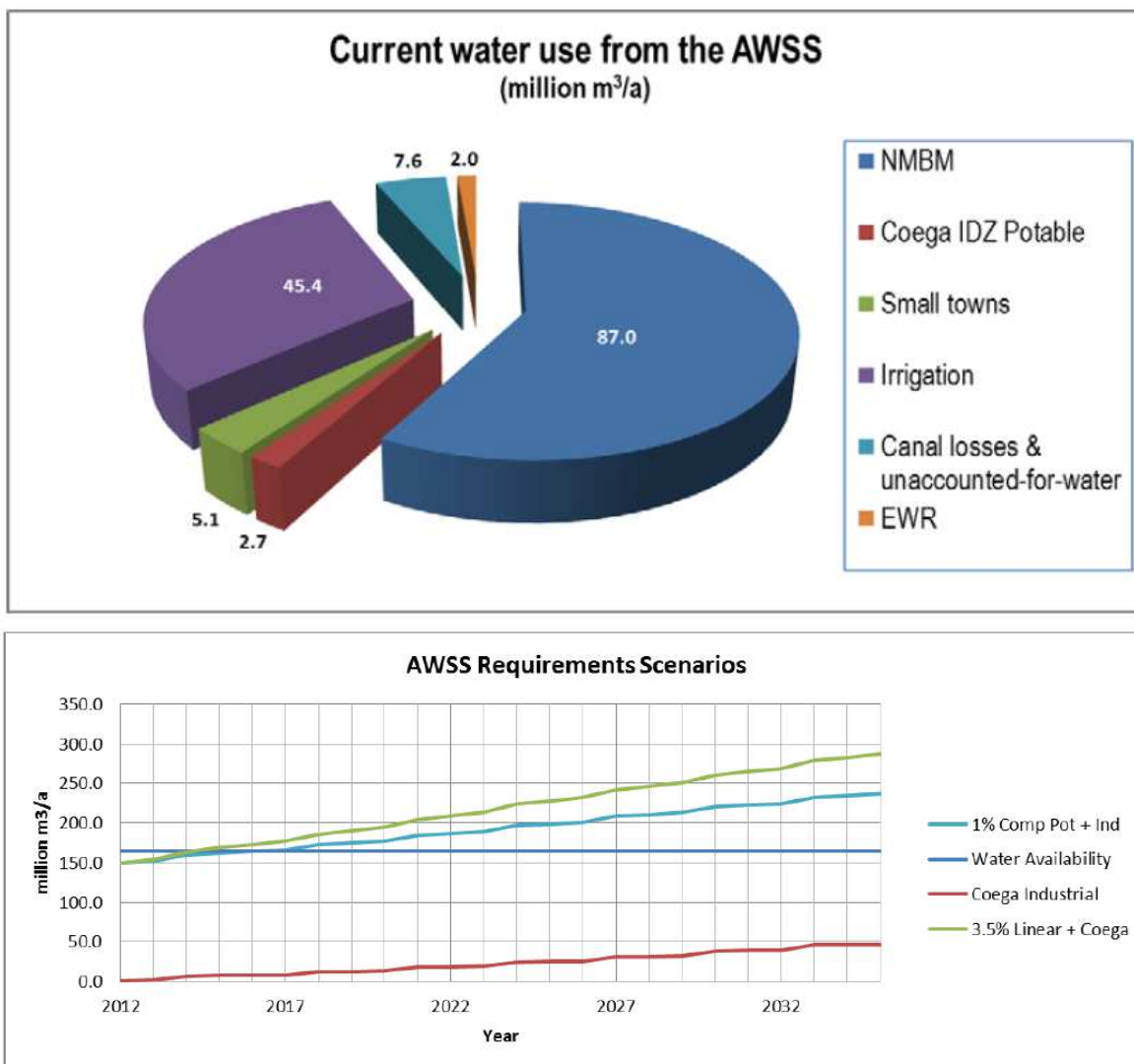


Figure 3-6: Water use (2011) and predicted growth in water demand in the Algoa Water Supply Scheme (DWS, n.d.)

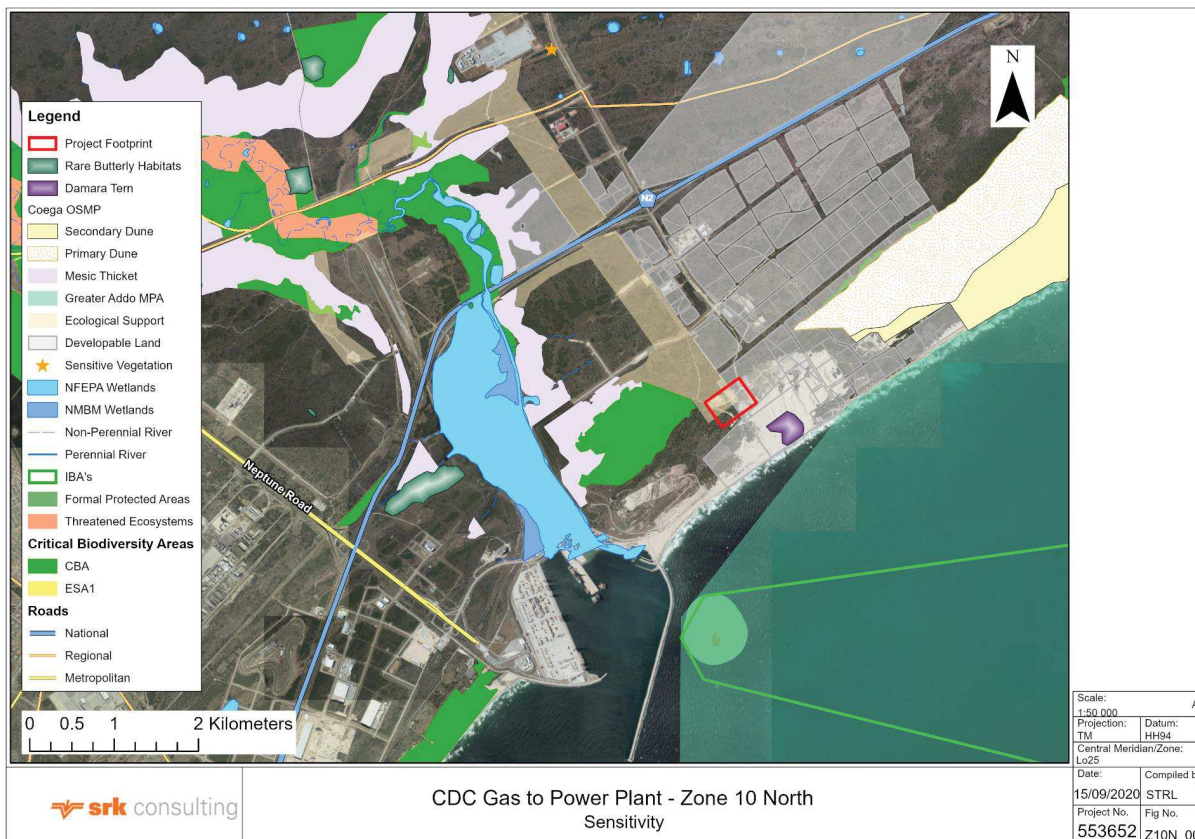


Figure 3-7: Terrestrial and marine environmental sensitivities in the Zone 10 North site area

### 3.10 Ambient Noise

The existing ambient noise within the project area was measured at various points by Safetech, the appointed noise specialist, during June 2020. The ambient noise levels were found to vary between 40-50dB(A) during the day and 30-35dB(A) at night, with high variability (especially at the coastal sites) due to the proximity to the sea. The noise sources that have been identified for the Zone 10 North power plant site are as follows:

- Marine traffic (tugs and container ships);
- Quayside operations (mostly vehicle movement but also engineering activities relating to oil rig maintenance);
- Vehicle noise within the SEZ and along the N2;
- Salt processing;
- Rail operations;
- Sea noise; and
- Wind noise.

There are currently no noise sources that are excessively dominant within the SEZ. The sea, wind and vehicle noise are the main contributors to the ambient noise.

### 3.11 Ambient Air Quality

Coega has an air quality monitoring network, consisting of three monitoring stations; at the salt works, Amsterdamplein and in Motherwell. These stations monitor both meteorological and ambient air quality parameters. Data at the monitoring stations is reported 10-minute averages. The monitoring stations at Amsterdamplein and the salt works measure total suspended particulates (TSP), nitrous oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) as well as temperature, relative humidity, wind speed and wind direction. In addition, the station at the salt works measures wind speed in the vertical plane, atmospheric pressure, solar radiation and rainfall. The monitoring station at Motherwell measures NO<sub>x</sub> and SO<sub>2</sub> and particulate matter less than 10 microns (PM<sub>10</sub>) in size, in addition to the standard meteorological variables. The Amsterdamplein station is situated Zone 5 of the Coega SEZ.

The status of ambient air quality in the Coega SEZ is described below using data from the Saltworks monitoring site, and dispersion modelling for existing industries. Monitoring data provided accurate measurement at a single point which may not be representative of the entire area of interest. Dispersion modelling provides estimated concentrations over the area.

Ambient monitoring data for 2017 to 2019 at Saltworks is analysed for SO<sub>2</sub>, NO<sub>2</sub>, and PM<sub>10</sub>. Monitored SO<sub>2</sub> data show ambient levels for the monitoring period, with no exceedances of the National Ambient Air Quality Standards (NAAQS) (see Figure 3-8 and Figure 3-9. Monitored NO<sub>2</sub> concentrations are elevated with higher concentrations observed in winter (i.e. June to August) (Figure 3-10). Monitored PM<sub>10</sub> concentrations are elevated year-round with no exceedances of NAAQS (Figure 3-11 below). An estimated background concentration of 10 µg/m<sup>3</sup> is observed, increasing in late winter and early spring. This is ascribed regional biomass burning. An increasing annual trend can also be observed and is suggestive of additional air quality management needs in the area.

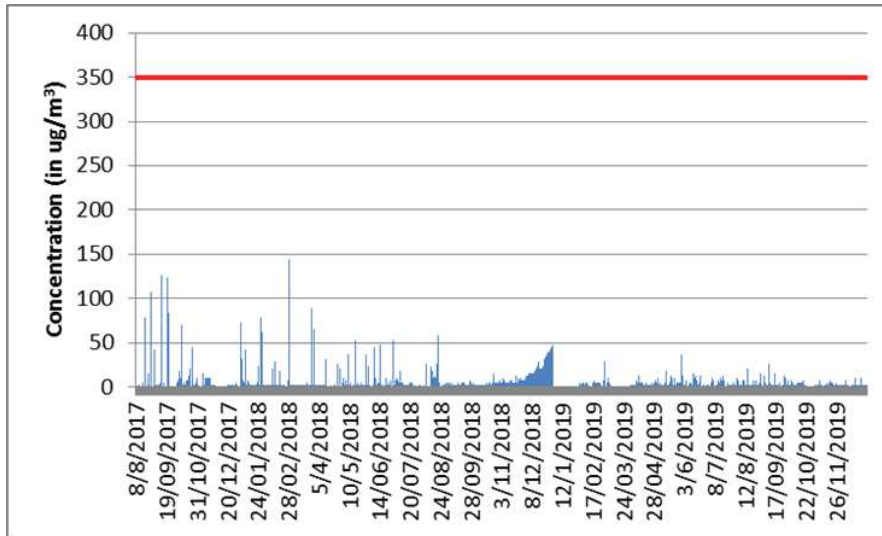


Figure 3-8: 1-hr average SO<sub>2</sub> monitored concentrations at Saltworks monitoring station

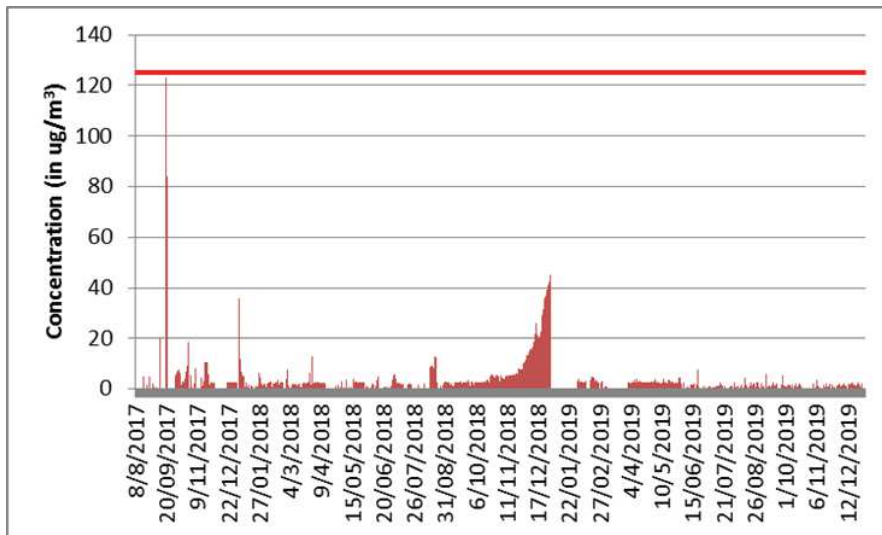


Figure 3-9: 24-hour average SO<sub>2</sub> monitored concentrations at Saltworks monitoring station

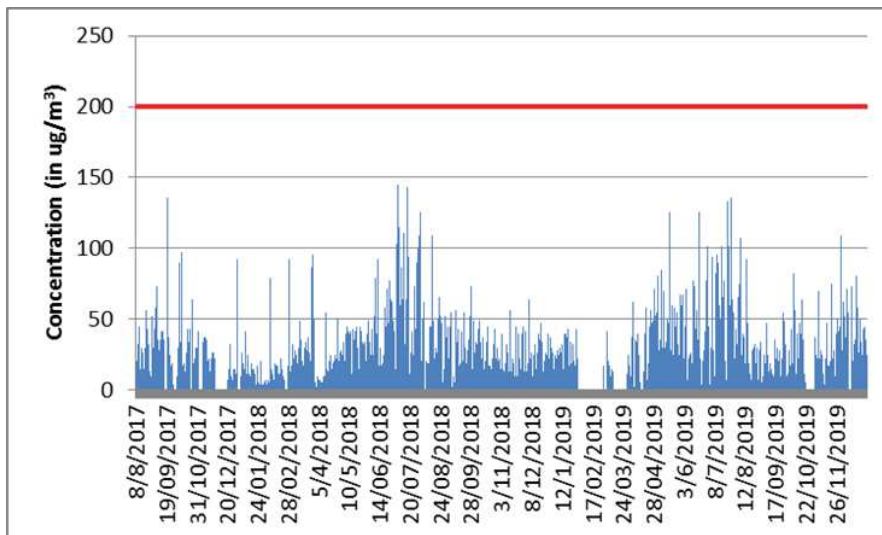


Figure 3-10: 1-hr average NO<sub>2</sub> monitored concentrations at Saltworks monitoring station



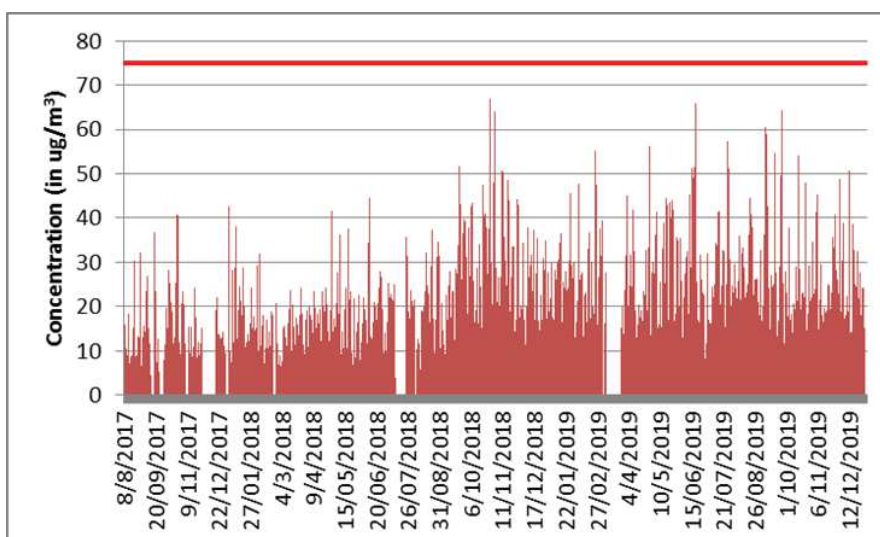


Figure 3-11: 24-hr average PM<sub>10</sub> monitored concentrations at Saltworks monitoring station

Table 3-1: Annual average monitored concentrations of SO<sub>2</sub>, NO<sub>2</sub> and PM<sub>10</sub> at Saltworks monitoring station

| Year  | SO <sub>2</sub> (NAAQS 50 µg/m <sup>3</sup> ) | NO <sub>2</sub> (NAAQS 40 µg/m <sup>3</sup> ) | PM <sub>10</sub> (NAAQS 40 µg/m <sup>3</sup> ) |
|-------|---|---|--|
| 2017* | 3.3   | 8.5   | 14.8   |
| 2018  | 4.4   | 9.1   | 20.9   |
| 2019  | 1.6   | 10.7  | 26.6   |

\* Limited dataset for August – December

### 3.12 Heritage Resources

#### 3.12.1 Archaeological Resources

Dr Johan Binneman, on behalf of CDC, conducted a Phase 1 Archaeological Impact Assessment of the greater Coega SEZ in 2010. All zones (approximately 9 200 hectares) were investigated apart from Zone 8 as this is owned by the National Port Authority. Sensitive heritage sites identified during this study are shown on Figure 3-12.

Zone 10 is situated along the coast and different areas have been investigated several times by Dr Binneman. Most of the coastal foreland is covered by impenetrable alien Acacia, making it difficult to find archaeological sites/material. A few sites were found in the shifting dunes however further sites may be covered by sand and vegetation. The area is composed of calcrete bedrock covered by a thin layer of dark soil, which do not allow for any deep archaeological deposits. The hinterland behind the coastal dunes is also covered with dense dune and alien vegetation. Occasional weathered/sand polished Middle Stone Age and Later Stone Age stone tools were found along the immediate beach area. These stone tools are of low cultural significance.

According to the Phase 1 Archaeological Study conducted for the Coega SEZ (Binneman, May 2010), the most important archaeological sites were found along the coast (on National Ports Authority property) and included mainly shell middens which date from the past ±8,000 to 6,000 years. Similar sites in the shifting sand dunes and coast east of the harbour area were much smaller in size, depth of deposit, quality and quantity of food waste and cultural material. These archaeological features are usually found between two to five kilometres inland from the coast. Earlier, Middle and Later Stone

Age stone tools were found throughout the Coega SEZ where pebble/cobble gravel were exposed. They are of low significance, but concentrations of stone tools may be buried, especially areas around pans.

### 3.12.2 Palaeontological resources

Dr John Almond of Natura Viva was commissioned to conduct a palaeontological heritage assessment as part of a comprehensive heritage assessment of the Coega SEZ in 2010. This report is the source of the background information provided below.

The Coega SEZ, situated inland of Algoa Bay about 20km to the northeast of Port Elizabeth (Eastern Cape Province) is underlain by a wide spectrum of sedimentary rocks spanning an age range of some 470 million years. Most of the rock units concerned contain fossil heritage of some sort but in most cases this is very limited, with the notable exception of three marine successions – the Sundays River Formation of Early Cretaceous age (c. 136 Ma = million years old), the Alexandria Formation of Miocene / Pliocene age (c. 7-5 Ma), and the Salnova Formation of Mid Pleistocene to Holocene age (< 1 Ma).

Good examples of vertically sectioned dunes showing large scale aeolian cross-bedding are seen in the active sand quarries near the Sea Arc factory site and at Sonop (Coega Zone 10). Apart from the usual concentrations of wind-deflated dune snails (notably superabundant *Tropidophora* and *Natalina*), a range of subfossil remains can be seen, especially in deflation hollows. Among these are millipede exoskeletons, small mammal and reptile bones, fragments of charcoal, buried mats of plant roots and incipient rhizcretions (possibly termite mediated). Shell middens of oysters and other edible marine shells situated close to the shoreline are attributable to Late Stone Age (and later) humans.

A small number of sites of special palaeontological and / or geological heritage significance were identified by Dr Almond within the Coega SEZ and are indicated on Figure 3-12. Examples include:

- Main Coega brick quarry – eastern face preserving fossil-rich sandstones and contact with overlying Alexandria Formation;
- Main Coega limestone quarry – eastern face and large disturbed blocks of basal Alexandria shelly conglomerate at the western edge of the quarry;
- Upper, eastern face of Tossies Quarry South – well-preserved contact between Alexandria and Sundays River Formations;
- Erosion gullies into Sundays River Formation just north of Tossies Quarry North as well as on Bontrug 301 – highly fossiliferous sandstones, rare fossil taxa;
- Railway cutting north of N2, SW of marshalling yard as well as the nearby stormwater channel – contact between the Alexandria and Kirkwood Formations, trace fossils near contact; and
- Stratotype section of Salnova Formation on coast at Hougham Park, also showing unconformable contact with Sundays River Formation.

According to (Almond, April 2010), most of the rock units in the Coega SEZ contain fossil heritage of some sort however in most instances this is very limited with the exception of the Sundays River Formation, Alexandria Formation and the Salnova Formation. The proposed site in zone 10 does not fall on any of these sensitive sites.

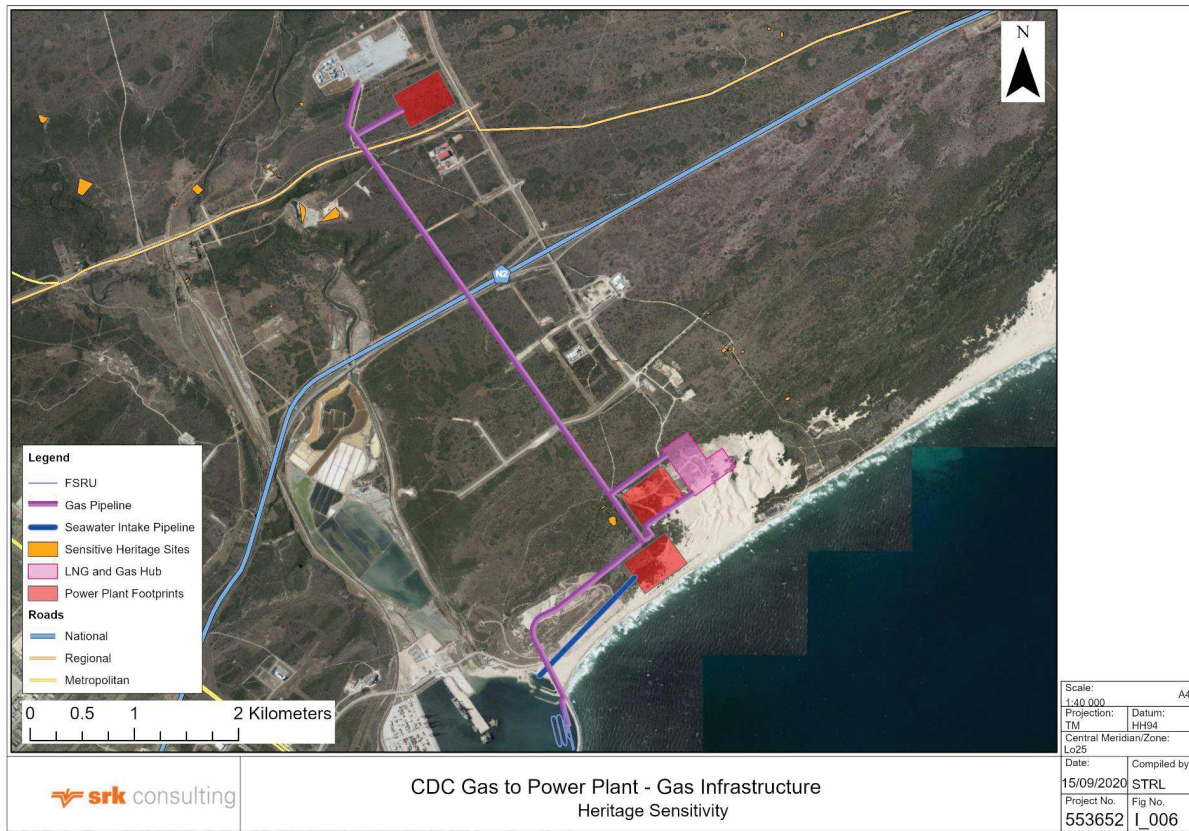


Figure 3-12: Sensitive heritage sites in the Coega SEZ relative to gas to power project infrastructure

## 4 Stakeholder Engagement

The Public Participation Process (PPP) forms a key component of the EIA process and has already resulted in the identification of a number of issues and concerns. The objectives of the PPP are outlined below, followed by a summary of the approach taken, and the issues raised.

### 4.1 Objectives and Approach

The overall aim of the PPP is to ensure that all Interested and Affected Parties (IAP's) have adequate opportunities to provide input into the process. More specifically, the objectives of the PPP are as follows:

- Identify IAP's and notify them of the proposed project and of the EIA process;
- Provide an opportunity for IAP's to raise issues and concerns; and
- Provide an opportunity for IAP's to review all reports generated in the EIA process.

### 4.2 Public Participation Activities

The activities that have been conducted to date as part of this Scoping Study are as follows:

- Advertisements of the development as an e-notice on the CDC notice board on 8 October 2020 (see Appendix C);
- Distribution of the Background Information Document (BID) from 22 January 2016 to identified Interested and Affected Parties (IAPs), stakeholders and neighbouring residents. A copy of the BID is attached in Appendix E, and the list of notified IAPs and commenting institutions is given in Table 4-1: Registered Interested and Affected Parties and Stakeholders below;
- Distribution of the BID to the relevant Ward Councillors caretaking for Ward 53 on 22 January 2016 on 22 January 2016;
- Recording of all issues raised in response to the BID (See summary of issues raised and responses to these in, and original copies of communication received in Appendix H);
- Preparation of a Draft Scoping Report (DSR) (this Report), including comments from IAPs and release for public comment;
- Submission of an application for environmental authorisation to DEFF, signalling the start of the regulated EIA process (see Appendix B);
- On-site notices put up at each site, notifying the public of the project on 2<sup>nd</sup> June 2020 (see Appendix C); and
- Presentation of the project to the Coega ELC on 20 August 2020 (see Appendix F), and inclusion of queries raised and responses to them in the DSR; and
- Uploading the DSR (this report) for download via the public documents link on SRK consulting's website for review by IAPs and distribution of the Executive Summary to all IAPs registered for this project.

The following activities are still to be conducted in the Scoping Study stage of the EIA:

- Provision of a 30 day comment period on the pre-application DSR (this report);
- Collation of public and IAP comments on the DSR, and incorporation of these into the final Scoping Report; and

- Newspaper advertisement, notifying the public of the project, as per the legal requirements.

#### 4.2.1 Availability of the Draft Scoping Report

The Executive Summary of this DSR will be distributed to registered IAPs. The report can also be accessed as an electronic copy on SRK's website, (<https://www.srk.com/en/public-documents>). A hard copy of the report will be made available for review at the ward 53 Ward councillor's office in Motherwell and SRK's Port Elizabeth office.

Comments on this report must be forwarded to:

SRK Consulting  
PO Box 21842, Port Elizabeth, 6000  
Email: [Inaidoo@srk.co.za](mailto:Inaidoo@srk.co.za) Fax: (041) 509 4850  
Attention: Lyndle Naidoo

Comments on this DSR must reach SRK by 12h00 on **9 November 2020**. Any issues raised will be integrated into the second version of the Draft Scoping Report, which will also be distributed for public comment. Comments received to date are included in Table 4-2 and Table 4-3 of this report.

#### 4.2.2 Registered IAPs and Issues Raised

IAP's have raised a number of issues and concerns regarding the proposed gas to power project. Copies of written correspondence received are provided in Appendix H. A list of registered IAP's is given in Table 4-1: Registered Interested and Affected Parties and Stakeholders, and the issues raised by IAP's to date are summarised in Table 4-2 below.

**Table 4-1: Registered Interested and Affected Parties and Stakeholders**

| Mr Dayalan Govender         | Department of Economic Development, Environmental Affairs & Tourism | Regional Manager                                      | ✓ | ✓ |
|-----------------------------|---|---|---|---|
| Mr Andries Struwig          | Department of Economic Development, Environmental Affairs & Tourism | Assistant Director IEM                                | ✓ | ✓ |
| Mr Sibulele Nondoda         | Department of Economic Development, Environmental Affairs & Tourism | Coastal Zone Management (Cacadu Region)               | ✓ | ✓ |
| Mr Lyndon Mardon            | Department of Economic Development, Environmental Affairs & Tourism | Manager: Air Quality                                  | ✓ | ✓ |
| Dr Monde Mayekiso           | Department of Environmental Affairs: Ocean And Coast                | Coastal Pollution Management                          | ✓ | ✓ |
| Mrs Nitasha Bajjnath-Pillay | Department of Environmental Affairs: Ocean And Coast                | Coastal Pollution Management                          | ✓ | ✓ |
| Mr Reuben Molale            | Department of Environmental Affairs: Ocean And Coast                | Coastal Pollution Management                          | ✓ | ✓ |
| Mr Mulalo Tshikotshi        | Department of Environmental Affairs: Ocean And Coast                | Pollution Manager                                     | ✓ | ✓ |
| Mrs Masina Lotsoane         | Department of Environment Forestry and Fisheries                    | Environmental Impact Management                       | ✓ | ✓ |
| Mr Wayne Hector             | Department of Environment Forestry and Fisheries                    | Deputy Director: Strategic Infrastructure Development | ✓ | ✓ |
| Dr Thuli Mdluli             | Department of Environment Forestry and Fisheries                    | Air Quality Manager                                   | ✓ | ✓ |

|                            |   |  |   |   |
|----------------------------|---|--|---|---|
|                            |   |  |   |   |
| Ms Lerato Moha             | Department of Environment Forestry and Fisheries  | Air Quality                                    | ✓ | ✓ |
| Mr Vumile Senene           | Department of Environment Forestry and Fisheries  | Air Quality                                    | ✓ | ✓ |
| Adv Avhantodi Munyai       | Department of Environment Forestry and Fisheries  | Air Quality                                    | ✓ | ✓ |
| Mr Olebogeng Matshediso    | Department of Environment Forestry and Fisheries  | Air Quality                                    | ✓ | ✓ |
| Mr Stanley Tshitwamulomoni | Department of Environment Forestry and Fisheries  | Biodiversity                                   | ✓ | ✓ |
| Mr Sibonele Mbanjwa        | Department of Environment Forestry and Fisheries  | Climate Change adaptation                      | ✓ | ✓ |
| Mr Mapula Tshangela        | Department of Environment Forestry and Fisheries  | Climate Change mitigation                      | ✓ | ✓ |
| Mr Mactavish Makwarela     | Department of Environment Forestry and Fisheries  | Climate Change mitigation                      | ✓ | ✓ |
| Mr Jongikhaya Witi         | Department of Environment Forestry and Fisheries  | Climate Change monitoring and evaluation       | ✓ | ✓ |
| Ms Phumeza Skepe           | Department of Environment Forestry and Fisheries  | Environmental Impact Management                | ✓ | ✓ |
| Ms Marisa Bloem            | Department of Water & Sanitation                  | Water Use Licences                             | ✓ | ✓ |
| Ms Thandi Mmachaka         | Department of Water & Sanitation                  | Water Quality Management                       | ✓ | ✓ |
| Ms Ncumisa Mntoza          | Department of Water & Sanitation                  | Water Quality Management                       | ✓ | ✓ |
| Mr Thabo Nokoyo            | Department of Agriculture, Forestry & Fisheries   | Forestry Officer                               | ✓ | ✓ |
| Mr Sello Mokhanya          | Eastern Cape Provincial Heritage Resources Agency | Heritage Officer                               | ✓ | ✓ |
| Mr Monde Manga             | Department of Public Works                        | District Roads Engineer                        | ✓ | ✓ |
| Mr McDonald Mdhuli         | Department of Mineral Resources                   | Environmental Management                       | ✓ | ✓ |
| Ms Deidre Thompson         | Department of Mineral Resources                   | Deputy Director: Mine Environmental Management | ✓ | ✓ |
| Mr Azwihangwisi Mulaudzi   | Department of Mineral Resources                   | Manager  | ✓ | ✓ |
| Ms Brenda Ngebulana        | Department of Mineral Resources                   | Acting Regional Manager                        | ✓ | ✓ |
| Mr Vusi Kubheka            | Department of Mineral Resources                   | ASD: Mineral Regulation                        | ✓ | ✓ |
| Mr Anton Rautenbach        | Telkom  | Wayleave Management EC                         | ✓ | ✓ |
| Ms Andrea Shirley          | CDC   | Environmental Management                       | ✓ | ✓ |
| Mr Graham Taylor           | CDC   | Spatial Development                            | ✓ | ✓ |

|                       |                                  |                           |   |   |
|-----------------------|----------------------------------|---------------------------|---|---|
|                       |                                  |                           |   |   |
| Mr Mandilakhe Mdoana  | TNPA                             | Environmental Management  | ✓ | ✓ |
| Mr Thulani Debeke     | TNPA                             | Harbour Master            | ✓ | ✓ |
| Mr Elliot Motsoahole  | TNPA                             | Environmental Management  | ✓ | ✓ |
| Ms Renee de Klerk     | TNPA                             | Environmental Officer     | ✓ | ✓ |
| Mr Mpatisi Pansi      | TNPA                             | SHE Manager               | ✓ | ✓ |
| Mr Chuma Mtati        | Eskom                            | Distribution              | ✓ | ✓ |
| Mr Raymond Couch      | Telkom                           | Operations Manager        | ✓ | ✓ |
| Ms Adele Bezuidenhout | Department of Labour             | Operations                | ✓ | ✓ |
| Ms Chumisa Njingana   | SANRAL                           | Statutory Control Officer | ✓ | ✓ |
| Ms Annedene Bantom    | Transnet                         | Operations Manager        | ✓ | ✓ |
| Ms Bongi Stofile      | SAMSA                            | Operations Manager        | ✓ | ✓ |
| Ms Nivashni Govender  | AfriSam (South Africa) (Pty) Ltd | Coega SEZ tenant          | ✓ | ✓ |
|                       | Cerebos                          | Coega SEZ tenant          | ✓ |   |
|                       | Dynamic Commodities              | Coega SEZ tenant          | ✓ |   |
|                       | Acoustex                         | Coega SEZ tenant          | ✓ |   |
|                       | Cape Concentrate                 | Coega SEZ tenant          | ✓ | X |
|                       | UTI                              | Coega SEZ tenant          | ✓ | X |
|                       | Digistics                        | Coega SEZ tenant          | ✓ | X |
|                       | Bosun Bricks                     | Coega SEZ tenant          | ✓ | X |
| Ms Chantell Spence    | Bosun Bricks                     | Coega SEZ tenant          | X | ✓ |
|                       | PE Cold Storage                  | Coega SEZ tenant          | ✓ | X |
|                       | Discovery Health                 | Coega SEZ tenant          | ✓ | X |
|                       | NTI                              | Coega SEZ tenant          | ✓ | X |
|                       | Enviroserv Waste Management      | Coega SEZ tenant          | ✓ | X |
|                       | Ibis                             | Coega SEZ tenant          | ✓ | X |
|                       | Osho SA Cement                   | Coega SEZ tenant          | ✓ | X |
|                       | GMSA                             | Coega SEZ tenant          | ✓ | X |
| Mr Kobus Bernardo     | Redefine Properties              | Landlord - GM             | ✓ | ✓ |

|                       | Star Bodies                    | Coega SEZ tenant                          | ✓ | X |
|-----------------------|--------------------------------|---|---|---|
|                       | Hichange Inv Pty Ltd           | Coega SEZ tenant                          | ✓ | X |
|                       | Coega Dairy                    | Coega SEZ tenant                          | ✓ | X |
|                       | NTIP                           | Coega SEZ tenant                          | ✓ | X |
|                       | Cape Produce Company           | Coega SEZ tenant                          | ✓ | X |
|                       | Holding 302-308 Pomona Pty Ltd | Coega SEZ tenant                          | ✓ | X |
|                       | Stapelberg Prop Trust          | Coega SEZ tenant                          | ✓ | X |
|                       | Agni Steel                     | Coega SEZ tenant                          | ✓ | X |
|                       | APM Terminals                  | Coega SEZ tenant                          | ✓ | X |
|                       | FAW                            | Coega SEZ tenant                          | ✓ | X |
|                       | Famous Brands                  | Coega SEZ tenant                          | ✓ | X |
|                       | DCD Wind Towers                | Coega SEZ tenant                          | ✓ | X |
|                       | Afrox                          | Coega SEZ tenant                          | ✓ | X |
|                       | Vector Logistics               | Coega SEZ tenant                          | ✓ | X |
|                       | GDF Suez                       | Coega SEZ tenant                          | ✓ | X |
|                       | Dedisa Peaking Power           | Coega SEZ tenant                          | ✓ | X |
|                       | ID Logistics                   | Coega SEZ tenant                          | ✓ | X |
|                       | ALE                            | Coega SEZ tenant                          | ✓ | X |
|                       | WNS                            | Coega SEZ tenant                          | ✓ | X |
|                       | Zacpack / CFR                  | Coega SEZ tenant                          | ✓ | X |
|                       | PPC                            | Coega SEZ tenant                          | ✓ | X |
| Mr Hugo Badenhorst    | PPC                            | Risk Manager                              | X | ✓ |
| Mr Karl Heese         | PPC                            | Risk Manager                              | X | ✓ |
|                       | Abengoa E & C                  | Coega SEZ tenant                          | ✓ | X |
|                       | Air Products SA                | Coega SEZ tenant                          | ✓ | X |
| JP van Wyk            | Air Products SA                | Regional Manager                          | X | ✓ |
| Mr Sherwin Harris     | Engie                          | Coega SEZ tenant                          | X | ✓ |
| Ms Seshni Naidoo      | Engie                          | Coega SEZ tenant                          | X | ✓ |
| Mr Michael Steiner    | Engie                          | Coega SEZ tenant                          | X | ✓ |
| Mr Christophe Crillon | Engie                          | Coega SEZ tenant                          | X | ✓ |
| Mr Tebogo More        | Engie Southern Africa          | Coega SEZ tenant                          | X | ✓ |
| Dr Paul Martin        | Private                        | Independent Environmental Control Officer | ✓ | ✓ |



| Ms Jenny Rump            | Zwartkops Conservancy                     | Environmental Manager         | ✓ | X |
|--------------------------|---|-------------------------------|---|---|
| Mr Morgan Griffiths      | WESSA                                     | Senior Conservation Officer   | ✓ | X |
| Dr Chantell Bezuidenhout | EOH Coastal & Environmental Services      | Principal Consultant          | X | ✓ |
| Dr Mike Cohen            | CEN IEM Unit                              | Principal Consultant          | X | X |
| Dr Philip Whittington    | East London Museum                        | Research Associate            | X | ✓ |
| Mr Gonzalo Ramirez       | Excelerate Energy                         | Interested Party              | X | ✓ |
| Mr Gavin Eales           | Glendore Sand & Stone                     | Interested Party              | X | ✓ |
| Mr Bertus van Niekerk    | Mulilo Thermal Project Development        | Interested Party              | X | ✓ |
| Mr Thomas Jachens        | AfriCoast                                 | Interested Party              | X | ✓ |
| Ms Sherina Shaw          | Leads 2 Business                          | Interested Party              | X | ✓ |
| Cllr Nomazulu Mthi       | Nelson Mandela Bay Municipality           | Ward 53 Councillor            | ✓ | ✓ |
| Mr Khaled El-Jabi        | Nelson Mandela Bay Ratepayers Association | Ratepayers Association        | ✓ | ✓ |
| Mr Johan Potgieter       | Nelson Mandela Bay Municipality           | Disaster Management           | ✓ | ✓ |
| Mrs Joannie Black        | Nelson Mandela Bay Municipality           | Air Pollution & Noise Control | ✓ | ✓ |
| Ms Buyiswa Deliwe        | Nelson Mandela Bay Municipality           | Air Pollution & Noise Control | ✓ | ✓ |
| Mrs Jill Miller          | Nelson Mandela Bay Municipality           | Environmental Manager         | ✓ | ✓ |
| Ms Rosa Blaauw           | Nelson Mandela Bay Municipality           | Environmental Manager         | ✓ | ✓ |
| Mr Peter Neilson         | Nelson Mandela Bay Municipality           | Electricity                   | ✓ | ✓ |
| Mr Barry Martin          | Nelson Mandela Bay Municipality           | Water & Sanitation            | ✓ | ✓ |
| Mr Anderson Mancotywa    | Nelson Mandela Bay Municipality           | Fish Water Flats WWTW         | ✓ | ✓ |
| Mr Kobus Slabbert        | Nelson Mandela Bay Municipality           | Air Pollution & Noise Control | ✓ | ✓ |
| Mr Patric Nodwele        | Nelson Mandela Bay Municipality           | Air Pollution & Noise Control | ✓ | ✓ |
| Mr Templeton Titima      | Nelson Mandela Bay Municipality           | Air Pollution & Noise Control | ✓ | ✓ |

**Table 4-2: Issues Raised by Interested and Affected Parties, as relevant to the Zone 10 North Power Plant, on BID distributed in 2016**

|                          |  |   |
|--------------------------|--|---|
|                          |  |   |
| Mrs C Spence             | Interested in development and environmental outcome as we are tenants of Coega   | Noted   |
| Mr A Southwood (DEDEAT)  | Require one hard copy of future reports for commenting purposes.   | Noted   |
| Mr Kobus Slabbert (NMBM) | Activity 28, listed in GN 984 (Listing Notice 2) of the 2014 NEMA Regulations, will be triggered. An AEL will be required for the proposed plant. The NMBM is the licensing authority for issuing of an Atmospheric Emission Licence.  | An AEL application is to be lodged with the NMBM.   |
| Dr P Martin              | Regular environmental reports / audits / monitoring reports should be submitted to the relevant Regulatory Authorities, CDC, TNPA and the Coega EMC during the life cycle of the project.  | Monitoring & reporting requirements will be specified in the Draft EMPr.  |
| Dr P Martin              | Existing RoDs / EAs and the mitigating conditions in their EIAs need to be scrutinised and any conflicts with what this EIA is suggesting need to be highlighted, preferably in table form with detailed motivation. Relevant EIAs include OTCG, Landside Infrastructure, Port & Port Extensions RoDs, Manganese Project, SEZ RoDs.                            | To be detailed in the revised Draft Scoping Report  |
| Mr T Nokoyo (DAFF)       | Area has relatively few protected tree species. We would like more information regarding the project moving forward.   | Noted. DAFF will be provided with all relevant reports generated during as part of the EIA process.   |
| Dr P Martin              | Does the proposed power station location overlap with the Aquaculture Development Zone and other proposed developments (e.g. marine pipeline servitude, WWTW outlet)?  | Two CCGT units will be located in Zone 10 which is recognised as the aquaculture cluster. The specific alignments of pipelines have not been determined yet and are expected to be aligned with existing servitudes, and with the servitudes for the marine intake and discharge pipelines. |
| Dr P Martin              | EIA specialist studies and reports should include the marine environmental and SANParks Marine Protected Area [redacted] heated water and pollution risk. [redacted]   | Cooling water from the project will be discharged into the marine pipeline [redacted] servitude and will adhere to requirements (temperature etc.) that will be specified for discharge into this pipeline.   |
| Dr P Martin              | Port of Ngqura is an important fish area and fish nursery (Matt Dicken studies).   | A marine ecological study is being undertaken as part of the gas infrastructure EIA.  |
| Dr P Martin              | Marine alien invasive organisms, especially invertebrates, mainly hull foulants are dominant in many areas of the Port and are one of the main impacts of the Port that were not adequately addressed in the original Port EIAs and Environmental Authorisations. Increased shipping for the project will lead to more alien invasion risks in the Port, Algoa | A marine ecological study is being undertaken [redacted] as part of the gas infrastructure EIA. [redacted]  |

---

Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 17:03:31  
This comment does not address the concern or comment. One cannot defer the impacts that will be associated with effluent / discharge from this project to another study.

---

Number: 2 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 17:01:31

---


Number: 3 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 17:04:24  
Status of this application - does this address the LNG gas hub as it is nowhere explained in any of the three DSR's for the gas to powerplants.

|                                       |  |   |
|---------------------------------------|--|---|
|                                       |  |   |
|                                       | Bay, proposed marine protected area and – due to close proximity of the anchorage – St Croix Island group. In light of the 2014 invasive Species Regulations the EIA needs to indicate how marine alien species will be monitored and controlled / eradicated and this should include the St Croix Island group. The monitoring will need to continue after de-commissioning. It will need to be determined who will be responsible for funding and undertaking this function. |   |
| Dr P Martin                           | The bi-annual water sampling and biomonitoring currently undertaken should be assessed to see if it is adequate for the added risks from this project.   | Assessment of marine discharges is outside the scope of this assessment and falls under the Marine pipeline Servitude EIA. It is anticipated that that EIA process would result in water quality specifications for acceptable discharges to that pipeline, which the Gas to Power project would need to adhere to. It is recognised that coordination between the two studies is required. |
| Dr P Martin                           | Potential impact on cetaceans (noise, warm water, pollution, increased shipping).  | A marine biological study is being undertaken as part of the Gas Infrastructure EIA.  |
| Dr P Martin                           | Damara Terns (critically endangered, rarest SA coastal breeding seabird) that feed in the Port and nest very near to the proposed Z10 facilities.  | It is understood that monitoring and studies of this Damara Tern population have already been undertaken for other projects in the SEZ and it is therefore proposed that the relevant management measures are included in the EMP. The Damara Tern breeding area, as per the Coega OSMP, is indicated on Figure 3-7.  |
| Dr P Whittington (East London Museum) | Primary concern is the close proximity of the plant to breeding areas of the Damara Tern. This species is considered to be critically endangered in the 2015 Red Data Book for South Africa, Lesotho and Swaziland and a large proportion of the population breeds in the vicinity of Coega and east of the Sundays River mouth.   |   |
| Dr P Martin                           | Red Tide: Will heated water increase the risk? This is already a problem, causing fish kills and workers unable to work due to odours.   | The seawater discharge pipeline is being assessed via a separate EIA process and is therefore outside the scope of this assessment.   |
| Dr P Martin                           | The St Croix Island group (largest African penguin colony in the world) must be considered sensitive receptors (noise, air and lighting). Aspergillosis is arising as a problem in the St Croix penguins.  | A marine ecological study is being undertaken as part of the Gas Infrastructure EIA.  |
| Dr P Martin                           | Which organisations are envisaged to build and operate the facilities? Will a build and operate tender type process be followed?   | It is assumed that a procurement process would follow an environmental authorisation. The description of the development is therefore deliberately general in terms of technology providers.  |
| Dr P Martin                           | How does proposed Floating Power Plant & LNG berth fit into the scenario?  | A floating power plant is not proposed as part of the CDC's gas to power project. The LNG berth and associated Floating Storage and Regasification Unit form part of the gas infrastructure that is   |

- 
- Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 17:05:29  
See comment above re deferring of impacts.
- 
- Number: 2 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 17:06:35  
Would these measures be applicable to mitigate the potential impact of two large powerplants in close proximity of this population - see comment above re the damara tern breeding site.
- 
- Number: 3 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 17:07:12  
And what the implications for this project be if this pipeline does not get installed?
- 
- Number: 4 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 17:08:07  
This comment does not address impacts that the two powerplants in Zone 10 specifically may have on the isands, especially Jaleel.


|                          |  |  |
|--------------------------|--|--|
|                          |  |  |
|                          |  | required to support the power plants and will be assessed in the gas infrastructure EIA. Section 1.1 provides an overview of the various components of the gas to power project and how they fit together.   |
| Dr P Martin              | Where does Dedisa Peaking Power Plant fit into the scenario? Will Dedisa also convert to LNG if a LNG terminal is available and could it then become a baseload station?   | The Dedisa Peaking Power Plant is not part of the CDC's Gas to Power project, however capacity for supply of gas to Dedisa as a third party off-taker (if required) is included in the gas infrastructure EIA.<br><br>The availability of cleaner fuel may make it viable to convert Dedisa to gas, but this is outside of the scope of this assessment. |
| Dr P Martin              | The efficient operation of the sand by-pass system must not be compromised.  | Marine impacts relating to the marine pipeline servitude are outside the scope of this EIA process, and are addressed separately via the EIA process for that project.   |
| Dr P Martin              | How will adequate firefighting capacity and other emergency services be provided (the area is beyond the current NMBM required response time radius)?  | SRK will consult with the NMBM Disaster Management to establish any additional firefighting requirements. The MHI risk assessment study will also comment on this.   |
| Mr Kobus Slabbert (NMBM) | Noise Assessment is proposed.  | A Noise Impact Assessment is proposed as part of the Plan of Study for the EIA (see ToR in section 6.5.4).   |
| Mr Kobus Slabbert (NMBM) | Air Quality Assessment is proposed.  | An Air Quality Assessment is proposed as part of the Plan of Study for the EIA (see ToR in Section 6.5.1).   |
| Dr P Martin              | Air quality assessment must be compatible with the Cumulative Air Quality Model and Monitoring system for the SEZ that CDC maintains.  | Agreed. The air quality specialist is liaising with the specialist responsible for the CDC's monitoring and modelling system, to ensure alignment.   |
| Dr P Martin              | The main excuses for most air pollution pulses are given as abnormal operating conditions (start-up, power failure, etc). The Air Specialist Report must indicate the frequency and consequence of abnormal conditions.  | Assessment of abnormal operating conditions is included as part of the ToR for the air quality study (see Section 6.5.1)   |
| Dr P Martin              | Figure 3 of the BID seems to indicate that a pier jetty will be located north of the existing Eastern Breakwater. Will this EIA cover all supporting infrastructure for the power stations (e.g. new berths / jetties), pipelines, seawater inlet / outlet, etc? | The scope of this study encompasses the land based activities associated with the gas to power plant, from the cryogenic pipeline to the Dedisa Power Plant.   |

---

 Number: 1      Author: Andries.Struwig      Subject: Sticky Note      Date: 10/11/2020 17:10:02

---

But it seems that there is a large porportion of dependence on this pipeline being installed??

|               |   |   |
|---------------|---|---|
|               |   |   |
| Mr JP van Wyk | We are a large power consumer in the Coega SEZ. Any issues on power would be a concern to us as this is our main resource other than air. Any possible impact on emission therefore would also be a concern to us.          | Noted   |
| Dr P Martin   | Project alternatives investigated should include why three facilities are being considered rather than a more efficient / cost effective phased implementation of one facility. Are they base-load stations operating 24/7? | The facilities are proposed as mid-merit power plants, operating at 100% of capacity, up to 80% of the time.  It is envisaged that each facility would bid for an Independent Power Producer license and would be operated by separate legal entities external to the CDC. The timing and phasing of their development is therefore unknown at this stage. |

**Table 4-3: Comments Raised by Stakeholders at the Coega ELC Meeting on 20 August 2020**

|                            |  |  |
|----------------------------|--|--|
|                            |  |  |
| DEFF<br>Wayne Hector       | The Public Participation Plan must be approved by the DEFF before the EIA applications are submitted.  | SRK is in the process of drafting the plan for submission to DEFF prior to the application forms, should this still be required under the current lockdown regulations.  |
| DEFF<br>Millicent Solomons | Considering that four separate application are being made, ensure that the public participation process is flawless.   | The PPP has been discussed during the pre-application meeting, where DEFF outlined their expectations in this regard.  |
| TNPA<br>Renee de Klerk     | Has TNPA been consulted wrt the siting of the infrastructure inside the Port of Ngqura?  | [CDC] The prefeasibility studies for the project were conducted in conjunction with TNPA and a letter of support from TNPA for the gas to power EIA process was received.  |
| TNPA<br>Renee de Klerk     | Who will be responsible for providing the new jetty and loading platform?  | The successful bidder / developer / operator for the gas infrastructure component of the work package, which has not yet been awarded, will be responsible for development of the new jetty and loading platform.                              |
| TNPA<br>Renee de Klerk     | Who will be responsible for the LNG terminal operations?   | The successful bidder / developer / operator for the gas infrastructure component of the work package, which has not yet been awarded, will be responsible for the operations.   |
| TNPA<br>Renee de Klerk     | Although the Port of Ngqura ROD states that no activities and/or infrastructure are allowed on the eastern breakwater, the EAP must consider the reasons for the restriction | It is SRK's understanding that the reasons for this restriction are both to ensure structural integrity of the breakwater is not compromised, and to prevent possible risk of rodents from ships and associated activities invading the nearby |



---

Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 17:12:06

But yet this is mooted as one project? This is a very valid comment that cannot just be summarily dismissed and should be considered as an alternative.

|                         |   |   |
|-------------------------|---|---|
|                         |   |   |
|                         |   | Jahleel island, putting the local bird breeding populations at risk.  |
| TNPA<br>Renee de Klerk  | Consider the impact of off-loading LNG vessels on current and future Port operations.   | The 2016 Prefeasibility study by PRDW took this into account. CDC has confirmed that the future development potential of the port was considered during compilation of the layout of the terminal in the prefeasibility study.  |
| TNPA<br>Renee de Klerk  | Consider the impact on the sand bypass system   | No impacts on the sand bypass system are anticipated. The CDC recognises the need to ensure the jetty and pipeline routes do not impact the sand bypass system negatively.  |
| TNPA<br>Renee de Klerk  | Consider HAZOP Risk Assessment and liquid bulk operations   | Riscom (MHI Specialist) has confirmed that a HAZOP study should be undertaken. The timing of this would typically be after the EIA, once the required detailed engineering drawings are available, but before construction phase.   |
| DEDEAT<br>Lyndon Mardon | The Terms of Reference (TOR) for the Climate Change Impact Assessment must consider RSA's commitment to a peak, plateau and decline scenario  | Promethium (The Climate Change Specialist) have confirmed that peak, plateau and decline scenario is not a climate scenario, but rather an emissions reduction trajectory envisioned for South Africa as part of our Nationally Determined Contribution to the UNCCC. They do however make use the IPCC's RCP scenarios as part of the climate change study.  |
| DEDEAT<br>Lyndon Mardon | The Climate Change Impact Assessment must look at the impact of climate change on this project and vice versa, the impact of this project on climate change.  | This will be assessed by Promethium in their climate change assessment.   |
| DEDEAT<br>Lyndon Mardon | From a planning perspective, the EIA must consider RSA's commitment to the management of GHG emissions and climate change adaptation and whether this project will meet the GHG emissions trajectory after mitigation. South Africa communicates, as defined in national policy, a peak, plateau and decline GHG emissions trajectory range, with emissions by 2025 and 2030 in a specified range | [Promethium (climate change specialist)] We have considered South Africa's peak, plateau and decline (PPD) scenario as well as the South African Carbon budget in our assessment for the project. The current EIA regulations and impact assessment methodology does not consider climate change, nor is it a fit for purpose method in assessing/determining climate change impacts. The methodology proposed to determine magnitude is based on two fundamental principles: 1) The remaining South African Carbon budget based on the most recent publicly available information and 2) the scale of emissions in terms of contributing to the use of this budget, considering South Africa's NDC, our PPD trajectory and the commitments/recommendations set |

|                                 |   |   |
|---------------------------------|---|---|
|                                 |   |   |
|                                 |   | <p>out in the Paris Agreement. These fundamental principles and the increasing pressure to achieve a global 1.5°C target informed the quantification of project contributions in terms of a localised carbon budget.</p>                |
| <p>DEDEAT<br/>Lyndon Mardon</p> | <p>What are the chemical constituents of the LNG gas that will be used? That has an implication in terms of the control equipment that would go into the power station, etc. and what happens with those pollutants i.e. where is the effluent going to go.</p> | <p>[CDC] the LNG will be a mixture primarily of methane (approximately 85%), ethane (approximately 10%), and propane (approximately 3%) with butane, carbon dioxide, hydrogen sulphide, nitrogen and oxygen comprising the balance.</p> |

## 5 Identification of Potential Impacts

This section describes the anticipated impacts of the development. During the EIA phase these impacts will be given a rating based on the methodology described in Section 6.3 and the findings of the specialist assessments. The identification of potential impacts of the proposed activity is based on the following factors:

- The legal requirements;
- The nature of the proposed activity;
- The nature of the receiving environment; and
- Issues raised during the public participation process.

### 5.1 Key environmental and social concerns identified during the PPP

Based on the comments received from IAPs, the following key potential social and environmental concerns relating to the zone 10 North power plant development have been identified:

- Impact on air quality, including upset conditions (e.g. start up and maintenance);
- Noise impacts;
- Impacts on the marine environment, specifically related to discharge of cooling water;
- Impacts on avi-fauna, specifically the Damara Tern and breeding site(s) in close proximity to Zone 10;
- Safety concerns relating to firefighting;

The Draft Plan of Study for EIA (Chapter 6) provides detail on how these concerns will be addressed via the EIA process

### 5.2 Key Environmental Issues and Impacts

The EIA Regulations, 2014 (Appendix 2) prescribe the required content of a Scoping Report (see Table 1-1), including the identification of risks and impacts (potential nature, significance, consequence, extent, duration and probability) of the project, and the degree to which impacts can be reversed, may cause irreplaceable loss of resources and can be avoided, managed or mitigated (Appendix 2 (h)(v) and (vii)).

The potential impacts of the project are mostly linked to the sensitivity of the biophysical environment, expected emissions and discharges and stakeholders' perceptions.

Based on the above considerations and the professional experience of the EAP, the following key environmental issues – in effect, a preliminary suite of potential negative impacts and potential benefits of the project in its proposed setting – have been identified.

Considering the factors listed above, the following environmental impacts were identified which could potentially result from the proposed gas to power project:

- Impacts on climate change;
- Impacts on surface and groundwater;
- Terrestrial ecological impacts;
- Visual impacts;

---

Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 17:22:59

These are the same as for the Zone 10 powerplant even though there are marked differences in the site locations. This furthermore fails to consider how the environment could impact on the two powerplants due to its locality right next to the coast and within a littoral active zone.

---

Number: 2 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 17:21:18

Does this include potential impacts on the islands?

- Noise impacts;
- Air quality impacts;
- Impacts on heritage resources;
- Socio-economic impacts;
- Traffic impacts;
- Waste management impacts;
- Stormwater and erosion impacts;
- Safety risks; and
- Construction related impacts.

The above listed impacts and their relevance to the proposed project area are described in more detail in the sections below.

### 5.2.1 Air quality impacts

The waste gases from the power plant will be expelled via a stack into the atmosphere. The number of stacks and their dimensions are currently unknown and will depend on the type of technology chosen. According to the Air Quality Act an AEL will be required. The impacts will be assessed on the basis of SO<sub>x</sub>, CO<sub>2</sub> and PM, and OCGE for NO<sub>x</sub>, as these represent the “worst case” scenario.

The emissions from the power plant will primarily comprise CO<sub>2</sub> and NO<sub>x</sub>, with minor amounts of SO<sub>2</sub> and particulates from the flue stack. Fugitive emissions of methane (CH<sub>4</sub>) could potentially be expelled in the event of abnormal conditions such as pipe failure and storage tank rupture. The assessment of air emissions should therefore include an assessment of greenhouse gases.

The cumulative impacts of the proposed gas to power project and other existing and future developments on the Coega SEZ airshed will need to be assessed to determine how this will affect CDC’s compliance with the national pollution level requirements.

Dust emissions may also be generated during the construction phase. These emissions are temporary in nature and can readily be managed by standard construction techniques. It is therefore proposed that the EAP provide a qualitative assessment of significance of dust impacts during construction in the Environmental Impact Report, and address these impacts by means of standard conditions in the Draft Environmental Management Programme.

### 5.2.2 Noise impacts

During construction noise will be generated by the operation of diesel powered earth moving and construction equipment, such as bulldozers, front end loaders, scrapers, excavators, concrete mixers as well as haulage and other kinds of trucks. It is likely that pile-driving activities will be required. These are characterised by impulsive noise events of high amplitude that can have a startling effect. It is proposed that noise impacts during the construction phase be assessed by the EAP and addressed through standard practices in the Environmental Impact Programme.

For most gas-fired power plants, the major noise sources during baseload operation are the air-cooled condenser (ACC) or cooling tower, steam turbine generator (STG), combustion inlet filter house, and the exhaust stack or heat recovery steam generator (HRSG) as well as the and combustion turbine or engine. During start up or other transient conditions in combined cycle configurations, the high-pressure steam piping and condenser is a major noise producer, with steam bypassing the STG. The combustion turbine and generator (CTG) may be housed in acoustical enclosures, thereby dropping

their respective noise source ranking (Saussus, 2012). A Noise Impact Assessment is proposed to assess the noise impacts during the operational phase of the development.

### 5.2.3 Impacts on heritage resources

It is possible that construction activities (especially excavation and earth-moving activities) could expose and potentially damage or destroy concentrations of palaeontological/archaeological material. As heritage studies have previously been compiled for the Coega SEZ and no sensitive areas/material was identified within the proposed development area, it is proposed that no additional heritage studies are required. Standard management measures will be included in the EMPr aimed at identification and assessment of heritage features that may be uncovered during construction.

### 5.2.4 Terrestrial ecological impacts

Vegetation will need to be cleared in order to prepare the site for construction of the power plant and associated infrastructure. Clearing and disturbance of the soil and dune vegetation during construction will also promote the growth and spread of invasive alien vegetation on the site. Faunal species could be lost and fragmented through vegetation clearing for the development, displacing these animals to adjacent areas.

The site sensitivity map (Figure 3-7) identified the CBAs around the study area. The proposed site in Zone 10 encompasses a CBA and lies to the north west of the Algoa Bay Islands. The Critically Endangered Damara Tern is known to occur along the coast to the Zone 10 North site. Impacts on terrestrial ecology have previously been authorised through the "Rezoning of the remainder of the Coega SEZ" impact assessment process, and are currently managed through the approved Coega Open Space Management Plan (OSMP). No terrestrial ecological assessment is therefore proposed in this EIA process. The proximity of known sensitive receptors (e.g. Damara Tern nesting sites) to the proposed infrastructure has been mapped and recorded in the Figure 3-7. It is proposed that terrestrial ecological impacts be managed through standard search & rescue procedures in the Environmental Management Programme, as well as the measures relating to protection of species listed in the CDC's Environmental Specifications for Construction and application for the relevant permits for protected species post-authorisation.

### 5.2.5 Socio-economic impacts

It is expected that the social and economic benefits associated with the project would be self-evident to the environmental authorities and the general public, particularly given that this project is in response to the government led IPPPP. The proposed development would result in positive investment in the Nelson Mandela Bay Municipal Area, and would result in the creation of a number of employment opportunities.

Additional socio-economic benefits resulting from indirect employment (provision of services and goods), stimulation of the local economy, and government levies and taxes paid would also result from the development.

As such it is proposed that the positive social and economic benefits be described qualitatively by the EAP during the impact assessment phase, and without specialist input.

### 5.2.6 Traffic impacts

During the construction phase materials and equipment will need to be transported to site by means of road transportation, resulting in more traffic utilising the CDC road network. Entrance to the site is

---

Number: 1      Author: Andries.Struwig      Subject: Sticky Note      Date: 10/11/2020 17:24:29  
This seem to indicate that it is located inside the CBA in which case it would be problematic.

---

Number: 2      Author: Andries.Struwig      Subject: Sticky Note      Date: 10/11/2020 17:27:40  
This surely is not adequate to address the potential impact that these two powerplants (and for that matter the LNG Gas Hub) may have on the Damara Tern Breeding Site. This cannot be addressed by means of search & rescue nor by implementing of specifications for construction. See comments re this matter elsewhere.



gained via the Hougham Park Interchange and the R334/Daniel Pienaar Street. Traffic impacts during operation are expected to be low as materials would be transported via pipeline from the Port to the facilities. The transportation of LNG via trucks outside the Coega SEZ does not fall within the scope of this assessment. It is proposed that traffic impacts be addressed through a specialist Traffic Impact Assessment (TIA).

### 5.2.7 Waste management impacts

With the exception of effluent and air emissions, no large scale systematic by-products (i.e. wastes) would be generated as part of the process. Wastes similar to other industrial or manufacturing concerns would naturally be generated, and are expected to be moderate quantities. No specific waste study is therefore proposed.

The standard waste management practices in terms of the CDC's Standard Environmental Specification for Construction would apply, and it is expected that the EMPr would include an item for the preparation and implementation of a waste management plan for the construction, operational, and decommissioning phases of each facility.

### 5.2.8 Visual impacts/Sense of Place

The power plant unit is located in an industrial zone (Coega SEZ) in areas allocated to energy and aquaculture development. While the zone 10 North site is sheltered to an extent from sensitive receptors along the N2 and inland, opportunities for visual screening may be limited for receptors along the coast and for offshore viewers (such as visitors to the MPA). To manage impacts during construction, activities will need to be managed so that negative visual impacts (including those resulting from dust) are minimised.

No assessment of visual impacts is proposed and standard management measures in the EMPr will be augmented with reference to the CDC's architectural guidelines, which are expected to be applicable to this project.

### 5.2.9 Stormwater and erosion impacts

Vegetation clearing and disturbance of soils during construction will leave them vulnerable to erosion by water and wind. This could lead to increased sediment load in stormwater runoff, potentially clogging the receiving stormwater infrastructure.

The increase in hardened surfaces associated with the operation of development will result in less infiltration of stormwater into the soil and increased runoff, potentially exacerbating stormwater impacts. Impacts will be assessed by the EAP, and standard mitigation measures to manage erosion and stormwater will be included in the EMPr for both construction and operation.

### 5.2.10 Impacts on surface and groundwater

No aquatic features are present in the proposed development area. The storage of backup fuels (e.g. diesel) poses a risk of pollution of groundwater and surface water resources. On the other hand, the design of storage & handling facilities are governed by well-established South African National Standards which are aimed at pollution prevention. It is therefore proposed that potential groundwater and surface water impacts be addressed through standard mitigation measures in the construction and operational EMPr without the need for further specialist input.

### 5.2.11 Climate change impacts

The use of natural gas to power the proposed power plants, and specifically the resultant emissions will add to greenhouse gases in the SEZ area and impact on emission targets both provincially and

---

Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 17:29:15  
Assuming that effluent will be addressed separately.

nationally, thereby contributing to climate change though the magnitude of this impact would be less than for coal fired power of the equivalent generation capacity. Furthermore, sea level rise as a result of climate change may over time impact on the project, specifically infrastructure in close proximity to the sea. This should be taken into account in planning the project design.

A Climate Change Impact Assessment is therefore proposed to assess these impacts during the operational phase of the development.

### 5.2.12 Safety risks

Accidental leaks of LNG could occur, and result in an LNG vapour cloud. The vapour cloud is quickly vaporised however if an ignition source is present this can cause a fire which burns back to the source. The storage and handling of LNG may be considered to be a Major Hazard Installation (MHI) in terms of the Occupational Health & Safety Act. A Quantitative Risk Assessment will therefore be conducted in order to assess the risks and determine if the project is considered an MHI.

### 5.2.13 Construction related impacts

Additional impacts typically associated with the construction phase include:

- Sanitation and water supply;
- Nuisance dust impacts;
- Safety and security;
- Damage to other infrastructure (e.g. underground cables and pipelines);
- Veld fires and fire management; and
- Damage to infrastructure.

The potential impacts above will be assessed by the EAP and can be addressed through standard well-managed construction procedures. Specific measures for the mitigation of construction related impacts will be included in the EMPr.

## 5.3 Potential Mitigation Measures

Appendix 2 of the EIA Regulations, 2014 requires that possible mitigation measures that could be applied to avoid or mitigate negative impacts and optimise positive impacts must be identified in the Scoping Report.

Many of the impacts can be readily mitigated and it is not foreseen that they are likely to pose a significant risk. Where necessary, the EMPr will identify and recommend specific mitigation measures applicable to the Zone 10 North power plant project.

Table 5-1 identifies typical / routine mitigation measures that are likely to apply to the Zone 10 North power plant project. The proposed development is located within a SEZ where it is assumed that the appropriate land use planning guidelines have been applied. The CDC has a number of Standard Specifications for construction, to which all developments within the SEZ are required to comply, and has in place systems for monitoring and reporting on environmental compliance, in accordance with the conditions of the authorisation for the SEZ as a whole. Additional and more detailed management and mitigation will be identified during impact assessment and reported in the EIA Report and EMPr.

**Table 5-1: Typical mitigation measures**

|                        |  |
|------------------------|--|
| Pre-construction Phase | <ul style="list-style-type: none"> <li>• Ensure all relevant permits and approvals are in place;</li> <li>• Ensure relevant guidelines, such as CDC's architectural guidelines, have been taken into account in design;</li> <li>• Establish an exclusion zone;</li> <li>• Provide all contractors with the EMPr;</li> <li>• Ensure contractors have subsidiary plans in place e.g. Oil Spill Contingency Plan, Waste Management Plan, etc.;</li> <li>• Ensure all contractors are suitably qualified and experienced;</li> <li>• Undertake environmental awareness training;</li> <li>• Review Contractors' method statements to ensure adequate environmental management</li> </ul>  |
| Construction Phase     | <ul style="list-style-type: none"> <li>• Maintain hazardous materials register and store all hazardous materials according to standard operating procedures;</li> <li>• Store and manage waste appropriately prior to disposal;</li> <li>• Regular compliance audits by a suitably qualified ECO and reporting to authorities on compliance;</li> <li>• Management of materials and waste so as to avoid spills and leaks;</li> <li>• Dust and noise management as appropriate;</li> <li>• Management of all sub-contractors on site to ensure compliance with the EMPr;</li> <li>• Maintain vehicles and equipment to avoid leaks;</li> <li>• Limit all activities to within the approved footprint area;</li> <li>• Revegetation and rehabilitation of disturbed areas;</li> </ul> |
| Operation Phase        | <ul style="list-style-type: none"> <li>• Undertake scheduled inspections and maintenance on all infrastructure;</li> <li>• Provide all service providers with the EMPr;</li> <li>• Ensure service providers have subsidiary plans in place;</li> <li>• Ensure all service providers are suitably qualified and experienced;</li> <li>• Store all hazardous materials according to standard operating procedures;</li> <li>• Monitor air emissions, effluent, waste, etc. to ensure compliance with the relevant standards and conditions; and</li> <li>• Submit performance reports to authorities.</li> </ul>   |

## 6 Draft Plan of Study for EIA

### 6.1 National Web Based Environmental Screening Tool

In terms of Regulation 16(1)(b)(v) of the NEMA EIA Regulation, 2014, an application for EA must include “the report generated by the national web based environmental screening tool”, and on 5 July 2019, notice was given that that the submission of such a report would be compulsory from 4 October 2019 – GN R 960). The screening tool report for this project is appended to the Application form in Appendix B.

The national screening tool is based on broad scale national environmental sensitivity data and identifies specialist studies that may be required for the EIA. It is the responsibility of the EAP to confirm whether these specialist studies will be conducted or provide a motivation as to why the specialist studies will not be conducted as part of the EIA process. Specialist studies generated/recommended by the screening tool, and where applicable, motivation as to why certain specialist studies have not been scoped for the EIA Phase, is provided in Table 6-1 below.

**Table 6-1: Site sensitivity verification**

| Agricultural Impact Assessment                         | High   | N/A | The power plant site is within the Coega SEZ, in an area that has already been approved for industrial development (in terms of the EIA for rezoning of the Coega SEZ).   |
|--|--------|-----|---|
| Animal Species Theme                                   | High   | Low | Biodiversity studies were completed in support of the rezoning EIA for the Coega SEZ, as well as some of the nearby developments in Zone 10. The area is therefore fairly well documented, and any protected species will be subject to plant search and rescue and the relevant permits being obtained prior to clearing.        |
| Aquatic Biodiversity                                   | Low    | N/A | NFEPA did not list any wetlands close to the site.  |
| Archaeological and Cultural Heritage Impact Assessment | High   | N/A | A Phase 1 heritage assessment (archaeological and palaeontological) has previously been undertaken for the Coega SEZ and no further heritage studies are therefore proposed. Any findings of palaeontological / archaeological and/or cultural heritage importance relevant to Zone 10, will be incorporated into the EIA report. |
| Palaeontology Impact Assessment                        | N/A    | N/A |   |
| Civil aviation theme                                   | Medium | N/A | The site is not close to any airport and is surrounded by other industrial development of similar height within the SEZ. The proposed power plant is therefore not expected to pose any negative impact to aviation craft.  |
| Plant species theme                                    | Medium | Low | Biodiversity studies were completed in support of the rezoning EIA for the Coega SEZ, as well as some of the nearby developments in Zone 10. The area is therefore fairly well documented, and any protected species will be subject to plant search and rescue and the relevant permits being obtained prior to clearing.        |
| Defence Theme  | Medium | Low | The site is in a designated industrial area and is surrounded by other industrial development of similar height within the SEZ. The proposed power plant is therefore not expected to pose any negative impact to aviation craft or any other defense related activities.   |

| Terrestrial Biodiversity Theme | Very High | Low | Biodiversity studies were completed in support of the rezoning EIA for the Coega SEZ, as well as some of the nearby developments in Zone 10. The area is therefore fairly well documented, and any protected species will be subject to the relevant permits being obtained prior to clearing. |
|--------------------------------|-----------|-----|--|
| Hydrology assessment           |           |     | No aquatic features are present in the proposed development areas, and the SEZ is already fairly well documented with regard to hydrological features.   |
| Socio-economic assessment      | N/A       | ?   | The socio-economic benefits of the development are largely self-evident. Standard enhancement measures to maximise benefits will be included in the EMPr.  |
| Geotechnical Assessment        |           |     | The geology and soil conditions of the area are already fairly well documented, and this study is therefore not considered to be necessary at EIA stage for the project.   |
| Risk Impact Assessment         | N/A       | ?   | N/A: a Risk Impact Assessment is proposed.   |
| Traffic Impact Assessment      | N/A       | Low | N/A: a Traffic Impact Assessment is proposed   |
| Climate Impact Assessment      | N/A       | ?   | N/A: a Climate Impact Assessment is proposed   |
| Noise Impact Assessment        | N/A       | ?   | N/A: a Noise Impact Assessment is proposed   |

## 6.2 Specialist Studies

A number of specialist studies are proposed in the Impact Assessment phase in order to investigate the potential environmental impacts associated with the proposed development. The identification of impacts and terms of reference for specialist studies is based on:

- The legal requirements;
- The nature of the proposed activity;
- The nature of the receiving environment;
- Discussions with the DEFF regarding their requirements during pre-application meetings for the project (see minutes appended to the Application form in Appendix B); and
- Issues raised during the public participation programme.

The proposed specialist studies to be conducted during the Impact Assessment phase are as follows:

- Air Quality Impact Assessment;
- Quantitative Risk Assessment;
- Climate change impact Assessment;
- Traffic impact assessment; and
- Noise Impact Assessment.

---

Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 17:37:19

This depends on how the two Zone 10 powerplants may impact / influence the damara tern breeding site.

---

Number: 2 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 17:38:21

Where would potential impacts on the islands and marine protected area due to operation of these two powerplants be addressed?

The following impacts will be addressed by SRK in consultation with the CDC:

- Waste impacts;
- Visual Impacts;
- Terrestrial ecology impacts; and
- Socio-Economic Impacts.

### 6.3 Impact Rating Methodology

The assessment of impacts will be based on the professional judgement of specialists at SRK Consulting according to the SRK impact assessment methodology presented below. The impact ratings will be informed by the findings of specialist assessments conducted, fieldwork, and desk-top analysis. The significance of potential impacts that may result from the proposed development will be determined in order to assist DEAT in making a decision.

The significance of an impact is defined as a combination of the consequence of the impact occurring and the probability that the impact will occur. The criteria that are used to determine impact consequences are presented in Table 6-2 below.

**Table 6-2: Criteria used to determine the Consequence of the Impact**

|                  |   |   |
|------------------|---|---|
|                  |   |   |
| None             |   | 0 |
| Local            | Confined to project or study area or part thereof (e.g. site)   | 1 |
| Regional         | The region, which may be defined in various ways, e.g. cadastral, catchment, topographic                | 2 |
| (Inter) national | Nationally or beyond  | 3 |
|                  |   |   |
| None             |   | 0 |
| Low              | Site-specific and wider natural and/or social functions and processes are negligibly altered            | 1 |
| Medium           | Site-specific and wider natural and/or social functions and processes continue albeit in a modified way | 2 |
| High             | Site-specific and wider natural and/or social functions or processes are severely altered               | 3 |
|                  |   |   |
| None             |   | 0 |
| Short-term       | Up to 2 years   | 1 |
| Medium-term      | 2 to 15 years   | 2 |
| Long-term        | More than 15 years  | 3 |

The combined score of these three criteria corresponds to a Consequence Rating, as follows:



---

Number: 1 Author: Andries.Struwig Subject: Sticky Note Date: 10/11/2020 17:39:38

See comments above re the damara tern breeding site and impacts on the marine protected area inclusive of the islands.

**Table 6-3: Method used to determine the Consequence Score**

|  |                 |          |     |        |      |           |
|--|-----------------|----------|-----|--------|------|-----------|
|  | 0 – 2           | 3 – 4    | 5   | 6      | 7    | 8 – 9     |
|  | Not significant | Very low | Low | Medium | High | Very high |

Once the consequence has been derived, the probability of the impact occurring will be considered using the probability classifications presented in Table 6-4.

**Table 6-4: Probability Classification**

|            |                                 |
|------------|---------------------------------|
| Improbable | < 40% chance of occurring       |
| Possible   | 40% - 70% chance of occurring   |
| Probable   | > 70% - 90% chance of occurring |
| Definite   | > 90% chance of occurring       |

The overall significance of impacts will be determined by considering consequence and probability using the rating system prescribed in the table below.

**Table 6-5: Impact Significance Ratings**

|             |           | Probability |          |          |          |
|-------------|-----------|-------------|----------|----------|----------|
|             |           | Improbable  | Possible | Probable | Definite |
| Consequence | Very Low  |             |          |          |          |
|             | Low       |             |          |          |          |
|             | Medium    |             |          |          |          |
|             | High      |             |          |          |          |
|             | Very High |             |          |          |          |

Finally, the impacts will also be considered in terms of their status (positive or negative impact) and the confidence in the ascribed impact significance rating. The system for considering impact status and confidence (in assessment) is laid out in the table below.

**Table 6-6: Impact status and confidence classification**

|   |                               |
|---|-------------------------------|
| Indication whether the impact is adverse (negative) or beneficial (positive).                                       | + ve (positive – a 'benefit') |
|   | - ve (negative – a 'cost')    |
| The degree of confidence in predictions based on available information, SRK's judgment and/or specialist knowledge. | Low                           |
|   | Medium                        |
|   | High                          |

The impact significance rating should be considered by authorities in their decision-making process based on the implications of ratings ascribed below:

- Insignificant: the potential impact is negligible and will not have an influence on the decision regarding the proposed activity/development.
- Very Low: the potential impact is very small and should not have any meaningful influence on the decision regarding the proposed activity/development.

- Low: the potential impact may not have any meaningful influence on the decision regarding the proposed activity/development.
- Medium: the potential impact should influence the decision regarding the proposed activity/development.
- High: the potential impact will affect the decision regarding the proposed activity/development.
- Very High: The proposed activity should only be approved under special circumstances.

Practicable mitigation measures will be recommended and impacts will be rated in the prescribed way both with and without the assumed effective implementation of mitigation measures. Mitigation measures will be classified as either:

- Essential: must be implemented and are non-negotiable; or
- Optional: must be shown to have been considered, and sound reasons provided by the proponent, if not implemented.

## 6.4 Cumulative Impacts

### 6.4.1 Introduction

Anthropogenic activities can result in numerous and complex effects on the natural and social environment. While many of these are direct and immediate, the environmental effects of individual activities (or projects) can combine (additive impact) and interact (synergistic impact) with other activities in time and space to cause incremental or aggregate effects. Effects from disparate activities may accumulate or interact to cause **additional** effects that may not be apparent when assessing the individual activities in isolation (Canadian Environmental Protection Agency, 2007). Cumulative effects can also be defined as the total impact that a series of developments, either present, past or future, will have on the environment within a specific region over a particular period of time (DEAT IEM Guideline 7, Cumulative effects assessment, 2004). The International Finance Corporation (IFC, 1998) states that environmental assessment should include consideration of “... *cumulative impacts of existing projects, the proposed project and anticipated future projects*”.

The IFC's Good Practice Handbook for *Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets*, published in 2012, provides further guidance for comprehensive stand-alone Cumulative Impact Assessment (CIA). It places further emphasis on biodiversity and socio-economic conditions and introduces the concept of Valued Environmental and Social Components (VECs).

The IFC recommends that cumulative assessment should (a) “*be **commensurate with the incremental contribution, source, extent, and severity of the cumulative impacts anticipated,***” and (b) “*determine if the project is incrementally responsible for adversely affecting an ecosystem component or specific characteristic beyond an acceptable predetermined **threshold** (carrying capacity) ...*”

For the purposes of this report, cumulative impacts are defined as ‘direct and indirect impacts that act together with existing or future potential impacts of other activities or proposed activities in the area/region that affect the same resources and/or receptors’.

To define the level of cumulative impact, it is critical to look beyond the geographical boundaries and environmental impacts of a single development/project and consider the area of influence of the specific project as well as other developments currently in or proposed in the area and their understood impacts and area of influence. It may be that impacts generated by a single development are not considered to be significant, but when considered as part of a cumulative impact assessment, these require mitigation.

Key considerations for the assessment of cumulative impacts as part of the environmental impact assessment are:

- The cumulative impact assessment will need to give consideration to developments that may have contributed to cumulative effects in the past, may be contributing or are anticipated to contribute in the foreseeable future. This needs to be relevant to the timeframe within which impacts are to be experienced as a result of the project itself (i.e. all phases for which the project specific impact assessment is being undertaken). Given that the baseline environment will already be impacted on by the historical and current contributors to the cumulative impact, it is only necessary when undertaking the cumulative impact assessment to place an emphasis on an identified future cumulative baseline environment;
- Cumulative impacts may not be applicable to all aspects, as project related impacts may be confined to the project area and not subject to or contributing to impacts in the broader area of influence as a whole. For example, if the project area is confined to a water catchment which is not anticipated to be impacted on by other developments (past, present or foreseeable future) then a cumulative impact assessment need not be considered for this environmental aspect;
- A cumulative impact assessment will consider a specific area of influence which will be determined by the impact itself and the baseline environment in which it is proposed; e.g. where one or more projects affect the same ecosystem, the whole area in which the ecosystem is found may be considered the area of influence for the cumulative assessment. This will vary across project aspects and therefore a single area of influence for the cumulative impact assessment cannot be set; and
- The cumulative impact assessment can only be undertaken where information is readily available and as such will only be an initial assessment of the likely cumulative impact in terms of knowledge available at the time of the assessment. It is critical to understand the information sources and limitations that exist.

For the most part, cumulative effects or aspects thereof are too uncertain to be quantifiable, due mainly to a lack of data availability and accuracy. This is particularly true of cumulative effects arising from potential or future projects, the design or details of which may not be finalised or available and the direct and indirect impacts of which have not yet been assessed.

#### **6.4.2 Scope of the Cumulative Assessment**

For cumulative effects analysis to be a useful tool to decision makers and stakeholders, it must be limited to effects that can be meaningfully evaluated, rather than expanded to the point where the resource or receptors are no longer significantly affected or the effects are no longer of interest to stakeholders. To this end, four important aspects require consideration prior to the evaluation of cumulative effects:

- The determination of an appropriate area of influence, i.e. spatial and, to a lesser extent, temporal boundaries for evaluation of cumulative effects of the project;
- Identification of VECs;
- External natural and social stressors; and
- The evaluation of relevant projects for consideration in the cumulative effects analysis.

Each of the four aspects listed above is discussed below.

### 6.4.3 Area of Influence

The IFC defines the area of influence (Aoi) to encompass “*cumulative impacts that result from the incremental impact, on areas or resources used or directly impacted by the project, from other existing, planned, or reasonably defined developments at the time the risks and impact identification process is conducted.*” Consequently, the spatial and temporal boundaries for analysis of cumulative effects are dependent on a number of factors, including:

- The size and nature of the project and its potential effects;
- The size, nature and location of past and (known) future projects and activities in the area, and the significance of their adverse or beneficial environmental effects;
- Relevant ecological boundaries, including landform, vegetation, land use, habitat, soil and surface materials and climate;
- Relevant aquatic boundaries, including catchments, sub-catchments and hydrogeological discontinuities;
- The aspect of the environment impacted by the cumulative effect (boundaries selected for cumulative environmental effects on, for example, air quality might be different from those relevant to the effects on a particular species of plant or animal); and
- The period of occurrence of effects (temporal boundaries may extend beyond the timing of construction and operations) (Canadian Environmental Protection Agency, no date).

The Aoi does not include potential impacts that would occur without the project or independently of the project.

For this project the Aoi includes the following:

- Areas potentially impacted by the project and facilities which are directly owned, operated, or managed (including by contractors) and that are a component of the project;
- Areas potentially impacted by unplanned but predictable developments caused by the project that may occur later or at a different location;
- Affected communities (if any) whose livelihoods are affected by indirect project impacts on biodiversity or the ecosystem;
- Areas potentially impacted by cumulative impacts from additional planned development or other sources of similar impacts in the geographical area, any existing project or condition, and other project-related developments that can realistically be expected at the time that due diligence is undertaken; and
- Areas and communities potentially affected by impacts from unplanned but predictable developments caused by the project that may occur later or at a different location.

The power plant is located in an existing SEZ and generates impacts that are mostly of local extent (therefore described in the baseline and assessed in the “regular” impact assessment), notable potential exceptions being air emissions and contribution to climate change. The spatial scope of this analysis is generally aligned with the zone of influence of the project and potential projects in the vicinity that may have impacts overlapping with the proposed project.

The temporal scale of the contribution of project’s impacts is likely to be medium to long term, although of limited to moderate intensity.

### 6.4.4 Identification of VECs

VECs are environmental and social attributes that are considered to be important in assessing risks; they may be: physical features, habitats, wildlife populations (e.g. biodiversity), ecosystem services, natural processes (e.g. water and nutrient cycles, microclimate), social conditions (e.g. health, economics) or cultural aspects (e.g. traditional spiritual ceremonies).

While VECs may be directly or indirectly affected by a specific development, they often are also affected by the cumulative effects of several developments. VECs are the ultimate recipient of impacts because they tend to be at the ends of ecological pathways.

VECs for this project were selected based on an understanding of the project activities, the vulnerability/sensitivity of the receiving environment; and the potential interactions between project activities and the biophysical and socioeconomic environment.

The project is located in an industrial area, and there are no communities in close proximity to the site.

As such the VECs likely considered in the cumulative assessment are as follows:

- Ambient air quality; and
- Climate change.



The baseline presented in Section 3 describes the current state of environmental attributes, including biodiversity, groundwater quality and quantity and air quality.

### 6.4.5 Past, Existing and Planned Activities that may affect VECs

In addition to the project, other past, present and future activities might have caused or may cause impacts and may interact with impacts caused by the project under review.


- **Cumulative impacts of past and existing activities:** It is reasonably straightforward to identify significant past and present projects and activities that may interact with the project to produce cumulative impacts, and in many respects, these are taken into account in the descriptions of the biophysical and socio-economic baseline (see respective sections in Section 3).
- **Potential cumulative impacts of planned and foreseen activities:** Relevant future projects that will be included in the assessment are defined as those that are ‘reasonably foreseeable’, i.e. those that have a high probability of implementation in the foreseeable future; speculation is not sufficient reason for inclusion. Such projects may include those for which authorisations have already been granted, that are currently subject to environmental assessment processes or that have been identified in planning documents.

The Zone 10 North power plant project is a significant industrial development in an existing SEZ, with other (existing and proposed) industrial developments in the area. Relevant known activities and projects are listed in Table 6-7 below.

**Table 6-7: Past, existing and future activities and projects**

|  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Sand mining in Zone 10</li> <li>• Port of Ngqura and associated infrastructure;</li> <li>• Cerebos saltworks</li> </ul> | <ul style="list-style-type: none"> <li>• Additional gas to power plants in zone 10 and 13 of the SEZ (EIA running concurrently with Zone 10 North power plant EIA);</li> <li>• Gas infrastructure project in the Coega SEZ, to provide gas for the three proposed power plants (EIA running concurrently with Zone 10 North power plant EIA);</li> </ul> |
|--|--|

---

 Number: 1      Author: Andries.Struwig      Subject: Sticky Note      Date: 10/11/2020 17:44:31  
Would have thought that the damara tern breeding site and marine protected area should feature here.

|  |  |
|--|--|
|  | <ul style="list-style-type: none"> <li>• Marine Pipeline Servitude in CDC SEZ to provide for marine discharge of effluent (EIA, currently being undertaken);</li> <li>• Aquaculture development zone (authorised but not yet developed)</li> </ul> |
|--|--|

## 6.5 Draft Terms of Reference for Specialist Studies

The generic terms of reference for each specialist study are to:

- Describe the existing baseline characteristics of the study area and place this in a regional context;
- Identify and assess potential impacts resulting from the Project (including impacts associated with the construction, operation, and [if appropriate] closure phases of the project), using SRK's prescribed impact rating methodology;
- Identify and describe potential cumulative impacts resulting from the proposed development in relation to proposed and existing developments in the surrounding area;
- Recommend mitigation measures to avoid or minimise impacts and/or optimise benefits associated with the proposed Project; and
- Recommend and draft a monitoring campaign, if applicable.

The precise scope of specialist studies will be defined during the Initiation Phase and presented in the Scoping Report. Nevertheless, preliminary Terms of Reference for specialist studies are provided below.

### 6.5.1 Air Quality

The specific terms of reference for the specialist study are:

- Conduct a baseline assessment;
- Describe sources of emissions and compile an emissions inventory for the project;
- Undertake dispersion modelling for key pollutants identified as part of the emissions inventory;
- Predict ambient concentrations, rendered as isopleths on a base map of the surrounding area;
- Assess impacts during construction, operation and decommissioning phases of the projects;
- Identify 'abnormal' operating conditions (e.g. start-up & maintenance) that may lead to air emissions;
- Make recommendations of management and mitigation measures (including optimal height of stacks) associated with impacts from the proposed power plants; and
- Include assessment of cumulative impacts on air quality, with reference to the additional emissions each power plant will add.

### 6.5.2 Quantitative Risk Assessment

The proposed Terms of Reference for this study are as follows:

- Develop accidental spill and fire scenarios for the facility;



- Using generic failure rates, determine the probability of each scenario identified, as well as potential consequences;
- Where the consequence / risk will extend beyond the site boundary, calculate the maximum individual risk, taking into account generic failure rates, initiating events, meteorological conditions and lethality;
- Determine and comment on the societal risk posed by the facility;
- Indicate whether the plant qualifies as an MHI;
- Recommend mitigation measures to minimise risk where required; and
- Identify and assess impacts, including cumulative impacts of the project.

### 6.5.3 Climate Change

The proposed Terms of Reference for this study are as follows:

- Determine the Greenhouse Gas (GHG) inventory of the project for project construction and operational phases with respect to direct and indirect emissions. In this context:
  - Determine the project boundaries;
  - Identify sources of greenhouse gas emissions and priority pollutants;
  - Calculate the project's carbon footprint; and
  - Provide guidance on reporting and verification;
  - Analyse the project's greenhouse gas emissions, including upstream and downstream sources of greenhouse gas emissions (Scope 3 emissions);
  - Where information is not available in this regard, develop a set of assumptions to inform the upstream and downstream greenhouse gas emissions;
  - Assessment of the impact of carbon tax as a result of the project
- Climate change impact assessment:
  - Determine a climate change baseline for the project;
  - Determine the impact of the project's greenhouse gas emissions (carbon dioxide, methane and nitrous oxide) on climate change; and
  - Comparison of impacts against project alternatives;
- Climate change vulnerability of the project:
  - Identify and assess climate change impacts, including cumulative impacts of the project
  - Potential impact of climate change on the project in terms of available climate data;
  - Potential climate change impacts for the region of operation in terms of project risks, the social context, project value chain and broader environmental risks.
- Analysis of project alternatives and potential mitigation / adaptation measures.

### 6.5.4 Noise

The proposed Terms of Reference for this study are as follows:

- Identify receptors that are potentially sensitive to noise through a desktop study;
- Conduct noise measurements conforming to the specification set out in the SANS guidelines;
- Ensure that the protocols followed during the survey work will comply with those set out within ISO 1996-1:2003, equivalent SANS guidelines;

- Describe the affected environment (the “baseline”), based on existing and, where required, primary information obtained as part of the specialist study;
- Identify and assess impacts, including cumulative impacts of the project; and
- Provide practical recommendations and management measures for consideration.

### 6.5.5 Traffic

The Specialist ToR for Traffic Impact Assessment is as follows:

- Source all relevant data and studies conducted in the vicinity of the site;
- Estimate the volumes and types of road traffic that are expected to be generated by the development during its construction and operation;
- Assess the project’s contribution to the future peak-hour traffic demand on the road systems inside and outside the SEZ, and the capacities of the roads serving the SEZ to accommodate this demand;
- Assess and rate impacts on other road users, including cumulative impacts;
- Propose measures to mitigate the impacts of project-related traffic on peak-hour traffic flows and road safety; and
- Address comments raised by IAP’s on issues relating to traffic.

## 6.6 EIA Process Schedule

The key activities and the provisional timetable required to achieve the objectives of the Environmental Impact Assessment study are summarised in Table 6-8 below.

**Table 6-8: Programme of activities and target dates**

| Submission of applications for environmental authorisation  | 09 /10/2020 |            |
|---|-------------|------------|
| Submission of Draft Scoping Report (DSR) and Plan of Study for EIA to DEFF  | 09 /10/2020 |            |
| Public Comment Period for DSR   | 09 /10/2020 | 09/11/2020 |
| Submission of Final Scoping Report and Plan of Study for EIA to DEFF  | 16/11/2020  |            |
| DEFF approval of Plan of Study for EIA (potentially including recommendations)  | 16/11/2020  | 18/01/2021 |
| Complete Specialist Studies and Compile Draft EIR   |             | 29/01/2021 |
| Public Comment Period for Draft EIR   | 29/01/2021  | 01/03/2021 |
| Submit Final EIR to DEFF for a decision   | 08/03/2021  |            |
| DEFF decision making period on Final EIR (reduced by 50 days as the project falls within the list of strategic infrastructure projects) | 08/03/2021  | 16/05/2021 |

## 7 The Way Forward

The Draft Scoping Report is not a final report and will be amended in response to the comments received. It is envisaged that comments received on this report will result in refinement of the development proposal as summarised herein, and to the Plan of Study for EIA. A Final Scoping Report, incorporating those changes, will be submitted for approval to the competent authority (DEFF). The submission of the application for environmental authorisation signals the commencement of the regulated EIA process, which includes further opportunities for public and authority comment (see Figure 1-4).

The Executive Summary of this Draft Scoping Report has been distributed to all registered IAPs. The report can also be accessed as an electronic copy on SRK Consulting's webpage via the 'Public Documents' link: (<https://www.srk.com/en/public-documents>).

Interested and Affected Parties are urged to review this report and submit comments as these could influence the Final Scoping Report. Comments should be submitted in writing and must reach SRK by 12h00 on **9 November 2020**. Comments must be forwarded to:

[lnaidoo@srk.co.za](mailto:lnaidoo@srk.co.za)


Tel: + 27 41 509 4800

Fax: +27 41 509 4850

### Prepared by:

SRK Consulting - Certified Electronic Signature  
  
 553652/44095/Report1  
 9009-9592-421-VNAB-29/09/2020  
 This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database.

Abby van Nierop BSc (Hons)  
 Environmental Scientist

SRK Consulting - Certified Electronic Signature  
  
 553652/44094/Report1  
 9415-9626-3114-RUMP-22/09/2020  
 This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database.

Nicola Rump CEAPSA  
 Principal Environmental Scientist

### Reviewed by:

SRK Consulting - Certified Electronic Signature  
  
 553652/44101/Report1  
 9026-5189-2229-DALC-29/09/2020  
 This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database.

Chris Dalgliesh Registered EAP No 20019/413  
 Director, Principal Environmental Scientist

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

---

## 8 References

- Adriatic LNG. (n.d.). How open rack vaporizer work.
- Almond, J. E. (April 2010). *Kalagadi Manganese Smelter, Zone 5, Coega IDZ, Nelson Mandela Bay Municipality, Eastern Cape Province: Desktop Palaeontological Assessment*. Nature Viva cc.
- Barnes, K. (. (2000). *The Eskom Red Data Book of Birds of South Africa, Lesotho and Swaziland*.
- Binneman, J. (May 2010). *A Phase 1 Archaeological Heritage Impact Assessment of Zone 5 in the Coega Industrial Development Zone for the proposed construction of a Manganese Smelter, near Port Elizabeth, Nelson Mandela Bay Municipality, Eastern Cape Province*. Eastern Cape Heritage Consultants.
- Birdlife International*. (2012). Retrieved November 22, 2012, from Birdlife International IUCN Red List for birds: <http://www.birdlife.org>
- Branch, W. (1988). Terrestrial reptiles and amphibians. In R. Lubke, F. Gess, & M. Bruton (Eds.), *A Field Guide to the Eastern Cape Coast* (pp. 251-264). Grahamstown Centre for the Wildlife Society of Sothern Africa.
- C&M Consulting Engineers. (2012). *Coega annual ambient air quality report: January 2011 - December 2011*.
- Carnegie Energie. (2019). *Memo: Technical Inputs to Coega Gas to Power EIA Scoping Report*.
- CDC. (20 July 2015). The Case for Coega's Gas Readiness - Fast Facts.
- CDC. (23 September 2015). Coega Readiness: Location for Gas-to- Power Plant.
- CDC. (23 September 2015). Overview of 2009 Feasibility Study.
- CES. (1997). *Strategic Environmental Assessment of the Coega IDZ - Terrestrial Specialist Report*. Grahamstown: Coastal & Environmental Services.
- CES. (2008). *Scoping Report: Proposed Kalagadi Manganese Smelter in the Coega IDZ*. Grahamstown: Coastal & Environmental Services.
- Cooperman, A., Dieckmann, J., & Brodrick, J. (2012, January). Power Plant Water Use. *ASHRAE Journal*, 65-68.
- CSIR. (1997). *Strategic Environmental Assessment for the Proposed Industrial Development Zone Harbour at Coega*. CSIR, Stellenbosh: CSIR Report No. ENV-S-C 97025.
- DOE. (October 2016). *Information Memorandum for New Generation Capacity for the LNG-to-Power Independent Power Producer Procurement Programme*. Independent Power Producer Office: Department of Energy.
- Dold, A. (2002). *A taxonomic revision of the genus Bergeranthus Schwantes (Mesembryanthemaceae) in South Africa*. Rhodes University: MSc Thesis.
- DWS. (n.d.). *Reconciliation Strategy for the Algoa Water Supply System*. Retrieved April 25, 2016, from Department of Water & Sanitation: <https://www.dwa.gov.za/Projects/algoa/>
- Eisentrou, B. (2006). Study focuses on six LNG regasification systems. *LNG journal*, 21-22.
- Enggcyclopedia*. (2012, October 6). Retrieved 12 5, 2016, from Enggcyclopedia: <http://www.enggcyclopedia.com/2012/10/procedures-pigging-operations/>
- Eskom. (2014, August 5). *Homeflex Tariff*. Retrieved December 5, 2016, from Eskom: <http://www.eskom.co.za/CustomerCare/TariffsAndCharges/Documents/Eskom%20Booklet.pdf>

- Friedmann, Y., & Daly, B. (Eds.). (2004). *Red Data Book of the Mammals of South Africa: A Conservation Assessment*. CBSG Southern Africa, Conservation Breeding Specialist Group (SSG/IUCN). Endangered Wildlife Trust, South Africa.
- GIIGNL. (2012-2015). Summary Report by the GIIGNL Technical Study Group on the Behaviour of LNG in Storage. *Rollover in LNG 2nd Ed.*
- Grange, E. I. (2013, August 9). *Engineering news*. Retrieved December 5, 2016, from Engineering news: <http://www.engineeringnews.co.za/article/the-case-for-mid-merit-power-generation-2013-08-09>
- Keltic Petrochemicals Inc. . (2007). *Liquid Natural Gas Facilities and Marginal Wharf: Comprehensive Study Report - Final Report*.
- Lloyd's Register. (2016). *Floating Storage and Regasification Units: A report on the commercial and technical aspects of the construction and conversion of floating units for storage and/or regasification*.
- Mechanical Booster*. (2013). Retrieved December 5, 2016, from Mechanical Booster: <http://www.mechanicalbooster.com/2016/06/closed-cycle-gas-turbine.html>
- Mott Macdonald. (2016). *IPP LNG-to-Power Project*.
- MSLGROUP. (n.d.). *LNG for shipping*. Retrieved 12 5, 2016, from LNG for shipping: <https://lngforshipping.eu/lng-for/bunkering>
- Mucina, L., & Rutherford, M. (2006). *The vegetation of South Africa, Lesotho and Swaziland*. Strelitzia 19. South African National Biodiversity Institute, Pretoria.
- Patel, D. (2013). *LNG VAPORIZER SELECTION BASED ON SITE AMBIENT CONDITIONS*.
- PRDW. (10 June 2016). *SA Gas to Power Medium-term Programme: Ngqura: Dredging Assessment*. Prestedge Retief Dresner Wijnberg (Pty) Ltd.
- PRDW. (2016). *SA Gas to Power Medium-term Programme: Ngqura Pre-feasibility Study (FEL2)*. Prestedge Retief Dresner Wijnberg (Pty) Ltd.
- Quirijns, S. (2015). *A literature study into the world of LNG*.
- Saussus, P. (2012, January 10). *Power Magazine*. Retrieved January 13, 2016, from <http://www.powermag.com/major-noise-sources-and-mitigation-cost-estimates-for-gas-fired-power-facilities/>
- STEP. (2004). *The STEP Mapbook. Subtropical Thicket Ecosystem Planning Project: Sundays River Mapbook*. Port Elizabeth: Nelson Mandela Metropolitan Municipality Spatial Development Framework.
- Transnet SOC Ltd. (2015). *Natural Gas Infrastructure and Planning*.
- Vlok, J., & Euston-Brown, D. (2002). *The patterns within, and the ecological processes that sustain, the Subtropical Thicket Vegetation in the planning domain for the Subtropical Thicket Ecosystem Planning (STEP) Project*. Terrestrial Ecology Research Unit, University of Port Elizabeth. Report No. 40.
- Weatherspark*. (2012). Retrieved November 2, 2012, from Average Weather for Port Elizabeth, South Africa: <http://weatherspark.com/averages/29027/Port-Elizabeth-Eastern-Cape-South-Africa>
- Worley Parsons. (2009). *CCGT Prefeasibility Study*.
- Zaretskaya, V. (2015, April 27). *Floating LNG regasification is used to meet rising natural gas demand in smaller markets*. Retrieved December 5, 2016, from U.S. Energy Information Administration (EIA) : <http://www.eia.gov/todayinenergy/detail.php?id=20972>

# Appendices

## **Appendix A: CV's of Key Professionals**



## **Appendix B: EIA Application Form**

## **Appendix C: On-site and E - Notices**

## **Appendix D: Newspaper Notice**

To be provided with FSR

## **Appendix E: Background Information Document**

## **Appendix F: Presentation to ELC on 20 August 2020**

## **Appendix G: Proof of IAP Notification**

## **Appendix H: IAP Correspondence on BID**

## **Appendix I: Layout drawings**



## **Appendix J: Site Photographs**

## SRK Report Distribution Record

Report No.

553652/Z10N/1

Copy No.

| Name/Title         | Organisation               | Copy       | Date           | Authorised by |
|--------------------|----------------------------|------------|----------------|---------------|
| Viwe Biyana        | CDC                        | Electronic | 9 October 2020 | C Dalgliesh   |
| Duane Mouton       | CDC                        | Electronic | 9 October 2020 | C Dalgliesh   |
| Muhammad Essop     | DEFF                       | Electronic | 9 October 2020 | C Dalgliesh   |
| Wayne Hector       | DEFF                       | Electronic | 9 October 2020 | C Dalgliesh   |
| Coenrad Agenbach   | DEFF                       | Electronic | 9 October 2020 | C Dalgliesh   |
| Sizwe Mvulelwa     | NMBM Environmental Health  | 1          | 9 October 2020 | C Dalgliesh   |
| Ward 53 Councillor | NMBM                       | 2          | 9 October 2020 | C Dalgliesh   |
| Andries Struwig    | DEDEAT                     | electronic | 9 October 2020 | C Dalgliesh   |
| -                  | SRK Port Elizabeth Library | Electronic | 9 October 2020 | C Dalgliesh   |

SRK Consulting - Certified Electronic Signature

 srk consulting

553652/44101/Report1

9226-5189-2229-DALC-29/09/2020

This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

Approval Signature:

This report is protected by copyright vested in SRK (SA) (Pty) Ltd. It may not be reproduced or transmitted in any form or by any means whatsoever to any person without the written permission of the copyright holder, SRK.

**From:** [Lyndle Naidoo](#)  
**To:** "[christelle@habitatlink.co.za](mailto:christelle@habitatlink.co.za)"  
**Cc:** [Nicola Rump](#)  
**Subject:** RE: CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape  
**Date:** Thursday, 12 November 2020 15:20:00

---

Good day Christelle,

Thank you for your email, your details have been added. Herewith the link to the project  
<https://docs.srk.co.za/en/za-cdc-coega-3000-mw-gas-power-project-eias>

**Kind regards,**

**Lyndle Naidoo** *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850

**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** christelle@habitatlink.co.za <christelle@habitatlink.co.za>

**Sent:** Thursday, 12 November 2020 15:04

**To:** Lyndle Naidoo <LNaidoo@srk.co.za>

**Subject:** CDC Coega Proposed 3000 MW Gas to Power Project, Coega SEZ, Eastern Cape

**EXTERNAL**

Good afternoon Lyndle

Kindly register me for the above project as the independent ECO for the Coega SEZ and please provide me with the relevant link to download documents.

Thanks

Christelle



**Christelle du Plessis (Pr. Sci. Nat.)**  
Environmental Consultant

christelle@habitatlink.co.za  
074 148 5583

PO Box 63879  
Greenacres  
6057

---

[www.habitatlink.co.za](http://www.habitatlink.co.za)

**From:** [Ane Oosthuizen](#)  
**To:** [Nicola Rump](#); [Rob Milne](#)  
**Cc:** [Lyndle Naidoo](#)  
**Subject:** RE: CDC 3000 MW gas to power EIAs- DSRs  
**Date:** Thursday, 19 November 2020 11:01:25

---

**EXTERNAL**

Hi Nicola

SANParks are in the process of preparing comments and will submit to you as soon as completed.

regards

\*\*\*\*\*

Dr Ané Oosthuizen  
National Marine Co-ordinator  
Park Planning & Development  
South African National Parks

071 4000371

[Ane.Oosthuizen@sanparks.org](mailto:Ane.Oosthuizen@sanparks.org)

[www.sanparks.org](http://www.sanparks.org)

---

**From:** Nicola Rump [mailto:NRump@srk.co.za]  
**Sent:** 16 November 2020 16:05  
**To:** Ane Oosthuizen <[Ane.Oosthuizen@sanparks.org](mailto:Ane.Oosthuizen@sanparks.org)>; Rob Milne <[rob.milne@sanparks.org](mailto:rob.milne@sanparks.org)>  
**Cc:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>  
**Subject:** RE: CDC 3000 MW gas to power EIAs- DSRs

Dear Ane and Rob,

Please note that any comments you wish to make on the DSRs that we are unable to address in the FSRs will be submitted directly to DEFF so that they can take them into account in their decision on the FSRs, and furthermore we will address them in the Draft EIR. Please do not hesitate to contact me should you have any queries about this.

Kind regards,  
Nicola

---

**From:** Nicola Rump  
**Sent:** Friday, 13 November 2020 14:32  
**To:** [Ane.Oosthuizen@sanparks.org](mailto:Ane.Oosthuizen@sanparks.org); [rob.milne@sanparks.org](mailto:rob.milne@sanparks.org)  
**Cc:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>  
**Subject:** CDC 3000 MW gas to power EIAs- DSRs

Dear Ane and Rob,

As you may be aware, we are currently doing the EIAs (4 in total, running concurrently) for the CDC's gas to power project. I noticed that you aren't registered as IAPs for the project, so may not have seen the Draft Scoping Reports to be able to comment on them – I have attached the

executive summaries thereof for your information (the full reports are available for download from our website). Unfortunately the comment period for the DSRs is over and we are wrapping up the FSRs for submission next week, however please contact me if you have any comments or queries, and we will see how we can address them. I have taken the liberty of registering you as IAPs on our database so that you will receive future updates on the project.

Kind regards,

**Nicola Rump (MSc) CEAPSA**

Principal Environmental Scientist



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humerail, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

**Tel:** +27-(0)41-509-4800; **Fax:** +27-(0)41-509-4850

**Email:** [nrump@srk.co.za](mailto:nrump@srk.co.za) ; **Skype:** nicola.rump.srk

[www.srk.co.za](http://www.srk.co.za)

In light of the lockdown SRK staff will be working remotely using the company's technological infrastructure and resources to ensure that work and project activities proceed as seamlessly as possible. SRK staff will continue to be responsive to client queries and requests during the lockdown period. Our preferred method of communication is email and if unsuccessful I can be contacted on 0824252751.

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail



**Disclaimer:** 1) Confidentiality: This email communication and any attachments sent from [ane.oosthuizen@sanparks.org](mailto:ane.oosthuizen@sanparks.org) to [lnaidoo@srk.co.za](mailto:lnaidoo@srk.co.za) on 2020-11-19 11:01:05 are confidential and may contain privileged or copyright information. You may not present this message to another party without consent from the sender. If you are not [lnaidoo@srk.co.za](mailto:lnaidoo@srk.co.za) please notify [ane.oosthuizen@sanparks.org](mailto:ane.oosthuizen@sanparks.org) and delete this email and you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited. 2) Liability: This email is not a binding agreement and does not conclude an agreement without the express confirmation by the sender's superior or relevant authorisation of SANParks. 3) Viruses: SANParks does not certify that this email is free of viruses or defects. 4) Requested: SANParks does not consent to its employees sending un-asked for emails which contravene the law. In the event that you feel this email is such, please notify SANParks in order for the appropriate corrective action to be taken. 5) Advice: Any views or opinions presented in this email are solely those of the author and do not necessarily represent those of SANParks. Any actions taken on the basis of this email are at the reader's own risk. 6) Other: The sender of this email is expressly required not make any defamatory statements. Any such communication is contrary to SANParks policy and outside the scope of the employment of the individual concerned. SANParks will not accept any liability in respect of such communication, and the employee responsible will be personally liable for any damages or other liability arising. Thank you. South African National Parks 643 Leyds Street, Muckleneuk, Pretoria, South Africa

---

## Lyndle Naidoo

---

**Attachments:** 14-12-16-3-3-2-2010.pdf; 14-12-16-3-3-2-2011.pdf; 14-12-16-3-3-2-2012.pdf

---

**From:** EIAAdmin <[EIAAdmin@environment.gov.za](mailto:EIAAdmin@environment.gov.za)>  
**Sent:** Monday, 02 November 2020 14:01  
**To:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>; [themba.koza@coega.co.za](mailto:themba.koza@coega.co.za)  
**Cc:** Mmamohale Kabasa <[MKabasa@environment.gov.za](mailto:MKabasa@environment.gov.za)>; EIAAdmin <[EIAAdmin@environment.gov.za](mailto:EIAAdmin@environment.gov.za)>  
**Subject:** 14/12/16/3/3/2/2010, 2011 & 2012

**EXTERNAL**

Good day.

Please find herein the attached letters for the above mentioned.

I hope you find all in order.

Thank you.

Kind Regards,  
Integrated Environmental Authorisations:  
IEM Systems and Tools Coordination  
Tel (012) 399 8630 / 9370 / 9367  
Email: [EIAAdmin@environment.gov.za](mailto:EIAAdmin@environment.gov.za)



***Please be informed that the Departmental EIA related templates were updated. It can be downloaded from the Departmental web address at [https://www.environment.gov.za/documents/forms#legal\\_authorisations](https://www.environment.gov.za/documents/forms#legal_authorisations).***

'Please consider the environment before you print this email'

### Disclaimer

This message and any attachments transmitted with it are intended solely for the addressee(s) and may be legally privileged and/or confidential. If you have received this message in error please destroy it and notify the sender. Any unauthorized usage, disclosure, alteration or dissemination is prohibited. The Department of Environmental Affairs accepts no responsibility for any loss whether it be direct, indirect or consequential, arising from information made available and actions resulting there from. The views and opinions expressed in this e-mail message may not necessarily be those of Management..



# environment, forestry & fisheries

Department:  
Environment, Forestry and Fisheries  
**REPUBLIC OF SOUTH AFRICA**

Private Bag X 447· PRETORIA 0001· Environment House 473 Steve Biko Road, Arcadia,· PRETORIA

DEA Reference: 14/12/16/3/3/2/2010

Enquiries: Mmamohale Kabasa

Telephone: (012) 399 9420 E-mail: MKabasa@environment.gov.za

Ms Nicola Rump  
SRK Consulting (South Africa) (Pty) Ltd  
PO Box 21842  
**PORT ELIZABETH**  
6000

Telephone Number: (041) 509 4800  
Email Address: nrump@srk.co.za

## PER MAIL / E-MAIL

Dear Ms Rump

### **COMMENTS ON THE DRAFT SCOPING REPORT FOR THE PROPOSED DEVELOPMENT OF THE COEGA ZONE 10 NORTH 1000MW GAS TO POWER PLANT ON ERF 351 OF THE COEGA INDUSTRIAL DEVELOPMENT ZONE WITHIN THE NELSON MANDELA BAY MUNICIPALITY IN THE EASTERN CAPE PROVINCE**

The Application for Environmental Authorisation and draft Scoping Report (SR) dated October 2020 and received by the Department on 09 October 2020 refer.

This letter serves to inform you that the following information must be included in the final SR:

#### **(a) Listed Activities**

- i. Please ensure that all relevant listed activities are applied for, are specific and can be linked to the development activity or infrastructure as described in the project description.
- ii. If the activities applied for in the application form differ from those mentioned in the final SR, an amended application form must be submitted. Please note that the Department's application form template has been amended and can be downloaded from the following link <https://www.environment.gov.za/documents/forms>.

#### **(b) Layout & Sensitivity Maps**

- i. Please provide a layout map which indicates the following:
  - a) Positions of the power island, steam turbine and generator, fuel storage tanks, water storage reservoir and tanks, water and gas supply pipelines;
  - b) Permanent laydown area footprint;
  - c) All supporting onsite infrastructure e.g. roads (existing and proposed);
  - d) Substation(s) and/or transformer(s) sites including their entire footprint;
  - e) Connection routes (including pylon positions) to the distribution/transmission network; and
  - f) All existing infrastructure on the site.
- ii. Please provide an environmental sensitivity map which indicates the following:
  - a) The location of sensitive environmental features on site e.g. CBAs, heritage sites, wetlands, drainage lines etc. that will be affected;
  - b) Buffer areas; and,

MS.



- c) All "no-go" areas.
- iii. The above layout map must be overlain with the sensitivity map and a cumulative map which shows neighbouring energy developments and existing grid infrastructure.

**(c) Public Participation Process**

- i. Please ensure that all issues raised and comments received during the circulation of the draft SR from registered I&APs and organs of state (including this Department's Climate Change Section), which have jurisdiction in respect of the proposed activity are adequately addressed in the final SR. Proof of correspondence with the various stakeholders must be included in the final SR. Should you be unable to obtain comments, proof should be submitted to the Department of the attempts that were made to obtain comments.
- ii. The Public Participation Process must be conducted in terms of Regulation 39, 40 41, 42, 43 & 44 of the EIA Regulations 2014, as amended.
- iii. A comments and response trail report (C&R) must be submitted with the final SR. The C&R report must incorporate all historical comments for this development. The C&R report must be a separate document from the main report and the format must be in the table format as indicated in Annexure 1 of this comments letter. Please refrain from summarising comments made by I&APs. All comments from I&APs must be copied verbatim and responded to clearly. Please note that a response such as "Noted" is not regarded as an adequate response to I&AP's comments.
- iv. The final SR must provide evidence that all identified and relevant competent authorities have been given an opportunity to comment on the proposed development particularly, the Eastern Cape Environmental Department, and the District and Local Municipalities.

**(d) Specialist Assessments**

- i. Specialist studies to be conducted must provide a detailed description of their methodology, as well as indicate the locations and descriptions of infrastructure positions, and all other associated infrastructures that they have assessed and are recommending for authorisation.
- ii. The specialist studies must also provide a detailed description of all limitations to their studies. All specialist studies must be conducted in the right season and providing that as a limitation, will not be accepted.
- iii. Should the appointed specialists specify contradicting recommendations, the EAP must clearly indicate the most reasonable recommendation and substantiate this with defensible reasons and where necessary, include further expertise advice.

**(e) Cumulative Assessment**

- i. As there are other similar Gas to Power plants proposed within a 30km radius of the proposed development site, a cumulative impact assessment must be conducted for all identified and assessed impacts which must be refined to indicate the following:
  - a) Identified cumulative impacts must be clearly defined, and where possible the size of the identified impact must be quantified and indicated, i.e. hectares of cumulatively transformed land.
  - b) Detailed process flow and proof must be provided, to indicate how the specialist's recommendations, mitigation measures and conclusions from the various similar developments in the area were taken into consideration in the assessment of cumulative impacts and when the conclusion and mitigation measures were drafted for this project.
  - c) The cumulative impacts significance rating must also inform the need and desirability of the proposed development.
  - d) A cumulative impact environmental statement on whether the proposed development must proceed.

**(f) Specific comments**

- i. The proposed Air Quality and Climate Change assessment specialist studies terms of reference (TORs) must be made available to this Department's Climate Change Directorate for comments. Proof of correspondence must be included in the public participation report.
- ii. Figure 1-1 on page 14 of 117 of the draft SR indicate the location of an LNG and Gas hub that would be used for conditioning of the LNG to be utilised in the Zone 10 North power plant. The EAP is requested to provide the EA status of this facility and indicate how the LNG would be transferred from the conditioning facility to the Zone 10 North power plant.
- iii. The final SR must indicate the status of the marine pipeline servitude intended for seawater cooling for the Zone 10 North power plant.
- iv. The EAP must decide on an alternative for cooling to be chosen to be taken into the EIA phase, and this must be reflected in the final SR.
- v. It must be noted that the preferred option of cooling, could be deemed as a fatal flaw, as there is no progress on the marine pipeline, which this project is dependent upon.
- vi. Activities 12 and 14 of Listing Notice 3 as applied for in the application form and included in the draft SR are not relevant to this application as the Coega IDZ is located within the urban edge. The application form and final SR must be updated accordingly, and this must be confirmed by the EAP in conjunction with the Municipality.
- vii. The landowner contact person is different from the applicant contact person. The EAP must therefore submit a signed landowner consent as prescribed in terms of Regulation 39(1) of the EIA Regulations, 2014 as amended, and outlined in the application form, if the landowner is different from the applicant.

**General**

You are further reminded to comply with Regulation 21(1) of the NEMA EIA Regulations 2014, as amended, which states that:

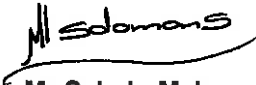
*"If S&EIR must be applied to an application, the applicant must, within 44 days of receipt of the application by the competent authority, submit to the competent authority a scoping report which has been subjected to a public participation process of at least 30 days and which reflects the incorporation of comments received, including any comments of the competent authority"*

You are further reminded that the final SR to be submitted to this Department must comply with all the requirements in terms of the scope of assessment and content of Scoping Reports in accordance with Appendix 2 and Regulation 21(1) of the EIA Regulations 2014, as amended.

Further note that in terms of Regulation 45 of the EIA Regulations 2014, as amended, this application will lapse if the applicant fails to meet any of the timeframes prescribed in terms of these Regulations, unless an extension has been granted in terms of Regulation 3(7).

You are hereby reminded of Section 24F of the National Environmental Management Act, Act No. 107 of 1998, as amended, that no activity may commence prior to an Environmental Authorisation being granted by the Department.

Yours sincerely



**Mr Sabelo Malaza**  
**Chief Director: Integrated Environmental Authorisations**  
**Department of Environment, Forestry and Fisheries**  
**Letter signed by: Ms Milicent Solomons**  
**Designation: Director: Priority Infrastructure Projects**  
**Date: 30/10/2020.**

|     |             |                                   |                                |
|-----|-------------|-----------------------------------|--------------------------------|
| cc: | Themba Koza | The Coega Development Corporation | Email: themba.koza@coega.co.za |
|-----|-------------|-----------------------------------|--------------------------------|

## Annexure 1

Format for Comments and Response Trail Report:

| Date of comment, format of comment name of organisation/I&AP   | Comment  | Response from EAP/Applicant/Specialist   |
|--|--|--|
| 27/01/2016<br>Email<br>Department of Environmental Affairs: Strategic Infrastructure Development (John Soap) | Please record C&R trail report in this format<br><br>Please update the contact details of the provincial environmental authority | EAP: (Noted)The C&R trail report has been updated into the desired format, see Appendix K<br><br>EAP: Details of provincial authority have been updated, see page 16 of the Application form |

**From:** [Whittington, Philip \(Dr\) \(Summerstrand Campus South\)](#)  
**To:** [Lyndle Naidoo](#)  
**Subject:** Comments on proposed gas to power project, Coega SEZ  
**Date:** Friday, 06 November 2020 17:16:17  
**Attachments:** [Comments on Draft Scoping Reports Coega.docx](#)

---

**EXTERNAL**

Dear Lyndle

Please find attached my comments relating to the draft scoping reports for the above project. I would be grateful if you could confirm receipt of these comments.

With best wishes

Phil Whittington

Dr P.A. Whittington  
Ornithologist  
East London Museum  
PO Box 11021  
Southernwood  
5213  
South Africa  
Tel +27 (0)43 743 0686  
Fax +27 (0)43 743 3127  
Email: [philw@elmuseum.za.org](mailto:philw@elmuseum.za.org)

---

NOTICE: Please note that this eMail, and the contents thereof, is subject to the standard Nelson Mandela University eMail disclaimer which may be found at:  
<http://www.mandela.ac.za/disclaimer/email.htm>

## Comments on Draft Scoping Reports: CDC Coega proposed 3000MW gas to power project, Coega SEZ, Eastern Cape

### All Reports

1. Figure 1-4 in the three power plant DSRs and Figure 1-3 in the Gas Infrastructure DSR do not include the Appeal process.
2. Reference list for all four DSRs: Branch 1988a, Branch 1998 and Branch 1999 are omitted from the reference lists (there may be other omissions but these are the ones I happened to notice).

### Zone 13 1000MW Power Plant DSR

1. Section 3.6.2: Taylor *et al.* (2015) should be used in preference to Barnes (2000) as it is more up to date. The full reference is: Taylor, M.R., Peacock, F. and Wanless, R.W. (eds). 2015. The Eskom Red Data Book of Birds of South Africa, Lesotho and Swaziland. BirdLife South Africa, Johannesburg. Taylor *et al.* (2015) lists blue crane as Near Threatened, and Martial eagle and African marsh harrier as Endangered. Secretarybird has been uplisted to Vulnerable by Taylor *et al.* (2015).
2. Table 6-1: There is no guarantee that the wetland close to the site will be the same as those identified in the 2016 study and should therefore be investigated by the relevant specialists.

### Zone 10 South and Zone 10 North Power Plant DSRs

1. Section 3.6.2, Birds, paragraph 2, first sentence: Please cite the source of this information.
2. Section 3.6.2, Birds, paragraph 2, line 6: there is more up to data information for the Roseate Tern. Tree *et al.* (2019) states that the breeding population on the Algoa Bay islands has ranged from 60-300 pairs. See Tree, A.J., Connan, M. and Whittington, P.A. 2019. Roseate Terns *Sterna dougallii* on the southeast coast of South Africa: information on moult and migratory status. *Ostrich* 90(4): 303-313.
3. Section 3.6.2, Birds, paragraph 2, lines 7 & 10: What is meant by “congregatory threshold” and what is the relevance of this?
4. Section 3.6.2, Birds, paragraph 3: Taylor *et al.* (2015) should be used in preference to Barnes (2000) as it is more up to date. The full reference is: Taylor, M.R., Peacock, F. and Wanless, R.W. (eds). 2015. The Eskom Red Data Book of Birds of South Africa, Lesotho and Swaziland. BirdLife South Africa, Johannesburg. Taylor *et al.* (2015) lists blue crane as Near Threatened, and Martial eagle and African marsh harrier as Endangered.
5. Section 3.6.2, Birds, paragraph 4: Damara Tern has been uplisted to Critically Endangered and African Black Oystercatcher downlisted to Least Concern by Taylor *et al.* (2015) (see 4. above).
6. Section 3.6.2, Birds, paragraph 4, lines 5-8: This is incorrect and misleading. You cannot compare a regional Red List assessment (Barnes 2000) with a global Red List assessment (BirdLife International) as they are different entities. Barnes (2000) has now been updated anyway by Taylor *et al.* (2015) and the global information given also needs updating. Under the regional Red Data list Damara Tern is listed as Critically Endangered and African Black Oystercatcher as Least Concern (Taylor *et al.* 2015). Globally, Damara Tern is listed as Vulnerable and African Black Oystercatcher as Least Concern (BirdLife International 2020). BirdLife International (2020) IUCN Red List for birds. Downloaded from <http://www.birdlife.org> on 06/11/2020.

7. Section 3.6.2, Birds: There is a breeding colony of Damara Terns within 200-300m of the proposed power station and gas infrastructure sites. This should be mentioned in this section as well as in section 3.6.1 on page 50.
8. Section 3.6.2, Birds, paragraph 5: Secretarybird has been uplisted to Vulnerable by Taylor *et al.* (2015).

### Gas Infrastructure DSR

1. The increase in shipping resulting from one LGNC delivery every three days will inevitably increase the risk of accidents that could potentially result in a spillage of oil/fuel within the bay. This could have catastrophic consequences for the African penguin, which has seen a drastic population decrease over the last 20 years and is now listed as globally and regionally Endangered. According to this report, Algoa Bay holds 43% of the African penguin population with the largest single colony being at St Croix Island, within close proximity of the planned development.
2. Increased turbidity of the water column at the dredge dumping site may potentially interfere with foraging of seabirds, particularly the African penguin. This should perhaps be investigated as part of the Marine Ecology specialist study.
3. Section 3.6.2, Birds, paragraph 2, last sentence. This statement is incorrect. A small population of Roseate Terns breeds annually at Dyer Island, near Gansbaai, off the coast of the Western Cape.
4. Section 3.6.2, Birds, paragraph 3: the first and last sentences require a reference.
5. Section 3.6.2, Birds, paragraph 4: What is meant by “congregatory threshold” and what is the relevance of this?
6. Section 3.6.2, Birds, paragraph 5: Use Taylor *et al.* (2015) rather than Barnes (2000). Taylor *et al.* (2015) lists blue crane as Near Threatened, and Martial eagle and African marsh harrier as Endangered.
7. Section 3.6.2, Birds, paragraph 6, lines 4-8: This is incorrect and misleading. You cannot compare a regional Red List assessment (Barnes 2000) with a global Red List assessment (BirdLife International) as they are different entities. Barnes (2000) has now been updated anyway by Taylor *et al.* (2015) and the global information given also needs updating. Under the regional Red Data list Damara Tern is listed as Critically Endangered and African Black Oystercatcher as Least Concern (Taylor *et al.* 2015). Globally, Damara Tern is listed as Vulnerable and African Black Oystercatcher as Least Concern (BirdLife International 2020). BirdLife International (2020) IUCN Red List for birds. Downloaded from <http://www.birdlife.org> on 06/11/2020.
8. Section 3.6.2, Birds, paragraph 7: Secretarybird has been uplisted to Vulnerable by Taylor *et al.* (2015).
9. Given the close proximity of the Greater Addo Elephant National Park, why were no representatives of South African National Parks invited to register as Interested and Affected Parties?
10. Page 80, Table 4-2, comments relating to Damara Tern: Given the inaccuracy of some of the information on birds provided in the draft scoping reports one has to call into question SRK’s view that “no further assessment of bird related impacts is required”. On what grounds is this statement made and what ornithological expertise does SRK have to support this statement?
11. I have some concerns over the effect of the discharging of warm water into the bay on the prey species of the Damara Tern. Little is known about the diet of Damara Terns in Algoa Bay or on where the terns forage. I think a study of diet and foraging behaviour of the Damara Terns needs to be carried out as part of the Marine Ecology specialist study or as a separate exercise before Environmental Authorisation can be given for this part of the project.

12. Pages 79-81, Table 4-2: In response to comments regarding marine organisms and the sand by-pass system it is stated that “Marine impacts are outside the scope of this EIA process” and yet section 6.2 clearly indicates that a Marine Ecology Assessment specialist study will be carried out as part of the Impact Assessment phase of this project. Given that this project includes the establishment of a LNG terminal within the port of Ngqura and dredging activities it cannot be justifiably stated that “Marine impacts are outside the scope of this EIA process”.
13. In Appendix I, the proposed north and south power plants are labelled the wrong way round. “Damara Turn” should be “Damara Tern”. The same applies to Appendix I for the Zone 10 North and Zone 10 South DSRs

Dr P. Whittington, 6 November 2020.



**From:** [Nicola Rump](#)  
**To:** [Lyndle Naidoo](#)  
**Cc:** [Abbigale Van Nierop](#)  
**Subject:** FW: COMMENTS ON THE PROPOSED COEGA 3000 MW GAS TO POWER PROJECT, COEGA SEZ, EASTERN CAPE PROVINCE  
**Date:** Tuesday, 10 November 2020 09:07:18  
**Attachments:** [image001.png](#)  
[PROPOSED COEGA 3000 MW GAS TO POWER PROJECT COEGA SEZ EASTERN CAPE PROVINCE.pdf](#)

---

Comments from DEFF biodiversity section

---

**From:** Seoka Lekota <[SLekota@environment.gov.za](mailto:SLekota@environment.gov.za)>  
**Sent:** Monday, 09 November 2020 23:49  
**To:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>  
**Cc:** Portia Makitla <[PMakitla@environment.gov.za](mailto:PMakitla@environment.gov.za)>; Aulicia Maifo <[amaifo@environment.gov.za](mailto:amaifo@environment.gov.za)>  
**Subject:** COMMENTS ON THE PROPOSED COEGA 3000 MW GAS TO POWER PROJECT, COEGA SEZ, EASTERN CAPE PROVINCE

**EXTERNAL**

Dear Nicola

Attached find our comments for implementation during the final Scoping phase.



**Seoka Lekota**  
**Deputy Director: Biodiversity Mainstreaming EIA**  
**Department of Environment Forestry & Fisheries**  
**Tell: +27 (12) 399 9573**  
**Email: [SLekota@environment.gov.za](mailto:SLekota@environment.gov.za)**

**Disclaimer**

This message and any attachments transmitted with it are intended solely for the addressee(s) and may be legally privileged and/or confidential. If you have received this message in error please destroy it and notify the sender. Any unauthorized usage, disclosure, alteration or dissemination is prohibited. The Department of Environmental Affairs accepts no responsibility for any loss whether it be direct, indirect or consequential, arising from information made available and actions resulting there from. The views and opinions expressed in this e-mail message may not necessarily be those of Management..



## environment, forestry & fisheries

Department: Environment, Forestry  
and Fisheries  
REPUBLIC OF SOUTH AFRICA

Private Bag 2447, Pretoria, 0001, Environment House, 473 Grieve Rd, Pretoria, 0002 Tel: +27 12 369 9000, Fax: + 27 06 625 1040

Reference: 3000 MW Coega Gas to Power

Enquiries: Ms Portia Makilla

Telephone: 012 369 9411 E-mail: [emakilla@environment.gov.za](mailto:emakilla@environment.gov.za)

Nicola Rump  
SRK Consulting (South Africa) (Pty) Ltd  
PO Box 21842  
Port Elizabeth  
6000

Telephone Number: +27 (41) 509 4800

Email Address: [nrump@srk.co.za](mailto:nrump@srk.co.za)

### PER E-MAIL

Dear Sir/Madam

### COMMENTS ON THE DRAFT SCOPING REPORT (DSR) FOR THE PROPOSED COEGA 3000 MW GAS TO POWER PROJECT, COEGA SEZ, EASTERN CAPE PROVINCE

The Directorate: Biodiversity Conservation has reviewed and evaluated the aforementioned report.

The proposed site lies at the south east part of Zone 13 of the Coega SEZ, which has been designated for industrial developments as well as power plants. The Dedisa peaking power plant and substation are situated close to the site.

The Final Scoping Report & Plan of Study must also include the following as guidelines considered and ensure that the proposed project is in compliance with their requirements:

- All relevant provincial biodiversity plans;
- NEMBA National List of Threatened Ecosystem that are threatened and in need of protection;
- Draft Species Environmental Assessment guideline;
- National Climate Change Adaptation Strategy Version UE10, 13 November 2019 and
- The site locality maps illustrating the ecological sensitivity, Open Space Management Plan (OSMP), and different alternatives, and
- The Coega Open Space Management Plan, which outline management process for the critically endangered *Ledebouria coriacea* must be submitted during the final scoping phase



**COMMENTS ON THE DRAFT SCOPING REPORT (DSR) FOR THE PROPOSED COEGA 3000 MW GAS TO POWER PROJECT, COEGA SEZ, EASTERN CAPE PROVINCE**

The final scoping phase must assess the cumulative impacts and also attach the cumulative map showing existing industrial developments since the area is zoned as industrial area.

In order to minimize loss of biodiversity the final report including the specialist studies must clearly describe how different stages of the mitigation hierarchy was applied.

Yours faithfully



**Mr Seoka Lekota**  
Control Biodiversity Officer Grade B: Biodiversity Conservation  
Department of Environmental affairs  
Date: 09/11/2020

**From:** [Andries Struwig](#)  
**To:** [Lyndle Naidoo](#)  
**Cc:** [Nicola Rump](#); [Dayalan Govender](#); [Lyndon Mardon](#)  
**Subject:** RE: Request for Extension to Comment--Energy Projects  
**Date:** Wednesday, 11 November 2020 17:09:37  
**Attachments:** [Scoping Report Template DEFEAT comment.pdf](#)

---

**EXTERNAL**

Good afternoon Ms Naidoo

Please find attached the second document as referred to in the email below.

Thank you.

**Andries Struwig**  
**Manager: EQM**  
**Cacadu Region**

---



Province of the  
**EASTERN CAPE**  
ECONOMIC DEVELOPMENT,  
ENVIRONMENTAL AFFAIRS AND TOURISM

Andries Struwig Pr. Sci. Nat.  
Tel: 041 508 5840 • Mobile: 079 503 1762  
Cnr of Athol Fugard Terrace & Castle Hill, Central  
Port Elizabeth, 6001  
P/Bag X5001, Greenacres, South Africa, 6057  
<http://www.dedea.gov.za/>  
<mailto:andries.struwig@dedea.gov.za>

---

**From:** Andries Struwig  
**Sent:** Wednesday, 11 November 2020 16:22  
**To:** Lyndle Naidoo <LNaidoo@srk.co.za>  
**Cc:** Nicola Rump <NRump@srk.co.za>; Dayalan Govender <Dayalan.Govender@dedea.gov.za>  
**Subject:** RE: Request for Extension to Comment--Energy Projects

Good afternoon Ms Naidoo

Further to the email below I attach the PDF document for the 1000MW gas to powerplant in Zone 13 of the SEZ. Please note the following:

- Comments are included in the document as sticky notes.
- Perusal of the three draft Scoping Reports has indicated that they are very similar in content. I have therefore made detailed comment on the SR for the Zone 13 site and these are relevant to all three draft Scoping Reports. In addition I have made further comments that are specifically relevant to the two sites in Zone 10 within the draft Scoping Report for the Zone 10 north site. I will be sending this in a separate email due to the size of the files. The SR for the Zone 10 south site is in essence similar to the one for the Zone 10 north site and I have thus not made separate comments in this SR.

In addition the following needs to be highlighted specifically.

- It is concerning that the documentation references this as an overall Coega Power Project with the different components being interlinked. Yet there are three separate applications and furthermore the LNG to Gas Hub is not addressed at all.
- The seemingly generic nature of the assessment process is also concerning – this is due to the fact that there are no specific details available as to the specifics of the powerplants.

The location of two of the powerplants immediately adjacent to coast and within the littoral active zone is problematic. There should have been alternative locations identified for these.

- There are a lot of assumptions and uncertainties due to the fact that this project is seemingly dependent on the outcome of other assessments and applications notably the marine intake and outfall project and the gas infrastructure project.
- The details with regard to the water situation seems to be based on old information. Furthermore the whole issue of water use / demand and supply is not properly addressed / explained. The Nelson Mandela Bay is severely constraint when it comes to water and with climate change it is foreseen that it will stay this way. Use of potable water from the municipal supply system for industrial use should not even be considered as it is not sustainable- yet all three Scoping Reports references the possibility municipal supply. Unless the source of such supply is return effluent it should not be considered as an option. Furthermore it is mentioned that desalinated water will be obtained from the desalination plant associated with the aquaculture project. This is meaningless without actually explaining in detail the proposed demand and supply i.e. what is the capacity of this desalination plant and will it be able to provide in the anticipated demand for all three proposed powerplants. If seawater is to be used such as being proposed for the two powerplants in Zone 10, again the volumes needs to be explained in the context of the proposed capacity of the marine intake bearing in mind that this intake will not only be there to supply the three powerplants.
- It is evident from statements in the three scoping reports that no carbon capture and storage is proposed for the bigger project. The question is why this is not considered as one would have thought it should be considered. Furthermore it this would be a requirement how will it influence the viability of the project.
- The comments and response report references comments made on a BID that dates from 2016. One would have thought that there would be an up to date BID circulated that would be more relevant. As such comments and responses contained in the comments and response report that relate to the BID is old and out of date.

Trust that you find this in order.

**Andries Struwig**  
**Manager: EQM**  
**Cacadu Region**



Province of the  
**EASTERN CAPE**  
ECONOMIC DEVELOPMENT,  
ENVIRONMENTAL AFFAIRS AND TOURISM

Andries Struwig Pr. Sci. Nat.  
Tel: 041 508 5840 • Mobile: 079 503 1762  
Cnr of Athol Fugard Terrace & Castle Hill, Central  
Port Elizabeth, 6001  
P/Bag X5001, Greenacres, South Africa, 6057  
<http://www.dedea.gov.za/>  
<mailto:andries.struwig@dedea.gov.za>

---

**From:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>

**Sent:** Monday, 09 November 2020 16:57

**To:** Andries Struwig <[Andries.Struwig@dedea.gov.za](mailto:Andries.Struwig@dedea.gov.za)>

**Cc:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>; Dayalan Govender <[Dayalan.Govender@dedea.gov.za](mailto:Dayalan.Govender@dedea.gov.za)>

**Subject:** RE: Request for Extension to Comment--Energy Projects

Good day Mr Struwig,

That will not be a problem, thank you. We look forward to receiving your comments.

Kind regards,

Lyndle Naidoo *MSc*

Environmental Scientist

ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001

P O Box 21842, Port Elizabeth, 6000

Tel: +27-(0)41-5094800; Fax: +27-(0)41-5094850

Direct: +27-(0)41-5094838; Email: [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)

[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Andries Struwig <[Andries.Struwig@dedea.gov.za](mailto:Andries.Struwig@dedea.gov.za)>

**Sent:** Monday, 09 November 2020 14:00

**To:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>

**Cc:** Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>; Dayalan Govender <[Dayalan.Govender@dedea.gov.za](mailto:Dayalan.Govender@dedea.gov.za)>

**Subject:** RE: Request for Extension to Comment--Energy Projects

**EXTERNAL**

Good day Ms Naidoo

We have recently been providing comment on PDF reports as sticky notes within the document itself. These are easy to copy and paste into any response report that are to be compiled and also makes it easier to make substantive comment without it taking up too much time to write up as a word document.

I trust that under the circumstances this will be acceptable.

Thank you.

**Andries Struwig**  
**Manager: EQM**  
**Cacadu Region**



Province of the  
**EASTERN CAPE**  
ECONOMIC DEVELOPMENT,  
ENVIRONMENTAL AFFAIRS AND TOURISM

Andries Struwig Pr. Sci. Nat.

Tel: 041 508 5840 • Mobile: 079 503 1762

Cnr of Athol Fugard Terrace & Castle Hill, Central

Port Elizabeth, 6001

P/Bag X5001, Greenacres, South Africa, 6057

<http://www.dedea.gov.za/>

<mailto:andries.struwig@dedea.gov.za>

**From:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>  
**Sent:** Monday, 09 November 2020 13:21  
**To:** Dayalan Govender <[Dayalan.Govender@dedea.gov.za](mailto:Dayalan.Govender@dedea.gov.za)>  
**Cc:** Andries Struwig <[Andries.Struwig@dedea.gov.za](mailto:Andries.Struwig@dedea.gov.za)>; Nicola Rump <[NRump@srk.co.za](mailto:NRump@srk.co.za)>  
**Subject:** RE: Request for Extension to Comment--Energy Projects

Good day Mr Govender,

As discussed with Ms Nicola Rump, given the Department's importance to the EIA process, we are willing to accept comments made by DEDEAT after the cut-off date but request that these are please provided in Word format as well as PDF format to allow us to capture them more quickly. Kindly please submit these comments by **12<sup>th</sup> November 2020** at the latest to allow us to submit the FSRs within the project timeframes.

**Kind regards,**

**Lyndle Naidoo** *MSc*  
Environmental Scientist  
ECAPE PLZ



SRK Consulting (South Africa) (Pty) Ltd.

Ground Floor, Bay Suites, 1a Humewood Rd, Humeral, Port Elizabeth, 6001  
P O Box 21842, Port Elizabeth, 6000  
**Tel:** +27-(0)41-5094800; **Fax:** +27-(0)41-5094850  
**Direct:** +27-(0)41-5094838; **Email:** [LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)  
[www.srk.co.za](http://www.srk.co.za)

*This transmission is intended for the sole use of the addressee, and may contain information that by its privileged and confidential nature is exempt from disclosure under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended recipient or its designated agent is strictly prohibited. If you have received this transmission in error, please notify the sender immediately by replying to this transmission, or by collect call to the above phone number.*

Please consider the environment before printing this e-mail.

---

**From:** Dayalan Govender <[Dayalan.Govender@dedea.gov.za](mailto:Dayalan.Govender@dedea.gov.za)>  
**Sent:** Monday, 09 November 2020 11:07  
**To:** Lyndle Naidoo <[LNaidoo@srk.co.za](mailto:LNaidoo@srk.co.za)>  
**Cc:** Andries Struwig <[Andries.Struwig@dedea.gov.za](mailto:Andries.Struwig@dedea.gov.za)>  
**Subject:** Request for Extension to Comment--Energy Projects

**EXTERNAL**

Dear Mam

Can I request an extension to comment on these projects.

Our IT system has been very erratic so my colleagues have had problems accessing and reviewing the documents.

They have finally succeed in doing so now and are busy with the reviews.

Regards

**Dayalan Jeff Govender**  
**Regional Manager: Environmental Affairs**  
**Sarah Baartman/Nelson Mandela Bay Region**

---

Tel: 041 508 5811 • Fax: 041 508 5865, 071 674 9710  
Cnr of Athol Fugard Terrace & Castle Hill, Central  
Port Elizabeth, 6001  
P/Bag X5001, Greenacres, South Africa, 6057



Province of the  
**EASTERN CAPE**

ECONOMIC DEVELOPMENT,  
ENVIRONMENTAL AFFAIRS AND TOURISM

<http://www.dedea.gov.za/>

[Dayalan.Govender@dedea.gov.za](mailto:Dayalan.Govender@dedea.gov.za)

'Everything in this email and its attachments relating to the official business of the Eastern Cape Provincial Government and the Department of Economic Development Environmental Affairs and Tourism is proprietary to the ECPG and DEDEAT. It is confidential, legally privileged and protected by law. The person addressed in the email is the sole authorized recipient. Should you receive it in error, immediately notify the sender of the error and delete the e-mail. Any unauthorized dissemination or copying of this e-mail (or any attachment to this e-mail) or the wrongful disclosure of the information here in contained is prohibited. Also note that this form of communication is not secure, it can be intercepted, and may not necessarily be free of errors and viruses in spite of reasonable efforts to secure this medium'; and fall back to action Wrap if the disclaimer can't be inserted.

'Everything in this email and its attachments relating to the official business of the Eastern Cape Provincial Government and the Department of Economic Development Environmental Affairs and Tourism is proprietary to the ECPG and DEDEAT. It is confidential, legally privileged and protected by law. The person addressed in the email is the sole authorized recipient. Should you receive it in error, immediately notify the sender of the error and delete the e-mail. Any unauthorized dissemination or copying of this e-mail (or any attachment to this e-mail) or the wrongful disclosure of the information here in contained is prohibited. Also note that this form of communication is not secure, it can be intercepted, and may not necessarily be free of errors and viruses in spite of reasonable efforts to secure this medium'; and fall back to action Wrap if the disclaimer can't be inserted.

'Everything in this email and its attachments relating to the official business of the Eastern Cape Provincial Government and the Department of Economic Development Environmental Affairs and Tourism is proprietary to the ECPG and DEDEAT. It is confidential, legally privileged and protected by law. The person addressed in the email is the sole authorized recipient. Should you receive it in error, immediately notify the sender of the error and delete the e-mail. Any unauthorized dissemination or copying of this e-mail (or any attachment to this e-mail) or the wrongful disclosure of the information here in contained is prohibited. Also note that this form of communication is not secure, it can be intercepted, and may not necessarily be free of errors and viruses in spite of reasonable efforts to secure this medium'; and fall back to action Wrap if the disclaimer can't be inserted.



# Proposed Coega 1000 MW Gas-to-Power Plant - Zone 13

## Draft Scoping Report

Report Prepared for



**Coega Development Corporation**

Report Number 553652/Z13/1

**DEFF ref no: not yet available**



Report Prepared by



October 2020

# **Proposed Coega 1000 MW Gas-to-Power Plant - Zone 13 Draft Scoping Report**

## **Coega Development Corporation**

### **SRK Consulting (South Africa) (Pty) Ltd.**

Ground Floor Bay Suites  
1a Humewood Rd.  
Humerail  
Port Elizabeth 6001  
South Africa  
e-mail: portelizabeth@srk.co.za  
website: www.srk.co.za

Tel: +27 (0) 41 509 4800  
Fax: +27 (0) 41 509 4850

**SRK Project Number 553652**

**October 2020**

#### **Compiled by:**

Nicola Rump  
Principal Environmental Scientist

Abby van Nierop  
Environmental Scientist

Email: [nrump@srk.co.za](mailto:nrump@srk.co.za)

#### **Authors:**

N Rump & A van Nierop

#### **Peer Reviewed by:**

Chris Dalgliesh  
Director,  
Principal Environmental Scientist

# Table of Contents

Disclaimer..... viii

**1 Background and Introduction ..... 9**

1.1 Background to the study .....9

1.2 Details and expertise of the environmental assessment practitioners (EAPs) .....10

1.3 Statement of SRK Independence .....10

1.4 Assessment of the Scoping Report.....14

1.5 Legal Requirements Pertaining to the Proposed Project.....14

1.5.1 National Environmental Management Act (Act No. 107 of 1998) (NEMA) .....14

1.5.2 NEMA EIA Regulations .....15

1.5.3 National Environmental Management: Air Quality Act (Act No. 39 of 2004) (NEM:AQA) ....16

1.5.4 National Greenhouse Gas Emission Reporting Regulations (GNR 275 of 2017).....17

1.5.5 National Environmental Management: Biodiversity Act (Act No. 10 of 2004).....17

1.5.6 Electricity Regulation Act (Act no. 4 of 2006).....18

1.5.7 National Heritage Resources Act (Act No. 25 of 1999).....18

1.5.8 National Water Act (Act No. 36 of 1998) .....19

1.6 Planning Policy Framework .....19

1.6.1 Integrated Energy Plan 2016 .....19

1.6.2 Integrated Resources Plan 2010-2030 .....19

1.7 Approach to the Scoping Study .....20

1.8 Purpose of this Draft Scoping Report .....22

1.9 Assumptions and Limitations .....22

1.10 Structure of this report.....24

1.11 Content of Report.....24

**2 Description of Development Proposal..... 28**

2.1 Context.....29

2.2 Need and desirability.....31

2.2.1 Analysis of Need and Desirability of the Project .....31

2.2.2 Alignment with energy initiatives .....34

2.2.3 Land Use Planning Policy Framework .....34

2.3 Location and site description of the proposed project .....34

2.4 Key Terminology .....36

2.4.1 Liquefied Natural Gas (LNG).....36

2.4.2 Open Cycle and Combined Cycle .....36

2.4.3 Gas engines vs gas turbines .....37

2.4.4 Cooling technologies .....38

2.5 Detailed Project Description.....39

2.5.1 Power Plant Technology Options .....39

2.5.2 Cooling technology .....41

|          |  |           |
|----------|--|-----------|
| 2.5.3    | Zone 13 Power Plant.....   | 42        |
| 2.5.4    | Power evacuation.....  | 42        |
| 2.5.5    | . The power plant will transfer power to the 400 kV powerlines located in the power line servitude depicted in the services corridor shown in Figure 1-2. Cold vent system ..... | 42        |
| 2.5.6    | Safety and fire protection .....   | 43        |
| 2.5.7    | Water Balance: Process Water: .....  | 43        |
| 2.5.8    | Waste generation and management .....  | 43        |
| 2.5.9    | Emergency Response .....   | 44        |
| 2.5.10   | Labour and Employment .....  | 44        |
| 2.6      | Project Alternatives .....   | 44        |
| 2.6.1    | Activity Alternatives .....  | 45        |
| 2.6.2    | Site Alternatives .....  | 45        |
| 2.6.3    | Layout and Alignment Alternatives.....   | 46        |
| 2.6.4    | Technology Alternatives .....  | 46        |
| 2.6.5    | No-Go alternative .....  | 47        |
| 2.7      | Phasing .....  | 47        |
| <b>3</b> | <b>Description of the Affected Environment.....</b>  | <b>48</b> |
| 3.1      | Climate .....  | 48        |
| 3.2      | Geology.....   | 49        |
| 3.3      | Topography .....   | 50        |
| 3.4      | Land Use.....  | 50        |
| 3.5      | Surface and Ground Water .....   | 52        |
| 3.6      | Ecology .....  | 52        |
| 3.6.1    | Vegetation .....   | 52        |
| 3.6.2    | Fauna .....  | 56        |
| 3.7      | Sense of Place .....   | 59        |
| 3.8      | Regional Water Supply .....  | 59        |
| 3.9      | Ambient Noise.....   | 60        |
| 3.10     | Ambient Air Quality .....  | 61        |
| 3.10.1   | Heritage Resources.....  | 63        |
| <b>4</b> | <b>Stakeholder Engagement .....</b>  | <b>66</b> |
| 4.1      | Objectives and Approach.....   | 66        |
| 4.2      | Public Participation Activities .....  | 66        |
| 4.2.1    | Availability of the Draft Scoping Report.....  | 67        |
| 4.2.2    | Registered IAPs and Issues Raised.....   | 67        |
| <b>5</b> | <b>Identification of Potential Impacts .....</b>   | <b>77</b> |
| 5.1      | Key environmental and social concerns identified during the PPP .....  | 77        |
| 5.2      | Key Environmental Issues and Impacts.....  | 77        |
| 5.2.1    | Air quality impacts .....  | 78        |
| 5.2.2    | Noise impacts .....  | 78        |
| 5.2.3    | Impacts on heritage resources.....   | 79        |

|          |  |           |
|----------|--|-----------|
| 5.2.4    | Terrestrial ecological impacts.....                              | 79        |
| 5.2.5    | Socio-economic impacts .....                                     | 79        |
| 5.2.6    | Traffic impacts .....  | 79        |
| 5.2.7    | Waste management impacts.....                                    | 80        |
| 5.2.8    | Visual impacts / Sense of place .....                            | 80        |
| 5.2.9    | Stormwater and erosion impacts.....                              | 80        |
| 5.2.10   | Impacts on surface and groundwater.....                          | 80        |
| 5.2.11   | Climate change impacts .....                                     | 80        |
| 5.2.12   | Safety risks.....  | 81        |
| 5.2.13   | Construction related impacts.....                                | 81        |
| 5.3      | Potential Mitigation Measures.....                               | 81        |
| <b>6</b> | <b>Draft Plan of Study for EIA .....</b>                         | <b>83</b> |
| 6.1      | National Web Based Environmental Screening Tool.....             | 83        |
| 6.2      | Specialist Studies.....  | 84        |
| 6.3      | Impact Rating Methodology .....                                  | 85        |
| 6.4      | Cumulative Impacts.....  | 87        |
| 6.4.1    | Introduction.....  | 87        |
| 6.4.2    | Scope of the Cumulative Assessment .....                         | 88        |
| 6.4.3    | Area of Influence .....  | 89        |
| 6.4.4    | Identification of VECs .....                                     | 90        |
| 6.4.5    | Past, Existing and Planned Activities that may affect VECs ..... | 90        |
| 6.5      | Draft Terms of Reference for Specialist Studies.....             | 91        |
| 6.5.1    | Air Quality.....   | 91        |
| 6.5.2    | Quantitative Risk Assessment .....                               | 91        |
| 6.5.3    | Climate Change.....  | 92        |
| 6.5.4    | Noise .....  | 92        |
| 6.5.5    | Traffic.....   | 93        |
| 6.6      | EIA Process Schedule .....                                       | 93        |
| <b>7</b> | <b>The Way Forward.....</b>                                      | <b>94</b> |
| <b>8</b> | <b>References .....</b>  | <b>96</b> |
|          | Appendices.....  | 98        |
|          | Appendix A: CV's of Key Professionals .....                      | 99        |
|          | Appendix B: EIA Application Form .....                           | 100       |
|          | Appendix C: On-site and E - Notices .....                        | 101       |
|          | Appendix D: Newspaper Notice .....                               | 102       |
|          | Appendix E: Background Information Document.....                 | 103       |
|          | Appendix F: Presentation to ELC Meeting on 20 August 2020 .....  | 104       |
|          | Appendix G: Proof of IAP Notification .....                      | 105       |
|          | Appendix H: IAP Correspondence on BID .....                      | 106       |
|          | Appendix I: Layout drawings .....                                | 107       |
|          | Appendix J: Site Photographs.....                                | 108       |

|                                      |     |
|--------------------------------------|-----|
| SRK Report Distribution Record ..... | 109 |
|--------------------------------------|-----|

## List of Tables

|   |    |
|---|----|
| Table 1-1: NEMA Listed Activities (2014 EIA regulations, as amended) applicable to the Proposed Zone 13 Power Plant.....                        | 16 |
| Table 2-1: The Case for Coega's Gas Readiness - Fast Facts (CDC, 20 July 2015).....   | 30 |
| Table 2-2: Property details .....   | 34 |
| Table 3-1: Annual average monitored concentrations of SO <sub>2</sub> , NO <sub>2</sub> and PM <sub>10</sub> at Saltworks monitoring station 63 |    |
| Table 4-1: Registered Interested and Affected Parties and Stakeholders .....  | 67 |
| Table 4-2 Issues Raised by Interested and Affected Parties, as relevant to the Zone 13 power plant, on BID distributed in 2016.....             | 72 |
| Table 4-3: Comments Raised by Stakeholders at the Coega ELC Meeting of 20 August 2020.....  | 74 |
| Table 5-1: Typical mitigation measures .....  | 82 |
| Table 6-1: Site sensitivity verification .....  | 83 |
| Table 6-2: Criteria used to determine the Consequence of the Impact.....  | 85 |
| Table 6-3: Method used to determine the Consequence Score.....  | 86 |
| Table 6-4: Probability Classification .....   | 86 |
| Table 6-5: Impact Significance Ratings.....   | 86 |
| Table 6-6: Impact status and confidence classification .....  | 86 |
| Table 6-7: Past, existing and future activities and projects .....  | 90 |
| Table 6-8: Programme of activities and target dates.....  | 93 |

## List of Figures

|   |    |
|---|----|
| Figure 1-1: Site Locality Plan showing all components of the CDC gas to power project .....   | 11 |
| Figure 1-2: Site Locality Plan, showing all components of the CDC gas to power project .....  | 12 |
| Figure 1-3: Site locality map for zone 13 power plant .....   | 13 |
| Figure 1-4: Environmental Impact Assessment (EIA) Process .....   | 23 |
| Figure 2-1: Schematic of scope of the gas to power project EIAs (Carnegie Energie, 2019).....   | 28 |
| Figure 2-2: Fuel combustion and Life-cycle GHG Emissions for Existing Power plant technology (Source: (Transnet SOC Ltd, 2015)) ..... | 33 |
| Figure 2-3: Coega SEZ zone layout .....   | 35 |
| Figure 2-4: Schematic showing inputs and outputs for open cycle gas turbine or engine technology (Carnegie Energie, 2019).....        | 37 |
| Figure 2-5: Schematic showing inputs and outputs for combined cycle gas turbine or engine technology (Carnegie Energie, 2019).....    | 37 |
| Figure 2-6: Summary of key differences between gas turbine and engine technology (Carnegie Energie, 2019) .....                       | 38 |
| Figure 2-7: Relative footprint and water demand for air, mechanical draft and seawater cooling (Source: (Mott Macdonald, 2016). ..... | 39 |
| Figure 2-8: Example of a typical Combined Cycle Internal Combustion Engine setup (Source: Wartsila) .....                             | 41 |
| Figure 2-9: Layout of a typical Combined Cycle Internal Combustion Engine setup, (Source: Wartsila) .....                             | 41 |

|   |    |
|---|----|
| Figure 2-10: Water Balance Diagram Source: (Carnegie Energie, 2019) .....   | 44 |
| Figure 3-1: Average of daily minimum, maximum and mean temperatures (°C) and average monthly precipitation (mm) at Port Elizabeth Airport for the period 1961 – 1990..... | 48 |
| Figure 3-2: Annual wind roses for Port Elizabeth Airport, Amsterdamplein, Motherwell and Saltworks for 2009-2011 .....  | 49 |
| Figure 3-3: Geology of the Coega SEZ .....  | 51 |
| Figure 3-4: Vegetation types near the Zone 13 site (Mucina & Rutherford, 2006).....   | 54 |
| Figure 3-5: STEP vegetation near the Zone 13 site .....   | 55 |
| Figure 3-6: Terrestrial and marine environmental sensitivities in the area of the proposed Zone 13 site .....   | 58 |
| Figure 3-7: Water use (2011) and predicted growth in water demand in the Algoa Water Supply Scheme (DWS, n.d.) .....  | 60 |
| Figure 3-8: 1-hr average SO <sub>2</sub> monitored concentrations at Saltworks monitoring station .....   | 61 |
| Figure 3-9: 24-hour average SO <sub>2</sub> monitored concentrations at Saltworks monitoring station .....  | 62 |
| Figure 3-10: 1-hr average NO <sub>2</sub> monitored concentrations at Saltworks monitoring station .....  | 62 |
| Figure 3-11: 24-hr average PM <sub>10</sub> monitored concentrations at Saltworks monitoring station.....   | 62 |
| Figure 3-12: Sensitive heritage sites in the Coega SEZ relative to gas to power project infrastructure .....  | 65 |

## List of Abbreviations

|        |   |
|--------|---|
| +ve    | Positive  |
| BID    | Background Information Document   |
| CBA    | Critical Biodiversity Areas   |
| CCCE   | Combined Cycle Combustion Engine  |
| CCGT   | Combined Cycle Gas Turbine  |
| CDC    | Coega Development Corporation   |
| DEA    | Department of Environmental Affairs (National) (now DEFF)   |
| DEDEAT | Department of Economic Development, Environmental Affairs and Tourism   |
| DEFF   | Department of Environment, Forestry and Fisheries (National) (formerly DEA)   |
| DHSWS  | Department of Human Settlements, Water and Sanitation   |
| DMRE   | Department of Mineral Resources and Energy (formerly separate Department of Mineral Resources and Department of Energy) |
| DSR    | Draft Scoping Report  |
| EA     | Environmental Authorisation   |
| EAP    | Environmental Assessment Practitioner   |
| EIA    | Environmental Impact Assessment   |
| EIR    | Environmental Impact Report   |
| EMPr   | Environmental Management Programme  |
| FSR    | Final Scoping Report  |
| FSRU   | Floating Storage Regasification Unit  |
| GHG    | Greenhouse Gas Emissions  |
| HRSG   | Heat Recovery Steam Generators  |
| IAPs   | Interested and Affected Parties   |
| IDP    | Integrated Development Plan   |

---

|        |  |
|--------|--|
| IEP    | Integrated Energy Plan                                 |
| IPP    | Independent Power Producer                             |
| IRP    | Integrated Resources Plan                              |
| IUCN   | International Union for Conservation of Nature         |
| LNG    | Liquid Natural Gas                                     |
| MPA    | Marine Protected Area                                  |
| MVA    | Megavolt ampere  |
| MW     | Megawatt   |
| NEMA   | National Environmental Management Act                  |
| NEMBA  | National Environmental Management: Biodiversity Act    |
| NEMPAA | National Environmental Management: Protected Areas Act |
| NMBM   | Nelson Mandela Bay Municipality                        |
| OCGE   | Open Cycle Gas Engine                                  |
| OCGT   | Open Cycle Gas Turbine                                 |
| OEM    | Original Equipment Manufacturers                       |
| ORV    | Open Rack Vaporiser                                    |
| PPP    | Public Participation Process                           |
| SAHRA  | South African Heritage Resource Agency                 |
| SANS   | South African National Standards                       |
| SCV    | Submerged Combustion Vaporiser                         |
| SDF    | Spatial development Framework                          |
| SEZ    | Special Economic Zone                                  |
| SSC    | Species of Special Concern                             |
| STEP   | Subtropical Thicket Ecosystem Planning Project         |
| ToR    | Terms of Reference                                     |
| WI     | Wobbe Index  |
| -ve    | Negative   |



## Glossary of Terms

|                                      |   |
|--------------------------------------|---|
| Auto – refrigeration                 | The process in which LNG is kept at its boiling point, so that any added heat is countered by energy lost from boil off.  |
| Base Load Power Plant                | A power plant that provides a continuous supply of electricity and is only turned off during maintenance.   |
| Berth                                | Designated location in port/harbour for the mooring of vessels  |
| Breakwater                           | Structures constructed on coasts as part of coastal defence or to protect an anchorage from the effects of both weather and longshore drift   |
| Combined Cycle Gas Turbine           | A turbine that utilises natural gas to generate electricity and the by-products (waste heat) of this process to power steam engines and generate further electricity.   |
| Closed Cycle Gas Turbine             | A turbine that uses gas for the working fluid and recirculates the gas within the system.   |
| Environment                          | The external circumstances, conditions and objects that affect the existence and development of an individual, organism or group. These circumstances include biophysical, social, economic, historical and cultural aspects.   |
| Floating Power Barge                 | A special purpose ship on which a power plant is installed to serve as a power generation source.   |
| Floating Storage Regasification Unit | Floating vessel that receives liquefied natural gas and converts this to its gaseous form on board.   |
| Independent Power Producer           | Independent Power Producer is an entity, which is not a public electric utility, but which owns and or operates facilities to generate electric power for sale to a utility, central government buyer and end users.  |
| Jetty                                | A structure that projects from the land out into the water  |
| Liquid Natural Gas                   | Natural gas that has been converted to liquid form.   |
| Liquefaction                         | The process by which natural gas is converted into liquid natural gas   |
| Mid-Merit Power Plant                | A 'load following' power plant. The power plant adjusts its power output as demand for electricity fluctuates.  |
| Natural Gas                          | A hydrocarbon gas that is usually obtained from underground sources, often in association with petroleum and coal deposits. Natural gas generally contains a high percentage of methane and inert gases.  |
| Open Cycle Gas Turbines              | A turbine that uses gas for the working fluid and does not reuse the exhaust by-products of the process but releases these outside of the system.   |
| Peaking Power Plant                  | Power plants that generally run only when there is a high demand, known as peak demand, for electricity.  |
| Port                                 | A location on a coast or shore containing one or more harbours where ships can dock and transfer people or cargo to or from land  |
| Quay                                 | A structure on the shore of a harbour where ships may dock to load and unload cargo. Includes one or more berths and may include piers, warehouses or other facilities necessary for handling the ships.  |
| Regasification                       | The process by which LNG is heated, converting it into its gaseous state.   |
| Terminal                             | The set of facilities at a port where loading and unloading of cargo/container takes place. Terminals are named on the basis of the type of cargo that can be handled by them. Some of the most common types of terminals are container terminal, bulk cargo terminal, LNG terminal |
| Ullage                               | The empty space in large tanks used to store liquids.   |

## Disclaimer

The opinions expressed in this Report have been based on the information supplied to SRK Consulting (South Africa) (Pty) Ltd. (SRK) by Coega Development Corporation (CDC). SRK has exercised all due care in reviewing the supplied information. Whilst SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them. Opinions presented in this report apply to the site conditions and features as they existed at the time of SRK's investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this Report, about which SRK had no prior knowledge nor had the opportunity to evaluate.

# 1 Background and Introduction

## 1.1 Background to the study

The Coega Development Corporation (CDC) proposes to develop a gas to power project, including three power plants and associated infrastructure, within the Coega Special Economic Zone (SEZ) (see Figure 1-1, Figure 1-2 and Figure 1-3 for site locality) and have appointed SRK Consulting (South Africa) (Pty) Ltd (SRK) to conduct an Environmental Impact Assessment (EIA) in terms of the National Environmental Management Act (NEMA).

The overall project would broadly involve the following components:

- A Liquefied Natural Gas (LNG) terminal, consisting of a berth with off-loading arms within the Port of Ngqura, cryogenic pipelines, storage and handling facilities and re-gasification modules;
- Three Gas to Power plants, each with 1000 MW generation capacity (specific generation technologies may vary);
- Gas pipelines for the transmission, distribution and reticulation of natural gas within the Coega SEZ and Port of Ngqura; and
- Electricity transmission lines to evacuate electricity to the previously approved 400 kV lines in the SEZ.

The overall/ultimate proposed project will comprise of three power plants with power generation capacities of 1000 MW each. A total power generation capacity of up to 3000 MW will therefore be available once the full extent of the project has been developed (which may be spread over a number of phases), the timing of which is unknown at this stage and is dependent on the CDC securing successful clients for the development of each component.

A smaller dual-fuel power plant operating on liquid fuels may also be implemented prior to the LNG infrastructure being available. Such a power plant would consist of dual fuel engines or turbines and would operate on Fuel Oil or Diesel for an extended period of time until switch to LNG. Such a plant would not be greater than 130 MW.

Four separate EIA applications have been lodged for the project (each of the three power plants and one for the gas infrastructure). This approach would allow for the transfer of discrete projects and associated authorisations to developers following a bidding process.

As developers and their chosen technologies have not yet been identified, various technologically feasible options are applied for in each EIA, and the assessment presented will be based on the worst case scenario for each impact. The aim of this approach is to identify the envelope limits within which the project impacts will fall, and which will be acceptable to the receiving environment with implementation of mitigation measures where relevant.

### **This Draft Scoping Report (DSR) deals with the power plant in Zone 13 of the Coega SEZ.**

In accordance with the requirements of the NEMA 2014 EIA regulations, as amended, the proposed project requires a full Scoping and EIA process to be conducted. The Scoping Study includes a Public Participation Process (PPP), aimed at identifying issues and concerns of Interested and Affected Parties (IAPs). The objective of the Scoping Study is to identify those issues and concerns that must be investigated in more detail, and which will be reported in a subsequent Environmental Impact Report (EIR). As part of the Scoping stage, a Plan of Study is proposed for the EIA process that

identifies specialist studies required in order to flag environmental sensitive/ no-go areas at an early stage in project planning. This allows, where possible and necessary, environmentally sensitive areas to be accommodated in the project layout. The report presents the findings of the scoping study and offers an opportunity for key stakeholders and IAPs to review the issues identified, and to make further comments.

## **1.2 Details and expertise of the environmental assessment practitioners (EAPs)**

The qualifications and experience of the key independent Environmental Assessment Practitioners (EAPs) undertaking the EIA are detailed below, and Curriculum Vitae provided in Appendix A. An Affirmation (as required in terms of the NEMA EIA regulations, 2014), is provided in the application form in Appendix B.

### **Environmental Assessment Practitioner: Nicola Rump, MSc, EAPSA**

Nicola Rump is a Principal Environmental Scientist in SRK's Port Elizabeth office and has been involved in environmental management for the past 12 years working on South African and international projects including EIAs and ISO 14001 auditing for a variety of activities. Her experience includes Basic Assessments, Environmental Impact Assessments, Environmental Management Plans, Environmental Auditing and Stakeholder Engagement. Nicola is the Environmental Assessment Practitioner for this Environmental Impact Assessment process.

### **Project Coordinator: Abby van Nierop, BSc Hons**

Abby van Nierop is an Environmental Scientist in the Port Elizabeth office. Abby has been involved in environmental management for the past 7 years. Her expertise includes assistance with Environmental Impact Assessments (EIAs), Basic Assessments, Environmental Management Programmes (EMPRs), Water Use Applications (WUAs), environmental compliance auditing and as a Public Participation Co-ordinator.

### **Internal Reviewer: Chris Dalgliesh, MPhil, BBusSc (Hons), Registered EAP No 2019/413**

Chris Dalgliesh is a Director and head of SRK's Environmental Department in Cape Town. He has more than 33 years environmental consulting experience covering a broad range of projects, including EIA and ESIA (EMPR), environmental and social due diligence, socio-economic impact assessments, stakeholder engagement, strategic environment assessments and management plans, state of environment reporting, environmental management frameworks, site safety reports for the nuclear industry, natural resource management and waste management.

## **1.3 Statement of SRK Independence**

Neither SRK nor any of the authors of this Report have any material present or contingent interest in the outcome of this Report, nor do they have any pecuniary or other interest that could be reasonably regarded as being capable of affecting their independence or that of SRK.

SRK's fee for conducting this EIA process is based on its normal professional daily rates plus reimbursement of incidental expenses. The payment of that professional fee is not contingent upon the outcome of the Report(s) or the EIA process.

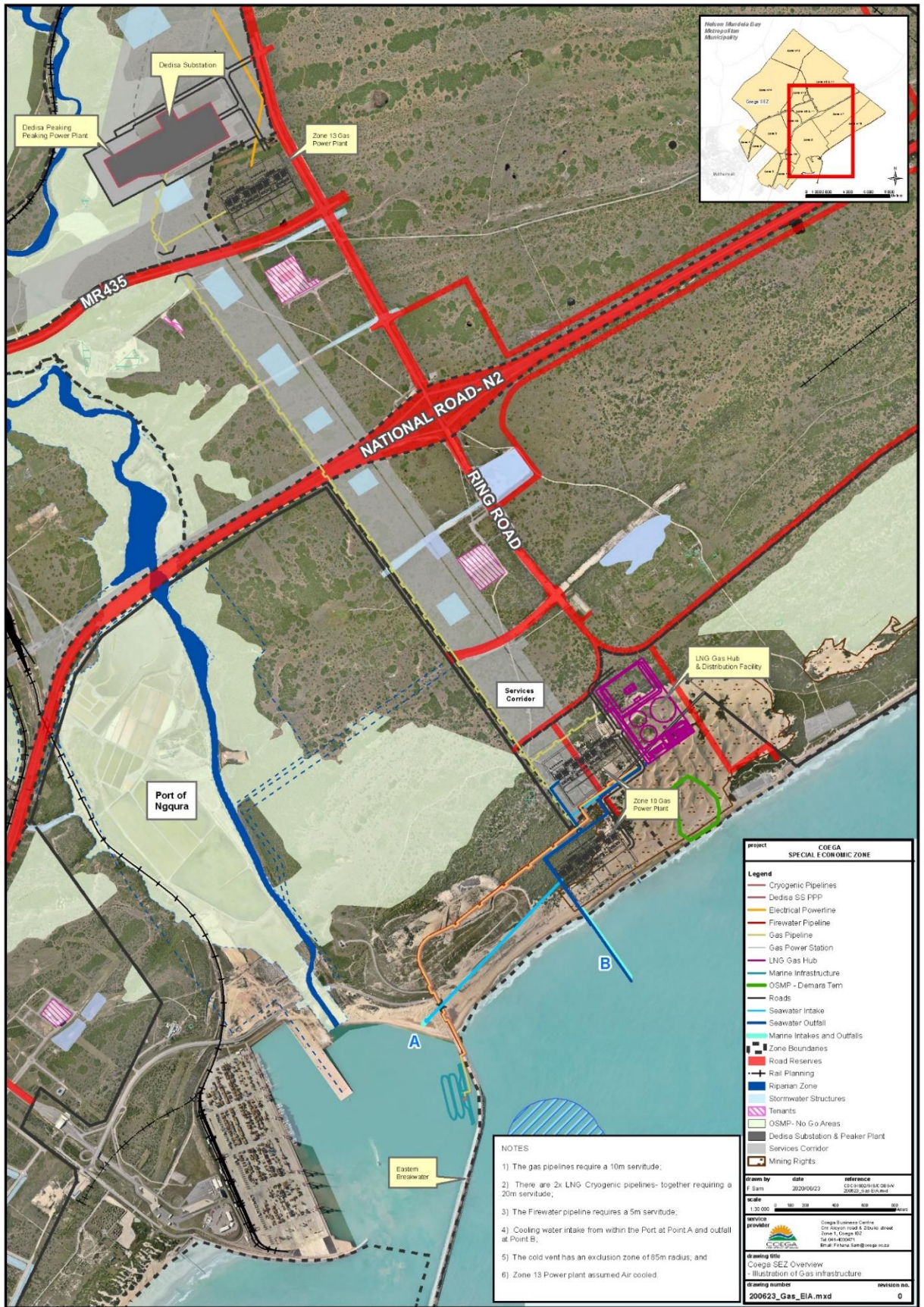


Figure 1-1: Site Locality Plan showing all components of the CDC gas to power project

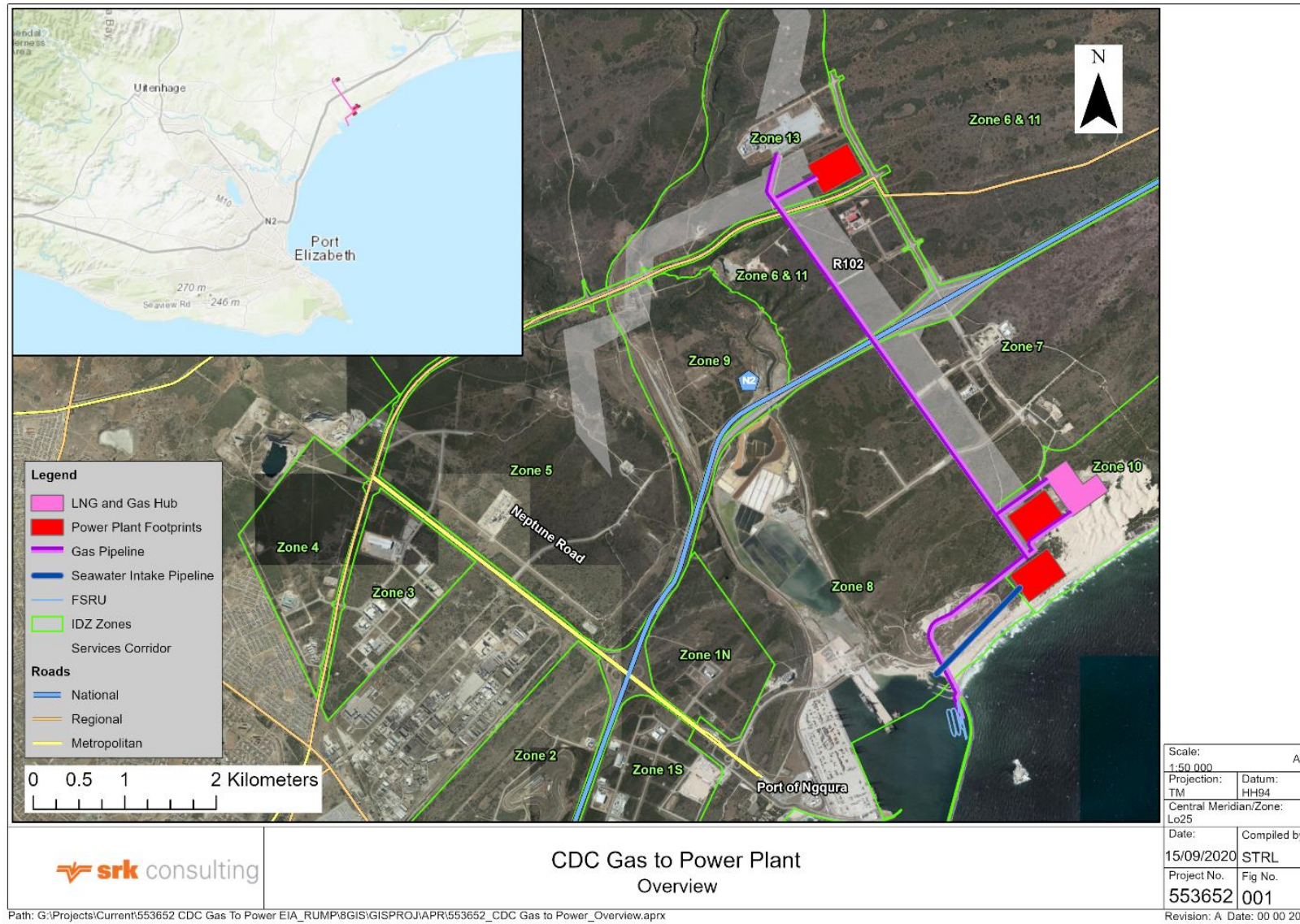


Figure 1-2: Site Locality Plan, showing all components of the CDC gas to power project

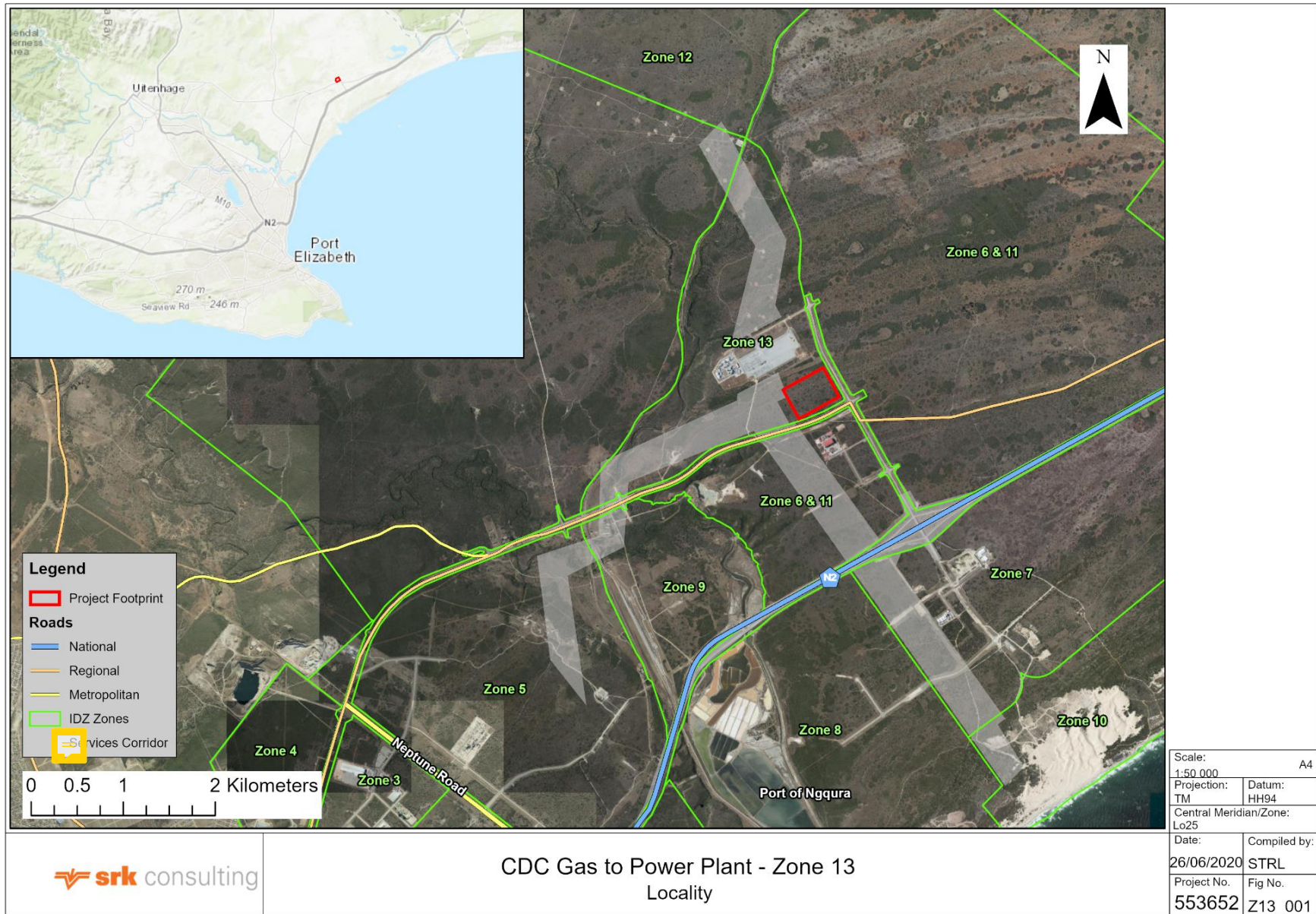


Figure 1-3: Site locality map for zone 13 power plant

## 1.4 Assessment of the Scoping Report

Before proceeding to the EIA phase, the Scoping Report and Plan of Study for EIA are assessed by the Department Environment, Forestry and Fisheries (DEFF).

In the spirit of cooperative governance, DEFF will consult with other relevant organs of state before making a decision. These organs of state could include:

- Department of Economic Development, Environmental Affairs and Tourism (DEDEAT);
- Department of Water Affairs and Sanitation (DWS);
- Eastern Cape Provincial Heritage Resources Authority (ECPHRA);
- Department of Mineral Resources and Energy (DMRE).

SRK has previously distributed Background Information Documents (BIDs) to relevant organs of state listed above. Each of these organs of state would be given an opportunity to comment on this report as part of the formal public participation process.

## 1.5 Legal Requirements Pertaining to the Proposed Project

The environmental legislation which is applicable to the authorisation of the proposed project is summarised in this section.

### 1.5.1 National Environmental Management Act (Act No. 107 of 1998) (NEMA)

NEMA provides for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of the State, as well as to provide for matters connected therewith. Section 2 of NEMA establishes a set of principles that apply to the activities of all organs of state that may significantly affect the environment. These include the following:

- Development must be sustainable;
- Pollution must be avoided or minimised and remedied;
- Waste must be avoided or minimised, reused or recycled;
- Negative impacts must be minimised; and
- Responsibility for the environmental health and safety consequences of a policy, project, product or service exists throughout its life cycle.

Section 28(1) states that:

*“Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring.”*

If such degradation/pollution cannot be prevented, then appropriate measures must be taken to minimise or rectify such pollution. These measures may include:

- Assessing the impact on the environment;
- Informing and educating employees about the environmental risks of their work and ways of minimising these risks;
- Ceasing, modifying or controlling actions which cause pollution/degradation;



- Containing pollutants or preventing movement of pollutants;
- Eliminating the source of pollution; and
- Remedying the effects of the pollution.

## Legal requirements for this project

The CDC has a responsibility to ensure that the proposed development and the EIA process conform to the principles of NEMA. The proponent is obliged to take action to prevent pollution or degradation of the environment in terms of Section 28 of NEMA.

### 1.5.2 NEMA EIA Regulations

Sections 24 and 44 of NEMA make provision for the promulgation of regulations that identify activities that may not commence without an EA issued by the competent authority (DEFF). In this context, the 2014 EIA Regulations, as amended in 2017 GN R326, promulgated in terms of NEMA, govern the process, methodologies and requirements for the undertaking of EIAs in support of EA applications. Listing Notices 1-3 in terms of NEMA list activities that require EA ("NEMA listed activities").

GN R326 of the EIA Regulations lays out two alternative authorisation processes. Depending on the type of activity that is proposed, either a Basic Assessment (BA) process or a S&EIR process is required to obtain EA. Listing Notice 1<sup>1</sup> lists activities that require a BA process, while Listing Notice 2<sup>2</sup> lists activities that require S&EIR. Listing Notice 3<sup>3</sup> lists activities in certain sensitive geographic areas that require a BA process.

The regulations for both processes – BA and S&EIR - stipulate that:

- Public participation must be undertaken as part of the assessment process;
- The assessment must be conducted by an independent EAP;
- The relevant authorities respond to applications and submissions within stipulated time frames;
- Decisions taken by the authorities can be appealed by the proponent or any other Interested and Affected Party (IAP); and
- A draft EMP must be compiled and released for public comment.

GN R326 sets out the procedures to be followed and content of reports compiled during the BA and S&EIR processes.

The NEMA National Appeal Regulations<sup>4</sup> make provision for appeal against any decision issued by the relevant authorities. In terms of the Regulations, an appeal must be lodged with the relevant authority in writing within 20 days of the date on which notification of the decision (EA) was sent to the applicant or IAP (as applicable). The applicant, the decision-maker, interested and affected parties and organ of state must submit their responding statement, if any, to the appeal authority and the appellant within 20 days from the date of receipt of the appeal submission.

Table 1-1 lists the NEMA listed activities in terms of the 2014 EIA regulations, as amended, that are triggered by the Zone 13 Power Plant. Where applicable, the relevant similar activities that have been

<sup>1</sup> GN R327 of 2017

<sup>2</sup> GN R325 of 2017

<sup>3</sup> GN R324 of 2017

<sup>4</sup> GN R993 of 2014, as amended by GN R2015 of 2015.

previously authorised via separate EIA processes (and therefore are excluded from this application) are indicated.

**Table 1-1: NEMA Listed Activities (2014 EIA regulations, as amended) applicable to the Proposed Zone 13 Power Plant**

| Listed Activity   | Description of each listed activity as per project description   |
|---|--|
| <u>R327 Activity 11</u> : The development of facilities or infrastructure for the transmission and distribution of electricity- (ii) inside urban areas or industrial complexes with a capacity of 275 kilovolts or more.   | An authorisation is in place for several powerlines within the SEZ, including 400 kV lines in the services corridor depicted in Figure 1-2. Short 400 kV powerlines would be required to connect from the proposed power plant to the previously approved, but not yet constructed, 400 kV lines within these corridors. A 400 kV double busbar will be required at the power plant. |
| <u>R327 Activity 16</u> : The development and related operation of facilities for the desalination of water with a design capacity to produce more than 100 cubic metres of treated water per day.  | On-site facilities for demineralisation of water prior to use in processing water are proposed. Approximately 33.7 m <sup>3</sup> /h of demineralised water will be required.  |
| <u>R327 Activity 27</u> : The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan. | The Zone 13 power plant will have a footprint of approximately 18 hectares and will require the clearance of vegetation. The equivalent / similar activity is however authorised in the 2007 Rezoning EA for the SEZ and therefore will not be assessed as part of this EIA.   |
| <u>R325 Activity 2</u> : The development and related operation of facilities or infrastructure for the generation of electricity from a non-renewable resource where the electricity output is 20 megawatts or more   | The Zone 13 power plant will have a capacity to generate up to 1000 MW of electricity  |
| <u>R325 Activity 4</u> : The development and related operation 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 cubic metres.   | The power plant is expected to require storage of backup or transition fuel in the form of diesel (8,000 m <sup>3</sup> ) or fuel oil (8,000 m <sup>3</sup> ).   |
| <u>R325 Activity 6</u> : The development of facilities or infrastructure for any process or activity which requires a permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent  | The development of each power plant will require licenses, including an Atmospheric Emission License (AEL) in terms of as NEM:AQA (Act 39 of 2004) for the burning of gas.   |

**Legal requirements for this project**

The proposed development includes the listed activities in terms of GN R 325, which are detailed above. As such, the proponent is obliged to conduct an Environmental Impact Assessment for the proposed activity in accordance with the procedure stipulated in GN R 326.

**1.5.3 National Environmental Management: Air Quality Act (Act No. 39 of 2004) (NEM:AQA)**

NEM:AQA stipulates that activities listed as having a potential negative impact on air quality require authorisation in the form of an AEL. A S&EIR process, as described in the EIA Regulations made under section 24(5) of the NEMA, is required. The following activities listed are relevant to the proposed activities:

- *Sub-category 1.4: Gas combustion (including gas turbines burning natural gas) used primarily for steam raising or electricity generation.*

- *Sub-category 1.5: Reciprocating Engines - liquid and gas fuel stationary engines used for electricity generation; and*
- *Sub-category 2.4: Storage and Handling of Petroleum Products*

### Legal requirements for this project

As the proposed plant includes the combustion of gas for electricity generation (via reciprocating engines as a development option); the storage of petroleum; and has a design capacity of greater than 50 MW, the developer is required to obtain an AEL prior to construction of the proposed facility. As the required level of technical information for an AEL application is not available at EIA stage, Provisional AELs will be applied for in alignment with the EIA process, for subsequent upgrading to full AELs when this information becomes available.

### 1.5.4 National Greenhouse Gas Emission Reporting Regulations (GNR 275 of 2017)

The National Greenhouse Gas Emission Reporting Regulations have been promulgated in terms of NEM:AQA for the purpose of introducing a single national reporting system for the transparent reporting of greenhouse gas emissions. The regulations apply to the categories of emission sources listed in Annexure 1 to the regulations and include electricity production exceeding 10 MW. Tier 1 reporting is required as a minimum, with a five year grace period applicable before reporting of the lower tiers.

### Legal requirements for this project

It is expected that, for the competent authority to make a decision regarding the project, the quantity of greenhouse gases emitted from the proposed development would be reported on in the EIA. Reporting of actual GHG emissions would be required during the operational phase.

### 1.5.5 National Environmental Management: Biodiversity Act (Act No. 10 of 2004)

This Act provides for the management and conservation of South Africa's biodiversity within the framework of the NEMA. In terms of the Biodiversity Act, the developer has a responsibility for:

- The conservation of endangered ecosystems and restriction of activities according to the categorisation of the area (not just by listed activity as specified in the EIA regulations).
- Application of appropriate environmental management tools in order to ensure integrated environmental management of activities thereby ensuring that all developments within the area are in line with ecological sustainable development and protection of biodiversity.
- Limit further loss of biodiversity and conserve endangered ecosystems.

The objectives of this Act are:

- To provide, within the framework of the NEMA, for –
  - The management and conservation of biological diversity within the Republic;
  - The use of indigenous biological resources in a sustainable manner.

The Act's permit system is further regulated in the Act's Threatened or Protected Species Regulations (GN 255), which were promulgated in March 2015, the National List of threatened ecosystems (GN 1002) promulgated in December 2011 and the Alien Invasive Species regulations (GNR 598) of August 2014.

## Legal requirements for this project

The proposed development must conserve endangered ecosystems and protect and promote biodiversity, it must assess the impacts of the proposed development on endangered ecosystems, no protected species may be removed or damaged without a permit, and the proposed site(s) must be cleared of alien vegetation using appropriate means. While the SEZ does include formally designated Open Space areas for management of biodiversity, which are avoided, protected species may still be impacted on and as such the relevant permits must be applied for prior to construction.

### 1.5.6 Electricity Regulation Act (Act no. 4 of 2006)

This act provides the national regulatory framework for the electricity supply industry; to make the National Energy Regulator the custodian and enforcer of the national electricity regulatory framework; to provide for licences and registration as the manner in which generation, transmission, distribution, reticulation, trading and the import and export of electricity are regulated; to regulate the reticulation of electricity by municipalities; and to provide for matters connected therewith.

The objectives of this Act are to:

- a. achieve the efficient, effective, sustainable and orderly development and operation of electricity supply infrastructure in South Africa;
- b. ensure that the interests and needs of present and future electricity customers and end users are safeguarded and met, having regard to the governance, efficiency, effectiveness and long term sustainability of the electricity supply industry within the broader context of economic energy regulation in the Republic;
- c. facilitate investment in the electricity supply industry;
- d. facilitate universal access to electricity;
- e. promote the use of diverse energy sources and energy efficiency;
- f. promote competitiveness and customer and end user choice; and
- g. facilitate a fair balance between the interests of customers and end users, licensees, investors in the electricity supply industry and the public.

### 1.5.7 National Heritage Resources Act (Act No. 25 of 1999)

The protection and management of South Africa's heritage resources is controlled by the National Heritage Resources Act 25 of 1999. The enforcing authority for this act is the South African Heritage Resources Agency (SAHRA).

In terms of the Act, historically important features such as graves, trees, archaeological artefacts/sites and fossil beds are protected. Similarly, culturally significant symbols, spaces and landscapes are also afforded protection. In terms of Section 38 of the National Heritage Resources Act, SAHRA can call for a Heritage Impact Assessment (HIA) where certain categories of development are proposed. The Act also makes provision for the assessment of heritage impacts as part of an EIA process and indicates that if such an assessment is deemed adequate, a separate HIA is not required.

The Act requires that:

*"...any person who intends to undertake a development categorised as the ... or any development or other activity which will change the character of a site exceeding 5 000 m<sup>2</sup> in extent or involving three or more existing erven or subdivisions thereof must at the very earliest stages of initiating such a*

*development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development...”*

### **Legal requirements for this project**

A Phase 1 heritage assessment (archaeological and palaeontological) has previously been undertaken for the Coega SEZ and no further heritage studies are therefore proposed. A chance finds procedure will be included in the Environmental Management Programme for the development.

### **1.5.8 National Water Act (Act No. 36 of 1998)**

The National Water Act 36 of 1998 provides for the promotion of efficient, sustainable and beneficial use of water in the public interest; for the facilitation of social and economic development; for the protection of aquatic and associated ecosystems and their biological diversity; and for the reduction and prevention of pollution and degradation of water resources. The Act also provides for emergency situations where pollution of water resources occurs. Section 21 of the Act describes activities that will require prior permitting before these activities may be implemented, including any changes to the river course and banks, changes to water flows and the discharge of water containing waste.

### **Legal requirements for this project**

The NFEPA database identifies a wetland within the site boundary. Therefore a Water Use Licence (WUL) will be required and will be applied for in due course, once the required design information is available.

## **1.6 Planning Policy Framework**

### **1.6.1 Integrated Energy Plan 2016**

The development of a National Integrated Energy Plan (IEP) was envisaged in the White Paper on the Energy Policy of the Republic of South Africa of 1998 and, in terms of the National Energy Act, 2008 (Act No. 34 of 2008), the Minister of Energy is mandated to develop and, on an annual basis, review and publish the IEP in the Government Gazette.

The purpose of the IEP is to provide a roadmap of the future energy landscape for South Africa which guides future energy infrastructure investments and policy development. The IEP considers the national supply and demand balance and proposes alternative capacity expansion plans based on varying sets of assumptions and constraints. While infrastructural matters are briefly discussed, the IEP does not explicitly consider supply and demand at specific geographical locations within the country, nor does it take into account infrastructure bottlenecks at specific locations. These are covered in detail in the Integrated Resources Plan (IRP) and the Gas Utilisation Master Plan (GUMP).

Natural Gas is identified in the IEP as presenting the most significant potential in the energy mix, particularly the use of natural gas in CCPPs in the electricity sector, Gas-to-Liquid (GTL) plants in the liquid fuel sector and for direct thermal applications in the industrial and residential sectors.

### **1.6.2 Integrated Resources Plan 2010-2030**

The Integrated Resource Plan (IRP) 2010-30 was first promulgated in March 2011. It was indicated at the time that the IRP should be a “living plan”. The Department of Energy has since updated the IRP and published the IRP 2019.

The primary objective of the IRP 2010 is to determine the long-term electricity demand and detail how this demand should be met in terms of generating capacity, type, timing and cost. The accuracy of the

IRP is improved by regular reviews and updates as and when things change or new information becomes available as with the current 2019 version.

Following the promulgation of the IRP 2010–2030, the DoE implemented the IRP by issuing Ministerial Determinations in line with Section 34 of the Electricity Regulation Act No. 4 of 2006. These Ministerial Determinations give effect to the planned infrastructure by facilitating the procurement of the required electricity capacity.

A determination dated 18 August 2015 (GN 732) was issued for the development of 3,126 MW of Gas (including CCGT/natural gas) and OCGT/diesel. A further determination dated 27 May 2016 was issued for an additional 600 MW.

The key amendments or additions as relating to gas power in the IRP (2019) are as follows:

- IPPs have commissioned 1 005 MW from two OCGT peaking plants
- The Electricity demand as projected in the promulgated IRP 2010–2030 did not materialise due to a number of factors which resulted in lower demand. The electricity demand figures have thus been updated; and
- The decision was taken to support the development of gas infrastructure and in addition to the new gas to power capacity (Additional 3000 MW), to convert existing diesel-fired power plants (Peakers) to gas.

## 1.7 Approach to the Scoping Study

The approach taken in this study is guided by the principles of Integrated Environmental Management (IEM) as described in the IEM guidelines published by the Department of Environmental Affairs and Tourism in 1992 (now known as the DEFF). The approach is therefore guided by the principles of transparency, which are aimed at encouraging decision-making. The underpinning principles of IEM are:

- Informed decision making;
- Accountability for information on which decisions are made;
- A broad interpretation of the term “environment”;
- Consultation with IAPs;
- Due consideration of feasible alternatives;
- An attempt to mitigate negative impacts and enhance positive impacts associated with the proposed project;
- An attempt to ensure that the social costs of the development proposals are outweighed by the social benefits;
- Regard for individual rights and obligations;
- Compliance with these principles during all stages of the planning, implementation, and decommissioning of the proposed development or activity; and
- Opportunities for public and specialist input in the decision-making process.

The study has also been guided by the requirements of the EIA Regulations set out in terms of the NEMA.

The study will also be guided by the requirements of the EIA Regulations, 2014 (see Section 1.5), which are more specific in their focus and define the detailed approach to the S&EIR process, as well as relevant guidelines published by the DEA and DEA&DP<sup>5</sup>, including:

- DEA&DP's EIA Guideline and Information Document Series (DEA&DP, 2013), which includes guidelines on Generic ToR for EAPs and Project Schedules, Public Participation, Alternatives, Need and Desirability, Exemption Applications and Appeals, an information;
- DEA's Public Participation Guideline in terms of NEMA EIA Regulations (DEA, 2017); and
- DEA's Guideline on Need and Desirability (DEA, 2017a).

The EIA process consists of two key phases, Scoping, and Environmental Impact Reporting, as depicted in Figure 1-4 below. The overall aim of the Scoping Phase is to determine whether there are environmental issues and impacts that require further investigation in the detailed EIA. More specifically, the objectives of the Scoping Phase for this EIA are to:

- Develop a common understanding of the proposed project with the authorities and IAPs;
- Identify stakeholders and notify them of the proposed activity and processes;
- Provide stakeholders with the opportunity to participate in the process and identify issues and concerns associated with the proposed activity;
- Identify potential environmental impacts that will require further study in the impact assessment phase of the EIA process; and
- Develop terms of reference for any studies that will be conducted in the impact assessment phase.

SRK was originally appointed by the CDC and conducted an initial round of pre-application public participation activities for the consolidated gas to power project in 2016, details of which are included below. Subsequent changes in the project description, approach to the EIA process (most notably the splitting into four separate applications), lapsing of SRK's appointment, and additional technical studies undertaken, resulted in delays in commencement of the formal EIA process. Comments received during the 2016 public participation activities, as relevant to the Zone 13 power plant, have been recorded and responded to in Table 4-2, comments are provided in Appendix H. To ensure compliance with the EIA regulations, legally required public participation activities are being repeated as part of the current application.

The activities that have been conducted to date as part of this Scoping Study are as follows:

- Advertisements of the development as an e-notice on the CDC notice board on 8 October 2020 (Appendix C);
- Placement of an onsite poster on 2 June 2020, affixed to the gate of the adjacent property;
- Distribution of the Background Information Document (BID) from 22 January 2016 to identified IAPs, including relevant ward councillors, stakeholders and neighbouring residents. A copy of the BID is attached in Appendix E, and the list of notified IAPs and commenting institutions is given in Table 4-1;
- Collation of public and IAP comments on the BID and E-notice, including responses to these issues;
- Presentation of the project to the Coega Environmental Liaison Committee (ELC) on 20 August 2020 (see copy of presentation in Appendix F), and recording of comments raised during this meeting, which are captured and responded to in Table 4-3; and

---

<sup>5</sup> As no specific guidelines are available from NCDENC, reference is made to DEA and DEA&DP guidelines.

- Preparation of a Draft Scoping Report (DSR) (this Report), including comments from IAPs, and application form (Appendix B), and submission thereof to DEFF.

The following activities are still to be conducted in the Scoping Study:

- Newspaper advertisement and updated e-notice notifying IAPs of the project;
- Making a copy of the report available for download via the Public Documents link on SRK's website and distribution of the Executive Summary to all IAPs registered for this project;
- Provision of a 30 day comment period on the DSR (this report);
- Collation of public and IAP comments on the DSR, and incorporation of these into the Final Scoping Report (for submission to DEFF).

Pre-application consultations were held with the DEFF on 22 May and 12 June 2019, during which a summary of the proposed development and approach to the EIA process was discussed. Minutes of these meetings are appended to the Application form in Appendix B.

## 1.8 Purpose of this Draft Scoping Report

The Scoping process is aimed at identifying the issues and/ or impacts that may result from the proposed activities in order to inform the Impact Assessment phase of the EIA process. The Final Scoping Report (FSR) will form the basis of the Terms of Reference (ToR) for specialist studies, and it is therefore important that all issues and potential impacts that may be associated with the proposed development be identified and recorded. The purpose of the DSR is to identify key issues that require further assessment, and possibly refinement of the development proposal, prior to the commencement of the regulated EIA process with its prescribed timeframes.

The EIA process thus far has focussed on developing a more detailed description of the development proposal (which is expanded on in Section 2), and on identifying the potential impacts. The aim of this Draft Scoping Report is to identify the issues and concerns of Stakeholders and IAPs.

IAPs are encouraged to review the DSR to ensure that their issues and concerns with the proposed development are captured in the FSR. All comments received will be included in the Final Scoping Report, which will be submitted to DEFF for acceptance.

## 1.9 Assumptions and Limitations

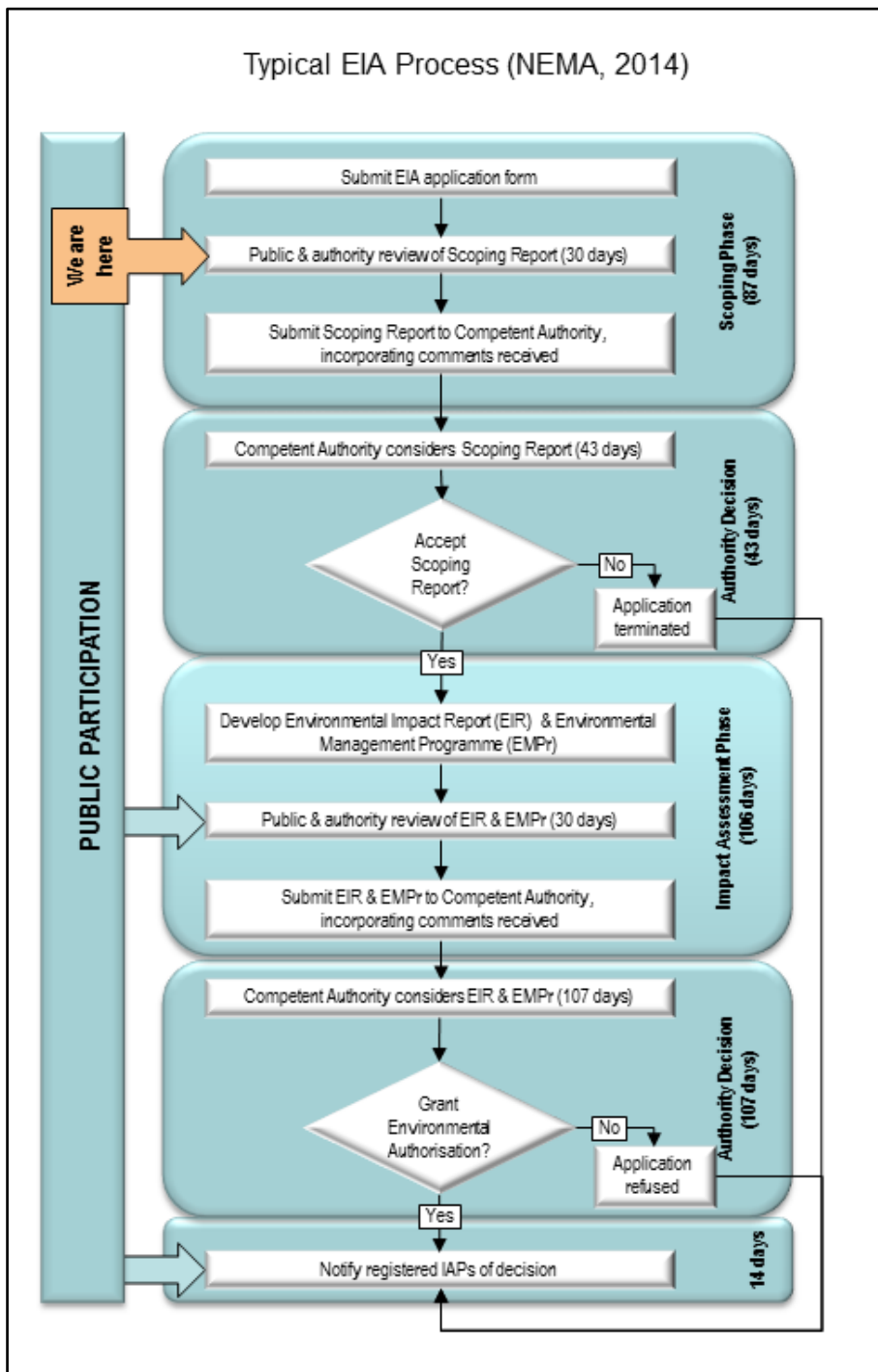
The scope of the EIA is limited to project as described in Chapter 2. The scope of EIA excludes any consideration of:

- Sources of gas – we assume LNG would be imported from suitably authorised sources;
- An evaluation of different energy sources as part of the energy generation mix. It is assumed, based on the IRP, that this has been decided at a strategic level, and it is assumed this included an assessment of environmental factors. Apart from describing the motivation (or need) for gas generated power as part of the energy mix, this assessment will not consider relative merits of different energy sources;
- The transmission of electricity from the power plants to the Grassridge and/or Dedisa substations – it is understood that the bulk powerlines required for this are already authorised (DEA Ref: 12/12/20/781) and therefore will not be assessed as part of this EIA;
- Activities (or the equivalent listed activities at the time) previously authorised via separate EIA processes for the whole SEZ, including the clearing of vegetation, rezoning of land, and



installation of bulk services infrastructure. Relevant listed activities are listed in Table 1-1 with reasons as to why they are not being applied for; and

- The evacuation of power from Grassridge and/or Dedisa substations to consumers.



**Figure 1-4: Environmental Impact Assessment (EIA) Process**

As is standard practice, the report is based on a number of assumptions and is subject to certain limitations. These are as follows:

- That, due to the cost of preparing detailed designs and plans, such detailed design/ planning information would only be developed in the event of environmental authorisation being granted. As such, it is anticipated that, as is typically the case in an EIA process, the EIA will assess broad land use and concept designs;

- That the project as described in this report is viable from an engineering design perspective, as well as economically, and that the project has been correctly scoped to align with other infrastructure that is outside the scope of this EIA such as the CDC Marine Pipeline Servitude EIA;
- That a worst case scenario approach is adopted in assessing the various aspects of the project so that the impacts assessed will cover whatever option is put forward by the chosen bidder.

Notwithstanding these assumptions, it is our view that this DSR provides a good description of the potential issues associated with the proposed development, and a reasonable Plan of Study for EIA.

## 1.10 Structure of this report

This report is divided into eight chapters:

### **Chapter 1 Background and Introduction**

Introduces the Scoping Study, and the legal context, for the proposed gas to power project.

### **Chapter 2 Description of Project**

Describes the various components of, and the motivation for, the proposed gas to power project.

### **Chapter 3 Description of the Affected Environment**

Provides an overview of the affected biophysical and socio-economic environment in Zone 13 of the Coega SEZ, as well as the broader context.

### **Chapter 4 Stakeholder Engagement**

Describes the Public Participation Process (PPP) followed, and the issues & concerns that have been raised by IAPs.

### **Chapter 5 Identification of Potential Impacts**

Describes the potential positive and negative environmental impacts of the proposed gas to power project.

### **Chapter 6 Draft Plan of Study for EIA**

Provides a plan on how SRK proposes to address the identified potential impacts in the EIA phase.

### **Chapter 7 The Way Forward**

Describes the next steps in the scoping process.

### **Chapter 8 References**

**Appendices** Supporting information is presented in various appendices.

## 1.11 Content of Report

The EIA Regulations, 2014 (Government Notice (GN) 982, Appendix 2) prescribe the required content in a Scoping Report. These requirements and the sections of this Scoping Report in which they are addressed, are summarised in Table 1-1.

**Table 1-1: Content of Scoping Report as per EIA Regulations, 2014**

| <b>GN 982, Appendix 2 Ref.:</b> | <b>Item</b>  | <b>Section Ref.:</b>       |
|---------------------------------|--|----------------------------|
| (1) (a)                         | Identify the relevant policies and legislation relevant to the activity  | Section 1.5                |
| (1) (b)                         | Motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;   | Section 2.2                |
| (1) (c)                         | Identify and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking process   | Section 2.5.9              |
| (1) (d)                         | Identify and confirm the preferred site, through a detailed site selection process, which includes an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified alternatives focusing on the geographical, physical, biological, social, economic, and cultural aspects of the environment  | Section 2.6.1              |
| (1) (e)                         | Identify the key issues to be addressed in the assessment phase  | Section 5                  |
| (1) (f)                         | Agree on the level of assessment to be undertaken, including the methodology to be applied, the expertise required as well as the extent of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site | Section 6                  |
| (1) (g)                         | Identify suitable measures to avoid, manage or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored.  | To be assessed in the DEIR |
| (2)                             | A scoping report must contain the information that is necessary for a proper understanding of the process, informing all preferred alternatives, including location alternatives, the scope of the assessment, and the consultation process to be undertaken through the environmental impact assessment process, and must include:  |                            |
| (2) (a) (i)                     | Details of the EAP who prepared the report:  | Section 1.2                |
| (2) (a) (ii)                    | Details of the expertise of the EAP, including a curriculum vitae  | Appendix A                 |
| (2) (b) (i)                     | The location of the activity, including the 21 digit Surveyor General code of each cadastral land parcel   | Section 2.3                |
| (2) (b) (ii)                    | The physical address and farm name   | Section 2.3                |
| (2) (b) (iii)                   | Where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;  | Section 2.3                |
| (2) (c) (i) & (ii)              | A plan which locates the proposed activity or activities applied for at an appropriate scale, or, if it is a linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken. Or if on land where the property has not been defined, the coordinates within which the activity is to be undertaken;  | Appendix B                 |
| (2) (d)                         | A description of the scope of the proposed activity, including:  |                            |
| (2) (d) (i)                     | All listed and specified activities triggered  | Table 1-1                  |
| (2) (d) (ii)                    | A description of the activities to be undertaken, including associated structures and infrastructure   | Section 2                  |
| (2) (e)                         | A description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process;  | Section 1.6                |
| (2) (f)                         | A motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location;  | Section 2.2                |
| (2) (h)                         | A full description of the process followed to reach the proposed preferred activity, site and location within the site, including:   |                            |

| <b>GN 982, Appendix 2 Ref.:</b> | <b>Item</b>  | <b>Section Ref.:</b>   |
|---------------------------------|--|--|
| (2) (h) (i)                     | Details of all the alternatives considered   | Section 2.5.9  |
| (2) (h) (ii)                    | Details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs;  | Section 4  |
| (2) (h) (iii)                   | A summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;   | Section 4.2.2  |
| (2) (h) (iv)                    | The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;   | Section 0  |
| (2) (h) (v)                     | The impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts—<br>(aa) can be reversed;<br>(bb) may cause irreplaceable loss of resources; and<br>(cc) can be avoided, managed or mitigated | Section 5<br>Assessment of these to be detailed in the Draft EIR |
| (2) (h) (vi)                    | The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives;  | Section 6.3  |
| (2) (h) (vii)                   | Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects   | Section 5  |
| (2) (h) (viii)                  | The possible mitigation measures that could be applied and level of residual risk  | To be provided in the Draft EMPr                                 |
| (2) (h) (ix)                    | The outcome of the site selection matrix   | Not applicable   |
| (2) (h) (x)                     | If no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such and  | Section 2.6.1  |
| (2) (h) (xi)                    | A concluding statement indicating the preferred alternatives, including preferred location of the activity   | Throughout Section 2.5.9   |
| (2) (i)                         | A plan of study for undertaking the environmental impact assessment process to be undertaken, including:   | Section 6  |
| (2) (i) (i)                     | A description of the alternatives to be considered and assessed within the preferred site, including the option of not proceeding with the activity  | Sections 2.6.3 & 2.6.5   |
| (2) (i) (ii)                    | A description of the aspects to be assessed as part of the environmental impact assessment process;  | Sections 0 & 6.5   |
| (2) (i) (iii)                   | Aspects to be assessed by specialists  | Section 6.5  |
| (2) (i) (iv)                    | A description of the proposed method of assessing the environmental aspects, including a description of the proposed method of assessing the environmental aspects including aspects to be assessed by specialists   | Section 6.3  |
| (2) (i) (v)                     | A description of the proposed method of assessing duration and significance  | Section 6.3  |
| (2) (i) (vi)                    | An indication of the stages at which the competent authority will be consulted   | Figure 1-4 and Section 7   |
| (2) (i) (vii)                   | Particulars of the public participation process that will be conducted during the environmental impact assessment process; and   | Sections 4 & 7   |
| (2) (i) (viii)                  | A description of the tasks that will be undertaken as part of the environmental impact assessment process  | Figure 1-4 and Section 7   |
| (2) (i) (ix)                    | Identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored  | To be provided in the Draft EMPr                                 |

| <b>GN 982,<br/>Appendix<br/>2 Ref.:</b> | <b>Item</b>   | <b>Section<br/>Ref.:</b>             |
|---|---|--------------------------------------|
| (2) (j)                                 | An undertaking under oath or affirmation by the EAP in relation to  |                                      |
| (2) (j) (i)                             | The correctness of the information provided in the report   | Appendix B                           |
| (2) (j) (ii)                            | The inclusion of comments and inputs from stakeholders and interested and affected parties; and   | Section 4.2                          |
| (2) (j) (iii)                           | Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties;   | Section 4.2<br>and Appendix<br>C - H |
| (2) (k)                                 | An undertaking under oath or affirmation by the EAP in relation to the level of agreement between the EAP and interested and affected parties on the plan of study for undertaking the environmental impact assessment; | Appendix B                           |
| (2) (l)                                 | Where applicable, any specific information required by the competent authority; and;  | -                                    |
| (2) (m)                                 | Any other matter required in terms of section 24(4)(a) and (b) of the Act.  | -                                    |

## 2 Description of Development Proposal

This chapter describes the key characteristics of the proposed Zone 13 Gas to Power Plant, and associated infrastructure, within the Coega SEZ).

At the outset, it is important to note that this description is deliberately non-specific in terms of the proprietary technologies that would be required. As the specific technology providers have not yet been selected, the approach in this report is to describe each of the components of the development using typical/standard Gas to Power plant design information.

One of the objectives of the Scoping Phase is therefore to identify instances (if any) where more specific design information might be required. It is envisaged that one of the outputs of the impact assessment process would be to record recommended thresholds and/or specifications in the Final EIR for DEFF to consider when deciding whether to authorise the project.

Where the different technologies that reasonably might be procured for this project have differing potential impacts, the worst case<sup>6</sup> scenario will be assessed. The basis of the design for the power plants, and the associated infrastructure, is that the power plants would operate at 100% capacity 80% of the time and the assessment of environmental impacts will be based on the quantities associated with this design basis.

The project description is sequenced to “follow” the delivery of the regasified LNG at the power plant to the evacuation of power to the previously authorised, but not yet constructed 400 kV lines in the Coega SEZ, as depicted in the generic schematic (of the overall project) shown in Figure 2-1. Several key terms are described below (Section 2.4) as an introduction to the gas to power process.

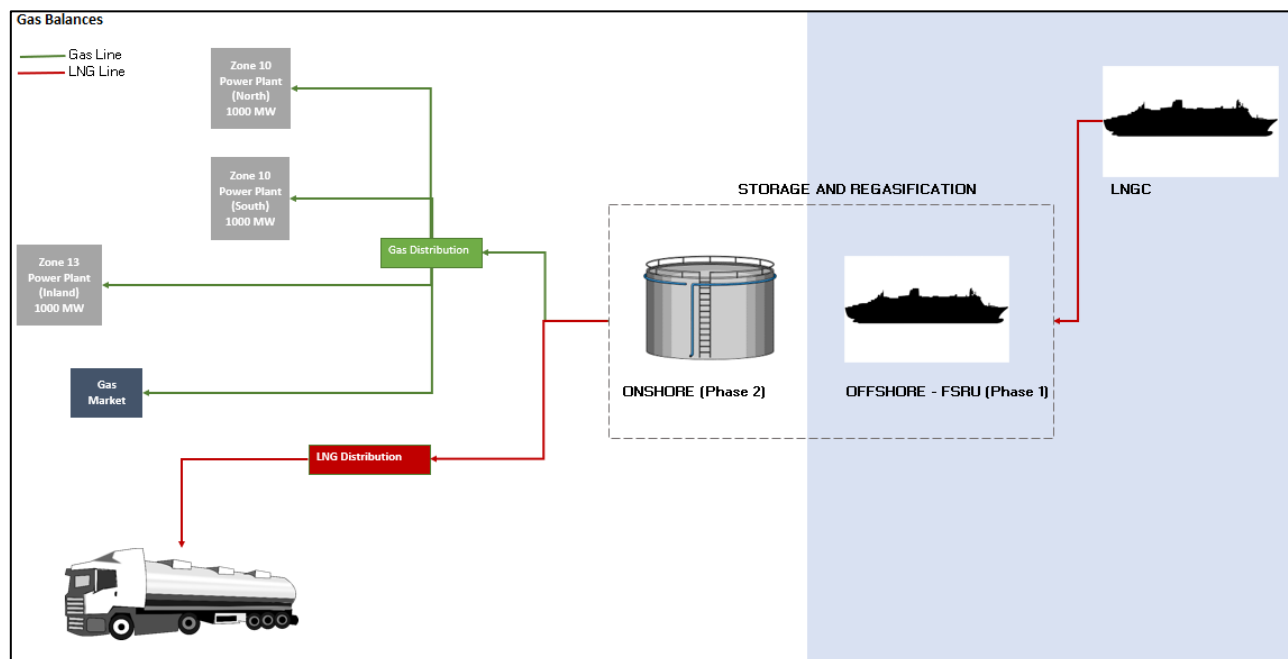


Figure 2-1: Schematic of scope of the gas to power project EIA (Carnegie Energie, 2019)

<sup>6</sup> Note that the use of the term ‘worst case’ in this report refers to the option that would result in the highest significance rating of negative impacts, or the lowest significance rating of positive impacts.

## 2.1 Context

A number of national policy documents present the case for natural gas as a significant contributor to South Africa's energy mix (see Section 1.6).

In support of the vision for the South African gas programme, the DMRE is developing an LNG to Power Independent Power Producer Procurement Programme (IPPPP). The LNG to Power IPPPP aims to identify and select successful bidders and enable them to develop, finance, construct and operate a gas-fired power generation plant at each of the two ports, Ngqura and Richards Bay. The LNG to Power IPPPP will provide the anchor gas demand on which LNG import and regasification facilities can be established at the Ports of Ngqura and Richards Bay. This will provide the basis for LNG import, storage and regasification facilities to be put in place that can be available for use by other parties for LNG import and gas utilisation development. Therefore, Third Party Access will be a fundamental aspect of the LNG to Power IPP Programme. This will enable the development of gas demand by third parties and the associated economic development. The DoE released a Preliminary Information Memorandum (PIM) in early October 2015, outlining the scope of the LNG to power projects.

In alignment with the future LNG IPPPP, the DMRE have recently released a 'Medium Term Risk Mitigation Power Purchase Programme' which seeks 2GW of flexible power capacity to be online by June 2022. Projects awarded under this programme will also be required to align with a future LNG to power programme initiative. It is therefore envisaged that power projects can be developed to operate on an interim liquid fuel such as Diesel and Fuel Oil until LNG becomes available. Such projects would need to be of a smaller nature due to the construction time constraints and bid size limit of 50-450MW per project.

The following studies were undertaken/considered for the development of a Gas to Power project in Coega:

1. CCGT Plant identified during the EIA for the Aluminium smelter;
2. Power lines from the proposed CCGT site locality to Dedisa and Grassridge substations authorised in 2006 (Ref: 12/12/20/781);
3. 2004 – CSIR EIA started for a 1600 MW LNG Terminal and CCGT plant. Process stopped at Scoping stage;
4. 2009 – Worley Parsons PFS for 3200 MW CCGT power plant in Coega IDZ linked to LNG terminal;
5. 2016 – PRDW Pre-feasibility Report (FEL2) (DoE and TNPA): Importing of up to 3.96 mtpa into the Port of Ngqura; and
6. 2016 – Mott-MacDonald IPP LNG-to-Power project (DoE), for 2000 MW at Richards Bay and 999 MW at Coega.

Following various pre-feasibility studies, the CDC initiated an expression of interest (EOI) process, inviting responses from interested parties with the requisite experience to deliver the project including:

- Receiving, storing and re-gasifying LNG;
- Delivering LNG to a modular power plant;
- Design, procurement, construction and operation of the power plant;
- Power transmission at 400kV to the main SEZ sub-station; and
- The option of sourcing and transporting the LNG.

The gas to power project site selection process considered the following criteria (CDC, 23 September 2015):

- The availability of fuel for the operational life of a power plant of at least 20 years. The level of confidence for these fuel reserves needs to be high and it must be feasible to transport the fuel to the proposed power plant in a reliable and cost effective manner. The quality parameters of the gas must be acceptable and fairly constant over the life of the proposed power plant. If power plant is not located at the source of the gas, then infrastructure to transport gas to the site must be available.
- Sufficient quantities of water must be available at the site, or it must be relatively straightforward to transfer to the site. The cost of the water must not be prohibitive. In most instances gas to power plants are built next to the sea. The availability of seawater is also required for regasification of the LNG;
- Suitable and sufficient land on which to build the proposed power plant must be available as close as possible to the fuel source and to the users of electricity and should be able to help anchor the grid and reduce transmission losses where necessary;
- The distance to the national transmission system has to be evaluated. The cost of integrating into the existing network, the strengthening of that network and whether the upgrading of this network is compatible with the regional transmission system expansion plans; and
- The area where the proposed power plant is to be located must preferably be an area where the air quality is not already degraded. Whilst it is possible to mitigate atmospheric pollution, it is still preferable to avoid already highly stressed locations.

The advantages of the Coega SEZ as a location for the proposed development, according to the CDC, are summarised in Table 2-1.

**Table 2-1: The Case for Coega’s Gas Readiness - Fast Facts (CDC, 20 July 2015)**

|   |   |
|---|---|
| <p><b>Alignment to National Strategic Drivers</b></p>       | <p>The National Development Plan (NDP) envisages a South African energy sector that promotes economic growth, social equality and environmental sustainability by 2030. The Department of Energy’s Integrated Resource Plan outlines gas-driven projects, which was further asserted by the 2012 Ministerial Determination allocation of 2,652 MW to be generated from Natural Gas between 2021 and 2025.</p> <p>This also supports the objectives of the Integrated Energy Plan, namely to: ensure the security of supply; minimise the cost of energy; increase access to energy; diversify supply sources and the primary sources of energy; minimise emissions from the energy sector; promote localisation and technology transfer and the creation of jobs.</p>                     |
| <p><b>World Class Site Location</b></p>                     | <ul style="list-style-type: none"> <li>• Coega SEZ consist of 14 zones with the total of 9,000 ha;</li> <li>• The proposed site for the Power Plant (1,000 MW) is in Zone 13 of the Coega SEZ is, ±5 km from the deepwater Port of Ngqura and adjacent to Eskom’s Dedisa Substation;</li> <li>• In 2009 Coega conducted a 2,500 MW CCGT Pre-feasibility study as preliminary analysis of the suitability and viability (strategic, technical, financial, regulatory, legal and commercial), linked to LNG terminal;</li> <li>• This is in addition to the 342 MW Dedisa Peaking Power Project which can be converted into a gas-driven power station; and</li> <li>• Close proximity to Shale Gas Prospects in the Eastern Cape offer opportunities for long term integration.</li> </ul> |
| <p><b>Progress on Environmental Authorizations (EA)</b></p> | <ul style="list-style-type: none"> <li>• EA for the rezoning of the Core Development Area of the Coega SEZ;</li> <li>• Existing EA for 400 kV Transmission Line between Gas-to-Power Project site in Zone 10 and the Dedisa Substation;</li> <li>• LNG-to- Power Project -Draft Scoping report (2006);</li> <li>• EIA underway for a marine pipeline servitude/ sea water intake for cooling: Draft Scoping report approved 2014;</li> <li>• EIA completed for the Dedisa Peaking Power plant;</li> </ul>   |



|  |  |
|--|--|
|  | <ul style="list-style-type: none"> <li>EIA conducted for the proposed establishment of nine 132 kV power lines between Grassridge Substation (Eskom) &amp; Coega SEZ</li> </ul>  |
| <b>Infrastructure Outlay</b>                             | <ul style="list-style-type: none"> <li>Availability of land on rezoned SEZ;</li> <li>Approved Coega Infrastructure Master Plan – defined services corridor from Project site to Dedisa Substation;</li> <li>Good access to site via National Road (N2) and ancillary road network.</li> </ul>  |
| <b>Grid Connectivity</b>                                 | <ul style="list-style-type: none"> <li>Connection of the Gas-to-Power plant to the Dedisa sub-station via 400 kV lines into the national grid and at 765 kV, in future.</li> </ul>   |
| <b>Gas Pipeline Infrastructure</b>                       | <ul style="list-style-type: none"> <li>Approved Coega Infrastructure Master Plan;</li> <li>Planned Gas servitudes in defined Services corridor – 4 km from Coast to Dedisa Peaking Power Plant;</li> <li>Integration to the Operation Phakisa Gas Infrastructure Planning</li> </ul>   |
| <b>LNG Berth at Port of Ngqura</b>                       | <ul style="list-style-type: none"> <li>Transnet National Ports Authority to conduct a feasibility study on the LNG terminal (receiving, storage &amp; regasification) to be built, operated and managed by a licensed operator;</li> <li>At least two LNG berth options identified in conceptual studies;</li> <li>Strong linkages between the Shale Gas prospects, LNG terminal and Gas infrastructure;</li> <li>Potential to host Power Barges.</li> </ul> |
| <b>Socio-Economic Aspects for EC (Jobs &amp; Skills)</b> | <ul style="list-style-type: none"> <li>Increased Electricity generation in the Province &amp; Balancing the Renewable Energy load - Stability of Electrical grid (Leading to confidence in province, thus stimulate economic growth);</li> <li>Reduced energy constraint as gas can be used directly in industrial complexes - Gas can be used for chemical products manufacturing (Job Creation &amp; Skills Development)</li> </ul>                        |

In addition to the advantages of the Coega SEZ as the project location, as summarised by the CDC, the DoE has noted the following reasons:

- The project is in line with a 2005 cabinet resolution;
- There is potential opportunity for other related projects;
- Sea water for cooling is readily available in proximity to the Power Station site;
- Reduction in transmission losses to the Eastern Cape;
- A large amount of preparatory work had already done by CEF/iGas;
- Increased economic activity and employment creation that would lead to socio-economic development in the region;
- Attract new industries on the back of power availability;
- Within a 26 km radius of a wide variety of specialist component suppliers;
- Manufacturing clusters that facilitate backward and forward integration of supply chains

## 2.2 Need and desirability

### 2.2.1 Analysis of Need and Desirability of the Project

Best practice as well as the EIA Regulations, 2014 (Appendix 3 Section 3 [f]) requires that the need and desirability of a project (including viable alternatives) are considered and evaluated against the tenets of sustainability. This requires an analysis of the effect of the project on *social, economic and ecological* systems; and places emphasis on consideration of a project's *justification* not only in terms of financial viability (which is often implicit in a [private] proponent's intention to implement the project),

but also in terms of the specific needs and interests of the community and the opportunity cost of development (DEA&DP, 2013).

The principles in NEMA (see Section 1.5.1) serve as a guide for the interpretation of the issue of "need", but do not conceive "need" as synonymous with the "general purpose and requirements" of the project. The latter might relate to the applicant's project motivation, while the "need" relates to the interests and needs of the broader public. In this regard, an important NEMA principle is that environmental management must ensure that the environment is "held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage" (DEA, 2014).

There are various proxies for assessing the need and desirability of a project, notably national and regional planning documents which enunciate the strategic needs and desires of broader society and communities: project alignment with these documents must therefore be considered and reported on in the EIA process. With the use of these documents or - where these planning documents are not available - using best judgment, the EAPs (and specialists) must consider the project's strategic context, or justification, in terms of the needs and interests of the broader community (DEA&DP, 2013).


The consideration of need and desirability in EIA decision-making therefore requires the consideration of the strategic context of the project along with broader societal needs and the public interest (DEA, 2014). However, it is important to note that projects which deviate from strategic plans are not necessarily undesirable. The DEA notes that more important are the social, economic and ecological impacts of the deviation, and "the burden of proof falls on the applicant (and the EAP) to show why the impacts...might be justifiable" (DEA, 2017).

The *social* component of need and desirability can be assessed using *regional* planning documents such as SDFs, IDPs and EMFs to assess the project's social compatibility with plans. These documents incorporate specific social objectives and emphasise the need to promote the social well-being, health, safety and security of communities, especially underprivileged and/or vulnerable communities.

*The proposed gas to power plant will create employment opportunities during the construction and operation phases and provide power to the national energy grid during the operation phase, improving energy security at a national level and indirectly facilitating further development opportunities in the area. The project would therefore constitute a strategic investment that will generate benefits through the provision of power, in a more environmentally sustainable manner than coal fired power generation.*

The *economic* need and desirability of a project can be assessed using *national*, provincial, district and local municipal planning documents to assess the project's economic compatibility with plans. These documents describe specific economic objectives and emphasise the need to:

- Improve job creation opportunities;
- Ensure appropriate economic growth;
- Concentrate on sustainable job creation, using existing economic strategies as a basis, particularly business and infrastructure development;
- Encourage trade and investment through improved energy availability and security;
- Provide adequate and appropriate infrastructure to stimulate economic growth;

*The proposed project is aligned with the above objectives, which effectively support the development of the gas to power plant as a means to ensure economic growth and energy provision* 

It is essential that the implementation of social and economic policies takes cognisance of strategic *ecological* concerns such as climate change, food security, as well as the sustainability in supply of natural resources and the status of our ecosystem services. Sustainable development is the process that is followed to achieve the goal of sustainability (DEA, 2014).

Sustainable development implies that a project should not compromise natural systems. In this regard, the Best Practicable Environmental Option (BPEO) is that which provides the most benefit and causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term.

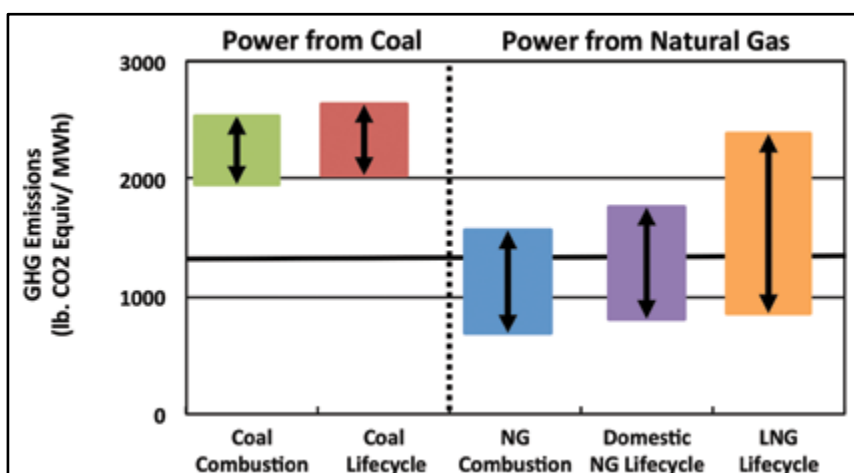
NEMA and the EIA Regulations, 2014 call for a hierarchical approach to the selection of development options, as well as impact management which includes the investigation of alternatives to avoid, reduce (mitigate and manage) and/or remediate (rehabilitate and restore) negative (ecological) impacts (DEA, 2014).

In support of this, the applicant’s motivation for the project is presented in Table 2-1. In essence, the power plant is needed to address current and projected energy shortfall at a national level, as well as stimulate local employment and the economy.

Gas fired power generation is among the current alternative sources of energy which has been shown to be an efficient and, in comparison with coal fired power plants, a relatively clean method of thermal power generation. The primary fuel type being considered is natural gas, although provision is also made for the storage and use of other fuel types (i.e. diesel and fuel oil), as a backup fuel, and possibly for initial periods, should gas supply be delayed for any reason (CDC, 23 September 2015).

A study comparing the life cycle emissions of natural gas and coal used for the generation of electricity in the United States of America revealed that, using existing power generation technology, natural gas is a cleaner energy source (Jamarillo, et al., 2007). This is illustrated in Figure 2-2, where the ranges of GHG emissions for coal, natural gas and LNG are compared.

GHG emissions from the combustion of natural gas range from 340 – 590 kg CO<sub>2</sub> equivalent/MWh. This is much lower than that of coal which ranges from 900 – 1180 kg CO<sub>2</sub> equivalent/MWh. This differential persists when the entire life cycle is taken into account. Furthermore, when the liquefaction, shipping and regasification processes involved with LNG are included, on average natural gas still remains cleaner than the coal alternative.



**Figure 2-2: Fuel combustion and Life-cycle GHG Emissions for Existing Power plant technology (Source: (Transnet SOC Ltd, 2015))**

The development of natural gas infrastructure also has the potential to enable other uses of natural gas, including direct heat and chemical feedstock for industrial processes, commercial and residential cooking and heating applications, as well as an alternative fuel source for transport.

### 2.2.2 Alignment with energy initiatives

The Gas to Power project is consistent with energy initiatives, and specifically the objectives of (CDC, 20 July 2015):

- Research & Knowledge Building;
- Public Awareness;
- Triggering the gas sector in the Eastern Cape; and
- Identification of Local industry participation & development

### 2.2.3 Land Use Planning Policy Framework

The proposed development is situated within the Coega SEZ and the Port of Ngqura and is consistent with land use planning objectives that the Coega Development Corporation has defined for the SEZ.

## 2.3 Location and site description of the proposed project

The proposed Zone 13 power plant is located in the Coega SEZ (Figure 1-3), close to the existing Dedisa 335 MW peaking power plant and substation, and Agni Steels metal processing and recycling plant. A map showing the various zones of the Coega SEZ relative to the proposed development sites is provided in Figure 2-3 for reference. The specific property portion is listed in Table 2-2 below.

**Table 2-2: Property details**

|                              |                                 |
|------------------------------|---------------------------------|
| <b>Farm Name/ Erf Number</b> | Erf 329                         |
| <b>SG 21 Digit Code</b>      | C07600230000032900000           |
| <b>Physical Address</b>      | Coega                           |
| <b>Coordinates</b>           | 25°40'56.809"E ; 33°44'44.296"S |

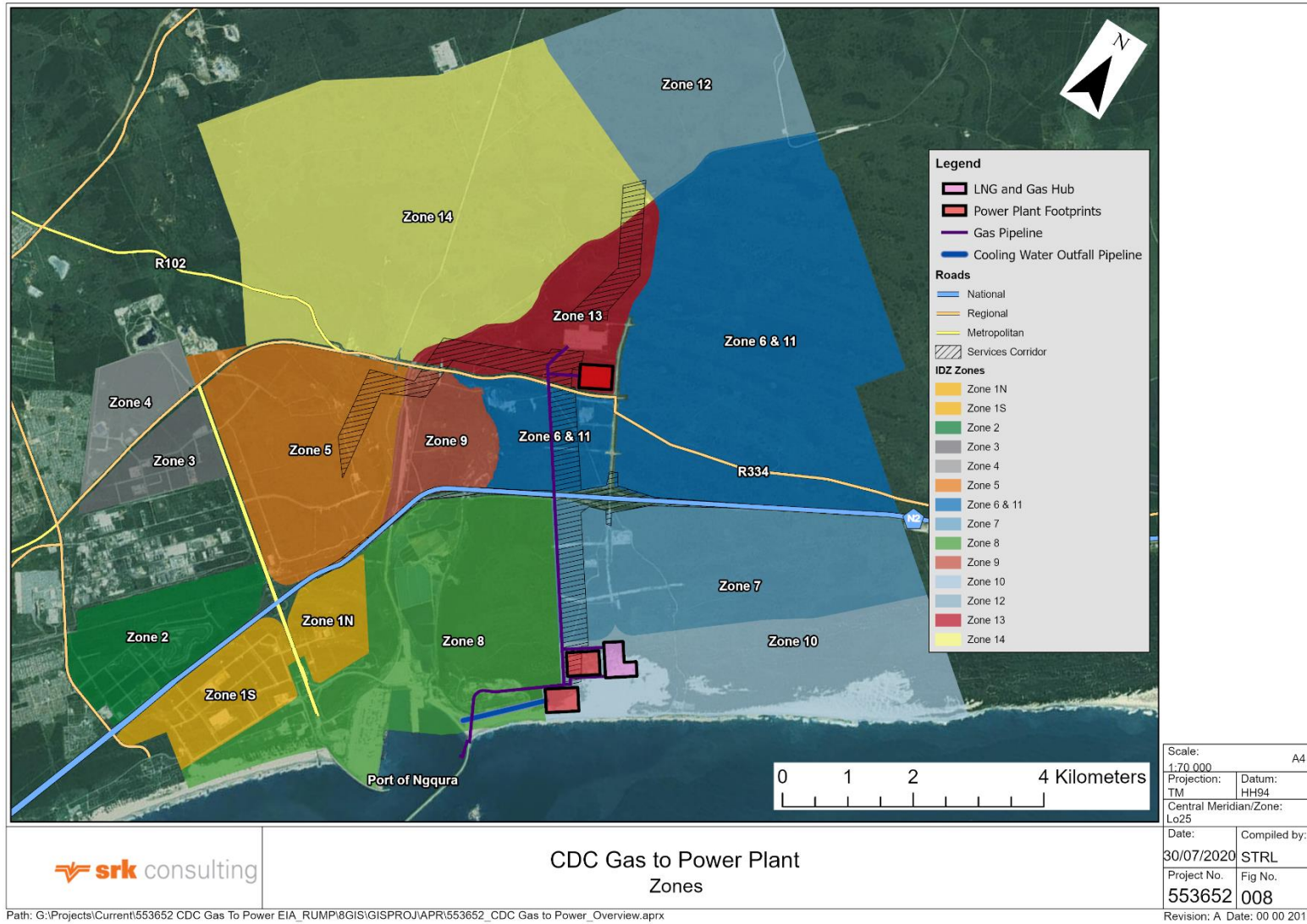


Figure 2-3: Coega SEZ zone layout

## 2.4 Key Terminology

As gas to power projects are relatively unknown in South Africa, this section presents a short non-technical description of key terms and acronyms used throughout this report.

### 2.4.1 Liquefied Natural Gas (LNG)

Natural gas used for energy generation is composed of primarily methane, with low concentrations of other hydrocarbons, water, carbon dioxide, nitrogen, oxygen and some sulphur compounds. LNG is natural gas which has been cooled below its boiling point (-161°C) in a process known as liquefaction. The process of liquefaction involves extracting most of the impurities in raw natural gas. The remaining natural gas is primarily methane with only small amounts of other hydrocarbons and consequently is widely considered a clean fossil fuel.

The quality of LNG is determined by means of gas specifications, and in particular the Wobbe Index (WI) (an indicator of the interchangeability of fuel gases). Imported gas, particularly from different sources, may need to be treated to achieve the same quality. Blending with nitrogen would make the LNG leaner, or alternatively if already too lean, the gas would need to be blended with liquid petroleum gas (LPG). Assuming all imported LNG falls within the range of allowable WI for Gas Turbines, conditioning via Nitrogen or LPG would be required to control the rate of change of WI when swapping between LNG sources. Gas Turbines typically allow a relatively wide WI band, however approx. 0,5% WI change per second. To achieve this rate of change, approx. 1.7 tonnes of LPG and 1.3 tonnes of Nitrogen (worst case + buffer capacity) would be required to change over between fuel specs. This conditioning of the LNG would take place at the LNG and gas hub, prior to the gas being transmitted to each power plant.

### 2.4.2 Open Cycle and Combined Cycle

The term open cycle refers to a power generation configuration in which the heat in exhaust gases is not utilised for energy production (Figure 2-4). The term combined cycle refers to a power generation configuration in which the exhaust gases from an engine can be used to power a second engine, usually this occurs by way of a heat exchanger. The CCGT process is depicted in Figure 2-5 below.

#### Open Cycle Gas Turbine/ Engine (OCGT / OCGE)

A simple open cycle gas turbine or engine consists of a compressor, combustion chamber and a turbine (or engine). A compressor sucks in air from the atmosphere and increases its temperature and pressure. Fuel in the form of gas is pumped into the combustion chamber and mixes with the compressed air. The gas/air mixture is ignited and produces hot gas. This hot gas is passed through turbine blades (or main axis in the case of an engine) of the generator and electricity is generated. The waste heat/gas from the process is released to the atmosphere. This contains carbon dioxide and water vapour, as well as other substances such as nitrogen, nitrogen oxides, sulphur oxides

#### Combined Cycle Gas Turbine/ Engine (CCGT / CCGE)

The combined cycle gas turbine or engine works in the same way as the open cycle except that instead of being released to the atmosphere, the exhaust is sent through a heat exchanger that extracts heat from the exhaust before it is returned to the compressor ([http://cset.mnsu.edu/engagethermo/systems\\_gtpp.html](http://cset.mnsu.edu/engagethermo/systems_gtpp.html)).

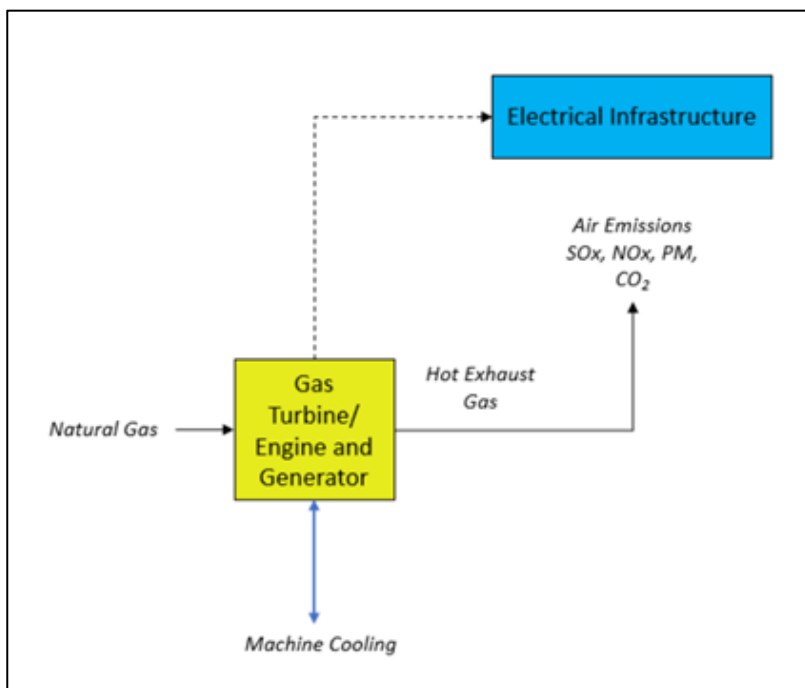


Figure 2-4: Schematic showing inputs and outputs for open cycle gas turbine or engine technology (Carnegie Energie, 2019)

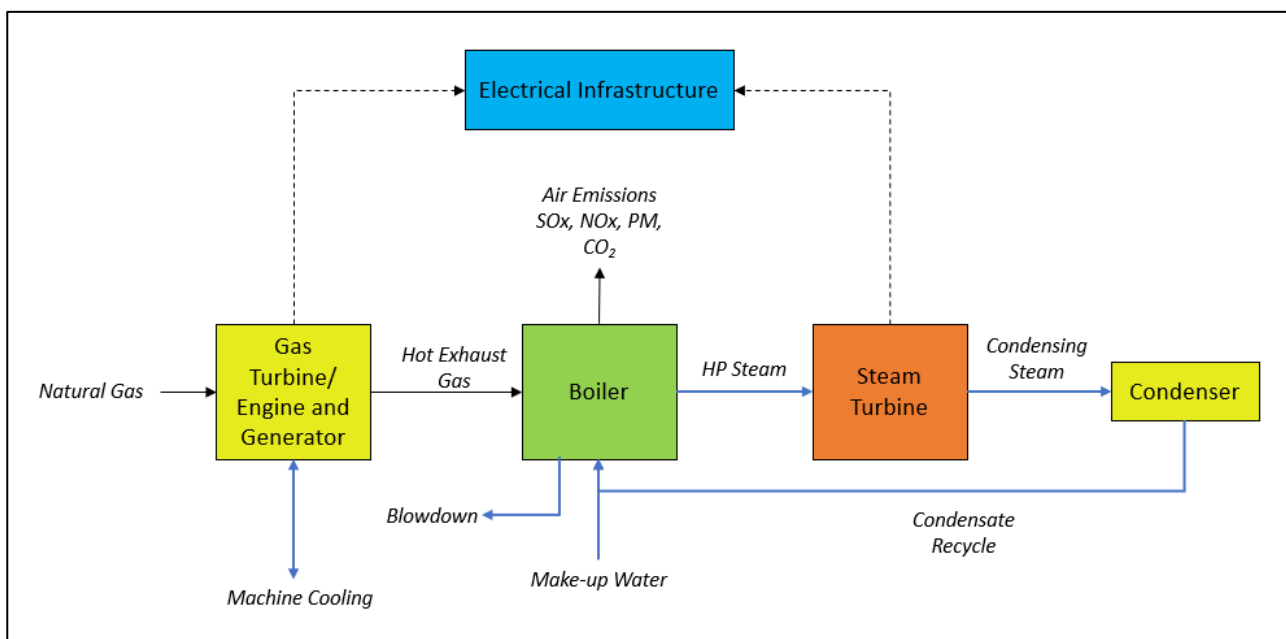
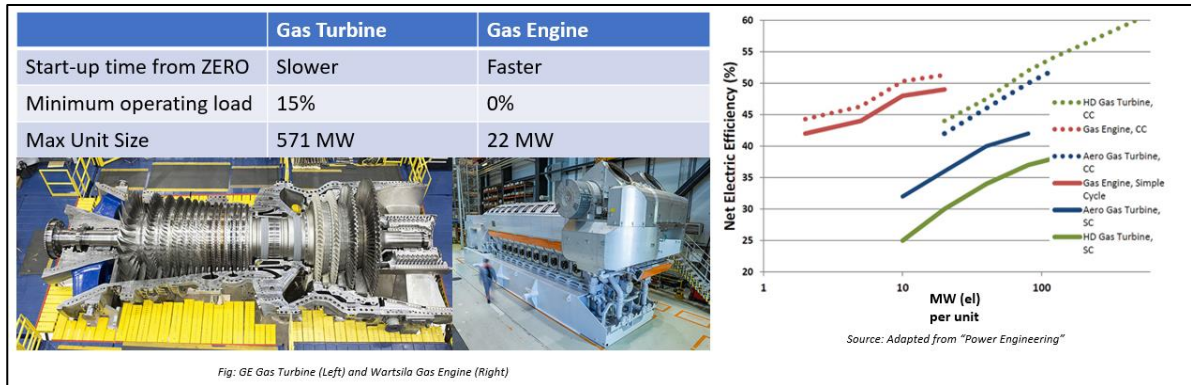


Figure 2-5: Schematic showing inputs and outputs for combined cycle gas turbine or engine technology (Carnegie Energie, 2019)

### 2.4.3 Gas engines vs gas turbines

A summary of the key differences between gas turbine and engine technologies is provided in Figure 2-6. On the whole, combined cycle gas turbines are more efficient than gas engines at baseload and mid-merit production capacities, however gas engines allow greater flexibility and have greater efficiencies in terms of changing load and rapid start-ups. While the maximum unit size of engines is limited to 22 MW capacity, multiple engine units could be connected in series to meet the capacity requirements.



**Figure 2-6: Summary of key differences between gas turbine and engine technology (Carnegie Energie, 2019)**

Some general principles in the selection of power generation technology and assessment thereof in this EIA are:

- Choice of generator and open or combined cycle technology affects efficiency of power output, and responsiveness to demand fluctuations
- Fuel volumes, and gas infrastructure specifications, are based on open cycle gas turbine operating at 100% daily load factor at an 80% annual dispatch factor, i.e. base load
- The combined cycle gas turbine requires the most water ( $\pm 790 \text{ m}^3/\text{day}/\text{power plant}$ ). Source of this water will be from municipality or the desalination plant already authorised as part of the adjacent Aquaculture Development Zone (once developed).

### 2.4.4 Cooling technologies

The choice of cooling system directly impacts the technical performance of the plant (electrical output), capital and operational cost, and environmental impacts. The trade-offs to reducing source water consumption are higher costs and lower electrical efficiencies. The optimal cooling system is typically influenced by environmental considerations for the abstraction of seawater, and the permissible temperate rise before discharge back to the marine environment. The relative footprint and water demand requirements for the main cooling technologies available are illustrated in Figure 2-7.

Even though all thermoelectric plants use water to generate steam for electricity generation, not all use water for cooling. The four fundamental technology options for cooling are:

1. Once through seawater cooling;
2. Mechanical draft wet cooling towers;
3. Natural draft wet cooling towers; and
4. Air cooled condenser.





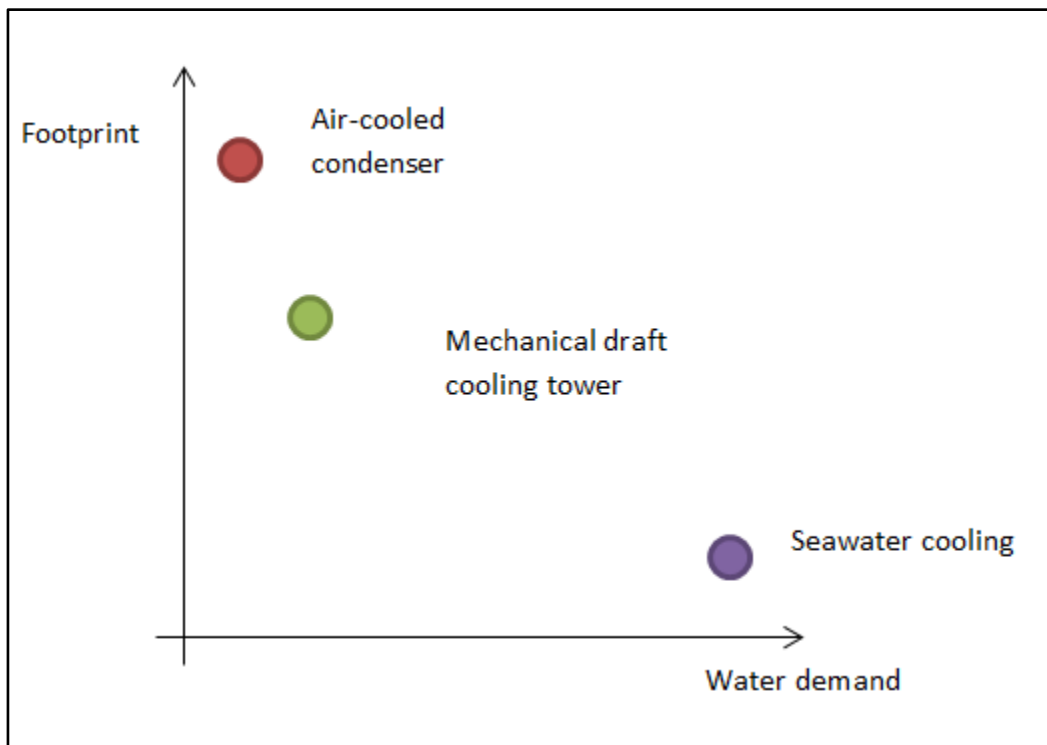


Figure 2-7: Relative footprint and water demand for air, mechanical draft and seawater cooling (Source: (Mott Macdonald, 2016)).

## 2.5 Detailed Project Description

The precise combination of generating technology, i.e. gas turbines or combustion engines and combined cycle or open cycle, is unknown and it is expected that the power plant could employ a range of these technologies.

In terms of footprint of the proposed development, as would typically be depicted in a site layout plan, the actual size and arrangement of the various elements will only be determined during a detailed design phase. Spacing between components and equipment may vary. The CDC has allocated 18 ha in Zone 13 to accommodate the proposed facilities and considers this sufficient to accommodate the power plant.

The power plant would be permanently staffed 24 hours per day, 365 days per year. For the purposes of this assessment it will be assumed that the facility operates at maximum capacity 80% of the time, which e.g. in terms of air emissions would provide a worst-case scenario.

### 2.5.1 Power Plant Technology Options

#### Key Components

The various components of a gas turbine or engine power plant are as follows:

- Power island, comprising of the power plant and electrical infrastructure. The power plant comprises of a Gas Turbine / engine, and in the case of a combined cycle plant will also include a Heat Recovery Steam Generator (HRSG), and Steam Turbine / engine;
- Cooling water system (for a combined cycle plant), including the technology for cooling of steam, and the source of cooling water;

- Associated services, including the storage and treatment of process water through a demineralisation process;
- Turbine / engine power house;
- Control and electrical building;
- Chemical storage facilities;
- Emergency back-up generator facilities;
- Transitional phase / back up fuel storage;
- Central control room, warehouse and admin buildings;
- Waste water storage and treatment facilities; and
- Firefighting systems.

## Gas Turbines

The basic operation of the gas turbine involves the intake of atmospheric air and input into a compressor consisting of multiple rows of fan blades. The compressor elevates the air pressure. Fuel is then injected into the high-pressure environment causing ignition creating a high velocity gas. The compressor fans are connected to a turbine by a shaft. This high-temperature high-pressure gas enters the turbine causing the shaft to rotate and generates mechanical energy.

## Combustion Engines

Combustion engines employ the expansion of hot gases to push a piston within a cylinder, converting the linear movement of the piston into the rotating movement of a crankshaft to generate power. Modern combustion engines used for electric power generation are internal combustion engines in which an air-fuel mixture is compressed by a piston and ignited within a cylinder in much the same way as a car engine.

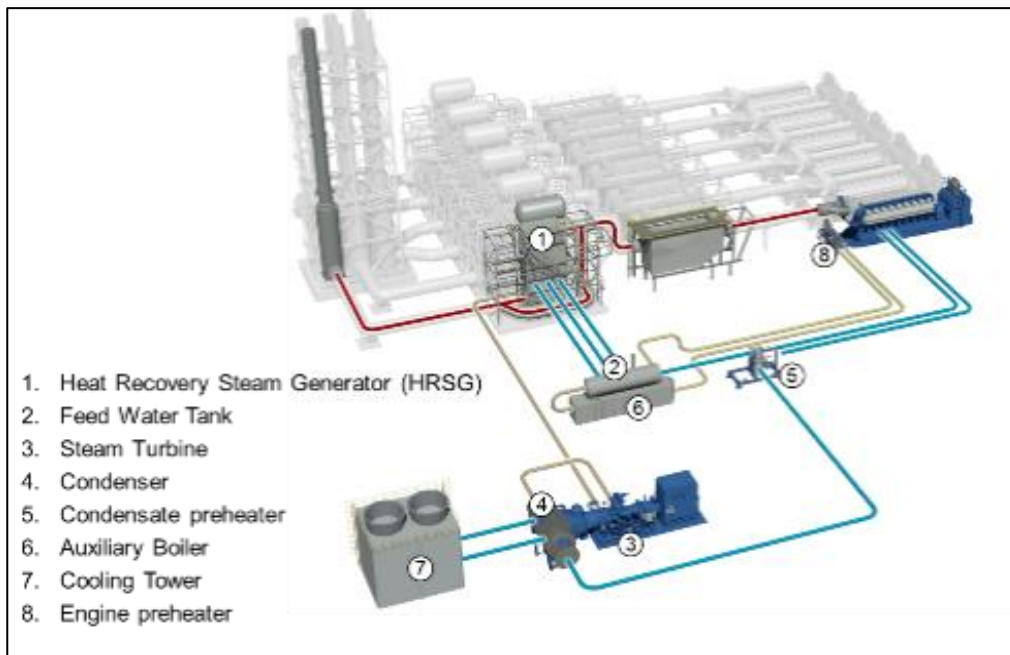
The size and power of a combustion engine is a function of the volume of fuel and air combusted. Thus, the size of the cylinder, the number of cylinders and the engine speed determine the amount of power the engine generates. By boosting the engine's intake of air using a blower or compressor – called supercharging – the power output of the engine can be increased.

For electric power generation, four-stroke engines are predominately used. During the intake stroke, the premixed air and fuel is drawn into the cylinder as the piston moves down to “bottom dead centre” position. During the compression stroke in gas engines, the air-fuel mixture is compressed by the piston and ignited by a spark from a plug. Auto-ignition in gas engines is prevented with proper limits on the compression ratio.

The combustion engine power plant would include the same components as the turbine power plant. A picture and layout of a typical combined cycle internal combustion engine setup are provided in Figure 2-8 and Figure 2-9.



**Figure 2-8: Example of a typical Combined Cycle Internal Combustion Engine setup (Source: Wartsila)**



**Figure 2-9: Layout of a typical Combined Cycle Internal Combustion Engine setup, (Source: Wartsila)**

In a combined cycle gas engine power plant (CCGE), each combustion engine generator set has an associated Heat Recovery Steam Generator (HRSG). Bypass valves are used to control the admission of steam to the steam turbine when an engine set is not operating. One engine can be used to preheat all the HRSG exhaust gas boilers with steam to keep the HRSGs hot and enable fast starting. Combined Cycle power plants combine the advantages of high efficiency in simple cycle and the modularity of multiple engines supplying the steam turbine.

## 2.5.2 Cooling technology

When it comes to turbine **te**chnology, Air Cooled Condensers (ACC) are considered the only economically feasible option for the Zone 13 power plant. ACCs condense turbine exhaust steam inside finned tubes that are externally cooled by ambient air (instead of seawater). Due to the relatively

low heat transfer coefficients, the heat exchange area required by ACCs is high, increasing footprint and capital costs, however the cost of transporting cooling water (required for the once through and wet cooling) has been determined to be greater.

In the case of Reciprocating Engine technology, Air Cooled Radiators are the primary method for cooling, which consumes no water due to the closed nature of the system.

### 2.5.3 Zone 13 Power Plant

The Power Plant in Zone 13 will occupy an 18 ha site and have generating capacity of 1 000 MW.

Key project facilities/components for the power plant include:

- Cooling by way of ACCs (in the case of turbines) or radiators (in the case of engines) to minimise water consumption. Exhaust gases will be released via a stack, which is expected to be a minimum of 40 - 60 m in height. The final height would depend on recommendations in the air dispersion model.
- Plant process water would be sourced from either municipal water or seawater (from the authorised desalination plant in the Aquaculture Development Zone). Facilities for the treatment (demineralisation) of water are necessary to supply the plant. Demineralisation would take place at the power plant. It is anticipated that 33.7 m<sup>3</sup>/hour of municipal water would be required or alternatively 67.3 m<sup>3</sup>/h of seawater (which would go through a desalination process), to provide the necessary process water.
- Construction is expected to take approximately 36 months and the overall investment is in the order of USD 550 million.
- No carbon capture and storage is proposed. Gas turbines considered in this project will be fitted with dry low NO<sub>x</sub> (DLN) combustor to meet the required national standards for NO<sub>x</sub> emissions to the atmosphere. Dry Low NO<sub>x</sub> (DLN) combustor systems are currently included in most standardised gas turbine packages. The EPC Contractor generally guarantees NO<sub>x</sub> emissions at a maximum 25ppm though actual emissions are lower than this and can reach a single digit (Source: (Mott Macdonald, 2016)). Water injection is expected to be adopted to control NO<sub>x</sub> emission when firing on diesel.
- Storage of liquid fuel for interim operational (two or three years) or backup use, will be required. A maximum of 2 x 4,000 m<sup>3</sup> tanks for storage of liquid petroleum fuels (either Fuel Oil or diesel) is anticipated (Carnegie Energie, 2019). The fuel storage tanks will be filled by 45 m<sup>3</sup> trucks, which will transport the fuel from storage area at the port to the site at a rate of up to 50 trucks per day

### 2.5.4 Power evacuation

The power plant will transfer power to the 400 kV powerlines located in the power line servitude depicted in the services corridor shown in Figure 1-2.

### 2.5.5 Cold vent system

The Power Plant will have its own independent overpressure protection and venting system and fire and gas and depressurisation regimes. The design of the project is expected to be in accordance with a philosophy of minimum venting in order to protect the environment without compromising safety. During normal operation, there will be no flow of vapour from the facilities into the vent system.

## 2.5.6 Safety and fire protection

The power plant site will be secured with a fence and access control. A 2000 m<sup>3</sup> firewater tank of will be installed on site. The NFPA 15 Standard for Water Spray Fixed Systems for Fire Protection will be followed.

## 2.5.7 Water Balance: Process Water:

The water requirements of the power plant will be met from one of two sources, i.e. from desalination of seawater or municipal water. Approximately 33.7 m<sup>3</sup>/h of municipal water will be required as opposed to 67.3 m<sup>3</sup>/h of seawater (which would need to be treated via a desalination process off-site prior to on-site demineralisation). The steam cycle will need to periodically blowdown water in order to remove any build-up of impurities in the boiler. The temperature of this blowdown water is estimated to be in the region of 95°C, at a flow rate of approximately 26m<sup>3</sup>/hr. All blowdown water effluent will be directed to the proposed Marine Pipeline Servitude for discharge, the impacts of which are addressed in the CDC's EIA process for that project.

## 2.5.8 Waste generation and management

During construction, waste types typically associated with large infrastructure will be generated, and disposed of at a landfill site in terms of the legal requirements. During operation, the following waste streams are expected:

- Used generator and turbine lubricant oil, which will be collected on site and removed in drums by a specialist contractor for appropriate disposal;
- Small volumes of oily sludge recovered from on-site surface water treatment;
- Spent gas turbine fabric air filter and lube oil filter cartridges;
- Dried powder / sludge and spent resins from on-site effluent treatment / demineralisation;
- Solid domestic waste (office consumables etc.);
- Scrap metals, plastic and packaging, which will be recycled where possible;
- Waste solvents and grease from cleaning of workshop equipment; and
- Spent laboratory chemicals from water testing and treatment.

Solid waste will be collected and stored on site in a properly designed facility, prior to regular collection and disposal by a registered contractor. Registration of the storage facility in terms of Category C of the Waste Management Activities may be required, should anticipated storage capacity exceed 100 m<sup>3</sup> of general waste or 80 m<sup>3</sup> of hazardous waste. This will be done post-authorisation once the relevant design details for the waste storage facility are known.

Sewage and stormwater will be treated on site to meet the required standards prior to discharge to CDC's bulk services infrastructure. Domestic sewage will need to be pumped to a sewage treatment plant. Depending on timing this would either be the future Coega WWTW or the existing Fishwater Flats WWTW.

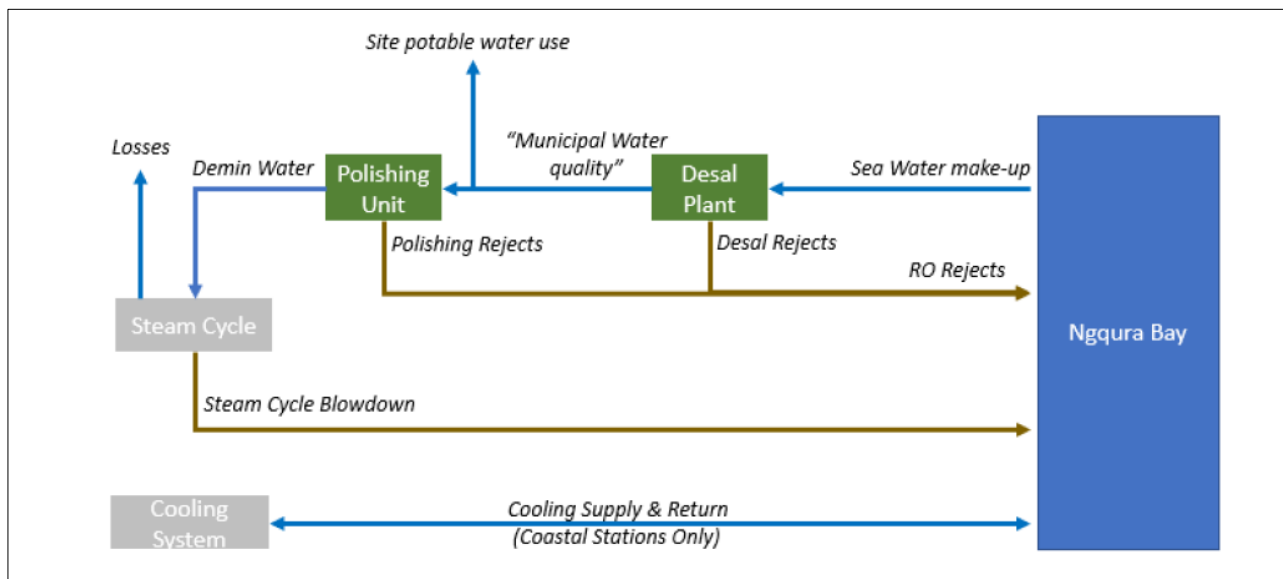


Figure 2-10: Water Balance Diagram Source: (Carnegie Energie, 2019)

### 2.5.9 Emergency Response

The CDC has an Emergency Response Plan to deal with emergency situations arising from operations in the SEZ, and should the power plant qualify as a Major Hazard Installation (MHI), a detailed site specific Emergency Response Plan will be required. The Plan would incorporate emergency scenarios such as explosions, fire, structural failure and hazardous spills, and outline response procedures. The Emergency Response Plan is implemented in collaboration with emergency response organisations including National and Regional disaster management, emergency medical services.

### 2.5.10 Labour and Employment

Employment opportunities are estimated to amount to 2030 jobs over the construction period (approximately 3 years) while it is anticipated that approximately 200 jobs would be created during operation for a 1000 MW plant. Thirty percent of these positions (for both construction and operation) would be allocated to local unskilled labourers and seventy percent by skilled individuals.

## 2.6 Project Alternatives

The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of which alternatives are appropriate needs to be informed by the specific circumstances of the activity and its environment.

Appendix 2 Sections 2 (1) (h) (i) and (x) Appendix 3 Sections 3 (1) (h) (i) and (ix) of the EIA Regulations, 2014 require that S&EIR processes must identify and describe alternatives to the proposed activity that were considered, or motivation for not considering alternatives. Different types or categories of alternatives can be identified, e.g. location alternatives, type of activity, design or layout alternatives, technology alternatives and operational alternatives.

Not all categories of alternatives are applicable to all projects. However, the consideration of alternatives is inherent in the detailed design and the identification of mitigation measures, and therefore, although not specifically assessed, alternatives have been and will be taken into account in the design and S&EIR processes.

The discussion of alternatives in this section aims to demonstrate the process followed during the early planning stages of the Gas to Power project and which have led to the project description as outlined above. It is recognised that this section does not explicitly address the environmental attributes of location alternatives, nor the impacts and risks of each alternative in a comparative format as suggested by Appendix 2 of the EIA regulations. Where decisions on preferred alternative have been based, or influenced, by environmental considerations, these are mentioned. In the most part, however, considerations have been based on strategic grounds (i.e. the selection of the Port of Ngqura as one of the locations) or technical or financial feasibility.

### 2.6.1 Activity Alternatives

No activity alternatives are considered as part of this EIA. since it is assumed that the land use planning for the allocations of the various zones within the Coega SEZ took various activity alternatives into account in determining the appropriate potential land uses for the project sites.

### 2.6.2 Site Alternatives

The feasibility study compiled by Worley Parsons identified the following key considerations in the selection of appropriate sites for the development of a gas to power plant:

- Proximity of the plant site to the fuel source and fuel storage;
- Proximity of the plant site to the transmission system grid;
- Proximity of the plant site to the cooling water and or other water supply source;
- Access to the plant site from major roads. railways and harbours;
- Availability of adequate land for the power plant. Including possible future expansion options; and
- Land/ground that would require minimal preparation for civil works.



The selection of the proposed site at the Port of Ngqura within the Coega SEZ follows investigations that progressively considered a range of sites at national and local levels. This process of site selection is summarised below.

#### National site selection process

Shell investigated various options for locating LNG receiving terminals along the South African coast. Together with the National Ports Authority (NPA), sites were investigated at Saldanha Bay, Cape Town, Mossel Bay, Port Elizabeth and Coega. The Shell investigation concluded that Coega was the most viable option for locating a LNG receiving terminal, and approached the national utility Eskom and national gas infrastructure company iGas to evaluate the pre-feasibility of a project to develop LNG receiving and regasification facilities, and a gas pipeline infrastructure at Coega, premised on the development of a CCGT power plant.

#### Identification of Power plant locations

The CDC have undertaken rezoning EIAs and developed an open space management plan and a development framework plan for the Coega SEZ several years ago. These documents identify no-go areas taking into account elements such as environmental and geotechnical constraints. They also specify particular land uses for the zoned areas. The intention of developing the SEZ at Coega is to concentrate industrial developments in a single location so that the provision of services can be optimised, and to take advantage of the proximity of the deep water harbour at the Port of Ngqura for the bulk transport of goods.

The Coega SEZ has various elements in place in order to expedite the development of Gas to Power plants in the SEZ including the establishment of demarcated zones for development and the RoD for the services corridor (which includes 400 kV lines) between the Dedisa substation and Zone 10. The Dedisa Peaking powerplant has also been earmarked for future conversion from diesel to gas and the services corridor allows for the establishment of gas pipeline infrastructure, which feeds directly into the Dedisa Peaking powerplant.

As part of the Coega SEZ planning process, and taking into account the key siting requirements, the CDC has identified two parcels of land that could potentially accommodate the proposed gas to power project. The first parcel of land stretches from Zone 8 (gas infrastructure) to Zone 10 (Zone 10 North and South power plants), and the second is found within Zone 13 (Zone 13 power plant) of the SEZ (Figure 2-3).

Zone 13 houses power infrastructure including the existing Dedisa peaking OCGT plant and the Dedisa 400 kV substation. A 18 ha piece of land on the south east part of Zone 13 is proposed for the power plant development. As the parcel of land is located adjacent to the Dedisa substation and services corridor it will require minimal grid infrastructure. The services corridor runs from Zone 10 immediately past the proposed site in Zone 13 and can therefore be used to establish possible gas distribution pipelines to supply gas to the Zone 13 site. The site contains no identified mining rights and no-go sensitive areas.

The proposed site alternatives within the SEZ were identified on the basis of their proximity to the key siting elements and development planning zones and are therefore the most viable locations for gas to power due to their proximity to the port and proposed related infrastructure for LNG storage and transmission, electricity distribution infrastructure (Dedisa substation and 400 kV powerlines) and services infrastructure (e.g. the proposed marine pipeline servitude).

### 2.6.3 Layout and Alignment Alternatives

Detailed layouts for the power plant will not be available during the EIA process, however conceptual layouts have been developed for each of the power plants as well as the overall gas infrastructure. A layout for the zone 13 power plant is provided in Appendix I.

### 2.6.4 Technology Alternatives

Given the CDC's requirement that any authorisation received will allow for various technology options as opposed to a single preferred technology, a "worst case" scenario approach will be adopted for the purposes of environmental assessment in the EIA process. The Input / Output model for the power plant will be based on the consideration that has the greater environmental impact (i.e. worst case scenario). For this the following criteria are relevant:

- Power generation technology - Open Cycle Gas Engine (OCGE) vs Open Cycle Gas Turbine (OCGT) vs Combined Cycle Gas Turbine (CCGT):
  - OCGT has the lowest efficiency (power output per unit of gas). Gas volumes used will therefore be based on those required for OCGT;
  - CCGT requires the most steam generation, and therefore demineralised process water for this purpose. The demineralised water demand will therefore be based on the amount required for CCGT. Furthermore, CCGT has the highest cooling demand, thus the cooling water requirements are based on this
  - OCGE has a marginally greater footprint requirement than OCGT. The space requirements for each power plant will therefore be based on that for OCGE



- Operating conditions:
  - For the purposes of the EIA it is assumed that all power plants will operate at 100% capacity, 80% of the time, i.e. above intended mid-merit range. Based on this the following have been calculated:
    - Gas volumes required
    - Air emissions
    - Water volumes required (demineralised water)
- Cooling technology:
  - Seawater cooling is not technically or economically feasible for Zone 13 power plant. The assessment of once through sea water cooling as a technology alternative is excluded from the scope of this EIA process.

### 2.6.5 No-Go alternative

The no development option assumes the sites allocated within the SEZ would remain vacant until developed for other industrial activities. Although another Gas to Power plant EIA has been authorised in Richard's Bay, the no development alternative assumes that this project would not be substituted by a similar project at a different location. Consequently, impacts on greenhouse gas emissions, energy security, and macro-economics at a national scale would not materialise.


The no-go alternative will be used as a baseline throughout the assessment process against which potential impacts will be compared and will be assessed in the EIR.

## 2.7 Phasing

Implementation timeframes would be dependent on the power plants obtaining generating licences from the DMRE through the IPP Programme. Should developers wish to bid as part of the Risk Mitigation IPPPP, they would need to provide power to the national grid by mid 2022. To meet this timeframe, bearing in mind that the gas infrastructure required to facilitate gas fired power generation would not yet be operational, an interim / transitional period of liquid fuelled operation is proposed for the zone 13 power plant, prior to expansion to the full generation capacity of 1000 MW (gas fuelled ).

Depending on when generating licences are obtained, development of the power plants could occur simultaneously or sequentially. Although there is the possibility that one or more of the power islands do not obtain generating licences, for the purposes of assessing cumulative impacts, it is assumed that the Dedisa power plant, together with all three proposed power plants, will.

Due to typical extended manufacturing lead times of the steam-cycle components, each plant may be operated as open cycle mode for initial periods before being operated as combined cycle, i.e. initially with lower efficiency.

The installation and commissioning  of gas infrastructure equipment could also take longer than the commissioning of the power plants (estimated at 3 years each), which may mean that diesel or furnace oil would be required for an intermediate period. Operation of the power plants with diesel or furnace oil would result in different air quality, climate change and traffic impacts and these specialist assessments would need predict the impact of the initial phase of operation using these alternative fuels.

### 3 Description of the Affected Environment

The study area has been described in great detail in the various studies already undertaken for the Coega SEZ and the Port of Ngqura. What follows is a brief description of the biophysical characteristics of the study site. A map showing the various zones of the Coega SEZ relative to the proposed development sites is provided in Figure 2-3 for reference.

This chapter presents an overview of the biophysical and socio-economic environment in which the proposed project is located, to:

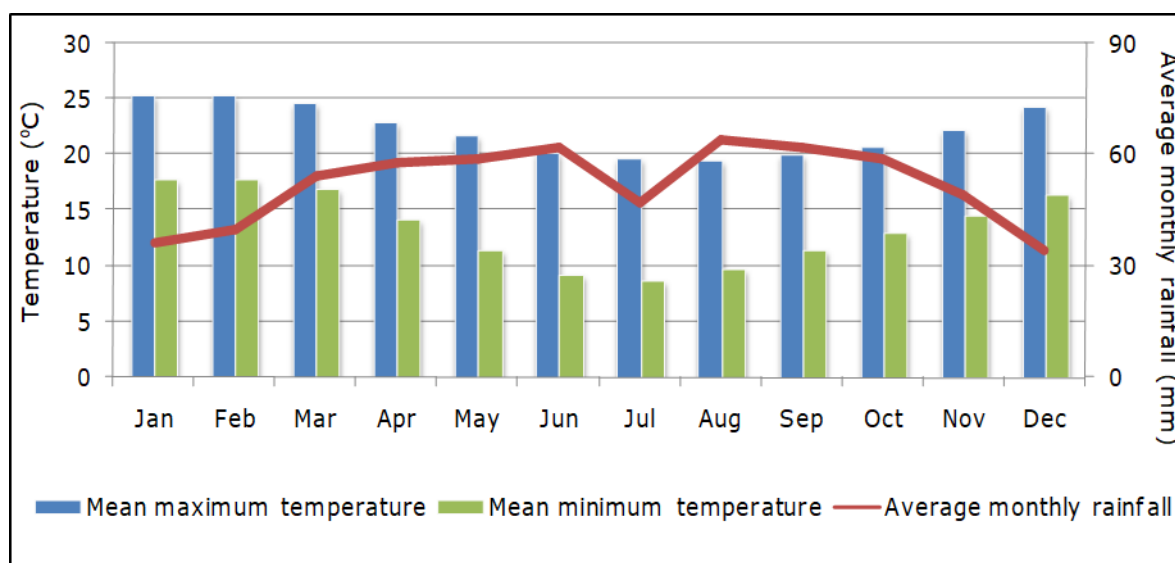
- Understand the general sensitivity of and pressures on the affected environment;
- Inform the identification of potential issues and impacts associated with the proposed project, which will be assessed during the Impact Assessment Phase;
- Identify gaps in available information to inform specialist study requirements; and
- Start conceptualising practical mitigation measures.

#### 3.1 Climate

The Eastern Cape Province has a complex climate. There are broad variations in temperature, rainfall and wind patterns, mainly as a result of movements of air masses, altitude, mountain orientation and the proximity of the Indian Ocean.

The Port Elizabeth region has a warm temperate climate and the temperature range is not extreme, although high temperatures can occur during summer. Averages of daily minimum, maximum and mean temperatures for the period 1961 – 1990 are presented in Figure 3-1 with accompanying wind. Very high temperatures may be experienced during berg wind conditions when maximum temperatures may exceed 30°C.

Rain occurs throughout the year, brought about by convective summer rain and winter rain associated with the passage of frontal systems. The area receives an annual average rainfall of 624 mm. Monthly average rainfall data for Port Elizabeth Airport for the period 1961 – 1990 is presented in Figure 3-1



**Figure 3-1: Average of daily minimum, maximum and mean temperatures (°C) and average monthly precipitation (mm) at Port Elizabeth Airport for the period 1961 – 1990**

Prevailing wind tends to follow the coastline and the prevailing winds in the Port Elizabeth area are west-southwesterlies and east-northeasterlies. Wind roses are presented for Port Elizabeth Airport, Amsterdamplein (in the Coega SEZ), Motherwell and Saltworks in Figure 3-2.

The airport at Port Elizabeth is the most climatologically representative of the sites and is well exposed to the prevailing synoptic-scale winds, showing a high frequency of winds from the sector west to southwest (more than 50% of all winds). These are also the strongest winds. There is some occurrence of wind from the northeast and east at this site. The annual average wind speed here is 5.7 m/s.

The winds at Amsterdamplein, Motherwell and Saltworks (all in the Coega area) also indicate the occurrence of reasonably strong west to southwesterly synoptic scale winds. At Amsterdamplein, winds are fairly, equally spread from the southwest, southeast, northwest, north and north-northeast, with an average wind speed of 4 m/s. At Motherwell, winds are predominantly from the northwest to southwest and east-southeast, with an average wind speed of 3.4 m/s. At Saltworks, winds are mainly from the west-northwest to southwest, north and east, also with an average wind speed of 3.4 m/s.

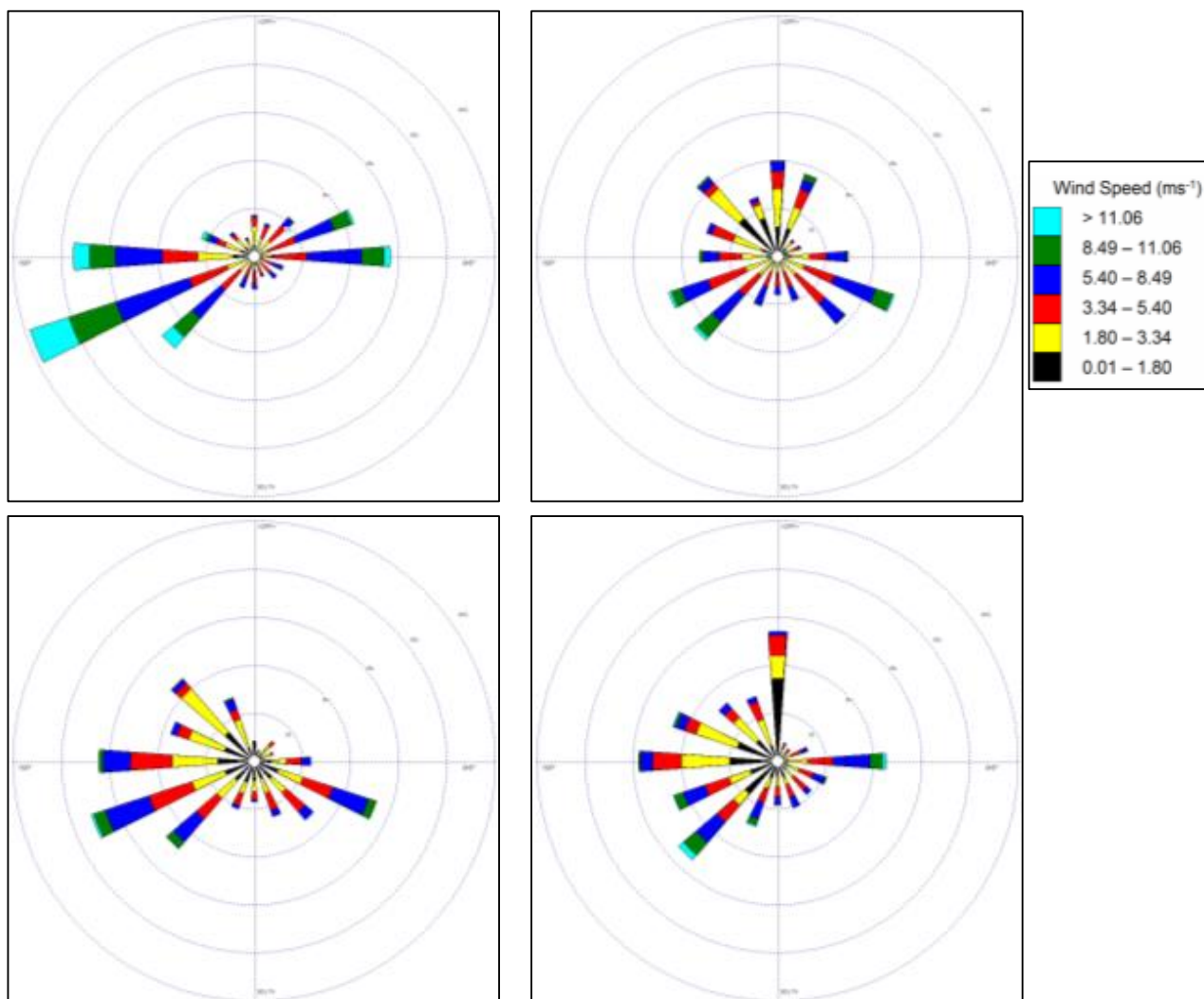


Figure 3-2: Annual wind roses for Port Elizabeth Airport, Amsterdamplein, Motherwell and Saltworks for 2009-2011

### 3.2 Geology

The bedrock around Port Elizabeth is characterised by the Peninsula Formation sandstones of the Table Mountain Group. This formation consists of coarse-grained super-mature quartzitic sandstone

and is relatively resistant to erosion. It forms the bedrock of Algoa Bay and emerges as outcrops in the bay as the islands of St Croix, Jahleel, Bird and Brenton. The areas between these islands are filled with recent marine deposits (Alexandria Formation), which directly overlie the mudstones of the Kirkwood Formation. The geology of the Coega SEZ is characterised by coastal limestone, overlaid by calcareous sands blown onshore.

The Coega SEZ is underlain by a wide spectrum of sedimentary rocks spanning an age range of some 470 million years. These sediments are assigned to the Palaeozoic Table Mountain Group, the Mesozoic Uitenhage Group and the Caenozoic Algoa Group. Levels of bedrock exposure within the Coega SEZ are generally very low due to extensive cover by superficial drift (e.g. soil, alluvium, in situ weathering products) as well as by surface calcrete (pedogenic limestone) (Almond 2010).

The Coega Fault extends west of the Groendal Dam eastwards towards the coast, dipping at between 30° and 60° for about 120 km. It is a normal tensional fault with a vertical southward throw of 500 m to 100 m.

### 3.3 Topography

The SEZ is situated on a coastal platform that descends towards the sea in a series of gentle steps parallel to the existing coastline. This platform has been incised by the Coega River, which flows towards the sea across the western and south-western parts of the SEZ.

The general landscape surrounding the proposed site in Zone 13 is comprised of gently rolling topography, which is cut into by the Coega River and its tributaries. The site itself is generally flat but falls steeply away, along its western edge, to a tributary of the Coega River (EIMS 2007).

### 3.4 Land Use

The Coega SEZ consists of approximately 11,000 hectares of sector specific zoned land with purpose built infrastructure and is earmarked for industrial development. Land uses in the Coega SEZ presently consist of infrastructure, harbour facilities, industrial & commercially developed land, and vacant land. Vacant land is destined for a combination of future industrial land and open spaces, as per the CDC's Open Space Management Plan (OSMP). The OSMP has identified environmental no-go areas that are to be protected from development. These no-go areas have varying functions from natural areas, where emphasis is on conservation of areas to protect special vegetation types and preserve ecological processes, to recreational and visually attractive open space areas for relief in the built environment, screening off industrial buildings and softening the development.

The Coega OSMP (2014) has identified Zone 13 for development by the energy industry. A Critical Biodiversity Area (CBA) lies immediately to the west of the Zone 13 within the proposed services corridor site.

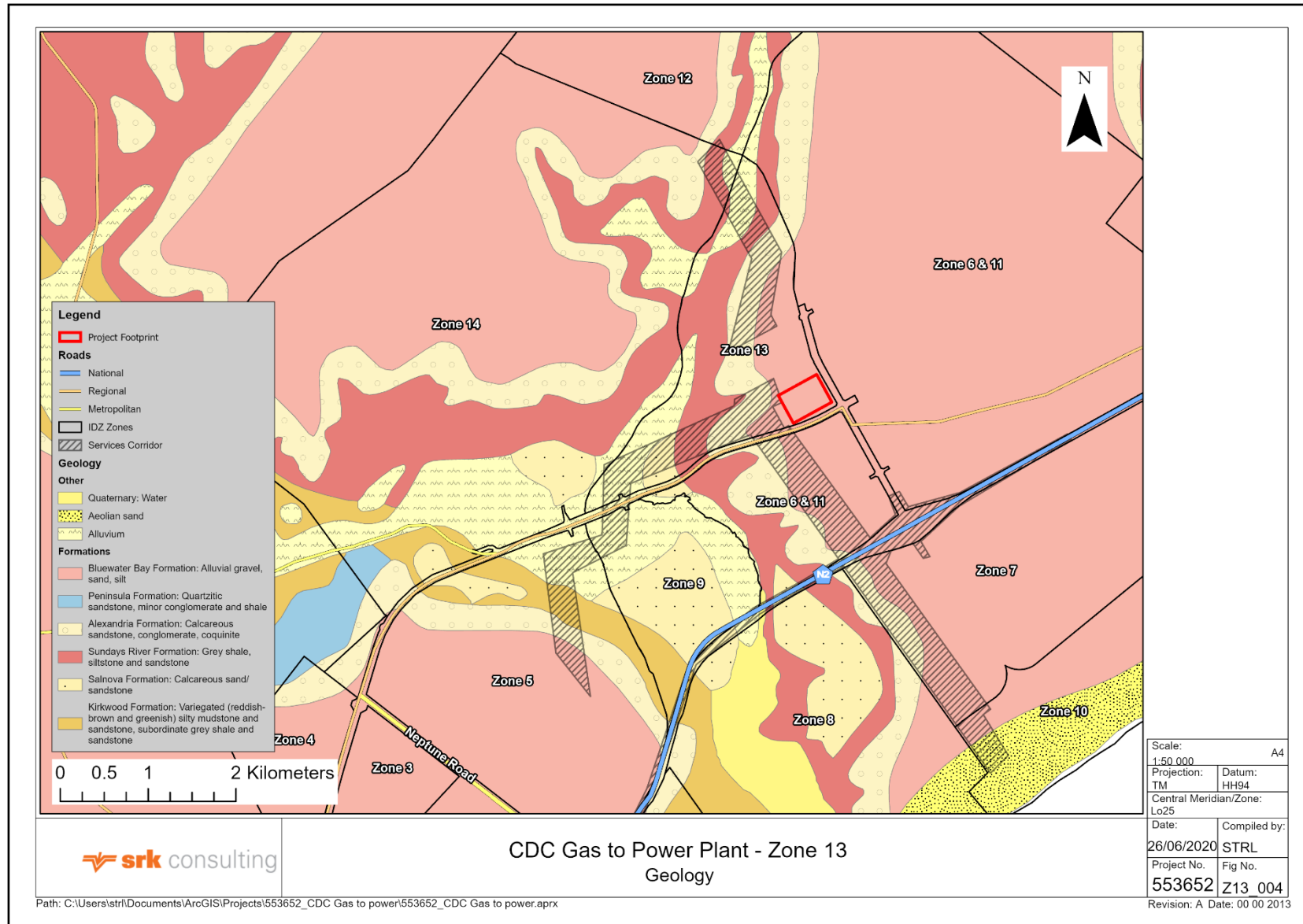


Figure 3-3: Geology of the Coega SEZ

## 3.5 Surface and Ground Water

The Coega River, which is a relatively small sand-bed river, is the most significant surface water feature associated with the Coega SEZ and flows to the west of the project site. The Coega catchment area is approximately 45 km long, 15 km wide and has a total area of about 550 km<sup>2</sup>. The Coega River classification, based on preliminary river classification guidelines, ranges from moderately modified (i.e. C classification) in the upper reaches to critically modified (i.e. F classification) in the lower reaches at the salt works facility.

The SEZ is underlain by calcrete, sand and gravel deposits that overlie low permeability clays. These clays limit the vertical infiltration of rainwater and induce a horizontal groundwater flow towards the Coega River channel. Consequently, rapid run-off takes place following precipitation. Due to the limited infiltration of rainfall, a significant fluctuation in groundwater level does not occur, although groundwater levels can fluctuate by 3-4 metres with rainfall. Any contaminants originating from the power plant could infiltrate the sandy subsurface but would eventually emanate in seepage in the Coega River and beach environments.

According to NFEPA a natural wetland is found just south of the proposed Zone 13 site (Refer to Figure 3-6) adjacent to the R102. The presence of this wetland was confirmed during a site visit by the EAP. While this particular pan / depression was not identified during the 2016 wetland assessment of the Coega SEZ (Scherman Colloty & Associates, 2016), similar pans in the vicinity were delineated and described, and mitigation recommendations provided.

## 3.6 Ecology

### 3.6.1 Vegetation

Mucina and Rutherford (2006) developed the National Vegetation map (2012) as part of a South African National Biodiversity Institute (SANBI) funded project: According to Mucina and Rutherford, , Coega falls within the Albany Thicket Biome with the vegetation type of the area consisting largely of Coega Bontveld which is also known as Grass Ridge Bontveld (Vlok & Euston-Brown, 2002).

An Ecological Impact Assessment was compiled by CEN as part of the Peaking power Plant EIA in Zone 13 in 2007. The study site was not in a pristine condition at the time of the study as the presence of alien plant species and access tracks were identified, however the vegetation was still considered to be in a good condition. A combination of Mesic Succulent Thicket, Bontveld and Grassy Fynbos were found within the footprint of the Peaking power plant.

#### ***Bontveld with grassy fynbos***

This vegetation type is often found on moderately undulating plains and is characterised by scattered circular clumps of bush up to 3 m high and 5 m in diameter, dispersed in grassland or mixed grass and low shrub community with scattered open patches rich in succulent species. It is restricted to shallow stony soils on ridges strongly influenced by an underlying calcareous substrate. This uncommon soil and geological structure, along with the local climate, has given rise to a unique, semi-arid habitat that includes several rare and endangered localised endemics, and a host of Species of Conservation Concern (SCC), often in the form of small succulents and geophytes.

Thicket clumps are generally restricted to doline karsts created through the dissolution of limestone aggregations by rainfall and groundwater creating round depression which accumulate deeper soils allowing the establishment and growth of bigger thicket shrubs. Succulent patches are generally

located on calcrete outcrops with shallow soils and a significant gravel component. Grassy shrubland comprises the remainder of the vegetation unit.

The bush clumps are dominated by *Euclea undulata*, and contain typical Thicket dominants such as *Ehretia rigida*, *Maytenus procumbens*, *Polygala myrtifolia*, *Scutia myrtina*, *Searsia incisa*, *S. pallens*, *S. pterota* and *Sideroxylon inerme*. Robust succulent species such as *Aloe africana*, *Aloe ferox*, *Euphorbia caerulescens* and *Euphorbia grandidens* also occur within the bush clumps. The Shrubby Grassland is dominated by *Themeda triandra* and *Eustachys paspaloides* (grasses), *Passerina rigida*, *Ficinia truncata*, *Berkheya heterophylla*, *Pteronia incana*, *Osteospermum polygaloides* and *Jamesbrittenia microphylla* with characteristic fynbos components including *Acmadenia obtusata*, *Achyranthemum recurvatum*, *Disparago tortilis* and *Muraltia squarrosa*. Open succulent patches are distinctive and include several protected and/or endangered highly localised species such as *Bergeranthus addoensis*, *Euphorbia globosa*, *E. meloformis*, *E. stellata*, *Lampranthus productus*, *Orthopterum coegana*, *Rhombophyllum romboidium*, *Ruschia cymbifolia*, *R. orientalis*, *R. recurva*, and *Trichodiadema intonsum*. Several bulbous and geophytic species are commonly found within the ecotones between the various vegetation components, including *Boophone disticha*, *Cyrtanthus spiralis*, *Drimia elata*, *Hypoxis zeyheri*, *Massonia hirsuta*, *Oxalis algoensis* and *Pachypodium succulentum*.

The baseline target for Coega Bontveld conservation is 25%. The final target is 4814.2 ha and the final trimmed target is 27.5% according to the NMBM Final Conservation Assessment (2010). The ecosystem threat status of the vegetation unit is Vulnerable

### **Coega Bontveld**

This vegetation type is characterised by circular clumps of bush up to 3 m high and 5 m in diameter, dispersed in grassland or mixed grass and low shrub community. The Bontveld on the site is found between the Thicket of the northern bank of the Coega valley and the Dune Strandveld in the south. There are two communities in the Bontveld: Bush Clumps and Dwarf Shrubby Grassland.

The Bush Clumps are dominated by *Euclea undulata*, and contain typical Thicket dominants such as *Scutia myrtina*, *Rhus incisa*, *Rhus pterota* and *Ehretia rigida* (Archibald, 1955). The Dwarf Shrubby Grassland is dominated by *Themeda triandra* (grass), *Passerina rigida* and *Jamesbrittenia microphylla*.

Inland portions of the zone are dominated by Coega Bontveld. The assessment in 2007 found the bontveld to be depauperate and infested with prickly pear (*Opuntia ficus*) and *Acacia Cyclops*.

## **Nelson Mandela Bay Conservation Assessment and Plan**

The Nelson Mandela Bay Conservation Assessment identifies the vegetation in Zone 13 as Grass Ridge Bontveld.

### **Grass Ridge Bontveld**

Small clumps of Sundays Valley Thicket occur in a matrix of veld that consists of a combination of species that are characteristic of grassland (*Eustachys paspaloides*, *Themeda triandra*), succulent karoo (*Pteronia incana*) and fynbos (*Acmadenia obtuse*, *Euryops ericifolius*). Many highly localised endemics are present. The vegetation unit is present on the Alexandria formation.

The baseline target for Grass ridge Bontveld conservation is 25%. The final target is 4814.2 ha and the final trimmed target is 27.5% according to the NMBM Final Conservation Assessment (2010). The ecosystem threat status of the vegetation unit is Vulnerable.

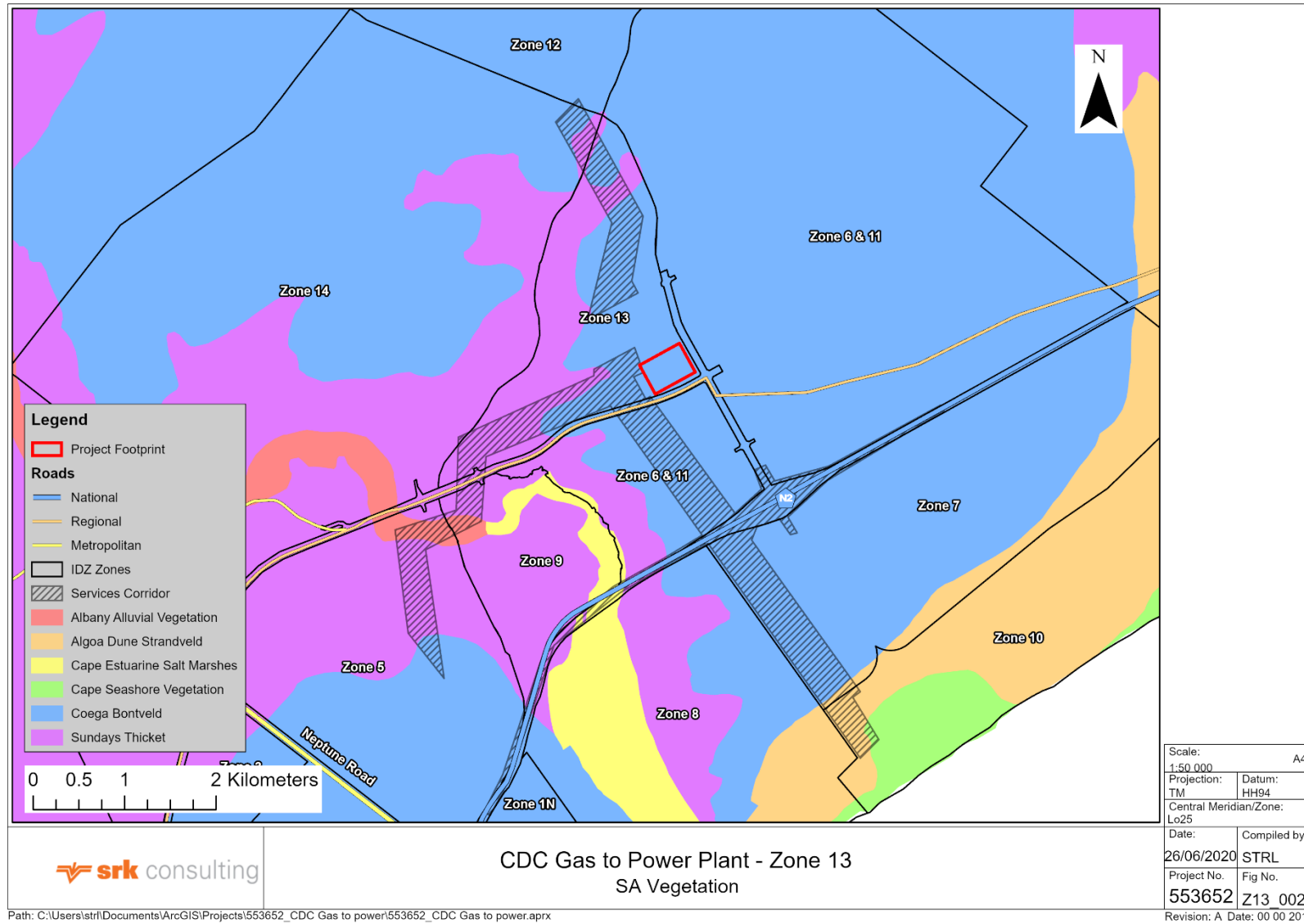


Figure 3-4: Vegetation types near the Zone 13 site (Mucina & Rutherford, 2006)



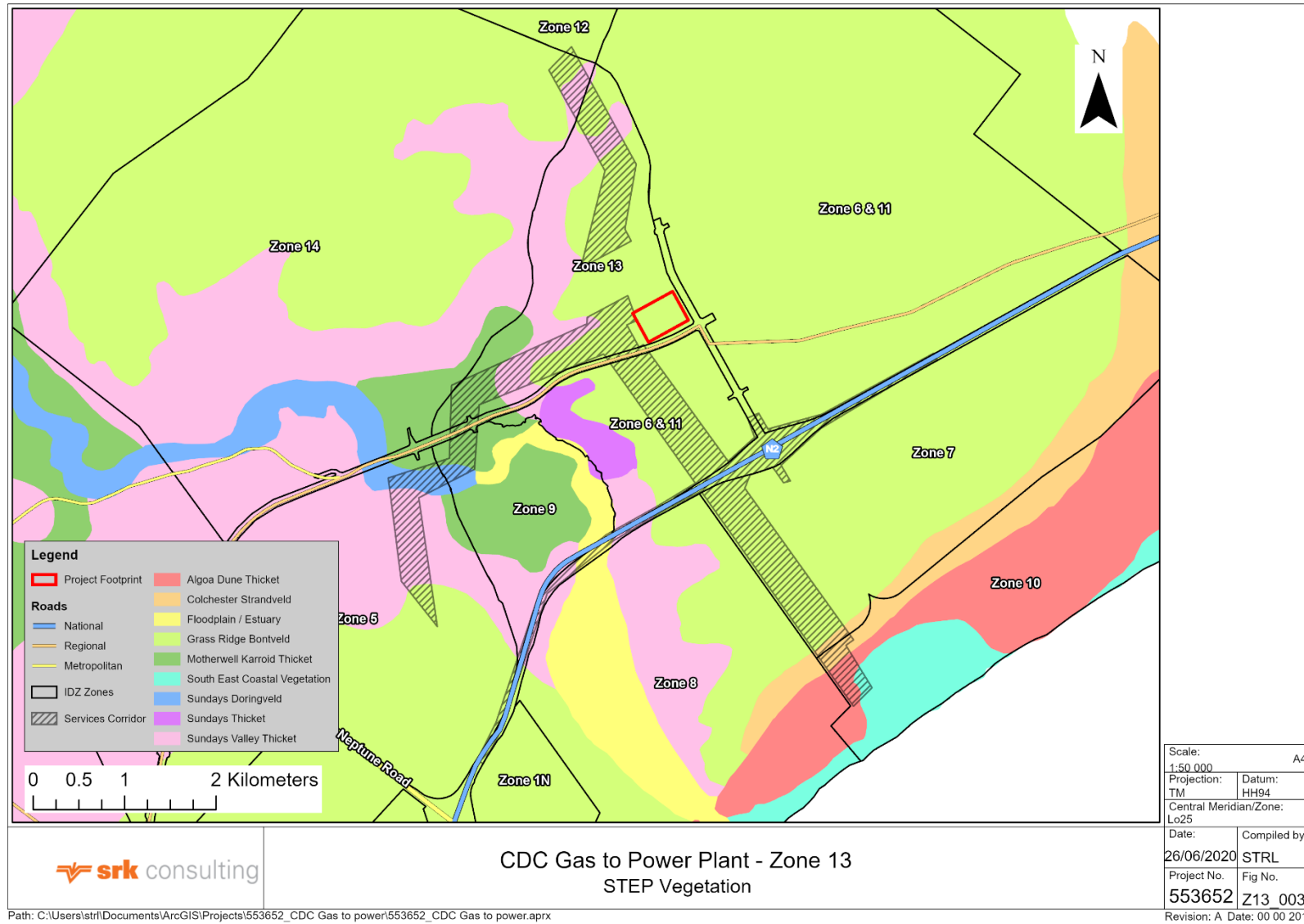


Figure 3-5: STEP vegetation near the Zone 13 site

## Coega Open Space Management Plan

The OSMP sets out the uses of the open space areas within the Coega SEZ. The OSMP informed the preparation of the Management Guidelines for the various open space uses identified on the plan, to identify the actions required to implement the Management Guidelines. Both the NMBM's SCA and Draft Bioregional Plan (Dec 2010) incorporated mapping from the Coega OSMP (PH3\_UD\_MPLAN\_OPEN SPACE PLAN Rev 9 of 23/01/2004) but, do not incorporate updates to the Coega OSMP system as reflected in the Environmental and Planning legislative framework for the Coega IDZ. The Zone 13 power plant lies immediately adjacent to an Ecological Support Area, which overlaps with the services corridor to the west of the site (see Figure 3-6).

### 3.6.2 Fauna

There is a general lack of pristine terrestrial habitats in the Coega region. This means that some components of the terrestrial fauna have been severely impacted by previous human activity, particularly the loss of vegetation, invasion of alien vegetation, local extinction of large mammals, and varied industrial developments.

#### **Birds**

Due to its varied habitats, the Coega terrestrial region has diverse avifauna and over 150 species are resident or common visitors to the region (CES, 1997). Most diversity occurs in the thicket clumps. A number of terrestrial birds are of conservation concern. Threatened occasional visitors to the region include the blue crane (*Anthropoides paradiseus*), Stanley's bustard (*Neotis denhami*), the Martial eagle (*Polemaetus bellicosus*) and the African marsh harrier (*Circus ranivorus*). All are considered Vulnerable in South Africa (Barnes, 2000). According to the DEFF online screening tool report, the Black Harrier, *Circus maurus* is also recorded for the area.

Other terrestrial species of conservation concern in a regional context include the secretary bird (*Sagittarius serpentaris*) and the Knysna woodpecker (*Campethera notata*). Both are considered Near Threatened in South Africa (Barnes, 2000). No breeding populations of all these terrestrial species are known in the Coega region, and with the exception of Stanley's bustard all are uncommon visitors.

#### **Reptiles**

The Eastern Cape is home to 133 reptile species including 21 snakes, 27 lizards and eight chelonians (tortoises and turtles). More than half of the Eastern Cape's endemic reptile species occur in the Algoa Bay area, giving the region a high conservation value (Branch, 1988). The majority of these are found in Mesic Succulent Thicket and riverine habitats. The list of reptiles of special concern is very significant since it includes five endemic species (two of which are endangered), eight CITES-listed species banned from International Trade in Endangered Species, one rare species and four species at the periphery of their range. More than a third of the species are described as relatively tolerant of disturbed environments, provided migration corridors of suitable habitat are maintained to link pristine habitats.

Reptile diversity in the Coega region is high, with 46 species known or likely to occur (Branch, 1988a; Branch 1998). This includes 24 snakes, 18 lizards, and 4 chelonians (CES 2006). They represent almost a third of all reptiles recorded from the Eastern Cape.

Only one threatened reptile occurs in the region. The Albany dwarf adder (*Bitis albanica*) is a small species whose only known population occurs in the Grassridge area in Bontveld habitat. The species

is known only from 14 specimens, and is of Priority Conservation importance with current knowledge indicating that it is Globally Critically Endangered (Branch 1999).

Three other reptiles are endemic to the Algoa bay region and occur in the vicinity of the zone 13 site. They are as follows:

- Algoa legless skink (*Acontias meleagris orientalis*);
- Algoa dwarf burrowing skink (*Scelotes anguineus*); and
- Tasman's girdled lizard (*Cordylus tasmani*).

St Croix Island holds populations of the Algoa Bay endemic Tasman's girdled lizard *Cordylus tasmani* and the spotted thick-toed gecko *Pachydactylus maculatus*.

### **Amphibians**

Amphibians are well represented in sub-Saharan Africa, from which approximately 600 species have been recorded. A relatively rich amphibian fauna occurs in the Eastern Cape, where a total of 32 species and sub-species occur. This represents almost a third of the species known from South Africa. Knowledge of amphibian species diversity in the Coega region is limited and based on collections housed in national and provincial museums. It is estimated that as many as 17 species may occur. However, none of these species are endemic or of conservation concern.

### **Mammals**

Large game makes up less than 15% of the mammal species in South Africa and a much smaller percentage in numbers and biomass. In developed and farming areas, such as the CDC, this percentage is greatly reduced, with the vast majority of mammals present being small or medium sized. Of the 62 mammal species known or expected to occur in the Coega area, none are now considered endemic to the coastal region. The conservation status of South African mammals has recently been re-assessed. The conservation status of some has been downgraded, with the African wild cat, Aardvark, Honey badger and Duthie's golden mole no longer considered threatened. The White-tailed rat (*Mystromys albicaudatus*) has not been recorded from the Coega region, whilst Duthie's golden mole is not known from east of the Swartkops River. No subspecies are recognised of the Hairy-footed gerbil (*Gerbillurus paeba*) which is also unthreatened. The conservation status of two species remains indeterminate (Data Deficient), and the only two terrestrial mammals of conservation concern in the region are the Blue duiker (Vulnerable) and Honey Badger (Near Threatened) (Friedmann & Daly, 2004).

In South Africa, there are currently three national plague surveillance sites, one of these being Coega. The last reported outbreak of plague occurred in Coega, Eastern Cape Province, in 1982, with 13 cases and 1 death. Measures to monitor and manage rodent populations in the port area, are therefore in place.

### **Terrestrial Invertebrates**

The distribution of the terrestrial invertebrates found along the coast depends to a large degree on the extent and composition of the natural vegetation. One grasshopper species (*Acrotylos hirtus*) is endemic to the dunefields. Of nearly 650 butterfly species recorded within the borders of South Africa, 102 are considered of conservation concern and are listed in the South African Red Data Book for Butterflies. Two have become extinct, whilst three rare butterflies are known from a number of scattered localities in the Coega region

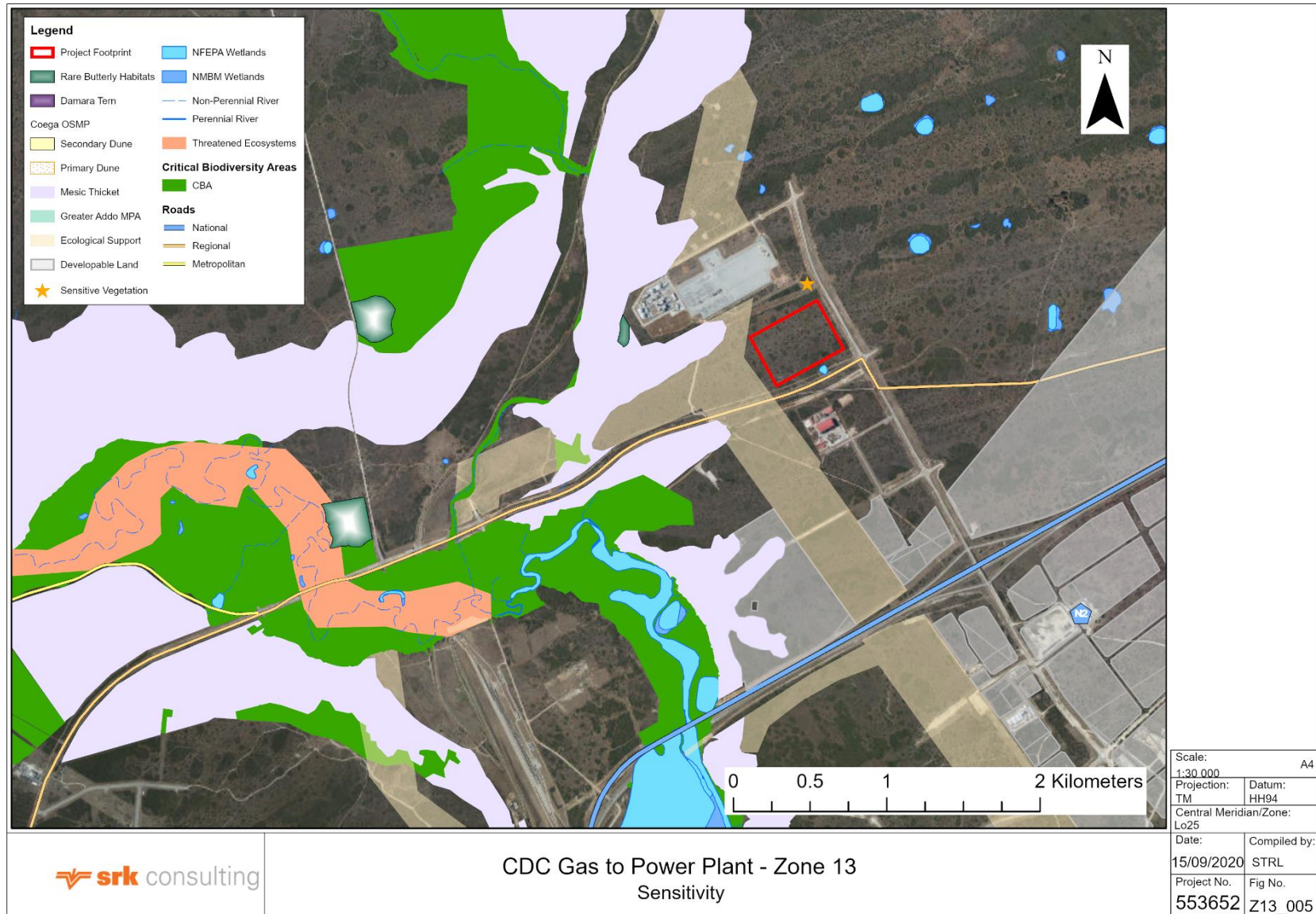


Figure 3-6: Terrestrial and marine environmental sensitivities in the area of the proposed Zone 13 site

The small blue lycaenid butterfly *Lepidochrysops bacchus* is known from four localities in the Eastern Cape. One of these is reported to occur in the “general area” of the Coega SEZ, but not within the port area. Another rare small copper lycaenid, *Poecilimitis pyroeis*, has a similar distribution to *Lepidochrysops bacchus*, extending from the southwestern Cape to Little Namaqualand. An isolated eastern race, *P.p. hersaleki*, was described from Witteklip Mountain (Lady’s Slipper) to the west of Port Elizabeth. It has also been recorded from St Albans and from the Baviaanskloof Mountains. There is currently no evidence that this rare butterfly occurs in the Coega area, or that a suitable habitat for the eastern race exists in the port area (CES, 1997).

According to the DEFF online screening tool report, two additional species of conservation concern, *Chrysoritis thysbe whitei* and *Aloeides clarki* (the Coega Copper) are recorded for the area.

### 3.7 Sense of Place

As per the Coega Development Zone Architectural Guidelines it is noted that the various operations to be established in the Core Development Area will result in tall or large structure that have a visual impact. The visual impact will be difficult to mitigate and the residual impact is regarded as high, as it will affect a wide area, will be permanent and will definitely occur. The current mitigation plan as per the CDC is that wherever possible, land-use planning has aimed to reduce the residual impact in such structures. Heavy industry has been located in the centre of the SEZ and screened from the N2. Smaller scale industries are located in the western side of the SEZ.

### 3.8 Regional Water Supply

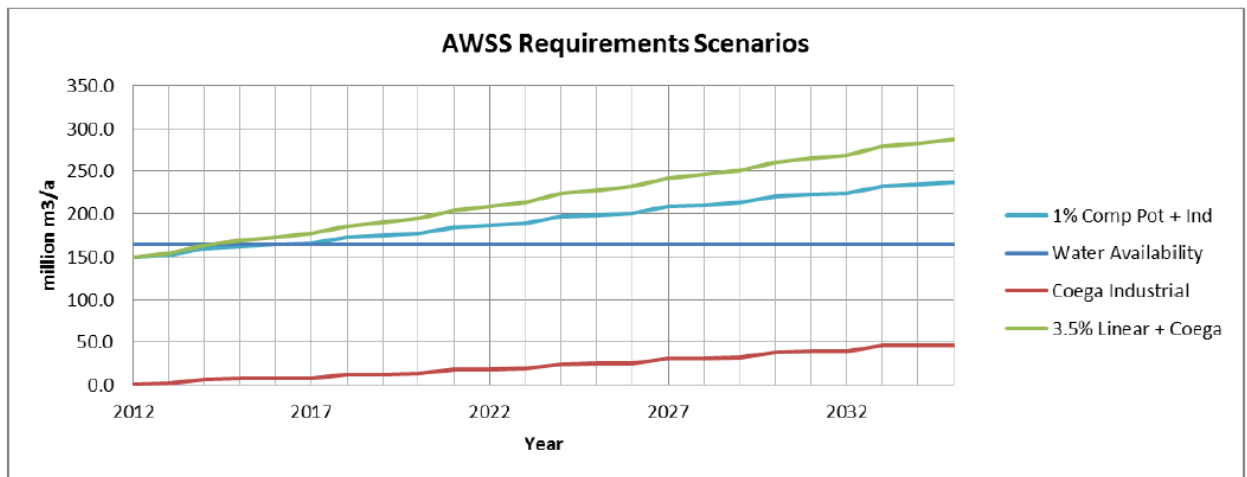
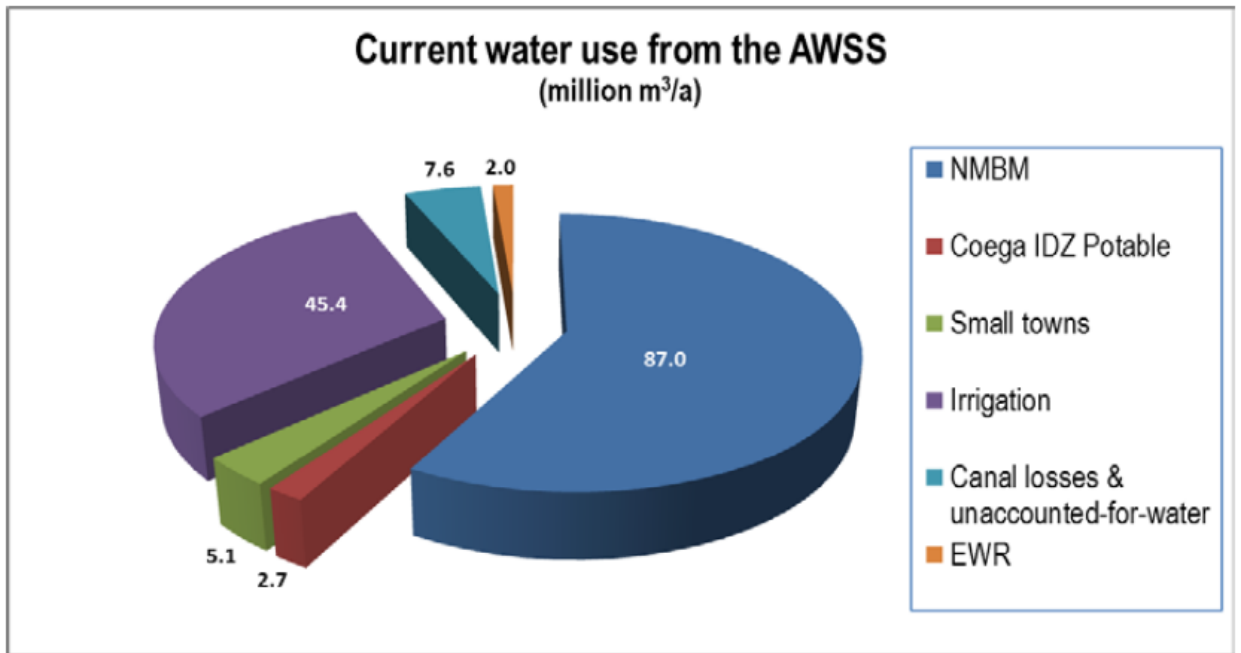
This section is an extract from the reconciliation strategy for the Algoa Water Supply System (AWSS), as reported on the DWS web site (DWS, n.d.).

Potable water is supplied to the Nelson Mandela Bay municipal area, including the Coega SEZ, from the Algoa Water Supply System. This supply system extends from the Kouga River system in the west to the Sundays River system in the east. The Algoa Water Supply System provides water to the Gamtoos Irrigation Board, the NMBM, the Coega SEZ, and several smaller towns within the Kouga Municipality area.

The purpose of the Reconciliation Strategy is to determine the current water balance situation and to develop various possible future water balance scenarios up to 2040. The strategy was completed in 2010 and was subsequently updated in April 2011 due to emergency interventions planned as a result of the drought at the time, as well as revised Coega SEZ water requirements at the time.

The total usage of water from the Algoa Water Supply System in 2011/12 was 149.7 million m<sup>3</sup>/a. This comprises urban use by NMBM and various small towns, Coega SEZ potable use, agricultural water use, losses from the Kouga/Loerie canal, and ecological flow water requirements.

The combined yield of the Algoa Water Supply Scheme sources, at an assurance of supply of 98% (1:50 year assurance of supply) is 164.4 million m<sup>3</sup>/a. Figure 3-7 shows the availability of surplus water at the time of the study and that any significant increase in use would put the system at risk.



**Figure 3-7: Water use (2011) and predicted growth in water demand in the Algoa Water Supply Scheme (DWS, n.d.)**

The higher the growth in water requirements, the higher the risk would be, especially if large users in the Coega SEZ were to be established prior to supply interventions coming into effect. The interventions which were identified to increase the available supply to the supply area of the Algoa Water Supply Scheme are:

- Nooitgedagt Low-Level Scheme, which is currently being expanded, would add an additional 70 ML/day to the Algoa Water Supply Scheme;
- Groundwater Development – Coega Kop aquifer and Churchill Dam area; and
- Re-use of water treated to industrial standards – Fish Water Flats WWTW.

### 3.9 Ambient Noise

The existing ambient noise within the project area was measured at various points by Safetech, the appointed noise specialist, during June 2020. The ambient noise levels were found to vary between 40-50dB(A) during the day and 30-35dB(A) at night. The noise sources that have been identified for the proposed gas infrastructure footprint are as follows:

- Vehicle noise within the SEZ and along the N2;
- Metal smelting works;
- Power generation; and
- Wind noise.

### 3.10 Ambient Air Quality

Coega has an air quality monitoring network, consisting of three monitoring stations; at the salt works, Amsterdamplein and in Motherwell. These stations monitor both meteorological and ambient air quality parameters. Data at the monitoring stations is reported 10-minute averages. The monitoring stations at Amsterdamplein and the salt works measure total suspended particulates (TSP), nitrous oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) as well as temperature, relative humidity, wind speed and wind direction. In addition, the station at the salt works measures wind speed in the vertical plane, atmospheric pressure, solar radiation and rainfall. The monitoring station at Motherwell measures NO<sub>x</sub> and SO<sub>2</sub> and particulate matter less than 10 microns (PM<sub>10</sub>) in size, in addition to the standard meteorological variables. The Amsterdamplein station is situated Zone 5 of the Coega SEZ.

The status of ambient air quality in the Coega SEZ is described below using data from the Saltworks monitoring site, and dispersion modelling for existing industries. Monitoring data provided accurate measurement at a single point which may not be representative of the entire area of interest. Dispersion modelling provides estimated concentrations over the area.

Ambient monitoring data for 2017 to 2019 at Saltworks is analysed for SO<sub>2</sub>, NO<sub>2</sub>, and PM<sub>10</sub>. Monitored SO<sub>2</sub> data show ambient levels for the monitoring period, with no exceedances of the National Ambient Air Quality Standards (NAAQS) (see Figure 3-8 and Figure 3-9. Monitored NO<sub>2</sub> concentrations are elevated with higher concentrations observed in winter (i.e. June to August) (Figure 3-10). Monitored PM<sub>10</sub> concentrations are elevated year-round with no exceedances of NAAQS (Figure 3-11 below). An estimated background concentration of 10 µg/m<sup>3</sup> is observed, increasing in late winter and early spring. This is ascribed regional biomass burning. An increasing annual trend can also be observed and is suggestive of additional air quality management needs in the area.

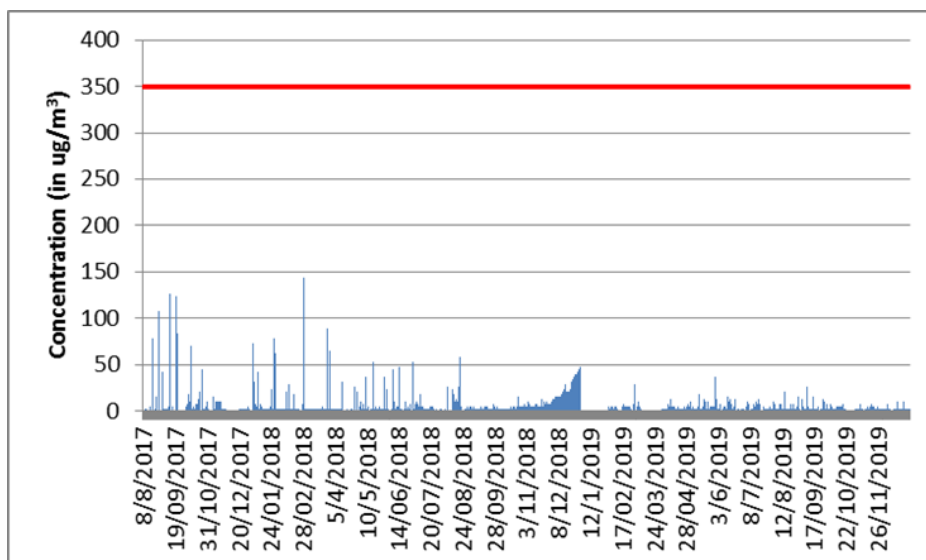


Figure 3-8: 1-hr average SO<sub>2</sub> monitored concentrations at Saltworks monitoring station

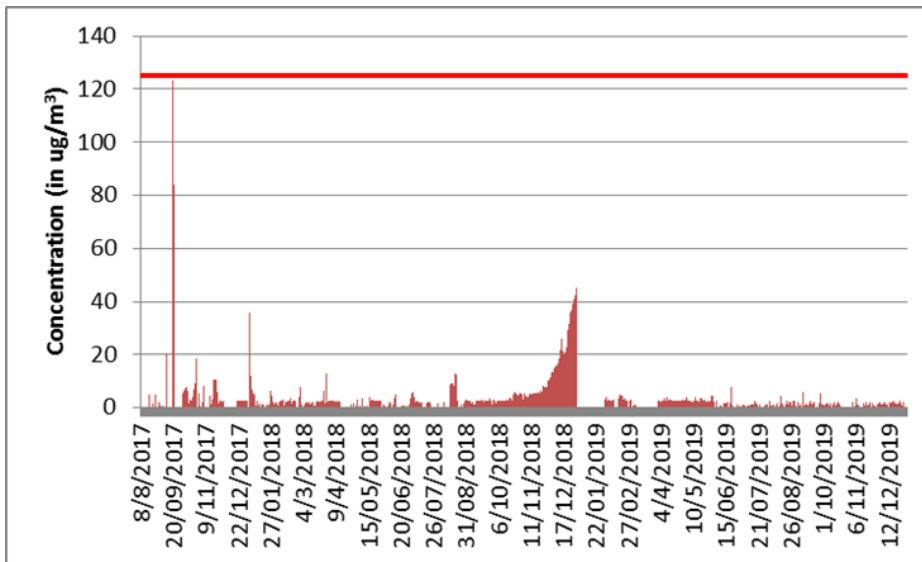


Figure 3-9: 24-hour average SO<sub>2</sub> monitored concentrations at Saltworks monitoring station

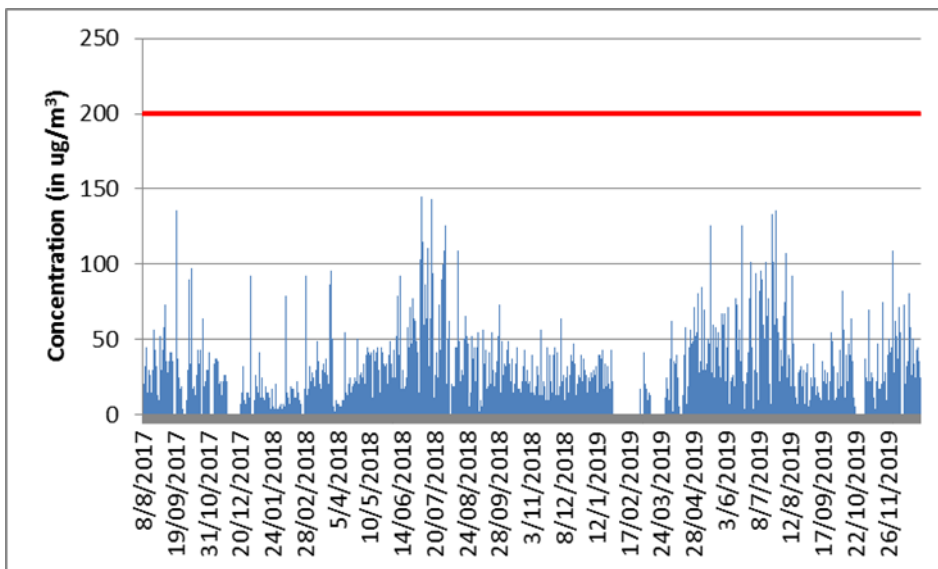


Figure 3-10: 1-hr average NO<sub>2</sub> monitored concentrations at Saltworks monitoring station

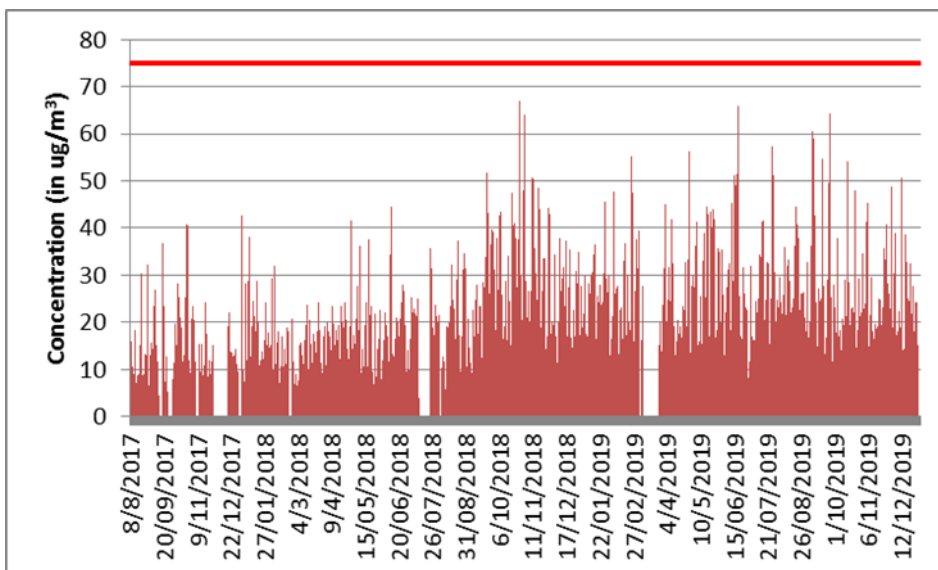


Figure 3-11: 24-hr average PM<sub>10</sub> monitored concentrations at Saltworks monitoring station



**Table 3-1: Annual average monitored concentrations of SO<sub>2</sub>, NO<sub>2</sub> and PM<sub>10</sub> at Saltworks monitoring station**

| Year  | SO <sub>2</sub> (NAAQS 50 µg/m <sup>3</sup> ) | NO <sub>2</sub> (NAAQS 40 µg/m <sup>3</sup> ) | PM <sub>10</sub> (NAAQS 40 µg/m <sup>3</sup> ) |
|-------|---|---|--|
| 2017* | 3.3   | 8.5   | 14.8   |
| 2018  | 4.4   | 9.1   | 20.9   |
| 2019  | 1.6   | 10.7  | 26.6   |

\* Limited dataset for August – December

### 3.10.1 Heritage Resources

#### Archaeological Resources

Dr Johan Binneman, on behalf of CDC, conducted a Phase 1 Archaeological Impact Assessment of the greater Coega SEZ in 2010. All zones (approximately 9 200 hectares) were investigated apart from Zone 8 as this is owned by the National Port Authority. Sensitive heritage sites identified during this study are shown on Figure 3-12.

Zone 13 is a narrow strip sandwiched between zones 9, 11 and 14 and comprises mainly the upper Coega River valley with relatively steep sides. An archaeological impact assessment was conducted for the peaking power plant site in 2006. The zone is well covered with low grass, dense patches of bushes, small trees and impenetrable thicket vegetation, which made it difficult to find archaeological sites/materials. Some stone tools were found during the survey for the peaking plant where pebble/cobble river gravels were exposed. The stone tools found were mainly small quartzite flakes, some were well weathered and displayed typical Middle Stone Age faceted striking platforms and features. Apart from the stone tools no other visible archaeological sites/material were found during the investigation.

#### Palaeontological resources

Dr John Almond of Natura Viva was commissioned to conduct a palaeontological heritage assessment as part of a comprehensive heritage assessment of the Coega SEZ in 2010.

The Coega SEZ is underlain by a wide spectrum of sedimentary rocks spanning an age range of some 470 million years. Most of the rock units concerned contain fossil heritage of some sort but in most cases this is very limited, with the notable exception of three marine successions – the Sundays River Formation of Early Cretaceous age (c. 136 Ma = million years old), the Alexandria Formation of Miocene / Pliocene age (c. 7-5 Ma), and the Salnova Formation of Mid Pleistocene to Holocene age (< 1 Ma).

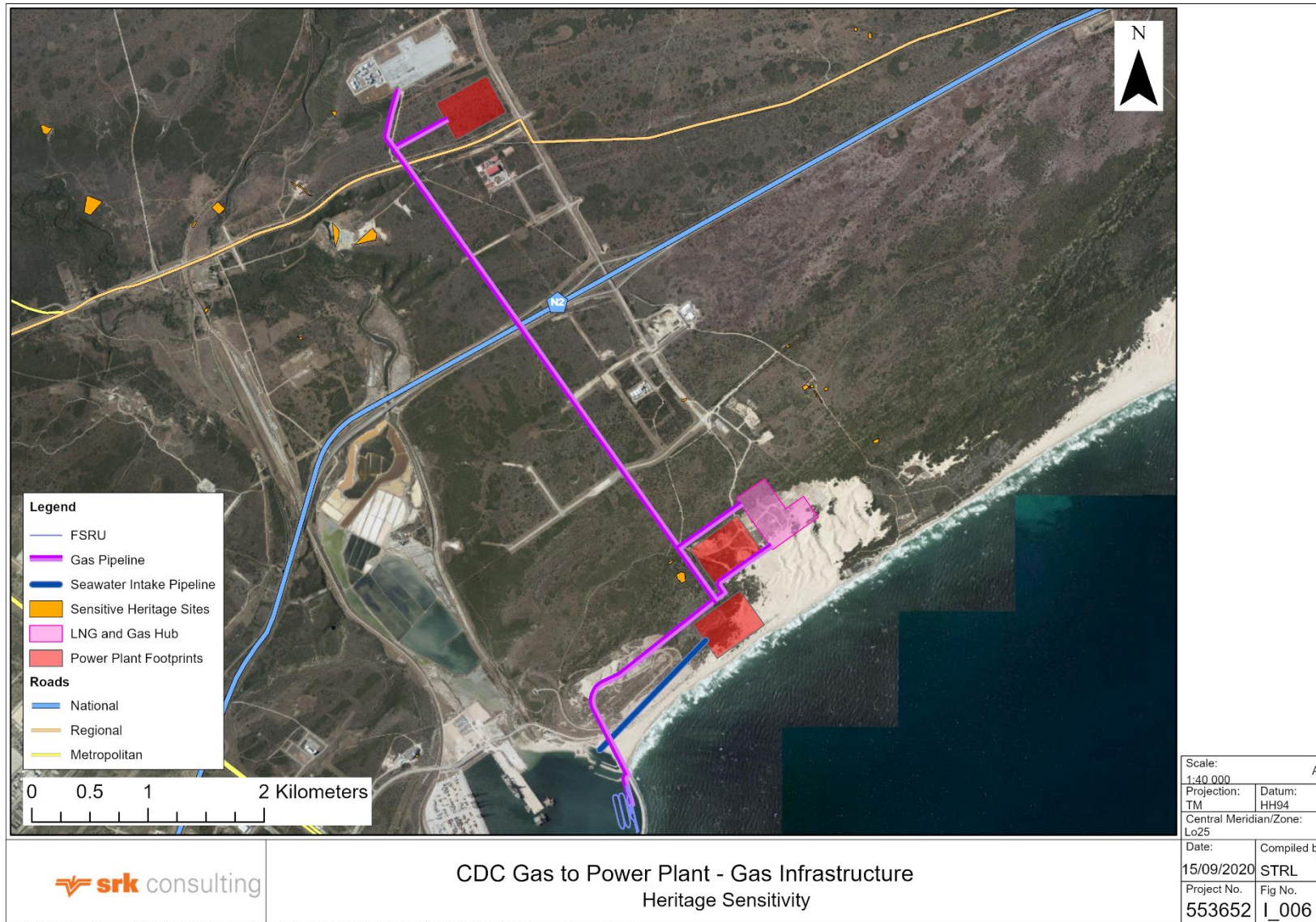
Good examples of vertically sectioned dunes showing large scale aeolian cross-bedding are seen in the active sand quarries near the Sea Arc factory site and at Sonop (Coega Zone 10). Apart from the usual concentrations of wind-deflated dune snails (notably superabundant *Tropidophora* and *Natalina*), a range of subfossil remains can be seen, especially in deflation hollows. Among these are millipede exoskeletons, small mammal and reptile bones, fragments of charcoal, buried mats of plant roots and incipient rhizocretions (possibly termite mediated). Shell middens of oysters and other edible marine shells situated close to the shoreline are attributable to Late Stone Age (and later) humans.

A small number of sites of special palaeontological and / or geological heritage significance were identified by Dr. Almond within the Coega SEZ and are indicated on Figure 3-12. Examples include:

- Main Coega brick quarry – eastern face preserving fossil-rich sandstones and contact with overlying Alexandria Formation;

- Main Coega limestone quarry – eastern face and large disturbed blocks of basal Alexandria shelly conglomerate at the western edge of the quarry;
- Upper, eastern face of Tossies Quarry South – well-preserved contact between Alexandria and Sundays River Formations;
- Erosion gullies into Sundays River Formation just north of Tossies Quarry North as well as on Bontrug 301 – highly fossiliferous sandstones, rare fossil taxa;
- Railway cutting north of N2, SW of marshalling yard as well as the nearby stormwater channel – contact between the Alexandria and Kirkwood Formations, trace fossils near contact; and
- Stratotype section of Salnova Formation on coast at Hougham Park, also showing unconformable contact with Sundays River Formation.

According to (Almond, April 2010), most of the rock units in the Coega SEZ contain fossil heritage of some sort however in most instances this is very limited with the exception of the Sundays River Formation, Alexandria Formation and the Salnova Formation. The proposed site in 13 does not fall on any of these sensitive formations.



**Figure 3-12: Sensitive heritage sites in the Coega SEZ relative to gas to power project infrastructure**

## 4 Stakeholder Engagement

The Public Participation Process (PPP) forms a key component of the EIA process and has already resulted in the identification of a number of issues and concerns. The objectives of the PPP are outlined below, followed by a summary of the approach taken, and the issues raised.

### 4.1 Objectives and Approach

The overall aim of the PPP is to ensure that all IAPs have adequate opportunities to provide input into the process. More specifically, the objectives of the PPP are as follows:

- Identify IAP's and notify them of the proposed project and of the EIA process;
- Provide an opportunity for IAP's to raise issues and concerns; and
- Provide an opportunity for IAP's to review all reports generated in the EIA process.

### 4.2 Public Participation Activities

The activities that have been conducted to date as part of this Scoping Study are as follows:

- Advertisements of the development as an e-notice on the CDC notice board on 8 October 2020 (Appendix C);
- Distribution of the Background Information Document (BID) from 22 January 2016 to identified Interested and Affected Parties (IAPs), stakeholders and neighbouring residents. A copy of the BID is attached in Appendix E, and the list of notified IAPs and commenting institutions is given in Table 4-1 below;
- Distribution of the BID to the relevant Ward Councillors caretaking for Ward 53 on 22 January 2016 on 22 January 2016;
- Recording of all issues raised in response to the BID (See summary of issues raised and responses to these in Appendix H);
- Preparation of a Draft Scoping Report (DSR) (this Report), including comments from IAPs and release for public comment;
- Submission of an application for environmental authorisation to DEFF, signalling the start of the regulated EIA process;
- On-site notices put up at each site, notifying the public of the project, on 2<sup>nd</sup> June 2020 (see Appendix C);
- Presentation of the project to the Coega ELC on 20 August 2020 (see Appendix F), and inclusion of queries raised and responses to them in the DSR; and
- Uploading the DSR (this report) for download via the public documents link on SRK consulting's website for review by IAPs and distribution of the Executive Summary to all IAPs registered for this project.

The following activities are still to be conducted in the Scoping Study stage of the EIA:

- Provision of a 30 day comment period on the DSR (this report);
- Collation of public and IAP comments on the DSR, and incorporation of these into the Final Scoping Report; and
- Newspaper advertisement, notifying the public of the project, as per the legal requirements.

## 4.2.1 Availability of the Draft Scoping Report

The Executive Summary of this DSR will be distributed to registered IAPs. The report can also be accessed as an electronic copy on SRK's website (<https://www.srk.com/en/public-documents>). A Hard copy of the report will be made available for review at the ward 53 Ward councillor's office in Motherwell and SRK's Port Elizabeth office.

Comments on this report must be forwarded to:

SRK Consulting  
 PO Box 21842, Port Elizabeth, 6000  
 Email: Inaidoo@srk.co.za  
 Fax: (041) 509 4850  
 Attention: Lyndle Naidoo

Comments on this DSR must reach SRK by 12h00 on **9 November 2020**. Any issues raised will be integrated into the second version of the Draft Scoping Report, which will also be distributed for public comment. Comments received to date are included in Appendix H of this report.

## 4.2.2 Registered IAPs and Issues Raised

IAP's have raised a number of issues and concerns regarding the proposed gas to power project. Copies of written correspondence received are provided in Appendix H. A list of registered IAP's is given in Table 4-1, and the issues raised by IAPs to date are summarised in Table 4-2 below.

**Table 4-1: Registered Interested and Affected Parties and Stakeholders**

| Name                        | Organisation  | Capacity  | Notified | Registered |
|-----------------------------|---|---|----------|------------|
| Mr Dayalan Govender         | Department of Economic Development, Environmental Affairs & Tourism | Regional Manager                                      | ✓        | ✓          |
| Mr Andries Struwig          | Department of Economic Development, Environmental Affairs & Tourism | Assistant Director IEM                                | ✓        | ✓          |
| Mr Sibulele Nondoda         | Department of Economic Development, Environmental Affairs & Tourism | Coastal Zone Management (Cacadu Region)               | ✓        | ✓          |
| Mr Lyndon Mardon            | Department of Economic Development, Environmental Affairs & Tourism | Manager: Air Quality                                  | ✓        | ✓          |
| Dr Monde Mayekiso           | Department of Environmental Affairs: Ocean And Coast                | Coastal Pollution Management                          | ✓        | ✓          |
| Mrs Nitasha Baijnath-Pillay | Department of Environmental Affairs: Ocean And Coast                | Coastal Pollution Management                          | ✓        | ✓          |
| Mr Reuben Molale            | Department of Environmental Affairs: Ocean And Coast                | Coastal Pollution Management                          | ✓        | ✓          |
| Mr Mulalo Tshikotshi        | Department of Environmental Affairs: Ocean And Coast                | Pollution Manager                                     | ✓        | ✓          |
| Mrs Masina Lotsoane         | Department of Environment Forestry and Fisheries                    | Environmental Impact Management                       | ✓        | ✓          |
| Mr Wayne Hector             | Department of Environment Forestry and Fisheries                    | Deputy Director: Strategic Infrastructure Development | ✓        | ✓          |
| Dr Thuli Mdluli             | Department of Environment Forestry and Fisheries                    | Air Quality Manager                                   | ✓        | ✓          |
| Ms Lerato Moha              | Department of Environment Forestry and Fisheries                    | Air Quality   | ✓        | ✓          |

| Name                       | Organisation                                      | Capacity                                       | Notified | Registered |
|----------------------------|---|--|----------|------------|
| Mr Vumile Senene           | Department of Environment Forestry and Fisheries  | Air Quality                                    | ✓        | ✓          |
| Adv Avhantodi Munyai       | Department of Environment Forestry and Fisheries  | Air Quality                                    | ✓        | ✓          |
| Mr Olebogeng Matshediso    | Department of Environment Forestry and Fisheries  | Air Quality                                    | ✓        | ✓          |
| Mr Stanley Tshitwamulomoni | Department of Environment Forestry and Fisheries  | Biodiversity                                   | ✓        | ✓          |
| Mr Sibonele Mbanjwa        | Department of Environment Forestry and Fisheries  | Climate Change adaptation                      | ✓        | ✓          |
| Mr Mapula Tshangela        | Department of Environment Forestry and Fisheries  | Climate Change mitigation                      | ✓        | ✓          |
| Mr Mactavish Makwarela     | Department of Environment Forestry and Fisheries  | Climate Change mitigation                      | ✓        | ✓          |
| Mr Jongikhaya Witi         | Department of Environment Forestry and Fisheries  | Climate Change monitoring and evaluation       | ✓        | ✓          |
| Ms Phumeza Skepe           | Department of Environment Forestry and Fisheries  | Environmental Impact Management                | ✓        | ✓          |
| Ms Marisa Bloem            | Department of Water & Sanitation                  | Water Use Licences                             | ✓        | ✓          |
| Ms Thandi Mmachaka         | Department of Water & Sanitation                  | Water Quality Management                       | ✓        | ✓          |
| Ms Ncumisa Mnotoza         | Department of Water & Sanitation                  | Water Quality Management                       | ✓        | ✓          |
| Mr Thabo Nokoyo            | Department of Agriculture, Forestry & Fisheries   | Forestry Officer                               | ✓        | ✓          |
| Mr Sello Mokhanya          | Eastern Cape Provincial Heritage Resources Agency | Heritage Officer                               | ✓        | ✓          |
| Mr Monde Manga             | Department of Public Works                        | District Roads Engineer                        | ✓        | ✓          |
| Mr McDonald Mdhuli         | Department of Mineral Resources & Energy          | Environmental Management                       | ✓        | ✓          |
| Ms Deidre Thompson         | Department of Mineral Resources & Energy          | Deputy Director: Mine Environmental Management | ✓        | ✓          |
| Mr Azwihangwisi Mulaudzi   | Department of Mineral Resources & Energy          | Manager  | ✓        | ✓          |
| Ms Brenda Ngebulana        | Department of Mineral Resources & Energy          | Acting Regional Manager                        | ✓        | ✓          |
| Mr Vusi Kubheka            | Department of Mineral Resources & Energy          | ASD: Mineral Regulation                        | ✓        | ✓          |
| Mr Anton Rautenbach        | Telkom  | Wayleave Management EC                         | ✓        | ✓          |
| Ms Andrea Shirley          | CDC   | Environmental Management                       | ✓        | ✓          |
| Mr Graham Taylor           | CDC   | Spatial Development                            | ✓        | ✓          |
| Mr Mandilakhe Mdogana      | TNPA  | Environmental Management                       | ✓        | ✓          |

| Name                  | Organisation                     | Capacity                  | Notified | Registered |
|-----------------------|----------------------------------|---------------------------|----------|------------|
| Mr Thulani Debeko     | TNPA                             | Harbour Master            | ✓        | ✓          |
| Mr Elliot Motsoahole  | TNPA                             | Environmental Management  | ✓        | ✓          |
| Ms Renee de Klerk     | TNPA                             | Environmental Officer     | ✓        | ✓          |
| Mr Mpatisi Pantsi     | TNPA                             | SHE Manager               | ✓        | ✓          |
| Mr Chuma Mtati        | Eskom                            | Distribution              | ✓        | ✓          |
| Mr Raymond Couch      | Telkom                           | Operations Manager        | ✓        | ✓          |
| Ms Adele Bezuidenhout | Department of Labour             | Operations                | ✓        | ✓          |
| Ms Chumisa Njingana   | SANRAL                           | Statutory Control Officer | ✓        | ✓          |
| Ms Annedene Bantom    | Transnet                         | Operations Manager        | ✓        | ✓          |
| Ms Bongsi Stofile     | SAMSA                            | Operations Manager        | ✓        | ✓          |
| Ms Nivashni Govender  | AfriSam (South Africa) (Pty) Ltd | Coega SEZ tenant          | ✓        | ✓          |
|                       | Cerebos                          | Coega SEZ tenant          | ✓        |            |
|                       | Dynamic Commodities              | Coega SEZ tenant          | ✓        |            |
|                       | Acoustex                         | Coega SEZ tenant          | ✓        |            |
|                       | Cape Concentrate                 | Coega SEZ tenant          | ✓        | X          |
|                       | UTI                              | Coega SEZ tenant          | ✓        | X          |
|                       | Digistics                        | Coega SEZ tenant          | ✓        | X          |
|                       | Bosun Bricks                     | Coega SEZ tenant          | ✓        | X          |
| Ms Chantell Spence    | Bosun Bricks                     | Coega SEZ tenant          | X        | ✓          |
|                       | PE Cold Storage                  | Coega SEZ tenant          | ✓        | X          |
|                       | Discovery Health                 | Coega SEZ tenant          | ✓        | X          |
|                       | NTI                              | Coega SEZ tenant          | ✓        | X          |
|                       | Enviroserv Waste Management      | Coega SEZ tenant          | ✓        | X          |
|                       | Ibis                             | Coega SEZ tenant          | ✓        | X          |
|                       | Osho SA Cement                   | Coega SEZ tenant          | ✓        | X          |
|                       | GMSA                             | Coega SEZ tenant          | ✓        | X          |
| Mr Kobus Bernardo     | Redefine Properties              | Landlord - GM             | ✓        | ✓          |
|                       | Star Bodies                      | Coega SEZ tenant          | ✓        | X          |
|                       | Hichange Inv Pty Ltd             | Coega SEZ tenant          | ✓        | X          |

| Name                  | Organisation                   | Capacity                                  | Notified | Registered |
|-----------------------|--------------------------------|---|----------|------------|
|                       | Coega Dairy                    | Coega SEZ tenant                          | ✓        | X          |
|                       | NTIP                           | Coega SEZ tenant                          | ✓        | X          |
|                       | Cape Produce Company           | Coega SEZ tenant                          | ✓        | X          |
|                       | Holding 302-308 Pomona Pty Ltd | Coega SEZ tenant                          | ✓        | X          |
|                       | Stapelberg Prop Trust          | Coega SEZ tenant                          | ✓        | X          |
|                       | Agni Steel                     | Coega SEZ tenant                          | ✓        | X          |
|                       | APM Terminals                  | Coega SEZ tenant                          | ✓        | X          |
|                       | FAW                            | Coega SEZ tenant                          | ✓        | X          |
|                       | Famous Brands                  | Coega SEZ tenant                          | ✓        | X          |
|                       | DCD Wind Towers                | Coega SEZ tenant                          | ✓        | X          |
|                       | Afrox                          | Coega SEZ tenant                          | ✓        | X          |
|                       | Vector Logistics               | Coega SEZ tenant                          | ✓        | X          |
|                       | GDF Suez                       | Coega SEZ tenant                          | ✓        | X          |
|                       | Dedisa Peaking Power           | Coega SEZ tenant                          | ✓        | X          |
|                       | ID Logistics                   | Coega SEZ tenant                          | ✓        | X          |
|                       | ALE                            | Coega SEZ tenant                          | ✓        | X          |
|                       | WNS                            | Coega SEZ tenant                          | ✓        | X          |
|                       | Zacpack / CFR                  | Coega SEZ tenant                          | ✓        | X          |
|                       | PPC                            | Coega SEZ tenant                          | ✓        | X          |
| Mr Hugo Badenhorst    | PPC                            | Risk Manager                              | X        | ✓          |
| Mr Karl Heese         | PPC                            | Risk Manager                              | X        | ✓          |
|                       | Abengoa E & C                  | Coega SEZ tenant                          | ✓        | X          |
|                       | Air Products SA                | Coega SEZ tenant                          | ✓        | X          |
| JP van Wyk            | Air Products SA                | Regional Manager                          | X        | ✓          |
| Mr Sherwin Harris     | Engie                          | Coega SEZ tenant                          | X        | ✓          |
| Ms Seshni Naidoo      | Engie                          | Coega SEZ tenant                          | X        | ✓          |
| Mr Michael Steiner    | Engie                          | Coega SEZ tenant                          | X        | ✓          |
| Mr Christophe Crillon | Engie                          | Coega SEZ tenant                          | X        | ✓          |
| Mr Tebogo More        | Engie Southern Africa          | Coega SEZ tenant                          | X        | ✓          |
| Dr Paul Martin        | Private                        | Independent Environmental Control Officer | ✓        | ✓          |
| Ms Jenny Rump         | Zwartkops Conservancy          | Environmental Manager                     | ✓        | X          |



| Name                     | Organisation                              | Capacity                      | Notified | Registered |
|--------------------------|---|-------------------------------|----------|------------|
| Mr Morgan Griffiths      | WESSA                                     | Senior Conservation Officer   | ✓        | X          |
| Dr Chantell Bezuidenhout | EOH Coastal & Environmental Services      | Principal Consultant          | X        | ✓          |
| Dr Mike Cohen            | CEN IEM Unit                              | Principal Consultant          | X        | X          |
| Dr Philip Whittington    | East London Museum                        | Research Associate            | X        | ✓          |
| Mr Gonzalo Ramirez       | Excelerate Energy                         | Interested Party              | X        | ✓          |
| Mr Gavin Eales           | Glendore Sand & Stone                     | Interested Party              | X        | ✓          |
| Mr Bertus van Niekerk    | Mulilo Thermal Project Development        | Interested Party              | X        | ✓          |
| Mr Thomas Jachens        | AfriCoast                                 | Interested Party              | X        | ✓          |
| Ms Sherina Shaw          | Leads 2 Business                          | Interested Party              | X        | ✓          |
| Cllr Nomazulu Mthi       | Nelson Mandela Bay Municipality           | Ward 53 Councillor            | ✓        | ✓          |
| Mr Khaled El-Jabi        | Nelson Mandela Bay Ratepayers Association | Ratepayers Association        | ✓        | ✓          |
| Mr Johan Potgieter       | Nelson Mandela Bay Municipality           | Disaster Management           | ✓        | ✓          |
| Mrs Joannie Black        | Nelson Mandela Bay Municipality           | Air Pollution & Noise Control | ✓        | ✓          |
| Ms Buyiswa Deliwe        | Nelson Mandela Bay Municipality           | Air Pollution & Noise Control | ✓        | ✓          |
| Mrs Jill Miller          | Nelson Mandela Bay Municipality           | Environmental Manager         | ✓        | ✓          |
| Ms Rosa Blaauw           | Nelson Mandela Bay Municipality           | Environmental Manager         | ✓        | ✓          |
| Mr Peter Neilson         | Nelson Mandela Bay Municipality           | Electricity                   | ✓        | ✓          |
| Mr Barry Martin          | Nelson Mandela Bay Municipality           | Water & Sanitation            | ✓        | ✓          |
| Mr Anderson Mancotywa    | Nelson Mandela Bay Municipality           | Fish Water Flats WWTW         | ✓        | ✓          |
| Mr Kobus Slabbert        | Nelson Mandela Bay Municipality           | Air Pollution & Noise Control | ✓        | ✓          |
| Mr Patric Nodwele        | Nelson Mandela Bay Municipality           | Air Pollution & Noise Control | ✓        | ✓          |
| Mr Templeton Titima      | Nelson Mandela Bay Municipality           | Air Pollution & Noise Control | ✓        | ✓          |

**Table 4-2 Issues Raised by Interested and Affected Parties, as relevant to the Zone 13 power plant, on BID distributed in 2016**

| Commentator                                 | Issues raised   | Response (SRK, unless specified otherwise)  |
|---|---|---|
| <b>Comments of a general nature</b>         |   |   |
| Mrs C Spence                                | Interested in development and environmental outcome as we are tenants of Coega  | Noted   |
| Mr A Southwood (DEDEAT)                     | Require one hard copy of future reports for commenting purposes.  | Noted   |
| <b>Comments relating to the process</b>     |   |   |
| Mr Kobus Slabbert (NMBM)                    | Activity 28, listed in GN 984 (Listing Notice 2) of the 2014 NEMA Regulations, will be triggered. An AEL will be required for the proposed plant. The NMBM is the licensing authority for issuing of an Atmospheric Emission Licence.   | An AEL application is to be lodged with the NMBM.   |
| Dr P Martin                                 | Regular environmental reports / audits / monitoring reports should be submitted to the relevant Regulatory Authorities, CDC, TNPA and the Coega EMC during the life cycle of the project.   | Monitoring & reporting requirements will be specified in the Draft EMPr.  |
| Dr P Martin                                 | Existing RoDs / EAs and the mitigating conditions in their EIAs need to be scrutinised and any conflicts with what this EIA is suggesting need to be highlighted, preferably in table form with detailed motivation. Relevant EIAs include OTCG, Landside Infrastructure, Port & Port Extensions RoDs, Manganese Project, SEZ RoDs. | Reference to listed activities that have already been authorised via separate authorisation processes is made in Table 1-1, and relevant mitigation measures / conditions will be noted in the EIR.   |
| <b>Comments relating to the environment</b> |   |   |
| Mr T Nokoyo (DAFF)                          | Area has relatively few protected tree species. We would like more information regarding the project moving forward.  | Noted. DAFF will be provided with all relevant reports generated during as part of the EIA process.   |
| Dr P Martin                                 | The bi-annual water sampling and biomonitoring currently undertaken should be assessed to see if it is adequate for the added risks from this project.  | Assessment of marine discharges is outside the scope of this assessment and falls under the Marine pipeline Servitude EIA. It is anticipated that that EIA process would result in water quality specifications for acceptable discharges to that pipeline, which the Gas to Power project would need to adhere to. It is recognised that coordination between the two studies is required. |
| <b>Comments relating to design</b>          |   |   |
| Dr P Martin                                 | Which organisations are envisaged to build and operate the facilities? Will a build and operate tender type process be followed?  | It is assumed that a procurement process would follow an environmental authorisation. The description of the development is therefore deliberately general in terms of technology providers.  |
| Dr P Martin                                 | Where does Dedisa Peaking Power Plant fit into the scenario? Will Dedisa also convert to LNG if a LNG terminal is available and could it then become a baseload station?  | The Dedisa Peaking Power Plant is not part of the CDC's Gas to Power project, however capacity for supply of gas to Dedisa as a third party off-taker (if required) is included in the gas infrastructure EIA.  |

| <b>Commentator</b>                                 | <b>Issues raised</b>  | <b>Response (SRK, unless specified otherwise)</b>   |
|--|---|---|
|  |   | The availability of cleaner fuel may make it viable to convert Dedisa to gas, but this is outside of the scope of this assessment.  |
| <b>Comments relating to safety concerns</b>        |   |   |
| Dr P Martin  | How will adequate firefighting capacity and other emergency services be provided (the area is beyond the current NMBM required response time radius)?   | SRK will consult with the NMBM Disaster Management to establish any additional firefighting requirements, and the MHI risk assessment study will also comment on this aspect.   |
| <b>Comments relating to noise pollution</b>        |   |   |
| Mr Kobus Slabbert (NMBM)                           | Noise Assessment is proposed.   | A Noise Impact Assessment is proposed as part of the Plan of Study for the EIA (See ToR in Section 6.5.4).  |
| <b>Comments relating to air pollution</b>          |   |   |
| Mr Kobus Slabbert (NMBM)                           | Air Quality Assessment is proposed.   | An Air Quality Assessment is proposed as part of the Plan of Study for the EIA (See ToR in Section 6.5.1).  |
| Dr P Martin  | Air quality assessment must be compatible with the Cumulative Air Quality Model and Monitoring system for the SEZ that CDC maintains.   | Agreed. The air quality specialist is liaising with the specialist responsible for the CDC's monitoring and modelling system, to ensure alignment.  |
| Dr P Martin  | The main excuses for most air pollution pulses are given as abnormal operating conditions (start-up, power failure, etc). The Air Specialist Report must indicate the frequency and consequence of abnormal conditions.     | Assessment of abnormal operating conditions is included as part of the ToR for the air quality study. See ToR in Section 6.5.1  |
| <b>Comments relating to infrastructure</b>         |   |   |
| Mr JP van Wyk                                      | We are a large power consumer in the Coega SEZ. Any issues on power would be a concern to us as this is our main resource other than air. Any possible impact on emission therefore would also be a concern to us.          | Noted   |
| <b>Comments relating to suggested alternatives</b> |   |   |
| Dr P Martin  | Project alternatives investigated should include why three facilities are being considered rather than a more efficient / cost effective phased implementation of one facility. Are they base-load stations operating 24/7? | The facilities are proposed as mid-merit power plants, operating at 100% of capacity, up to 80% of the time.<br><br>It is envisaged that each facility would bid for an Independent Power Producer license and would be operated by separate legal entities external to the CDC. The timing and phasing of their development is therefore unknown at this stage |

**Table 4-3: Comments Raised by Stakeholders at the Coega ELC Meeting of 20 August 2020**

| Commentator                         | Comments raised  | Response (SRK, unless specified otherwise)  |
|-------------------------------------|--|---|
| Comments relating to the process    |  |   |
| DEFF<br>Wayne Hector                | The Public Participation Plan must be approved by the DEFF before the EIA applications are submitted.  | SRK is in the process of drafting the plan for submission to DEFF prior to the application forms, should this still be required under the current lockdown regulations.   |
| DEFF<br>Millicent Solomons          | Considering that four separate application are being made, ensure that the public participation process is flawless.   | The PPP has been discussed during the pre-application meeting, where DEFF outlined their expectations in this regard.   |
| Comments relating to infrastructure |  |   |
| TNPA<br>Renee de Klerk              | Has TNPA been consulted wrt the siting of the infrastructure inside the Port of Ngqura?  | [CDC] The prefeasibility studies for the project were conducted in conjunction with TNPA and a letter of support from TNPA for the gas to power EIA process was received.   |
| TNPA<br>Renee de Klerk              | Who will be responsible for providing the new jetty and loading platform?  | The successful bidder / developer / operator for the gas infrastructure component of the work package, which has not yet been awarded, will be responsible for development of the new jetty and loading platform.   |
| TNPA<br>Renee de Klerk              | Who will be responsible for the LNG terminal operations?   | The successful bidder / developer / operator for the gas infrastructure component of the work package, which has not yet been awarded, will be responsible for the operations.  |
| TNPA<br>Renee de Klerk              | Although the Port of Ngqura ROD states that no activities and/or infrastructure are allowed on the eastern breakwater, the EAP must consider the reasons for the restriction | It is SRK's understanding that the reasons for this restriction are both to ensure structural integrity of the breakwater is not compromised, and to prevent possible risk of rodents from ships and associated activities invading the nearby Jahleel island, putting the local bird breeding populations at risk. |
| TNPA<br>Renee de Klerk              | Consider the impact of off-loading LNG vessels on current and future Port operations.  | The 2016 Prefeasibility study by PRDW took this into account. CDC has confirmed that the future development potential of the port was considered during compilation of the layout of the terminal in the prefeasibility study.  |
| TNPA<br>Renee de Klerk              | Consider the impact on the sand bypass system  | No impacts on the sand bypass system are anticipated. The CDC recognises the need to ensure the jetty and pipeline routes do not impact the sand bypass system negatively.  |
| TNPA<br>Renee de Klerk              | Consider HAZOP Risk Assessment and liquid bulk operations  | Riscom (MHI Specialist) has confirmed that a HAZOP study should be undertaken. The timing of this would typically be after the EIA, once the required detailed  |

| Commentator                         | Comments raised   | Response (SRK, unless specified otherwise)  |
|-------------------------------------|---|---|
|                                     |   | engineering drawings are available, but before construction phase.  |
| Comments relating to Climate Change |   |   |
| DEDEAT<br>Lyndon Mardon             | The Terms of Reference (TOR) for the Climate Change Impact Assessment must consider RSA's commitment to a peak, plateau and decline scenario  | Promethium (The Climate Change Specialist) have confirmed that peak, plateau and decline scenario is not a climate scenario, but rather an emissions reduction trajectory envisioned for South Africa as part of our Nationally Determined Contribution to the UNCCC. They do however make use the IPCC's RCP scenarios as part of the climate change study.  |
| DEDEAT<br>Lyndon Mardon             | The Climate Change Impact Assessment must look at the impact of climate change on this project and vice versa, the impact of this project on climate change.  | This will be assessed by Promethium in their climate change assessment.   |
| DEDEAT<br>Lyndon Mardon             | From a planning perspective, the EIA must consider RSA's commitment to the management of GHG emissions and climate change adaptation and whether this project will meet the GHG emissions trajectory after mitigation. South Africa communicates, as defined in national policy, a peak, plateau and decline GHG emissions trajectory range, with emissions by 2025 and 2030 in a specified range | [Promethium (climate change specialist)] We have considered South Africa's peak, plateau and decline (PPD) scenario as well as the South African Carbon budget in our assessment for the project. The current EIA regulations and impact assessment methodology does not consider climate change, nor is it a fit for purpose method in assessing/determining climate change impacts. The methodology proposed to determine magnitude is based on two fundamental principles: 1) The remaining South African Carbon budget based on the most recent publicly available information and 2) the scale of emissions in terms of contributing to the use of this budget, considering South Africa's NDC, our PPD trajectory and the commitments/recommendations set out in the Paris Agreement. These fundamental principles and the increasing pressure to achieve a global 1.5°C target informed the quantification of project contributions in terms of a localised carbon budget. |
| Comments relating to LNG gas        |   |   |
| DEDEAT<br>Lyndon Mardon             | What are the chemical constituents of the LNG gas that will be used? That has an implication in terms of the control equipment that would go into the power station, etc. and what happens with those pollutants i.e. where is the effluent going to go.  | [CDC] the LNG will be a mixture primarily of methane (approximately 85%), ethane (approximately 10%), and propane (approximately 3%) with butane, carbon dioxide, hydrogen sulphide, nitrogen and oxygen comprising the balance.  |
| Comments relating to Alternatives   |   |   |
| DEFF<br>Milicent Solomons           | With reference to the consideration of alternatives, ensure that it is understood that  | SRK and the CDC do understand this. The DSR aims to adequately cover the options potential developers may require as part of  |

| Commentator                          | Comments raised   | Response (SRK, unless specified otherwise)   |
|--------------------------------------|---|--|
|                                      | only the preferred alternative will be authorised.  | the preferred alternative that is presented for authorisation.   |
| DEFF<br>Milicent Solomons            | Are you only considering LNG or are you looking at any other technology type for these applications?  | Only LNG is being considered as a long term fuel source for the gas to power plants, however there is a possibility that a transitional HFO-fuelled phase (covering the first 2-3 years of operation) will be required should the supporting infrastructure for gas not yet be operational. No other types of power generation technology are being considered for this application. |
| Comments relating to bidding process |   |  |
| DEFF<br>Milicent Solomons            | What is the bidding process referred to in the presentation? Additionally, what is the bidding process to be followed by the CDC? Does the CDC intend to be ready to bid for the Risk Mitigation bid to be advertised in Nov '20? | [CDC] It refers to the IPP process where the Department of Energy will go out on the tender process to get bidders for the power plants. The CDC does not currently plan on bidding for the Risk Mitigation bid as yet, however are considering this as an option.   |

## 5 Identification of Potential Impacts

This section describes the anticipated impacts of the development. During the EIA phase these impacts will be given a rating based on the methodology described in Section 6.3 and the findings of the specialist assessments. The identification of potential impacts of the proposed activity is based on the following factors:

- The legal requirements;
- The nature of the proposed activity;
- The nature of the receiving environment; and
- Issues raised during the public participation process.

### 5.1 Key environmental and social concerns identified during the PPP

Based on the comments received from IAPs, the following key potential social and environmental concerns relating to the zone 13 power plant development have been identified:

- Impact on air quality, including upset conditions (e.g. start up and maintenance);
- Noise impacts;
- Safety concerns relating to firefighting;

The Draft Plan of Study for EIA (Chapter 6) provides detail on how these concerns will be addressed via the EIA process.

### 5.2 Key Environmental Issues and Impacts

The EIA Regulations, 2014 (Appendix 2) prescribe the required content of a Scoping Report (see Table 1-1), including the identification of risks and impacts (potential nature, significance, consequence, extent, duration and probability) of the project, and the degree to which impacts can be reversed, may cause irreplaceable loss of resources and can be avoided, managed or mitigated (Appendix 2 (h)(v) and (vii)).

The potential impacts of the project are mostly linked to the sensitivity of the biophysical environment, expected emissions and discharges and stakeholders' perceptions.

Based on the above considerations and the professional experience of the EAP, the following *key* environmental issues – in effect, a preliminary suite of potential negative impacts and potential benefits of the project in its proposed setting – have been identified.

Considering the factors listed above, the following environmental impacts were identified which could potentially result from the proposed gas to power project:

- Impacts on climate change;
- Impacts on surface and groundwater;
- Terrestrial ecological impacts;
- Visual impacts;
- Noise impacts;
- Air quality impacts;
- Impacts on heritage resources;

- Socio-economic impacts;
- Traffic impacts;
- Waste management impacts;
- Stormwater and erosion impacts;
- Safety risks; and
- Construction related impacts.

The above listed impacts and their relevance to the proposed project area are described in more detail in the sections below.

### 5.2.1 Air quality impacts

The waste gases from the power plant will be expelled via a stack into the atmosphere. The number of stacks and their dimensions are currently unknown and will depend on the type of technology chosen. According to the Air Quality Act an AEL will be required. The impacts will be assessed on the basis of OCGT emissions for SO<sub>x</sub>, CO<sub>2</sub> and PM, and OCGE for NO<sub>x</sub>, as these represent the “worst case” scenario, and will take into account the initial liquid fuelled fired phase of operation.

The emissions from the power plant will primarily comprise CO<sub>2</sub> and NO<sub>x</sub>, with minor amounts of SO<sub>2</sub> and particulates from the flue stack. Fugitive emissions of methane (CH<sub>4</sub>) could potentially be expelled in the event of an incident such as pipe failure and storage tank rupture. The assessment of air emissions will therefore include an assessment of greenhouse gases.

The cumulative impacts of the proposed gas to power project and other existing and future developments on the Coega SEZ airshed will need to be assessed to determine how this will affect CDC’s compliance with the national pollution level requirements.

Dust emissions may also be generated during the construction phase. These emissions are temporary in nature and can readily be managed by standard construction techniques. It is therefore proposed that the EAP provide a qualitative assessment of significance of dust impacts during construction in the Environmental Impact Report, and address these impacts by means of standard conditions in the Draft Environmental Management Programme.

### 5.2.2 Noise impacts

During construction noise will be generated by the operation of diesel powered earth moving and construction equipment, such as bulldozers, front end loaders, scrapers, excavators, concrete mixers as well as haulage and other kinds of trucks. It is likely that piling will be required. These are characterised by impulsive noise events of high amplitude that can have a startling effect. It is proposed that noise impacts during the construction phase be assessed by the EAP and addressed through standard practices in the Environmental Impact Programme.

For most gas-fired power plants, the major noise sources during baseload operation are the ACC or cooling tower, steam turbine generator (STG), combustion inlet filter house, and the exhaust stack or heat recovery steam generator (HRSG) as well as the combustion turbine or engine. During start up or other temporary conditions in combined cycle configurations, the high-pressure steam piping and condenser is a major noise producer, with steam bypassing the STG. The combustion turbine and generator (CTG) may be housed in acoustical enclosures, thereby dropping their respective noise source ranking (Saussus, 2012). A Noise Impact Assessment is proposed to assess the noise impacts during the operational phase of the development.



### 5.2.3 Impacts on heritage resources

It is possible that construction activities (especially excavation and earth-moving activities) could expose and potentially damage or destroy concentrations of palaeontological/archaeological material. As heritage studies have previously been compiled for the Coega SEZ and no sensitive areas/material was identified within the proposed development area, it is proposed that no additional heritage studies are required. Standard management measures will be included in the EMPr aimed at identification and assessment of heritage features that may be uncovered during construction.

### 5.2.4 Terrestrial ecological impacts

Vegetation will need to be cleared in order to prepare the site for construction of the power plant units and associated infrastructure. Clearing and disturbance of the soil during construction will also promote the growth and spread of invasive alien vegetation on the site. Faunal species could be lost and habitats fragmented through vegetation clearing for the development, displacing these animals to adjacent areas.

The site sensitivity map (Figure 3-6) identified the CBAs in and around the study area. Impacts on terrestrial ecology have previously been authorised through the “Rezoning of the remainder of the Coega SEZ” impact assessment process, and are currently managed through the approved Coega Open Space Management Plan (OSMP). No terrestrial ecological assessment is therefore proposed in this EIA process. It is proposed that terrestrial ecological impacts be managed through standard search & rescue procedures in the EMPr, as well as the measures relating to protection of species listed in the CDC’s Environmental Specifications for Construction and application for the relevant permits for protected species post-authorisation.

### 5.2.5 Socio-economic impacts

It is expected that the social and economic benefits associated with the project would be self-evident to the environmental authorities and the general public, particularly given that this project is in response to the government led IPPPP. The proposed development would result in positive investment in the Nelson Mandela Bay Municipal Area, and would result in the creation of a number of employment opportunities.

Additional socio-economic benefits resulting from indirect employment (provision of services and goods), stimulation of the local economy, and government levies and taxes paid would also result from the development.

As such it is proposed that the positive social and economic benefits be described qualitatively by the EAP during the impact assessment phase, and without specialist input.

### 5.2.6 Traffic impacts

During the construction phase materials and equipment will need to be transported to site by road, resulting in more traffic utilising the CDC road network. Entrance to the site is gained via the Hougham Park Interchange and the R334/Daniel Pienaar Street. Traffic impacts during operation are expected to be low as materials would be transported via pipeline from the Port to the facilities. The transportation of LNG via trucks outside the Coega SEZ does not fall within the scope of this assessment. It is proposed that traffic impacts be addressed through a specialist Traffic Impact Assessment (TIA).

### 5.2.7 Waste management impacts

With the exception of effluent and air emissions, no large scale systematic by-products (i.e. wastes) would be generated as part of the process. Wastes similar to other industrial or manufacturing concerns would naturally be generated, and are expected to be moderate in quantity. No specific waste study is therefore proposed.

The standard waste management practices in terms of the CDC's Standard Environmental Specification for Construction would apply, and the EMPr would include an item for the preparation and implementation of a waste management plan for the construction, operational, and decommissioning phases of each facility.

### 5.2.8 Visual impacts / Sense of place

The power plant unit is located in an industrial zone (Coega SEZ) in areas allocated to energy development. The site in Zone 13 is situated between the Dedisa Power Plant and Agni Steels metal processing and recycling plant. No sensitive receptors are therefore anticipated during construction or operation however construction activities will need to be managed so that negative visual impacts (including those resulting from dust) are minimised.

No assessment of visual impacts is proposed and standard management measures in the EMPr will be augmented with reference to the CDC's architectural guidelines, which are expected to be applicable to this project.

### 5.2.9 Stormwater and erosion impacts

Vegetation clearing and disturbance of soils during construction will leave them vulnerable to erosion by water and wind. This could lead to increased sediment load in stormwater runoff, potentially clogging the receiving stormwater infrastructure.

The increase in hardened surfaces associated with the operation of development will result in less infiltration of stormwater into the soil and increased runoff, potentially exacerbating stormwater impacts. Impacts will be assessed by the EAP, and standard mitigation measures to manage erosion and stormwater will be included in the EMPr for both construction and operation.

### 5.2.10 Impacts on surface and groundwater

According to the National Freshwater Ecosystem Priority Areas (NFEPA) a wetland may be present on or close to the Zone 13 site. This will need to be verified and assessed as required. No other aquatic features are present in the proposed development areas.

The storage of backup fuels (e.g. diesel) poses a risk of pollution of groundwater and surface water resources. On the other hand, the design of storage & handling facilities is governed by well-established South African National Standards which are aimed at pollution prevention. It is therefore proposed that potential groundwater and surface water impacts be addressed through standard mitigation measures in the construction and operational EMPr without the need for further specialist input.

### 5.2.11 Climate change impacts

The use of natural gas to power the proposed power plants, and specifically the resultant emissions will add to greenhouse gases in the SEZ area and impact on emission targets both provincially and nationally, thereby contributing to climate change though the magnitude of this impact would be less than for coal fired power of the equivalent generation capacity.

A Climate Change Impact Assessment is therefore proposed to assess these impacts during the operational phase of the development.

### 5.2.12 Safety risks

Accidental leaks of LNG could occur and result in an LNG vapour cloud. The vapour cloud is quickly vaporised, however if an ignition source is present this can cause a fire which burns back to the source. The storage and handling of LNG may be considered to be a Major Hazard Installation (MHI) in terms of the Occupational Health & Safety Act. A Quantitative Risk Assessment will therefore be conducted in order to assess the risks and determine if the project is considered an MHI.

### 5.2.13 Construction related impacts.

Additional impacts typically associated with the construction phase include:

- Sanitation and water supply;
- Nuisance dust impacts;
- Safety and security;
- Damage to other infrastructure (e.g. underground cables and pipelines); and
- Veld fires and fire management.

The potential impacts above will be assessed by the EAP and can be addressed through standard well-managed construction procedures. Specific measures for the mitigation of construction related impacts will be included in the EMPr.

## 5.3 Potential Mitigation Measures

Appendix 2 of the EIA Regulations, 2014 requires that possible mitigation measures that could be applied to avoid or mitigate negative impacts and optimise positive impacts must be identified in the Scoping Report.

Many of the impacts can be readily mitigated and it is not foreseen that they are likely to pose a significant risk. Where necessary, the EMPr will identify and recommend specific mitigation measures applicable to the Zone 13 power plant project.

Table 5-1 identifies typical / routine mitigation measures that are likely to apply to the Zone 13 power plant project. The proposed development is located within a SEZ where it is assumed that the appropriate land use planning guidelines have been applied. The CDC has a number of Standard Specifications for construction, to which all developments within the SEZ are required to comply, and has in place systems for monitoring and reporting on environmental compliance, in accordance with the conditions of the authorisation for the SEZ as a whole. Additional and more detailed management and mitigation will be identified during impact assessment and reported in the EIA Report and EMPr.

**Table 5-1: Typical mitigation measures**

| Phase                  | Typical management / mitigation measures  |
|------------------------|---|
| Pre-construction Phase | <ul style="list-style-type: none"> <li>• Ensure all relevant permits and approvals are in place;</li> <li>• Establish an exclusion zone;</li> <li>• Provide all contractors with the EMPr;</li> <li>• Ensure contractors have subsidiary plans in place e.g. Oil Spill Contingency Plan, Waste Management Plan, etc.;</li> <li>• Ensure all contractors are suitably qualified and experienced;</li> <li>• Undertake environmental awareness training;</li> <li>• Review Contractors' method statements to ensure adequate environmental management measures are in place; and</li> <li>• Demarcate sensitive / no-go areas if applicable.</li> </ul>   |
| Construction Phase     | <ul style="list-style-type: none"> <li>• Maintain hazardous materials register and store all hazardous materials according to standard operating procedures;</li> <li>• Store and manage waste appropriately prior to disposal;</li> <li>• Regular compliance audits by a suitably qualified ECO and reporting to authorities on compliance;</li> <li>• Management of materials and waste so as to avoid spills and leaks;</li> <li>• Dust and noise management as appropriate;</li> <li>• Management of all sub-contractors on site to ensure compliance with the EMPr;</li> <li>• Maintain vehicles and equipment to avoid leaks;</li> <li>• Limit all activities to within the approved footprint area;</li> <li>• Manage effluent / wastewater and ensure proper disposal thereof;</li> </ul> |
| Operation Phase        | <ul style="list-style-type: none"> <li>• Undertake scheduled inspections and maintenance on all infrastructure;</li> <li>• Provide all service providers with the EMPr;</li> <li>• Ensure service providers have subsidiary plans in place;</li> <li>• Ensure all service providers are suitably qualified and experienced;</li> <li>• Store all hazardous materials according to standard operating procedures;</li> <li>• Monitor air emissions, effluent, waste, etc. to ensure compliance with the relevant standards and conditions; and</li> <li>• Submit performance reports to authorities.</li> </ul>  |

## 6 Draft Plan of Study for EIA

### 6.1 National Web Based Environmental Screening Tool

In terms of Regulation 16(1)(b)(v) of the NEMA EIA Regulation, 2014, an application for EA must include “the report generated by the national web based environmental screening tool”, and on 5 July 2019, notice was given that that the submission of such a report would be compulsory from 4 October 2019 – GN R 960). The screening tool report for this project is appended to the Application form in Appendix B.

The national screening tool is based on broad scale national environmental sensitivity data and identifies specialist studies that may be required for the EIA. It is the responsibility of the EAP to confirm whether these specialist studies will be conducted or provide a motivation as to why the specialist studies will not be conducted as part of the EIA process. Specialist studies generated/recommended by the screening tool, and where applicable, motivation as to why certain specialist studies have not been scoped for the EIA Phase, is provided in Table 6-1 below.

**Table 6-1: Site sensitivity verification**

| Studies Required in Terms of the Screening Tool        | Screening Sensitivity | Sensitivity Verification | Motivation as to why not proposed   |
|--|-----------------------|--------------------------|---|
| Agricultural Impact Assessment                         | Medium                | N/A                      | The power plant site is within the Coega SEZ, in an area that has already been approved for industrial development (in terms of the EIA for rezoning of the Coega SEZ).   |
| Animal Species Theme                                   | High                  | Low                      | Biodiversity studies were completed in support of the rezoning EIA for the Coega SEZ, as well as some of the nearby developments in Zone 13. The area is therefore fairly well documented, and any protected species will be subject to plant search and rescue and the relevant permits being obtained prior to clearing.  |
| Aquatic Biodiversity                                   | Very High             | Low                      | NFEPA lists a wetland close to the site, which was confirmed during the site visit. The wetland is however already subject to upstream impacts due to existing development in the area. An integrated wetland assessment was completed for the whole SEZ in 2016, and while this study did not identify this particular wetland, the findings and recommendations of it relating to similar wetlands will be incorporated into the EIR. |
| Archaeological and Cultural Heritage Impact Assessment | High                  | N/A                      | A Phase 1 heritage assessment (archaeological and palaeontological) has previously been undertaken for the Coega SEZ and no further heritage studies are therefore proposed. Any findings of palaeontological / archaeological and/or cultural heritage importance relevant to Zone 13, will be incorporated into the EIA report.   |
| Palaeontology Impact Assessment                        | N/A                   | N/A                      |   |
| Civil aviation theme                                   | Medium                | N/A                      | The site is not close to any airport and is surrounded by other industrial development of similar height within the SEZ. The proposed power plant is therefore not expected to pose any negative impact to aviation craft.  |
| Plant species theme                                    | Medium                | Low                      | Biodiversity studies were completed in support of the rezoning EIA for the Coega SEZ, as well as some of the nearby developments in Zone 13. The area is therefore fairly well documented, and any protected species will be subject to plant   |

| Studies Required in Terms of the Screening Tool | Screening Sensitivity | Sensitivity Verification | Motivation as to why not proposed  |
|---|-----------------------|--------------------------|--|
|   |                       |                          | search and rescue and the relevant permits being obtained prior to clearing.   |
| Defence Theme                                   | Medium                | Low                      | The site is in a designated industrial area and is surrounded by other industrial development of similar height within the SEZ. The proposed power plant is therefore not expected to pose any negative impact to aviation craft or any other defense related activities.                      |
| Terrestrial Biodiversity Theme                  | Very High             | Low                      | Biodiversity studies were completed in support of the rezoning EIA for the Coega SEZ, as well as some of the nearby developments in Zone 13. The area is therefore fairly well documented, and any protected species will be subject to the relevant permits being obtained prior to clearing. |
| Hydrology assessment                            |                       |                          | The site is not located near any rivers or surface water flow, and the SEZ is already fairly well documented with regard to hydrological features (these are also addressed in the integrated wetland assessment for the SEZ)  |
| Socio-economic assessment                       | N/A                   | ?                        | The socio-economic benefits of the development are largely self-evident. Standard enhancement measures to maximise benefits will be included in the EMPr.  |
| Geotechnical Assessment                         |                       |                          | The geology and soil conditions of the area are already fairly well documented, and this study is therefore not considered to be necessary at EIA stage for the project.   |
| Risk Impact Assessment                          | N/A                   | ?                        | N/A: a Risk Impact Assessment is proposed.   |
| Traffic Impact Assessment                       | N/A                   | Low                      | N/A: a Traffic Impact Assessment is proposed   |
| Climate Impact Assessment                       | N/A                   | ?                        | N/A: a Climate Impact Assessment is proposed   |
| Noise Impact Assessment                         | N/A                   | ?                        | N/A: a Noise Impact Assessment is proposed   |

## 6.2 Specialist Studies

A number of specialist studies are proposed in the Impact Assessment phase in order to investigate the potential environmental impacts associated with the proposed development. The identification of impacts and terms of reference for specialist studies is based on:

- The legal requirements;
- The nature of the proposed activity;
- The nature of the receiving environment;
- Discussions with the DEFF regarding their requirements during pre-application meetings for the project (see minutes appended to application form in Appendix B); and
- Issues raised during the public participation programme.

The proposed specialist studies to be conducted during the Impact Assessment phase are as follows:

- Air Quality Impact Assessment;

- Quantitative Risk Assessment;
- Climate Change Impact Assessment;
- Traffic Impact Assessment; and
- Noise Impact Assessment.

The following impacts will be addressed by SRK in consultation with the CDC:

- Waste impacts;
- Visual Impacts;
- Terrestrial ecology impacts;
- Aquatic impacts; and
- Socio-Economic Impacts.

### 6.3 Impact Rating Methodology

The assessment of impacts will be based on the professional judgement of specialists at SRK Consulting according to the SRK impact assessment methodology presented below. The impact ratings will be informed by the findings of specialist assessments conducted, fieldwork, and desk-top analysis. The significance of potential impacts that may result from the proposed development will be determined in order to assist DEFF in making a decision.

The significance of an impact is defined as a combination of the consequence of the impact occurring and the probability that the impact will occur. The criteria that are used to determine impact consequences are presented in Table 6-2 below.

**Table 6-2: Criteria used to determine the Consequence of the Impact**

| Rating   | Definition of Rating  | Score |
|--|---|-------|
| <b>A. Extent– the area over which the impact will be experienced</b>   |   |       |
| None   |   | 0     |
| Local  | Confined to project or study area or part thereof (e.g. site)   | 1     |
| Regional   | The region, which may be defined in various ways, e.g. cadastral, catchment, topographic                | 2     |
| (Inter) national   | Nationally or beyond  | 3     |
| <b>B. Intensity– the magnitude of the impact in relation to the sensitivity of the receiving environment, taking into account the degree to which the impact may cause irreplaceable loss of resources</b> |   |       |
| None   |   | 0     |
| Low  | Site-specific and wider natural and/or social functions and processes are negligibly altered            | 1     |
| Medium   | Site-specific and wider natural and/or social functions and processes continue albeit in a modified way | 2     |
| High   | Site-specific and wider natural and/or social functions or processes are severely altered               | 3     |
| <b>C. Duration– the time frame for which the impact will be experienced and its reversibility</b>  |   |       |
| None   |   | 0     |
| Short-term   | Up to 2 years   | 1     |
| Medium-term  | 2 to 15 years   | 2     |

|           |                    |   |
|-----------|--------------------|---|
| Long-term | More than 15 years | 3 |
|-----------|--------------------|---|

The combined score of these three criteria corresponds to a Consequence Rating, as follows:

**Table 6-3: Method used to determine the Consequence Score**

| Combined Score (A+B+C) | 0 – 2           | 3 – 4    | 5   | 6      | 7    | 8 – 9     |
|------------------------|-----------------|----------|-----|--------|------|-----------|
| Consequence Rating     | Not significant | Very low | Low | Medium | High | Very high |

Once the consequence has been derived, the probability of the impact occurring will be considered using the probability classifications presented in Table 6-4.

**Table 6-4: Probability Classification**

| Probability– the likelihood of the impact occurring |                                 |
|---|---------------------------------|
| Improbable  | < 40% chance of occurring       |
| Possible  | 40% - 70% chance of occurring   |
| Probable  | > 70% - 90% chance of occurring |
| Definite  | > 90% chance of occurring       |

The overall significance of impacts will be determined by considering consequence and probability using the rating system prescribed in the table below.

**Table 6-5: Impact Significance Ratings**

|             |           | Probability   |               |           |           |
|-------------|-----------|---------------|---------------|-----------|-----------|
|             |           | Improbable    | Possible      | Probable  | Definite  |
| Consequence | Very Low  | INSIGNIFICANT | INSIGNIFICANT | VERY LOW  | VERY LOW  |
|             | Low       | VERY LOW      | VERY LOW      | LOW       | LOW       |
|             | Medium    | LOW           | LOW           | MEDIUM    | MEDIUM    |
|             | High      | MEDIUM        | MEDIUM        | HIGH      | HIGH      |
|             | Very High | HIGH          | HIGH          | VERY HIGH | VERY HIGH |

Finally, the impacts will also be considered in terms of their status (positive or negative impact) and the confidence in the ascribed impact significance rating. The system for considering impact status and confidence (in assessment) is laid out in the table below.

**Table 6-6: Impact status and confidence classification**

| Status of impact  |                               |
|---|-------------------------------|
| Indication whether the impact is adverse (negative) or beneficial (positive).                                       | + ve (positive – a 'benefit') |
|   | - ve (negative – a 'cost')    |
| Confidence of assessment  |                               |
| The degree of confidence in predictions based on available information, SRK's judgment and/or specialist knowledge. | Low                           |
|   | Medium                        |
|   | High                          |

The impact significance rating should be considered by authorities in their decision-making process based on the implications of ratings ascribed below:



- Insignificant: the potential impact is negligible and will not have an influence on the decision regarding the proposed activity/development.
- Very Low: the potential impact is very small and should not have any meaningful influence on the decision regarding the proposed activity/development.
- Low: the potential impact may not have any meaningful influence on the decision regarding the proposed activity/development.
- Medium: the potential impact should influence the decision regarding the proposed activity/development.
- High: the potential impact will affect the decision regarding the proposed activity/development.
- Very High: The proposed activity should only be approved under special circumstances.

Practicable mitigation measures will be recommended and impacts will be rated in the prescribed way both with and without the assumed effective implementation of mitigation measures. Mitigation measures will be classified as either:

- Essential: must be implemented and are non-negotiable; or
- Optional: must be shown to have been considered, and sound reasons provided by the proponent, if not implemented.

## 6.4 Cumulative Impacts

### 6.4.1 Introduction

Anthropogenic activities can result in numerous and complex effects on the natural and social environment. While many of these are direct and immediate, the environmental effects of individual activities (or projects) can combine (additive impact) and interact (synergistic impact) with other activities in time and space to cause incremental or aggregate effects. Effects from disparate activities may accumulate or interact to cause **additional** effects that may not be apparent when assessing the individual activities in isolation (Canadian Environmental Protection Agency, 2007). Cumulative effects can also be defined as the total impact that a series of developments, either present, past or future, will have on the environment within a specific region over a particular period of time (DEAT IEM Guideline 7, Cumulative effects assessment, 2004). The International Finance Corporation (IFC, 1998) states that environmental assessment should include consideration of “... *cumulative impacts of existing projects, the proposed project and anticipated future projects*”.

The IFC’s Good Practice Handbook for *Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets*, published in 2012, provides further guidance for comprehensive stand-alone Cumulative Impact Assessment (CIA). It places further emphasis on biodiversity and socio-economic conditions and introduces the concept of Valued Environmental and Social Components (VECs).

The IFC recommends that cumulative assessment should (a) “*be **commensurate with the incremental contribution, source, extent, and severity of the cumulative impacts anticipated,***” and (b) “*determine if the project is incrementally responsible for adversely affecting an ecosystem component or specific characteristic beyond an acceptable predetermined **threshold** (carrying capacity) ...*”

For the purposes of this report, cumulative impacts are defined as ‘direct and indirect impacts that act together with existing or future potential impacts of other activities or proposed activities in the area/region that affect the same resources and/or receptors’.

To define the level of cumulative impact, it is critical to look beyond the geographical boundaries and environmental impacts of a single development/project and consider the area of influence of the specific project as well as other developments currently in or proposed in the area and their understood impacts and area of influence. It may be that impacts generated by a single development are not considered to be significant, but when considered as part of a cumulative impact assessment, these require mitigation.

Key considerations for the assessment of cumulative impacts as part of the environmental impact assessment are:

- The cumulative impact assessment will need to give consideration to developments that may have contributed to cumulative effects in the past, may be contributing or are anticipated to contribute in the foreseeable future. This needs to be relevant to the timeframe within which impacts are to be experienced as a result of the project itself (i.e. all phases for which the project specific impact assessment is being undertaken). Given that the baseline environment will already be impacted on by the historical and current contributors to the cumulative impact, it is only necessary when undertaking the cumulative impact assessment to place an emphasis on an identified future cumulative baseline environment;
- Cumulative impacts may not be applicable to all aspects, as project related impacts may be confined to the project area and not subject to or contributing to impacts in the broader area of influence as a whole. For example, if the project area is confined to a water catchment which is not anticipated to be impacted on by other developments (past, present or foreseeable future) then a cumulative impact assessment need not be considered for this environmental aspect;
- A cumulative impact assessment will consider a specific area of influence which will be determined by the impact itself and the baseline environment in which it is proposed; e.g. where one or more projects affect the same ecosystem, the whole area in which the ecosystem is found may be considered the area of influence for the cumulative assessment. This will vary across project aspects and therefore a single area of influence for the cumulative impact assessment cannot be set; and
- The cumulative impact assessment can only be undertaken where information is readily available and as such will only be an initial assessment of the likely cumulative impact in terms of knowledge available at the time of the assessment. It is critical to understand the information sources and limitations that exist.

For the most part, cumulative effects or aspects thereof are too uncertain to be quantifiable, due mainly to a lack of data availability and accuracy. This is particularly true of cumulative effects arising from potential or future projects, the design or details of which may not be finalised or available and the direct and indirect impacts of which have not yet been assessed.

#### **6.4.2 Scope of the Cumulative Assessment**

For cumulative effects analysis to be a useful tool to decision makers and stakeholders, it must be limited to effects that can be meaningfully evaluated, rather than expanded to the point where the resource or receptors are no longer significantly affected or the effects are no longer of interest to stakeholders. To this end, four important aspects require consideration prior to the evaluation of cumulative effects:

- The determination of an appropriate area of influence, i.e. spatial and, to a lesser extent, temporal boundaries for evaluation of cumulative effects of the project;
- Identification of VECs;

- External natural and social stressors; and
- The evaluation of relevant projects for consideration in the cumulative effects analysis.

Each of the four aspects listed above is discussed below.

### 6.4.3 Area of Influence

The IFC defines the area of influence (AoI) to encompass “*cumulative impacts that result from the incremental impact, on areas or resources used or directly impacted by the project, from other existing, planned, or reasonably defined developments at the time the risks and impact identification process is conducted.*” Consequently, the spatial and temporal boundaries for analysis of cumulative effects are dependent on a number of factors, including:

- The size and nature of the project and its potential effects;
- The size, nature and location of past and (known) future projects and activities in the area, and the significance of their adverse or beneficial environmental effects;
- Relevant ecological boundaries, including landform, vegetation, land use, habitat, soil and surface materials and climate;
- Relevant aquatic boundaries, including catchments, sub-catchments and hydrogeological discontinuities;
- The aspect of the environment impacted by the cumulative effect (boundaries selected for cumulative environmental effects on, for example, air quality might be different from those relevant to the effects on a particular species of plant or animal); and
- The period of occurrence of effects (temporal boundaries may extend beyond the timing of construction and operations) (Canadian Environmental Protection Agency, no date).

The AoI does not include potential impacts that would occur without the project or independently of the project.

For this project the AoI includes the following:

- Areas potentially impacted by the project and facilities which are directly owned, operated, or managed (including by contractors) and that are a component of the project;
- Areas potentially impacted by unplanned but predictable developments caused by the project that may occur later or at a different location;
- Affected communities (if any) whose livelihoods are affected by indirect project impacts on biodiversity or the ecosystem;
- Areas potentially impacted by cumulative impacts from additional planned development or other sources of similar impacts in the geographical area, any existing project or condition, and other project-related developments that can realistically be expected at the time that due diligence is undertaken; and
- Areas and communities potentially affected by impacts from unplanned but predictable developments caused by the project that may occur later or at a different location.

The power plant is located in an existing SEZ and generates impacts that are mostly of local extent (therefore described in the baseline and assessed in the “regular” impact assessment), notable potential exceptions being air emissions and contribution to climate change. The spatial scope of this analysis is generally aligned with the zone of influence of the project and potential projects in the vicinity that may have impacts overlapping with the proposed project.

The temporal scale of the contribution of project's impacts is likely to be medium to long term, although of limited to moderate intensity.

#### 6.4.4 Identification of VECs

VECs are environmental and social attributes that are considered to be important in assessing risks; they may be: physical features, habitats, wildlife populations (e.g. biodiversity), ecosystem services, natural processes (e.g. water and nutrient cycles, microclimate), social conditions (e.g. health, economics) or cultural aspects (e.g. traditional spiritual ceremonies).

While VECs may be directly or indirectly affected by a specific development, they often are also affected by the cumulative effects of several developments. VECs are the ultimate recipient of impacts because they tend to be at the ends of ecological pathways.

VECs for this project were selected based on an understanding of the project activities, the vulnerability/sensitivity of the receiving environment; and the potential interactions between project activities and the biophysical and socioeconomic environment.

The project is located in an industrial area, and there are no communities in close proximity to the site.

As such the VECs likely considered in the cumulative assessment are as follows:

- Ambient air quality; and
- Contribution to climate change.

The baseline presented in Section 3 describes the current state of environmental attributes, including biodiversity, groundwater quality and quantity and air quality.

#### 6.4.5 Past, Existing and Planned Activities that may affect VECs

In addition to the project, other past, present and future activities might have caused or may cause impacts and may interact with impacts caused by the project under review.

- **Cumulative impacts of past and existing activities:** It is reasonably straightforward to identify significant past and present projects and activities that may interact with the project to produce cumulative impacts, and in many respects, these are taken into account in the descriptions of the biophysical and socio-economic baseline (see respective sections in Section 3).
- **Potential cumulative impacts of planned and foreseen activities:** Relevant future projects that will be included in the assessment are defined as those that are 'reasonably foreseeable', i.e. those that have a high probability of implementation in the foreseeable future; speculation is not sufficient reason for inclusion. Such projects may include those for which authorisations have already been granted, that are currently subject to environmental assessment processes or that have been identified in planning documents.

The Zone 13 power plant project is a significant industrial development in an existing SEZ, with other (existing and proposed) industrial developments in the area. Relevant known activities and projects are listed in Table 6-7 below.

**Table 6-7: Past, existing and future activities and projects**

| Past and existing activities  | Future activities  |
|---|--|
| <ul style="list-style-type: none"> <li>• Dedisa 335 MW Peaking power plant (diesel fuelled)</li> <li>• Agni Steels metal processing and recycling facility</li> </ul> | <ul style="list-style-type: none"> <li>• Potential conversion of Dedisa plant to gas fuelled</li> <li>• Two additional gas to power plants in zone 10 of the SEZ (EIA running concurrently with Zone 13 power plant EIA);</li> </ul> |

| Past and existing activities | Future activities   |
|------------------------------|---|
|                              | <ul style="list-style-type: none"> <li>• Gas infrastructure project in the Coega SEZ, to provide gas for the three proposed power plants (EIA running concurrently with Zone 13 power plant EIA);</li> <li>• Engie 130 MW gas to power plant</li> </ul> |

## 6.5 Draft Terms of Reference for Specialist Studies

The generic terms of reference for each specialist study are to:

- Describe the existing baseline characteristics of the study area and place this in a regional context;
- Identify and assess potential impacts resulting from the Project (including impacts associated with the construction, operation, and [if appropriate] closure phases of the project), using SRK's prescribed impact rating methodology;
- Identify and describe potential cumulative impacts resulting from the proposed development in relation to proposed and existing developments in the surrounding area;
- Recommend mitigation measures to avoid or minimise impacts and/or optimise benefits associated with the proposed Project; and
- Recommend and draft a monitoring campaign, if applicable.

The precise scope of specialist studies will be defined during the Initiation Phase and presented in the Scoping Report. Nevertheless, preliminary Terms of Reference for specialist studies are provided below.

### 6.5.1 Air Quality

The specific terms of reference for the specialist study are:

- Conduct a baseline assessment;
- Describe sources of emissions and compile an emissions inventory for the project;
- Undertake dispersion modelling for key pollutants identified as part of the emissions inventory;
- Predict ambient concentrations, rendered as isopleths on a base map of the surrounding area;
- Assess impacts during construction, operation and decommissioning phases of the projects;
- Identify 'abnormal' operating conditions (e.g. start-up & maintenance) that may lead to air emissions;
- Make recommendations of management and mitigation measures (including optimal height of stacks) associated with impacts from the proposed power plants; and
- Include assessment of cumulative impacts on air quality, with reference to the additional emissions each power plant will add.

### 6.5.2 Quantitative Risk Assessment

The proposed Terms of Reference for this study are as follows:

- Develop accidental spill and fire scenarios for the facility;

- Using generic failure rates, determine the probability of each scenario identified, as well as potential consequences;
- Where the consequence / risk will extend beyond the site boundary, calculate the maximum individual risk, taking into account generic failure rates, initiating events, meteorological conditions and lethality;
- Determine and comment on the societal risk posed by the facility;
- Indicate whether the plant qualifies as an MHI;
- Recommend mitigation measures to minimise risk where required; and
- Identify and assess impacts, including cumulative impacts of the project.

### 6.5.3 Climate Change

The proposed Terms of Reference for this study are as follows:

- Determine the Greenhouse Gas (GHG) inventory of the project for project construction and operational phases with respect to direct and indirect emissions. In this context:
  - Determine the project boundaries;
  - Identify sources of greenhouse gas emissions and priority pollutants;
  - Calculate the project's carbon footprint; and
  - Provide guidance on reporting and verification;
  - Analyse the project's greenhouse gas emissions including upstream and downstream sources of greenhouse gas emissions;
  - Where information is not available in this regard, develop a set of assumptions to inform the upstream and downstream greenhouse gas emissions;
  - Assessment of the impact of carbon tax as a result of the project
- Climate change impact assessment:
  - Determine a climate change baseline for the project;
  - Determine the impact of the project's greenhouse gas emissions (carbon dioxide, methane and nitrous oxide) on climate change; and
  - Comparison of impacts against project alternatives;
  - Identify and assess climate change impacts, including cumulative impacts of the project
- Climate change vulnerability of the project:
  - Potential impact of climate change on the project in terms of available climate data;
  - Potential climate change impacts for the region of operation in terms of project risks, the social context, project value chain and broader environmental risks.
- Analysis of project alternatives and potential mitigation / adaptation measures.

### 6.5.4 Noise

The proposed Terms of Reference for this study are as follows:

- Identify receptors that are potentially sensitive to noise through a desktop study;
- Conduct noise measurements conforming to the specification set out in the SANS guidelines;
- Ensure that the protocols followed during the survey work will comply with those set out within ISO 1996-1:2003, equivalent SANS guidelines;

- Describe the affected environment (the “baseline”), based on existing and, where required, primary information obtained as part of the specialist study;
- Identify and assess impacts, including cumulative impacts of the project; and
- Provide practical recommendations and management measures for consideration.

### 6.5.5 Traffic

The Specialist ToR for Traffic Impact Assessment is as follows:

- Source all relevant data and studies conducted in the vicinity of the site;
- Estimate the volumes and types of road traffic that are expected to be generated by the development during its construction and operation;
- Assess the project’s contribution to the future peak-hour traffic demand on the road systems inside and outside the SEZ, and the capacities of the roads serving the SEZ to accommodate this demand;
- Assess and rate impacts on other road users, including cumulative impacts;
- Propose measures to mitigate the impacts of project-related traffic on peak-hour traffic flows and road safety; and
- Address comments raised by IAP’s on issues relating to traffic.

## 6.6 EIA Process Schedule

The key activities and the provisional timetable required to achieve the objectives of the Environmental Impact Assessment study are summarised in Table 6-8 below.

**Table 6-8: Programme of activities and target dates**

| Stage / Activity  | Target Dates |            |
|---|--------------|------------|
|   | Start        | End        |
| Submission of applications for environmental authorisation  | 09 /10/2020  |            |
| Submission of Draft Scoping Report (DSR) and Plan of Study for EIA to DEFF  | 09/10/2020   |            |
| Public Comment Period for DSR   | 09 /10/2020  | 09/11/2020 |
| Submission of Final Scoping Report and Plan of Study for EIA to DEFF  | 16/11/2020   |            |
| DEFF approval of Plan of Study for EIA (potentially including recommendations)  | 16/11/2020   | 18/01/2021 |
| Complete Specialist Studies and Compile Draft EIR   |              | 29/01/2021 |
| Public Comment Period for Draft EIR   | 29/01/2021   | 01/03/2021 |
| Submit Final EIR to DEFF for a decision   | 08/03/2021   |            |
| DEFF decision making period on Final EIR (reduced by 50 days as the project falls within the list of strategic infrastructure projects) | 08/03/2021   | 16/05/2021 |

## 7 The Way Forward

The Draft Scoping Report is not a final report and will be amended in response to the comments received. It is envisaged that comments received on this report will result in refinement of the development proposal as summarised herein, and to the Plan of Study for EIA. A Final Scoping Report, incorporating those changes, will be submitted for approval to the competent authority (DEFF). The submission of the application for environmental authorisation signals the commencement of the regulated EIA process, which includes further opportunities for public and authority comment (see Figure 1-4).

The Executive Summary of this Draft Scoping Report has been distributed to all registered IAPs. The report can also be accessed as an electronic copy on SRK Consulting's webpage via the 'Public Documents' link (<https://www.srk.com/en/public-documents>). A hard copy of the report will be made available for review at the ward 53 Ward councillor's office in Motherwell and SRK's Port Elizabeth office.

Interested and Affected Parties are urged to review this report and submit comments as these could influence the recommendations of the Final Scoping Report and the decisions taken by the competent authority. Comments should be submitted in writing and must reach SRK by 12h00 on **9 November 2020**. Comments must be forwarded to:

**Lyndle Naidoo**

Email: [lnaidoo@srk.co.za](mailto:lnaidoo@srk.co.za)

Tel: + 27 41 509 4800

Fax: +27 41 509 4850

PO Box 21842, Port Elizabeth, South  
Africa, 6000

### Prepared by:

SRK Consulting - Certified Electronic Signature  
  
 553652/44095/Report  
 8089-9592-421-VNAB-23/09/2020  
 This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

Abby van Nierop BSc (Hons)

Environmental Scientist

SRK Consulting - Certified Electronic Signature  
  
 553652/44094/Report  
 9415-9628-3114-RUMP-22/09/2020  
 This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

Nicola Rump CEAPSA

Principal Environmental Scientist

### Reviewed by:

SRK Consulting - Certified Electronic Signature  
  
 553652/44101/Report  
 6004-9554-9605-DALC-29/09/2020  
 This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

Chris Dalgliesh Registered EAP No 20019/413

Director, Principal Environmental Scientist



All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

---

## 8 References

Adriatic LNG. (n.d.). How open rack vaporizer work.

Almond, J. E. (April 2010). *Kalagadi Manganese Smelter, Zone 5, Coega IDZ, Nelson Mandela Bay Municipality, Eastern Cape Province: Desktop Palaeontological Assessment*. Nature Viva cc.

Barnes, K. (. (2000). *The Eskom Red Data Book of Birds of South Africa, Lesotho and Swaziland*.

Binneman, J. (May 2010). *A Phase 1 Archaeological Heritage Impact Assessment of Zone 5 in the Coega Industrial Development Zone for the proposed construction of a Manganese Smelter, near Port Elizabeth, Nelson Mandela Bay Municipality, Eastern Cape Province*. Eastern Cape Heritage Consultants.

*Birdlife International*. (2012). Retrieved November 22, 2012, from Birdlife International IUCN Red List for birds: <http://www.birdlife.org>

Branch, W. (1988). Terrestrial reptiles and amphibians. In R. Lubke, F. Gess, & M. Bruton (Eds.), *A Field Guide to the Eastern Cape Coast* (pp. 251-264). Grahamstown Centre for the Wildlife Society of Sothern Africa.

C&M Consulting Engineers. (2012). *Coega annual ambient air quality report: January 2011 - December 2011*.

Carnegie Energie. (2019). *Memo: Technical Inputs to Coega Gas to Power EIA Scoping Report*.

CDC. (20 July 2015). The Case for Coega's Gas Readiness - Fast Facts.

CDC. (23 September 2015). Coega Readiness: Location for Gas-to- Power Plant.

CDC. (23 September 2015). Overview of 2009 Feasibility Study.

CES. (1997). *Strategic Environmental Assessment of the Coega IDZ - Terrestrial Specialist Report*. Grahamstown: Coastal & Environmental Services.

CES. (2008). *Scoping Report: Proposed Kalagadi Manganese Smelter in the Coega IDZ*. Grahamstown: Coastal & Environmental Services.

Cooperman, A., Dieckmann, J., & Brodrick, J. (2012, January). Power Plant Water Use. *ASHRAE Journal*, 65-68.

CSIR. (1997). *Strategic Environmental Assessment for the Proposed Industrial Development Zone Harbour at Coega*. CSIR, Stellenbosh: CSIR Report No. ENV-S-C 97025.

DOE. (October 2016). *Information Memorandum for New Generation Capacity for the LNG-to-Power Independent Power Producer Procurement Programme*. Independent Power Producer Office: Department of Energy.

Dold, A. (2002). *A taxonomic revision of the genus Bergeranthus Schwantes (Mesembryanthemaceae) in South Africa*. Rhodes University: MSc Thesis.

DWS. (n.d.). *Reconciliation Strategy for the Algoa Water Supply System*. Retrieved April 25, 2016, from Department of Water & Sanitation: <https://www.dwa.gov.za/Projects/algoa/>

Eisentrou, B. (2006). Study focuses on six LNG regasification systems. *LNG journal*, 21-22.

*Enggcyclopedia*. (2012, October 6). Retrieved 12 5, 2016, from Enggcyclopedia: <http://www.enggcyclopedia.com/2012/10/procedures-pigging-operations/>

Eskom. (2014, August 5). *Homeflex Tariff*. Retrieved December 5, 2016, from Eskom: <http://www.eskom.co.za/CustomerCare/TariffsAndCharges/Documents/Eskom%20Booklet.pdf>

- Friedmann, Y., & Daly, B. (Eds.). (2004). *Red Data Book of the Mammals of South Africa: A Conservation Assessment*. CBSG Southern Africa, Conservation Breeding Specialist Group (SSG/IUCN). Endangered Wildlife Trust, South Africa.
- GIIGNL. (2012-2015). Summary Report by the GIIGNL Technical Study Group on the Behaviour of LNG in Storage. *Rollover in LNG 2nd Ed.*
- Grange, E. I. (2013, August 9). *Engineering news*. Retrieved December 5, 2016, from Engineering news: <http://www.engineeringnews.co.za/article/the-case-for-mid-merit-power-generation-2013-08-09>
- Keltic Petrochemicals Inc. . (2007). *Liquid Natural Gas Facilities and Marginal Wharf: Comprehensive Study Report - Final Report*.
- Lloyd's Register. (2016). *Floating Storage and Regasification Units: A report on the commercial and technical aspects of the construction and conversion of floating units for storage and/or regasification*.
- Mechanical Booster*. (2013). Retrieved December 5, 2016, from Mechanical Booster: <http://www.mechanicalbooster.com/2016/06/closed-cycle-gas-turbine.html>
- Mott Macdonald. (2016). *IPP LNG-to-Power Project*.
- MSLGROUP. (n.d.). *LNG for shipping*. Retrieved 12 5, 2016, from LNG for shipping: <https://lngforshipping.eu/lng-for/bunkering>
- Mucina, L., & Rutherford, M. (2006). *The vegetation of South Africa, Lesotho and Swaziland*. Strelitzia 19. South African National Biodiversity Institute, Pretoria.
- Patel, D. (2013). *LNG VAPORIZER SELECTION BASED ON SITE AMBIENT CONDITIONS*.
- PRDW. (10 June 2016). *SA Gas to Power Medium-term Programme: Ngqura: Dredging Assessment*. Prestedge Retief Dresner Wijnberg (Pty) Ltd.
- PRDW. (2016). *SA Gas to Power Medium-term Programme: Ngqura Pre-feasibility Study (FEL2)*. Prestedge Retief Dresner Wijnberg (Pty) Ltd.
- Quirijns, S. (2015). *A literature study into the world of LNG*.
- Saussus, P. (2012, January 10). *Power Magazine*. Retrieved January 13, 2016, from <http://www.powermag.com/major-noise-sources-and-mitigation-cost-estimates-for-gas-fired-power-facilities/>
- STEP. (2004). *The STEP Mapbook. Subtropical Thicket Ecosystem Planning Project: Sundays River Mapbook*. Port Elizabeth: Nelson Mandela Metropolitan Municipality Spatial Development Framework.
- Transnet SOC Ltd. (2015). *Natural Gas Infrastructure and Planning*.
- Vlok, J., & Euston-Brown, D. (2002). *The patterns within, and the ecological processes that sustain, the Subtropical Thicket Vegetation in the planning domain for the Subtropical Thicket Ecosystem Planning (STEP) Project*. Terrestrial Ecology Research Unit, University of Port Elizabeth. Report No. 40.
- Weatherspark*. (2012). Retrieved November 2, 2012, from Average Weather for Port Elizabeth, South Africa: <http://weatherspark.com/averages/29027/Port-Elizabeth-Eastern-Cape-South-Africa>
- Worley Parsons. (2009). *CCGT Prefeasibility Study*.
- Zaretskaya, V. (2015, April 27). *Floating LNG regasification is used to meet rising natural gas demand in smaller markets*. Retrieved December 5, 2016, from U.S. Energy Information Administration (EIA) : <http://www.eia.gov/todayinenergy/detail.php?id=20972>

# Appendices

## **Appendix A: CV's of Key Professionals**

## **Appendix B: EIA Application Form**

## **Appendix C: On-site and E - Notices**

## **Appendix D: Newspaper Notice**

To be provided with FSR



## **Appendix E: Background Information Document**

## **Appendix F: Presentation to ELC Meeting on 20 August 2020**

## **Appendix G: Proof of IAP Notification**

## **Appendix H: IAP Correspondence on BID**

## **Appendix I: Layout drawings**

## **Appendix J: Site Photographs**

# SRK Report Distribution Record

Report No. 553652/Z13/1

Copy No.

| Name/Title         | Organisation               | Copy       | Date           | Authorised by |
|--------------------|----------------------------|------------|----------------|---------------|
| Viwe Biyana        | CDC                        | Electronic | 9 October 2020 | C Dalgliesh   |
| Duane Mouton       | CDC                        | Electronic | 9 October 2020 | C Dalgliesh   |
| Muhammad Essop     | DEFF                       | Electronic | 9 October 2020 | C Dalgliesh   |
| Wayne Hector       | DEFF                       | Electronic | 9 October 2020 | C Dalgliesh   |
| Coenrad Agenbach   | DEFF                       | Electronic | 9 October 2020 | C Dalgliesh   |
| Sizwe Mvulelwa     | NMBM Environmental Health  | 1          | 9 October 2020 | C Dalgliesh   |
| Ward 53 Councillor | NMBM                       | 2          | 9 October 2020 | C Dalgliesh   |
| Marisa Bloem       | DWS                        | 3          | 9 October 2020 | C Dalgliesh   |
| Andries Struwig    | DEDEAT                     | electronic | 9 October 2020 | C Dalgliesh   |
| -                  | SRK Port Elizabeth Library | Electronic | 9 October 2020 | C Dalgliesh   |

Approval Signature: 

SRK Consulting - Certified Electronic Signature  
553652/44101/Report 1  
8532-530-7396-DALC-29/09/2020  
This signature has been printed digitally. The Author has given permission for its use for this document. The details are stored in the SRK Signature Database

This report is protected by copyright vested in SRK (SA) (Pty) Ltd. It may not be reproduced or transmitted in any form or by any means whatsoever to any person without the written permission of the copyright holder, SRK.