

Proposed Provision of a Third Tippler and Associated Infrastructure at the Port of Saldanha: Basic Assessment Report

APPENDIX J: Summary of Industrial Developments Proposed on Properties near Tippler 3

1 ASSESSMENT OF PROPOSED DEVELOPMENTS

GIBB has reviewed the publicly available information on other proposed industrial developments near the preferred location for the installation of a third tippler at the Port of Saldanha. This was done for the assessment of potential cumulative impacts. Several projects were identified and brief descriptions of each are provided below.

1.1 Proposed Construction of the Dunes Photovoltaic Plant

1.1.1 Description of the Proposed Development

Clifton Dunes Investments 238 (Pty) Ltd. proposes to develop and construct a Photovoltaic Plant (PV plant) and associated transmission line on a portion of portion 2 of Farm Ongegund No. 132, within the Saldanha Bay Municipal area. Farm 132/2 is situated approximately 16 km north-east of Saldanha Bay and approximately 4 km south-east of Vredenburg. The location of the photovoltaic site is at 32°56'24" S, 18°2'41.27" E. This is a distance of 6.25 km from the preferred location of the Tippler.

The proposed facility will comprise approximately 54 500 PV panels that will convert solar radiation energy into electrical energy. The facility will have the combined capacity to generate a maximum electricity output of approximately 13.07 megawatts (MW). The facility will be spaced over an area of approximately 19.99 hectares (ha). The infrastructure associated with the Mystic PV Plant includes:

- A 22/66 kV step-up substation with a maximum height of 4.5 m;
- The upgrade of internal roads and construction of new roads to accommodate the construction vehicles and access to the site;
- A lightning mast of approximately 21 m within the yard of the substation;
- Construction of a 66 kV transmission line, to connect the proposed PV plant with Eskom's grid via the Blouwater Substation.

1.1.2 Key Issues

All negative impacts were rated by the projects EAP as having a low to medium impact on the environment. Mitigation measures for these impacts have been addressed in the Environmental Management Programme.

1.1.3 EIA Status

The project was authorised by the Department of Environmental Affairs (DEA) on the 29 October 2012.

1.2 Proposed Construction of the Mystic Photovoltaic Plant

1.2.1 Description of the Proposed Development

Mystic Blue Trading 314 (Pty) Ltd. proposes to develop and construct a Photovoltaic Plant (PV plant) and associated transmission line on a portion of Portion 4 of Farm Yzervarkensrug No. 127, within the Saldanha Bay Municipality. Farm 127/4 is situated approximately 16 km north-east of Saldanha Bay and approximately 5 km south-east of Vredenburg. The location of the photovoltaic site is at 32°56'48" S, 18°2'36.63" E. This is a 5.3 km distance from the preferred location of the tippler.

The proposed facility will comprise of approximately 52 300 PV panels that will convert solar radiation energy into electrical energy. The facility will have the combined capacity to generate a maximum electricity output of approximately 12.55 megawatts (MW). The facility will be spaced over an area of approximately 19.99 hectares (ha). The infrastructure associated with the Mystic Photovoltaic Plant (Mystic PV Plant) includes:

- A 22/66 kV step-up substation;
- The upgrade of internal roads and construction of new roads to accommodate the construction vehicles and access to the site;
- A lightning mast of approximately 21 m height within the substation of the yard;
- Construction of a 66 kV transmission line, to connect the proposed PV plant with Eskom's grid via the Blouwater Substation.

The power line will traverse the neighbouring property Farm 1112, Vredenburg.

1.2.2 Key Issues

All negative impacts were rated by the projects EAP as having a low to medium impact on the environment. Mitigation measures for these impacts have been addressed in the Environmental Management Programme.

1.2.3 EIA Status

The project was authorised by the Department of Environmental Affairs (DEA) on the 28 September 2012.

1.3 Proposed Construction of the Storm Photovoltaic Plant

1.3.1 Description of the Proposed Development

Midnight Storm Investments 184 (Pty) Ltd. proposes to develop and construct a Photovoltaic Plant (PV plant) and associated transmission line on a portion of Farm 133, Malmesbury Registration District (RD), within the Saldanha Bay Municipality. Farm 133 is situated approximately 16 km north-east of Saldanha Bay and approximately 10 km south-east of Vredenburg. The location of the photovoltaic site is at 32°94'63.29" S, 18°04'81.76" E. This is a 6.5 km distance from the preferred location of the tippler.

The proposed facility will comprise of 165 417 PV panels, of 240 Watt each, that will convert solar radiation energy into electrical energy. The facility will have the combined capacity to generate a maximum electrical output of about 40 megawatts (MW). The facility will be spaced over an area of covering approximately 57 hectares (ha) of the 70.87 ha property. The infrastructure associated with the Storm Photovoltaic Plant (Storm PV Plant) includes:

- A 22/66kV step-up substation;
- The upgrade of internal roads and construction of new roads to accommodate the construction vehicles and access to the site;
- Construction of a 66kV transmission line approximately 1,5km in length, to connect the proposed PV plant with Eskom's grid via the Blouwater Substation;
- A mixed use zone/servitude (100m wide) for conveyor belt transportation, rail activity, stormwater detention ponds and landscaping are situated adjacent, on the eastern boundary of the proposed PV plant, within the property boundaries

The power line will traverse the:

- Portion of Portion 4 of the Farm Yzervarkensrug No. 127 (owned by Parklands Township Developers (Pty) Ltd.);
- Transnet Railway line servitude;
- A portion of the farm, Remaining Extent of Farm 1112 (owned by Exxaro); and
- A portion of the farm, Farm 1132 (owned by Arcelor Mittal).

1.3.2 Key Issues

Visual impacts associated with the proposed project including the change in density and character of the site/area from agricultural to light industrial, and the visibility from the adjacent OP7643. Impacts will be largely reduced if the prescribed mitigation measures proposed by the specialists are successfully implemented.

All other negative impacts have a low to medium impact on the environment according to the EAP for the project. These impacts include archaeological and heritage resources, conservation and sustainable use of scarce water; and waste generated. These impacts have mitigation measures that have been addressed in the Environmental Management Programme.

1.3.3 EIA Status

The project was authorised by the Department of Environmental Affairs (DEA) on the 29 October 2012.

1.4 Proposed Construction of an Liquid Petroleum Gas (LPG) Facility

1.4.1 Description of the Proposed Development

The project involves the proposed construction of bulk import infrastructure for liquid petroleum gas (LPG) into Saldanha Bay Port in the Western Cape. The full scope of

the proposed project includes a system for off-loading LPG from ships in the Port of Saldanha and a pipeline to an on-land storage facility. It will include marine and land-based components:

Jetty LPG off-loading facility;

Off-shore buoy mooring off-loading facility (i.e. multi-buoy mooring (MBM) system); and

- LPG subsea pipeline from the off-shore berthing facility to the shore.
- An LPG pipeline running from the shoreline/jetty to the on-shore storage facility; and
- A storage facility consisting of horizontally mounded LPG storage vessels or bullets with a maximum total storage capacity of approximately 15 000 tons.

LPG load-out facilities (also land based) to the off-takers via:

- Three road gantries initially, expandable to six gantries;
- Two rail loading gantries initially, expandable to three gantries; and
- A LPG bottling or cylinder filling and local distribution facility.

The facility will be designed to handle the following feed stocks: commercial propane, commercial butane, mixed butane, propane LPG, and ethyl mercaptane.

Two locality alternatives for the on-land storage facility have been identified in the EIA, farm portion 7/197 and 16/197 on the farm Pienaarspoort. Each of the sites is located approximately 1.2 km distance from the preferred location of the tippler.

1.4.2 Key Issues

The storage facility could be exposed to flammable, toxic, reactive or corrosive components within the facility that could result in flash fires, vapour cloud explosions, boiling liquid expanding vapour explosion and toxic releases. Any hazardous unplanned events with respect to the LPG pipeline could cause a LPG release and result in a jet and flash fire or a vapour cloud explosions that will have a direct negative impact on the natural vegetation/ecology, structures, employees and vessels in close proximity of the incident.

Marine-based issues include:

- Potential compromised and degraded water quality during the construction phase
- Adverse effects of underwater noise on marine environment during the construction phase
- Potential collision with small crafts that could lead to leakage of LPG
- Risk of bunker fuel oils spills in the bay
- Risk of gas leakage, fire, combustion and explosion from LPG tanker
- Pipeline incidents could result in pool fires, jet fires, vapour cloud explosions, flash fires. These listed factors will have a direct negative impact on the natural vegetation/ecology, structures, employees and vessels in close proximity of the incident.

1.4.3 EIA Status

The project has been authorised for both the land-based component (28 March 2013) and the marine-based component (13 May 2013) of the LPG facility by the Department of Environmental Affairs and Development Planning.

1.5 Proposed Construction of Parklands Industrial Development Zone

1.5.1 Description of the Proposed Development

Parklands Township Developers (Pty) Ltd. proposes to rezone and subdivide the application area for the purposes of developing light “clean” industries. The development option comprises of a mix of light industrial properties:

- Various precincts comprising light industry (clean industries) covering an area of ±268.5 ha (this includes the proposed IDZ);
- A private open space (nature reserve) of ±64.7 ha;
- Public roads and parking areas of ± 13.8 ha;
- Railway line link to the existing railway line to the north site; and
- A mixed use zone/servitude (100 m wide) for the conveyor belt transportation, rail activity, stormwater detention ponds and landscaping.

This proposed development is planned in three phases and will cover approximately 268.5 ha of property. Infrastructure to be developed includes:

- A small substation;
- An access road;
- An electrical transmission line from Eskom’s Blouwater Substation to the south of the site; and
- Standard bulk engineering facilities such as water and sewage reticulation will also be installed.

The proposed land to be used for the IDZ is:

- Farm 133;
- Farm Driehoek No. 131;
- Portion 2 of the Farm Ongegund no. 132; and
- Portion 4 of the Farm Yzervarkensrug No. 127, Malmesbury Registration Division (RD).

This area collectively measures a total of ± 347 ha. The first phase (±12.8 ha) is planned for the next five years (until 2017). The second phase is planned for the five years thereafter (2022). The third, and last, phase is planned for the following ten years (2032). The centre of the proposed IDZ is approximately 6 km from the preferred location of the tippler.

1.5.2 Key Issues

According to the assessment made by the EAP of the project visual impacts include the change in density and character of the site from agricultural to light industrial, and the visibility from the adjacent OP7643. Impact will be largely reduced if the prescribed mitigation measures proposed by the specialists are successfully implemented. All other negative impacts were rated as having a low to medium impact on the environment. These impacts include archaeological and heritage resources, the conservation and sustainable use of scarce water and waste generated. Mitigation measures for these impacts have been addressed in the Environmental Management Programme.

1.5.3 EIA Status

The project is in the final EIA phase and is awaiting its authorisation report from the Department of Environmental Affairs (DEA).

1.6 Proposed Construction of the Afrisam Cement Plant and Quarries

1.6.1 Description of the Proposed Development

Afrisam proposes to construct a cement plant, limestone and clay quarries and associated infrastructure in the Saldanha area, Western Cape. The proposed project comprises the following:

- A cement plant located at Saldanha on farm 1139 (near the ore loading terminal, adjacent to Saldanha Steel), which consists of both a grinding and packing facility, and a clinker manufacturing plant;
- Limestone and clay quarries parallel to the coast between Saldanha and Portion 2 (Portion of Portion 1) of the farm Trekkossenkraal 104;
- A 9 km transport corridor to transport limestone from the proposed quarries to the proposed cement plant; and
- Two conservation areas.

The cement plant is proposed to be located on farm portion 1139. This is a 0.5 km distance from the preferred position of the tippler.

1.6.2 Key Issues

According to the EAP of that project the following key impacts have been identified:

- Dust created by work in the quarry as well as transporting mined material on dirt roads. Application for AEL has been submitted.
- The visual impact of the original quarry on a hill top as well as lights at night.
- Impacts on archaeology and palaeontology were tabled as high.
- Noise impact on residents and fauna from blasting, drilling and engines
- Impact on fauna and flora; loss of habitat, pollution of groundwater.

1.6.3 EIA Status

The project is in the final EIA phase and is awaiting its authorisation report from the Department of Environmental Affairs (DEA).

1.7 Proposed Crude Oil Storage Tank Farm

1.7.1 Description of the Proposed Development

MOGS (Mining, Oil and Gas Services) have a signed agreement with ArcelorMittal South Africa Limited (who are the property owners) to purchase land to develop crude oil storage tanks. Associated infrastructure includes the following:

- Underground pipeline of less than 360 mm in diameter for the transportation of municipal water to the storage facility;
- Underground pipeline for the transportation of dangerous goods, i.e. crude oil to and from the storage facility.
- 11 kV distribution line from the Blouwater Substation located to the north of the storage facility.
- An oily water treatment system and two evaporation ponds (each with a volume of approximately 1400 m³) for the treatment of water drained from the storage tanks.

The tank farm is proposed to be located on the farm Osfontein 194 or on farm 2/1038. This is a distance of 4.3 km from the preferred position of the tippler.

1.7.2 Key Issues

The EAP of the project identified the following potential impacts:

- The risk of a crude oil spill in the port
- Pipeline leakage into the marine environment and the adverse effects which could follow
- Potential leakage in concrete tanks and subsequent contamination of the surrounding area
- Accidental overflow of tanks into/into surrounding area
- Inappropriate waste management
- Inappropriate flaring of Volatile Organic Compound (VOC)

1.7.3 EIA Status

The project is in the final EIA phase and is awaiting its authorisation report.