



**Western Cape  
Government**

Environmental Affairs and  
Development Planning

**DIRECTORATE: LAND MANAGEMENT  
REGION 2**

**EIA REFERENCE NUMBER: 16/3/1/1/A1/2/3036/12**

**ENQUIRIES: MS. T. MAART**

**DATE OF ISSUE: 16 JAN 2013**

The Municipal Manager  
City of Cape Town  
13<sup>th</sup> Floor Tower Block, Civic Centre  
12 Hertzog Boulevard  
**CAPE TOWN**  
8001

**For attention: Mr. A.A. Human**

Tel: (021) 400 2366  
Fax: (021) 419 5303

Dear Sir

**APPLICATION FOR ENVIRONMENTAL AUTHORISATION AND EXEMPTION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT AMENDMENT REGULATIONS, 2010: THE PROPOSED GREEN TECHNOLOGY MANUFACTURING CLUSTER INDUSTRIAL DEVELOPMENT AND ASSOCIATED INFRASTRUCTURE ON PORTION 4 AND PORTION 1 OF FARM 1183, ATLANTIS.**

With reference to your application for the abovementioned, find below the outcome with respect to this application.

#### **ENVIRONMENTAL AUTHORISATION AND EXEMPTION**

#### **DECISION**

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Amendment Regulations, 2010, ("NEMA EIA Regulations") the competent authority herewith **grants environmental authorisation and exemption** to the applicant to undertake the list of activities specified in section B below with respect to Alternative 1 described in the Final Basic Assessment Report ("BAR") dated October 2012.

The applicant is herewith exempted from the following provisions of the NEMA EIA Regulations:

Regulation 10(2)(d) of Government Notice No. R.543, which reads as follows:

10(2) *The applicant must, in writing, within 12 days of the date of the decision of the application*

(d) *publish a notice –*

*(i) informing interested and affected parties of the decision;*

*(ii) informing interested and affected parties where the decision can be accessed; and*

*(iii) drawing the attention of interested and affected parties to the fact that an appeal may be lodged against the decision in terms of Chapter 7 of these Regulations, if such appeal is available under the circumstances of the decision,*

*in the newspapers contemplated in regulation 54(2)(c) and (d) and which newspaper was used for the placing of advertisements as part of the public participation process.*

The granting of this environmental authorisation and exemption (hereinafter referred to as the "environmental authorization") is subject to compliance with the conditions set out in section E below.

#### **A. DETAILS OF THE APPLICANT FOR THIS ENVIRONMENTAL AUTHORISATION**

The Municipal Manager  
City of Cape Town  
c/o Mr. A. A. Human  
13<sup>th</sup>Floor Tower Block, Civic Centre  
12 Hertzog Boulevard  
**CAPE TOWN**  
8001

Tel: (021) 400 2366  
Fax: (021) 419 5303

The abovementioned juristic person is the holder of this environmental authorisation and is hereinafter referred to as "the applicant".

#### **B. LIST OF ACTIVITIES AUTHORISED**

Government Notice No. R544 of 18 June 2010 –

Activity Number: 38

Activity Description:

*The expansion of facilities for the transmission and distribution of electricity where the expanded capacity will exceed 275 kilovolts and the development footprint will increase.*

## Government Notice No. R545 of 18 June 2010-

Activity Number: 15

Activity Description:

*Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more;*

*except where such physical alteration takes place for:*

- (i) linear development activities; or*
- (ii) agriculture or afforestation where activity 16 in this Schedule will apply.*

## Government Notice No. R546 of 18 June 2010-

Activity Number: 12

Activity Description:

*The clearance of an area of 300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.*

- (a) Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;*
- (b) Within critical biodiversity areas identified in bioregional plans;*
- (c) Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuary, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas.*

Activity Number: 13

Activity Description:

*The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, except where such removal of vegetation is required for:*

- (1) the undertaking of a process or activity included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), in which case the activity is regarded to be excluded from this list.*
- (2) the undertaking of a linear activity falling below the thresholds mentioned in Listing 1 in terms of GN R.544 of 2010.*
  - (a) In Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga, Northern Cape and Western Cape:*
    - (i) In an estuary;*
    - (ii) Outside urban areas, the following:*
      - (aa) A protected area identified in terms of NEMPAA, excluding conservancies;*
      - (bb) National Protected Area Expansion Strategy Focus areas;*
      - (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;*

- (dd) Sites or areas identified in terms of an International Convention;
  - (ee) Core areas in biosphere reserves;
  - (ff) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;
  - (gg) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined.
- (iii) In urban areas, the following:
- (aa) Areas zoned for use as public open space;
  - (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose;
  - (cc) Areas seawards of the development setback line;
  - (dd) Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined.

The abovementioned list is hereinafter referred to as "the listed activities".

The applicant is herein authorised to undertake the following alternative related to the listed activities:

The removal of indigenous vegetation and the transformation of undeveloped land to accommodate the construction of industrial buildings, facilities and associated infrastructure for the manufacturing of various renewable energy infrastructure such as turbine blades, turbine towers, turbine assemblers, Photovoltaic (PV) panel assembly plants and inverters. The City of Cape Town intends to lease the land to companies within the renewable energy sector which produce renewable energy infrastructure.

The proposal will entail the utilisation of the entire site for industrial development, which is approximately 38,65 ha in extent. The buildings (coverage, height etc.) that will be located on the proposed site will be in accordance with the existing zoning of the site and of the Atlantis Industrial Area. The relevant municipal building regulations and planning policies will be adhered to in this regard.

A landscaping plan will be compiled by a suitably qualified and experienced horticulturalist and be submitted along with the applications for building approval.

An appropriate off-site biodiversity offset site will be secured by the applicant in order to compensate for the loss of intact endangered and critically endangered indigenous vegetation located on the proposed site.

All services (i.e. potable water, sewage disposal, electricity, solid waste disposal) will connect to the existing Municipal infrastructure. However, should the proposed development require additional electricity, the proposed development will also entail the upgrading of the existing electrical substation on site.

Industrial effluent will be treated in a bioretention facility to remove heavy and noxious elements. The bioretention facility will then discharge the treated industrial

effluent into a dedicated municipal waste-water system specifically provided for effluent which is not suitable for recharging the ground water aquifer. The bioretention facility will be located in such a way that treated effluent will gravitate into the dedicated municipal pipeline for industrial effluent.

The preferred access onto the local road network will be at the northern end of the site, leading onto Neil Hare Road.

#### C. PROPERTY DESCRIPTION AND LOCATION

The listed activities will take place on Portion 4 and Portion 1 of Farm CA 1183, Atlantis industrial area, Neil Hare Road, Atlantis.

The SG 21 digit codes are: C01600000000118300004  
C01600000000118300001

Co-ordinates: 33° 35' 59.82" South  
18° 28' 12.77" East

hereinafter referred to as "the site".

#### D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Doug Jeffery Environmental Consultants (Pty) Ltd.  
c/o Ms. J. Theron  
P.O. Box 44  
**KLAPMUTS**  
7625

Tel: (021) 875 5272  
Fax: (021) 875 5515

#### E. CONDITIONS OF AUTHORISATION

1. This environmental authorisation is valid for a period of **five years** from the date of issue. The holder must commence with all the listed activities within the said period or this environmental authorisation lapses and a new application for environmental authorisation must be submitted to the competent authority, unless the holder has lodged a valid application for the amendment of the validity period of this environmental authorisation, before the expiry of this environmental authorisation. In such instances, the validity period will be automatically extended ("the period of administrative extension") from the day before this environmental authorisation would otherwise have lapsed, until the amendment application for the extension of the validity period is decided. The listed activities, including site preparation, may not commence during the period of administrative extension.
2. The listed activities, including site preparation, may not commence within 20 (twenty) calendar days of the date of issue of this environmental

authorisation. In the event that an appeal notice and subsequent appeal is lodged with the competent authority, the effect of this environmental authorisation may be suspended until such time as the appeal is decided.

3. The applicant must in writing, within 12 (twelve) calendar days of the date of this decision and in accordance with regulation 10(2)–
  - 3.1 notify all registered interested and affected parties of –
    - 3.1.1 the outcome of the application;
    - 3.1.2 the reasons for the decision as included in Annexure 1;
    - 3.1.3 the date of the decision; and
    - 3.1.4 the date of issue of the decision;
  - 3.2 draw the attention of all registered interested and affected parties to the fact that an appeal may be lodged against the decision in terms of Chapter 7 of the Environmental Impact Assessment Amendment Regulations, 2010 detailed in section F below;
  - 3.3 draw the attention of all registered interested and affected parties to the manner in which they may access the decision; and
4. A minimum of seven calendar days notice, in writing, must be given to the competent authority before commencement of construction activities.
  - 4.1. The notice must make clear reference to the site details and EIA Reference number given above.
  - 4.2. The notice must also include proof of compliance with the following conditions described herein:

Conditions: 2, 13 and 18
5. The holder is responsible for ensuring compliance with the conditions by any person acting on his behalf, including an agent, sub-contractor, employee or any person rendering a service to the holder.
6. Any changes to, or deviations from the scope of the description set out in section B above must be accepted or approved, in writing, by the competent authority before such changes or deviations may be implemented. In assessing whether to grant such acceptance/approval or not, the competent authority may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder to apply for further authorisation in terms of the applicable legislation.
7. The applicant must notify the competent authority in writing, within 24 hours thereof if any condition herein stipulated is not being complied with.

8. The draft Environmental Management Programme ("EMP") submitted as part of the application for environmental authorisation is hereby approved, on condition that the following amendments are made to the EMP, and must be implemented.

8.1. The recommendations provided in the Palaeontological Assessment Report dated July 2012 as compiled by Mr. Graham Avery (attached as Appendix A), must be included in the EMP.

8.2. The manner and frequency for updating the EMP must be as follows:

An application for an amendment to the EMP must be submitted to the competent authority if any further amendments are to be made to the EMP, other than those mentioned above, and this may only be implemented once the amended EMP has been authorised by the competent authority.

The EMP must be included in all contract documentation for all phases of implementation.

9. A copy of the environmental authorisation and the EMP must be kept at the site where the listed activities will be undertaken. Access to the site referred to in section C above must be granted and the environmental authorisation and EMP must be produced, to any authorised official representing the competent authority who requests to see it for the purposes of assessing and/or monitoring compliance with the conditions contained herein. The environmental authorisation and EMP must also be made available for inspection by any employee or agent of the applicant who works or undertakes work at the site.

10. The applicant must submit an application to the competent authority for amendment of the environmental authorisation where any detail with respect to the environmental authorisation must be amended, added, substituted, corrected, removed or updated. Further, the rights granted by this environmental authorisation are personal rights (i.e. not attached to a property, but granted to a natural or juristic person). As such, only the holder may undertake the activities authorised by the competent authority. Permission to transfer the rights and obligations contained herein must be applied for in the following manner:

10.1. The applicant must submit an originally signed and dated application for amendment of the environmental authorisation to the competent authority stating that he wishes the rights and obligations contained herein to be transferred, and including (a) confirmation that the environmental authorisation is still in force (i.e. that the validity period has not yet expired or the activities were lawfully commenced with); (b) the contact details of the person who will be the new holder; (c) the reasons for the transfer; (d) an originally signed letter from the proposed new holder acknowledging the rights and obligations contained in the environmental authorisation and indicating that he

has the ability to implement the mitigation and management measures and to comply with the stipulated conditions.

- 10.2. The competent authority will issue an amendment to the new holder either by way of a new environmental authorisation or an addendum to the existing environmental authorisation if the transfer is found to be appropriate.
11. Non-compliance with a condition of this environmental authorisation or EMP may result in suspension of this environmental authorisation and may render the holder liable for criminal prosecution.
12. Notwithstanding this environmental authorisation, the holder must comply with any other statutory requirements that may be applicable to the undertaking of the listed activities.
13. The holder must appoint a suitably experienced environmental control officer ("ECO"), or site agent where appropriate, for the construction phase of implementation before commencement of any land clearing or construction activities to ensure compliance with the EMP and the conditions contained herein.
14. An integrated waste management approach, which is based on waste minimisation and incorporates reduction, recycling, re-use and disposal, where appropriate, must be employed. Any solid waste must be disposed of at a landfill licensed in terms of the applicable legislation.
15. No surface or ground water may be polluted due to any actions on the site. The applicable requirements with respect to relevant legislation pertaining to water must be met.
16. The applicable requirements with respect to relevant legislation pertaining to occupational health and safety must be adhered to.
17. The off-site biodiversity offset must be secured within **1 (one) year** of the commencement of construction. The applicant must engage with CapeNature in this regard.
  - 17.1. A Conservation Environmental Management Plan must be compiled for the selected off-site offset once secured in order to ensure the required maintenance and management takes effect;
  - 17.2. A copy of the Conservation Environmental Management Plan must be submitted to this Directorate once the offset has been secured for auditing; and
  - 17.3. The Conservation Environmental Management Plan must include *inter alia* the following:
    - 17.3.1. Roles and responsibilities of all parties concerned;



17.3.2. Appropriate environmental control measures and procedures to ensure that site is adequately managed.

18. A landscaping plan must be compiled by a suitably qualified and experienced horticulturalist and be submitted along with the relevant applications for building approval.
19. Should any heritage remains be exposed during excavations or any actions on the site, these must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape (in accordance with the applicable legislation). Heritage remains uncovered or disturbed during earthworks must not be further disturbed until the necessary approval has been obtained from Heritage Western Cape. Heritage remains include: archaeological remains (including fossil bones and fossil shells); coins; indigenous and/or colonial ceramics; any articles of value or antiquity; marine shell heaps; stone artifacts and bone remains; structures and other built features; rock art and rock engravings; shipwrecks; and graves or unmarked human burials.

A qualified archaeologist must be contracted where necessary (at the expense of the applicant and in consultation with the relevant authority) to remove any human remains in accordance with the requirements of the relevant authority.

## F. APPEALS

Appeals must comply with the provisions contained in Chapter 7 of the Environmental Impact Assessment Amendment Regulations, 2010.

### 1. An appellant must –

- 1.1. submit a notice of intention to appeal to the Minister, within 20 (twenty) calendar days of the date of the decision;
- 1.2. submit the appeal within 30 (thirty) calendar days after the lapsing of the 20 (twenty) calendar days contemplated in regulation 60(1), for the submission of the notice of intention to appeal; and
- 1.3. within 10 (ten) calendar days of having lodged the notice of intention to appeal, provide each person and organ of state registered as an interested and affected party in respect of the application, or the applicant, with –
  - 1.3.1. a copy of the notice of intention to appeal form; and
  - 1.3.2. a notice indicating where and for what period the appeal submission will be made available for inspection by such person, organ of state, or applicant, on the day of lodging it with the Minister, and that a responding statement may be made on the

appeal within 30 (thirty) calendar days from the date the appeal submission was lodged with the Minister.

2. A person, organ of state or applicant who submits a responding or answering statement in terms of regulation 63 must within 10 (ten) calendar days of having submitted the responding or answering statement, serve a copy of the statement on the other party.
3. If the person, organ of state or applicant fails to meet a timeframe with respect to the requirements as detailed above, the person, organ of state or applicant must immediately submit a written explanation to the Ministry providing a concise explanation for the non-compliance.
4. All notice of intention to appeal and appeal forms must be submitted by means of one of the following methods:
  - By post: Western Cape Ministry of Local Government, Environmental Affairs and Development Planning  
Private Bag X9186  
CAPE TOWN  
8000
  - By facsimile: (021) 483 4174; or
  - By hand: Attention: Mr J. de Villiers  
Room 305 A  
3rd Floor Leeusig Building (Entrance at: Utilitas Building, 1 Dorp Street, Cape Town, 8001)
5. A prescribed notice of intention to appeal form and appeal form as well as assistance regarding the appeal processes is obtainable from the office of the Minister at: Tel. (021) 483 3721, E-mail [Jaap.DeVilliers@westerncape.gov.za](mailto:Jaap.DeVilliers@westerncape.gov.za) or URL <http://www.westerncape.gov.za/eadp>.

**G. DISCLAIMER**

The Western Cape Government, the Local Authority, committees or any other public authority or organisation appointed in terms of the conditions of this environmental authorisation shall not be responsible for any damages or losses suffered by the holder, developer or his/her successor in any instance where construction or operation subsequent to construction is temporarily or permanently stopped for reasons of non-compliance with the conditions as set out herein or any other subsequent document or legal action emanating from this decision.

Your interest in the future of our environment is appreciated.

Yours faithfully



**MR. ZAAHIR TOEFY**

**DIRECTOR: LAND MANAGEMENT (REGION 2)**

DATE OF DECISION: 16-01-2013

Copied to: (1) Ms. J. Theron/Mr. D. Jeffery (EAP)  
(2) Mr. R. Smart (CapeNature)  
(3) Mr. M. Theron (City of Cape Town: ERM)

Fax: (021) 875 5515  
Fax: (021) 866 1523  
Fax: (086) 588 8945

**FOR OFFICIAL USE ONLY:**

EIA REFERENCE NUMBER:	16/3/1/1/AT/2/3036/12
NEAS EIA REFERENCE NUMBER:	WCP/EIA/0000949/2012
EXEMPTION REFERENCE NUMBER:	16/3/1/4/A1/2/3055/12
NEAS EXEMPTION REFERENCE NUMBER:	WCP/EIA/EX/0000207/2012

## ANNEXURE 1: REASONS FOR THE DECISION

In reaching its decision, the competent authority, *inter alia*, considered the following:

- a) The information contained in the application form dated 30 May 2012 and received by the competent authority on 01 June 2012, the final BAR received by the competent authority on 01 November 2012, the EMP submitted together with the final BAR, and the additional information received by the competent authority on 06 November 2012 and 27 November 2012;
- b) Relevant information contained in the Departmental information base, including, the Guidelines on Public Participation, Alternatives and Exemptions (dated October 2011);
- c) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998);
- d) The comments received from interested and affected parties and the responses provided thereon, as included in the final BAR dated October 2012;
- e) The sense of balance of the negative and positive impacts and proposed mitigation measures; and
- f) The site visit conducted on

Date: 07 December 2012

Attended by: Ms. W. Gaisford of the Western Cape Government: Environmental Affairs and Development Planning, Mr. C. Dorse of the City of Cape Town ("CoCT"), Mr. K. Wiseman of the CoCT and Ms. J. Bodenstein of the CoCT.

All information presented to the competent authority was taken into account in the consideration of the application for environmental authorisation. A summary of the issues which, according to the competent authority, were the most significant reasons for the decision is set out below.

### 1. Exemption

Exemption from regulation 10(2)(d) was granted as all registered interested and affected parties ("I&AP's) were notified of the exemption application, as required. All concerns that were raised by I&APs were adequately responded to in this regard.

As such, the exemption application was regarded as appropriate by the competent authority in this instance based on the adequate public participation process.

## 2. Public Participation

The public participation process included:

- identification of and engagement with interested and affected parties;
- fixing a notice board at the site and any alternative site where the listed activities are to be undertaken on 23 July 2012;
- giving written notice to the owners and occupiers of land adjacent to the site and any alternative site where the listed activities are to be undertaken, the municipality and ward councillor, and the various organs of state having jurisdiction in respect of any aspect of the listed activities on 19 July 2012; and
- the placing of a newspaper advertisement in the 'Cape Times', 'Die Burger' and 'Weskus Nuus-News' on 24 July 2012.

The Department is satisfied that the public participation process that was followed met the minimum legal requirements and all the comments raised and responses thereto were included in the comments and response report.

## 3. Alternatives

A site selection investigation was undertaken to determine which sites within the City of Cape Town (which are also owned by the City of Cape Town) were suitable for the proposed activity. One of the biggest contributing factors in selecting the proposed site, which is located within the Atlantis Industrial Area, as the only viable site, in comparison to other industrial areas such as Montague Gardens and Epping, was the large portions of land required in order to accommodate the large buildings and lay-down areas for turbine blades. The land available within areas such as Montague Gardens and Epping were thus not considered feasible in this regard.

### Alternative 1 (Herewith authorized)

This entails the removal of indigenous vegetation and the transformation of undeveloped land to accommodate the construction of industrial buildings and facilities and associated infrastructure for the manufacturing of various renewable energy infrastructure such as turbine blades, turbine towers, turbine assemblers, Photovoltaic (PV) panel assembly plants and inverters. The City of Cape Town intends to lease the land to companies within the renewable energy sector which produce renewable energy infrastructure.

The proposal will entail the utilisation of the entire site for industrial development, which is approximately 38,65 ha in extent. The buildings (coverage, height etc.) that will be located on the proposed site will be in accordance with the existing zoning of the site and of the Atlantis Industrial Area. The relevant municipal building regulations and planning policies will be adhered to in this regard.

A landscaping plan will be compiled by a suitably qualified and experienced horticulturalist and be submitted along with the relevant applications for building approval.

An appropriate off-site biodiversity offset site will be secured by the applicant in order to compensate for the loss of intact endangered and critically endangered indigenous vegetation located on the proposed site.

All services (i.e. potable water, sewage disposal, electricity, solid waste disposal) will connect to the existing Municipal infrastructure. However, should the proposed development require additional electricity, the proposed development will also entail the upgrading of the existing electrical substation on site.

Industrial effluent will be treated in a bioretention facility to remove heavy and noxious elements. The bioretention facility will then discharge the treated industrial effluent into a dedicated municipal waste-water system specifically provided for effluent which is not suitable for recharging the ground water aquifer. The bioretention facility will be located in such a way that treated effluent will gravitate into the dedicated municipal pipeline for industrial effluent.

The preferred access onto the local road network will be at the northern end of the site, leading onto Neil Hare Road.

The proposed site as located in Atlantis is considered the only viable site alternative within the City of Cape Town and is therefore the preferred site alternative.

#### Design and Layout Alternatives

It is envisaged that the entire site (in accordance with local planning policies) will be utilized for the proposed development. The buildings (coverage, height etc.) to be located on site will be in accordance with the existing zoning of the site and the location in which the site is. It is not considered feasible to design layout alternatives at this stage as it would depend on the investors who are successful in terms of the bidding process to lease the land and the types of technology that will be manufactured, in accordance with the types of renewable energy alternatives.

#### Technology Alternative 1 (Herewith authorized)

A combination of the Technological Alternatives below will form part of the 'green' manufacturing hub in Atlantis and therefore all three are considered as viable technology alternatives.

##### Wind technology

There are currently no companies in South Africa that manufacture utility scale wind turbine blades. The proposed development therefore provides an opportunity for one or two manufacturers of wind turbine towers.

##### Photo Voltaic technology

There are currently three PV manufacturers in South Africa. These are all located in Cape Town and currently employ approximately 250 people. There is an opportunity for these companies (or a new company) to set up a factory to supply the new demand.

##### Inverters

It is anticipated that there will be 1 inverter manufacturer established. There is one current inverter manufacturer who employs approximately 35 people and would need to scale up tenfold to meet the projected demand.

### Technology Alternative 2

This alternative will entail the utilization of only one of the above technologies. This alternative is not regarded as feasible since the benefits would be limited to one particular renewable energy sector. This alternative is therefore not regarded as feasible in this regard.

### "No-Go" Alternative

The "no-go" alternative will result in the status quo of the land being maintained. Since the proposed site is zoned 'General Industrial' and is located within the Atlantis Industrial Area and within the existing approved Urban Edge, the "no-go" alternative is not warranted in this regard.

## **4. Impact Assessment and Mitigation measures**

### **4.1. Activity Need and Desirability**

The site is zoned "General Industrial" and is located in the Atlantis Industrial Area. According to the City of Cape Town Spatial Development Framework, dated May 2012 ("SDF") the site is earmarked for industrial development. The proposed development therefore adheres to the SDF of the local municipality, particularly key strategy 1: "*Plan for employment and improve access to economic opportunities*".

Historically, Atlantis was a de-centralized zone for manufacturing. The Atlantis Industrial Area will benefit from the creation of an established "Green Technology Manufacturing Cluster" as it has the potential to attract large investments in the area. The planned roll-out of renewable energy in South Africa has the potential to result in significantly high investments.

### **4.2. Regional/ Planning Context**

The site is zoned "General Industrial" and is located in the Atlantis Industrial Area. Furthermore, the proposed site is located within the Urban Edge of Atlantis and is in line with the principles of the City of Cape Town's SDF.

### **4.3. Surrounding Environment**

The eastern boundary of the proposed site is flanked by a railway line, whereas the western boundary is marked by a water-main servitude, which extends along most of the boundary length until the southern side meets Gideon Basson Road. At this point, the boundary continues along the western side of a retention pond and joins Neil Hare Road. The Ankerlig Power Station is located to the north/north-west of the proposed site.

### **4.4. Services/ Bulk Infrastructure**

In terms of potable water, the proposed site is serviced by a 150 mm diameter pressurized pipe-line located along the western boundary of the site. The proposed development will therefore connect to the existing municipal infrastructure.

In terms of sewage, there are two parallel municipal gravity pipelines in the adjacent road network. Effluent is divided into two categories, namely, domestic effluent (generated from toilets, showers, hand basins and kitchen sinks) and industrial effluent (which may include noxious effluents (bye product from manufacturing process). Industrial effluent will be treated on site in a bioretention

facility to remove heavy and noxious elements. The bioretention facility will then discharge into an existing separate municipal waste-water system specifically provided for effluent which is not suitable for recharging the ground water aquifer. As such, the bioretention facility will be located so that treated effluent can gravitate into the dedicated municipal pipeline for industrial effluent. Buildings which generate domestic effluent and which require connection to the existing municipal sewerage reticulation will be situated close to the adjacent road to ensure domestic effluent can gravitate into the dedicated municipal pipeline for conveyance to the existing treatment works for domestic wastewater. The site is serviced by a 300 mm gravity pipeline adjacent to the western and south section of the eastern boundary. Buildings requiring connection into the municipal pipeline will be situated close to the municipal sewer lines to ensure domestic waste water can gravitate into the municipal pipeline without pumping.

In terms of storm water management, the proposed storm water system will be designed in accordance with the City of Cape Town and Department of Water Affairs' requirements.

In terms of electricity requirements, the proposed site will be supplied by the City of Cape Town: Utility Services-Electricity Division. The power supply network capacity in the area is currently limited. However, the municipality has confirmed that they could provide up to 2MVA to the site. An amount in excess of 2 MVA could be accommodated, provided the existing network is upgraded. Should the proposed development require any additional electricity, the existing electrical substation on site will be upgraded accordingly.

In terms of access to the site, the preferred access onto the local road network will be at the northern end of the site onto Neil Hare Road.

#### 4.5. Biophysical Impacts

A small excavated pond is located towards the middle of the site and a larger retention pond is located in the south-eastern corner of the site. Both ponds are covered with bulrush (*Typha capensis*) and are surrounded by alien vegetation. The possible presence of a wetland in terms of the City of Cape Town wetland layer mapping was investigated and found to be a grassy area with alien vegetation. The existing retention pond to the west of Gideon Basson Road will remain as is and will therefore not be affected by the proposed development.

The Atlantis dune plume and Witzand Aquifer Nature Reserve ("WANR") is located within approximately 2.5km to the west of the proposed site, but the natural system extends from the WANR to the proposed site. There are strict guidelines set out by the Atlantis Water Resource Management Scheme concerning the disposal of storm water and effluent from sites within the Atlantis Industrial Zone. The purpose of these guidelines is to ensure quality of potential waste water (storm water and effluent), which is used to artificially recharge the Atlantis Aquifer, is of a quality which minimize contamination of ground water resource. Unsuitable effluent should alternatively be disposed of appropriately to prevent contamination of the ground water. A bioretention facility will be constructed on the site to treat effluent in order to remove heavy and noxious elements. The "bioretention" facility will then discharge treated industrial effluent into a separate existing municipal waste-water system specifically provided for effluent which is not suitable for recharging the



ground water aquifer. As such, the bioretention facility will be located in order for treated effluent to gravitate into the dedicated municipal pipeline for industrial effluent. This will therefore ensure that the purposes of the guideline are met, and potential negative impacts of the proposed development on the Atlantis Aquifer are prevented.

#### 4.6. Biodiversity

The site is currently undeveloped and is covered in parts with Cape Flats Dune Strandveld, which is classified as Endangered, and Atlantis Sand Fynbos, which is classified as Critically Endangered, according to the National Environmental Management: Biodiversity Act of 2002: National list of ecosystems that are threatened and in need of protection (dated 11 December 2011).

According to the Botanical Impact Assessment Report dated July 2012 and compiled by Dr. D.J. McDonald or Bergwind Botanical Surveys and Tours CC, the proposed development would impact on two vegetation types, which includes a large portion, and several smaller portions, of Endangered, good quality Cape Flats Dune Strandveld within the northern half of the site (with high numbers of the Endangered mesemb *Ruschia indecora* present). The second portion of vegetation occurs along the southern boundary in a relatively narrow strip, comprising Critically Endangered, medium quality, Atlantis Sand Fynbos. This area contains approximately 80 individuals of Endangered Malmesbury Pincushion (*Leucospermum parile*). The transitional area where the soil interface gives rise to a changeover and interchange of species between the vegetation types is of high conservation importance since such ecotones usually drive speciation and are important in terms of ecological processes.

In terms of direct impacts, the proposed development will result in the loss of intact vegetation and species of importance. These impacts on the two classes of vegetation and habitat due to the proposed construction are considered according to two identified potential impacts which are: Loss of vegetation type – including intact vegetation, ecologically important species and species of conservation concern; and loss of ecological processes associated with the loss of intact vegetation, ecologically important species and species of conservation concern.

#### 4.7. Visual

The proposed development may result in visual impacts on the surrounding environment as a result of new buildings to be constructed. Mitigation measures have been included in the final BAR and EMP to ensure potential visual impacts are minimized. In addition, the site is located in the Atlantis Industrial Area and other industrial and manufacturing facilities exist on sites in the area.

#### 4.8. Noise

The proposed development may result in potential noise impacts during the construction and operational phases of the proposed development. However, since the proposed site is located in an existing industrial area (Atlantis Industrial Area), the significance of the potential noise impacts are deemed to be low. The proposed development will however be required to conform to the relevant legislation pertaining noise.

#### 4.9. Heritage / Archaeological / Built Environment

The site is located within the designated Atlantis Industrial Area. No heritage resources have been identified. However, according to the Palaeontological Assessment Report dated July 2012 as compiled by Mr. Graham Avery, the proposed development is located in an area where paleontological remains may occur. Excavations for foundations and infrastructure will be monitored by an appropriate palaeontologist. Conditions have been included in the environmental authorisation to ensure the recommendations provided in the Palaeontological Assessment Report are implemented.

#### 4.10. Socio-economic

Despite notable industrial potential, Atlantis has limited commercial (mainly manufacturing) and service economic activity that has experienced severe limitations given the impacts of the recent economic crisis. Furthermore, Atlantis has been hard hit by the global and domestic economic crisis, with a loss of business and jobs. Rising unemployment is further compounded by high food price inflation, the hikes in electricity and fuel prices, and this has had severe social implications in an already economically and socially distressed area. The proposed development will therefore provide job opportunities and increase economic growth in the greater Atlantis area.

#### 4.11. Offsets

The Botanical Impact Assessment Report dated July 2012 and compiled by Dr. D.J. McDonald or Bergwind Botanical Surveys and Tours CC concluded that: *"The position of the intact vegetation (i.e. in the center of the site) means that the development alternative is only likely if a biodiversity offset is offered to compensate for the loss. The proposed offset of 1:1 ha for Endangered Cape Flats Dune Strandveld pertains to most of the site, whereas the ratio 2:1 ha for Critically Endangered Atlantis Sand Fynbos would apply to the strip of land along the southern boundary. The offset option is thus considered the only feasible mitigation option available."* As such, an appropriate off-site biodiversity offset will be secured by the applicant as required in terms of condition 17 of this environmental authorisation.

#### 4.12. Cumulative

In terms of biodiversity, the cumulative loss of vegetation within the Atlantis area has led to the extensive loss of the two vegetation types, namely Atlantis Sand Fynbos and Cape Flats Dune Strandveld. As such, the loss of intact vegetation on the proposed site will therefore result in a high cumulative impact without mitigation. However, since an appropriate off-site biodiversity offset will be secured to mitigate the loss of the aforementioned intact vegetation, the cumulative impacts will be reduced to an acceptable level in this regard. The Botanical Impact Assessment Report dated July 2012 and compiled by Dr. D.J. McDonald or Bergwind Botanical Surveys and Tours CC concluded that: *"The position of the intact vegetation (i.e. in the centre of the site) means that the development alternative is only likely if a biodiversity offset is offered to compensate for the loss. The proposed offset of 1:1 ha for Endangered Cape Flats Dune Strandveld pertains to most of the site, whereas the ratio 2:1 ha for Critically Endangered Atlantis Sand Fynbos would apply to the strip of land along the southern boundary. The offset option is thus considered the only feasible mitigation option available."*

Increased demand for water supply, electricity supply, sewage removal and disposal, and solid waste removal and disposal services is a potential cumulative impact applicable to the proposed development. The anticipated cumulative increase in demand for municipal services in the area has been taken into account by the Local Authority and confirmation of available unallocated supply was obtained.

Cumulative impacts on the Atlantis aquifer also have the potential to be significant. As such, mitigation measures have been included in the Basic Assessment Report and the EMP to ensure adequate storm water management and disposal of industrial effluent is exercised. As such, cumulative impacts will be minimal in this regard.

#### 4.13. Impact Assessment and significance

In terms of botanical impacts, the proposed development will result in the loss of intact indigenous vegetation and the ecological process associated with intact indigenous vegetation and species of concern. These impacts were assessed and are deemed to be of high significance during both the construction and operational phase of the proposed development. This determination is based on the extent and duration of the impacts. As such, a biodiversity offset is regarded as the only feasible mitigation measure in this regard.

In terms of noise impacts during the construction phase, the proposed development was assessed as medium-high as a result of construction related activities. These potential impacts will however be reduced to low-medium after mitigation. Mitigation measures have been incorporated in the EMP in this regard. In terms of noise impacts during the operational phase, the impacts were assessed as low significance since the proposed site is located within an industrial area and noise will be in keeping with the surrounding noise in the industrial area.

In terms of the potential visual impacts associated with the proposed development, the impacts prior to mitigation were assessed as of medium significance, but low after mitigation. A landscaping plan and signage master plan will be compiled and has been incorporated into conditions of this environmental authorisation.

### **National Environmental Management Act Principles**

The National Environmental Management Principles (set out in section 2 of the NEMA, which apply to the actions of all organs of state, serve as guidelines by reference to which any organ of state must exercise any function when taking any decision, and which must guide the interpretation, administration and implementation of any other law concerned with the protection or management of the environment), *inter alia*, provides for:

- the effects of decisions on all aspects of the environment to be taken into account;
- the consideration, assessment and evaluation of the social, economic and environmental impacts of activities (disadvantages and benefits), and for decisions to be appropriate in the light of such consideration and assessment;
- the co-ordination and harmonisation of policies, legislation and actions relating to the environment;
- the resolving of actual or potential conflicts of interest between organs of state through conflict resolution procedures; and

- the selection of the best practicable environmental option.

The development will result in both negative and positive impacts.

Negative Impacts:

Loss of intact critically endangered and endangered indigenous vegetation and species of high conservation;

Loss of ecological process associated with the intact indigenous vegetation and species of conservation concern;

Potential pollution of the Atlantis aquifer;

Noise during the construction and operational phase of the proposed development;

Visual Impacts; and

Increased service infrastructure requirements.

The Department is satisfied that all the negative impacts of significance specified above will be addressed by the conditions contained in the EA and the mitigation measures contained in the EMP.

Positive impacts:

Socio-Economic benefits such as job creation, growth of the local, provincial and regional economies;

Diversity in the manufacturing industry through investment in the renewable energy sector; and

Creation of a 'Green Technology Manufacturing Cluster'.

In view of the above, the NEMA principles, compliance with the conditions stipulated in this environmental authorisation, and compliance with the EMP, the competent authority is satisfied that the proposed listed activities will not conflict with the general objectives of integrated environmental management stipulated in Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and that any potentially detrimental environmental impacts resulting from the listed activities can be mitigated to acceptable levels.

-----END-----

**APPENDIX A**

RECOMMENDATIONS OF THE PALAEOLOGICAL ASSESSMENT FOR THE PROPOSED GREEN TECHNOLOGY MANUFACTURING CLUSTER INDUSTRIAL DEVELOPMENT AND ASSOCIATED INFRASTRUCTURE ON PORTION 4 AND PORTION 1 OF FARM 1183, ATLANTIS.

DATED JULY 2012 AND PREPARED BY GRAHAM AVERY

**Palaeontological Assessment:  
Proposed Development Farms  
CA1183 (Portions 1&4) and CA 4  
(Portion 93), 3318CB Melkbosstrand**

**Prepared by**

**Graham Avery**  
(Sole Proprietor)

Archaeozoology, Stone Age Archaeology and Quaternary Palaeontology

July, 2012

### **Klein Springfontein**

A temporary exposure in the 'Duinefontein Dune Field' near the R27 yielded many fossils of terrestrial mammals, reptiles and birds, which were collected by GA and RG Klein and lodged in the Cenozoic Section of Iziko Museum's Natural History Collections Department.

### **Koeberg Nuclear Power Station**

Excavations for the foundations of the Koeberg Nuclear Power Station yielded 14 m of terrestrial Middle Pleistocene deposits underlain by a further 14 m of highly fossiliferous marine deposits, dated to approximately 5 Ma, that extended to Malmesbury bedrock (Rogers 1979; Rogers 2006). Unique early Pliocene avian and marine mammal species, including a probable new species of *Arctocephalus* (the same genus the South African Fur Seal falls into), have been described from the site, e.g. (Avery and Klein 2011; Simpson 1975).

### **Human Burials**

Later Stone Age people inhabited the area as evidenced by surface scatters (above) and San and/or Khoekhoe burials may be encountered at any time or level e.g. (Pfeiffer and Van der Merwe 2004; Pfeiffer, et al. 1999).

If possible, geotechnical information, together with the proposed depths of excavations for foundations and/or infrastructure, should be provided prior to the commencement of construction. This may enable a better estimation of the time(s) when monitoring will take place and even the extent of recovery work.

Protocols for dealing with palaeontological monitoring/mitigation must be included in the Environmental Management Plan (EMP). Any such material is likely to be fragile and due care must be exercised.

Any material recovered will be lodged in the collections of Iziko South African Museum. Funds must be available *a priori* to cover costs.

### Heritage Permits Required

The primary heritage legislation that needs to be considered is The South African Heritage Resources Act 25 of 1999 and regulations (details at [www.sahra.org.za](http://www.sahra.org.za)). All heritage material, including burials, is included.

Clearance in terms of the National Heritage Act of 1999 will be required before the development can proceed. Locally, a permit will be required from Heritage Western Cape; in the event of a burial being exposed, SAHRA is the organization to contact along with the South African Police Services, but no bones should be further moved until an archaeologist or palaeontologist has assessed them.

Although not required by the Act, it is suggested that, to obviate possible delays should fossil material be encountered, a permit be applied for before any excavation is initiated. This would enable the monitor to readily recover material, should it be encountered during construction activities.

### References

- Avery, G.  
1995 Archaeological and Palaeontological Survey: Milnerton Lagoon Mouth (3318CD). South African Museum.
- Avery, G., and R.G. Klein  
2011 Review of fossil phocid and otariid seals from the southern and western coasts of South Africa. *Transactions of the Royal Society of South Africa* 61(1):14-24.
- Cruz-Uribe, K., et al.  
2003 Excavation of buried Late Acheulean (Mid-Quaternary) land surfaces at Duinefontein 2, Western Cape Province, South Africa. *Journal of Archaeological Science* 30:559-575.
- Hendey, Q. Brett  
1968 The Melkbos site: an Upper Pleistocene fossil occurrence in the South-Western Cape Province. *Annals of the South African Museum* 52:89-119.
- Hendey, Q.B.  
1969 Quaternary vertebrate fossil sites in the south-western Cape Province. *South African Archaeological Bulletin* 24:96-105.  
1983 Palaeoenvironmental implications of the late Tertiary vertebrate fauna of the fynbos region. *In Fynbos Palaeoecology: a Preliminary Synthesis*. H.J. Deacon, Q.B. Hendey, and J.J.N. Lambrechts, eds. Pp. 100-115. South African National Scientific Programmes Report, Vol. 75. Pretoria: South African National Scientific Programmes.
- Inskeep, R. R.  
1966 Interesting association of bones from the Elandsfontein fossil site. *Actes du V Congres Panafricain de prehistoire et de L' Etude du Quaternaire*.