
BIOMASS POWER PLANT NEAR MKUZE, KWAZULU-NATAL

DEA ref: 14/12/16/3/3/1/619

MOTIVATION FOR AMENDMENT OF ENVIRONMENTAL AUTHORISATION

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TABLE OF CONTENTS

	PAGE
1. INTRODUCTION	1
2. MOTIVATION FOR AMENDMENT	3
3. CONCLUSION	6
4. LIST OF APPENDICES.....	6

APPENDIX A:

Figures –

A1: Map indicating the BAR Alternatives and the authorised co-ordinates (CSIR)

A2: Illustration of site boundary co-ordinates for 3ha area as considered in this amendment

APPENDIX B:

Ecology - Addendum report drafted by the specialist, ACER Africa

APPENDIX C:

Heritage Resources - letter of motivation drafted by the specialist, PGS Heritage

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MOTIVATION FOR AMENDMENT OF ENVIRONMENTAL AUTHORISATION

1. INTRODUCTION

Electrawinds Africa and Indian Ocean Islands (Pty) Ltd received an environmental authorisation for the construction and operation of the Mkuze Biomass Power Plant with an installed net electrical generation capacity of up to 16.5 MW (DEA ref: 14/12/16/3/3/1/619) on 20 March 2013.

In terms of the environmental authorisation, the project description and scope of the environmental authorisation referred to the establishment of a 16.5MW biomass renewable energy facility with a total footprint of 3ha on site Alternative 2 on land parcels 13434 and RE/13433 near Mkuze.

In mid-2013, Navosync (Pty) Ltd acquired the project from Electrawinds Africa and Indian Ocean Islands (Pty) Ltd and bid the project in the DOE REIPPP Programme. Following the project being awarded Preferred Bidder Status in Round 3 of the DOE REIPPP Programme, and as the new applicant was finalising the site development plan, it was identified that the approved co-ordinates listed in the Environmental Authorisation (EA) for the Mkuze biomass plant site:

1. Represent an area of less than the authorised 3ha area, and
2. The co-ordinates were taken inside the Alternative 2 footprint boundary (refer to Figure 1 in Appendix A) (i.e. do not match the boundary of the area which was assessed through the Basic Assessment process).

The developer requires the co-ordinates for the boundary of the development footprint to be amended to correlate with the 3ha area as authorised, which is required for the construction of a facility of this nature. It has been agreed with DEA that a substantive amendment will be submitted to DEA for consideration.

A Basic Assessment process was undertaken by the CSIR for the facility in 2012, with the Final BAR submitted to DEA in January 2013. The assessment considered two site alternatives for the project, located on land parcels 13434 and RE/13433 forming part of the Senekal Estate, approximately 2 km west of the town of Mkuze in the Jozini Municipal area, KwaZulu-Natal. Biomass in the form of sugarcane rests from the Senekal farming operation on and around the property will fuel the plant. Two alternative sites (of 3ha in extent), which form part of a 10 000ha privately owned game reserve, were considered as part of the assessment. Generated electricity is planned to be fed into the national electrical grid at the

existing 132 kV Mkuze Substation situated adjacent to the proposed development site Alternative 2.

The project description as described in the authorisation is now requested to be amended as follows:

From:

Alternative S2	Latitude	Longitude
NE	27°37'52.84"S	32°0'56.42"E
SE	27°37'56.10"S	32°0'58.35"E
SW	27°37'58.12"S	32°0'54.87"E
NW	27°37'54.32"S	32°0'52.81"E

To:

Alternative S2	Latitude	Longitude
NE	27°37'51.03"S	32° 0'55.33"E
SE	27°37'57.00"S	32° 0'58.25"E
SW	27°37'59.34"S	32° 0'53.41"E
NW	27°37'53.37"S	32° 0'50.53"E

The footprint boundaries as per the co-ordinates listed above are shown in Figure 2 in Appendix A. The amended co-ordinates now cover an area 3ha in extent.

The significance of the impacts as assessed in the Basic Assessment remains unchanged - this is supported by the Ecological and Heritage report and statements from the relevant specialists involved in the BAR process (refer to Appendix B and C). The amendment only relates to the physical footprint of the site for the facility.

In terms of Condition 5 of the Environmental Authorisation, it is possible for an applicant to apply, in writing, to the competent authority for a change or deviation from the project description to be approved. In this regard, **Navosync (Pty) Ltd** will request DEA to amend:

1. The project applicant details
2. The co-ordinates as described in the project description.

Savannah Environmental has prepared this motivation in support of this request/application on behalf of **Navosync (Pty) Ltd**, and provides detail pertaining to the significance and impacts of the proposed change to the project description in order for interested and affected parties to be informed of the potential change in the project description, and for the competent authority to be able to reach a decision in this regard.

In order to verify the potential for a change in the impacts on ecology and heritage the amendment has been presented to the relevant specialists engaged as part of the EIA for consideration and comment. The comments and reports from the specialist consultants are attached within Appendix B and Appendix C.

2. MOTIVATION FOR AMENDMENT

Project history: Electrawinds Africa and Indian Ocean Islands (Pty) Ltd received an environmental authorisation for the construction and operation of the Mkuze Biomass Power Plant with an installed net electrical generation capacity of up to 16.5 MW (DEA ref: 14/12/16/3/3/1/619) on 20 March 2013.

In terms of the environmental authorisation, the project description and scope of the environmental authorisation referred to the establishment of a 16.5MW biomass renewable energy facility with a total footprint of 3ha on site Alternative 2 on land parcels 13434 and RE/13433 near Mkuze.

The project was awarded Preferred Bidder Status in Round 3 of the DOE REIPPP Programme in 2013.

Amendment request:

1. The project applicant details
2. The co-ordinates as described in the project description.

Reason for Amendment:

1. Project applicant details

In mid-2013, Navosync (Pty) Ltd acquired the project from Electrawinds Africa and Indian Ocean Islands (Pty) Ltd and successfully bid the project in the DOE REIPPP Programme.

2. The co-ordinates as described in the project description.

The approved co-ordinates listed in the Environmental Authorisation (EA) for the Mkuze biomass plant site represent an area of less than the authorised 3ha development footprint.

The co-ordinates within the EA were taken inside the footprint boundary of the approved Alternative 2, as assessed in the BAR (refer to Figure 1 in Appendix A) (i.e. the co-ordinates in the EA (refer to yellow boundary in Figure 1, Appendix A) do not match the boundary of the area which was assessed through the Basic Assessment process (refer to red boundary in Figure 1, Appendix A)).

The development footprint boundary is required to be 3ha in extent, and offset a minimum distance of 50m from Eskom's infrastructure to the east of the site (refer to green boundary in Figure 1, Appendix A).

Location:

The site is located on land parcel Alkmaar 13434 forming part of the Senekal Estate, approximately 2 km west of the town of Mkuze in the Jozini Municipal area, KwaZulu-Natal. The entire site is located within the farm portion, and is bordered to the south by an existing road, and to the east by Eskom's existing Mkuze-Pongola 132kV power line and the Mkuze Substation (refer to Figure 2, Appendix A).

Environmental sensitivity: From the specialist investigations undertaken within the Basic Assessment process for the proposed biomass facility development site, the only absolute environmental exclusions areas identified related to the wetland and drainage line features on the site. The authorisation of site Alternative 2 avoided the potential for impact on this system, and reduced impacts to an environmentally acceptable level.

Understanding the nature and extent of the proposed amendment to the authorised co-ordinates, the potential for the change in the significance of the impact as assessed in the EIA for the following is required to be evaluated for:

- » Impacts on ecology
- » Impacts on heritage resources

The potential for change in the significance of impacts is discussed in detail below.

- » **Impacts on ecology:** This assessment included a site visit to verify whether the vegetation communities found on the site development footprint were different to that previously observed, to record any differences observed, as well as to note if any sensitive ecosystems occur within the potential development footprint.

The site falls within the privately owned game reserve area. One plant community, namely the *Acacia tortillis* – *Urochloa mosambicensis* short thicket community, was found. This is consistent with the findings of the original survey and study undertaken in 2012. The conclusions drawn with in the original ecological assessment remain valid:

- Site Alternative 2 is adjacent to an Eskom electricity substation. Based on the non-wetland terrestrial nature of this alternative, as well as the high levels of fragmentation caused by the existing substation, provincial road, Eskom servitude and numerous fence lines along its borders, Alternative 2 was the preferred option from a botanical and terrestrial faunal perspective.
- The same vegetation type and plant species (including species of conservation concern and protected under Provincial and National

legislation) were identified within the amended footprint. Therefore the significance of the impact assessed in the BAR therefore remains unchanged.

- Alternative 2 can easily be fenced out of the game reserve with minimal impact on the resident large mammals. The development will only affect 3ha of the 10 000ha privately owned land. Since the area is already fragmented, Alternative 2 is not an important migration route or corridor. The loss of this section is not critical to the survival of the mammal species of concern, as the remainder of the farm (\pm 10 000ha) will still be available for these species. The impact of the development would therefore be minimal for the large mammal and bird species. Therefore the significance of the impact assessed in the BAR therefore remains unchanged.

It was, therefore, concluded by the ecological specialist that based on her observations during walk-through surveys on site to date, the significance of the impact assessed in the BAR remains unchanged (refer to Addendum report drafted by the specialist, ACER Africa, included in Appendix B).

- » **Impacts on heritage resources:** The HIA concluded that "The overall impact of the development on possible heritage resources is seen as acceptably low and impacts can be mitigated to acceptable levels." The HIA further recommended that general heritage management measures, as contained in the HIA, be included in the Environmental Management Plan (EMP) for the project.

With the proposed amendment in the site Alternative 2 footprint, the impact on heritage resources could possibly change, and were therefore reassessed by the heritage specialist. During the original field work the archaeologist conducting the field work also traversed the expanded area (refer to Figure 4 in Appendix C) and found no heritage resources. It was found that the area was previously utilised for planting purposes and totally disturbed. Evaluating the new information and the field work data gathered during the original field work, the specialist is of the opinion that the impact on heritage resources will not differ from the original and is seen as acceptably low. Refer to a letter of motivation drafted by the specialist, PGS Heritage, included in Appendix C.

The BAR stated that the development is not expected to have an impact on the palaeontology of the site, and therefore no reassessment was required.

3. CONCLUSION

It is concluded that an amendment to the authorised co-ordinates for the project development footprint boundary will not change the impact significance ratings for impacts as assessed in the BAR. The significance of the impacts assessed in the BAR therefore remain unchanged. In addition, there are no new impacts identified as a result of the proposed amendment.

Navosync (Pty) Ltd is therefore formally requesting that the co-ordinates as described in the project description within the authorisation be amended to correctly represent an area of 3ha, as authorised. This request is made in terms of Condition 5 of the Environmental Authorisation.

4. LIST OF APPENDICES

The following Appendices are attached in support of the motivation for amendment:

Appendix A: Figures

Appendix B: Ecology - Addendum report drafted by the specialist, ACER Africa

Appendix C: Heritage Resources - letter of motivation drafted by the specialist, PGS
Heritage

APPENDIX A:

Figures -

A1: Map indicating the BAR Alternatives and the authorised co-ordinates (CSIR)

A2: Illustration of site boundary co-ordinates for 3ha area as considered in this amendment

Explanation of mapped data:

A1: Map indicating the BAR Alternatives and the authorised co-ordinates (CSIR)

The boundary for Site Alternative 1 (blue) and Site Alternative 2 (red) as assessed through the BAR are indicated.

The co-ordinates within the EA were taken inside the footprint boundary of the approved Site Alternative 2 (annotated black dots joined by yellow boundary).

The approved co-ordinates listed in the Environmental Authorisation (EA) for the Mkuze biomass plant site represent an area of less than the authorised 3ha development footprint.

A2: Illustration of site boundary co-ordinates for 3ha area as considered in this amendment

The boundary for Site Alternative 2 as assessed through the BAR is indicated in red.

The authorised co-ordinates are indicated as the yellow boundary.

The 3ha development footprint boundary as assessed in the amendment application is indicated in green.

APPENDIX B:
**Ecology - Addendum report drafted by the
specialist, ACER Africa**

APPENDIX C:
Heritage Resources - letter of motivation
drafted by the specialist, PGS Heritage

