

Enquiries: Anita Rautenbach

Savannah Environmental (Pty) Ltd
1st Floor, Block 2; 5 Woodlands Drive Office Park
cnr Woodlands Drive and Western Service Road
Woodmead
2191

23 May 2019

COMMENTS WITH REGARDS TO THE PROPOSED AMENDED LAYOUT OF THE RICHARDS BAY COMBINED CYCLE (CCPP) POWER PLANT AND ASSOCIATED INFRASTRUCTURE NEAR RICHARDS BAY, KWAZULU-NATAL PROVINCE (REF NR: SE1655)

Thank you for forwarding the proposed layout changes (i.e. amended layout, refer to Appendix A) for the Richards Bay Combined Cycle (CCPP) power plant and associated infrastructure to me on the 17th of May 2019. The following changes to the layout are noted:

- The original layout assessed as part of the impact assessment report represented a development footprint of 71ha. The development footprint has been reduced to 52ha as part of the amended layout;
- The western and eastern boundaries of the development footprint have been reduced;
- The western boundary of the development footprint is now located parallel to the Transmission HV yard;
- The extent of the top-soil laydown area has been reduced; and
- The pollution control area has been reduced.

Having considered the effects this proposed change will have on the impacts/mitigation initially identified as per the original layout assessed (Appendix B) as part of the ecological impact assessment, there will be no change with regards to the ecological impacts identified for the construction and operation phases on the receiving environment. The impacts assessed are described below.

Construction phase impacts re-assessed:

- Loss of sensitive terrestrial ecosystems;
- Loss of CBAs;
- Loss of natural vegetation;
- Loss/disturbance of local fauna populations;
- Noise and artificial light disturbance;
- Soil erosion and sedimentation;
- Pollution of soils and habitat.

The mitigation measures proposed in the Ecological Impact Assessment report for the above mentioned impacts are regarded as sufficient and no additional mitigation measures are required.

- Loss of sensitive aquatic ecosystems

Due to the extent of the proposed project activities, the wetland ecosystems as delineated by 'The Biodiversity Company' and considered in the Ecological Impact Assessment Report covers large areas on the project site (Figure 1). Although it is conceded that the development footprint was reduced on the amended layout, drainage of the wetlands will still be required to accommodate infrastructure. Consequently the loss of wetland ecosystems will be unavoidable. Since the wetland ecosystem on the project site provide habitat to three wetland dependent fauna species of conservation significance, i.e. *Hemisus guttatus* (Vulnerable), *Crocidura mariquensis* (Near Threatened) and *Hyperolius microps* (Range Restricted), the implementation of the wetland offset plan as proposed in the Environmental Impact Assessment Report of March 2019 will still be relevant.

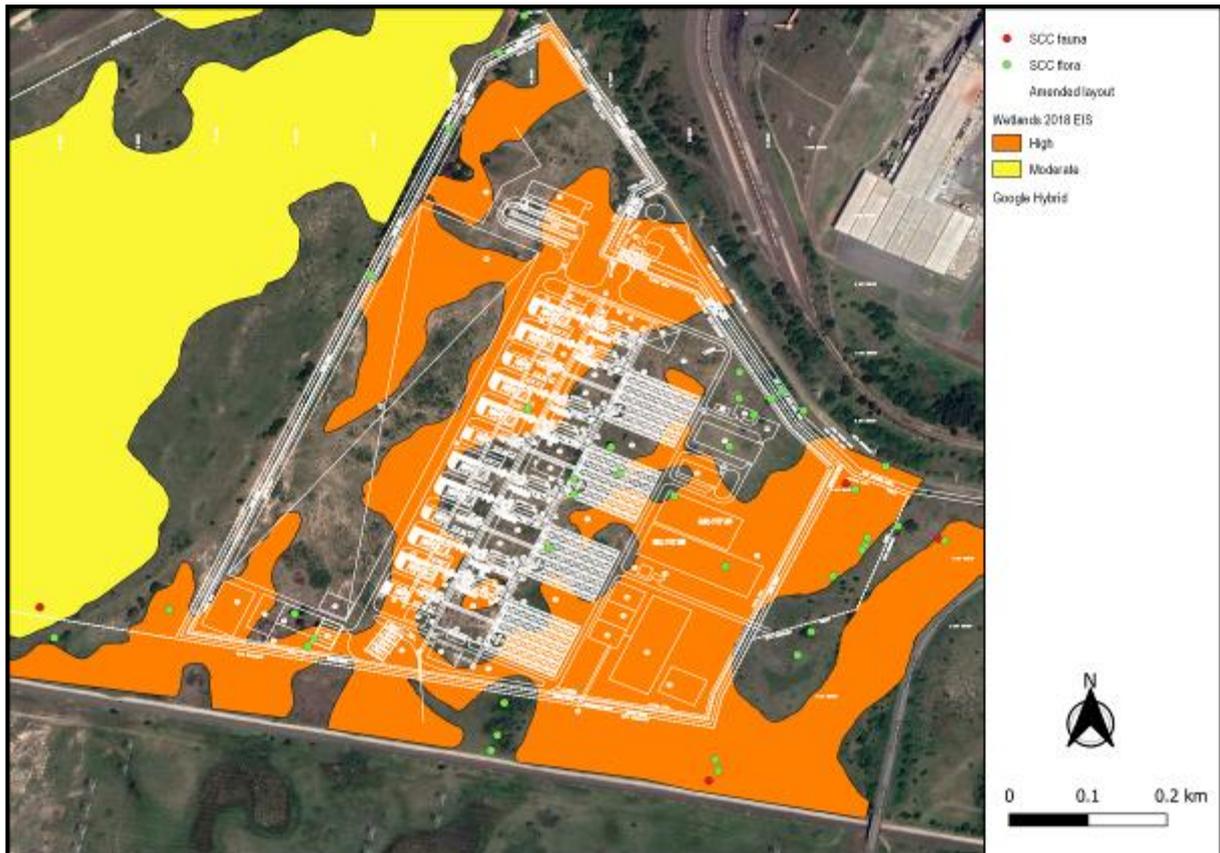


Figure 1: The extent of the wetland ecosystem on the project site in relation to the amended layout.

Operation phase impacts re-assessed:

- Introduction and spread of alien & invasive species and weeds;
- Disturbance of local fauna communities;
- Noise and artificial lighting;
- Pollution of soils and habitat.

The mitigation measures proposed in the Ecological Impact Assessment report are regarded as sufficient and no additional mitigation measures are required.

Cumulative impacts re-assessed:

- Cumulative impacts on regional and municipal conservation targets;
- Loss of SCC fauna and flora species.

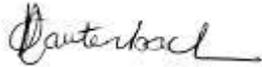
Contact details:

Anita Rautenbach
Cellphone: +27 83 305 1516
Email: rabiodiversity@gmail.com

The mitigation measures proposed in the Ecological Impact Assessment report are regarded as sufficient and no additional mitigation measures are required.

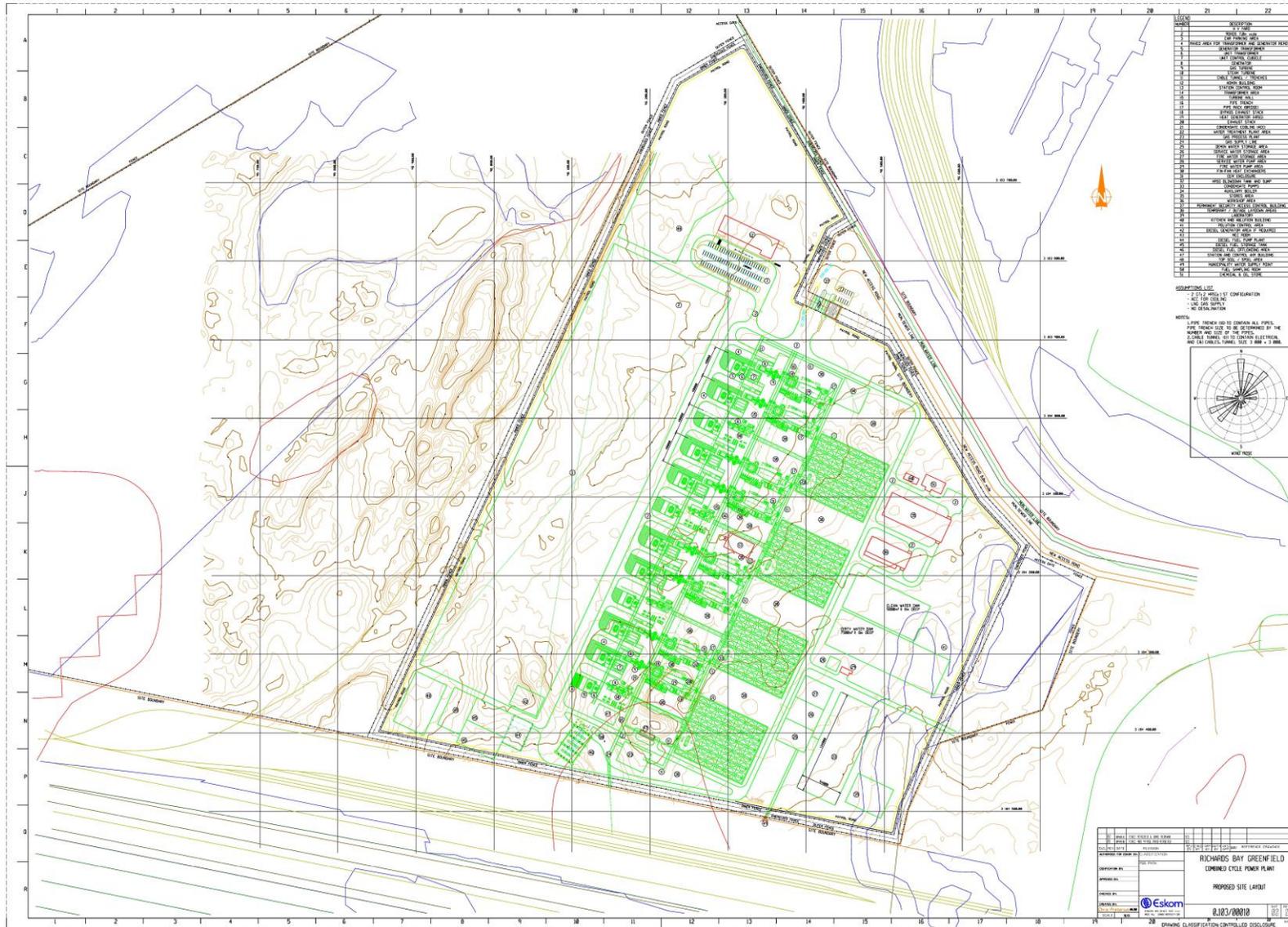
Please do not hesitate to contact me should you require additional information.

Yours sincerely,

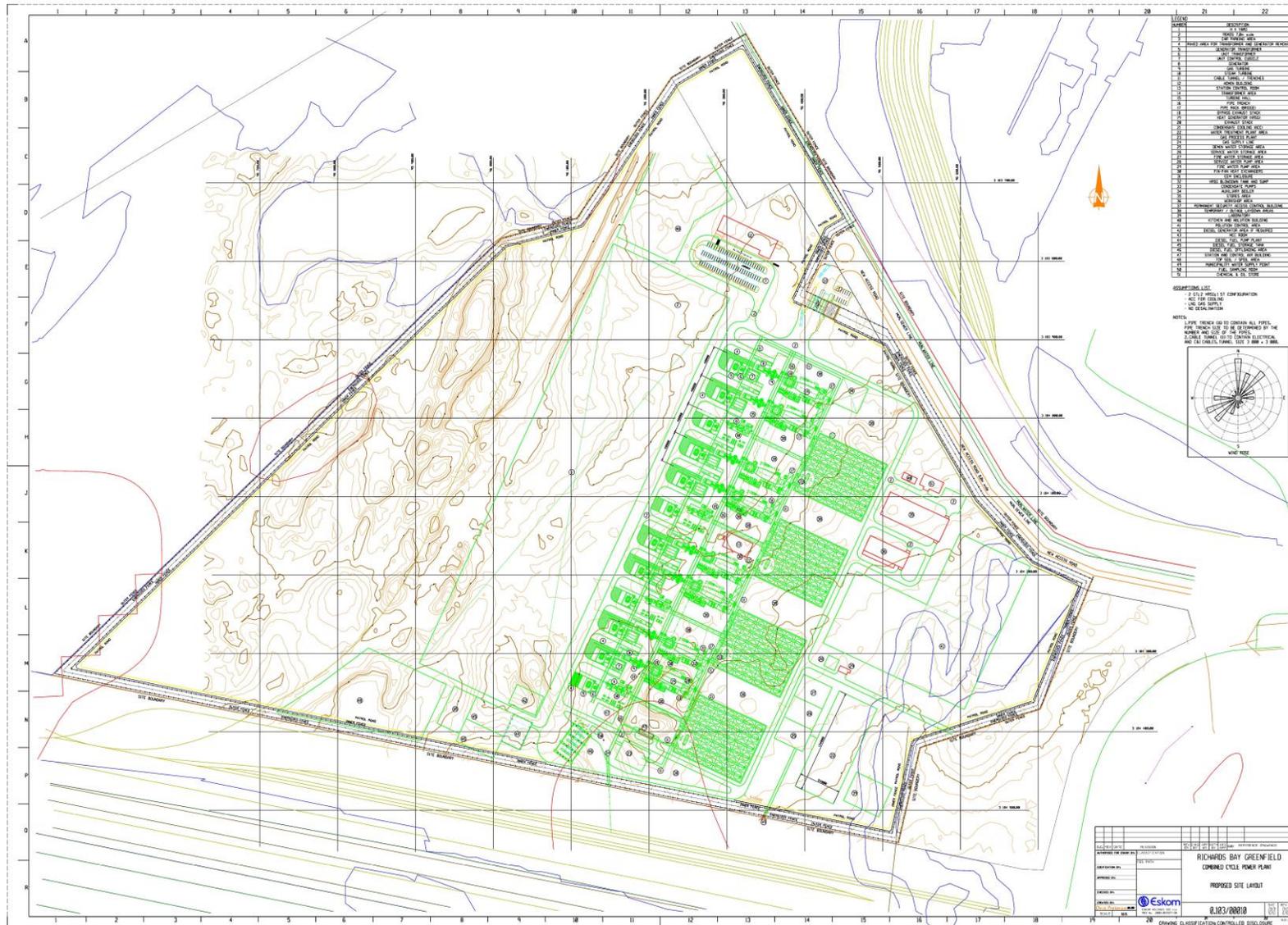


Anita Rautenbach (Pr. Sci. Nat)
Rautenbach Biodiversity Consulting

APPENDIX A – AMENDED LAYOUT



APPENDIX B –LAYOUT ASSESSED AS PART OF THE ECOLOGICAL IMPACT ASSESSMENT REPORT (ORIGINAL LAYOUT PRIOR TO CHANGES)



9 July 2019

Attention: Lisa Opperman
lisa.o@savannahsa.com

Savannah Environmental (Pty) Ltd
1st Floor, Block 2; 5 Woodlands Drive Office Park
cnr Woodlands Drive and Western Service Road
Woodmead
2191

RE: COMMENTS WITH REGARDS TO THE AMENDED LAYOUT PROPOSED FOR THE RICHARDS BAY COMBINED CYCLE (CCPP) POWER PLANT AND ASSOCIATED INFRASTRUCTURE NEAR RICHARDS BAY, KWAZULU-NATAL PROVINCE (REF NR: SE1655)

The Biodiversity Company has been requested to provide comment pertaining to the amended layout proposed for the Richards Bay Combined Cycle (CCPP) power plant and associated infrastructure, dated 17th of May 2019. The proposed amendments include:

- The western and eastern boundaries of the development footprint have been reduced;
- The western boundary of the development footprint is now located parallel to the Transmission HV yard;
- The extent of the top-soil laydown area has been reduced; and
- The pollution control area has been reduced.

The original layout assessed as part of the impact assessment report represented a development footprint of 71ha. The development footprint has been reduced to 52ha as part of the amended layout.

Having considered the proposed amended layout (Appendix A), the impacts/mitigation identified and prescribed in the original layout (Appendix B) remain and there will be no change with regards to the water resource impacts on the receiving environment with the implementation of the amended layout. The impacts assessed are described below.

Potential impacts re-assessed:

- Loss / degradation of wetlands
- Spread and/or establishment of alien and/or invasive species
- Environmental pollution due to increased sedimentation and erosion of watercourses

- Impaired water quality (surface and groundwater)
- Alterations in hydrological regime (flow of surface and sub-surface water)

The original layout will result in the loss of (approximately) 25.7 ha of wetland area, and the amended layout would result in the direct loss of 23.4 ha of wetland area. The direct loss of these wetlands will have an indirect impact on the adjacent wetland areas. These wetland flats are typically fed by precipitation, but these systems in particular are expected to be associated with groundwater to surface water linkages. Thus, disruption to these linkages will have an indirect impact on the wetland areas not directly lost as a result of the project. The subsurface seepage is difficult to reinstate artificially once the catchment has been transformed, particularly by hardened surfaces.

The mitigation measures prescribed in the Water Resource Assessment report are regarded as sufficient and no additional mitigation measures are required for the proposed amended layout. The proposed project will result in the loss and modifications of water resources, notably the delineated wetland areas. The recommendation to compile and implement a Wetland Offset Strategy is still applicable.

Due to the extent of the proposed project activities, the proposed amended layout will result in the direct loss of the delineated wetland ecosystems, with indirect losses and impacts also expected, this is also relevant for the original layout as assessed for the project. The loss of wetland ecosystems within the project site will be unavoidable. As a result of this, the implementation of the wetland offset plan and the recommendations made as proposed in the Environmental Impact Assessment Report of March 2019 will still be relevant.

The findings from the “original” offset calculation suggest that the identified wetlands, located in the biodiversity offset area adjacent to the project site, will not be adequate to meet the minimum requirements for the all components of the wetland offset targets. The original offset presents a functional net loss of 17.6 ha. Taking consideration, the larger offset /conservation area with the reduction of the facility development footprint, reduced direct loss of wetland and the additional land parcels, the extent of the proposed offset area (option 1) is approximately 65ha, with the implementation of the amended layout. Despite this increase in potential wetland offset area, a wetland functional loss of 15.3 ha remains.

Offset Target	Offset Minimum requirements (Hectare equivalents from wetlands to be lost)	Original Offset		New Considerations	
		Offset contribution	Deficit/Gain	Offset contribution	Deficit/Gain
Functional Offset	19,6	2	-17,6 (net loss)	4,3	-15,3 (net loss)
Ecosystem Conservation	13,9	24	10,1 (net gain)	39	25,1 (net gain)



Based on the above calculations, the offset strategy considered two alternatives (or options), Option 1 comprising the adjacent biodiversity offset area, and Option 2. The proposed Option 2 offset plan is in conjunction with KwaZulu-Natal Ezemvelo Wildlife (KZN Ezemvelo) and includes three (3) broad areas which have been earmarked for KZN Ezemvelo Stewardship. It is evident from the calculations that Option 1 as a standalone project will not meet the offset requirements. Option 2 (or a form thereof) will have to be considered, and this option may be jointly considered with Option 1. Another alternative (Option 3) was presented by Ezemvelo, this option would require the purchase of this land from the landowner (thought to be Mondi), pictured below.



This original document proposed an offset strategy to compensate for the expected loss of wetland area, this has been quantified. Two primary options available in achieving the offset target have been discussed. It is the opinion of the specialist that contributing to an existing wetland management / environmental programme may be the most effective way of ensuring appropriate ecological compensation for the incorporation of this wetland into the development. Once a decision is made on which option (or a combination of both) to proceed with, a detailed wetland offset management plan must be compiled which details the expectations, actions, resources and commitments (including timeframes) for the implementation of the plan. According to the minimum requirements for biodiversity offsets (Ezemvelo), the plan must address the following:



1. The identification of an offset area. This is to include desktop research and also some level of stakeholder engagement. This is mostly considered to be completed.
2. Finalisation of the offset should include field verification, listing of positive and negative attributes of the offset area and also confirm land ownership. These are also mostly considered to be completed. Aspects which have not been completed and should be incorporated into the plan include how management of the offset will be financed, implemented and monitored, involvement and responsibilities of relevant stakeholders and also financial provision and liability.
3. The offset management plan would include the following:
 - a. Identification of management issues,
 - b. Address the management issues identified,
 - c. Provide realistic timeframes for implementation and setting out measurable stages,
 - d. Identify responsible individuals and timeframes within which each activity is to have been completed or substantially achieved,
 - e. A Programme Plan for Offset Implementation,
 - f. Maps,
 - g. Proof of financing.

Cumulative impacts re-assessed:

The results of the impact assessment indicate that there will be a negative impact to water resources in the considered project site. The most notable impact will be the loss of wetland areas, and the subsequent loss of ecological services provided by these systems. This is relevant to the implementation of the amended layout.

Please do not hesitate to contact me should you require additional information.

Yours sincerely,



Andrew Husted (Pr. Sci. Nat)
Project Manager



APPENDIX B – ORIGINAL LAYOUT ASSESSED AS PART OF THE WATER RESOURCES IMPACT ASSESSMENT REPORT



9 July 2019

Attention: Lisa Opperman

lisa.o@savannahsa.com

Savannah Environmental (Pty) Ltd
1st Floor, Block 2; 5 Woodlands Drive Office Park
cnr Woodlands Drive and Western Service Road
Woodmead
2191

RE: COMMENTS WITH REGARDS TO THE AMENDED LAYOUT PROPOSED FOR THE RICHARDS BAY COMBINED CYCLE (CCPP) POWER PLANT AND ASSOCIATED INFRASTRUCTURE NEAR RICHARDS BAY, KWAZULU-NATAL PROVINCE (REF NR: SE1655)

The Biodiversity Company has been requested to provide comment pertaining to amended layout for the Richards Bay Combined Cycle (CCPP) power plant and associated infrastructure, dated 17th of May 2019. The amendments proposed to the layout include:

- The western and eastern boundaries of the development footprint have been reduced;
- The western boundary of the development footprint is now located parallel to the Transmission HV yard;
- The extent of the top-soil laydown area has been reduced; and
- The pollution control area has been reduced.

The original layout assessed as part of the impact assessment report represented a development footprint of 71ha. The development footprint has been reduced to 52ha as part of the amended layout.

Having considered the proposed amended layout (Appendix A), the impacts/mitigation identified and prescribed in the original layout (Appendix B) remain and there will be no change with regards to the impacts on the receiving environment with the implementation of the amended layout. The impacts assessed are described below.

Potential impacts re-assessed:

- Loss of agricultural potential



The original layout resulted in the loss of 10.49 ha Namib soil form and Class III Land Capability, which was reduced by 0.21 ha due to the amended layout. The loss of the remaining soil forms (e.g. Longlands, Katspruit etc.) and Land Capability classes (e.g. Class IV and Class V etc.) remains similar for both layouts, 0.45 ha and 25.7 ha respectively. This is based on direct impacts only, and taking into considering likely indirect impacts to the soils / agricultural potential for the area there is not notable difference in the level of impact significance between the two options.

The mitigation measures and recommendations prescribed in the Agricultural Potential Impact Assessment report are regarded as sufficient and no amendments or additions to the recommendations or results are required for the implementation of the amended layout.

Please do not hesitate to contact me should you require additional information.

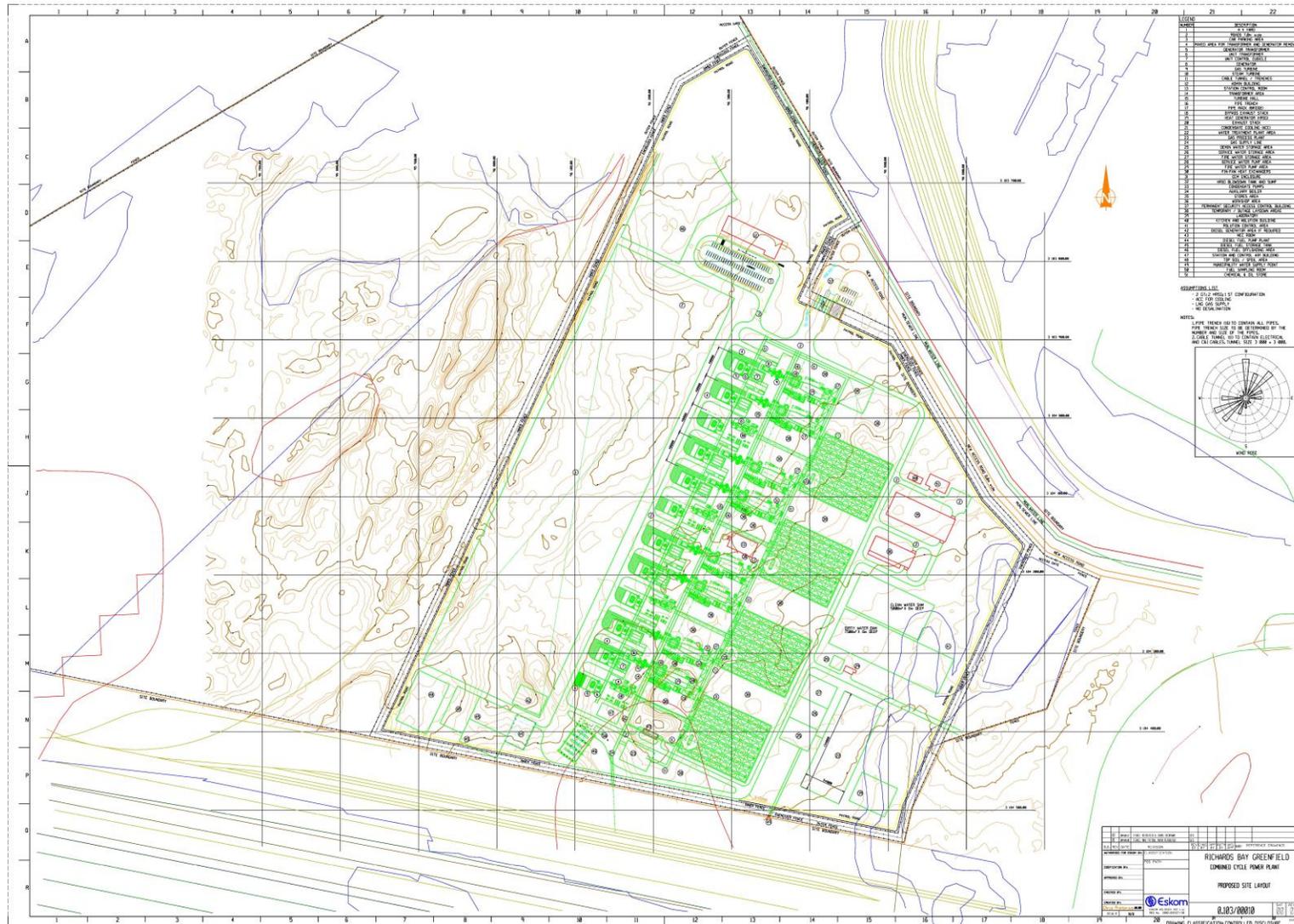
Yours sincerely,



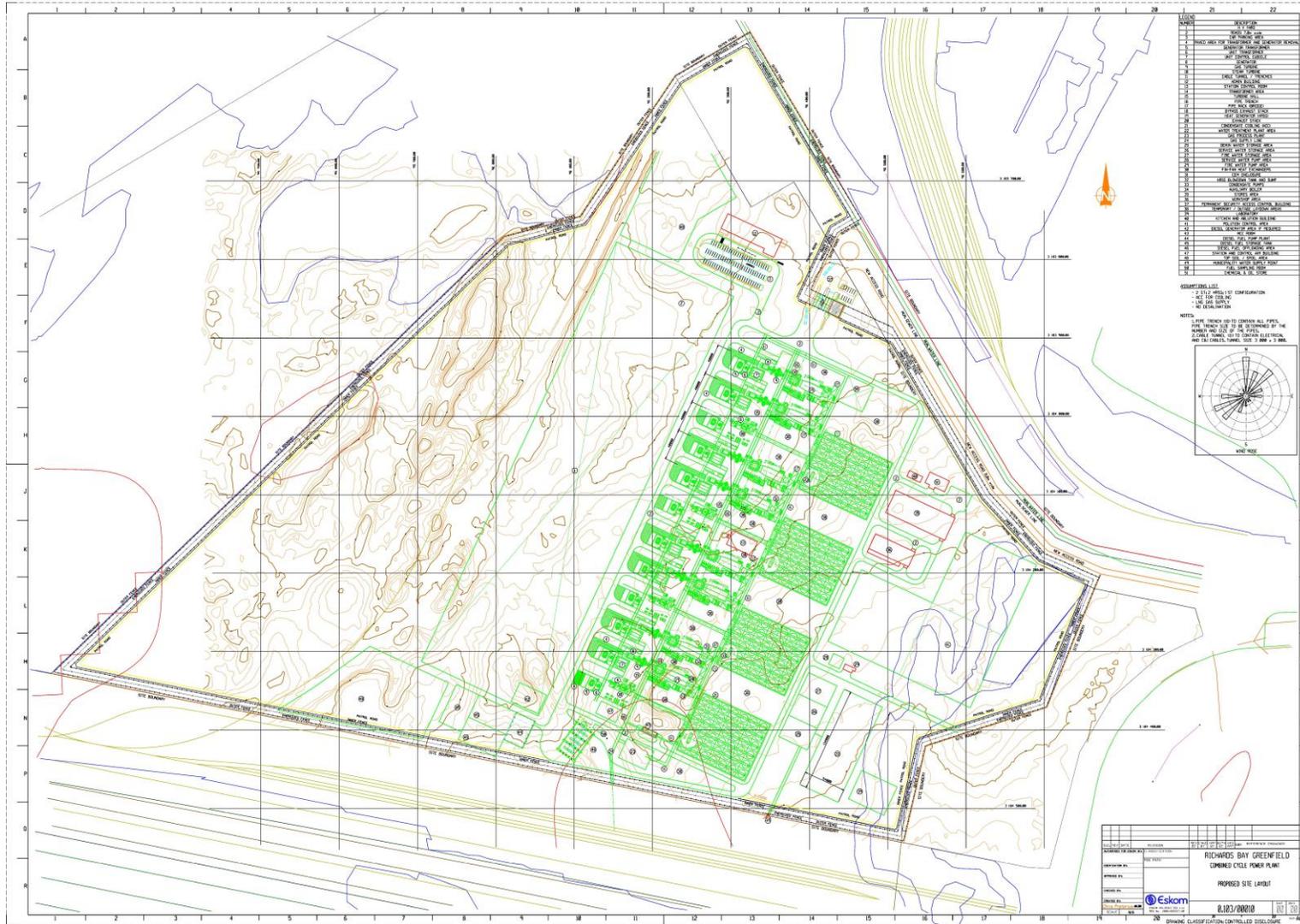
Andrew Husted (Pr. Sci. Nat)
Project Manager



APPENDIX A – AMENDED LAYOUT



APPENDIX B – ORIGINAL LAYOUT ASSESSED AS PART OF THE AGRICULTURAL POTENTIAL IMPACT ASSESSMENT REPORT





Geo Hydraulic and Environmental Technology (Pty) Ltd

Groundwater Specialist Consultants

Reg.No. 2016/04429/07

25 Trichy Road, Raisethorpe, Pietermaritzburg 3201, South Africa

Tel: +27 33 391 0707 / cell +27 78 884 5263

info@get-sa.co.za

www.get-sa.co.za

Supporting a safe and sustainable water provision

GET Ref: P201904G120

27th May 2019

Savannah Environmental

Tel: 011 656 3237

Cell: 084 920 3111

Email: lisa.o@savannahsa.com

Delivered via email to lisa.o@savannahsa.com

Dear Lisa,

Re: *Specialist inputs regarding a slight shift and components changes of the Richards Bay Combined Cycle Power Plant (CCPP) layout from a geohydrological perspective, Richards Bay, Kwazulu Natal*

Geo Hydraulic and Environmental Technology (Pty) Ltd (hereafter referred to as "GET-SA") was appointed to provide specialist input in the form of a letter to be attached to the Geohydrological Impact Assessment Report undertaken for the Richards Bay CCPP. This letter includes desktop reviews aiming to verify whether the amended facility layout (i.e. slight shift of the facility and components changes within the assessed project site) will result in potential changes of impacts/mitigations which will modify the findings of the Geohydrological Impact Assessment undertaken for the project. The desktop reviews include:

- Reviewing of the amended layout (Appendix A) details to assess whether the changes are significant compared to the layout assessed in the Geohydrological Impact Assessment (Appendix B).

- Reviewing of the geohydrology setting and the geological setting to assess whether the amended layout location and changes will potentially modify the significance ratings of the impacts assessed in the Geohydrological Impact Assessment report.
- Reviewing of the amended layout location and changes within the project site to assess whether geophysical surveys will be required for the amended layout.

Disclaimer

Options detailed in this letter apply to the amended layout as received from the client and data obtained in February 2018. Geohydraulic and Environmental Technology cannot be held liable for any inaccurate information and omission to the amended layout and its description as received from Savannah Environmental (Pty) Ltd.

Amendments to the Layout assessed in the Geohydrological Impact Assessment Report

The infrastructure associated with the CCPP facility as observed on the amended layout includes:

- The western and eastern boundaries of the development footprint have been reduced;
- The western boundary of the development footprint is now located parallel to the Transmission HV yard;
- The diesel fuel pump plant;
- The top-soil laydown area; and
- The pollution control area.

Impact Assessment

The geohydrological assessment undertaken did not include the pollution area, the top-soil laydown area and the Diesel fuel pump plant as these facilities were not part of the layout and its description received initially. Therefore, an additional desktop geohydrological assessment will be required to investigate their impacts on groundwater environment and to propose mitigation measures.

This is based on the data obtained during field investigations undertaken in February 2018 which included hydrocensus survey, groundwater level measurements and geophysical survey. However, the data does not consider any unknown changes in terms of

groundwater abstraction, land use in the vicinity of the site and climate changes that could have occurred over time. These unknown changes can be identified by implementing the monitoring plan recommended in the Geohydrological Impact Assessment Report undertaken for the project.

Geological Setting Assessment

It is confirmed from the information considered that the slight shift of the layout location within the project site associated with the amended layout does not result in a change of impacts as identified in the geological assessment findings. However the three components listed above and their locations require a desktop geological assessment to identify impacts and mitigation measures.

Based on groundwater data obtained in February 2018 and the amended layout proposed for the Richards Bay CCPP, it is confirmed that the amended layout will trigger additional impacts assessment as the proposed infrastructure associated with the CCPP facility has changed. The additional mitigation measures need to be proposed in the Geohydrological Impact Assessment for the implementation of the amended layout.

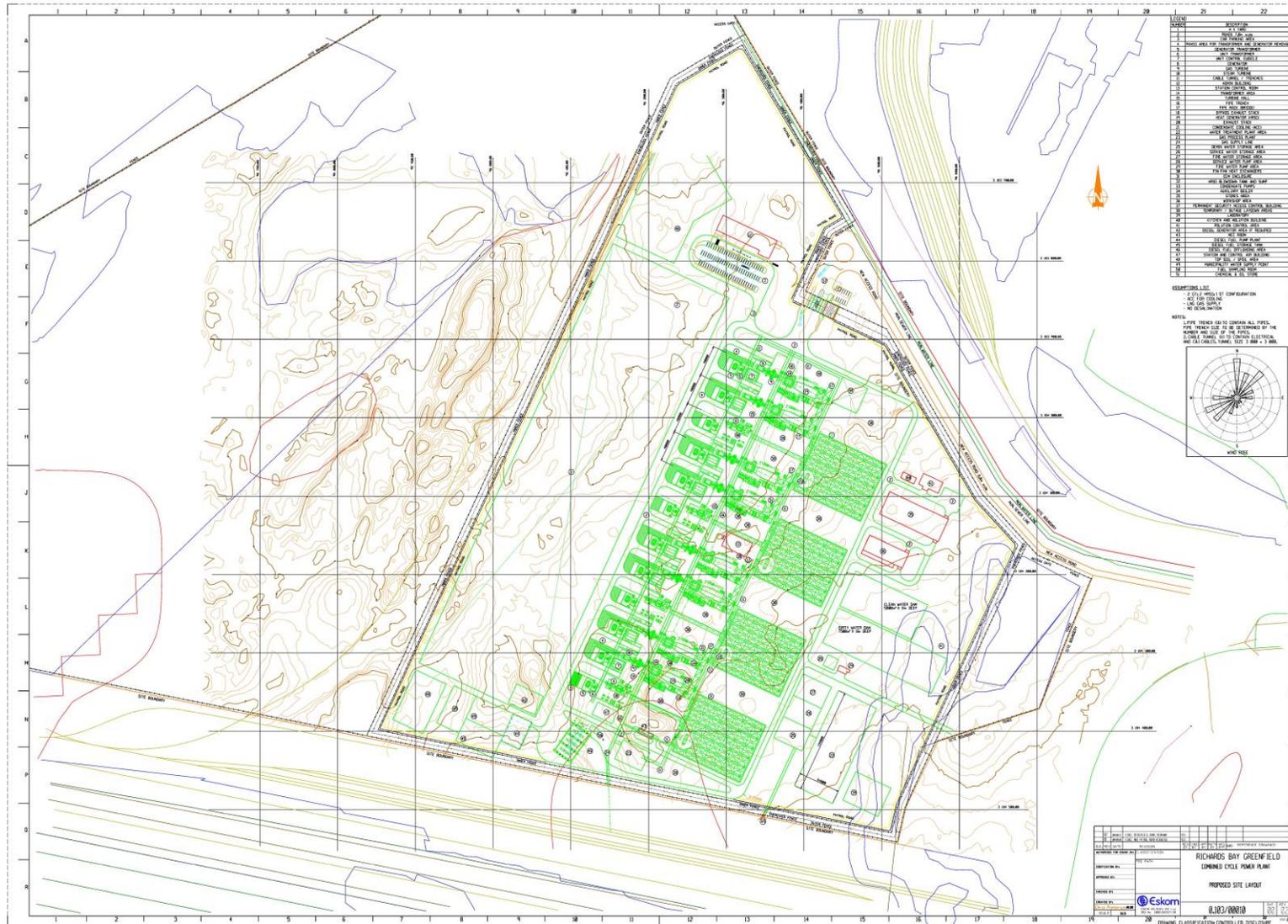
Please contact me should you require additional assistance with the above discussed matter.

Yours Sincerely,



John Kalala Ngeleka Pr.Sci.Nat
Senior Geohydrologist (Msc)
GEO HYDRAULIC AND ENVIRONMENTAL TECHNOLOGY (PTY) LTD

APPENDIX A - AMENDED LAYOUT



APPENDIX B - LAYOUT ASSESSED IN THE GEOHYDROLOGICAL IMPACT ASSESSMENT



Attention: Lisa Opperman
Savannah Environmental (Pty) Ltd
1st Floor,
Block 2,
5 Woodlands Drive Office Park,
Woodlands Drive
Woodmead,
Johannesburg, 2191

Re: Richards Bay CCPP: Amended Layout Heritage Specialist Inputs

Dear Lisa,

This letter serves to inform you that I have received and reviewed the amended layout (Figure 1 and Appendix A) as below:



Figure 1. Google Earth Image of the proposed revised layout.

Eskom plans to shift and amend their layout of the CCPP slightly, within the 71ha project site assessed as part of the Heritage Impact Assessment (van der Walt 2019) for the project (Appendix B). The specific amendments include:

- The western and eastern boundaries of the development footprint have been reduced;
- The western boundary of the development footprint is now located parallel to the Transmission HV yard;
- The extent of the top-soil laydown area has been reduced; and
- The pollution control area has been reduced.

Figure 2 below illustrates the tracks walked as part of the Heritage Impact Assessment, which covered the project site.

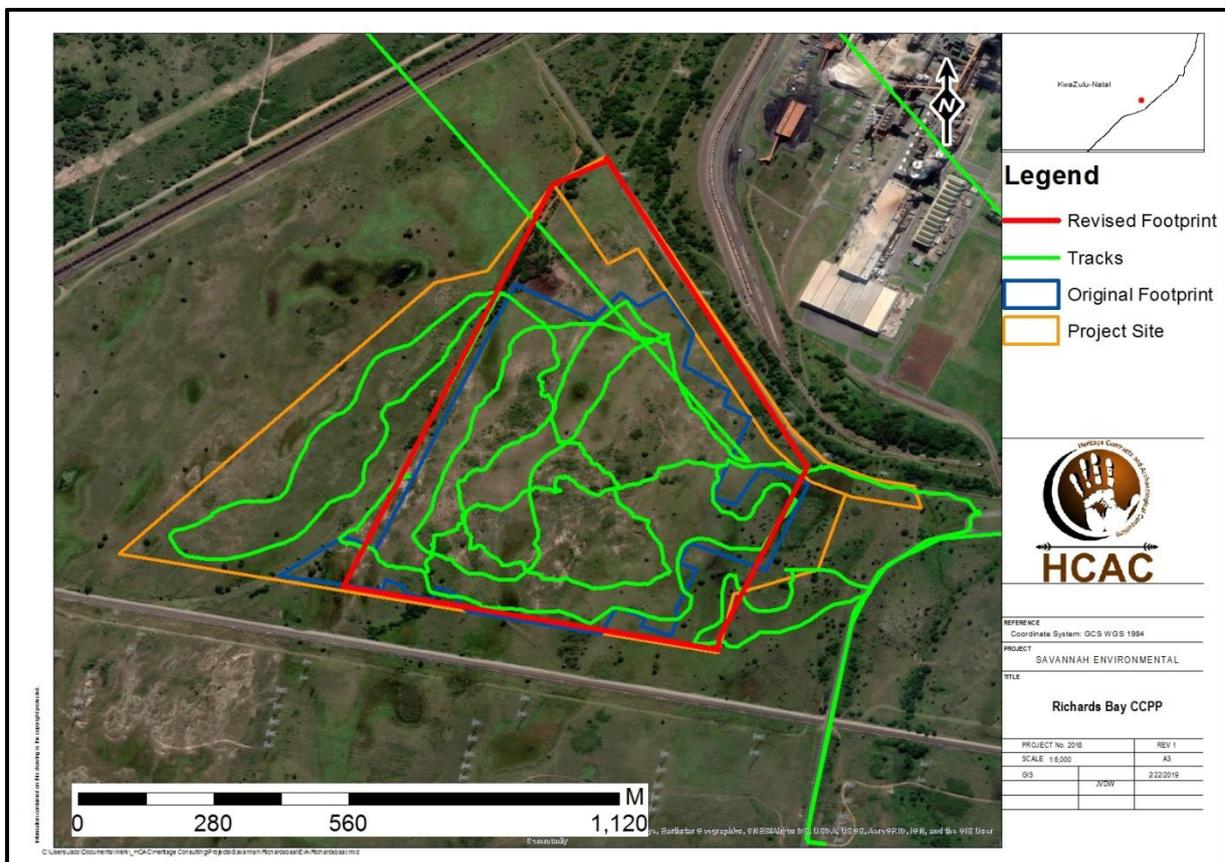


Figure 2: Tracks walked in the assessed project site as part of the Heritage Impact Assessment.

The original layout assessed as part of the impact assessment report represented a development footprint of 71ha. The development footprint has been reduced to 52ha as part of the amended layout. Due to the lack of significant heritage resources in the project site the impact of the project on heritage resources is considered low. The amended layout does not have a material effect on the specialist report "Heritage Impact Assessment Richards Bay CCPP: 3000MW Feb 2019" and the findings and recommendations of the report still stand with the implementation of the amended layout. No additional mitigation measures are required with the implementation of the amended layout.

Kind regards,

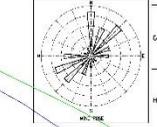
Jaco van der Walt
 MA Archaeology (University of the Witwatersrand)
 ASAPA #159
 APHP #114

APPENDIX A – AMENDED LAYOUT



NO.	DESCRIPTION
1	PROPOSED CYCLE POWER PLANT
2	PROPOSED CYCLE POWER PLANT
3	PROPOSED CYCLE POWER PLANT
4	PROPOSED CYCLE POWER PLANT
5	PROPOSED CYCLE POWER PLANT
6	PROPOSED CYCLE POWER PLANT
7	PROPOSED CYCLE POWER PLANT
8	PROPOSED CYCLE POWER PLANT
9	PROPOSED CYCLE POWER PLANT
10	PROPOSED CYCLE POWER PLANT
11	PROPOSED CYCLE POWER PLANT
12	PROPOSED CYCLE POWER PLANT
13	PROPOSED CYCLE POWER PLANT
14	PROPOSED CYCLE POWER PLANT
15	PROPOSED CYCLE POWER PLANT
16	PROPOSED CYCLE POWER PLANT
17	PROPOSED CYCLE POWER PLANT
18	PROPOSED CYCLE POWER PLANT
19	PROPOSED CYCLE POWER PLANT
20	PROPOSED CYCLE POWER PLANT
21	PROPOSED CYCLE POWER PLANT
22	PROPOSED CYCLE POWER PLANT

LEGEND
 1. PROPOSED CYCLE POWER PLANT
 2. PROPOSED CYCLE POWER PLANT
 3. PROPOSED CYCLE POWER PLANT
 4. PROPOSED CYCLE POWER PLANT
 5. PROPOSED CYCLE POWER PLANT
 6. PROPOSED CYCLE POWER PLANT
 7. PROPOSED CYCLE POWER PLANT
 8. PROPOSED CYCLE POWER PLANT
 9. PROPOSED CYCLE POWER PLANT
 10. PROPOSED CYCLE POWER PLANT
 11. PROPOSED CYCLE POWER PLANT
 12. PROPOSED CYCLE POWER PLANT
 13. PROPOSED CYCLE POWER PLANT
 14. PROPOSED CYCLE POWER PLANT
 15. PROPOSED CYCLE POWER PLANT
 16. PROPOSED CYCLE POWER PLANT
 17. PROPOSED CYCLE POWER PLANT
 18. PROPOSED CYCLE POWER PLANT
 19. PROPOSED CYCLE POWER PLANT
 20. PROPOSED CYCLE POWER PLANT
 21. PROPOSED CYCLE POWER PLANT
 22. PROPOSED CYCLE POWER PLANT



NO.	DESCRIPTION
1	PROPOSED CYCLE POWER PLANT
2	PROPOSED CYCLE POWER PLANT
3	PROPOSED CYCLE POWER PLANT
4	PROPOSED CYCLE POWER PLANT
5	PROPOSED CYCLE POWER PLANT
6	PROPOSED CYCLE POWER PLANT
7	PROPOSED CYCLE POWER PLANT
8	PROPOSED CYCLE POWER PLANT
9	PROPOSED CYCLE POWER PLANT
10	PROPOSED CYCLE POWER PLANT
11	PROPOSED CYCLE POWER PLANT
12	PROPOSED CYCLE POWER PLANT
13	PROPOSED CYCLE POWER PLANT
14	PROPOSED CYCLE POWER PLANT
15	PROPOSED CYCLE POWER PLANT
16	PROPOSED CYCLE POWER PLANT
17	PROPOSED CYCLE POWER PLANT
18	PROPOSED CYCLE POWER PLANT
19	PROPOSED CYCLE POWER PLANT
20	PROPOSED CYCLE POWER PLANT
21	PROPOSED CYCLE POWER PLANT
22	PROPOSED CYCLE POWER PLANT



ESKOM
 SOUTH AFRICAN NATIONAL ENERGY GROUP

APPENDIX A - AMENDED LAYOUT

Our reference: 16SAV02 – RBCCPP

4 July 2019

Savannah Environmental (Pty) Ltd
P.O. Box 148, Sunninghill, 2157
1st Floor, Block 2, 5 Woodlands Drive Office Park, Woodlands Drive,
Woodmead, 2191

Attention: Lisa Opperman

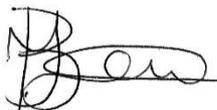
RE: Amended layout of the Richards Bay Combined Cycle Power Plant

Airshed Planning Professionals (Pty) Ltd prepared an Atmospheric Impact Report (AIR) as part of the environmental authorisation process for a gas-fed combined cycle power plant (CCPP) proposed for development in Richards Bay, KwaZulu-Natal (report Revision 3 Final, February 2019). In order to try avoid areas of sensitive biodiversity, Eskom has amended the site of the CCPP. The original layout assessed as part of the impact assessment report represented a development footprint of 71 ha. The development footprint has been reduced to 52 ha as part of the amended layout. The western and eastern plant boundary have been reduced. The western plant boundary is now located parallel to the Transmission HV Yard and the extent of the top-soil laydown area has been reduced. The extent of the pollution control area has also been reduced which has resulted in the reduction of the eastern boundary of the development footprint.

The amended site layout was provided by Eskom (via Savannah Environmental on 17 May 2019). The original location (Appendix A - Figure 1) of the sources of atmospheric pollutant emissions, as assessed in the Atmospheric Impact Report as part of the EIA process, were compared with the amended site layout (Appendix B - Figure 2). The locations differ by 20 m or less between the two layouts. The sources are now slightly further away from the nearest receptors. The finest grid resolution used in the CALPUFF dispersion model setup was 50 m for a 2.5 km x 2.5 km area, centred over the proposed facility.

Since the difference in source locations is smaller than the finest grid resolution of the dispersion model, the amended locations of the sources of atmospheric pollutant emissions, based on the amended layout, are not likely to result in a substantive change in impact area from that summarised in the AIR. Remodelling using the amended layout is not required. The potential pollutant concentrations at the receptors could stay the same or decrease. The mitigation measures included in the Atmospheric Impact Report (as part of the EIA process) are sufficient for the implementation of the amended layout and that no additional measures will be required. The “medium” significance rating of the SO₂ impacts, and “low” significance rating of other pollutants released during operation will still apply.

Warm regards



Dr Terri Bird
(PhD, Wits)(Pr.Sci.Nat)
Senior Specialist Consultant

APPENDIX B

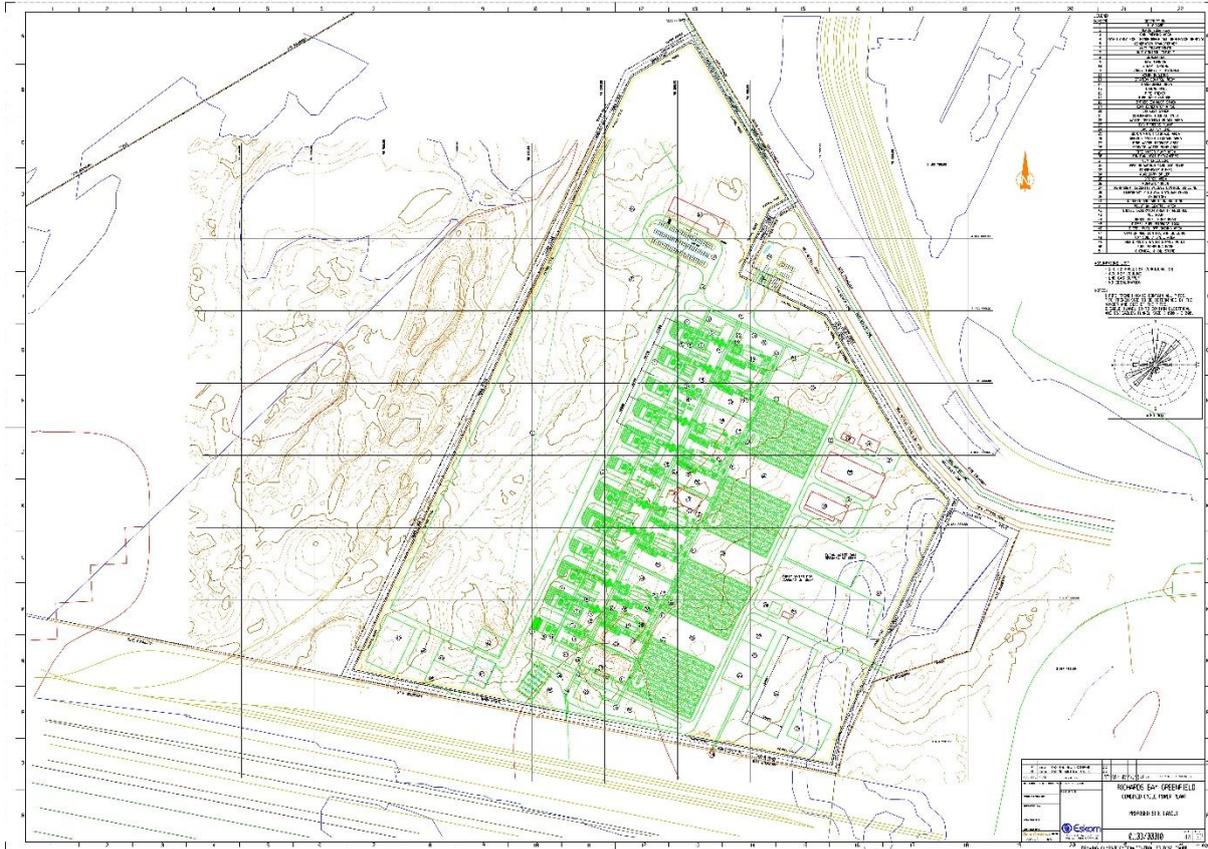


Figure 2: Amended layout



7 July 2019

Lisa Opperman
Environmental Consultant
Savannah Environmental (Pty) Ltd
Via email: lisa.o@savannahsa.com

Dear Lisa,

Letter regarding the site layout revision of the proposed Richards Bay Combined Cycle Power Plant

We understand that the ongoing environmental impact assessment process and facility layout (Appendix A) associated with the proposed Richards Bay Combined Cycle Power Plant is to be updated to revise the layout of the power plant and associated infrastructure. The original layout assessed as part of the impact assessment report represented a development footprint of 71ha. The development footprint has been reduced to 52ha as part of the amended layout

Promethium Carbon's opinion is that the site layout revision (Appendix B) will not impact the findings of our specialist climate change assessment related to Eskom's proposed Richards Bay Combined Cycle Power Plant, which was finalised earlier this year (February 2019).

The basis of our opinion is that the proposed site layout revision is immaterial to the inputs considered in our assessment. We understand, based on the information that you have provided, that Eskom plans to shift the site layout slightly as indicated in Appendix B, within the 71 ha that Promethium Carbon assessed as part of the specialist climate change assessment report compiled for the project. We understand that the motivation for shifting the site layout is to try and avoid and/or reduce impact on areas of biodiversity sensitivity within the project site.

The new proposed site layout remains within the boundary of our assessment. Therefore, the assessment of the receiving environment is not impacted.

Furthermore, the amended site layout has no impact on the proposed project and technology components (the development of a combined cycle gas turbine and associated infrastructure). Therefore, Promethium Carbon's assessment of the greenhouse gas impacts associated with the project, as well as the mitigation measures recommended, are not impacted by the amended site layout. No additional mitigation measures are recommended following the amendment to the site layout.

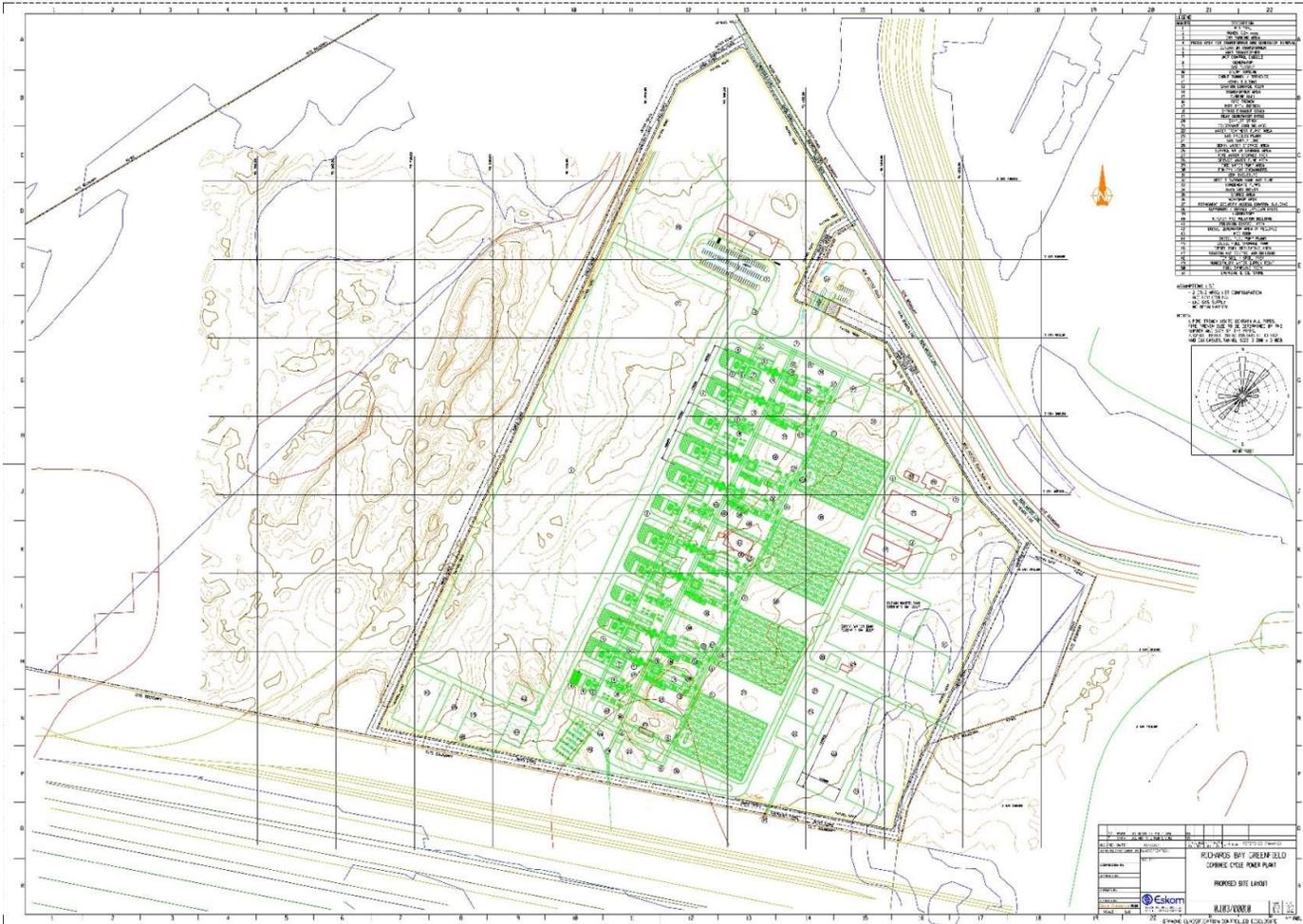
Please contact us should you have any queries regarding this letter.

Yours sincerely,



Robbie Louw

APPENDIX B – AMENDED LAYOUT





ENVIRONMENTAL PLANNING AND DESIGN CC

Our Ref: 1701/JM
Official Ref: 12/12/20/ or 12/9/11/L

28th May 2019

Savannah Environmental (Pty) Ltd
PO Box 148
Sunninghill
Gauteng
2157

Attn: Lisa Opperman

Dear Lisa

PROPOSED RICHARDS BAY COMBINED CYCLE POWER PLANT (CCPP) PROJECT IN RICHARDS BAY, KWAZULU-NATAL PROVINCE - REVIEW OF VISUAL IMPLICATIONS OF PROPOSED LAYOUT AMENDMENTS DETAILED ON SITE LAYOUT DRAWING 0.103/00010 REV 2

Further to our recent discussion and receipt of the above mentioned drawing, I confirm that I have compared the proposed amended layout (Appendix A) with the layout that was assessed as part of Landscape and Visual Impact Assessment (February 2019) (Appendix B).

1. PROJECT AMENDMENTS

The amendments include the following changes to the layout:

- The western and eastern boundaries of the development footprint have been reduced;
- The western boundary of the development footprint is now located parallel to the Transmission HV yard;
- The extent of the top-soil laydown area has been reduced; and
- The pollution control area has been reduced.

The original layout assessed as part of the impact assessment report represented a development footprint of 71ha. The development footprint has been reduced to 52ha as part of the amended layout.

From the comparison of the originally assessed layout and the proposed amended layout, the location of major elements relative to each other remains consistent with the assessed layout considered as part of the Landscape and Visual Impact Assessment

2. LIKELY VISUAL IMPLICATIONS

Given the scale of the proposed development, the proposed amendments to the layout will not result in any change in the areas from which the proposed development is likely to be visible (Zone of Theoretical Visibility Map 7 of the Landscape and Visual Impact Assessment).

The amended layout will also not change the location or the extent of the view that the proposed development will occupy as indicated on Plates 15 to 24 inclusive within the Visual Assessment Report.

In addition to the nature of the existing landscape, the factors noted above are critical to the assessment of visual impacts. We are therefore confident that the assessment included in Section 5 of our report will not be affected by the proposed amendment and the proposed mitigation measures are still considered acceptable for the amended layout. No additional mitigation measures will be required.

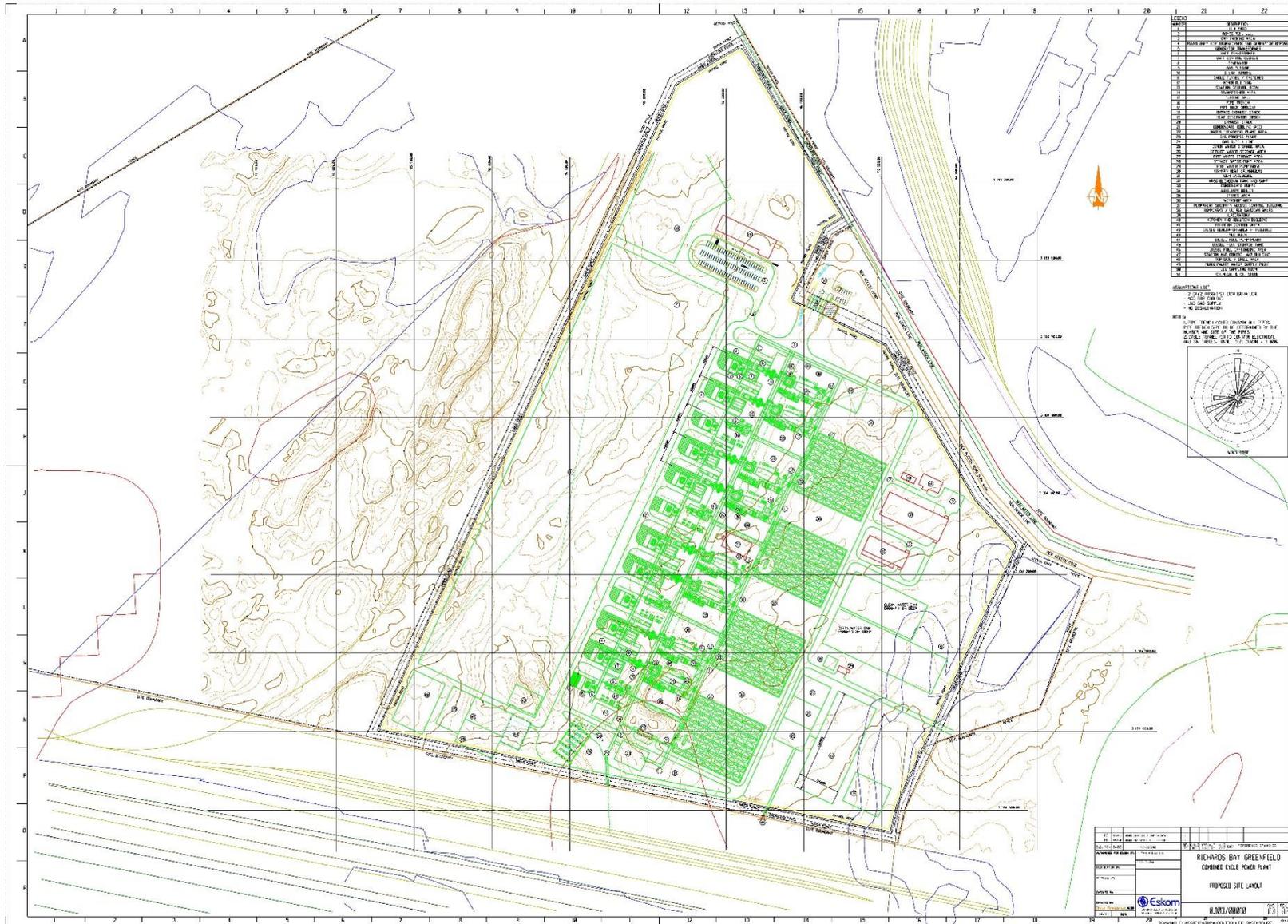
Should you require further information, please contact the undersigned.

Yours faithfully

J. Marshall

Jon Marshall
ENVIRONMENTAL PLANNING AND DESIGN

APPENDIX A – AMENDED LAYOUT



NO.	DESCRIPTION
1	PROPOSED SITE LAYOUT
2	EXISTING TOPOGRAPHY
3	EXISTING ROADS
4	EXISTING UTILITIES
5	EXISTING BUILDINGS
6	EXISTING FENCES
7	EXISTING DRAINAGE
8	EXISTING WATERWAYS
9	EXISTING POWER LINES
10	EXISTING TELEPHONE LINES
11	EXISTING RAIL LINES
12	EXISTING AIRPORT
13	EXISTING PORT
14	EXISTING HARBOUR
15	EXISTING BEACH
16	EXISTING RESIDENTIAL
17	EXISTING COMMERCIAL
18	EXISTING INDUSTRIAL
19	EXISTING AGRICULTURE
20	EXISTING FOREST
21	EXISTING WETLANDS
22	EXISTING NATURAL RESOURCES

GENERAL NOTES:

1. THIS PLAN IS FOR INFORMATION ONLY.
2. THE PROPOSED SITE LAYOUT IS SUBJECT TO APPROVAL BY THE RELEVANT AUTHORITIES.
3. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE REGULATIONS AND BY-LAWS.
4. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE ZONING REGULATIONS.
5. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE ENVIRONMENTAL REGULATIONS.
6. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE SOCIAL REGULATIONS.
7. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE ECONOMIC REGULATIONS.
8. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE CULTURAL REGULATIONS.
9. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE HERITAGE REGULATIONS.
10. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE LAND-USE REGULATIONS.
11. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE INFRASTRUCTURE REGULATIONS.
12. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE TRANSPORT REGULATIONS.
13. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE ENERGY REGULATIONS.
14. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE WATER REGULATIONS.
15. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE WASTE REGULATIONS.
16. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE AIR REGULATIONS.
17. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE CLIMATE REGULATIONS.
18. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE OCEAN REGULATIONS.
19. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE COASTAL REGULATIONS.
20. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE MARINE REGULATIONS.
21. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE FISHERY REGULATIONS.
22. THE PROPOSED SITE LAYOUT IS SUBJECT TO THE APPLICABLE TOURISM REGULATIONS.

PROJECT NO.	123456789
CLIENT	ESKOM
DATE	2023-10-27
SCALE	1:1000
DRAWN BY	J. D. VAN DER MERWE
CHECKED BY	M. J. VAN DER MERWE
APPROVED BY	[Signature]
PROJECT NAME	RICHARDS BAY GREENFIELD COMBINED CYCLE POWER PLANT
PROPOSED SITE LAYOUT	
ESKOM	
WATER/AMBU	

4 July 2019

Lisa Opperman
Savannah Environmental (Pty) Ltd
Tel: +27 (0) 11 656 3237
E-mail: lisa.o@savannahsa.com

Dear Lisa

RE: IMPLICATIONS OF THE AMENDED LAYOUT FOR THE PROPOSED DEVELOPMENT OF THE RICHARDS BAY COMBINED CYCLE POWER PLANT (CCPP) AND ASSOCIATED INFRASTRUCTURE ON A SITE NEAR RICHARDS BAY, KWAZULU-NATAL PROVINCE ON THE SOCIO-ECONOMIC IMPACT ASSESSMENT

This letter is compiled in response to the request made by Savannah Environmental to update the assessment of socio-economic impacts for the Richard Bay CCPP and associated infrastructure planned to be developed in the KwaZulu-Natal Province given the proposed changes to the project's layout.

This letter contains the following:

- Summary of the socio-economic impacts that were identified to be associated with the project mentioned above and assessed in the report dated February 2019 on the basis of the original layout (Appendix A) proposed by the client.
- Comparative assessment of the changes to the layout (i.e. amended layout, Appendix B) and the effects thereof on the socio-economic zone of influence and sensitive receptors.
- Analysis of the changes to socio-economic impacts and their ratings of significance brought by the changes in the zone of influence and sensitive receptors.
- Revised socio-economic impact statement, if applicable.

The following changes are proposed as part of the amended layout:

- The western and eastern boundaries of the development footprint have been reduced;
- The western boundary of the development footprint is now located parallel to the Transmission HV yard;
- The extent of the top-soil laydown area has been reduced; and
- The pollution control area has been reduced.

1. Summary of socio-economic impacts associated with the original layout

The socio-economic impact assessment study, dated February 2019, identified the following range of socio-economic impacts that were expected to ensue as a result of the abovementioned development during various project lifecycle phases. The table below also contains information on the nature (i.e. status) of the impact and its significance before and after mitigations proposed the report.

Table 1: Summary of impacts and significance rating per impact

Impact	Status	Significance before mitigations/enhancements	Significance after mitigations/enhancements
Construction Phase			
Increase in production	Positive	High (60)	High (60)
Increase in GDP	Positive	Medium (52)	Medium (52)
Employment creation	Positive	High (75)	High (75)
Skill development	Positive	High (70)	High (70)
Increase in household income	Positive	High (65)	High (65)
Demographic shifts due to influx of migrant labour	Negative	Medium (33)	Low (27)

Impact	Status	Significance before mitigations/enhancements	Significance after mitigations/enhancements
Increase in housing demand	Negative	Medium (36)	Low (21)
Pressure on basic services, social facilities, and economic infrastructure	Negative	Medium (33)	Low (18)
Operation Phase			
Increase in production	Positive	High (60)	High (68)
Increase in GDP	Positive	High (60)	High (68)
Employment creation	Positive	High (75)	High (75)
Skill development	Positive	High (70)	High (70)
Increase in household income	Positive	High (75)	High (75)
Increase in government revenue	Positive	High (65)	High (65)
Energy security	Positive	High (60)	High (60)
Cumulative Impacts			
Production, GDP and employment	Positive	Medium (45)	Medium (45)
Health risks	Negative	Medium (39)	Medium (39)
Influx of migrant labour and job seekers	Negative	Medium (48)	Medium (48)

Source: Urban-Econ, 2019

2. Comparative analysis of the original and amended layouts from a socio-economic impact perspective

The socio-economic impact assessment presented in the table above was premised on the assumption that the project will be located on Portion 2 and Portion 4 of Erf 11376 as outlined in the map below. At the time of the study, both parcels of land were owned by the City of uMhlathuze Municipality and were not serviced. Portion 2 of Erf 11376 was also reserved for industrial and high-impact industry, while Portion 4 of Erf 11376 was reserved for an access road. The project site bordered the Mondi factory to the north (Portion 7 of Erf 6274), conserved land to the west (Portion 1 of Erf 11376), and open land parcels to the west and south. The surrounding activities and the greater zone of influence were determined to be not sensitive to the location of project infrastructure within Portion 2 and 4 of Erf 11376.



Map 1: Directly and indirectly affected land portions (Urban-Econ 2019)

The amended layout of the proposed Richards Bay CCPP and associated infrastructure suggests that the project will remain located within the boundaries of Portion 2 and 4 of Erf 11376. It should be noted though that the amended layout is associated with a reduced footprint of 52ha versus a footprint of 71ha that was assessed as part of the impact assessment report. This in means that the surrounding land uses and sensitive receptors will remain the same as that identified and described in the Socio-Economic Impact Assessment report dated February 2019.



Map 2: Revised layout and location

3. Changes to the socio-economic impact assessment

In the previous section it was indicated that the changes in the layout will not result in the changes of the directly and indirectly affected properties, and subsequently land uses and sensitive receptors. Therefore, it can be argued that the proposed changes to the layout will not lead to changes of the socio-economic impacts analysed in the original study and the assessment of their significance ratings. The mitigation and enhancement measures recommended are considered sufficient for the implementation of the amended layout and no additional measures are required.

4. Socio-economic impact statement

Given the above analysis, it can be concluded that the proposed Richard Bay CCPP and associated infrastructure, following the implementation of the amended layout of the project, will remain to be associated with a notable positive socio-economic impact in the context of the local economy and the greater region. The project will remain free of objections from a socio-economic perspective and is therefore recommended for approval.

Yours sincerely,

Elena Broughton

For URBAN-ECON Development Economists (Pty) Ltd

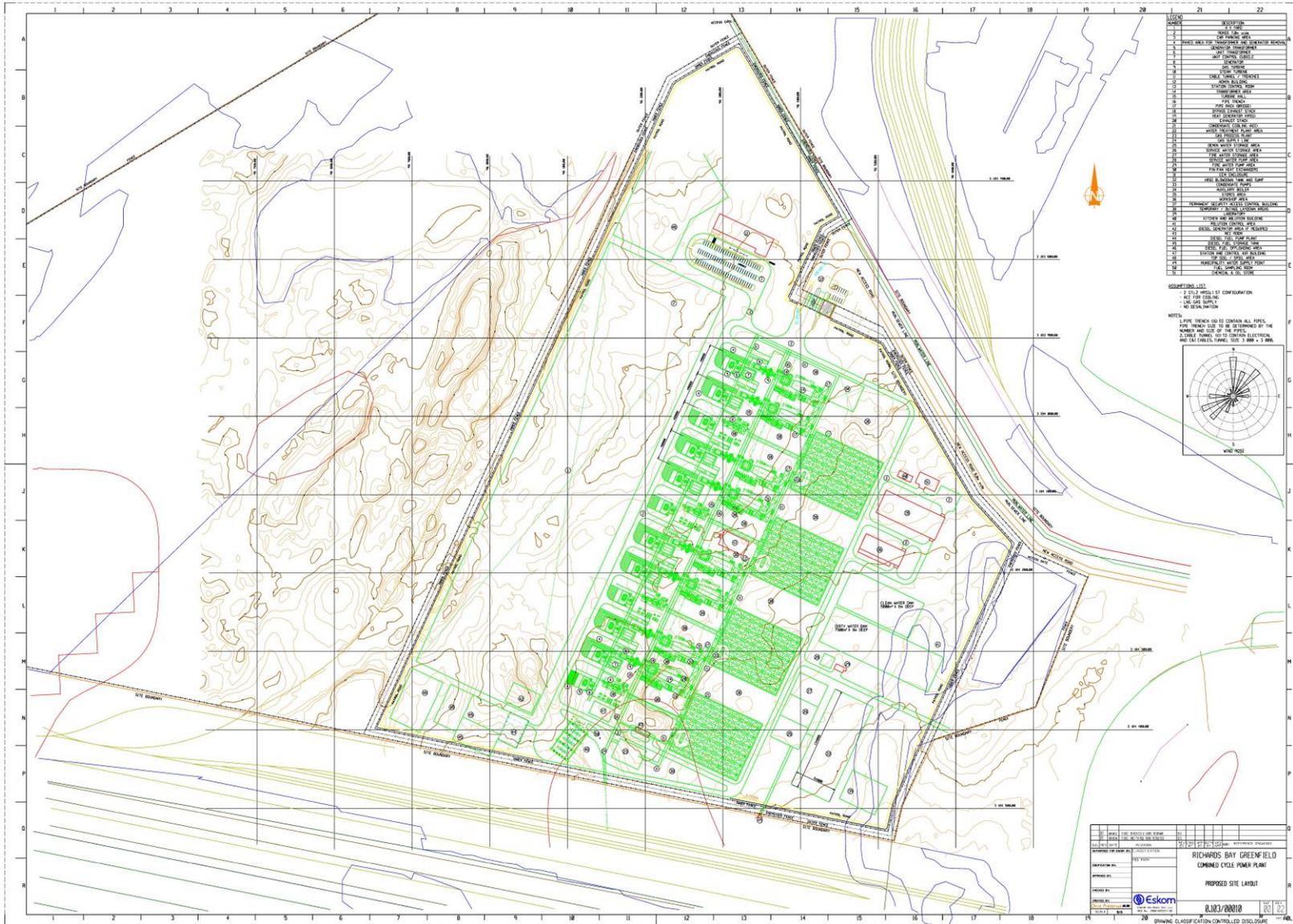


Socio-Economic Specialist
Cell: 082 463 2325
elena@urban-econ.com

APPENDIX A – ORIGINAL LAYOUT



APPENDIX B – AMENDED LAYOUT





Addendum
to the February 2019 Traffic
Impact Assessment Report for
the proposed Richards Bay
Combined cycle Power Plant
(CCPP), Richards Bay, KwaZulu-
Natal Province



July 2019

Summary Sheet

Report Type: Traffic Impact Assessment Addendum Report

Title: Addendum to the February 2019 Traffic Impact Assessment Report for the proposed Richards Bay Combined Cycle Power Plant (CCPP), Richards Bay, KwaZulu-Natal

Location: Site in Richards Bay, within the City of uMhlatuze Local Municipality in KwaZulu-Natal were identified

Client - Contact person: Savannah Environmental (Pty) Ltd – Ms. Lisa Opperman

Reference Number: TJ1625WC

Project Team: Mr. Stephen Fautley (Pr. Tech Eng. 200270171)

Contact Details: 021 - 557 7730

Date: 04 July 2019

Report Status: FINAL

File Name: C:\Users\Stephen\Qsync\Techso\Projects\Projects 2016\Gas Power Station Richards Bay\Addendum - Traffic Specialist Report - RB - CCPP (20190704).docx

This Traffic Screening Report has been prepared in accordance with the requirements in the TMH 16 Vol 1 & 2 South African Traffic Impact and Site Traffic Assessment Manual, August 2012, compiled by the Committee of Transport Officials (COTO) by a suitably qualified and registered professional traffic engineering technologist. Details of any of the calculations on which the results in this report are based will be made available on request.

CONTENTS

PAGE

1. CHANGES TO CCPP PROJECT SINCE FEBRUARY 2019	4
2. IMPACT OF AMENDED CCPP LAYOUT ON TIA REPORT OF FEBRUARY 2019	5
3. CONCLUSION.....	6
4. RECOMMENDATION	6
5. REFERENCES.....	6

LIST OF FIGURES

PAGE

Figure 1 – February 2019 Proposed CCPP site and indicative layout for the CCPP.	4
Figure 2 – May 2019 Amended layout for the CCPP.	5

1. CHANGES TO CCPP PROJECT SINCE FEBRUARY 2019

The Traffic Impact Assessment Report dated February 2019 for the subject development, assessed the traffic impact of the proposed Richards Bay Combined Cycle Power Plant (CCPP). The CCPP layout as considered in the afore-mentioned TIA is shown in **Figure 1** below.



Figure 1 – February 2019 Proposed CCPP site and indicative layout for the CCPP.

The proposed CCPP site boundary has since been amended (reduced in size) as shown in **Figure 2** below.

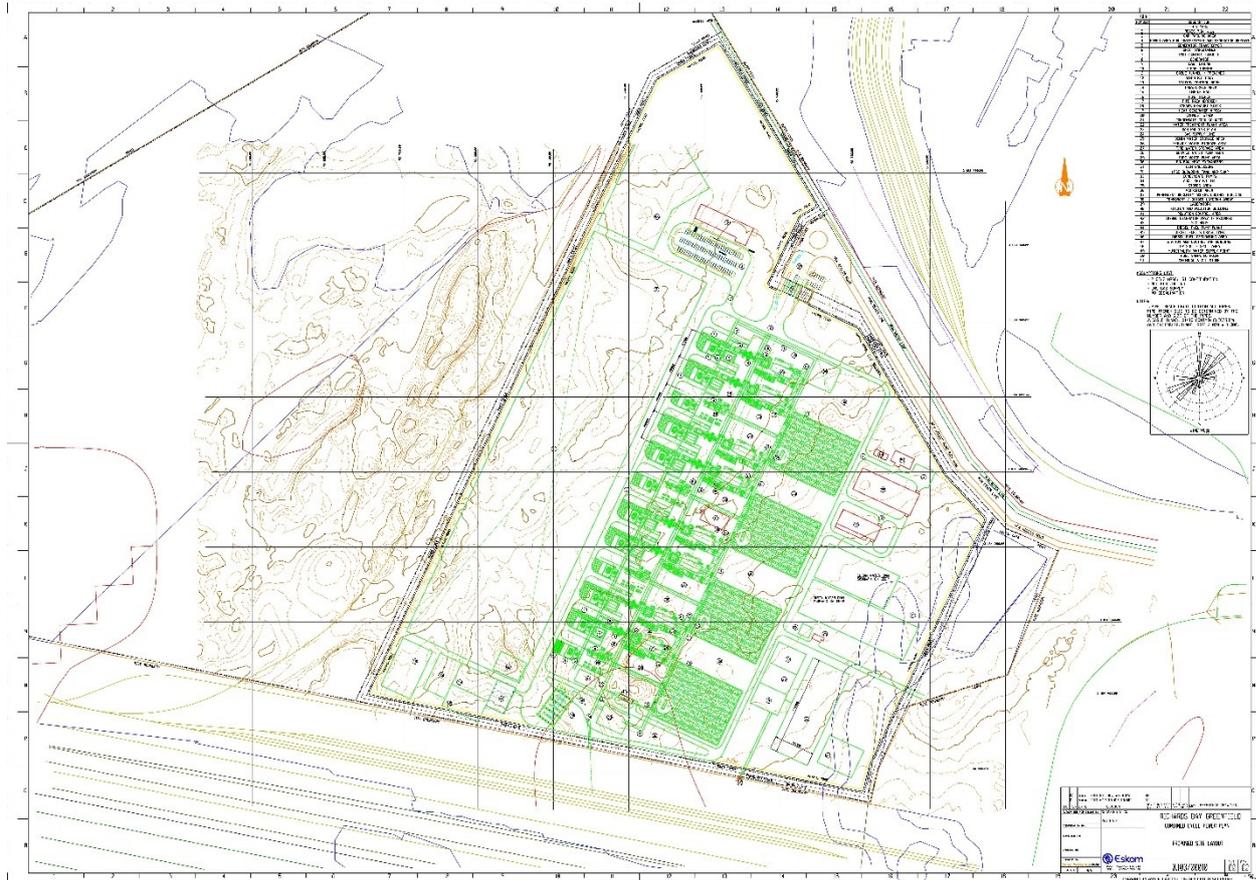


Figure 2 – May 2019 Amended layout for the CCPP.

The original layout assessed as part of the impact assessment report represented a development footprint of 71ha. The development footprint has been reduced to 52ha as part of the amended layout.

The proposed amended layout incorporates the following:

- The western and eastern boundaries of the development footprint have been reduced;
- The western boundary of the development footprint is now located parallel to the Transmission HV yard;
- The extent of the top-soil laydown area has been reduced; and
- The pollution control area has been reduced.

2. IMPACT OF AMENDED CCPP LAYOUT ON TIA REPORT OF FEBRUARY 2019

The change in the layout does not impact on the proposed CCPP, nor does it impact on the site access, expected traffic generation, and environmental assessment as contained in the Traffic Impact Assessment Report for the proposed CCPP Power Plant, Richards Bay, KwaZulu-Natal – February 2019 – Techso (Pty) Ltd.

3. CONCLUSION

It is concluded that:

1. The TIA Report dated February 2019 remains valid and that the amended layout, as shown in **Figure 2** of this report, has no impact on the conclusions and recommendations of the TIA dated February 2019.
2. The mitigation measures included are sufficient for the implementation of the amended layout and no additional measures are required.

4. RECOMMENDATION

1. It is recommended that the TIA dated February 2019 be regarded as applicable to the amended layout for the CCPP.

5. REFERENCES

2. Traffic Impact Assessment Report for the proposed CCPP Power Plant, Richards Bay, KwaZulu-Natal – February 2019 – Techso (Pty) Ltd.

PROJECT DONE ON BEHALF OF
SAVANNAH ENVIRONMENTAL (PTY) LTD

**ADDENDUM TO THE QUANTITATIVE RISK
ASSESSMENT FOR THE PROPOSED RICHARDS
BAY COMBINED CYCLE POWER PLANT NEAR
RICHARDS BAY, KWAZULU-NATAL PROVINCE**

Author: M.P Oberholzer
Date of Issue: 29th May 2019
Report No.: Addendum to R/18/SAV-01 Rev 1

P O Box 2541, Cresta, 2118
Tel: +27 (0) 11 431 2198
Cell: +27 (0) 82 457 3258
Fax: +27 (0) 86 624 9423
Email: mike@riscom.co.za



Table of Contents

1	INTRODUCTION	1-1
2	CONCLUSIONS FROM THE RISK ASSESSMENT REPORT	2-1
3	LAYOUT CHANGES.....	3-2
4	CONCLUSIONS - PROJECT SITE LAYOUT CHANGES	4-2
5	APPENDIX A: ORIGINAL SITE LAYOUT	5-1
6	APPENDIX B: UPDATED SITE LAYOUT	6-1

ADDENDUM TO THE QUANTITATIVE RISK ASSESSMENT FOR THE PROPOSED RICHARDS BAY COMBINED CYCLE POWER PLANT NEAR RICHARDS BAY, KWAZULU-NATAL PROVINCE

1 INTRODUCTION

Eskom Holdings SOC Ltd (hereinafter referred to as Eskom) proposes to construct a Combined Cycle Power Plant near Richards Bay, KwaZulu-Natal, South Africa.

A risk assessment of the proposed Eskom power plant was undertaken (Mabaso (2019)), based on a layout presented at the time of the assessment. Since issuing the risk assessment report, Eskom has proposed an update to the site layout, referred to as the amended layout.

The purpose of this report is to discuss the implication to the implementation of the amended layout and potential deviations from the original report.

2 CONCLUSIONS FROM THE RISK ASSESSMENT REPORT

Based on the information provided, the following installations were considered for analysis in the assessment:

- Chlorine;
- Natural gas;
- Diesel;
- Hydrogen;
- LPG; and
- Ammonia.

Of these installations, only the natural gas and diesel were referenced in the layout drawing See Appendix A. The remainder of the installations were placed on the layout and their locations were assumed based on the information provided.

The risk assessment also acknowledges that the detailed designs of the power plant has not been completed and that layouts may change as a result of the EIA findings and authorisation conditions.

The report concluded that although 1% fatality from these installations may extend beyond the site boundary, the risks would remain on site and should not severely impact land planning approvals. The report also stipulated that the land planning approvals can only be fully determined at the completion of the detailed designs and that local government will base approvals on the Major Hazard Installation report, as required by legislation.

The report found no fatal flaws in the project proposal that could prevent the project proceeding to the detailed design and approvals stage.

3 LAYOUT CHANGES

The amended layout is provided in Appendix B. In this amended layout, the diesel installation and the natural gas pipeline is in the same position as the original layout and would not detract from the current risk assessment. The remainder of the installations considered in the risk assessment could move to alternative positions on the site layout, which has still not been fully identified as part of the amended layout. To this end the impacts and risks associated with the project would not significantly change with the implementation of the amended layout.

Other changes proposed includes:

- The western and eastern boundaries of the development footprint have been reduced;
- The western boundary of the development footprint is now located parallel to the Transmission HV yard;
- The extent of the top-soil laydown area has been reduced; and
- The pollution control area has been reduced.

The original layout assessed as part of the risk assessment report represented a development footprint of 71ha. The development footprint has been reduced to 52ha as part of the amended layout

4 CONCLUSIONS - PROJECT SITE AMENDED LAYOUT

The implementation of the amended layout would not significantly change the risk profile of the proposed power plant and the risk assessment remains valid without any changes to the conclusions or recommendations.

It must be noted that the report undertaken as part of the EIA process does not replace the Major Hazard Installation, which will be used by local government for approvals and which will be required prior to the construction phase.

5 APPENDIX A: ORIGINAL LAYOUT

ADDENDUM TO THE QUANTITATIVE RISK ASSESSMENT FOR THE PROPOSED RICHARDS BAY COMBINED CYCLE POWER PLANT NEAR RICHARDS BAY, KWAZULU-NATAL PROVINCE



6 APPENDIX B: AMENDED LAYOUT

ADDENDUM TO THE QUANTITATIVE RISK ASSESSMENT FOR THE PROPOSED RICHARDS BAY COMBINED CYCLE POWER PLANT NEAR RICHARDS BAY, KWAZULU-NATAL PROVINCE

