



REFERENCE: 16/3/3/5/A8/15/3033/23
NEAS REFERENCE: WCP/EIA/AMEND/0000755/2023
DATE OF ISSUE: 30 August 2023

The Rector
University of Stellenbosch
P.O. Box X1
Matieland
STELLENBOSCH
7602

Attention: Mr. Francois Swart

Tel.: (021) 808 4834

E-mail: fcswart@sun.ac.za

Dear Sir

APPLICATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED) FOR THE PART 1 AMENDMENT TO THE ENVIRONMENTAL AUTHORISATION ISSUED ON 07 NOVEMBER 2018 (REFERENCE NO.: 16/3/3/1/A5/4/2031/18): PROPOSED DEVELOPMENT OF A HOSPITAL PRECINCT AND ASSOCIATED INFRASTRUCTURE AND THE UPGRADING OF AN ACCESS ROAD ON PORTIONS OF ERVEN 23974 AND 1682, BELLVILLE.

1. With reference to the above application, the competent authority hereby notifies you of its decision to **grant** the amended Environmental Authorisation, attached herewith, together with the reasons for the decision.
2. In terms of Regulation 4 of the Environmental Impact Assessment Regulations, 2014 (as amended), you are instructed to ensure, within 14 days of the date of the amended Environmental Authorisation, that all registered interested and affected parties ("I&APs") are provided with access to and reasons for the decision, and that all registered I&APs are notified of their right to appeal.
3. Your attention is drawn to Chapter 2 of the National Appeal Regulations, 2014 (as amended), which prescribes the appeal procedure to be followed. This procedure is summarised in the attached amended Environmental Authorisation.

Yours faithfully

MR. ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)
DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

CC: (1) Ms. Maurietta Stewart (City of Cape Town)
(2) Ms. Kim Pontac (Legacy Environmental)

E-mail: maurietta.stewart@capetown.gov.za
E-mail: info@legacyemc.co.za



REFERENCE: 16/3/3/5/A8/15/3033/23
NEAS REFERENCE: WCP/EIA/AMEND/0000755/2023
DATE OF ISSUE: 30 August 2023

AMENDED ENVIRONMENTAL AUTHORISATION

APPLICATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) ("NEMA") AND THE ENVIRONMENTAL IMPACT ASSESSMENT ("EIA") REGULATIONS, 2014 (AS AMENDED) FOR THE AMENDMENT OF THE ENVIRONMENTAL AUTHORISATION ISSUED ON 07 NOVEMBER 2018 (REFERENCE NO.: 16/3/3/1/A5/4/2031/18): PROPOSED DEVELOPMENT OF A HOSPITAL PRECINCT AND ASSOCIATED INFRASTRUCTURE AND THE UPGRADING OF AN ACCESS ROAD ON PORTIONS OF ERVEN 23974 AND 1682, BELLVILLE.

With reference to your application for the abovementioned, find below the amendment to the Environmental Authorisation (hereinafter referred to as an "Environmental Authorisation") with respect to this application.

A. DECISION

By virtue of the powers conferred on it by the NEMA and the EIA Regulations, 2014 (as amended), the competent authority herewith grants the amendment of the Environmental Authorisation issued on 07 November 2018 (Reference No.: 16/3/3/1/A5/4/2031/18). The Environmental Authorisation (Reference No.: 16/3/3/1/A5/4/2031/18) (attached as Appendix A) is amended as set out below:

1. **The Activity Description under Section B of the Environmental Authorisation issued on 07 November 2018 reads as follows:**

"The proposed project entails the development of a hospital precinct and associated infrastructure and the upgrading of an access road on portions of Erven 23974 and 1682, Bellville.

The proposed hospital precinct development will comprise of the following:

- The hospital precinct including hospital facilities, consulting rooms and parking bays;*
- An access road off Carl Cronje Drive, including a box culvert to cross the quarry inlet, and associated gabion mattresses and baskets;*
- Access and parking solutions for the existing Toboggan Park;*
- Engineering services for the proposed hospital precinct (i.e., water supply, effluent removal, storm water detention facilities and electrical supply);*
- The implementation of the recommendations made by the air quality specialist as part of the Landfill Air Quality Impact Assessment (i.e., the installation of a gas cut-off trench and additional monitoring probes); and*
- Rehabilitation measures and access road design considerations as recommended by the botanical and freshwater specialists.*

An access road will provide access to the proposed hospital precinct off Carl Cronje Drive. The access road will have a road reserve of 32m and will be approximately 8.7m wide and 750m long. The access road will cross the quarry inlet (the open high flow channel of the Elsieskraal River). An *in situ* box culvert of 3.6m high, 3.6m wide and 13m long will be constructed to accommodate the new access road and associated sidewalks. Erosion protection works such as gabion mattresses or concrete slab apron and gabion boxes will be provided up and downstream and will tie into the existing erosion protection works in the channel. The culvert will accommodate the 1:100-year flood.

The proposed new access road mainly follows the alignment of the current access road to the Toboggan Park and will require portions of the current road to be removed/demolished during the construction of the new access road. The new access road also crosses the piped portion of the low flow channel of the Elsieskraal River and does not require the construction of a bridge structure".

This is herewith replaced with the following:

The proposed project entails the development of a hospital precinct and associated infrastructure and the upgrading of an access road on portions of Erven 23974 and 1682, Bellville.

The proposed hospital precinct development will comprise of the following:

- The hospital precinct including hospital facilities, consulting rooms and parking bays;
- An access road off Carl Cronje Drive, including a box culvert to cross the quarry inlet, and associated in-situ cast concrete;
- Access and parking solutions for the existing Toboggan Park;
- Engineering services for the proposed hospital precinct (i.e., water supply, effluent removal, storm water detention facilities and electrical supply);
- The implementation of the recommendations made by the air quality specialist as part of the Landfill Air Quality Impact Assessment (i.e., the installation of a gas cut-off trench and additional monitoring probes); and
- Rehabilitation measures and access road design considerations as recommended by the botanical and freshwater specialists.

An access road will provide access to the proposed hospital precinct off Carl Cronje Drive. The access road will have a road reserve of 32m and will be approximately 8.7m wide and 750m long. The access road will cross the quarry inlet (the open high flow channel of the Elsieskraal River). An *in-situ* box culvert of 4.7m high, 7.2m wide and 17.174m long will be constructed to accommodate the new access road and associated sidewalks. Erosion protection works such *in-situ* cast concrete and gabion baskets will be provided up and downstream and will tie into the existing erosion protection works in the channel. The culvert will accommodate the 1:100-year flood.

The proposed new access road mainly follows the alignment of the current access road to the Toboggan Park and will require portions of the current road to be removed/demolished during the construction of the new access road. The new access road also crosses the piped portion of the low flow channel of the Elsieskraal River and does not require the construction of a bridge structure.

B. REASONS FOR THE DECISION:

In reaching its decision, the competent authority took, *inter alia*, the following into consideration:

- (a) The information contained in the application form received by the competent authority via electronic mail correspondence on 01 August 2023.
- (b) The application is for a Part 1 amendment to the Environmental Authorisation and will not increase the level or nature of the impacts assessed as part of the initial EIA application.
- (c) The amendment is applied for in order to alter the design of the box culvert and channel lining.
- (d) No additional impacts are anticipated due to the proposed amendment. This can be justified as follows:

- i. Alteration to the design of the box culvert:

The culvert was designed to handle a 1 in 100-year flood, which amounted to 56m³, to reduce the risk of floodwater backing up at the culvert bridge and prevent overflow. However, the proposed enlargement of the box culvert will enhance the culvert's resilience against high water velocities and large water volumes during intense rainfall and storms.

The approved box culvert crossing of 3.6m high, 3.6m wide and 13m long is insufficient to accommodate the more recent flood determinations for the river. It is now proposed that the structure be increased to an *in-situ* box culvert of 4.7m high, 7.2m wide and 17.174m long to accommodate the predicted larger future flows. Since the proposed amendment will result in an increase in the width of the structure, a reduced impact on the flows in the channel is expected and thus a reduction in the potential aquatic ecosystem impacts.

- ii. Alteration to the design of the channel lining:

An Aquatic Statement dated 27 July 2023 was compiled by BlueScience, to assess the potential impacts of the proposed *in-situ* cast concrete liner at the invert of the channel of the Elsieskraal River high flow diversion, both downstream and upstream of the proposed permanent culvert bridge.

Downstream of the permanent culvert bridge:

The significant level difference between the culvert invert level and quarry discharge height (top water level under normal conditions) results in a steep slope, thereby increasing the velocity of flow significantly. *In-situ* cast concrete is the preferred solution to mitigate the risk of long-term scouring on the riverbed. The use of concrete will allow the construction of vertical energy dissipation steps to reduce the effect of turbulent flow on the quarry edge.

Upstream of the permanent culvert bridge (40m):

The 40m section upstream of the culvert is critical to ensure steady flow in the approach to the culvert opening. This is best achieved with a smooth homogeneous concrete finish. During major storms, an increase in the high-water level in the quarry results in a backwater effect, which may cause turbulence upstream of the culvert. *In-situ* concrete will protect the channel

invert against heavy scour under such circumstances. Sedimentation and vegetation growth can significantly reduce the hydraulic capacity of the channel. A future sedimentation basin for the proposed low-flow diversion will consist of a concrete structure, which will tie in with the proposed concrete lined invert.

Both up-and-downstream concrete lining of the channel invert is imperative for erosion control as a more stable solution to protect the canal, and to prevent nuisance vegetation growth that blocks the channel, thus minimising the maintenance requirements for the canal. The concrete invert (bottom lining) is the best solution to deal with the high volumes and water flow speed of the high-flow diversion canal. Furthermore, sedimentation and vegetation growth can significantly reduce the hydraulic capacity of the channel. A smooth concrete finish will deter vegetation growth, increase self-cleansing potential, and ease maintenance for routine clearing.

iii. Freshwater Impacts:

The freshwater specialist who undertook the initial Aquatic Biodiversity Assessment for the authorised development, confirmed (in the Aquatic Statement dated 27 July 2023) that the proposed amendments and changes to the access road crossing do not significantly alter the findings of the Freshwater Impact Assessment dated October 2017.

The freshwater specialist also indicated that the channel in which the works will take place comprises an excavated bypass of the Elsieskraal River that diverts high-flow events into an adjacent quarry. The channel is straight and steep-sided with limited instream vegetation. In terms of its habitat integrity, the channel is deemed to be seriously to critically modified. The ecological integrity of the River at the site appears to be essentially unchanged from the 2017 assessment.

The site is located within a wider area considered to be of very high aquatic biodiversity sensitivity. This is due to the rivers, wetlands and estuaries within the wider area having been mapped as Aquatic Critical Biodiversity Areas (a seep located on the adjacent hillslope) and Freshwater Ecosystem Priority Area Wetlands (artificial wetlands at the quarry), and a Strategic Water Source Area for groundwater (Cape Peninsula and Cape Flats) occurring. However, it is highly unlikely that the proposed activities will impact the surrounding sensitivities.

The assessed impact ratings (medium to low negative significance) will not be altered due to any of the proposed amendments. The cumulative impact of the proposed amendment will also not be altered, provided the initial recommended freshwater mitigation measures are implemented. The risk rating of medium to low negative significance will also remain unchanged.

The mitigation measures stated in the Freshwater Impact Assessment Report dated October 2017 remain the same, and no additional mitigation measures are required.

- (e) The environment and the rights and interests of interested and affected parties ("I&APs") are not likely to be affected.

- (f) No listed activities are triggered by the proposed amendments.
- (g) The conditions contained in the Environmental Authorisation issued on 07 November 2018 still remain unchanged and in force.

C. CONDITION:

1. The holder must in writing, within 14 (fourteen) calendar days of the date of this decision–
 - 1.1 notify all registered I&APs of –
 - 1.1.1 the outcome of the application;
 - 1.1.2 the reasons for the decision as included in Section B;
 - 1.1.3 the date of the decision; and
 - 1.1.4 the date when the decision was issued.
 - 1.2 draw the attention of all registered I&APs to the fact that an appeal may be lodged against the decision in terms of the National Appeal Regulations, 2014 (as amended) detailed in Section D below;
 - 1.3 draw the attention of all registered I&APs to the manner in which they may access the decision; and
 - 1.4 provide the registered I&APs with:
 - 1.4.1 the name of the holder (entity) of this Environmental Authorisation;
 - 1.4.2 name of the responsible person for this Environmental Authorisation;
 - 1.4.3 postal address of the holder;
 - 1.4.4 telephonic and fax details of the holder;
 - 1.4.5 e-mail address, if any, of the holder; and
 - 1.4.6 the contact details (postal and/or physical address, contact number, facsimile and e-mail address) of the decision-maker and all registered I&APs in the event that an appeal is lodged in terms of the National Appeal Regulations, 2014 (as amended).

D. APPEALS:

1. Appeals must comply with the provisions contained in the National Appeal Regulations, 2014 (as amended).

An appellant must –

- 1.1 Submit an appeal in accordance with Regulation 4 to the appeal administrator, within 20 (twenty) calendar days from the date the applicant notified registered I&APs of this decision.
- 1.2 If the appellant is the applicant, provide any registered I&AP, any Organ of State and the decision-maker with a copy of the appeal lodged with the appeal administrator.

- 1.3 If the appellant is a person other than the applicant, provide the applicant, any registered I&AP, any Organ of State and the decision-maker with a copy of the appeal lodged with the appeal administrator.
- 1.4 The applicant (if not the appellant), the decision-maker, I&APs and Organs of State must submit their responding statement, if any, to the appeal authority and the appellant within 20 days from the date of receipt of the appeal submission.
- 1.5 The appeal form/s must be submitted by means of one of the following methods:
- By post: Attention: Mr. Marius Venter
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. Marius Venter (Tel: 021 483 3721), Room 809
8th Floor Utilitas Building, 1 Dorp Street, Cape Town, 8001
- By e-mail: DEADP.Appeals@westerncape.gov.za
- 1.6 An electronic copy (word document format) of the appeal and supporting documents must also be submitted.
- 1.7 A prescribed appeal form, as well as assistance regarding the appeal processes is obtainable from the office of the appeal authority at: Tel. (021) 483 3721, E-mail DEADP.Appeals@westerncape.gov.za or URL <http://www.westerncape.gov.za/eadp>.

E. DISCLAIMER

The Western Cape Government, the Local Authority, committees or any other public authority or organisation appointed in terms of the conditions of this Amended 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 greatly appreciated.

Yours faithfully

MR. ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)
DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

DATE OF DECISION: 30 AUGUST 2023

CC: (1) Ms. Maurietta Stewart (City of Cape Town)
(2) Ms. Kim Pontac (Legacy Environmental)

E-mail: maurietta.stewart@capetown.gov.za
E-mail: info@legacyemc.co.za

-----END-----

APPENDIX A

A copy of the Environmental Authorisation issued on 07 November 2018 (Reference No.: 16/3/3/1/A5/4/2031/18)



REFERENCE: 16/3/3/1/A5/4/2031/18
ENQUIRIES: RONDINE ISAACS
DATE OF ISSUE: 2018 -11- 07

The Rector
University of Stellenbosch
PO Box 1
MATIELAND
7602

Attention: Mr Francois Swart

Tel.: (021) 808 4834
Fax: (021) 883 2257

Dear Sir

APPLICATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) ("NEMA") AND THE ENVIRONMENTAL IMPACT ASSESSMENT ("EIA") REGULATIONS, 2014:

PROPOSED DEVELOPMENT OF A HOSPITAL PRECINCT AND ASSOCIATED INFRASTRUCTURE AND THE UPGRADE OF AN ACCESS ROAD ON PORTIONS OF ERVEN 23974 AND 1682, BELLVILLE

1. With reference to the above application, the competent authority hereby notifies you of its decision to **grant** Environmental Authorisation, attached herewith, together with the reasons for the decision.
2. In terms of Regulation 4 of the EIA Regulations, 2014, you are instructed to ensure, within 14 days of the date of the Environmental Authorisation, that all registered Interested and Affected Parties are provided with access to and reasons for the decision, and that all registered Interested and Affected Parties are notified of their right to appeal.
3. Your attention is drawn to Chapter 2 of the Appeal Regulations, 2014, which prescribes the procedure to be followed in the event of appeals being lodged. This procedure is summarized in the attached Environmental Authorisation.

Yours faithfully

DIRECTOR, DEVELOPMENT MANAGEMENT (REGION 1)
DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

Copied to: (1) Ms Karin Neethling (Withers Environmental Consultants (Pty) Ltd)

Fax: (021) 883 2952



REFERENCE: 16/3/3/1/A5/4/2031/18
ENQUIRIES: RONDINE ISAACS
DATE OF ISSUE: 2018 -11- 07

The Rector
University of Stellenbosch
PO Box 1
MATIELAND
7602

Attention: Mr Francois Swarf

Tel.: (021) 808 4834
Fax: (021) 883 2257

Dear Sir

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) ("NEMA") AND THE ENVIRONMENTAL IMPACT ASSESSMENT ("EIA") REGULATIONS, 2014:

PROPOSED DEVELOPMENT OF A HOSPITAL PRECINCT AND ASSOCIATED INFRASTRUCTURE AND THE UPGRADING OF AN ACCESS ROAD ON PORTIONS OF ERVEN 23974 AND 1682, BELLVILLE

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

ENVIRONMENTAL AUTHORISATION

DECISION

By virtue of the powers conferred on it by the NEMA and the EIA Regulations, 2014, the competent authority herewith grants Environmental Authorisation to the applicant to undertake the list of activities specified in Section B below as included in the Basic Assessment Report ("BAR") dated 16 August 2018.

The granting of this Environmental Authorisation (hereinafter referred to as the "Environmental Authorisation") is subject to compliance with the conditions set out in Section E below.

A. DETAILS OF THE HOLDER OF THIS ENVIRONMENTAL AUTHORISATION

University of Stellenbosch
c/o Mr Francois Swart
PO Box 1
MATIELAND
7602
Tel.: (021) 808 4834
Fax: (021) 883 2257

The abovementioned applicant is the holder of this Environmental Authorisation and is hereinafter referred to as "the holder".

B. LIST OF ACTIVITIES AUTHORISED

Government Notice No. R. 983 of 4 December 2014 –

| Listed Activity | Activity/Project Description |
|--|---|
| <p>Activity 19: <i>"The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</i></p> <p><i>but excluding where such infilling, depositing, dredging, excavation, removal or moving -</i></p> <ul style="list-style-type: none"><i>(a) will occur behind a development setback;</i><i>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</i><i>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</i><i>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</i><i>(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies".</i> | <p>The excavation from and infilling of material into the watercourse will be required for the proposed development of the access road across the quarry inlet.</p> |
| <p>Activity 27: <i>"The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for -</i></p> <ul style="list-style-type: none"><i>(i) the undertaking of a linear activity; or</i><i>(ii) maintenance purposes undertaken in accordance with a maintenance management plan".</i> | <p>More than 1ha of indigenous vegetation will be cleared.</p> |

| Listed Activity | Activity/Project Description |
|--|--|
| <p>Activity 12: <i>"The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</i></p> <p>i. <i>Western Cape</i></p> <p>i. <i>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;</i></p> <p>ii. <i>Within critical biodiversity areas identified in bioregional plans;</i></p> <p>iii. <i>Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line or even in urban areas;</i></p> <p>iv. <i>On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or</i></p> <p>v. <i>On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister".</i></p> | <p>More than 300m² of critically endangered vegetation will be cleared.</p> |

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

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

The proposed project entails the development of a hospital precinct and associated infrastructure and the upgrading of an access road on portions of Erven 23974 and 1682, Bellville.

The proposed hospital precinct development will comprise of the following:

- The hospital precinct including hospital facilities, consulting rooms and parking bays;

- An access road off Carl Cronje Drive, including a box culvert to cross the quarry inlet, and associated gabion mattresses and baskets;
- Access and parking solutions for the existing Toboggan Park;
- Engineering services for the proposed hospital precinct (i.e., water supply, effluent removal, storm water detention facilities and electrical supply);
- The implementation of the recommendations made by the air quality specialist as part of the Landfill Air Quality Impact Assessment (i.e., the installation of a gas cut-off trench and additional monitoring probes); and
- Rehabilitation measures and access road design considerations as recommended by the botanical and freshwater specialists.

An access road will provide access to the proposed hospital precinct off Carl Cronje Drive. The access road will have a road reserve of 32m and will be approximately 8.7m wide and 750m long. The access road will cross the quarry inlet (the open high flow channel of the Elsiekraal River). An *in situ* box culvert of 3.6m high, 3.6m wide and 13m long will be constructed to accommodate the new access road and associated sidewalks. Erosion protection works such as gabion mattresses or concrete slab apron and gabion boxes will be provided up and downstream and will tie into the existing erosion protection works in the channel. The culvert will accommodate the 1:100-year flood.

The proposed new access road mainly follows the alignment of the current access road to the Toboggan Park and will require portions of the current road to be removed/demolished during the construction of the new access road. The new access road also crosses the piped portion of the low flow channel of the Elsiekraal River and does not require the construction of a bridge structure.

C. LOCATION AND SITE DESCRIPTION

The listed activities will take place on portions of Erven 23974 and 1682, Bellville.

The proposed hospital precinct is located between the existing Cool Runnings Toboggan Family Park and the Bellville Park quarry pond on Erf No. 23974. The proposed new access road is located off Carl Cronje Drive and across Erf No. 1682. The road continues to the south of the Engen filling station, where after the road bends to cross the quarry inlet and Erf No. 23974 directly south of the Toboggan Family Park and terminates in a traffic circle to the west of the quarry. Erf No. 1682 is located directly to the east of Erf No. 23974.

The SG 21-digit codes are:

Erf No. 23974: C01600020002397400000

Erf No. 1682: C01600020000168200000

Co-ordinates:

Erf No. 23974 (hospital precinct):

Latitude: 33° 52' 48.75" S

Longitude: 18° 37' 42.75" E

Quarry inlet crossing:

Latitude: 33° 52' 53.11" S

Longitude: 18° 37' 49.35" E

New access roadStarting point (current Mispel Road intersection):

Latitude: 33° 52' 56.27" S

Longitude: 18° 37' 52.09" E

Middle point:

Latitude: 33° 52' 46.65" S

Longitude: 18° 37' 41.25" E

End point:

Latitude: 33° 52' 52.39" S

Longitude: 18° 37' 34.90" E

Refer to Annexure 1: Locality Plan and Annexure 2: Site Plan.

hereinafter referred to as "the site".

D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

Withers Environmental Consultants (Pty) Ltd
c/o Ms Karin Neethling
PO Box 6118
UNIEDAL
7612
Tel.: (021) 887 4000
Fax: (021) 883 2952

E. CONDITIONS OF AUTHORISATION**Scope of authorisation**

1. The holder is authorised to undertake the listed activities specified in Section B above in accordance with and restricted to the preferred alternative, described in the BAR dated 16 August 2018 on the site as described in Section C above.
2. Authorisation of the activities is subject to compliance with the conditions set out in this Environmental Authorisation. The holder must ensure compliance with the conditions by any person acting on his/her behalf, including an agent, sub-contractor, employee or any person rendering a service to the holder.
3. The holder must commence with, and conclude, the listed activities within the stipulated validity period which this Environmental Authorisation is granted for, or this Environmental Authorisation shall lapse and a new application for Environmental Authorisation must be submitted to the competent authority.

This Environmental Authorisation is granted for–

- (a) A period of five (**5**) years, from the date of issue, during which period the holder must commence with the authorised listed activities; and
 - (b) A period of ten (**10**) years, from the date the holder commenced with an authorised listed activity, during which period the authorised listed activities for the construction phase, must be concluded.
4. The activities that have been authorised may only be carried out at the site described in Section C above in terms of the approved "Environmental Management Programme" ("EMPr").
 5. Any changes to, or deviations from the scope of the description set out in Section B and Condition 2 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 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.

Notification of authorisation and right to appeal

6. The holder of the authorisation must in writing, within 14 (fourteen) calendar days of the date of this decision –
 - 6.1 notify all registered Interested and Affected Parties of –
 - 6.1.1 the outcome of the application;
 - 6.1.2 the reasons for the decision;
 - 6.1.3 the date of the decision; and
 - 6.1.4 the date of issue of the decision;
 - 6.2 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 the National Appeals Regulation, 2014;
 - 6.3 draw the attention of all registered Interested and Affected Parties to the manner in which they may access the decision; and
 - 6.4 provide the registered Interested and Affected Parties with:
 - 6.4.1 the name of the holder (entity) of this Environmental Authorisation,
 - 6.4.2 name of the responsible person for this Environmental Authorisation,
 - 6.4.3 postal address of the holder,
 - 6.4.4 telephonic and fax details of the holder,
 - 6.4.5 e-mail address, if any;
 - 6.4.6 the contact details (postal and/or physical address, contact number, facsimile and e-mail address) of the decision-maker and all registered Interested and Affected Parties in the event that an appeal is lodged in terms of the National Appeals Regulations 2014.

Commencement

7. The listed activities, including site preparation, must not commence within 20 (twenty) calendar days from the date the applicant notified the registered Interested and Affected Parties of this decision.
8. In the event that an appeal is lodged with the Appeal Administrator, the effect of this Environmental Authorisation is suspended until such time as the appeal is decided. In the instance where an appeal is lodged the holder may not commence with the activity, including site preparation, until such time as the appeal has been finalised and the holder is authorised to do so.

Written notice to the competent authority

9. Seven calendar days' notice, in writing, must be given to the competent authority before commencement of construction activities. Commencement for the purpose of this condition includes site preparation.
 - 9.1 The notice must make clear reference to the site details and EIA Reference number given above.
 - 9.2 The notice must also include proof of compliance with the following conditions described herein:
Conditions: 6, 7, 14 and 21.

Management of activity

10. The draft EMPr submitted as part of the application for Environmental Authorisation is hereby approved and must be implemented.
11. An application for amendment to the EMPr must be submitted to the competent authority in terms of Chapter 5 of the EIA Regulations, 2014 if any amendments are to be made to the outcomes of the EMPr, and these may only be implemented once the amended EMPr has been authorised by the competent authority.
12. The EMPr must be included in all contract documentation for all phases of implementation.
13. A copy of the Environmental Authorisation and the EMPr 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 EMPr 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 EMPr must also be made available for inspection by any employee or agent of the applicant who works or undertakes work at the site.

Monitoring

14. The holder must appoint a suitably experienced Environment Control Officer ("ECO"), for the duration of the construction and rehabilitation phases of implementation.

The ECO must—

- 14.1 be appointed prior to commencement of any land clearing or construction activities commencing;
- 14.2 ensure compliance with the EMPr and the conditions contained herein;
- 14.3 keep record of all activities on site; problems identified; transgressions noted and a task schedule of tasks undertaken by the ECO; and
- 14.4 remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed.

Environmental audit reports

15. The holder must, for the period during which the Environmental Authorisation and EMPr remain valid—
 - 15.1 ensure that the compliance with the conditions of the Environmental Authorisation and the EMPr is audited;
 - 15.2 submit at least two environmental audit reports to the relevant competent authority during the construction phase. The holder must submit one audit report six months after commencement of the construction phase and another audit report six months after completion of the construction period; and
 - 15.3 submit an environmental audit report every five (5) years while the Environmental Authorisation remains valid.
16. The environmental audit report must be prepared by an independent person and must address the objectives and contain all the information set out in Appendix 7 of the EIA Regulations, 2014.

In addition to the above, the environmental audit report, must -

- 16.1 provide verifiable findings, in a structured and systematic manner, on—
 - (a) the level of compliance with the conditions of the Environmental Authorisation and the EMPr and whether this is sufficient or not; and
 - (b) the extent to which the avoidance, management and mitigation measures provided for in the EMPr achieve the objectives and outcomes of the EMPr and highlight whether this is sufficient or not;
- 16.2 identify and assess any new impacts and risks as a result of undertaking the activity;
- 16.3 evaluate the effectiveness of the EMPr;
- 16.4 identify shortcomings in the EMPr;
- 16.5 identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMPr;
- 16.6 indicate the date on which the construction work was commenced with and completed or in the case where the development is incomplete, the progress of the development and rehabilitation;
- 16.7 include a photographic record of the site applicable to the audit; and
- 16.8 be informed by the ECO reports.

17. The holder must, within 7 days of the submission of the environmental audit report to the competent authority, notify all potential and registered Interested and Affected Parties of the submission and make the report available to anyone on request and, where the holder has such a facility, be placed on a publicly accessible website.

Specific conditions

18. Surface or ground water must not be polluted due to any actions on the site. The applicable requirements with respect to relevant legislation pertaining to water must be met.
19. 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 waste disposal facility licensed in terms of the applicable legislation.
20. 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.

21. The wild olive thicket must be clearly demarcated and fenced off before commencement of any construction activities and must be considered as a no-go area during the construction process.
22. The mitigation measures and recommendations made by the various specialists involved in the EIA process, as contained in the EMP, must be implemented and strictly adhered to.
23. Water saving mechanisms and/or water recycling systems must be installed in order to reduce water consumption that include *inter alia*, the following:
 - 23.1 A dual-flush toilet system.
 - 23.2 All taps must be fitted with water saving devices, that is, tap aerators, flow restrictors and low flow shower heads.
 - 23.3 Water-wise landscaping must be done.
 - 23.3.1 Indigenous plants and/or plants that require little water must be used.

23.3.2 The use of kikuyu grass must be prohibited in all landscaped areas. Non-invasive, low-water use grass must be used for any lawns on site.

24. The development must incorporate energy/electricity saving measures, which include *inter alia*, the following:
 - 24.1 Use of energy efficient lamps and light fittings. Low energy bulbs must be installed and replacement bulbs must also be of the low energy consumption type.
 - 24.2 Street lighting must be kept to a minimum and down lighting must be used to minimize light impacts. Street light must be switch off during the day.
 - 24.3 All geysers must be covered with geyser 'blankets'.
25. The holder of the Environmental Authorisation must, at all times, ensure that the activities comply with the Noise Regulations in terms of the relevant legislation.
26. Notwithstanding this Environmental Authorisation, the holder must comply with any other statutory requirements that may be applicable when undertaking the listed activities.
27. If the holder does not commence with the listed activities within the period referred to in Condition 3, this Environmental Authorisation shall lapse for the activity, and a new application for Environmental Authorisation must be submitted to the competent authority. If the holder wishes to extend the validity period of the Environmental Authorisation, an application for amendment in this regard must be made to the competent authority prior to the expiry date of the Environmental Authorisation.
28. The holder must submit an application for amendment of the Environmental Authorisation to the competent authority where any detail with respect to the Environmental Authorisation must be amended, added, substituted, corrected, removed or updated. If a new holder is proposed, an application for amendment in terms of Part 1 of the EIA Regulations, 2014 must be submitted.

Please note that an amendment is not required if there is a change in the contact details of the holder. In this case, the competent authority must only be notified of such changes.

29. The manner and frequency for updating the EMPr is as follows:

Amendments to the EMPr, other than those mentioned above, must be done in accordance with Regulations 35 to 37 of GN No. R. 982 of 4 December 2014 or any relevant legislation that may be applicable at the time.
30. Non-compliance with a condition of this Environmental Authorisation or EMPr may render the holder liable to criminal prosecution.

F. APPEALS

Appeals must comply with the provisions contained in the National Appeal Regulations 2014 (as amended).

1. An appellant (if the holder of the decision) must, within 20 (twenty) calendar days from the date notification of the decision was sent to the holder by the competent authority -
 - 1.1 Submit an appeal in accordance with Regulation 4 of the National Appeal Regulations 2014 (as amended) to the Appeal Administrator; and
 - 1.2 Submit a copy of the appeal to any registered Interested and Affected Parties, any Organ of State with interest in the matter and the decision-maker i.e. the competent authority that issued the decision.
2. An appellant (if NOT the holder of the decision) must, within 20 (twenty) calendar days from the date the holder of the decision sent notification of the decision to the registered Interested and Affected Parties -
 - 2.1 Submit an appeal in accordance with Regulation 4 of the National Appeal Regulations 2014 (as amended) to the Appeal Administrator; and
 - 2.2 Submit a copy of the appeal to the holder of the decision, any registered Interested and Affected Party, any Organ of State with interest in the matter and the decision-maker i.e. the competent authority that issued the decision.
3. The holder of the decision (if not the appellant), the decision-maker that issued the decision, the registered Interested and Affected Party and the Organ of State must submit their responding statements, if any, to the appeal authority and the appellant within 20 (twenty) calendar days from the date of receipt of the appeal submission.
4. The appeal and the responding statement must be submitted to the address listed below:

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 Jaap de Villiers (Tel: 021 483 3721)
Room 809
8th Floor Utilitas Building, 1 Dorp Street, Cape Town, 8001

Note: For purposes of electronic database management, you are also requested to submit electronic copies (Microsoft Word format) of the appeal, responding statement and any supporting documents to the Appeal Authority to the address listed above and/ or via e-mail to Jaap.DeVilliers@westerncape.gov.za.

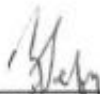
5. A prescribed appeal form as well as assistance regarding the appeal processes is obtainable from Appeal Authority at: Tel. (021) 483 3721, E-mail Jaap.DeVilliers@westerncape.gov.za or URL <http://www.westerncape.gov.za/eadp>.

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 ZAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

DATE OF DECISION: 07/11/2018

CC: (1) Ms Karin Neethling (Withers Environmental Consultants (Pty) Ltd)

Fax: (021) 883 2952

FOR OFFICIAL USE ONLY:

EIA REFERENCE NUMBER: 16/3/3/1/A5/4/2031/18
NEAS EIA REFERENCE NUMBER: WCP/EIA/0000423/2018

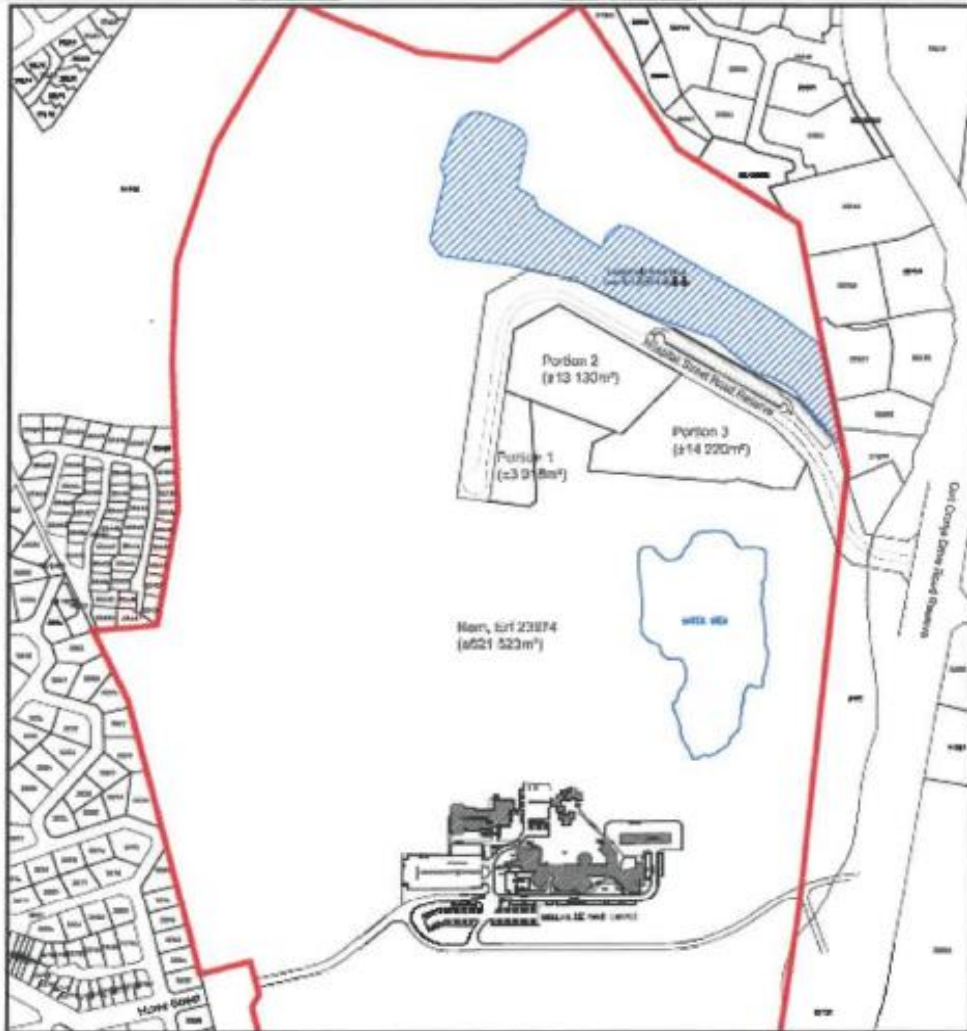
ANNEXURE 1: LOCALITY PLAN

The approximate location of Erven 23974 and 1682, Bellville.



ANNEXURE 2: SITE PLAN

The proposed hospital precinct and access road on portions of Erven 23974 and 1682, Bellville.



ANNEXURE 3: 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 21 May 2018, as received by the competent authority on the same date; the BAR dated 16 August 2018 and the EMPr submitted together with the BAR; and the information received by the competent authority on 27 August 2018, 28 August 2018, 14 September 2018, 28 September 2018 and 18 October 2018, respectively;
- b) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the NEMA;
- c) The comments received from Interested and Affected Parties and the responses provided thereon, as included in the BAR dated 16 August 2018;
- d) The pre-application consultation meeting held on 25 August 2017

Attended by: Mr Eldon van Boom and Ms Rondine Isaacs of the Department of Environmental Affairs and Development Planning ("DEA&DP"); and Ms Karin Neethling and Mr Douw Steyn of Withers Environmental Consultants (Pty) Ltd.

- e) No site visits were conducted. The competent authority had sufficient information before it to make an informed decision without conducting a site visit.

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. Public Participation

The Public Participation Process comprised of the following:

- E-mails were sent on 15 May 2018, 18 May 2018 and 21 May 2018, respectively to indicate the availability of the Background Information Document;
- An advertisement was placed in the "Tygerburger" newspaper on 16 May 2018;
- Background Information Documents were distributed to stakeholders on 18 May 2018;
- A notice board was erected at the entrance to the site on 19 May 2018;
- The post-application draft BAR was made available from 21 May 2018 until 22 June 2018;
- The post-application draft BAR was placed at the Tygervalley Library on 21 May 2018; and
- A meeting was held with the owners of the Toboggan Park on 1 August 2018.

Authorities consulted

The authorities consulted included the following:

- Directorate: Pollution and Chemicals Management of the DEA&DP;
- Directorate: Waste Management of the DEA&DP;
- Directorate: Air Quality Management of the DEA&DP;
- CapeNature;
- Department of Health;
- Department of Transport and Public Works;

- South African National Roads Agency Limited;
- Various departments within the City of Cape Town;
- Department of Water and Sanitation; and
- Heritage Western Cape.

The competent authority is satisfied that the Public Participation Process that was followed met the minimum legal requirements. All the objections and comments and responses that were raised were included in the BAR.

2. Alternatives

The following activity alternatives were investigated:

Parking alternatives:

Option 1:

In this alternative parking is provided adjacent to the hospital access road. The entry and exit points are aligned with the access points for Portions 2 and 3. This alternative was rejected since the average walking distance is approximately 100m.

Option 2:

Alternative 2 proposes a parking area north of the Toboggan Park. This alternative was rejected since it is located on a landfill. In order to accommodate an access road to the parking area with acceptable gradients, it will be required to cut into the natural ground level (landfill). In addition, the alternative will also require the covering of the drainage channel/cut-off trench.

Option 3:

This alternative is a combination of on-street parking and a portion of Option 1. This alternative was rejected since the on-street parking will only be viable while the traffic volumes on the road are low.

Option 4 (preferred alternative – herewith authorised):

Option 4 is similar to Option 1 in that parking is provided adjacent to the hospital access road, but is located further to the east and provides additional bays. The entry point is opposite Portion 2 and the exit point is located approximately 80m east of the access to Portion 3. This is the preferred alternative since it will be the least disruptive to the existing Toboggan Park lease and offers the same number of bays.

Storm water management alternatives:

Option 1:

A detention pond will be placed on each portion, and as such, there will be three ponds. Each pond will cater for the required detention volume of the portion it is located on. This is the preferred alternative from a freshwater perspective since the storm water generated on each portion will be accommodated on that portion.

Option 2:

This alternative makes provision for one detention pond which will be placed outside the boundary in the open space between Portion 3 and the quarry pond and a second pond to be placed on Portion 3. This alternative was rejected since the two ponds will cater for the entire required detention volume. Pond 1 will receive runoff from Portion 2 and the

western section of Portion 3, and Pond 2 will receive runoff from the eastern section of Portion 3.

"No-Go" Alternative:

This alternative implies that the hospital precinct and access road will not be established. This alternative was rejected since the site is used for dumping of building material and the veld is used as a toilet. In addition, the no-go option is not a viable alternative in the medium to long term since the site is zoned appropriately, i.e., for hospital/medical facilities.

3. Impacts, assessment and mitigation measures

3.1 Activity Need and Desirability

The Municipal Planning Tribunal of the City of Cape Town approved the subdivision of Erf No. 23974, Bellville into a Remainder, a Portion 1, a Portion 2 and a Portion 3 on 12 December 2017. The subdivision will enable the development of a hospital which is considered to be compatible with the surrounding residential and commercial developments.

The proposed development is consistent with the approved City of Cape Town policies and strategies such as the Northern District Plan, Economic Growth Strategy, the Social Development Strategy and the Transit-Orientated Development Strategic Framework. The proposed development will contribute to job creation, provide important community infrastructure and contribute to the intensification of the metropolitan node which supports public transport.

Erf No. 23974 is located within an area identified by the City of Cape Town as a strategic site for mixed use intensification in terms of the Northern District Plan. Erven 23974 and 1682 are currently zoned Community 2: Regional. This zoning permits the development of healthcare facilities of which the primary uses include a hospital. The proposed development is also in line with the City of Cape Town Spatial Development Framework (2018) as it will make efficient use of land within the urban edge.

3.2 Biophysical Impacts

Impacts on vegetation:

The proposed hospital precinct site is classified as No Natural according to the Biodiversity Network for the City of Cape Town and the Western Cape Biodiversity Spatial Plan. The southern extent of the site has been mapped as a Critical Biodiversity Area ("CBA") 2 site and is regarded as a Restorable Irreplaceable Site containing critically endangered vegetation of restorable condition. Three vegetation units were identified on the site, namely stream and dam fringing wetland Shrubland, anthropogenic lawns and wild olive thicket.

The botanical specialist study indicated that the landfill and most of the area to the east thereof, except for the quarry fringes and Elsieskraal River, do not support natural vegetation of any conservation importance. The area to the north of the quarry dam (the proposed hospital precinct development site) is covered in anthropogenic lawns.

The vegetation units on the proposed hospital precinct site are modified to varying degrees, whilst the olive thicket and the Elsiekraal stream and dam fringing wetland vegetation retain some natural floristic and structural components. The proposed site will not impact on the olive thicket as it is excluded from the proposed development area.

Impacts on aquatic features:

The aquatic features on the site and the immediate surrounding area consist of the high and low flow channels of the Elsiekraal River at the site and the downstream associated wetland area; a small tributary of the river that flows just outside of the eastern boundary of the site; and a manmade quarry south of the site.

The ecological integrity of the Elsiekraal River at the site has already been modified. The tributary along the eastern boundary of the site has also been significantly impacted by the surrounding urban activities.

The low flow channel is piped at the entrance to the site whilst the high flow channel comprises of a deep channel that discharges into the quarry. A box culvert is proposed for the crossing of the access road over the high flow channel and will accommodate the 1:100-year flood. Due to the current ecological condition of the river and the proposed culvert, the potential freshwater impacts are considered to be low.

3.3 Visual impacts

Significant portions of the site occupy elevated positions within the surrounding landscape, but have no particular aesthetic value other than being largely undeveloped land contrasting with the encroaching urban and commercial developments. Further urban and commercial development on the site will therefore result in a continuation of the predominantly urban landscape.

Steep slopes occur in certain areas on the site. Earthworks will be undertaken to create platforms for roads, buildings and parking areas. This will also result in new cut and fill slopes which will be retained and planted with vegetation to mitigate the potential visual impacts. Fill slopes adjacent to the quarry will be stabilized such that they will be visually synonymous with the quarry cliffs. Runoff from the site will be controlled to prevent erosion and the formation of visual scars.

The access road and buildings on Portion 1 will result in the loss of two large Eucalyptus windrows. The windrows are visual resources on the site and provide a visual interest of a green and vertical nature. However, large trees will be replanted along the roads and on either side thereof and within all new proposed parking areas to compensate for the loss of the windrows.

The views of the quarry and cliffs will remain and the proposed buildings and landscaping will enhance the visual quality of the view. This will be achieved through appropriate building style, form and materials which will be supported by good landscaping. The architectural form and style will be recessive and will be stepped back against the slope to reduce cut and fill.

The proposed development is situated on a site that has moderately rated visual resources and is moderately visually sensitive. The buildings will be visible in the view

cone, but the proposed development will enhance the view rather than detract from it. The overall visual impact of the proposed development on the environment will be loss of visual/scenic resources which is rated as moderate before mitigation and low after mitigation.

3.4 Traffic impacts

The existing access road to the site and the Cool Runnings Toboggan Park crosses the quarry inlet and is accompanied by a box culvert. The access road allows for one lane traffic in each direction.

A new access road will be established to provide access to the hospital precinct off Carl Cronje Drive. The access road will have a road reserve of 32m and will be approximately 8.7m wide and 750m long.

The proposed new access road mainly follows the alignment of the current access road to the Toboggan Park and will require portions of the current road to be removed/demolished during the construction of the new access road.

The parking lease area spans over the subdivided road reserve and the Stellenbosch University property and as such, the road reserve area will be extended to include the Toboggan parking within the road reserve.

The Transport Impact Study conducted by AECOM SA (Pty) Ltd indicated that the poor intersection levels of service in the vicinity of the site are mainly due to background traffic volumes and that the hospital traffic will be minimal.

3.5 Air quality impacts

Due to the proximity of the proposed development to the closed Bellville Park Landfill site, a Landfill Gas Risk Assessment was undertaken. A buffer zone of no less than 150m should therefore be established around the landfill site. However, the buffer zone can be reduced to between 30m and 50m if a cut-off trench and monitoring probes are installed between the site and the landfill site. The odour impacts of the Bellville Park landfill site on the surrounding receptors is considered to be low.

Non-carcinogenic health risk impacts:

The short and long term hazard indexes were found to be well below 1 in and outside the landfill site. The 1-hour and annual maximum concentrations of the non-carcinogenic air pollutants were well below their respective guidelines in and around the site. The expected non-carcinogenic health impacts are considered to be low.

Carcinogenic risk impacts:

Based on the maximum resulting ambient concentrations of possible carcinogens and carcinogenic compounds commonly found in landfill gas, the carcinogenic risk around the site was estimated. The chance of developing cancer due to a lifetime exposure of landfill gas emissions would be 6 in 1 000 000 or less. This carcinogenic risk is therefore considered low.

3.6 Storm water impacts

The site is currently undeveloped and there are no existing storm water drainage systems in place. The site drains naturally in a south westerly direction to the quarry pond. A minor watercourse traverses the northern part of the site and runoff is discharged into the quarry pond. The site receives very little runoff from external areas since the majority of the external catchment drains directly into the Elsiekraal River via a canal system.

A detention pond will be placed on each portion, and as such, there will be three ponds. Each pond will cater for the required detention volume of the portion it is located on. This is the preferred alternative from a freshwater perspective since the storm water generated on each portion will be accommodated on that portion.

National Environmental Management Act Principles

The National Environmental Management Act 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.

In view of the above, the NEMA principles, compliance with the conditions stipulated in this Environmental Authorisation, and compliance with the EMPr, 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 NEMA and that any potentially detrimental environmental impacts resulting from the listed activity can be mitigated to acceptable levels.

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