



REFERENCE: 16/3/3/1/B4/12/1015/18
NEAS REFERENCE: WCP/EIA/0000383/2018
ENQUIRIES: Arabel McClelland
DATE OF ISSUE: 2018 -09- 13

Board of Directors
Clos Cabriere (Pty) Ltd
P.O. Box 245
FRANSCHHOEK
7690

Attention: Mr. Reinier Matthee

Tel: (021) 876 2630
Fax: (021) 876 3390

Dear Sir

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED): PROPOSED RIVER MAINTENANCE ON FARM NO. 510, FRANSCHHOEK

1. With reference to the above application, the Department hereby notifies you of its decision to **grant** Environmental Authorisation and to **adopt** the Maintenance Management Plan, 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 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, which prescribes the appeal procedure to be followed. This procedure is summarised in the attached Environmental Authorisation.

Yours faithfully


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

CC: (1) Ms. K. Myburgh (Ecosense)
(2) Mr. S. van der Merwe (Stellenbosch Municipality)
(3) Mr. R. Smart (CapeNature)
(4) Ms. M. Lintnaar-Strauss (Department of Water and Sanitation)

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ENVIRONMENTAL AUTHORISATION

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED): PROPOSED RIVER MAINTENANCE ON FARM NO. 510, FRANSCHHOEK

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

DECISION

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") and the Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended), the Department herewith **grants Environmental Authorisation** to the applicant to undertake the listed activities specified in section B below with respect to the preferred Design Alternative (A1), as described in the Basic Assessment Report ("BAR"), dated June 2018.

In terms of the NEMA, viz, the EIA Regulations, 2014 (as amended) (Government Notice ("GN") No. 324, 325, 326 and 327 in Government Gazette No. 40772 of 7 April 2017) the Competent Authority hereby adopts the Maintenance Management Plan ("MMP") for the affected portion of the watercourse identified on the subject property, contained in Section C of the Environmental Management Programme submitted as part of the application for Environmental Authorisation.

The applicant for this Environmental Authorisation is required to comply with the conditions set out in section E below.

A. DETAILS OF THE APPLICANT FOR THIS ENVIRONMENTAL AUTHORISATION

Clos Cabriere (Pty) Ltd
c/o Mr. Reinier Matthee
P.O. Box 245
FRANSCHHOEK
7690

6th Floor, 1 Dorp Street, Cape Town, 8001
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Tel: (021) 876 2630
 Fax: (021) 876 3390

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

B. LIST OF ACTIVITIES AUTHORISED

Listed Activity	Activity/Project Description
<p>Listing Notice 1 -</p> <p>Activity Number: 19</p> <p><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> <p><i>(a) will occur behind a development setback;</i></p> <p><i>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</i></p> <p><i>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</i></p> <p><i>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</i></p> <p><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>	<p>The proposal entails the replacement of an existing bridge, the reinstatement of gabions and installation of new erosion control measures within a section of the Franschoek River that would necessitate the movement of more than 10m³ of material in the watercourse.</p>
<p>Listing Notice -</p> <p>Activity Number: 48</p> <p><i>The expansion of—</i></p> <p><i>(i) infrastructure or structures where the physical footprint is expanded by 100 square metres or more;</i> <i>or</i></p> <p><i>(ii) dams or weirs, where the dam or weir, including infrastructure and water surface area, is expanded by 100 square metres;</i></p> <p><i>where such expansion occurs—</i></p> <p><i>(a) within a watercourse;</i></p> <p><i>(b) in front of a development setback; or</i></p> <p><i>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; —</i></p> <p><i>excluding—</i></p> <p><i>(aa) the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</i></p>	<p>The development entails the replacement of the existing low level bridge that spans the Franschoek River. This will result in the footprint of the bridge being expanded from approximately 50m² to 80m². In addition, concrete aprons will be established on either side of the bridge, within 32m of the river. There is evidence of gabions having been installed along the subject portion of the river banks and these structures will be reinstated with additional new gabions and reno mattresses also installed, extending to a maximum of 10m up- and downstream within and along sections of the river banks. Overall and in total, this will result in the expansion of the existing bridge and erosion control measures, where the footprint will exceed 100m².</p>

- (bb) where such expansion activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;
- (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;
- (dd) where such expansion occurs within an urban area; or
- (ee) where such expansion occurs within existing roads, road reserves or railway line reserves.

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

The holder is herein authorised to undertake the following alternative that includes the listed activities as it relates to the development:

The development proposal entails the replacement of an existing bridge and installation of erosion control measures along a section of the Franschhoek River, located on Farm no. 510, Franschhoek. The proposal includes the following:

- The upgrade and reinforcement of a low level bridge where existing cylindrical culverts within the watercourse will be replaced with four larger reinforced concrete box culverts (3m x 1.2m each). Concrete apron slabs will be constructed on either side of the bridge on both sides of the road to allow flow during flood events.
- The installation of four sections of gabions, one on each bank of the river, both up- and downstream of the bridge, to prevent erosion and damage to the bridge. This will involve the installation of new reno mattresses, in combination with geotextile, within the river bed in the immediate vicinity of the culverts, as well as reinstatement of gabions and the installation of new stone-filled gabions along a section of the river on either side of the bridge, to a maximum distance of 10m from the edge of the bridge (dimensions as per the Site Plan attached as Annexure 2).
- The river bed and banks will be rehabilitated upon completion of construction.

C. SITE DESCRIPTION AND LOCATION

The listed activities will be undertaken on Farm no. 510, Franschhoek.

The co-ordinates of the bridge, maintenance and erosion control measures are:

Position on Franschhoek River	Latitude (S)	Longitude (E)
Start Point	33° 54' 47.39" South	19° 06' 45.33" East
Mid Point	33° 54' 48.28" South	19° 06' 44.38" East
End Point	33° 54' 49.83" South	19° 06' 43.67" East

The SG digit code is: C05500030000051000000

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

The above is hereinafter referred to as **"the site"**.

D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Ecosense Consulting Environmentalists cc
c/o Ms. Kozette Myburgh
P.O Box 1426
KNYSNA
6570

Tel: (044) 384 0849
Fax: (086) 547 4221

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 Design Alternative, described in the BAR, dated June 2018, on the site as described in Section C above.
2. The holder must commence with the listed activities on site within a period of **five (5) years** from the date of issue of this Environmental Authorisation.
3. The development must be concluded within **two (2) years** from the date of commencement of the listed activities.
4. The holder shall be responsible for ensuring 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.
5. Any changes to, or deviations from the scope of the alternative described in section B above must be accepted or approved, in writing, by the Competent Authority before such changes or deviations may be implemented. In assessing whether to grant such acceptance/approval or not, the Competent Authority may request information in order 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.

Written notice to the Competent Authority

6. Seven calendar days' notice, in writing, must be given to the Competent Authority before commencement of construction activities.
 - 6.1 The notice must make clear reference to the site details and EIA Reference number given above.
 - 6.2 The notice must also include proof of compliance with the following conditions described herein:

Conditions: 7, 8, 12 and 18.

Notification and administration of appeal

7. The holder must in writing, within 14 (fourteen) calendar days of the date of this decision–
 - 7.1 notify all registered Interested and Affected Parties (“I&APs”) of –
 - 7.1.1 the outcome of the application;
 - 7.1.2 the reasons for the decision as included in Annexure 3;
 - 7.1.3 the date of the decision; and
 - 7.1.4 the date when the decision was issued.
 - 7.2 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 Appeals Regulations, 2014 (as amended) detailed in Section G below;
 - 7.3 draw the attention of all registered I&APs to the manner in which they may access the decision;
 - 7.4 provide the registered I&APs with:
 - 7.4.1 the name of the holder (entity) of this Environmental Authorisation,
 - 7.4.2 name of the responsible person for this Environmental Authorisation,
 - 7.4.3 postal address of the holder,
 - 7.4.4 telephonic and fax details of the holder,
 - 7.4.5 e-mail address, if any, of the holder, and
 - 7.4.6 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 2014 National Appeals Regulations (as amended).
8. The listed activities, including site preparation, must not commence within 20 (twenty) calendar days from the date the applicant notified the registered I&APs of this decision. In the event that an appeal is lodged with the Appeal Authority, the effect of this Environmental Authorisation is suspended until the appeal is decided i.e. the listed activities, including site preparation, must not commence until the appeal is decided.

Management of activity

9. The draft Environmental Management Programme (“EMPr”) submitted as part of the application for Environmental Authorisation is hereby approved and must be implemented.
10. The MMP, contained in Section C of the EMPr, adopted as part of this Environmental Authorisation, must be implemented.
11. The EMPr and MMP must be included in all contract documentation for all phases of implementation.

Monitoring

12. The holder must appoint a suitably experienced environmental control officer ("ECO"), or site agent where appropriate, before commencement of any land clearing or construction activities to ensure compliance with the EMPr and the conditions contained herein.
13. A copy of the Environmental Authorisation, EMPr, audit reports and compliance monitoring reports must be kept at the site of the authorised activity, and must be made available to anyone on request, including a publicly accessible website.
14. Access to the site referred to in Section C must be granted, and the environmental reports mentioned above 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.

Auditing

15. In terms of Regulation 34 of the NEMA EIA Regulations, 2014 (as amended), the holder must conduct environmental audits to determine compliance with the conditions of the Environmental Authorisation and the EMPr and submit Environmental Audit Reports to the Competent Authority. The Audit Report must be prepared by an independent person and must contain all the information required in Appendix 7 of the NEMA EIA Regulations, 2014 (as amended).

The holder must undertake an environmental audit (quarterly for the duration of the construction phase) and submit Environmental Audit Reports to the Competent Authority (once every six months during the construction phase). The final Environmental Audit Report must be submitted to the Competent Authority (six months after operation commenced).

The holder must, within 7 days of the submission of the report to the Competent Authority, notify all potential and registered I&APs of the submission and make the report available to anyone on request and on a publicly accessible website (if applicable).

Specific Conditions

16. Should any heritage remains be exposed during excavations or any other actions on the site, these must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape. 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: meteorites, archaeological and/or palaeontological remains (including fossil shells and trace fossils); 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 with heritage significance; rock art and rock engravings; and/or graves or unmarked human burials including grave goods and/or associated burial material.

17. A qualified archaeologist and/or palaeontologist must be contracted where necessary (at the expense of the holder) to remove any heritage remains. Heritage remains can only be disturbed by a suitably qualified heritage specialist working under a directive from the relevant heritage resources authority.
18. The construction phase disturbance footprint must be limited as far as possible with the construction area clearly demarcated before commencement of any construction activities. Construction areas must be strictly adhered to. All areas beyond the construction footprint must be considered as no-go areas.
19. Construction is to be undertaken during the drier months of the year.
20. Rehabilitation of the riparian zone must include planting of appropriate locally indigenous riparian species and be undertaken in consultation with a suitably qualified and experienced specialist.

F. GENERAL MATTERS

1. Notwithstanding this Environmental Authorisation, the holder must comply with any other statutory requirements that may be applicable when undertaking the listed activities.
2. Non-compliance with a condition of this Environmental Authorisation or EMPr may render the holder liable to criminal prosecution.
3. If the holder does not commence with a listed activity within the period referred to in Condition 2, this Environmental Authorisation shall lapse for that 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.
4. 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 (as amended) 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.

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

Amendments to the EMPr must be done in accordance with Regulations 35 to 37 of the EIA Regulations, 2014, or any relevant legislation that may be applicable at the time.

G. 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 on which 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 I&APs, 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 on which the holder of the decision sent notification of the decision to the registered I&APs–
 - 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 I&AP, any Organs 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 I&AP and the Organs 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>.

H. DISCLAIMER

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

Your interest in the future of our environment is appreciated.

Yours faithfully



MR. ZAAHIR TOEFY

DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

DATE OF DECISION: 13/09/2018

CC: (1) Ms. K. Myburgh (Ecosense)
(2) Mr. S. van der Merwe (Stellenbosch Municipality)
(3) Mr. R. Smart (CapeNature)
(4) Ms. M. Lintnaar-Strauss (Department of Water and Sanitation)

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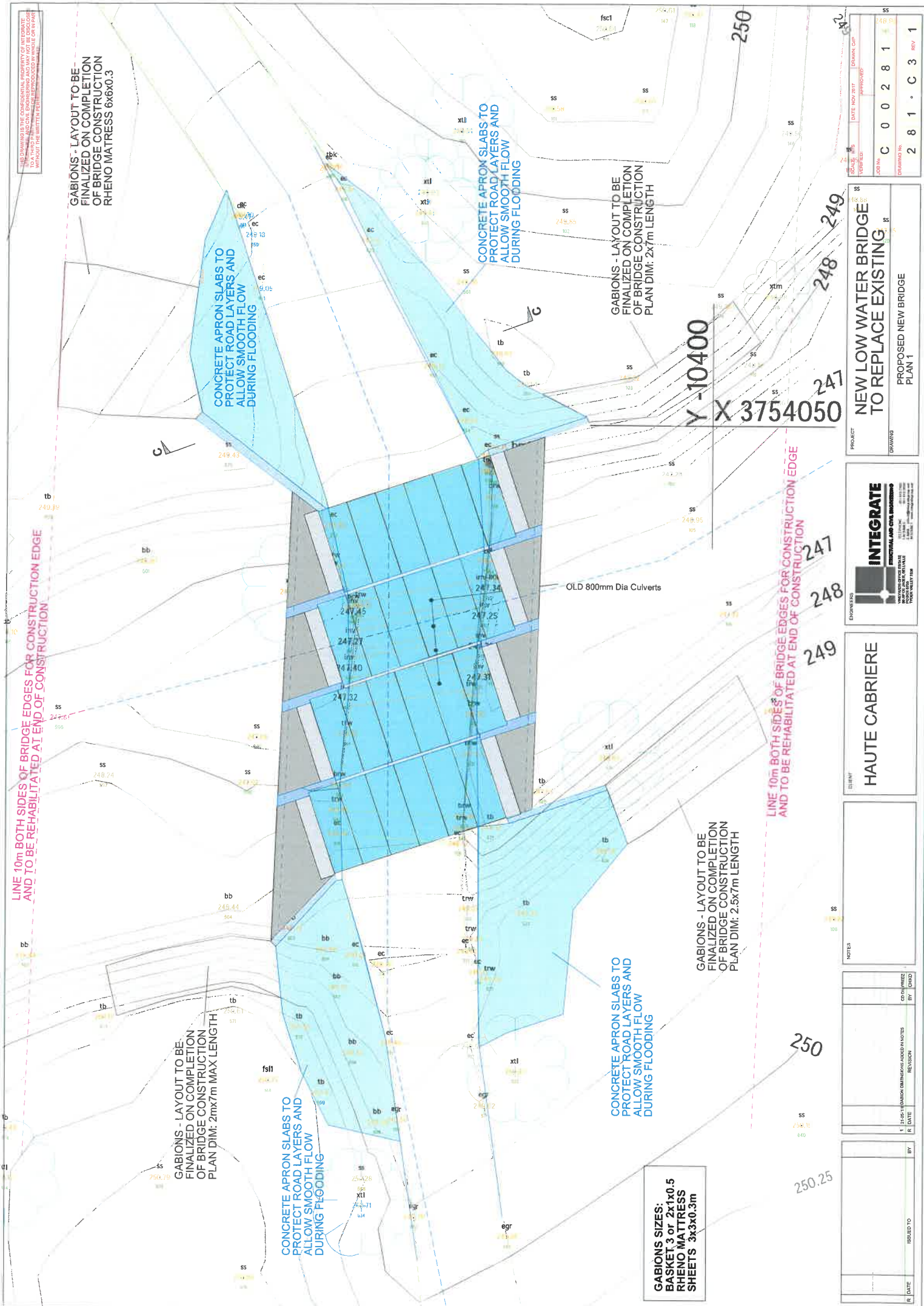
ANNEXURE 1: LOCALITY MAP

AERIAL IMAGE INDICATING THE LOW LEVEL BRIDGE AT HAUTE CABRIERE WITH A YELLOW MARKER.



ANNEXURE 2: SITE PLAN

THIS DRAWING IS THE CONFIDENTIAL PROPERTY OF INTEGRATE
 NO PART OF THIS DRAWING IS TO BE REPRODUCED IN WHOLE OR IN PART
 WITHOUT THE WRITTEN PERMISSION OF INTEGRATE



GABIONS - LAYOUT TO BE
 FINALIZED ON COMPLETION
 OF BRIDGE CONSTRUCTION
 RHENO MATRESS 6x6x0.3

CONCRETE APRON SLABS TO
 PROTECT ROAD LAYERS AND
 ALLOW SMOOTH FLOW
 DURING FLOODING

CONCRETE APRON SLABS TO
 PROTECT ROAD LAYERS AND
 ALLOW SMOOTH FLOW
 DURING FLOODING

GABIONS - LAYOUT TO BE
 FINALIZED ON COMPLETION
 OF BRIDGE CONSTRUCTION
 PLAN DIM: 2x7m LENGTH

Y - 10400
 X 3754050

OLD 800mm Dia Culverts

LINE 10m BOTH SIDES OF BRIDGE EDGES FOR CONSTRUCTION EDGE
 AND TO BE REHABILITATED AT END OF CONSTRUCTION

LINE 10m BOTH SIDES OF BRIDGE EDGES FOR CONSTRUCTION EDGE
 AND TO BE REHABILITATED AT END OF CONSTRUCTION

GABIONS - LAYOUT TO BE
 FINALIZED ON COMPLETION
 OF BRIDGE CONSTRUCTION
 PLAN DIM: 2mx7m MAX LENGTH

CONCRETE APRON SLABS TO
 PROTECT ROAD LAYERS AND
 ALLOW SMOOTH FLOW
 DURING FLOODING

CONCRETE APRON SLABS TO
 PROTECT ROAD LAYERS AND
 ALLOW SMOOTH FLOW
 DURING FLOODING

GABIONS - LAYOUT TO BE
 FINALIZED ON COMPLETION
 OF BRIDGE CONSTRUCTION
 PLAN DIM: 2.5x7m LENGTH

GABIONS SIZES:
 BASKET 3 or 2x1x0.5
 RHENO MATRESS
 SHEETS 3x3x0.3m

DATE	NOV 2017	DRAWN	GP
SCALE	AS SHOWN	APPROVED	
JOB No	C 0 0 2 8 1	DATE	24 09 18
DRAWING No	2 8 1 - C 3	REV	1

PROJECT
 NEW LOW WATER BRIDGE
 TO REPLACE EXISTING
 PROPOSED NEW BRIDGE
 PLAN 1



CLIENT
 HAUTE CABRIERE

NO	DATE	REVISION	BY	CHKD
1	21-05-18	LONDON DIMENSIONS ADDED IN NOTES		

ISSUED TO	BY

ANNEXURE 3: REASONS FOR THE DECISION

In reaching its decision, the Competent Authority considered, *inter alia*, the following:

- a) The information contained in the Application Form dated March 2018, and the EMPr and MMP submitted together with the BAR on 8 June 2018;
- b) Relevant information contained in the Departmental information base, including the Guidelines on Public Participation and Alternatives (dated March 2013);
- c) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998);
- d) The comments received from I&APs and responses to these, included in the BAR, dated June 2018; and
- e) The balancing of negative and positive impacts and proposed mitigation measures.

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 that were considered to be the most significant for the decision is set out below.

1. Public Participation

The public participation process included:

- identification of and engagement with I&APs;
- giving written notice to the owners and occupiers of land adjacent to the site where the listed activities are to be undertaken, the municipality and ward councillor, and the various Organs of State having jurisdiction in respect of any aspect of the listed activities on 30 October 2017;
- placement of notice boards, on 30 October 2017, in a public location in close proximity to the site where the listed activities are to be undertaken;
- making the pre-application BAR available to I&APs for public review from 30 October 2017;
- the placing of a newspaper advertisement in the 'Eikestad Nuus' on 2 November 2017;
- making the in-process draft BAR available to I&APs for public review from 22 March 2018.

All the concerns raised by I&APs were responded to and adequately addressed during the public participation process. Specific management and mitigation measures have been considered in this Environmental Authorisation, EMPr and MMP to adequately address the concerns raised.

The Competent Authority notes the Environmental Assessment Practitioner's responses to the issues raised during the public participation process and has included appropriate conditions in this Environmental Authorisation.

2. Alternatives

Preferred Design Alternative (A1) (Herewith authorised)

The development proposal entails the replacement of an existing bridge and installation of erosion control measures along a section of the Franschoek River, located on Farm no. 510, Franschoek. The proposal includes the following:

- The upgrade and reinforcement of a low level bridge where existing cylindrical culverts within the watercourse will be replaced with four larger reinforced concrete box culverts (3m x 1.2m each). Concrete apron slabs will be constructed on either side of the bridge on both sides of the road to allow flow during flood events.
- The installation of four sections of gabions, one on each bank of the river, both up- and downstream of the bridge, to prevent erosion and damage to the bridge. This will involve the installation of new reno mattresses, in combination with geotextile, within the river bed in the immediate vicinity of the culverts, as well as reinstatement of gabions and the installation of new stone-filled gabions along a section of the river on either side of the bridge, to a maximum distance of 10m from the edge of the bridge (dimensions as per the Site Plan attached as Annexure 2).
- The river bed and banks will be rehabilitated upon completion of construction.

This alternative is preferred for the following reasons:

- The preferred bridge design is superior in that it increases flow capacity and will result in less hydraulic obstruction.
- The risk of damage to infrastructure and downstream properties is reduced.
- The culvert edges will act as support pillars for the bridge.
- The design is in line with recommendations by the hydraulic specialist.
- The proposed gabions and reno mattresses will prevent scouring and damage to the bridge.
- The bridge and erosion control measures will not result in disturbance to the flow pattern of the river.

Second Design Alternative (A2)

This alternative would entail the repair, rather than replacement, of the low level bridge. The current cylindrical culverts would remain and minor repairs would be done to the face of the bridge.

This alternative was not preferred for the following reasons:

- The current flow capacity of the low level bridge is insufficient to accommodate a 1 in 2 year flood event. As such, overtopping of the current bridge design is inevitable.
- According to the hydraulic specialist, the existing design shows signs that it will not withstand major floods in the future.
- The current culverts are too narrow to accommodate debris during floods. Therefore, debris, such as branches, would be more likely to accumulate and block the river.
- An increased risk of damage to infrastructure and properties downstream exists.
- The option of repairing the bridge is not preferred by the hydraulic specialist or favoured by the Department of Water and Sanitation.

"No-Go" Alternative (A3)

The "no-go" option was also investigated and was not preferred. In the absence of the gabions upstream or the lateral concrete aprons, the bridge would continue to be at risk of failure and the

current issue of bank scouring and undercutting of the bridge would persist. In addition, potential future flooding or high magnitude events would significantly increase this risk, and the safety of any users would be jeopardized. Should the bridge itself fail, a portion of the farm would be rendered inaccessible.

3. Impact Assessment and Mitigation measures

3.1 Activity need and desirability

The existing low level bridge structure spanning an arm of the upper Franschoek River has fallen into disrepair and the risk of failure of the structure exists. Therefore, based on specialist input, it was deemed repair, preventative maintenance and/or replacement was advisable in order to continue its use. Additionally, the river banks up- and downstream of the bridge require rehabilitation and armouring in order to withstand high-energy flows. A Flood Level Estimation Report, dated July 2017, compiled by Integrate Consulting Engineers, details analysis, modelling and flood lines for the river and the low water bridge on Farm no. 510. As it was established that the current bridge would likely not withstand a major flood in the future, the report aimed to assist with preliminary sizing of a repaired or upgraded bridge. It was evident that the bridge creates an obstacle for all flood sizes and that a new bridge would need to pass a 1:2 year flood without overtopping. The recommendation is therefore to reinforce the bridge and install four concrete rectangular culverts with a minimum height of 1.2m. This, however, would still require the upstream approach to the bridge to be sloped to enable trees to clear the openings during flooding.

Given the potential risk to infrastructure and exacerbated bank erosion within the river in the event of a flood, the proposed replacement of the bridge and installation of erosion control measures is deemed a priority to the landowner and within the Franschoek River catchment. Furthermore, the proposal is in line with the specific priorities of river maintenance, safety and improvement contained in the Stellenbosch Integrated Development Plan.

3.2 Biophysical Impacts

An Aquatics Assessment was undertaken by DH Environmental Consulting, dated December 2017, which considers the need to upgrade the existing low level bridge. The river banks up- and downstream of the existing bridge were identified as highly modified and hydraulically impacted. There is evidence of bank failures, deposition of material and structural weakness in the existing low level bridge. According to the aquatic specialist, the proposed repairs are relatively simple and, if managed correctly, the potential impacts on the freshwater system will be minor and of a temporary nature. The two most significant potential impacts identified relate to the risk of scour and gouging of the river bed while it is exposed during construction and the impact of cement within the aquatic environment. Both potential impacts are sufficiently mitigated by ensuring construction work is undertaken during low-flow or no-flow conditions, preferably in the late summer months, and as quickly as possible. In addition, various other mitigation measures, particularly relating to the construction phase, are proposed that significantly reduce the potential negative impacts. These have been carried through to the EMP and conditions of this Environmental Authorisation, where appropriate.

Furthermore, a MMP for the affected watercourses on site, including invasive alien vegetation management, has been compiled to address future routine maintenance activities. The maintenance of the structures authorised in this Environmental Authorisation forms part of this MMP. It must be noted that the accepted maintenance activities only relate to the activities described in the MMP. Should any new activities and associated infrastructure, not included in the MMP,

require maintenance and if any of the applicable listed activities are triggered, an Environmental Authorisation must be obtained prior to the undertaking of such activities. It remains the responsibility of the proponent to determine if any other listed activities are triggered and to ensure that the necessary Environmental Authorisation is obtained.

The fact that the MMP is adopted by the Competent Authority does not absolve the applicant from its general "duty of care" set out in Section 28(1) of the NEMA, which states that "Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment." (Note: When interpreting their "duty of care" responsibility, cognisance must be taken of the principles of sustainability contained in Section 2 of NEMA).

The Department of Water and Sanitation ("DWS") has confirmed that the proposed works will trigger water uses in terms of Section 21 of the National Water Act, 1998 (Act No. 36 of 1998) ("NWA") and that a General Authorisation must be applied for prior to commencement of activities. Application was submitted to the DWS on 14 May 2018.

The development will result in both negative and positive impacts.

Negative Impacts:

- The proposed development will result in construction related impacts such as dust, visual and noise during the construction period.
- The reinstatement and installation of the gabion baskets and reno mattresses will negatively impact the affected watercourse, specifically through the modification of the bed and banks of the portion of the Franschoek River in the vicinity of the crossing.
- Construction-related activities may impact water quality and introduce pollutants.
- The gabion structures and upgraded bridge and associated infrastructure will result in a minor visual impact.
- Maintenance-related work on the embankments and bridge may result in minor disturbance within the aquatic ecosystem.

Positive impacts:

- The development will provide temporary employment opportunities during the construction phase.
- Existing infrastructure will be upgraded and improved.
- There will be an improvement to vehicular and pedestrian safety for users of the bridge.
- The affected portion of the river banks of the Franschoek River will be stabilised and rehabilitated. This will result in a decrease of erosion within the subject portion of the river.
- Alien clearing will be undertaken on an ongoing basis.

3 National Environmental Management Act Principles

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

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

4 Conclusion

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 National Environmental Management Act, 1998 (Act No. 107 of 1998) and that any potentially detrimental environmental impacts resulting from the listed activities can be mitigated to acceptable levels.

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