



REFERENCE: 16/3/3/1/B4/12/1025/18
NEAS REFERENCE: WCP/EIA/0000404/2018
ENQUIRIES: Samornay Smidt
DATE OF ISSUE: 2018 -11- 01

The Board of Directors
Holden Manz Wine Estate (Pty) Ltd
PO Box 620
FRANSCHHOEK
7690

Attention: Mr Gerard Holden

Tel.: (021) 876 2738
Email:gerhard@holdenmanz.com

Dear Sir

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED): PROPOSED CONSTRUCTION OF INFRASTRUCTURE WITHIN THE STONY BROOK STREAM AT THE HOLDEN MANZ WINE ESTATE ON FARM NO. 1657, 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 summarized in the attached Environmental Authorisation.

Yours faithfully

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

CC: (1) P de Villiers (Cornerstone Environmental Consultants)
(2) S van der Merwe (Stellenbosch Municipality)

Fax: 086 435 2174
Fax: (021) 886 6899



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ENVIRONMENTAL AUTHORISATION

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED): PROPOSED CONSTRUCTION OF INFRASTRUCTURE WITHIN THE STONY BROOK STREAM AT THE HOLDEN MANZ WINE ESTATE ON FARM NO. 1657, 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 Competent Authority herewith **grants Environmental Authorisation** to the applicant to undertake the listed activities specified in section B below with respect to Alternative 1, as described in the Basic Assessment Report ("BAR"), dated 17 July 2018.

In terms of the NEMA, viz, the EIA Regulations, 2014 (as amended) and (Listing Notices 1 and 3 of 2014 in Government Gazette No. 40772 of 7 April 2017) the Competent Authority hereby **adopts the Maintenance Management Plan** for the Holden Manz Bridge and Stony Brook Stream and for the maintenance of new erosion control infrastructure on Farm 1657, Franschhoek included as Appendix H2 in the BAR dated 17 July 2018.

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

The Board of Directors
 Holden Manz Wine Estate (Pty) Ltd
 c/o Mr. Gerard Holden
 PO Box 620
 FRANSCHHOEK
 7690

Tel: (021) 876 2738
 Email: gerhard@holdenmanz.com

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

B. LIST OF ACTIVITIES AUTHORISED

Listed Activities	Activities/Project Description
<p>EIA Regulations Listing Notice 1 of 2014 -</p> <p>Activity Number: 12</p> <p>The development of -</p> <ul style="list-style-type: none"> (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or (ii) infrastructure or structures with a physical footprint of 100 square metres or more; <p>where such development occurs -</p> <ul style="list-style-type: none"> (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; - <p>excluding -</p> <ul style="list-style-type: none"> (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such development activities are related to the development of a port or harbour, in which case activities 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity1 4 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such development occurs within an urban area; (ee) where such development occurs within existing roads, road reserves or railway line reserves; or (ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the 	<p>The development entails the construction of gabions and groynes within the Stony Brook Stream, which exceed 100 square metres.</p>

<p>commencement of development and where indigenous vegetation will not be cleared.</p>	
<p>EIA Regulations Listing Notice 1 of 2014 -</p> <p>Activity Number: 19</p> <p>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 -</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving -</p> <ul style="list-style-type: none"> (a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies, (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or (e) where such development is related to the development of a port or harbour, in which case activities 26 in Listing Notice 2 of 2014 applies. 	<p>The proposed construction of infrastructure in the river channel and on the riverbanks will result in the infilling into and excavation, removal or moving of more than 10 cubic metres of material from the watercourse.</p>
<p>EIA Regulations Listing Notice 3 of 2014 -</p> <p>Activity Number: 12</p> <p>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.</p> <p>Western Cape</p> <ul style="list-style-type: none"> 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; ii. Within critical biodiversity areas identified in bioregional plans; iii. 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; iv. 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 v. On land designated for protection or conservation purposes in an Environmental Management 	<p>The development will result in the clearance of 300 square metres or more of critically endangered indigenous vegetation.</p>

Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.	
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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 proposed long-term erosion protection scheme for the 150m long section of the Stony Brook Stream within the Holden Manz Estate consists of the following three components:

1. Boulder management / River alignment modification (channel shaping):

- Alteration of the river alignment as follows:
 - A gentle sinusoidal river meander must be formed (and maintained) by boulder movement.
 - Maintain a trapezoidal channel with a base width of 6 to 7m (the proposed river channel is at the blue zone in Annexure 2: Site Plan).
 - Boulder movement and clearing of existing boulder deposits (yellow zone in Annexure 2: Site Plan) to re-establish north-eastern riverbank.
 - This is a continual process and must be repeated, as required.

2. River erosion control structures:

- Six groyne structures spaced between 7.5 to 10.5m apart along the north-eastern riverbank, each consisting of the following:
 - A 2m wide shaft;
 - A groyne head (riverside) with a height of 1m high above the riverbed;
 - A groyne toe (riverbank side) 2m above the riverbed and embedded at least 2m into the riverbank;
 - A groyne slope of 1:4 (V:H) between the groyne head and toe;
 - A 300mm thick reno-mattress scour protection apron around the groyne structure;
 - A geotextile filter layer along the groyne and foundation soil interface; and
 - The riverbanks between the groyne structures will be modified to a slope of 1:3 (V:H) to promote revegetation of the riverbanks.
- Two gabion walls that will act as bridge abutments consisting of the following:
 - A 2m wide and 1m high gabion base;
 - A 1m wide and 1m high gabion crown;
 - A 300mm thick reno-mattress scour protection apron beneath and around the gabion structure; and
 - A geotextile filter layer along the groyne and foundation soil interface.
 - All the gabion cages must be fixed together and the gabion wall/abutment must be constructed flush to the bridge.

3. Revegetation of the eroded riverbanks and ongoing maintenance of river erosion mitigation structures.

C. SITE DESCRIPTION AND LOCATION

The listed activities will be undertaken within the 150m long section of the Stony Brook Stream at the Holden Manz Estate, situated along the Green Valley Road, Franschhoek.

The SG21 digit code is: C05500000000165700000

Co-ordinates:

	Latitude	Longitude
Start Point	33° 56' 07.06"	19° 06' 53.71"
Middle Point	33° 56' 09.18"	19° 06' 55.24"
End Point	33° 56' 11.29"	19° 06' 55.41"

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

Environmental Assessment Practitioner:

Cornerstone Environmental Consultants
c/o Mr P de Villiers
P.O. Box 12606

DIE BOORD
7613

Tel: (021) 887 9099

Fax: (086) 435 2174

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 Alternative 1, as described in the BAR dated 17 July 2018 on the site as described in Section C above.
2. The Environmental Authorisation is valid for a period of **five years** from the date of issue, within which commencement must occur.
3. The development must be concluded within **ten 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 19.

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 activities

9. The draft Environmental Management Programme ("EMPr") dated 17 July 2018, submitted as part of the application for Environmental Authorisation is hereby approved and must be implemented.
10. The MMP 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, MMP, audit reports and compliance monitoring reports must be kept at the site of the authorised activities, 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 relevant requirements with respect to occupational health and safety must be adhered to at all times.
19. The laydown area and access point to the proposed works within the already disturbed areas as identified in Annexure 2: Site Plan must be clearly demarcated before commencement of construction activities and must be rehabilitated once construction is completed.
20. The construction activities should be undertaken during the low-flow periods.
21. During the reshaping of the channel, the base of the streambed or thalweg must not be lowered.
22. The disturbance footprint must be kept to a minimum and disturbed areas must be rehabilitated following construction.

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 the listed activities within the period referred to in Condition 2, this Environmental Authorisation shall lapse for that activities, 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, (as amended) 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. ZAHIR TOEFY

DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

DATE OF DECISION: 01/11/2018

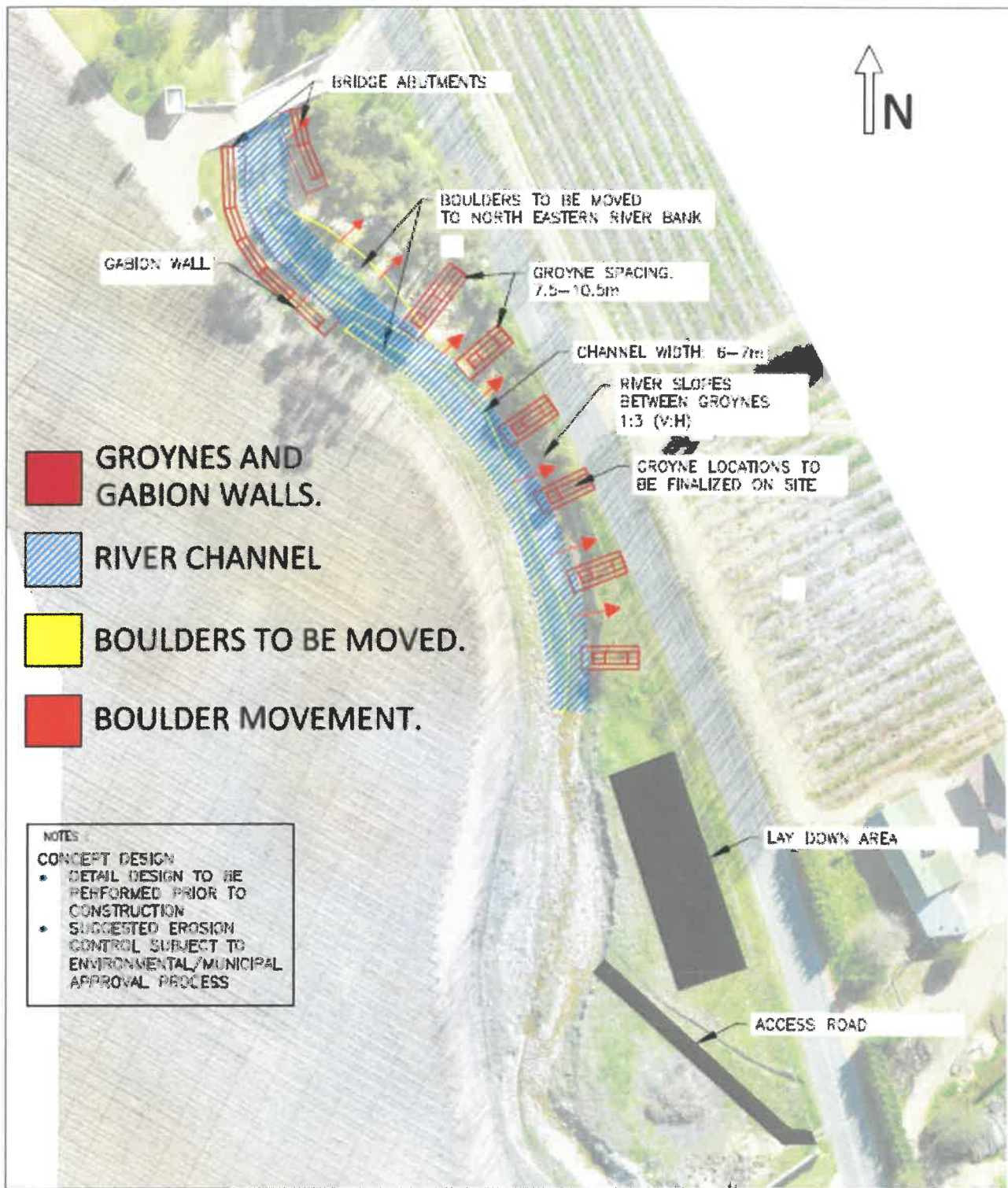
Cc: (1) P de Villiers (Cornerstone Environmental Consultants)
(2) S van der Merwe (Stellenbosch Municipality)

Fax: 086 435 2174
Fax: (021) 886 6899

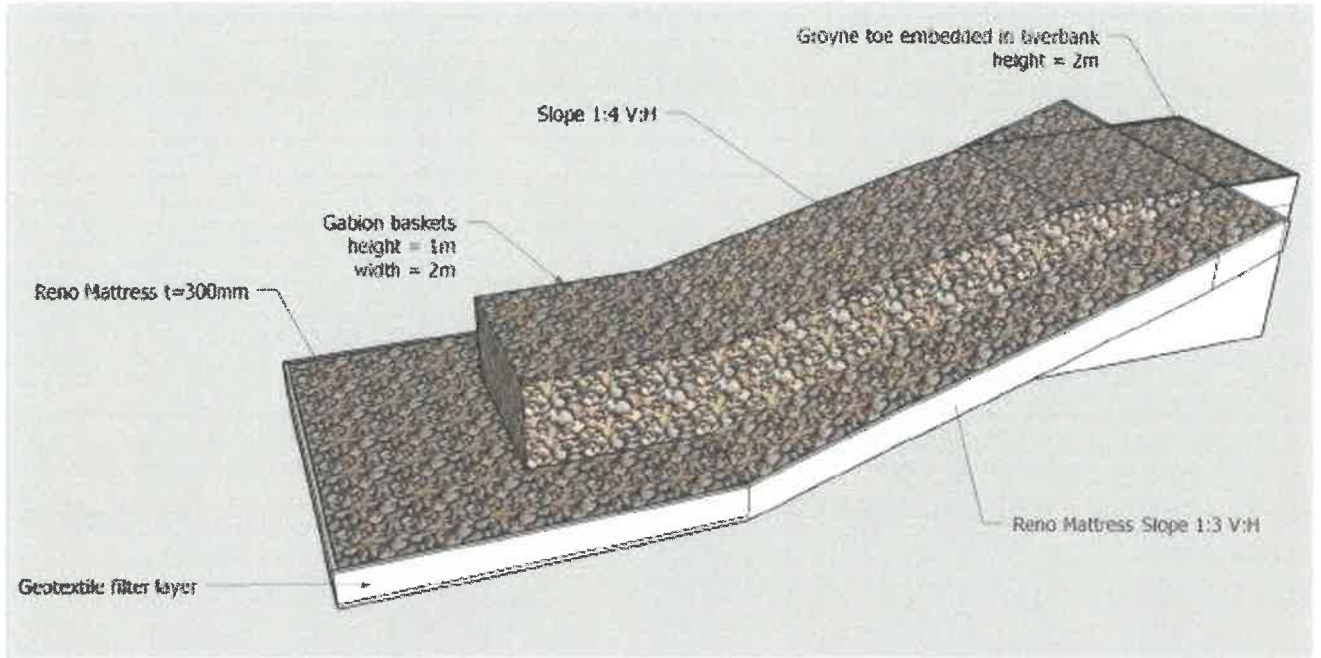
ANNEXURE 1: LOCALITY MAP



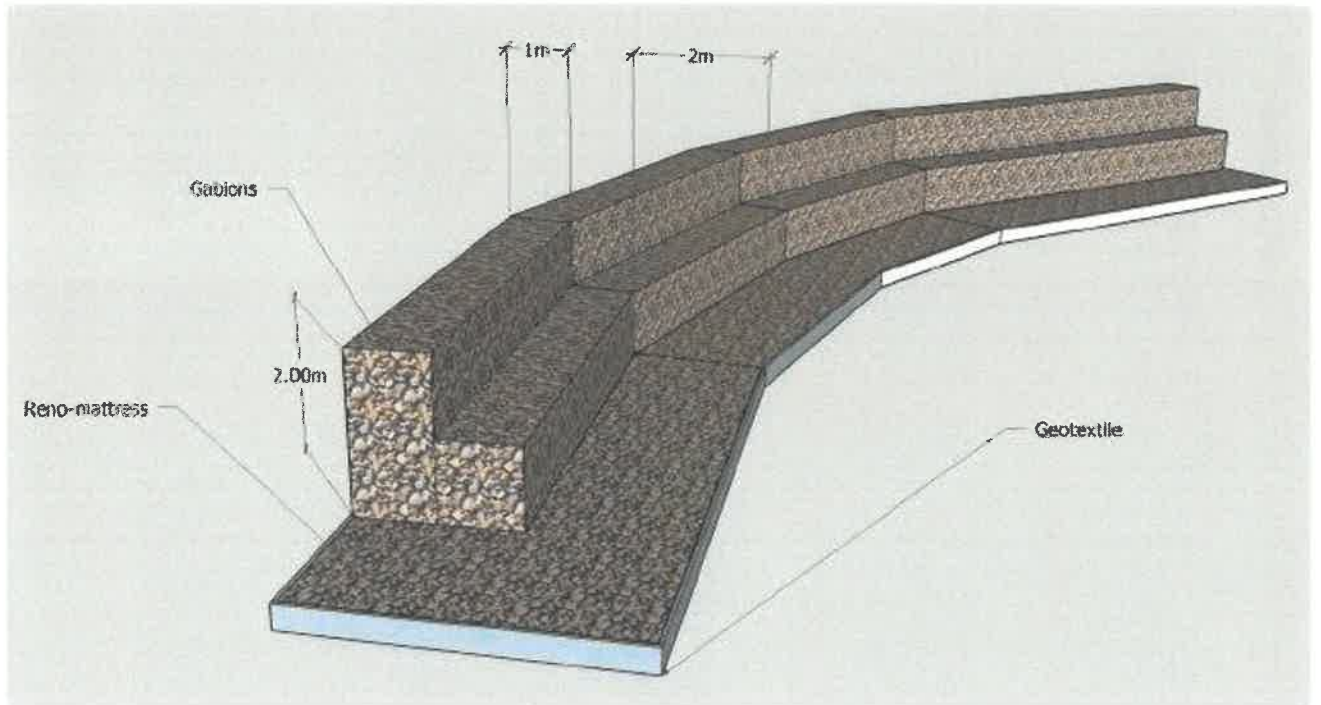
ANNEXURE 2: SITE PLAN



GROYNE CROSS-SECTION



GABION WALL/ABUTMENT CROSS-SECTION



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 18 April 2018 and the BAR together with the EMPr dated 17 July 2018 and submitted on 19 July 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 17 July 2018; and
- e) The balancing of negative and positive impacts and proposed mitigation measures.

A site visit was not 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 is 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 16 April 2018;
- the placing of a newspaper advertisement in the 'Paarl Post' newspaper on 19 April 2018;
- fixing notice boards at the site where the listed activities is to be undertaken on 19 April 2018;
- circulating the draft BAR to I&APs from 20 April 2018;
- circulating the revised draft BAR to registered I&APs from 15 June 2018;

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

Specific alternatives, management and mitigation measures have been considered in this Environmental Authorisation and EMPr to adequately address the concerns raised.

2. Alternatives

Alternative 1 (Preferred Alternative herewith authorised):

The proposed long-term erosion protection scheme for the 150m long section of the Stony Brook Stream within the Holden Manz Estate consists of the following three components:

1. Boulder management / River alignment modification (channel shaping):

- Alteration of the river alignment as follows:
 - A gentle sinusoidal river meander must be formed (and maintained) by boulder movement.
 - Maintain a trapezoidal channel with a base width of 6 to 7m (the proposed river channel is at the blue zone in Annexure 2: Site Plan).
 - Boulder movement and clearing of existing boulder deposits (yellow zone in Annexure 2: Site Plan) to re-establish north-eastern riverbank.
 - This is a continual process and must be repeated, as required.

2. River erosion control structures:

- Six groyne structures spaced between 7.5 to 10.5m apart along the north-eastern riverbank, each consisting of the following:
 - A 2m wide shaft;
 - A groyne head (riverside) with a height of 1m high above the riverbed;
 - A groyne toe (riverbank side) 2m above the riverbed and embedded at least 2m into the riverbank;
 - A groyne slope of 1:4 (V:H) between the groyne head and toe;
 - A 300mm thick reno-mattress scour protection apron around the groyne structure;
 - A geotextile filter layer along the groyne and foundation soil interface; and
 - The riverbanks between the groyne structures will be modified to a slope of 1:3 (V:H) to promote revegetation of the riverbanks.
- Two gabion walls that will act as bridge abutments consisting of the following:
 - A 2m wide and 1m high gabion base;
 - A 1m wide and 1m high gabion crown;
 - A 300mm thick reno-mattress scour protection apron beneath and around the gabion structure; and
 - A geotextile filter layer along the groyne and foundation soil interface.
 - All the gabion cages must be fixed together and the gabion wall/abutment must be constructed flush to the bridge.

3. Revegetation of the eroded riverbanks and ongoing maintenance of river erosion mitigation structures.

Factors contributing to the selection of the preferred erosion mitigation strategy included the river hydraulics, riverbed stability, site location – which, in turn, affects ease of accessibility and materials availability, environmental aspects, aesthetics and cost. Based on these considerations, boulder management/river alignment modification and the construction of groynes and gabion walls were deemed most appropriate for effective erosion control within the affected stretch of the stream at the Holden Manz Estate. Groynes are a more ecologically acceptable alternative to traditional erosion protection structures as they integrate well with the revegetation of the riverbanks. The implementation of gabion wall abutments will also effectively prevent upstream river bank scour and the potential undermining of the bridge foundations by floods. The preferred alternative was also informed by input from a freshwater specialist.

Alternative 2

Riprap channel lining was also identified as an appropriate option for erosion control within the affected section of the Stony Brook Stream at the Holden Manz Estate. This alternative was however discarded as a viable option due to the large rock diameter requirement for successful implementation and the consequent undesirable aesthetics.

"No-Go" Alternative

The "no-go" option was also investigated and was not preferred since erosion will continue unabated within the subject portion of the Stony Brook Stream, which could result in the eventual collapse of the road infrastructure in future.

3. Impact Assessment and Mitigation measures

3.1 Activities need and desirability

The property is situated in an agricultural area, south west of the residential area Franschhoek, with predominantly agricultural activities in the immediate area. The Holden Manz Estate is a country guesthouse, wedding venue and wine estate and is accessed via a bridge across the Stony Brook Stream. The Stony Brook Stream running through the estate is morphologically unstable and is scouring its banks. The scoured material (predominantly boulders) is dumped directly upstream of the main access bridge to the property, which inhibits optimal functioning of the bridge culverts. This poses a risk of flooding at the bridge, which could prevent access to the farm during flood events and cause potential damage to the bridge abutments. High flow events over the past three years have brought down sediment and cobbles and deposited the material within and upstream of the culverts. The proposed long-term erosion protection scheme was therefore developed to repair the existing and to prevent future erosion of the Stony Brook Stream banks and protect the access bridge and adjacent Green Valley Road. In addition, it is anticipated that the erosion control infrastructure will improve the water quality of the stream since less sediment will be carried downstream and it will provide adequate attenuation of water flow rates, reducing the erosion potential of the stream, which will also benefit downstream landowners.

3.2 Biophysical Impacts

The Stony Brook Stream, a tributary of the Franschhoek River, which itself is a tributary of the upper reaches of the Berg River, flows in a northerly direction along the eastern boundary of the farm. The stream channel would naturally have consisted of a braided stream channel with a mix of boulders and cobbles. The channel of the stream has however been significantly modified and currently flows within a confined channel along the eastern boundary of the site. The area has been mapped as containing critically endangered Swartland Alluvium Fynbos. This vegetation type has, however, mostly been removed from the property over time, due to agricultural activities and the presence of alien vegetation.

The Stony Brook Stream has, however, been mapped by the South African National Biodiversity Institute as an Ecological Support Area ("ESA"). The mapping of the stream is due to the fact that the watercourse provides an important corridor for the movement of biota between the mountain slopes and the valley floor. The ecological importance and sensitivity of the stream is therefore considered to be moderate to high, due largely to the link that it has with the larger river system and the biota and ecological services it supports.

The farm is accessed via a bridge, consisting of five box culverts, over the Stony Brook Stream. High flow events over the past three years have brought down sediment and cobbles and deposited the material within and upstream of the culverts. In order to repair current and prevent future

erosion of the Stony Brook Stream banks and to protect the bridge, a series of groynes and gabions are proposed to slow the high flow velocities in the stream, redirecting the flow and reinforcing the banks at the location of the bridge. Due to the lack of aquatic habitat along the channel, the high potential to mitigate the disturbance during construction, and the positive impact of mitigating erosion and slowing the water flow rates, the Freshwater Impact Assessment compiled by BlueScience, dated October 2017 concluded that the overall impact of the proposed activities is considered to be of low significance. The potential impacts will largely occur during the construction phase and can be adequately addressed through the implementation of the identified mitigation measures (included in the EMP and as conditions of this EA).

An application for a General Authorisation ("GA") in terms of the National Water Act, 1998 (Act 38 of 1998) has also been submitted to the Department of Water and Sanitation, who will further investigate the watercourse related impacts.

Furthermore, a MMP has also been compiled to address future maintenance activities taking place in the affected watercourse. 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).

Negative Impacts:

- The proposed activities works will result in elevated noise and dust levels during the construction phase.
- Impacts on the watercourse is anticipated during the construction phase.
- Indigenous vegetation will be removed during site preparation and construction.

Positive impacts:

- The proposed activities will repair and protect the bridge access and adjoining road from further damage.
- The development will improve the water quality in the stream, reduce the risk of bank erosion and will provide an opportunity to improve the aquatic habitat and ecosystem functioning of the stream.
- The construction of erosion control infrastructure will attenuate the water flow rates, which will also benefit downstream users.
- The development will provide employment opportunities during the construction phase.

4. 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.

5. 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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