



**REFERENCE:** 16/3/3/1/B2/3/1018/23  
**NEAS REFERENCE:** WCP/EIA/0001245/2023  
**DATE OF ISSUE:** 20 June 2023

The Director  
Western Cape: Department of Infrastructure  
9 Dorp Street  
**CAPE TOWN**  
8001

**Attention: Mr. A. November**

Cell: 076 816 4564

Email: Azni.November@westerncape.gov.za

Dear Sir

**APPLICATION FOR ENVIRONMENTAL AUTHORISATION AND THE ADOPTION OF A WATERCOURSE MAINTENANCE MANAGEMENT PLAN ("MMP") IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014, (AS AMENDED): THE PROPOSED REPLACEMENT OF BRIDGE (B0495) ALONG DR01489 AT KM 0,53 WITHIN THE SAND RIVER, DE DOORNS**

1. With reference to the above application, the Department hereby notifies you of its decision to **grant** Environmental Authorisation and to **adopt the MMP**, 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 (as amended), which prescribes the appeal procedure to be followed. This procedure is summarized in the attached Environmental Authorisation.

Yours faithfully

**MR. ZAAHIR TOEFY**

**DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)**

**DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING**

CC: (1) C. Becker (Guillaume Nel Environmental Consultants)  
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## ENVIRONMENTAL AUTHORISATION

### APPLICATION FOR ENVIRONMENTAL AUTHORISATION AND THE ADOPTION OF A WATERCOURSE MAINTENANCE MANAGEMENT PLAN ("MMP") IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014, (AS AMENDED): THE PROPOSED REPLACEMENT OF BRIDGE (B0495) ALONG DR01489 AT KM 0,53 WITHIN THE SAND RIVER, DE DOORNS

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 the Design Alternative 1, described in the Basic Assessment Report ("BAR"), dated 3 May 2023.

In terms of the NEMA, viz, the EIA Regulations, 2014 (as amended) (in Government Gazette No. 40772 of 7 April 2017) the Competent Authority hereby **adopts the MMP** for maintenance of proposed activities associated with the Sand River.

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

Western Cape: Department of Infrastructure  
% Mr. A. November  
9 Dorp Street  
**CAPE TOWN**  
8001

Cell: 076 816 4564

Email: Azni.November@westerncape.gov.za

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	Activity/Project Description
<p>EIA Regulations Listing Notice 1 of 2014: Activity Number 12: The development of—</p> <ul style="list-style-type: none"> <li>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or</li> <li>(ii) infrastructure or structures with a physical footprint of 100 square metres or more;</li> </ul> <p>where such development occurs—</p> <ul style="list-style-type: none"> <li>(a) within a watercourse;</li> <li>(b) in front of a development setback; or</li> <li>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; —</li> </ul> <p>excluding—</p> <ul style="list-style-type: none"> <li>(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</li> <li>(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</li> <li>(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;</li> <li>(dd) where such development occurs within an urban area;</li> <li>(ee) where such development occurs within existing roads, road reserves or railway line reserves; or</li> </ul> <p>the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.</p>	<p>The proposal entails the development of erosion protection structures, outside the road reserve, within the Sand River.</p>
<p>Activity Number 19: 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"> <li>(a) will occur behind a development setback;</li> </ul>	<p>The proposal entails the replacement of the bridge, the construction of erosion protection structures, the deepening of the existing pipeline within the Sand River, as well as the maintenance and the removal of the bypass road.</p>

<p>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</p> <p>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</p> <p>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>(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.</p>	
<p>Activity Number: 48</p> <p>The expansion of—</p> <p>(i) infrastructure or structures where the physical footprint is expanded by 100 square metres or more; or</p> <p>(ii) dams or weirs, where the dam or weir, including infrastructure and water surface area, is expanded by 100 square metres or more;</p> <p>where such expansion occurs—</p> <p>(a) within a watercourse;</p> <p>(b) in front of a development setback; or</p> <p>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;</p> <p>excluding—</p> <p>(aa) the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</p> <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;</p> <p>(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;</p> <p>(dd) where such expansion occurs within an urban area; or</p> <p>(ee) where such expansion occurs within existing roads, road reserves or railway line reserves.</p>	<p>The replacement bridge will be larger than the previous degraded bridge and will be enlarged by more than 100m<sup>2</sup>.</p>

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

The holder is herein authorised to undertake the development in respect of the following alternative:

The proposal will include the replacement of bridge (B0495) along DR01489, along the Sand River in De Doorns. The bridge and associated infrastructure entails:

- A 20m single-span solid deck slab integral bridge with compact return walls in the direction of the road. This bridge design comprises a single-span integral bridge constructed with in-situ reinforced concrete and founded on spread footings. The span length between abutment faces in the

direction of the road is 20m. A solid slab deck with a mid-span depth of 1m is anticipated, while deck haunches will be required near the abutments to cater for the deck hogging moments. As the total bridge length is above 20m a 1m high, Type B balustrade will be constructed. The natural trapezoidal shape of the river can pass below the 20m spans.

- Rip rap placed upstream and downstream of the bridge to formalise flow and ensure protection against erosion.
- The installation of reno mattress.
- The installation of a terramesh wall (including gabions to protect the embankment).
- The deepening of an existing 200mm diameter water pipeline that will be concrete encased.
- The maintenance and the removal of the bypass road.

### C. SITE DESCRIPTION AND LOCATION

The listed activities will be undertaken on Remainder of Farm No. 93, De Doorns, at the following co-ordinates:

Latitude (S)			Longitude (E)		
33°	28'	52.15"	19°	37'	15.15"

The SG digit code is: C0850000000009300000

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

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

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

Guillaume Nel Environmental Consultants

% C. Becker

P.O. Box 2632

**PAARL**

7620

Cell: 072 157 1321

Email: carina@gnec.co.za

### 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, Design Alternative 1, described in the Basic Assessment Report ("BAR"), dated 3 May 2023, at the site as described in Section C above.
2. 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.

- (b) A period of 10 years, from the date the holder commenced with the authorised listed activities, during which period the authorised listed activities must be concluded.
- 3. 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.
- 4. 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**

- 5. Seven calendar days' notice, in writing, must be given to the Competent Authority before commencement of construction activities. The notice must:
  - 5.1 make clear reference to the site details and EIA Reference number given above; and
  - 5.2 include proof of compliance with the following conditions described herein:  
Conditions: 6 and 11

#### **Notification and administration of appeal**

- 6. The holder must in writing, within 14 (fourteen) calendar days of the date of this decision–
  - 6.1 notify all registered Interested and Affected Parties ("I&APs") of –
    - 6.1.1 the outcome of the application;
    - 6.1.2 the reasons for the decision as included in Annexure 3;
    - 6.1.3 the date of the decision; and
    - 6.1.4 the date when the decision was issued.
  - 6.2 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;
  - 6.3 draw the attention of all registered I&APs to the manner in which they may access the decision; and
  - 6.4 provide the registered I&APs 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, of the holder; and
    - 6.4.6 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).

## **Management of activity**

7. The draft Environmental Management Programme ("EMPr") submitted as part of the application for Environmental Authorisation is hereby approved and must be implemented.
8. The MMP submitted as part of the application for Environmental Authorisation must be implemented.
9. The Alien Management Plan submitted as part of the application for Environmental Authorisation must be implemented.
10. The EMPr, MMP and the Alien Management Plan must be included in all contract documentation for all phases of implementation.

## **Monitoring**

11. The holder must appoint a suitably experienced environmental control officer ("ECO"), before commencement of any construction activities to ensure compliance with the EMPr and the conditions contained herein.
12. The ECO must conduct one site visit prior to the commencement of construction and site clearance activities. Fortnightly monitoring inspections must be undertaken during the construction phase. Environmental Compliance Reports must be compiled and must be submitted to the Competent Authority every month for the duration of the construction phase. The final Environmental Compliance Report must be submitted to the Competent Authority within one month of construction having been completed.
13. A copy of the Environmental Authorisation, EMPr, 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, the holder must conduct environmental audits to determine compliance with the conditions of the Environmental Authorisation and the EMPr. The Environmental Audit Report must be prepared by an independent person that is not the ECO referred to in Condition 12 or the EAP and must contain all the information required in Appendix 7 of the NEMA EIA Regulations, 2014 (as amended).

Environmental Audit Reports must be submitted to the Competent Authority during the construction phase. The first Environmental Audit Report must be submitted three months after the commencement of construction activities. A final Environmental Audit Report must be submitted within three months of the construction phase having been completed.

The holder must, within 7 days of the submission of an environmental audit report to the Competent Authority, notify all potential and registered I&APs of the submission and make the

report immediately available to anyone on request and on a publicly accessible website (where the holder has such a website).

### **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 paleontological remains (including fossil shells and trace fossils); coins; indigenous and/or colonial ceramics; any articles of value or antiquity; marine shell heaps; stone artefacts 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.

### **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 activity/ies, 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 the 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 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 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 I&AP 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; or

By facsimile:              (021) 483 4174; or

By hand:                    Attention: Mr Marius Venter (Tel: 021 483 2659)  
Room 809  
8<sup>th</sup> 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 [DEADP.Appeals@westerncape.gov.za](mailto:DEADP.Appeals@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 2659, E-mail [DEADP.Appeals@westerncape.gov.za](mailto:DEADP.Appeals@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 EA 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)**

**DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING**

DATE OF DECISION: 20 JUNE 2023

CC: (1) C. Becker (Guillaume Nel Environmental Consultants)  
(2) J. Steyn (Breede Valley Municipality)  
(3) A. Duffel-Canham (CapeNature)  
(4) R.A Morrie (Cape Winelands District Municipality)  
(5) E. Rossouw (BGCMA)

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Email: rmorrie@capewinealnds.gov.za  
Email: erossouw@bgcma.co.za

## ANNEXURE 1: LOCALITY MAP

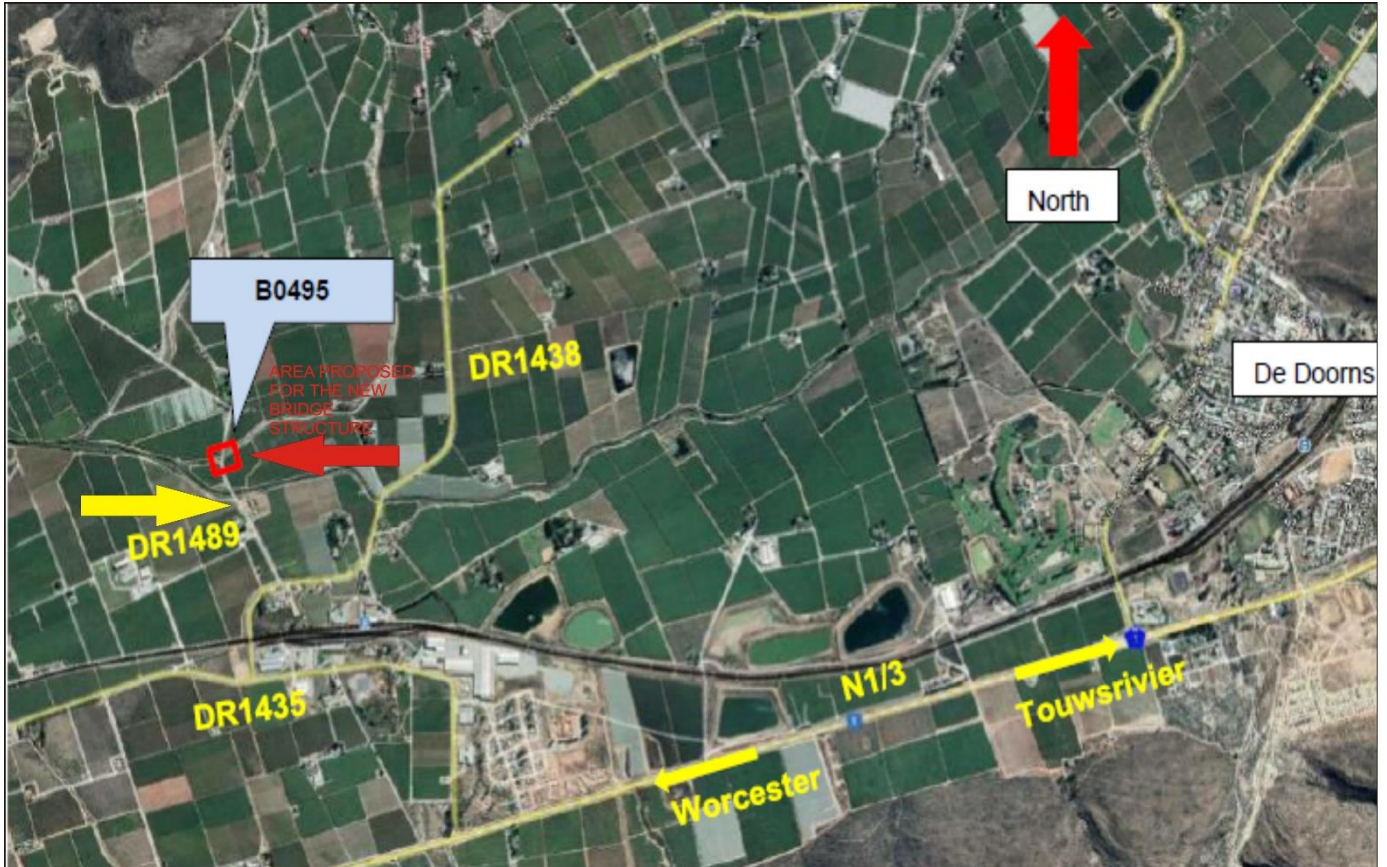


Figure 1: Location of the proposed development.

**ANNEXURE 2: SITE DEVELOPMENT PLAN**

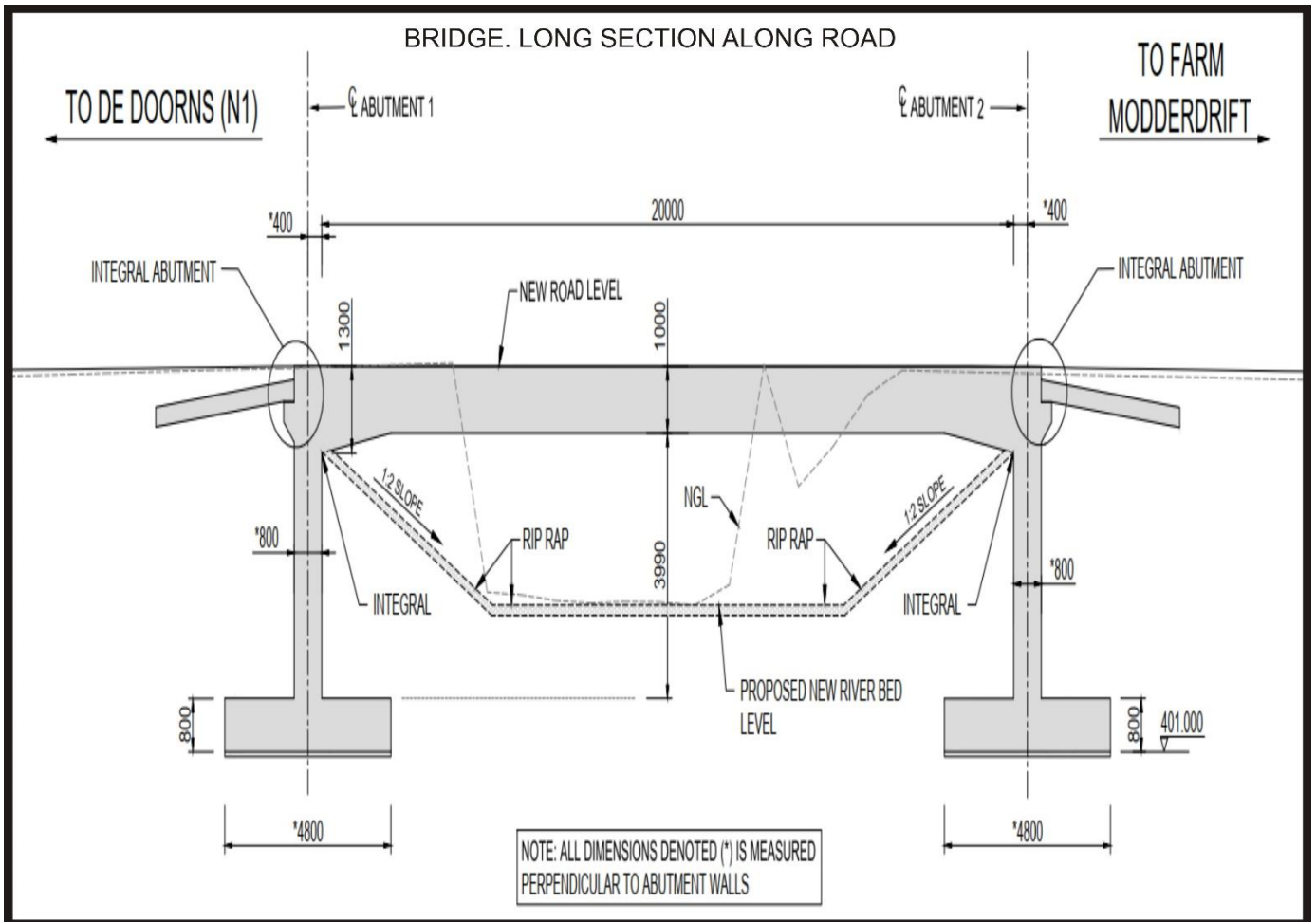


Figure 2: Site development plan for the proposed development.

### **ANNEXURE 3: REASONS FOR THE DECISION**

In reaching its decision, the Competent Authority considered, amongst others, the following:

- a) The information contained in the Application Form dated 6 March 2023, the final BAR dated 3 May 2023, the EMPr and MMP submitted together with the final BAR;
- 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 NEMA;
- d) The comments received from I&APs and responses to these, included in the BAR dated 3 May 2023; 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 during 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;
- fixing notice boards at locations within and around the area where the listed activities are to be undertaken on 10 November 2022;
- 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 15 November 2022 and 22 and 23 March 2023;
- the placing of a newspaper advertisement in the 'Worcester Standard' on 10 November 2022; and
- making the pre-application draft BAR available for comment from 15 November 2022 and in-process draft BAR from 22 and 23 March 2023.

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**

The proposed development entails the replacement of a degraded bridge. The alternatives assessed as part of this application relate to different design alternatives and the "no-go" alternative and are discussed below.

## 2.1 Design Alternatives

### 2.1.1 Design Alternative 1 (Herewith Authorised)

This alternative entails the following:

The proposal will include the replacement of bridge (B0495) along DR01489, along the Sand River in De Doorns. The bridge and associated infrastructure entails:

- A 20m single-span solid deck slab integral bridge with compact return walls in the direction of the road. This bridge design comprises a single-span integral bridge constructed with in-situ reinforced concrete and founded on spread footings. The span length between abutment faces in the direction of the road is 20m. A solid slab deck with a mid-span depth of 1m is anticipated, while deck haunches will be required near the abutments to cater for the deck hogging moments. As the total bridge length is above 20m a 1m high, Type B balustrade will be constructed. The natural trapezoidal shape of the river can pass below the 20m spans.
- Rip rap placed upstream and downstream of the bridge to formalise flow and ensure protection against erosion.
- The installation of reno mattress.
- The installation of a terramesh wall (including gabions to protect the embankment).
- The deepening of an existing 200mm diameter water pipeline that will be concrete encased.
- The maintenance and the removal of the bypass road.

This alternative is preferred for the following reasons:

- The construction of compact return walls will result in less excavation and construction work within the Sand River.
- The 20m span also allows for the abutment foundation to be built outside of the direct watercourse.
- The single-span bridge design spanning the entire river cross-section with the abutments situated outside of the river embankments causes no obstruction to the river flows.
- Rip rap lined embankments at 1:2 slopes are provided to run through the bridge opening, protecting against erosion and to improve the hydraulic characteristics of the canalized Sand River at the bridge crossing.
- This option results in the lowest flow velocity and Froude number among all the options minimizing the risk of impact damage or erosion.
- The Froude number and flow profile indicate subcritical flow conditions and a stable flow profile which poses the least risk to the road and proposed replacement bridge.

### 2.1.2 Design Alternative 2

This design comprises a cellular bridge with two cells that resemble a typical box culvert. The length of the structure, measured in the direction of the road, between the internal faces of the abutment walls, is 10m. The structure is founded on a shallow raft foundation.

The wingwall and erosion protection measures for this design are in accordance with the "Type C" hydraulic improvements. Cantilevered concrete wingwalls extended parallel to the river, sloping down to the river level, with increasing rip rap erosion protection on the river invert and behind the wall as the wall height reduces. The design ends with rip rap erosion protection at 1:2 embankment slopes up to 20m upstream and downstream of the bridge.

This alternative not preferred for the following reasons:

- This option has the least favourable hydraulic results due to the obstruction to the river flow caused by the divided span and internal wall. The restricted opening for the river flow results in the highest backwater, flow velocities and Froude number, which poses a risk of



impact damage and erosion to the structure and will require more expensive erosion protection.

- The internal wall increases the risk of debris build-up upstream of the structure, which might cause even higher backwater and flow velocities.

## 2.2 “No-Go” Alternative

The “no-go” option was considered and is not preferred because the existing bridge is degraded and unsafe. The opportunity to provide a safer access to farmers and other road users and a reduction in the potential accident rates will not be realised. Additionally, no employment opportunities will be created during the construction phase.

## 3. Impact Assessment and Mitigation measures

### 3.1 Activity Need and Desirability

The existing bridge, B0495, has deteriorated to a point where the safety was compromised. A large portion of the northern abutment and fill had collapsed into the river, most likely due to significant scour from the substantial rainfall. The structure was deemed unsafe for continued use and a sudden failure of this bridge would have caused a major safety risk. Additionally, the state of the bridge posed a life-threatening risk to the public, as it cuts off the only available access for farmers. A temporary bypass, adjacent to Bridge B0495 on the downstream side, was constructed in accordance with a Section 30A Directive issued on 21 July 2021 (Referenced Number: 16/6/B2/3/1214/21). The existing bridge was demolished after the completion of the temporary bypass. A replacement bridge on the same alignment as the demolished bridge is proposed, which will provide a safer structure for road users and reduce the potential for accidents to occur.

### 3.2 Biodiversity and Biophysical Impacts

According to the Freshwater Ecological Assessment dated October 2022, compiled by R. Mathakutha of FEN Consulting, the Sand River is largely modified with a moderate ecological importance and sensitivity. The proposed replacement bridge with an improved design (spanning the entire active channel of the Sand River with the abutment foundation to be built outside of the active channel) is considered a positive maintenance measure following the failure of Bridge B0495. The construction of the proposed bridge will improve the overall ecological functioning of the Sand River in the long-term through adequate hydrological movement. Through the implementation of the EMP the impact on the Sand River will be limited.

An MMP has been compiled for the maintenance of the replacement bridge within the Sand River. The construction of the replacement bridge and the maintenance thereof, as approved 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).

### 3.3 Heritage Impacts

In a comment from Heritage Western Cape, dated 25 November 2022, it was confirmed that no additional studies are required since no impacts on heritage resources are anticipated.

The development will result in both negative and positive impacts.

#### **Negative Impacts:**

- The proposed development will have an impact on the Sand River. However, adequate mitigation measures have been included in the EMPr to mitigate impacts associated with the development.

#### **Positive impacts:**

- The river crossing will be safer for residents and other road users in the area using the river crossings.
- Improvement in the hydraulic characteristics of the canalized Sand River cross section at the bridge crossing.
- Temporary employment opportunities will be created during the construction phase.

## **4. National Environmental Management Act Principles**

The NEMA 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 NEMA and that any potentially detrimental environmental impacts resulting from the listed activities can be mitigated to acceptable levels.

-----**END**-----