

**edtea****Department :**Economic Development, Tourism and
Environmental Affairs**PROVINCE OF KWAZULU-NATAL**

Enquiries : Ms. V. Maclou	Telephone : 031 – 366 7338	Private Bag : X54321
Imibuzo :	Ucingo :	Isikhwama Seposi : Durban
Navrae :	Telefoon :	Privaat Sak : 4000
Reference :	Fax :	Date :
Inkomba : DM/0012/2019	iFeksi : —	Usuku : 18 / 10 / 2019
Verwysing:	Faks :	Datum :

eThekweni Municipality: City Engineers Department
30 Archie Gumede Place
Durban
4000

Attention : Ms. Roxanne Mudali
Tel : 031 311 7606
Cell : 079 409 3145
Email address : Roxanne.Mudali@durban.gov.za

Dear Madam

DM/0012/2019: ENVIRONMENTAL AUTHORISATION FOR THE CONSTRUCTION OF A PEDESTRIAN BRIDGE ON REM OF PORTION 508 OF ERF 842 OF RIET RIVIER 842 (WARD 102), SITUATED AT 610210 STREET, VERULAM, WHICH IS LOCATED WITHIN THE ETHEKWINI MUNICIPALITY.

The KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs (hereafter referred to as "the Department") has **authorised** the abovementioned project.

ENQUIRIES

Please note that:

- All queries regarding this application for environmental authorisation (including the Department's decision) must be directed to the official of this Department with contact details provided on the letterhead above.
- **Only** queries regarding appeals must be submitted to the Office of the MEC (details provided below).

NOTIFICATION OF DECISION ON APPLICATION

In accordance with regulation 4(2) of the EIA Regulations 2014, as amended on 07 April 2017, the applicant must in writing within **fourteen (14) days** of the date of this decision ensure that:

- a. All registered interested and affected parties are provided with access to this decision and the reasons for the decision; and
- b. The attention of all registered interested and affected parties is drawn to the fact that an appeal may be lodged against the decision in terms of the National Appeal Regulations 2014, if such appeal is available in the circumstances of the decision.

Department of Economic Development, Tourism &
Environmental Affairs, KwaZulu-Natal

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APPEALS

In accordance with regulation 4(1) of the National Appeal Regulations, 2014 an appellant must submit an appeal to the appeal administrator and a copy of the appeal to the applicant, any registered interested and affected party and organ of state with interest in the matter with **twenty (20) days** from the date of notification of this decision.

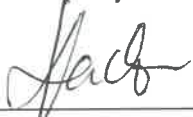
An appellant must comply with regulation 4(2) and submit the appeal in writing, on the form obtainable from the Appeal Administrator and **by post, fax, e-mail or hand delivery** to the following address:

The Appeal Administrator,

Office of the KwaZulu-Natal MEC for Economic Development, Tourism & Environmental Affairs

FAX/ E-MAIL:	PHYSICAL:	POSTAL:
Tel: 033- 264 2651 Mobile: 081 731 7361 E-mail: haresh.inderlall@kznedtea.gov.za (Mr. Haresh Inderlall)	2 ND Floor, Room 218.23 270 Jabu Ndlovu Street Pietermaritzburg 3201	Private Bag X9152 PIETERMARITZBURG 3200

Yours faithfully



for: Acting Head of Department


KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs

Signed by: Ms. Vanessa MacClou

Designation: District Manager - eThekweni

Date: 18 / 10 / 2019

cc: Ms. Riona Patak, JG Afrika, Tel: 033 343 6700, e-mail address: PatakR@jgafrika.com

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Environmental Authorisation

In terms of regulation 25 of the
Environmental Impact Assessment Regulations, 2014

Project Title: The construction of a pedestrian bridge

Municipality: eThekweni Municipality

Application number : DM/0012/2019

NEAS number : KZN/EIA/0001105/2019

Date of issue : 18 / 10 / 2019

Environmental Authorisation Holder : eThekweni Municipality

Location of activity : Rem of Portion 508 of Erf 842 of Riet Rivier 842 (Ward 102), situated at 610210 Street, Verulam

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Scope of Project

The project entails the construction of a pedestrian bridge on Rem of Portion 508 of Erf 842 of Riet Rivier 842 (Ward 102), situated at 610210 Street, Verulam, which is located within the eThekweni Municipality as per **Annexure 2: Locality Map** attached herewith. At present, the surrounding community makes use of existing informal footpaths to cross the two unnamed tributaries of the Ohlanga River. Crossing points have proven to be dangerous and inaccessible during heavy storm events. The bridge will be located within the 1:100 year floodline.

The pedestrian bridge will link into an existing informal footpath that is currently utilised by the surrounding community. The bridge alignment will cross two non-perennial tributaries of the Ohlanga River and will connect Street 610210 (to the west) with Street 600109 (to the east).

The construction of the pedestrian bridge is as follows:

- a) The bridge structure will consist of a 2.3m wide deck, which will be connected to bedrock using Continuous Flight Auger (CFA) piles and reinforced concrete columns.
- b) A galvanised mesh enclosure over the bridge deck;
- c) The substructure is supported by 4 raked piles at each pier and abutment position; and,
- d) The bridge structure will consist of reinforced concrete deck which will be connected to bedrock using Continuous flight auger (CFA) piles and reinforced concrete columns.

The development of the site will be as per **Annexure 3: Layout Plan** attached herewith.

Decision

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations, 2014 as amended on 07 April 2017, the

KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs
(hereafter referred to as the "Department")
grants Environmental Authorisation

to:

eThekweni Municipality
(herein after referred to as "the holder of the Environmental Authorisation")

Details of the contact person:

Ms Roxanne Mudali

30 Archie Gumede Place
Durban
4001

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Tel: 031 311 7325
Cell: 079 409 3145
Email: Roxanne.Mudali@durban.gov.za

to undertake the following activities (hereafter referred to as "the activities") as described in section 1 below.

1. Activities authorised

The following activities in Government Notice Number Regulation (GNR) 983 dated 04 December 2014, as amended on 07 April 2017 are triggered by the abovementioned project:

1.1 Description of Activity and location

21 Digit Surveyor General Codes for each property

N	0	F	U	0	0	0	0	0	0	0	0	0	8	4	2	0	0	5	0	8
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This application is described as triggering the following listed activities:

Listing Notice / Activity No.	Activity description	Component of the project
Activity 19 of Listing Notice 1 of the Government Notice Regulations, December 2014 as amended	<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>(f) <i>will occur behind a development setback;</i></p> <p>(g) <i>is for maintenance purposes undertaken in accordance with a maintenance management plan;</i></p> <p>(h) <i>falls within the ambit of activity 21 in this Notice, in which case that activity applies;</i></p> <p>(i) <i>occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</i></p>	The construction of the Pedestrian Bridge will result in more than 10m ³ of material being removed and deposited within the tributaries of the Ohlanga River. The structure will be 50m long. As such, this activity applies.

Environmental Authorisation
Pedestrian Bridge, Verulam


	<p><i>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>Activity 14 of Listing Notice 3 of the Government Notice Regulations, December 2014 as amended</p>	<p>The development of—</p> <p>(ii) <i>infrastructure or structures with a physical footprint of 10 square metres or more;</i></p> <p><i>where such development occurs—</i></p> <p>(a) <i>within a watercourse;</i> (b) <i>in front of a development setback; or</i> (c) <i>if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.</i></p> <p><i>excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.</i></p> <p>d. KwaZulu-Natal xi. <i>In an estuarine functional zone.</i></p> <p>(aa) <i>Areas Zoned for use as Public Open Space</i></p>	<p>The pedestrian bridge will be constructed within an area zoned as public open space. Therefore, this will entail the development of more than 10m² of infrastructure within a watercourse in a geographical area listed under Listing Notice 3 of the EIA Regulations, 2014, as Amended.</p>

Table 1: Listed activities triggered

1.2 The activity triggering the need for an EA is located at the following GPS co-ordinates:

Authorised alternative	Latitude (south)	Longitude (east)
Rem of Portion 508 of Erf 842 of Riet Rivier 842 (Ward 102), situated 610210 Street, Verulam	29° 39' 40.78"	31° 2' 10.75" E
	29° 39' 40.03"	31° 2' 12.65" E

Table 2: GPS co-ordinates of the activity

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2. General

2.1 Compliance with the conditions of this environmental authorisation (EA)

In terms of section 24F of the National Environmental Management Act, 1998 (Act No. 107 of 1998), no person may commence with an activity listed in terms of section 24(2) (a) or (b) of the Act, unless the competent authority has granted an EA.

2.2 Understanding the conditions of this authorisation

It is the responsibility of the holder of the EA to understand the conditions of this authorisation. Any queries regarding this EA must be submitted in writing to the Department as per contact details specified in condition 2.4 herewith.

2.3 Amendments to the project and update of the Environmental Management Programme (EMPr)

- 2.3.1 Any changes to, or deviations from, the project description set out in this EA must be approved, in writing, by the Department before such changes or deviations may be effected.
- 2.3.2 Any subsequent amendments to the approved EMPr must also be submitted to the Department for review. The amendments must only be implemented after being approved by the Department in writing.
- 2.3.3 This EA does not negate the EA holder's responsibility to comply with any other statutory requirement that may be applicable to the carrying on of the activities.
- 2.3.4 The Department retains the right to inspect the project area at any time during all phases of the development in accordance with relevant legislation.
- 2.3.5 It is the responsibility of the EA holder to ensure that the Department is made aware of any change of ownership or contact details within **thirty (30) days** of such changes. Where applicable, an amendment application must be submitted.
- 2.3.6 The holder of the EA must ensure that all workers be supplied with appropriate personal protective equipment/clothing (PPE/C) and management must ensure that all staff wear the necessary PPE/C during the construction phase.
- 2.3.7 Please note that it is the responsibility of the EA holder to ensure the details are correct at the time of submitting any documentation and that the documentation reaches the relevant official.

2.4 Contact details of the Department

The following contact details for the Department must be used for all reports, notices etc. which must be submitted to the Department:

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Environmental Authorisation
Pedestrian Bridge, Verulam

KZN Department of Economic Development, Tourism and Environmental Affairs
P. O. Box X54321
Durban
4000

Physical Address: 40 Dr AB Xuma Street (Commercial Street) Commercial City, 17th Floor, Durban, 4001

Attention: The Compliance Officer -

Component	Email Address	Telephone No.	Cell. No.
Compliance, Monitoring & Enforcement (CME)	Edtea.cme.ethekwini@gmail.com	031 – 366 7338	079 898 0491
Environmental Impact Assessment (EIA)	Natasha.Brijlal@kznedtea.gov.za/ Yugeshni.Govender@kznedtea.gov.za	031 – 366 7317 / 9	079 898 0491 / 082 9219340
Pollution & Waste Management (P&W)	Shireen.Mahabeer@kznedtea.gov.za	031 - 366 7318	082 322 1871

Table 3: eThekweni District office component contact email addresses and telephone numbers

3 Conditions of Environmental Authorisation

This Environmental Authorisation (EA) is subject to the conditions set out below:

- 3.1. **Period of Validity:** The listed activities authorised must commence within **ten (10) years** from the date of issue. If commencement of the authorised activity / any of the authorised activities does not occur within that period, this EA lapses. Construction must be completed within 05 years of commencement.
- 3.2. **Notification to interested and affected parties**
 - 3.2.1 The holder of the EA must notify all registered interested and affected parties, in writing and within **fourteen 14 calendar days from date of** the Department's decision to authorise the activity.
 - 3.2.1.1 The notification referred to must –
 - 3.2.1.1.1 Specify the date on which the authorisation was issued;
 - 3.2.1.1.2 Inform the interested and affected party of the appeal procedure provided for in the National Appeal Regulations, 2014 as amended on 07 April 2017; and,
 - 3.2.1.1.3 Advise the interested and affected party that a copy of the authorisation will be furnished on request.
- 3.3. **Environmental Management Programme (EMPr)**
 - 3.3.1 The Environmental Management Programme (EMPr) prepared by JG Afrika (Pty) Ltd and submitted as part of the Final BAR dated June 2019 received by the Department on 02 July 2019, for the construction and operational phases of this project as submitted for the EA of this

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
project complies with section 24N of NEMA and Appendix 4 of the EIA Regulations, 2014, as amended on 07 April 2017. This EMPr is hereby **approved** and must be implemented throughout the above-mentioned phases of the project.

- 3.3.2 The EMPr must be kept on site throughout the construction and rehabilitation phases of the development.
- 3.3.3 Non-compliance with the approved EMPr will constitute non-compliance with the conditions of this EA.
- 3.3.4 The EMPr is considered as an extension of the EA. Each official and/or worker operating on site must be made aware of his/her responsibilities as outlined in the EMPr. Proof of this must be attached to the first audit report submitted to the Department as per contact details specified in condition 2.4 herewith.
- 3.3.5 The approved EMPr must be:
 - 3.3.5.1 Made binding on all parties operating on the site during all phases of the project; and,
 - 3.3.5.2 Included in all contractual documentation for the construction and operational phase of the development.
- 3.3.6 A copy of the approved EMPr together with any documents that need to be attached to the EMPr must be forwarded to the CME component – eThekweni District with contact details as specified in condition 2.4 herewith.

3.4. Monitoring and Reporting to the Department

- 3.4.1 All requirements for the management, monitoring and reporting of impacts for all phases of the project must be as specified in the EMPr or environmental audit report.
- 3.4.2 An independent Environmental Control Officer (ECO)¹ must be appointed **prior** to the commencement of the construction phase to monitor the implementation of the approved EMPr and EA.
- 3.4.3 Should the ECO for the approved development change at any time, this must be communicated, in writing, to the CME component – eThekweni District with contact details as specified in condition 2.4 herewith within **fourteen (14) calendar days** of appointing the new ECO.
- 3.4.4 The notification in terms of condition 3.4.3 above must include contact details for the ECO, details pertaining to the ECO's relevant experience, and reasons for the change in ECO.
- 3.4.5 The ECO must conduct **one (01) site visit per month** during the construction phase and **one (01) post construction site visit within 30 days after completion of construction**.
- 3.4.6 The responsibilities of the ECO must include *inter alia*:

¹ The ECO must be independent and have the necessary experience and qualifications to understand, interpret, monitor, audit and implement the EMPr and the conditions of this EA. Feedback must be given in the form of an audit report which must address any non-compliance that may have arisen from the audit.

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- 3.4.6.1 Performing all tasks assigned to the ECO in the approved EMPr;
- 3.4.6.2 Keeping record of all activities on site, problems identified and transgressions noted;
- 3.4.6.3 Assisting the EA holder in ensuring/enforcing implementation of the EA and EMPr; and,
- 3.4.6.4 Providing guidance/advice that ensures implementation of appropriate environmental management measures and adherence with environmental legislation/regulations.

3.4.7 Records relating to monitoring and auditing must be kept on site by the ECO and made available for inspection to this Department and other relevant authorities.

3.4.8 The activity authorised must only be carried out at the location/s as described in **Section 1** above.

3.5 Written notice of the commencement of the construction and operational phases

3.5.1 Not less than **seven (07) days** written notice must be given to the Department that the construction phase will commence. Commencement for the purposes of this condition includes site preparation. The notice must include the EIA reference number DM/0012/2019, a date on which it is anticipated that construction will commence and a copy of the signed EA together with any other subsequent amendment if applicable.

3.6 Availability of this EA

3.6.1 A copy of this EA must be kept by the EA holder and made available on request to any authorised official of the Department.

3.6.2 The Department shall not be held responsible for any damages or losses suffered by the holder or successor in title in any instance where construction/commissioning may be temporarily or permanently stopped for reasons of non-compliance by the holder of the EA with the conditions of the EA as set out in this document or any other subsequent document emanating from these conditions of the EA.

Commissioning of the activity

3.7 The development must comply substantially with the Development Layout Plan prepared by eThekweni Municipality Procurement and Infrastructure Cluster, Engineering Unit, Roads Provision Department, dated 01 March 2016 submitted as part of the final BAR dated June 2019 and received by the Department on 02 July 2019, as per **Annexure 3: Layout Plan** attached herewith. Should there be any changes to the approved layout plan; the Department must be informed in writing **prior** to the implementation of the change and the Department will provide a written response to confirm whether such changes are of a substantive nature or not.

3.8 The final layout plan must be approved by to the eThekweni Municipality **prior** to the commencement of construction. The approved plan must be attached to the first audit report.

3.9 Should there be any deviations from the layout authorised in Condition 3.7 above, this must be approved in writing by the EIA section – eThekweni District in accordance with the legislation applicable at the time, as per contact details specified in condition 2.4 herewith **prior** to the implementation of such deviation.

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- 3.10 A qualified Engineering Geologist or similar professional specialist in geotechnical engineering must be appointed **prior** to the finalization of the Engineer's designs and before the commencement of construction in order to carry out foundation investigations for foundation of piers.
- 3.11 Chemical ablution facilities used during the construction phase must:
- 3.11.1 Be located outside the 1:100 year floodline;
 - 3.11.2 Not cause any pollution to the receiving environment neither should it be a health hazard to the general public;
 - 3.11.3 Be cleaned weekly and disposed of at a registered waste water treatment facility; and,
 - 3.11.4 Be removed from site when the construction and rehabilitation phases have been completed and a safe disposal certificate must be obtained as proof and attached to the audit report.
- 3.12 The construction camp/s must be situated away from adjacent properties and outside of any sensitive areas, the 1:100 year floodline and must be easily accessible to all workers.
- 3.13 The location of the construction camp/s must be negotiated and agreed upon by the holder of the EA, the contractor and ECO for the project.
- 3.14 Prior to the commencement of the construction phase, a shade cloth screen must be erected around the working area to prevent the unnecessary spread of any material into neighbouring residences and the watercourse.

Construction Phase

- 3.15 During the construction phase, the working area must be cordoned off from the public.
- 3.16 Signage must be erected on the site to warn workers, the community and motorists that construction is in progress.
- 3.17 No fires are permitted on site. Fire extinguishers must be made available on site during the construction phase of the development.
- 3.18 Cement mixing must be carried out on a hard surface or on cement mixing trays. Cement mixing must not be permitted to occur on bare ground or areas prone to erosion.
- 3.19 The following conditions apply to the storage of dangerous substances on site during the construction phase:
- 3.19.1 Dangerous substances must be stored in the construction camp under lock and key;
 - 3.19.2 The site Engineer or ECO must ensure that the storage and utilisation of any potentially dangerous materials such as, but not limited to, diesel, petrol, oils and/or lubricants do not result in any form of soil and water pollution; and,
 - 3.19.3 Any soil/groundwater polluted during construction must be removed, stored in a sealed container and disposed thereof at a licensed disposal facility. Safe disposal certificates must be obtained and made available to the Department upon request.

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landfill site registered in terms of section 20(b) of the National Environmental Management: Waste Act, Act No. 59 of 2008. The contractor responsible for the removal of the waste must supply the applicant with a certificate indicating safe disposal. Within **fourteen (14) days** of its issue, a copy of the safe disposal certificates must be forwarded to the Control Environmental Officer: CME Component as per contact details specified in condition 2.4 herewith.

- 3.50 It is the responsibility of the holder of the EA to identify any sources of pollution from the undertaking of the activity and to take appropriate measures to prevent any pollution of the environment.
- 3.51 Chemicals or dangerous substances must not be allowed to pollute the soil or groundwater. In the event of this occurring, the necessary clean up measures must be undertaken immediately. Any soil/groundwater polluted during construction must be removed, stored in a sealed container and disposed off in terms of the National Environmental Management Waste Act (NEMWA), Act no. 59 of 2008.

Operational phase

- 3.52 The holder of the EA is responsible for compliance with the provisions for *Duty of Care and remediation of damage* in accordance with section 28 of NEMA, Act no. 107 of 1998 (as amended). Determination of damage vests in this Department.
- 3.53 Prior to the undertaking of any further expansion, a written enquiry must be lodged with the Department: EIA section as per condition 2.4 herewith. The Department will provide a written response to your enquiry. Proof of the response must be kept as record.

Date of environmental authorisation: 18 October 2019



for: Head of Department:

KwaZulu-Natal Department of Economic Development Tourism and Environmental Affairs

Signed by: Ms. Vanessa MacClou

Designation: District Manager

District office: eThekweni

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3.39.4 The incident must be documented.

3.40 It is the responsibility of the EA holder to ensure that all emergency contact numbers on the Spill Contingency Plan (SCP) are updated annually.

3.41 In the event of a spillage which poses a serious threat to the environment, the following Departments must be informed within **forty-eight (48)** of an incident² and/or emergency situation³:

3.41.1 The eThekweni Municipality;

3.41.2 DHSWS;

3.41.3 KZN Department of Economic Development, Tourism & Environmental Affairs: P&W component as per contact details specified in condition 2.4 herewith;

3.41.4 The Local Fire Department; and,

3.41.5 Any other mandated department.

Geotechnical

3.42 A geotechnical specialist or similar professional specialist in geotechnical engineering must be present on site during the pre-construction phase to attend to geotechnical-related issues.

3.43 All earthworks must be carried out in a manner to promote stable development of the site. Earthworks must be carried out along the guidelines given in SANS 1200 (current version).

3.44 All recommendations made by the geotechnical specialist must be adhered to.

Biodiversity

3.45 Indigenous vegetation outside the development footprint must be protected by means of danger tape preventing access of construction vehicles and personnel into these areas, unless for rehabilitation purposes and maintenance thereof.

3.46 Any pollution to surface or groundwater must be immediately reported to the DHSWS and the Department as per the contact details in condition 2.4 herewith and appropriate mitigation measures must be employed.

Solid Waste Management


3.47 Waste material generated during all phases of the development must be handled/stored/disposed according to its classification in terms of the National Environmental Management Waste Act (NEMWA), Act no. 59 of 2008.

3.48 All waste material collected must be stored under cover and within a designated waste collection/storage area which must be on an impermeable surface. Access control to this area must be properly managed.

3.49 The holder of the EA is responsible for the removal and disposal of solid waste including surplus of spoil material and rubble. All waste that cannot be reused or recycled must be disposed off accordingly at a

² 'Incident' as described in terms of Section 30 of National Environmental Management Act (NEMA), Act no. 107 of 1998 (as amended).

³ 'Emergency Situation' as described in terms of Section 30(A) of NEMA, Act no. 107 of 1998 (as amended).

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- 3.20 Berms must be constructed above and below the construction site during the preconstruction and construction phases of the project so as to reduce the flow of water in the section that construction is taking place.
- 3.21 The berms must be constructed out of a non-erodible material, such as sand bags with plastic liners.
- 3.22 The berms and all construction materials utilized during the construction phase must be removed from the watercourse once construction is completed.
- 3.23 The following conditions apply to stream diversion of the watercourse during the construction of the pedestrian bridge:
- 3.23.1 The Department of Human Settlements, Water and Sanitation (DHSWS) must be contacted for any necessary authorisations/requirements regarding the diversion of the stream or abstraction of water from the stream/river. This must be documented in writing **prior** to commencement of construction;
 - 3.23.2 The water used during the construction phase must only be obtained from an approved natural source or from a municipal source as per DHSWS conditions or eThekweni Municipality approval;
 - 3.23.3 The rehabilitation of the affected areas must follow immediately upon completion of construction in accordance with the DHSWS conditions of approval;
 - 3.23.4 The diversion must not result in the impediment of water flow; and,
 - 3.23.5 Riverbanks must be rehabilitated and the banks of any diversion must be protected from erosion.

Traffic Management

- 3.24 Construction vehicles must be parked in a designated area which must not disrupt vehicle traffic from surrounding public users. All vehicles to remain in the parking area designated within the construction site when not in use.
- 3.25 Construction vehicles and machinery must make use of existing access routes. Should this not be possible, an alternative route must be agreed upon with the ECO and the CME component of the Department.
- 3.26 Traffic control measures must be implemented should the access roads be affected by the ingress and egress of construction vehicles and equipment.

Noise

- 3.27 Machinery and equipment must always be used in accordance with the approved EMP.
- 3.28 Surrounding land owners must be notified **in writing** prior to commencement of the construction phase. Proof of this must be submitted to the Department: CME section as per contact details specified in condition 2.4 herewith.
- 3.29 Machinery that creates a noise nuisance, such as reverse sirens must only be operated as per city bylaws.

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Stormwater Management

- 3.30 The Stormwater Management Plan (SWMP) must be complied with for the duration of the construction and operation of the development which must include but not limited to the following:
- 3.30.1 Measures to reduce erosion on site, stormwater must be attenuated and the cause of erosion of riverbanks must be dealt with within twenty-four (24) hours of detection in accordance with the approved EMP; and,
 - 3.30.2 Measures to contain wastewater and to safely dispose of it must be implemented. Any wastewater (i.e. dirty construction water) generated must not be discharged into the natural environment.
- 3.31 Berms or coffer dams must be constructed above and below the construction site during the pre-construction and construction phases of the project.
- 3.32 Earthworks and drainage measures must be designed in such a way as to prevent ponding of, or high concentrations of, stormwater anywhere on the site, both during and after the development has been completed.

Dust and Erosion Control

- 3.33 Dust must be suppressed during dry periods by the regular application of grey/waste water via a water cart in such quantities that will not result in runoff and erosion or muddied areas.
- 3.34 Soil erosion prevention measures and soil erosion control measures outlined in the approved EMP must be implemented during the construction and rehabilitation phase.
- 3.35 Vehicles transporting sand or finer grained materials must be covered to prevent dangers/nuisance to other road users (dust, falling sand/rocks).
- 3.36 Materials excavated during the construction phase should be deposited/ stored in areas outside of drainage lines and stormwater channels.
- 3.37 All stockpiles must be covered to prevent windblown scatter.

Spillage

- 3.38 The holder of the EA must ensure that all personnel/workers on site are appropriately trained to deal with a spill/leak in accordance with relevant environmental legislative requirements.
- 3.39 Should spillage occur, the following steps must be taken and managed in accordance with the approved EMP:
- 3.39.1 Stop the source of the spill;
 - 3.39.2 Contain the spill;
 - 3.39.3 All spills must be reported to this Department's Control Environmental Officer: Pollution and Waste (P&W) Component as per contact details specified in condition 2.4 herewith as well as any other mandated authorities such as the Department of Human Settlement, Water and Sanitation (DHSWS); and,

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Annexure 1: Reasons for Decision

1. Background and project scope

The project entails the construction of a pedestrian bridge on Rem of Portion 508 of Erf 842 of Riet Rivier 842 (Ward 102), situated at 610210 Street, Verulam, which is located within the eThekweni Municipality as per **Annexure 2: Locality Map** attached herewith. At present, the surrounding community makes use of existing informal footpaths to cross the two unnamed tributaries of the Ohlanga River. Crossing points have proven to be dangerous and inaccessible during heavy storm events. The bridge will be located within the 1:100 year floodline.

The pedestrian bridge will link into an existing informal footpath that is currently utilised by the surrounding community. The bridge alignment will cross two non-perennial tributaries of the Ohlanga River and will connect Street 610210 (to the west) with Street 600109 (to the east).

The construction of the pedestrian bridge is as follows:


- a) The bridge structure will consist of a 2.3m wide deck, which will be connected to bedrock using Continuous Flight Auger (CFA) piles and reinforced concrete columns.
- b) A galvanised mesh enclosure over the bridge deck;
- c) The substructure is supported by 4 raked piles at each pier and abutment position; and,
- d) The bridge structure will consist of reinforced concrete deck which will be connected to bedrock using Continuous flight auger (CFA) piles and reinforced concrete columns.

The development of the site will be as per **Annexure 3: Layout Plan** attached herewith.

2. Information considered in making the decision

In reaching its decision, the Department took, *inter alia*, the following into consideration –

- a) The pre-application Meeting was held with Mrs Y. Naicker of the EDTEA: eThekweni District on 15 March 2017;
- b) Application form compiled by JG Afrika (Pty) Ltd, and received by the Department on 28 March 2019;
- c) The acknowledgement of the application by the Department on 04 April 2019;
- d) The information contained in the draft BAR and EMP, both compiled by JG Afrika (Pty) Ltd, dated March 2019 as received by the Department on 26 March 2019;
- e) The comments on the draft Bar submitted by the Department on 26 April 2019 and the associated response to the comments by JG Afrika (Pty) Ltd on 31 May 2019.
- f) The information contained in the final BAR and EMP, both compiled by JG Afrika (Pty) Ltd dated June 2019 as received by the Department on 02 July 2019;
- g) The findings of the site visit conducted by Mr. Ndumiso Masuku from the Department of Economic Development, Tourism and Environmental Affairs on 25 July 2019.

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3. Key factors considered in making the decision

a) The final BAR (received by the Department on 02 July 2019)

- i. The final BAR prepared by JG Afrika (Pty) Ltd received by the Department on 02 July 2019;
- ii. The final BAR included a description of the environment that may be affected by the activity and the manner in which the physical, biological, social, economic and cultural aspects of the environment may be affected by the activity; and,
- iii. The methodology used in assessing the potential impacts identified in the final BAR has been indicated.

b) Public Participation

The public participation process complies with the requirements of Chapter 6 of the EIA Regulations, 2014 as amended on 07 April 2017 and the comments from the organs of state and interested & affected parties have either been included in the final amended BAR dated June 2019.

c) Need and Desirability⁴

Currently pedestrians from the surrounding community utilise existing informal footpaths to traverse the two non-perennial tributaries located within the watercourse. Wooden planks are utilised to cross the watercourse, regardless of flow. This informal crossing consequently poses a health and safety risk to the community when utilised under both normal and flood conditions. Disabled individuals utilise the main roads in the area which requires a round trip of approximately 5-7 km.

The crossing provides access to clinics on the eastern side of the watercourse and schools on the western side. Currently school children and sickly individuals in the area cross the watercourse to reach schools and clinics on a daily basis. The pedestrian bridge will therefore provide a secure, more easily accessible and convenient long term means of crossing both non-perennial tributaries of the Ohlanga River for the identified communities within the Verulam area.

The need for the pedestrian bridge has been motivated by the local Ward Councillor (on behalf of the community) to the eThekweni Metropolitan Municipality's Transport Authority. The pedestrian bridge is part of the eThekweni Metropolitan initiative to provide a safe environment for all those living in the region. The site was identified in consultation with the local Ward Councillor as the community representatives. Such consultation will ensure that the pedestrian bridge efficiently and effectively meets the needs of the community. Secondary benefits of the development include the creation of skilled jobs for professional engineers, local liaison officers etc. during the planning phase, and temporary job creation and skills development for community members during the construction phase.

d) Geotechnical Assessment⁵

A desktop investigation and visual appraisal of the study concluded that the site is suitable for the bridge construction.

⁴ Extracted from the Final BAR compiled by JG Afrika, received by the Department on 02 July 2019.

⁵ Extracted from the Geotechnical Desktop Assessment compiled by Mr. Kevin Diemont of JG Afrika (PTY) Ltd, received by the Department on 02 July 2019.

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The investigation concluded:

- Foundations should comprise piled solution socketed into competent bedrock.
- The steep river embankments are prone to erosion and mitigation measures in the form of gabion baskets may need to be implemented at the bridge abutment locations.
- All construction materials will need to be imported from a commercial source.

The findings and recommendations by the specialist have been included in the EMP_r and this EA.

e) Wetland and Biodiversity Assessment⁶

The study concluded that the site is in poor condition and that the impacts of the development are manageable. The Specialist notes that although the site is within a SANBI threatened ecosystem, no sensitive species are present due to the level of disturbance of the area. Furthermore, no wetlands have been identified within 500m of the site.

i. Vegetation

The original natural vegetation at the crossing site was KwaZulu-Natal Coastal Belt Veld (CB 3) after Mucina and Rutherford (2006). This type is classed as *Endangered* with over 50% having been transformed already and less than 1% of the original area being under formal conservation in nature reserves. Hydrophilic plant species are listed for the type includes *Dissotis canescens*, and some tree species which are often associated with riparian and damp conditions. These include *Bridelia macrantha* and *Syzygium cordatum*. The bridge site lies within an area mapped in the SANBI Threatened Ecosystems database as Interior North Coast Grassland. However, the entire area is already totally transformed and no such vegetation is present now.

ii. Wetlands

Neither the KwaZulu-Natal Wetlands Database nor the NFEPA database list any wetlands within 1.5 km of the site. The closest found was the Ohlanga River floodplain which is approximately 1.2 km (by run-of channel) away. Further, the site is not included within the D'MOSS⁷ system.

f) Heritage Impact Assessment⁸

No heritage sites were noted in the desktop study. The desktop study noted that the area has been in use for several decades. The impact assessment thus concluded that any heritage site that could have occurred in the study area would have been destroyed by now.

⁶ Extracted from the Wetland and Biodiversity assessment compiled by Mr. D.J. Alletson of JG Afrika (Pty) Ltd, received by the Department on 02 July 2019.

⁷ D'MOSS is referred to as the Durban Metropolitan Open Space System is a tool utilized by the eThekweni Municipality which looks at interconnecting open spaces in public, private and traditional authority ownership that seeks to protect the biodiversity and associated ecosystem services.

⁸ Extracted from the HIA compiled by Mr. Gavin Anderson of Umlando: Archaeological Surveys and Heritage (Pty) Ltd, received by the Department on 02 July 2019.

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g) Floodline Delineation & Stormwater Management layout plan⁹

The recommendations of the specialist have been added as conditions of this EA and are included in the approved EMPr. Negative impacts to the downstream environment, as a result of poor stormwater management, relate predominantly to a reduction in water quality due to erosion from the construction site resulting sedimentation of streams and drainage lines and hydrocarbon spills from machinery used in construction activities. These impacts will be mitigated by the implementation of the EMPr.

h) Alternative Options

i. Site location

The site alternative provided in the Final BAR is the only site considered within this assessment as no other site matches favorably to satisfy the need to provide access in the same location of the informal paths currently in use. The general locality of the site was chosen through recommendation and consultation with the Ward Councillor within the affected community, who represents the needs and requests of the greater community. A formalised crossing over the watercourse, at the point suggested by the Ward Councillor, that tie into existing footpath infrastructure, was therefore requested in this regard.

A number of factors influenced the specific location of the crossing, including the following:

- Limiting the impacts to the receiving environment, as the specific site chosen is located along existing informal footpaths within a corridor of disturbance, limiting impacts to the vegetation and watercourse within the receiving environment;
- The chosen location therefore serves to be the most practical and most feasible as it is frequently used by the communities; and
- An access road (610210 Street) is already in existence in close proximity to the site thereby providing access to the site with minimal additional disturbance.

Based on the above, no other site alternatives have been identified given that the preferred site alternative meets the criteria required by the receiving community in terms of locality. Further, the site allows for:


- Land availability;
- Site access; and
- Limited impact on the receiving environment.

The Department is satisfied that the basic need of the community overrides the need to provide alternative access at another location.

ii. Layout and Design

Design Alternatives, including a cable-stay or suspension bridge, were considered. However, the construction of a cable-stay or suspension bridge, although leaving a smaller development footprint, has cost implications that would far outweigh the lifespan of the bridge. As such these Design

⁹ Extracted from the Final BAR compiled by Mr. Nhlakanipho Zondi of JG Afrika (Pty) Ltd, received by the Department on 02 July 2019.

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Alternatives were not considered feasible. The design that has been chosen was the design that best suited the needs of the site, within the budget limitations provided.

The layout alternative takes into consideration the location of the site camp, the placing of the pedestrian bridge predominantly outside the 1:100 year floodline, and the conditions of the receiving environment. Based on these criteria, no other layout alternative was considered. This is because the preferred layout alternative meets all of the criteria needed to construct the pedestrian bridge, on the identified site.

iii. The 'No-Go' alternative

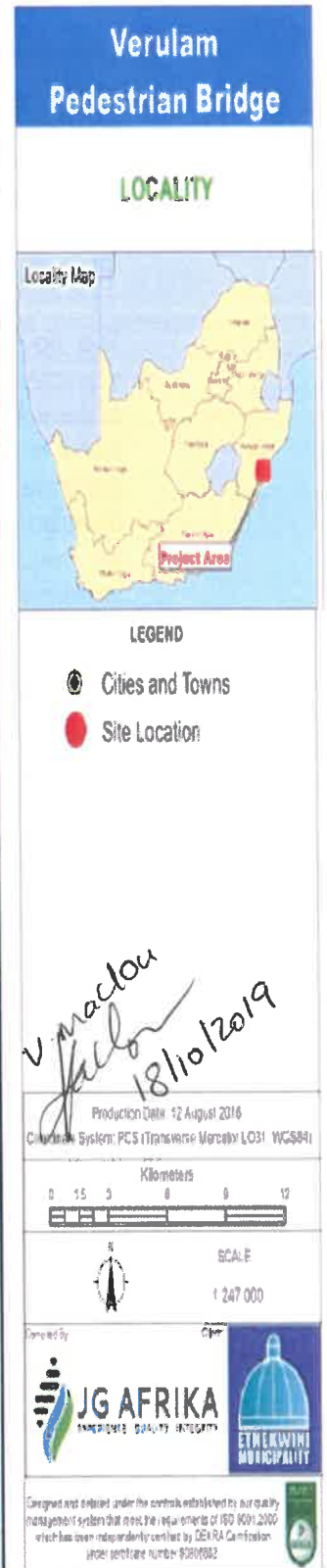
The no-go alternative is to not construct the pedestrian bridge. Should this alternative be implemented, the surrounding community will continue to cross the two non-perennial tributaries at the informal crossings over the watercourse, to the detriment of their health and safety. During times of peak flows and floods, the community will not be able to cross the watercourse and therefore will not be able to easily access adjacent communities, schools, clinics etc. In addition, disabled persons will have to continue utilising alternative routes via main roads to gain access to the required respective area, which results in a round trip of approximately 14km. The implementation of the No-Go alternative will result in the status quo remaining and the receiving environment maintaining its present conditions.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the activity will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the activity can be mitigated to acceptable levels. **The construction of a pedestrian bridge in Verulam, located within the eThekweni Municipality is hereby approved.**

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Environmental Authorisation
Pedestrian Bridge, Verulam

Annexure 2: Locality Map



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Annexure 3: Layout Plan

