| | environmental affairs Department: Environmental Affairs REPUBLIC OF SOUTH AFRICA | |
|------------------------|---|-------------------------|
| | | (For official use only) |
| File Reference Number: | | |
| Application Number: | | |
| Date Receiv | ed: | |
| | | |

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

- 1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
- 2. This report format is current as of **08 December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
- 3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
- 4. Where applicable **tick** the boxes that are applicable in the report.
- 5. An incomplete report may be returned to the applicant for revision.
- 6. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
- 7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
- 8. No faxed or e-mailed reports will be accepted.
- 9. The signature of the EAP on the report must be an original signature.
- 10. The report must be compiled by an independent environmental assessment practitioner.

- 11. Unless protected by law, all information in the report will become public information on receipt by the competent authority.

 Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
- 12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
- 13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
- 14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
- 15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

| YES | NO |
|-----|----|
| | X |

1. PROJECT DESCRIPTION

a) Describe the project associated with the listed activities applied for

INTRODUCTION

The KZN Department of Transport (DOT) proposes to upgrade the existing access road to a Type 7A Local Road (gravel road) which is 3.761km in length and 6m in width that conforms to DOT standards. The existing road will be upgraded in one of the Nqutu villages on local road L2718. There is an urgent need to ensure safe and reliable means of access. The existing access road is not suitable, and erosion is evident as a direct result of poor drainage. The upgrading of the existing track to a gravel road will address such issues, but more importantly improve access for the local community to basic amenities.



Photo 1: Showing proposed access road leading to primary school.



Photo 2: Showing existing track.

b) Provide a detailed description of the listed activities associated with the project as applied for

Listed activity as described in GNR 983 (Listing Description of project activity Notice 1)

Listing Notice 1 of 2014, Listed The proposed construction of an access Activity 24.

The development of -

(i) a road for which an environmental authorization was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or

(ii) a road with a reserve wider than

road from a mud track to a gravel road 6m in width, and a length of 3.761km.

13,5 meters, or where

no reserve exists where the road is wider than 8 metres:

but excluding-

- (a) roads which are identified and included in activity 27 in Listing Notice 2 of 2014; or
- (b) roads where the entire road falls within an urban area.

Listing Notice 1 of 2014, Listed According to DOT upgrade the proposed Activity 56.

The widening of a road by more than 6 meters, or the lengthening of a road more than 1 kilometre-

- (i) where the existing reserve is wider than 13.5 m;
- (ii) where no reserve exists, where the existing road is wider than 8m; excluding where widening or lengthening occur inside urban areas.

road length is approx. 3.761km in length.

2. FEASIBLE AND REASONABLE ALTERNATIVES

"alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

| a) Site Alternative 1 (preferred alternative) | | |
|--|-----------------|-----------------|
| Description | Lat (DDMMSS) | Long (DDMMSS) |
| The preferred route was chosen based on the fact that | 28° 15´ 40.86"S | 30° 56′ 51.59″E |
| an access road currently exists and no new road will | | |
| be constructed minimizing the impact to the receiving | | |
| environment. This alternative has shown to be the | | |
| best practical option. The road design has taken | | |
| numerous engineering methodologies into | | |
| consideration which has a minimal impact on the | | |
| environment, by improving drainage and reducing | | |
| erosion along the road. The road has been designed | | |
| according to DOT standards. | | |
| Alternative 2 | | |
| Description | Lat (DDMMSS) | Long (DDMMSS) |
| No alternate activities or routes or have been | N/A | N/A |
| investigated. It is not feasible to construct a new road | | |
| which will have a negative impact on the environment. | | |
| Alternative 3 | ı | 1 |
| Description | Lat (DDMMSS) | Long (DDMMSS) |
| N/A | N/A | N/A |

In the case of linear activities:

Alternative:

Alternative S1 (preferred)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Alternative S2 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Alternative S3 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Latitude (S): Longitude (E):

| 28° 15´ 40.86″ S | 30° 56′ 51.59″ E |
|------------------|------------------|
| 28° 14′ 46.31″ S | 30° 57′ 09.10″ E |
| 28° 13′ 54.85″ S | 30° 57′ 17.65″ E |

| N/A | N/A |
|-----|-----|
| N/A | N/A |
| N/A | N/A |

| N/A | N/A |
|-----|-----|
| N/A | N/A |
| N/A | N/A |

b) Lay-out alternatives

| Alternative 1 (preferred alternative) | | |
|--|---------------|---------------|
| Description | Lat (DDMMSS) | Long (DDMMSS) |
| The proposed construction of an access road from a | S28°15′40.86″ | E30°56′51.59″ |
| mud track to a gravel road 6m in width, and a length | | |
| of 3.761km. The road will be upgraded on an existing | | |
| track, which has become prone to erosion and | | |
| inundated during periods of high rainfall. | | |
| Alternative 2 | | |
| Description | Lat (DDMMSS) | Long (DDMMSS) |
| No alternate road designs/routes have been | N/A | N/A |
| investigated as the proposed/preferred | | |
| designs/routes meet DOT standards for gravel roads, | | |
| and the proposed construction is an upgrade of an | | |
| existing track. Furthermore, the access road: | | |
| 1. Is within the budget available from Department of | | |
| Transport to establish a gravel road. | | |
| 2. Have limited impact on the ecological | | |
| environment as no new road will be constructed. | | |
| Alternative 3 | | |
| Description | Lat (DDMMSS) | Long (DDMMSS) |
| N/A | N/A | N/A |

c) Technology alternatives

Alternative 1 (preferred alternative)

Figure 1 below: shows the cross section of the proposed Type 7A Road (Drawing number SD 0211). Refer to the plan of the Road in **Appendix C** - Facility Illustration for a more detailed design.

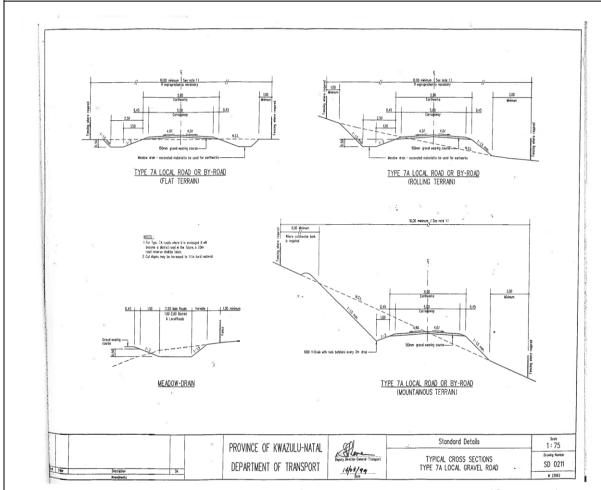


Figure 1: showing typical cross section of type 7A local gravel road (SD 0211).

| N/A |
|---------------|
| Alternative 2 |
| N/A |
| Alternative 3 |
| N/A |

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

No alternate technologies have been investigated as the proposed/preferred design:

- 1. The current design is in accordance with DOT standards for gravel roads.
- 2. Is within the budget available from Department of Transport to establish a Gravel road.
- 3. Have limited impact on the ecological environment as no new road will be constructed.
- 4. The best practical means approach has been adopted and the design favorably suits the ambience of the surrounding environment.

e) No-go alternative

No gravel road will be constructed, therefore there will be no negative impacts associated with construction activity. However, there will also be no positive impacts associated with the road construction such as the improved connectivity and access for local residents. Residents that make use of the road will continue to experience disruptions, as access is frequently overtopped by flood water, making access difficult at times of high flow. Erosion along the road is evident in areas as a direct result of poor drainage of the existing road. According to the ward councillor, members of the community are left stranded during periods of high rainfall as the existing road becomes impossible to use. The proposed route is .transformed by existing footpaths and highly degraded, most natural vegetation have been invaded by alien vegetation along the track.

3. PHYSICAL SIZE OF THE ACTIVITY

a) Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

| Alternative: | Size of the activity: |
|--|-----------------------|
| Alternative A11 (preferred activity alternative) | N/A |
| Alternative A2 (if any) | N/A m ² |
| Alternative A3 (if any) | N/A m ² |

or, for linear activities:

| Alternative: | Length of the activity: |
|---|-------------------------|
| Alternative A1 (preferred activity alternative) | 3.761km |
| Alternative A2 (if any) | N/A m |
| Alternative A3 (if any) | N/A m |

b) Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

| Alternative: | Size of the site/servitude: |
|---|-----------------------------|
| Alternative A1 (preferred activity alternative) | N/Am ² |
| Alternative A2 (if any) | N/Am ² |
| Alternative A3 (if any) | N/Am ² |

¹ "Alternative A.." refer to activity, process, technology or other alternatives.

4. SITE ACCESS

Does ready access to the site exist?

If NO, what is the distance over which a new access road will be built

| YES | NO |
|-----|-------|
| x | |
| | N/A m |

Describe the type of access road planned:

| N | 1 | Δ |
|-----|----|----------|
| 1 1 | // | <u> </u> |

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

5. ACTIVITY MOTIVATION

Motivate and explain the need and desirability of the activity (including demand for the activity):

1. Is the activity permitted in terms of the property's existing land use rights?

YES

X

The access road is located on Local Road L2718 which provides access to the local communities, and school children. The gravel road will be constructed to ensure safe access to pedestrians and motorists. This activity is in line with the property's existing land use rights.

2. Will the activity be in line with the following?

(a) Provincial Spatial Development Framework (PSDF)

YES X

NO

Please explain

According to the SDF (2011), there exists two major Provincial and Secondary transport corridors, which includes two agricultural corridors. The general qualities of these roads are good except the access routes which are found in the rural areas. The Dundee region is predominately rural and access to basic developmental areas is limited. Development in this area will create opportunities and unlock new development. Therefore the activity is in line with the PSDF.

(b) Urban edge / Edge of Built environment for the area

YES X

NO P

Please explain

The road is not in a built urban environment thus urban edge policies are not affected.

(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise YES the integrity of the existing approved and credible municipal IDP and SDF?).

NO X

Please explain

According to the SDF (2011), The Nqutu municipality has highlighted that upgrading of existing roads will provide transport services as well as access to remote regions as such this will open up additional economic opportunities for the area. The area is characterized by poor levels of infrastructure. Investments will improve living conditions and create economic development (IDP, 2012/2013). They also form the basis for the identification of settlement webs. Therefore the activity is in line with both the IDP and SDF of the local municipality. The IDP has prioritized road development and transport nodes.

| (d) Approved Structure Plan of the Municipality | YES X | | Please explain |
|---|----------|---------|------------------|
| The tribal authority has expressed the communities' conce | | | |
| access route that is not inundated during high rainfall period | ods. He | e expr | essed these |
| concerns to the local municipality which were documented | . There | fore t | he activity is |
| in line with the approved structure plan of the municipality. | | | |
| (e) An Environmental Management Framework (EMF) adopted | | | |
| by the Department (e.g. Would the approval of this | | | |
| application compromise the integrity of the existing | YES | NO | Diananana |
| environmental management priorities for the area and if | ILO | X | Please explain |
| so, can it be justified in terms of sustainability | | | |
| considerations?) | | | |
| The EMF is still in the compilation stages. | | | |
| (f) Any other Plans (e.g. Guide Plan) | YES | NO X | Please explain |
| N/A | | | |
| 3. Is the land use (associated with the activity being applied for) | | | |
| considered within the timeframe intended by the existing | | | |
| approved SDF agreed to by the relevant environmental | YES | NO | Please explain |
| authority (i.e. is the proposed development in line with the | | NO | r iease expiaiii |
| projects and programmes identified as priorities within the | X | | |
| credible IDP)? | | | |
| Five national key performance areas (KPA's) were in | dentifie | d by | the Nqutu |
| municipality which takes into consideration Basic service delivery and infrastructure | | | |
| investment, local economic development as well as good governance and public | | | |
| participation (IDP, 2012/2013, pg 59). The Nqutu IDP (2012/2013) has highlighted | | | |

the key development priorities, under these priorities roads were highlighted in order

to realise the development mandate of the council.

| 4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.) | YES | NO | Please explain |
|--|----------|---------|---|
| The community and more especially the school childre | n will | bene | fit from the |
| proposed gravel road as the road will be constructed for | | | |
| Community members are left stranded during periods | | | |
| construction process will also increase employment, as loc | al labo | ur will | be sourced |
| by the contractor providing skilled training to community | membe | ers. Tl | nerefore it's |
| recommended to be a high societal priority for the local con | nmunity | y mem | nbers. |
| 5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? | YES X | NO | Please explain |
| All necessary services are available for the activity to commence. | | | |
| 6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? | YES | NO X | Please explain |
| No infrastructure planning is envisaged by the municipali | tv w.r.t | this | project. The |
| project costs are borne by the Department of Transport. | | | , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| 7. Is this project part of a national programme to address an issue of national concern or importance? | YES | NO X | Please explain |
| The proposed activity is site specific and is at a localized level. | | | |
| 8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.) | YES X | NO | Please explain |
| The site leasting is bighty degreeded and noticed vegetati | | | 1 141 41 |

The site location is highly degraded and natural vegetation is disturbed with the presence of alien vegetation. Therefore the location factors favour this activity, as the site will be rehabilitated once construction is completed.

| 9. Is the development the best practicable environmental option for this land/site? | YES X | NO | Please explain |
|---|-----------|---------|----------------|
| The proposed site has been assessed and a favorable | e positi | ion fo | or the road |
| construction has been identified with all stakeholders. | This | will | significantly |
| decrease the overall costs of proposing to construct an enti | rely nev | w grav | vel road. |
| 10. Will the benefits of the proposed land use/development outweigh the negative impacts of it? | YES X | NO | Please explain |
| The proposed construction of the road will positively impac | t the lo | cal co | ommunity by |
| providing access to basic amenities, and minimizing the neg | gative ii | mpac | t of flooding, |
| soil erosion. | | | |
| 11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)? | YES | NO X | Please explain |
| No precedent will be set in the area, however the upgrade o | f the ro | ad fro | m a track to |
| a gravel road will improve accessibility for community memb | ers. | | |
| 12. Will any person's rights be negatively affected by the proposed activity/ies? | YES | NO X | Please explain |
| During the Public Participation Process no person expre | essed t | he vi | ew that the |
| proposed activity will directly affect them, all stakeholders fu | ılly sup | porte | d the project |
| proposal. | | | |
| 13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality? | YES | NO X | Please explain |
| The project is located in a rural area, and therefore the urban edge is not affected. | | | |
| 14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)? | YES | NO X | Please explain |
| This is a localized site specific activity, and will benefit the local community members. | | | |
| | | | |

15. What will the benefits be to society in general and to the local communities?

Please explain

There is an urgent need to ensure safe and reliable means of transversing the road for both vehicles and pedestrians, which will promote economic growth in the area as well as make travelling for basic amenities, education and work feasible for the local communities. The access road is prone to flooding and more importantly access to basic amenities is limited during high rainfall periods. The establishment of access roads lays the foundation for further and knock-on development, thereby leading to the upliftment of the society. While the local road may not have benefits as far reaching as to society in general, it is paving the way for upliftment of disadvantaged societies. The majority of the population has no formal education and is illiterate. Most people earn a living from governmental social grants, pensions and others from informal trading. Development of this area is therefore paramount and the establishment of this road can be considered the first step in this direction toward upliftment of the community. The road will also allow for public transport modes to cater to the local community. The construction of the road would contribute to the community in the following ways:

- Vehicles would not have to endure rugged terrain.
- Communities will have easier access to public and governmental transportation.
- Travelling route distances would be decreased.
- Will increase the safety of the people within the community.
- Response and delivery time would be increased for public and emergency services.
- Easier travelling routes for basic needs, schools and medical centers.

16. Any other need and desirability considerations related to the proposed activity?

Please explain

According to the IDP (2012-2017) there is a critical need to improve access roads within the Nqutu municipality. The area is predominately rural and developmental initiatives are limited w.r.t funding. The Department of Transport has funded the project and similar projects within the District. Communities expressed their excitement for the project, as they are of the view that the Government is taking their concerns of development seriously.

17. How does the project fit into the National Development Plan for 2030?

Please explain

The National Development Plan for 2030 sets out strategic goals in terms of access to basic services and amenities. Although this project is site specific in nature, it contributes to the cumulative effect of developmental nodes of rural communities to the urban environments.

18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.

According to section 23 of NEMA the appropriate environmental management tools were applied effectively. The EAP is an independent person, appointed by Nankhoo Engineers to determine all negative as well as positive impacts of the proposed activities might have on the environment. Mitigation measures were also proposed in this report. All the information compiled by the EAP was rated in a scoring matrix, taking environmental, cultural heritage and ecological issues into account. The BAR will be circulated into the public domain for a Public Participation Process as described in NEMA. All comments received during the entire BAR process will be recorded as part of the Issues and Responses Report. Particulars regarding this Process have been included in **Appendix C.** All impacts with regards to the construction and operation of the bridge have been identified in Section D. The impacts that have been identified must be managed and mitigated. These measures have been included in the Environmental Management Plan attached as **Appendix D**.

19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.

All of these principles have been taken into account as the construction of this bridge will be socially sustainable due continuous access that will be provided to local communities. Communities will therefore be able to access basic amenities at all times. Economically, the proposed activity will ensure that communities gain access to the school. All factors mentioned in Section 2 (4) of NEMA were taken into consideration, assessed and discussed in **Section D.** Through Section 2 of NEMA it is understood that the principles as set out in this section have been taken into account through the proper application of a Basic Assessment Process as described by NEMA, and by assessing the predicted and actual impacts of the proposed activity in order to assist the Competent Authority in adequately making an informed decision.

6. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

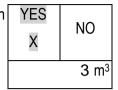
| Title of legislation, policy | Applicability to the project | Administering authority | Date |
|------------------------------|------------------------------------|-------------------------|------|
| or guideline | | | |
| National | Environmental Authorisation is | Department of | 1998 |
| Environmental | required in terms of Regulation R | Environmental Affairs | |
| Management Act, | 983 of Dec 2014 (included within | | |
| 1998 (Act No 107 of | NEMA 107 of 1998) | | |
| 1998) | | | |
| Environmental Impact | Guidelines with regards to the | Department of | 1998 |
| Assessment | Environmental Impact | Environmental Affairs | |
| Regulations (Notice | Assessment Process to be | | |
| No. R983 of 2014) | undertaken | | |
| Constitution of | The project falls within the | Department of | 1998 |
| Republic of South | boundaries of South Africa | Environmental Affairs | |
| Africa (Act No 108 of | | | |
| 1996) | | | |
| National Heritage | Any possible artefacts which | SAHRA | 1999 |
| Resources Act (Act | could be of cultural or historical | | |
| No 25 of 1999) | significance must be identified | | |
| | | | |
| National | Damaging of, disturbance to or | Department of | 2004 |
| Environmental | destroying of plant or animal | Environmental Affairs | |
| Biodiversity Act 10 of | species during the clearing of the | | |
| 2004 | site | | |
| Integrated | Public Participation Process | Department of | 2010 |
| Environmental | | Environmental Affairs | |
| Management | | | |
| Guideline, Public | | | |
| Participation | | | |

7. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

If YES, what estimated quantity will be produced per month?



How will the construction solid waste be disposed of (describe)?

All solid waste will be disposed at the registered local landfill site. This will be addressed in the EMPr. The ECO will audit the EMPr and submission will be made to the CA for review.

Where will the construction solid waste be disposed of (describe)?

The construction solid waste will be disposed of at the registered landfill site by the contractor. This will be addressed in the EMPr. The ECO will audit the EMPR and submission will be made to the CA.

Will the activity produce solid waste during its operational phase?

YES NO x N/A m³

If YES, what estimated quantity will be produced per month?

How will the solid waste be disposed of (describe)?

N/A

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

N/A

Where will the solid waste be disposed of if it does not feed into a municipal waste stream (describe)?

N/A

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

| Can any part of the solid waste be classified as hazardous in terms of the NEM: WA? | YES | NO X | |
|---|----------|--------------------|--|
| If YES, inform the competent authority and request a change to an application for sco application for a waste permit in terms of the NEM: WA must also be submitted with thi | | | |
| | | | |
| Is the activity that is being applied for a solid waste handling or treatment facility? | YES | NO X | |
| If YES, then the applicant should consult with the competent authority to determ | ine whet | her it is | |
| necessary to change to an application for scoping and EIA. An application for a waste | | | |
| the NEM: WA must also be submitted with this application. | • | | |
| | | | |
| b) Liquid effluent | | | |
| | | | |
| Will the activity produce effluent, other than normal sewage, that will be disposed of | \/=0 | NO | |
| in a municipal sewage system? | YES | X | |
| If YES, what estimated quantity will be produced per month? | | N/A m ³ | |
| Will the activity produce any effluent that will be treated and/or disposed of on site? | \/F0 | NO | |
| | YES | X | |
| If YES, the applicant should consult with the competent authority to determine whether it is necessary | | | |
| to change to an application for scoping and EIA. | | | |
| | | | |
| Will the activity produce effluent that will be treated and/or disposed of at another | | | |
| facility? | | NO | |
| | YES | X | |
| | | ^ | |
| | | | |
| If YES, provide the particulars of the facility: | | | |
| Facility name: | | | |
| Contact | | | |
| person: | | | |
| Postal | | | |
| address: | | | |
| | | | |

| | ASSESSMENT | DEDODE |
|-------------------------------|------------|---------|
| $\bowtie \Delta \searrow \Pi$ | | REP()RI |
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| Postal code: | | |
|--------------|-------|--|
| Telephone: | Cell: | |
| E-mail: | Fax: | |

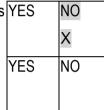
Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

N/A

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions YES and dust associated with construction phase activities?

If YES, is it controlled by any legislation of any sphere of government?



If YES, the applicant must consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If NO, describe the emissions in terms of type and concentration:

N/A

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM: WA?

YES NO

If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?

If YES, is it controlled by any legislation of any sphere of government?

| YES | NO |
|-----|----|
| | X |

Describe the noise in terms of type and level:

Noise will only be generated during the construction phase (machinery, generator etc.) The level of the noise is however low as there are no residents nearby. No noise will be generated during the operational phase, therefore the impact is temporary in nature.

8. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

| Municipal | Water board | Groundwater | River, stream, | Other | The activity will |
|-----------|--------------|-------------|----------------|-------|-------------------|
| Municipal | vvater board | Oroundwater | dam or lake | Other | not use water |

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

Does the activity require a water use authorisation (general authorisation or water)

N/A
YES NO

9. ENERGY EFFICIENCY

use license) from the Department of Water Affairs?

Describe the design measures, if any, which have been taken to ensure that the activity is energy efficient:

N/A

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

N/A

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section B and indicate the area, which is covered by each copy No. on the Site Plan.

Section B Copy No. (e.g. A):



- 1. Paragraphs 1 6 below must be completed for each alternative.
- 2. Has a specialist been consulted to assist with the completion of this section?

| YES | NO |
|-----|----|
| X | |

| Name of Specialist | Neelesh Ramasis |
|--------------------|----------------------------|
| Qualification | Bsc. Environmental Science |

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

Property description/physica I address:

| Province | Kwazulu-Natal |
|-----------------------|-------------------------|
| District Municipality | UMzinyathi Municipality |
| Local Municipality | Nqutu Municipality |
| Ward Number(s) | Ward 4 |
| Farm name and | N/A |
| number | |
| Portion number | N/A |
| SG Code | N/A |

Is a change of land-use or a consent use application required?

YES

NO

1. GRADIENT OF THE SITE

Alternative S1:

| Flat | 1:50 – 1:20 | 1:20 – 1:15 | 1:15 – 1:10 | 1:10 – 1:7,5 | 1:7,5 – 1:5 | Steeper | than |
|------|-------------|-------------|-------------|--------------|-------------|---------|------|
| | | x | | | | 1:5 | |

Alternative S2 (if any):

| Flat | 1:50 – 1:20 | 1:20 – 1:15 | 1:15 – 1:10 | 1:10 – 1:7,5 | 1:7,5 – 1:5 | Steeper | than |
|------|-------------|-------------|-------------|--------------|-------------|---------|------|
| | | | | | | 1:5 | |

Alternative S3 (if any):

| Flat | 1:50 – 1:20 | 1:20 – 1:15 | 1:15 – 1:10 | 1:10 – 1:7,5 | 1:7,5 – 1:5 | Steeper | than |
|------|-------------|-------------|-------------|--------------|-------------|---------|------|
| | | | | | | 1:5 | |

2. LOCATION IN LANDSCAPE

| Indicate the landform(s) that | 2.4 Closed valley | 2.7 Undulating plain / low hills | X |
|---------------------------------|-------------------|----------------------------------|---|
| best describes the site: | | | |
| 2.1 Ridgeline | | | |
| 2.2 Plateau | 2.5 Open valley | 2.8 Dune | |
| 2.3 Side slope of hill/mountain | 2.6 Plain | 2.9 Seafront | |
| 2.10 At sea | | | I |

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following?

| | Alternat | tive S1: | Alterna | tive S2 | Alterna | tive S3 |
|--|----------|----------|----------|---------|-----------|---------|
| | | | (if any) | | (if any): | |
| Shallow water table (less than 1.5m deep) | YES | NO | YES | NO | YES | NO |
| | | X | 120 | | 120 | 110 |
| Dolomite, sinkhole or doline areas | YES | NO | YES | NO | YES | NO |
| | | X | | | | |
| Seasonally wet soils (often close to water bodies) | YES | NO | YES | NO | YES | NO |
| | | X | | | | |
| Unstable rocky slopes or steep slopes with loose | YES | NO | YES | NO | YES | NO |
| soil | | X | | | | |
| Dispersive soils (soils that dissolve in water) | YES | NO | YES | NO | YES | NO |
| | | X | | | | |
| Soils with high clay content (clay fraction more | YES | NO | YES | NO | YES | NO |
| than 40%) | | X | | | | |
| Any other unstable soil or geological feature | YES | NO | YES | NO | YES | NO |
| | | X | | | | |
| An area sensitive to erosion | YES | NO | YES | NO | YES | NO |
| | X | | | | | |

As per the site investigation on the 13/05/15 the following features have been identified:

The Nqutu municipality is located within the Northern portions of Kwazulu-Natal and is one of four local municipalities found in the uMzinyathi district municipality (SDF, 2011). The site for the proposed development is located in one of the villages in the Nqutu municipality on local road L2718.

The site is located in an open valley where the general gradient of the site is 1:15-1:20, which indicates generally a flat terrain. There is no presence of a watercourse in this site, as it is just an upgrade of an existing road to a gravel road.

The geology of the region is underlain by three specific geological units, the Vryheid formation, Volkrust formation and Karoo Dolerite. In these formations consists geological outcrops which can be found around the site. Sandstone is one of the major geological features found in close proximity to the site of the proposed development. There exist very few geotechnical hindrances to development where areas are underlain by this specific type of rock.

There are no slopes in the site as the gradient and general terrain is extensively flat. There is no need for a slope stability assessment report. The Vryheid Formation which consists of sandstone is considered to be generally stable and good founding conditions occur for structures which occur at nominal depths.

Soils around this region exhibit a yellow colour, which is an indication of the presence of iron which is dominated by hematite and aluminum. Some of the soils in this region are severely degraded due to geological influence, overgrazing and improper land use. There are no steep slopes or cliffs near the site of development which means that construction will not be hampered. There exists extensive gully and donga formation in this region. Soil erosion is prominent due to surface run-off and overgrazing.



Photo 3: Showing general terrain of the site.

4. GROUNDCOVER

Indicate the types of groundcover present on the site. The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

| Natural veld - good condition ^E | Natural veld with scattered aliens ^E | heavy alien | Veld dominated by | Gardens |
|--|---|---------------|-----------------------------|----------------|
| Sport field | Cultivated land X | Paved surface | Building or other structure | Bare soil X |

5. SURFACE WATER

| Perennial River | YES | NO | UNSURE |
|------------------------------|-----|----|--------|
| Non-Perennial River | YES | NO | UNSURE |
| Permanent Wetland | YES | NO | UNSURE |
| Seasonal Wetland | YES | NO | UNSURE |
| Artificial Wetland | YES | NO | UNSURE |
| Estuarine / Lagoonal wetland | YES | NO | UNSURE |

6. LAND USE CHARACTER OF SURROUNDING AREA

| Natural area | Dam or reservoir | Polo fields |
|---------------------------------------|-------------------------------------|----------------------------------|
| Low density residential | Hospital/medical centre | Filling station H |
| Medium density residential | School | Landfill or waste treatment site |
| High density residential | Tertiary education facility | Plantation |
| Informal residential ^A | Church | Agriculture |
| Retail commercial & warehousing | Old age home | River, stream or wetland |
| Light industrial | Sewage treatment plant ^A | Nature conservation area |
| Medium industrial AN | Train station or shunting yard N | Mountain, koppie or ridge |
| Heavy industrial AN | Railway line N | Museum |
| Power station | Major road (4 lanes or more) N | Historical building |
| Office/consulting room | Airport N | Protected Area |
| Military or police | Harbour | Graveyard |
| base/station/compound | Tidibodi | Jointo |
| Spoil heap or slimes dam ^A | Sport facilities | Archaeological site |
| Quarry, sand or borrow pit | Golf course | Other land uses (describe) |

If any of the boxes marked with an "N "are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

| N | 1 | 7 | Δ |
|---|---|---|---|
| 1 | / | , | • |

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

Does the proposed site (including any alternative sites) fall within any of the following:

| Critical Biodiversity Area (as per provincial conservation plan) | YES | NO |
|--|-----|----|
| | | X |
| Core area of a protected area? | YES | NO |
| | | X |
| Buffer area of a protected area? | YES | NO |
| | | X |
| Planned expansion area of an existing protected area? | YES | NO |
| | | X |
| Existing offset area associated with a previous Environmental Authorisation? | YES | NO |
| | | X |
| Buffer area of the SKA? | YES | NO |
| | | X |

7. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:

| YES | NO X | | | |
|-----------|---------|--|--|--|
| Uncertain | | | | |

No heritage permit is required. However, should elements of significance be identified during the construction phase, all construction activities will stop immediately and an independent heritage specialist will be appointed to investigate. This is covered in more detail in the EMPr. A draft BAR document was sent to AMAFA for comments and uploaded onto the SAHRIS website. Awaiting comments from AMAFA.

Will any building or structure older than 60 years be affected in any way?

YES NO X YES X

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

Unemployment levels are high. Only 7.6% of the economically active population are employed. 23.5% of the population are actively seeking employment, while the rest of the potential labour force is not economically active (students, housewives, etc).

| Employed | 6519 | 6170 |
|-----------------------------|-------|-------|
| Unemployed | 10736 | 12628 |
| Not economically active | 19006 | 30926 |
| Not applicable/Institutions | 37787 | 41106 |
| Total | 74048 | 90830 |

Table 1: Representing Employment Status (IDP, 2011, pg 24).

Economic profile of local municipality:

The service sector accounts for the majority share of the local economy, it is not a creator of wealth and hence it is not recognised as an economic sector. Agriculture in Nqutu is limited to subsistence farming with dry land cropping being the main economic agricultural practice. Livestock production is the dominant activity in the area. Trade and commerce is the second most important sector in Nqutu and it plays an important role as an employer and a creator of wealth. Mining and quarrying are limited to sand weaning and with the growth in the construction sector, sand weaning is expected to pick-up. No mining of mineral ore deposits are recorded in Nqutu. Tourism in the area has great potential to expand and develop in the future (IDP, 2012/2013).

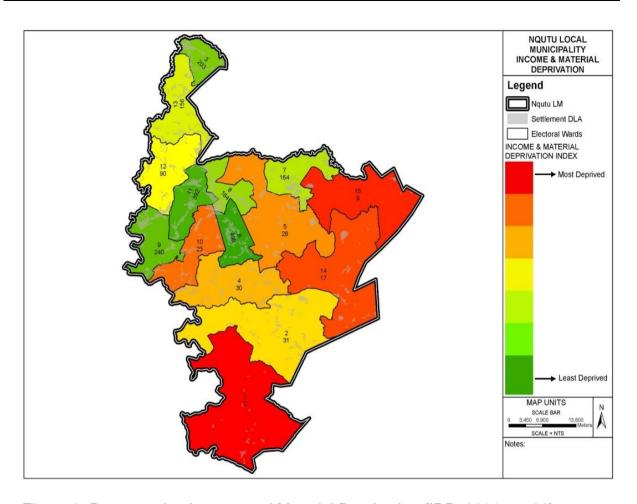


Figure 2: Representing Income and Material Deprivation (IDP, 2011, pg 26).

Level of education:

In terms of the basic level of education, only one third of the population has had this type of education. Statistics reveal that 13% of the total population of the municipality has no formal schooling. It is also noted that low portions of the population have a form of higher education this can be related to the fact that the area is mostly rural and transport facilities are limited. There are limited higher educational facilities in the area. There is currently an FET College and a private Nursing College (IDP, 2012/2013).

| | Umzinyathi DM | Nquthu | Endumeni | Umvoti | Umsinga |
|---------------------------------|------------------|--------|----------|--------|---------|
| Higher Education | 200 | 65 | 121 | 13 | 0 |
| Diploma with Gr12 | 4206 | 776 | 1250 | 1437 | 743 |
| Diploma with less than Gr12 | 1521 | 408 | 39 | 649 | 429 |
| Certificate with Gr12 | 2414 | 479 | 153 | 717 | 1064 |
| Certificate with less than Gr12 | 3007 | 1442 | 136 | 317 | 1112 |
| Grade 11 and 12 | 52529 | 17583 | 8960 | 15202 | 10784 |
| Grade 10 | 27136 | 4162 | 10131 | 6473 | 6369 |
| Primary Schooling | 98796 | 36117 | 8184 | 21156 | 36117 |
| No Schooling | 85709 | 22539 | 4380 | 18137 | 40653 |

Table 2: Representing Education Levels (IDP, 2011, pg 22).

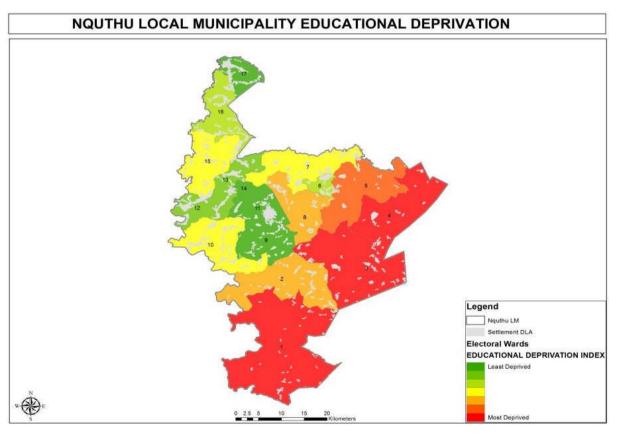


Figure 3: Showing Educational deprivation of the Nqutu region (IDP, 2011, pg 27).

b) Socio-economic value of the activity Not determined to What is the expected capital value of the activity on completion? date. What is the expected yearly income that will be generated by or as a result of the R N/A activity? Will the activity contribute to service infrastructure? YES NO X Is the activity a public amenity? YES NO X How many new employment opportunities will be created in the development and To be construction phase of the activity/ies? determined What is the expected value of the employment opportunities during the To be development and construction phase? determined What percentage of this will accrue to previously disadvantaged individuals? 100 % How many permanent new employment opportunities will be created during the To be operational phase of the activity? determined What is the expected current value of the employment opportunities during the first R N/A 10 years? 100 % What percentage of this will accrue to previously disadvantaged individuals?

9. BIODIVERSITY

Various GIS maps have been consulted during the desk studies, and no biodiversity issues were identified. The site is degraded and the presence of alien vegetation and existing footpaths have transformed the site, therefore the proposed activity will contribute to the rehabilitation of the site which has been outlined in the EMPr. A draft BAR has been submitted to KZN Wildlife for comments and forms part of the Public Participation Process. KZN Wildlife comments to be included in Final BAR.

a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

| Systemati | c Biodiversi | ty Planning | Category | If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan |
|--|-------------------------------------|--------------------------------|---------------------------------|--|
| Critical Biodiversity Area (CBA) | Ecological Support Area (ESA) | Other Natural Area (ONA) | No Natural Area Remaining (NNR) | N/A |

b) Indicate and describe the habitat condition on site

| Habitat Condition | Percentage of habitat condition class (adding up to 100%) | Description and additional Comments and Observations (Including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc). |
|---|---|---|
| Natural | % | |
| Near Natural (includes areas with low to moderate level of alien invasive plants) | % | |
| Degraded (includes areas heavily invaded by alien plants) | % | |
| Transformed (includes cultivation, dams, urban, plantation, roads, etc) | 100 % | The existing road has been utilized as an access road over a number of years, therefore the site has become degraded by footpaths and invaded by alien vegetation. |

c) Complete the table to indicate:

- (i) the type of vegetation, including its ecosystem status, present on the site; and
- (ii) whether an aquatic ecosystem is present on site.

| Terrestrial Ecosy | Aquatic Ecosystems | | | | | | | |
|------------------------|---------------------|-----------|-----------|---------------|-----------|----|-----|----|
| Ecosystem threat | Critical | Wetlan | d (includ | ling rivers, | | | | |
| status as per the | Endangered | depressi | ons, cha | innelled and | | | | |
| National Environmental | Vulnerable | unchann | Estu | uary | Coastline | | | |
| Management: | Locat | seeps | pans, ar | nd artificial | | | | |
| Biodiversity Act (Act | Least Threatened | wetlands) | | | | | | |
| No. 10 of 2004) | Tilleaterieu | YES | NO | UNSURE | YES | NO | YES | NO |

d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

Natural vegetation is minimal being invaded by alien vegetation and footpaths. The area has become completely transformed and offers no significant biodiversity or natural pristine ecosystems. **KZN Wildlife comments to be included in the Final BAR.**

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

| Publication name | Illanga Newspaper | | |
|----------------------|-------------------|---------------|--|
| Date published | 07/05/15 | | |
| Site notice position | Latitude | Longitude | |
| | 28° 15′ 40.86″ S | E30°56′51.59″ | |
| Date placed | | | |

Include proof of the placement of the relevant advertisements and notices.

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 983.

A site notice was placed at two strategic points on the 07/05/2015 (Appendix D.4), and two Newspaper articles (English and Zulu) were published in the Ilanga Newspaper on the 07/05/2015 (Appendix D.3). The tribal authority was made aware of the proposed development. (Date of hand delivery to be confirmed). The elected structures that currently exist were chosen to be the most appropriate means of informing community members of the proposed development. All organs of state that were identified during the process were informed and requested to comment on the BAR. (See Appendix D.1 for confirmation of all correspondence to stakeholders, and "comments & responses" section).

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 983

| Title, Name and Surname | Affiliation/ key stakeholder status | Contact details (tel number or |
|-------------------------|-------------------------------------|--------------------------------|
| | | e-mail address) |
| Mr Buthelezi | Tribal Authority | 078 111 6383 |

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

| Summary of main issues raised by I&APs | Summary of response from EAP | | | | | | | |
|--|------------------------------|------|--------|---------|------|------|--|--|
| No concerns have been raised by the | Responses | have | been | include | d in | the | | |
| local community, other than the lack of | Appendix | D.1 | entitl | ed 'Co | omm | ents | | |
| formal access to all amenities and safe | Received' | | | | | | | |
| access to the school. The tribal authority | | | | | | | | |
| expressed the need for an access road, | | | | | | | | |
| and the employment opportunities that | | | | | | | | |
| will be created during the construction | | | | | | | | |
| phase. | | | | | | | | |

4. COMMENTS AND RESPONSE REPORT

SEE APPENDIX D.1 FOR COMMENTS AND REPONSES REPORT.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

| Authority/Org | Contact | Tel No | e-mail | Postal address |
|---------------|----------------|---------|--------------------------|-------------------|
| an of State | person (Title, | | | |
| | Name and | | | |
| | Surname) | | | |
| Department | Mrs S. | 034 299 | Sibongile.mhlungu@ | Private Bag x2002 |
| of Transport | Ndlela | 8600 | kzntransport.gov.za | Dundee |
| | | | | 3000 |
| Amafa | Ms Bernadet | 033 | bernadetp@amafapmb.co.za | P.O.Box 2685 |
| | | 3946543 | | PMB |
| | | | | 3201 |
| KZN Wildlife | Mr D | 033 | dominic.wieners@ | P.O.Box 13053 |
| | Wieners | 8451999 | kznwildlife.com | 3202 |

SECTION D: IMPACT ASSESSMENT

IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

N.B All mitigation measures have been outlined in specific detail in the EMPR (Appendix E), therefore this section must be read in conjunction with the EMPr. Due to this being a linear development and the access road following the existing track, no alternative routes have been investigated. The proposed upgrade will follow the existing track which will have minimal impact to the environment as no further disturbance is envisaged.

1. Selection of Route - Access Road

The selection of an access road will have the greatest environmental impact. The proposed gravel road will be constructed along an existing track. The area is degraded with the presence of alien vegetation and highly eroded banks. Therefore the existing road has been selected as the preferred alternative as not to cause further disturbance to the environment. Engineering Designs prepared by DOT has taken the most efficient techniques with minimal impact to the environment into consideration. Generally, roads are constructed along the path of least disturbance, often following existing tracks.

Impact Ratings

The following presents the assessment criteria used to evaluate the impacts resulting from the proposed development.

Impact Assessment Methodology

The impacts that may result from the construction phase and operation phase of the project was assessed according to a number of criteria to arrive at an overall significance rating. The criteria used were as follows:

Spatial Scale

Site (S) Immediate area of impact

Local **(L)** Area within 20km of the development

Regional (R) Entire Municipality

Duration

Short Term (ST) Less than the duration of the activity

Medium Term (MT) Impact persists until activity ceases

Long Term (LT) Impact persists well beyond the cessation of the activity

Permanent (P) Impact is permanent

Probability

Low (L) Unlikely

Medium (M) Possible

High (H) Likely

<u>Intensity</u>

Intensity describes whether an impact is destructive or benign.

| SCORE | ELABORATION |
|--------|--|
| LOW | These are impacts which individually or combined pose a deleterious |
| (L) | or adverse impact and low negative risk to the quality of the receiving |
| | environment, and may lead to potential health, safety and |
| | environmental concerns. Aesthetically and/or physical non-compliance |
| | can be expected for short periods. In this case the impact is short term, |
| | local in extent, not intense in its effect and may not be likely to occur. A |
| | low impact has no permanent impact of significance. Mitigation |
| | measures are feasible and are readily instituted as part of a standing |
| | design, construction or operating procedure. |
| MEDIUM | These are impacts which individually or combined pose a moderate |
| (M) | negative risk to the quality of health of the receiving environment. |
| | These systems would not generally require immediate action but the |
| | deficiencies should be rectified to avoid future problems and |
| | associated cost to rectify once in HIGH risk. Aesthetically and/or |
| | physically non-compliance can be expected over a medium term. In |
| | this case the impact is medium term, moderate in extent, mildly intense |
| | in its effect and probable. Mitigation is possible with additional design |
| | and construction inputs. |
| HIGH | These are impacts which individually or combined pose a significantly |
| (H) | high negative risk to the environment. These impacts pose a high risk |
| | to the quality of the receiving environment. The design of the site may |
| | be affected. Mitigation and possible remediation are needed during the |
| | construction and/or operational phases. The effects of the impact may |
| | affect the broader environment. |

Significance

Impacts can be Low, Medium or High and can be positive (+ve) or negative (-ve).

Impacts/Significance associated with the Construction phase

| Impact | Impact type | Activity | Prefe | rred | alte | rnat | ive | | |
|----------------|----------------------------------|--|------------------|----------|-------------|-----------|--------------|-----------|--|
| | Positive (+ve) Or Negative (-ve) | | SPATIAL SCALE | DURATION | PROBABILITY | INTENSITY | SIGNIFICANCE | MITIGATED | |
| | | DIRECT IMPACTS | | | | | | | |
| Dust Pollution | (-) | During construction high levels of dust is emitted into the atmosphere by construction vehicles and sediment is produced as a result of dust that enters the environment in rainfall runoff. These impacts are short-term and will only result over a 2 month period. No surrounding dwellings will directly be affected. These impacts have been addressed in detail within the EMPr. | S | мт | М | L | | L | |

| Impact | Preferred alternative | | | | | | | | |
|-----------|----------------------------------|---|-------|---|---|-------------|-----------|--------------|------|
| | Positive (+ve) Or Negative (-ve) | | SCALE | | | PROBABILITY | INTENSITY | SIGNIFICANCE | POST |
| Spillages | (-) | Construction vehicles pose major threats w.r.t spillages on-site, this may result in the contamination of soil and water. The presence of fuels on-site may have a negative impact on the groundwater. Cement mixing/spillages on open ground pose a threat to the receiving environment. | s | М | Т | М | М | ı | L |

| Impact | Impact type | Activity | Pre | ferr | ed a | lterr | nativ | ⁄e | | |
|--------------|----------------------------------|--|-------|---------|----------|-------------|-----------|--------------|-----------|------|
| | Positive (+ve) Or Negative (-ve) | | SCALE | SPATIAL | DURATION | PROBABILITY | INTENSITY | SIGNIFICANCE | MITIGATED | POST |
| Soil erosion | (-) | All topsoil that will be removed during construction will be prone to erosion; therefore all topsoil must be stockpiled using the appropriate erosion control techniques. Soil erosion was evident at various points along the existing route as a result of poor drainage. The proposed gravel road will address these concerns by implementing correct standard designs by DOT. A vegetation rehabilitation plan will be included in the EMPr to address the mitigation measures that must be implemented to reduce soil erosion on site. Extensive gully erosion is evident around the entire area. The road itself may have negative soil erosion impacts during construction but positive impacts thereafter as it may stabilize erosion. | 8 | | MT | М | M | | L | |

| Impact | Impact type | Activity | Pref | errec | alt | ern | ativ | /e | | |
|-----------------------|----------------------------------|--|-------|------------|------------|--------------|-----------|--------------|---|------|
| | Positive (+ve) Or Negative (-ve) | | SCALE | CDATIAL CA | DIBATION . | PROBABII ITY | INTENSITY | SIGNIFICANCE | | TSOG |
| Habitat Fragmentation | (-) | Roads can act as barriers or filters to animal movement and lead to habitat fragmentation. Many species will not cross the open space created by a road due to the threat of predation, and roads also cause increased animal mortality from traffic. This barrier effect can prevent species from migrating and re-colonizing areas where the species has gone locally extinct as well as restricting access to seasonally available or widely scattered resources. This will be a low negative impact as a track already exists, and the new proposed gravel road is an upgrade, therefore the route has been disturbed by the existing track and footpaths. | L | L | Т | M | M | | L | |

| Impact | Impact type | Activity | Pref | erre | d al | terr | ativ | /e | | |
|-----------------------------|----------------------------------|--|-------|---------|----------|-------------|-----------|--------------|-------------------|--|
| | Positive (+ve) Or Negative (-ve) | | SCALE | SPATIAI | DURATION | PROBABILITY | INTENSITY | SIGNIFICANCE | POST MITIGATED | |
| Unplanned routes/footpaths. | (-) | Construction workers may disturb or create footpaths that are not planned or existing, which may lead to areas becoming prone to erosion and spread of alien vegetation. Strict control measures must be implemented by the Contractor and ECO. All areas must be clearly demarcated and incidents must be reported immediately to the site agent. | s | 1 | МΤ | M | L | | L | |
| Water Resource | (-) | Water will be required during the construction phase that may lead to extra demands on the local water resources of the municipality. However, water will be transported to the site via tanks which will minimize the impact. No water will be extracted from any watercourse in the construction phase. | L | ı | МΤ | M | L | | L | |

| Impact | Impact type | Activity | Pre | eferr | ed a | lterr | nati | ve | |
|------------------------------------|----------------------------------|--|-------|---------|----------|-------------|-----------|---------------------------|------|
| | Positive (+ve) Or Negative (-ve) | | SCALE | SPATIAL | DURATION | PROBABILITY | INTENSITY | MITIGATED SIGNIFICANCE | POST |
| Impact on surface and ground water | (-) | Pollution of soil/ groundwater (fuel, oil, cement, other chemicals etc.) | I | L | MT | М | М | L | |
| Impact of Storm water | (-) | Storm water could lead to erosion without the proper mitigation measures in place, and side drains not properly constructed. | | S | MT | М | М | L | |
| Sanitation | (-) | Inadequate sanitation could lead to pollution of the water table. | 9 | S | MT | М | M | L | |
| Heritage impacts | (+) | No negative impact. As artifacts of historical or cultural value was not found on the route. | , | S | ST | L | L | L | |
| Noise disturbance | (-) | Construction machinery and personnel could disturb the peace in the surrounding area. | Ş | S | ST | M | L | L | |
| Waste Disposal | (-) | Waste is generated through construction activities and therefore the possibility of the area being polluted is increased. | | L | МТ | M | М | L | |

| Impact | Impact type | Activity | Prefer | red a | lterr | ativ | ve | |
|-----------------------|----------------------------------|--|------------------|----------|-------------|-------------|--------------|------|
| | Positive (+ve) Or Negative (-ve) | | SPATIAL SCALE | DURATION | PROBABILITY | INTENSITY | SIGNIFICANCE | POST |
| Socio-Economic Impact | | Construction creates temporary employment for community members. | L | Р | Н | N / A | | Н |
| No-go option | (-) | Safety - During most rainy seasons, the road is flooded. The local community's safety will therefore be compromised. | | - | - | 1 | | - |

| Impact | Impact type | Activity | Preferred alternative | | | | | | |
|----------------------------|----------------------------------|--|-----------------------|---------|----------|-------------|-----------|---------------------------|------|
| | Positive (+ve) Or Negative (-ve) | | SCALE | SPATIAL | DURATION | PROBABILITY | INTENSITY | MITIGATED SIGNIFICANCE | POST |
| | | INDIRECT IMPACTS | | | | | | | |
| Spread of Alien Vegetation | (-) | The removal of topsoil and natural vegetation with an increase in human activity may result in the increase of alien vegetation. The vegetation rehabilitation will address this issue in more detail. | s | | LT | M | М | L | |
| Waste Disposal | (-) | Waste such as plastic and paper will impact surrounding animals if ingested. | L | | МТ | M | н | L | |
| Socio-Economic Impact | (+) | Improved living standards. | L | | Р | н | L | L | |
| No-go option | (-) | Safety - During most rainy seasons, the road is flooded. The local community's safety will therefore be compromised. | - | | - | ı | - | - | |

| Impact | Impact type | Activity | Pre | ferr | ed al | terr | ativ | ve | |
|--------------------|----------------------------------|---|-------|---------|----------|-------------|-----------|--------------|-------------------|
| | Positive (+ve) Or Negative (-ve) | | SCALE | SPATIAL | DURATION | PROBABILITY | INTENSITY | SIGNIFICANCE | POST MITIGATED |
| CUMULATIVE IMPACTS | | | | | | | | | |
| Waste Generation | (-) | Extra waste generated during the construction phase could result in added pressure placed on the local landfill site. | L | | MT | L | L | | L |
| No-go option | (-) | Safety - During most rainy seasons, the road is flooded. The local community's safety will therefore be compromised. | _ | | - | | 1 | | - |

Alternative 2

No alternative site or route has been identified. Alternative alignments would require additional disturbance to the environment with very little potential of improvement in terms of environmental performance. This is a linear activity and the proposed gravel road will be upgraded on the existing track to minimise negative impacts to the environment, furthermore DOT has assessed other options and none were cost effective. As a new road will require relocation of dwellings and disturbance to the natural state of the surroundings. Therefore upgrading the existing track is the most feasible option.

Impacts/Significance associated with the Operational Phase

| Impact | Impact type | Activity | Prefe | Preferred alternative | | | | | | |
|---|----------------------------------|---|------------------|-----------------------|-------------|-----------|-----------------------------|--|--|--|
| | Positive (+ve) Or Negative (-ve) | | SPATIAL SCALE | DURATION | PROBABILITY | INTENSITY | POST MITIGATED SIGNIFICANCE | | | |
| | | DIRECT IMPACTS | | _ | | | | | | |
| Increased traffic in the area | (-) | The proposed road is an access route off a local road, therefore increased traffic. | L | LT | М | L | L | | | |
| Increased vehicular fumes contributing to Air Pollution | (-) | It is not envisaged that the increased vehicular fumes will contribute significantly to increased localized air pollution but may have a cumulative effect. | L | МТ | L | L | L | | | |
| Direct alteration of faunal habitat | (-) | The area is highly transformed by the existing track and river crossing. | ٦ | LT | L | L | L | | | |
| Increased socio-economic benefits | (+) | The positive impact is that of increased socio- economic development to the local community. | L | LT | н | L | Н | | | |

| Impact | Impact type | Activity | Pre | eferr | ed al | tern | ativ | e | | |
|---------------------------------|----------------------------------|---|-------|---------|----------|-------------|-----------|--------------|-----------|------|
| | Positive (+ve) Or Negative (-ve) | | SCALE | SPATIAL | DURATION | PROBABILITY | INTENSITY | SIGNIFICANCE | MITIGATED | POST |
| | | INDIRECT IMPACTS | | | | | | | | |
| Safety Issues for the community | (+) | The proposed road is merely an upgrade of the existing track; therefore safety issues do not pose a major threat. | S | 3 | МТ | L | L | | L | |
| Increased noise | (-) | The road services the local community therefore noise levels should not be affected greatly by the upgrade. | 9 | 3 | МТ | M | L | | L | |

6. ENVIRONMENTAL IMPACT STATEMENT

Alternative A (preferred alternative)

It is the opinion of the EAP that all potential impacts that could potentially occur during the construction and operational phase of the road construction have been identified and key impacts and their mitigation measures are provided in this report.

The following factors were taken into consideration:

A) Site and route

- The route and site location has been selected based on the fact that an
 existing track is currently used as an access road, however this is not
 suitable. DOT therefore proposes to upgrade the existing track to a gravel
 road which conforms to DOT standards.
- The existing route is disturbed and footpaths have been created along the track.
- Should a new access road be constructed this will impact negatively on the receiving environment.

B) Land

- No land needs to be expropriated and the community has expressed the need for the track to be upgraded to a gravel road.
- No land will be lost that is currently utilized by the community or the school.

C) Design of the gravel road

- The proposed design of the gravel road has taken DOT standards into consideration. This will improve the overall drainage of the road and minimize surface run-off and erosion along the road verges.
- The route is relatively gentle in gradient and no major modifications are envisaged along the route.

D) Funding

 DOT has made funding available for this financial year 2015/16, the upgrade falls within the ambient of road infrastructure projects for the local municipality.

It is the opinion of the EAP that the proposed access road should be constructed. The construction would result in minor environmental impact whilst promoting development in the area. The construction of this road from an environmental perspective will result in an improved situation with minimal erosion and damage caused by storm water run-off.

Alternative B

N/A

Alternative C

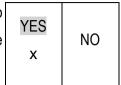
N/A

No-go alternative (compulsory)

Should the proposed construction of the road not go ahead, the site would be exposed to on-going erosion as well as major safety concerns for crossing the existing track during high rainfall periods The road provides the local community access to a number of amenities, therefore the "No-Go" alternative was used as a baseline for impact studies. The proposed construction has positive impacts with minimal environmental impacts.

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?



If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

N/A

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application.

- The EMPr must be strictly adhered to and implemented during the construction and operational phases.
- An ECO should be appointed by the applicant to undertake Environmental Audits and submit reports to the Competent Authority when requested.
- All mitigation measures and factors outlined in the BAR must be considered.
- Should cultural artefacts or heritage sites occur in close proximity to the site, construction must cease immediately and the applicant must appoint a heritage specialist to submit a report to AMAFA.

| Is an EMPr attached? | | YES | NO |
|----------------------|------|-----|----|
| SHELDON SINGH | DATE | _ | |
| SIGNATURE OF EAP | | | |



APPENDIX A.1 LOCALITY MAP



APPENDIX A.2 AERIAL PHOTO



APPENDIX A.3 TOPOGRAPHICAL MAP



APPENDIX B SITE PHOTOS



APPENDIX C DESIGN DRAWINGS

C.1 – PLAN OF THE ROAD DESIGN

APPENDIX D PUBLIC PARTICIPATION

- D.1 COMMENTS/RESPONSES FROM I&APS
- D.2 PROOF OF RECIEPTS
- D.3 COPY OF NEWSPAPER AD
- D.4 COPY OF SITE NOTICES
- D.5 COMMENTS FROM AMAFA
- D.6 COMMENTS FROM KZN WILDLIFE

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APPENDIX E ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPR)