BACKGROUND INFORMATION DOCUMENT (BID)

as a component of the

Basic Assessment Process (Environmental Impact Assessment) and Water Use Licence Application

for the

PROPOSED UPGRADE OF MAIN ROAD P278 AND ASSOCIATED BORROW PITS, UMSHWATI LOCAL MUNIICPALITY, UMGUNGUNDLOVU DISTRICT, KWAZULU-NATAL

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1. CONTACT NAMES AND ADDRESSES

Interested and Affected Parties may contact the Environmental Consultant listed below for additional information.

Applicant:	Engineering Consultant:	Environmental Consultant:
transport Department: Transport PROVINCIAL OF KWAZULU-NATAL **KZN Department of Transport**	Samani Consulting Civil Engineering Consultants & Project Managers 2 Latina Place, Westville. 3630 Tel: 031 266 2955 Fax: 031 266 2376	enviroedge environmental solutions **EnviroEdge cc** PO Box 1009, Kloof, 3640 Tel: 031 764 2569; 083 619 8683 Fax: (086) 654 6598 Email: karin@enviroedge.co.za www.enviroedge.co.za

The Basic Assessment Process

The proposed upgrade of main road P278 and the establishment of two borrow pits requires an Application for Environmental Authorisation in terms of the Environmental Impact Assessment Regulations of 2010, Regulations in terms of Chapter 5 of the National Environmental Management Act of 1998, and the Environmental Impact Assessment Regulations 2014, as amended 2017, and the Mineral and Petroleum Resources Development Act, (No.28 of 2002). As such, applications will be lodged with the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs, and Department of Mineral Resources respectively, and a Basic Assessment is being undertaken by EnviroEdge. The Basic Assessment process is summarised below:

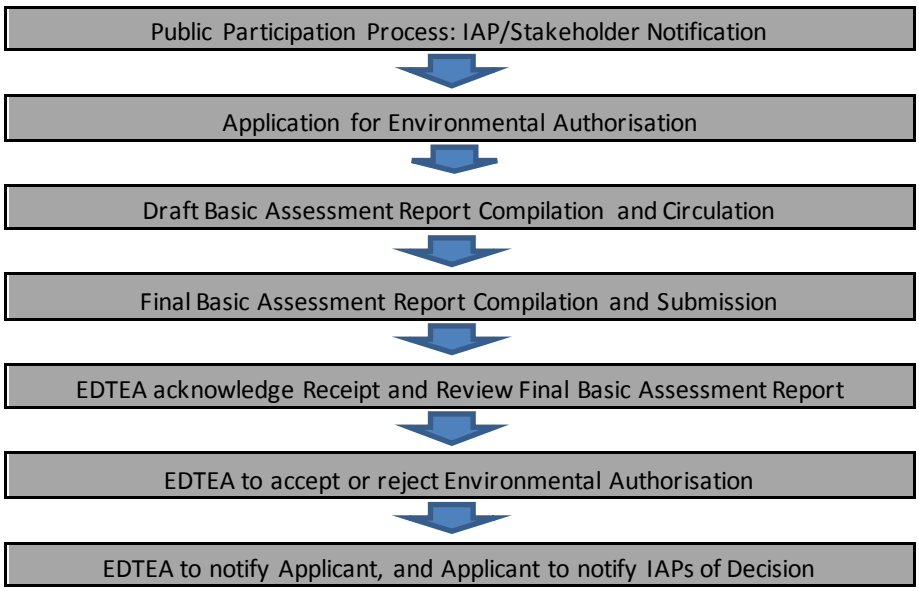

Figure 1. Basic Assessment Process

The Water Use Licence Application Process

The proposed road upgrade and borrow pits will require a Water Use Licence Application (WULA), in terms of the National Water Act, (Act 36 of 1998). As such, EnviroEdge will be submitting an application for a Section 21 *(c) impeding or diverting the flow of water in a watercourse, and (i) altering the bed, banks, course, or characteristics of a watercourse.*

The Public Participation Process

The Public Participation Process, (PPP) forms part of the Basic Assessment and WULA process and helps to ensure that Interested and/or Affected Parties, (IAPs) have an opportunity to participate throughout the process by submitting their comments or concerns. Members of the public have the right to be informed of decisions that affect them. IAPs are provided with an opportunity during this process to submit their comments on issues or concerns regarding the proposed development.

The Background Information Document

As part of the Basic Assessment and WULA Public Participation Process, the Background Information Document, (BID), provides preliminary project information and serves to inform all authorities, stakeholders, and Interested and/or Affected Parties (IAPs) of the applicant's proposed project. The BID provides interested and affected parties an opportunity to submit their comments on any issues or concerns relating to the biophysical, economic or socio-economic environment.

2. BACKGROUND INFORMATION

EnviroEdge cc. has been commissioned to undertake an Environmental Impact Assessment and Water Use Licence Application for the proposed development. The Basic Assessment process is being undertaken in accordance with Sections 19 – 20 in terms part 2 of chapter 4 of the National Environmental Management Act, (Act No 107 of 1998), as amended, and the Environmental Impact Assessment Regulations of December 2014, as amended 2017. These Regulations identify various activities which may have a substantial detrimental effect on the environment. In addition, the Regulations list procedures for assessing potential associated environmental impacts. Public participation and the scoping of issues form part of these procedures. The Water Use Licence Application will be undertaken in accordance with the National Water Act, (Act 36 of 1998), and associated GN 126.

3. PURPOSE OF THIS REPORT AND PUBLIC PARTICIPATION

This document provides preliminary project information to enable interested and/or affected parties (IAPs) an opportunity to comment on the proposed development, (a process known as public participation or scoping). All issues and comments raised by IAPs during scoping will be documented in the Comments and Reponses Report, which, in turn, will be included in the Basic Assessment Report and Water Use Licence Application, and submitted to the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs, (DEDTEA), and the Department of Water and Sanitation respectively.

4. PROJECT LOCATION

EnviroEdge cc is submitting the applications for environmental authorisation and a water use licence application, on behalf of the applicant KwaZulu-Natal Department of Transport for the proposed upgrading of 11km of the Main P278 Road. The project area is situated approximately 35 km north-east of the Pietermaritzburg CBD, 11km north east of Wartburg and 2km east of Dalton. The project area extends into Wards 1, 3 and 7 of the Umshwati Local Municipality, uMgungundlovu District Municipality. The start point of the P278 Road upgrade is at the junction of the P157 and P156-1, at the start co-ordinates: 29°21'18.31" S 30°39'20.99" E. The project includes the sourcing of gravel material from two potential Borrow Pits (BP). BP 1 is located on Portion 26 of the Farm Paardfontein 1299 at co-ordinates: 29°16'34.45"S 30°40'46.57"E, and BP2 on Portion 14 of the Farm Paardfontein 1299 at co-ordinates: 29°17'5.84"S 30°42'26.2"E.

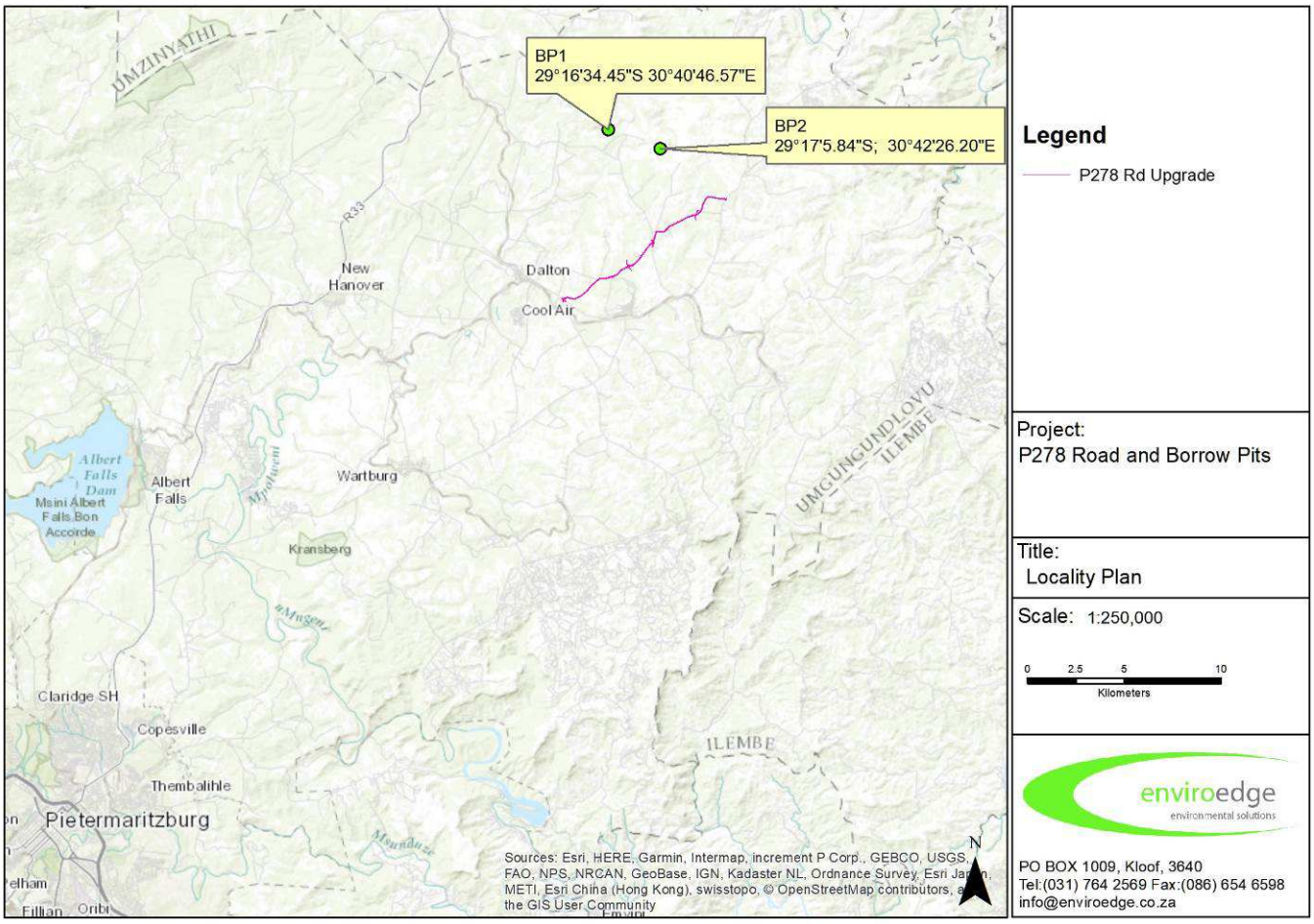

Figure 2. Locality Plan

5. DEVELOPMENT PROPOSAL

The development proposal is the upgrading of Main Road P278 to an all-weather black top road. The proposed road upgrade aims to allow local residents to have improved, formalised vehicular access to their farms, homes, schools, shops and the extended road network. The proposed road upgrade will include the upgrading of 11km of road anticipated to be 8.5m wide, 4 watercourse crossings upgrade, storm water improvements and a minor horizontal realignment at km 3,8.

Watercourse crossing 1 is located on a non-perennial tributary of the Manzamnyama River which drains in a north easterly direction to meet the Pambanyoni River 4.8km downstream. The Pambanyoni River then feeds into the perennial Khamanzi River 9km to the north. Watercourse crossings 2, 3 and 4 traverse non-perennial tributaries of the Mtizane River, which drain in a north easterly direction to meet the Khamanzi River 8.5km to the north. The project is located within the U40C quaternary catchment. The locations of the proposed watercourse crossings are provided below.

	Latitude (dms)	Longitude (dms)	Km
WC1	29° 20' 23.435" S	30° 41' 24.598" E	3.9
WC2	29° 19' 21.141" S	30° 42' 38.540" E	6.9
WC3	29° 18' 57.084" S	30° 43' 34.312" E	8.6
WC4	29° 18' 46.030" S	30° 43' 46.144" E	9.1

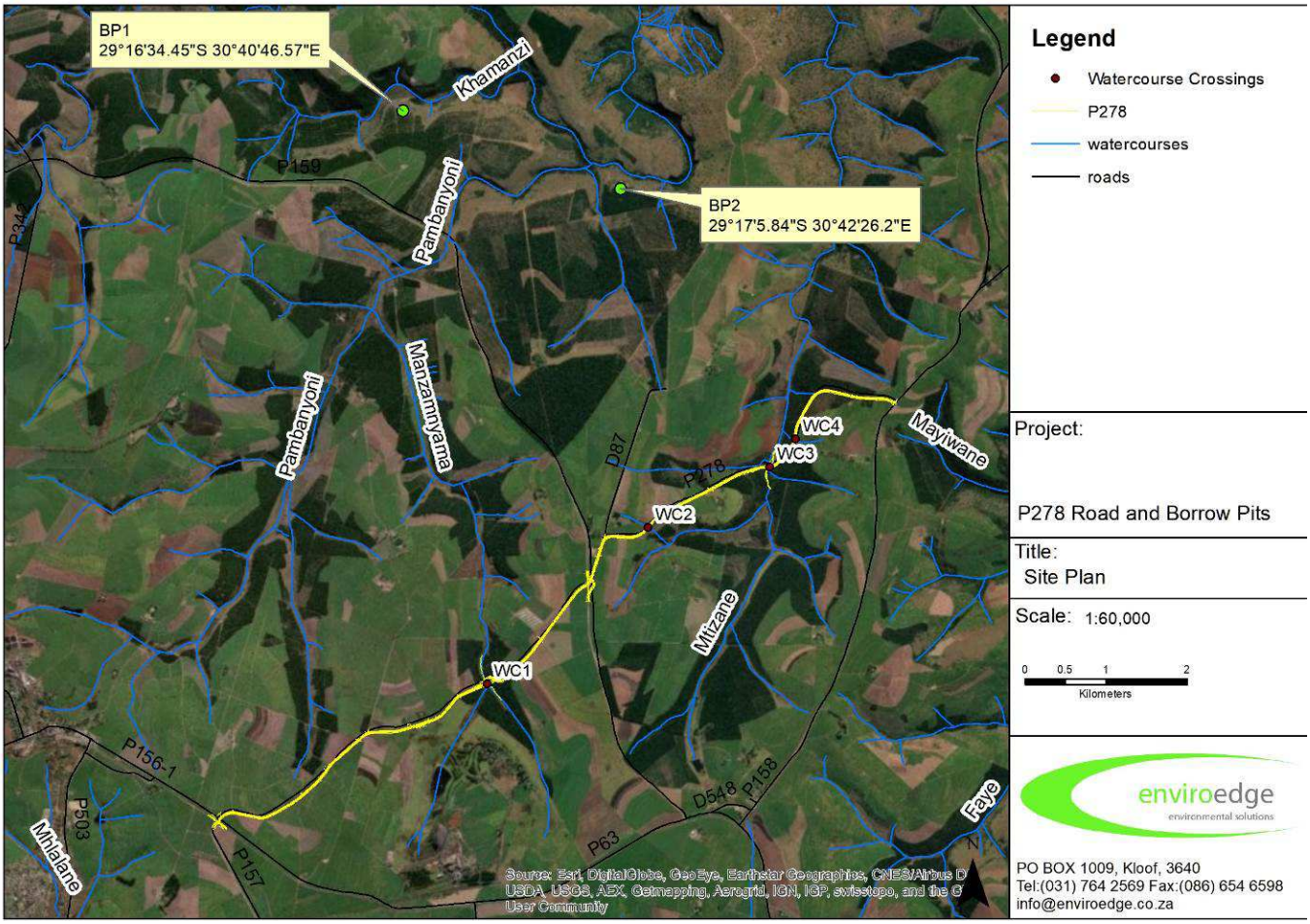

Figure 3. Site plan

6. AFFECTED AREA

Vegetation

The proposed P278 Road upgrade traverses 2 different vegetation types, namely the KwaZulu-Natal Sandstone Sourveld, (Svs5), in the southern portion, and extends into the Midlands Mistbelt Grassland, (Gs9) vegetation type in the north. KwaZulu-Natal Sandstone Sourveld, consists short, species-rich grassland with scattered low shrubs and trees, such as *Proteaceae*, with *Protea, Leucospermum* and *Faure*a being locally common species. For the majority of the length of the Main Road P278, the road traverses sugar cane fields and some tree plantations, with some sections of alien invasive weeds generally located near to the proposed watercourse crossing upgrade areas. The vegetation noted along the proposed road edge comprises of cut grass with some brush along the edges of the agricultural fields and hygrophilous material at river stream edges. Sections of alien invasive weeds noted along the route, include: *Acacia mearnsii*, *Solanum mauritianum, Lantana camara* and *Melia azedarach*, (Syringa). Midlands Mistbelt Grassland vegetation in the north features forb-rich tall sour veld, *Themeda triandra* grasslands which have been transformed by the invasion of native Ngongoni grass, (*Aristida junciformis*), with only a few patches of the original species rich grasslands that remain.

The proposed borrow pits, (BP1 and BP2) are situated within the vegetation Ngongoni Veld, (SVs 4) Ngongoni Veld type. The vegetation and landscape features are characterised by dense, tall grassland almost entirely dominated by unpalatable, wiry Ngongoni grass, (*Aristida junciformis*) and associated low species diversity. These borrow pits are, however, located on existing borrow areas, which show evidence of previous disturbance from agricultural activities and informal mining activities.

Fauna

The project area is situated between commercial agricultural farms, where sugar cane and forestry are most common. Watercourses intersecting the road and smaller drainage features provide refuge for smaller terrestrial and aquatic fauna. For the most part, the proposed road upgrade follows the existing road alignment, which should also help to reduce fauna disturbance.

Culture and Heritage

The presence of features of cultural or historical importance is currently unknown. An Heritage Impact Assessment will be undertaken as part of the Basic Assessment process.

National and District Roads

The proposed P278 road upgrade, will provide improved vehicular access and crossing over a non-perennial tributary of the Manzamnyama River which drains in a north easterly direction to meet the Pambanyoni River 4.8km downstream, namely Watercourse Crossing 1. The Pambanyoni River then feeds into the perennial Khamanzi River 9km to the north. Three other improved crossings, namely, Watercourse crossings 2, 3 and 4 traverse non-perennial tributaries of the Mtizane River, which drain in a north easterly direction to meet the Khamanzi River 8.5km to the north. The Main Road P278 upgrade is accessed from the R 614 Wartburg Road, then the P156 turn off west to the P278 Road start point. The proposed development, (operational phase), is unlikely to impact any provincial or national road, although slow turning construction traffic and the generation of dust may have an impact during the construction phase, this will, however, be of short term duration with medium to low impact. There may also be a slight increase in the number of vehicles utilising connecting roads to the R 614 and P156, as well as the P278 itself.

Services

Powerlines were noted near the proposed pedestrian bridge, however, all relevant government departments or parastatals will be consulted as part of the Public Participation Process.

Topography and Drainage

The study area is generally hilly and rolling landscape dissected by undulating valley areas. The approximate centre point of the site can be found at co-ordinates: 29°19'44.17"S; 30°42'10.98"E. To the north, flat rolling plateau tops and steep slopes commonly forming table mountains are dominating landscape features.

Watercourse 1 in the southern portion of the road is located directly on a non-perennial tributary of the Manzamnyama River which drains in a north easterly direction to meet the Pambanyoni River 4.8km downstream. The Pambanyoni River then feeds into the perennial Khamanzi River 9km to the north. Watercourse crossings 2, 3 and 4 are located directly on non-perennial tributaries of the Mtizane River, which drain in a north easterly direction to meet the Khamanzi River 8.5km to the north. The Albert Falls Dam is located 23km south-west of the road start point. The road route is relatively flat with steeper sections at the watercourse crossing points.

Geology and Hydrology

The geology of the southern portion of the road is described as Ordovician Natal Group sandstones with shallow, nutrient-poor, sandy soils including Glenrosa and Mispah forms. The geology of the northern portion of the road is described as Apedal and plinthic soil forms derived mostly from Ecca Group, (Karoo Supergroup), shale and minor sandstone, while the geology of the two Borrow Pit sites is described as Acid, leached, heavy soils derived from Karoo Supergroup sediments, including significant Dwyka tillites and intrusive Karoo dolerites. Glenrosa and Mispah soils also occur.

Land use and Socio-economic structure

Land use in the surrounding areas consists of predominantly commercial agricultural activities. Scattered dwellings, farm buildings, an old church and a sugar mill were noted along the roadside. The socio-economic structure can be classified as middle to high income. Most of the surrounding region is developed for commercial agriculture activities.

Figure 1: At Start point of P278 Road along the P156 Road looking north-east along the P278 Road.

Figure 2: On the P278 Road overlooking Watercourse Crossing 1 looking north-east.

Figure 3: Central intersection of the P278 Road with Seven Oaks Road/Fawnleas Road, 800m north-east of New Hanover central.

Figure 4: On the P278 Road overlooking Watercourse Crossing 2 looking north-east.

Figure 5: On the P278 Road overlooking Watercourse Crossing 3 looking east.

Figure 6: On the P278 Road overlooking Watercourse 4 looking north.

Figure 7: At the end point of the P278 Road overlooking the T junction looking west along the P278 Road.

7. POTENTIAL KEY ISSUES

Access to River and Drainage areas – The site soils indicate wetland characteristics. Mitigation measures to help reduce impacts identified will be included. Access to the non-perennial river areas within the study area by construction vehicles will cause damage to the fauna and flora associated with these systems; it will also alter water and soil characteristics and flow patterns. Owing to the nature of the project, this cannot be avoided and must be managed appropriately both during and after construction, (rehabilitation).

Surface Water Runoff – The construction activities may affect the area through changed hydrological patterns and this could have an ecological impact. Permanent alteration of flow patterns is a risk and could lead to detrimental effects on the vegetation if these are not mitigated during and after construction. Storm water management associated with the proposed development must be incorporated into the design and must take into consideration the erosion potential of the region.

Rehabilitation – Post Construction rehabilitation programme must be implemented for all areas affected by the proposed development. Rehabilitation of the damage to the watercourses during construction, (compaction and erosion), must be ensured through planning from the outset. Alien plants which establish during construction must be removed. This must be an ongoing process and must not be left to the end of the projected construction period. Any vegetation rehabilitation which occurs post construction must be with indigenous vegetation.

Vegetation Clearance – Where it is necessary for vegetation to be removed, this must not occur as a once off clearance, but must be phased, as needed, in order to reduce soil erosion potential and the proliferation of exotic

weeds. Weeds will thrive in disturbed soil and will present an eradication problem later should these plants set seed, especially near the watercourses.

Erosion – Potential erosion must always be considered during and after construction. If strict mitigation measures are implemented these potential factors can be prevented / reduced. Mitigation measures include soil stabilisation and re-vegetation of affected areas as well as the avoidance, (during construction and operation phases), of all areas susceptible to erosion.

The opportunities created by this development through social upliftment may help to outweigh the negative impacts. It is imperative; however, that the construction activities occur over as small an area as is practical.

8. INTERESTED AND AFFECTED PARTIES

All Interested and Affected Parties (IAPs) wishing to become registered as such and receive additional information, should contact the environmental consultant to register as soon as possible. If you would be so kind, if you are aware of any IAPs who have not been informed or identified by ourselves, please let us know, so that they too may have the opportunity to register and / or receive information. Any issues, which you would like to raise and have not been identified to date, would be welcomed.

References

Mucina L & Rutherford MC (eds) 2006. *The Vegetation of South Africa, Lesotho and Swaziland.* Strelitzia 19. South African National Biodiversity Institute. Pretoria.