



HANSLAB (PTY) Ltd
ENVIRONMENTAL AND GROUND
ENGINEERING SPECIALIST

SITE INVESTIGATION REPORT

OKHALWENI MUD TRACK UPGRADE

ALFRED DUMA LOCAL MUNICIPALITY



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Report Name	Okhalweni mud track upgrade Site Investigation Report
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1. INTRODUCTION

A Site Investigation is the process of collecting information, assessment of the data and reporting potential hazards within a site which is unknown (O'Brien and Gere, 2011). A site investigation/ assessment highlights potential ecological issues or constraints in relation to a proposed development (Perry, B, 2011). This site investigation report will analyse the ground assessment undertaken for the proposed development of a local road upgrade. A desktop analysis will then be done to compare these results and formulate potential environmental constraints, in reference to the proposed development. This analysis will also aid in defining specific potential environmental triggers within the project boundaries.

2. METHODOLOGY

The methodology followed for conducting the site investigation report included:

- Compilation of an environmental site visit checklist for screening purposes. This checklist is specific to local road developments and assisted in recognising potential constraints from an environmental and social perspective.
- Site Visit/Site Walk-Over (Conducted on the 8th November 2017). **Refer to Appendix B – Site Register.**
- Taking site photographs for environmental evaluation purposes
- Desktop analysis using environmental management tools i.e. Google Earth, DOT GIS, SANBI, ARCGIS

3. BACKGROUND

The KwaZulu-Natal Department of Transport (Applicant) proposes to upgrade the existing Okhalweni mud track to a type 7A gravel road. The upgrade of the local road will be approximately 2.91km in length, and 6m in width with a 20m road reserve which conforms to DOT standards for local road upgrades. The proposed route does not traverse any watercourses, however there are portions of the route which needs to be widened to facilitate storm water control structures. These storm water structures will be as per standard DOT designs. The specific designs will be that of v-drains.

4. PROJECT LOCATION

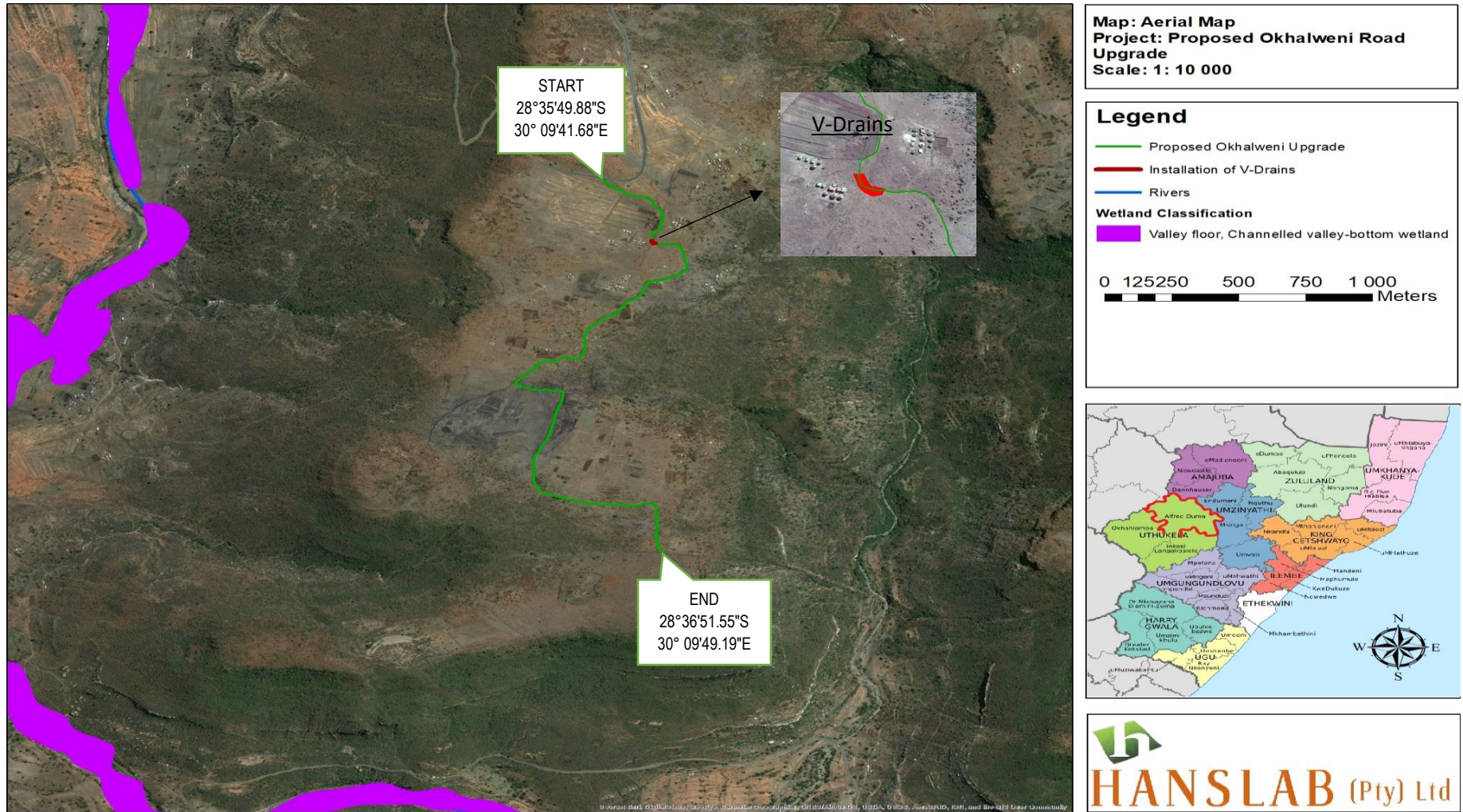


Figure 1: Showing Aerial Map (Source: ArcGIS, 2018)

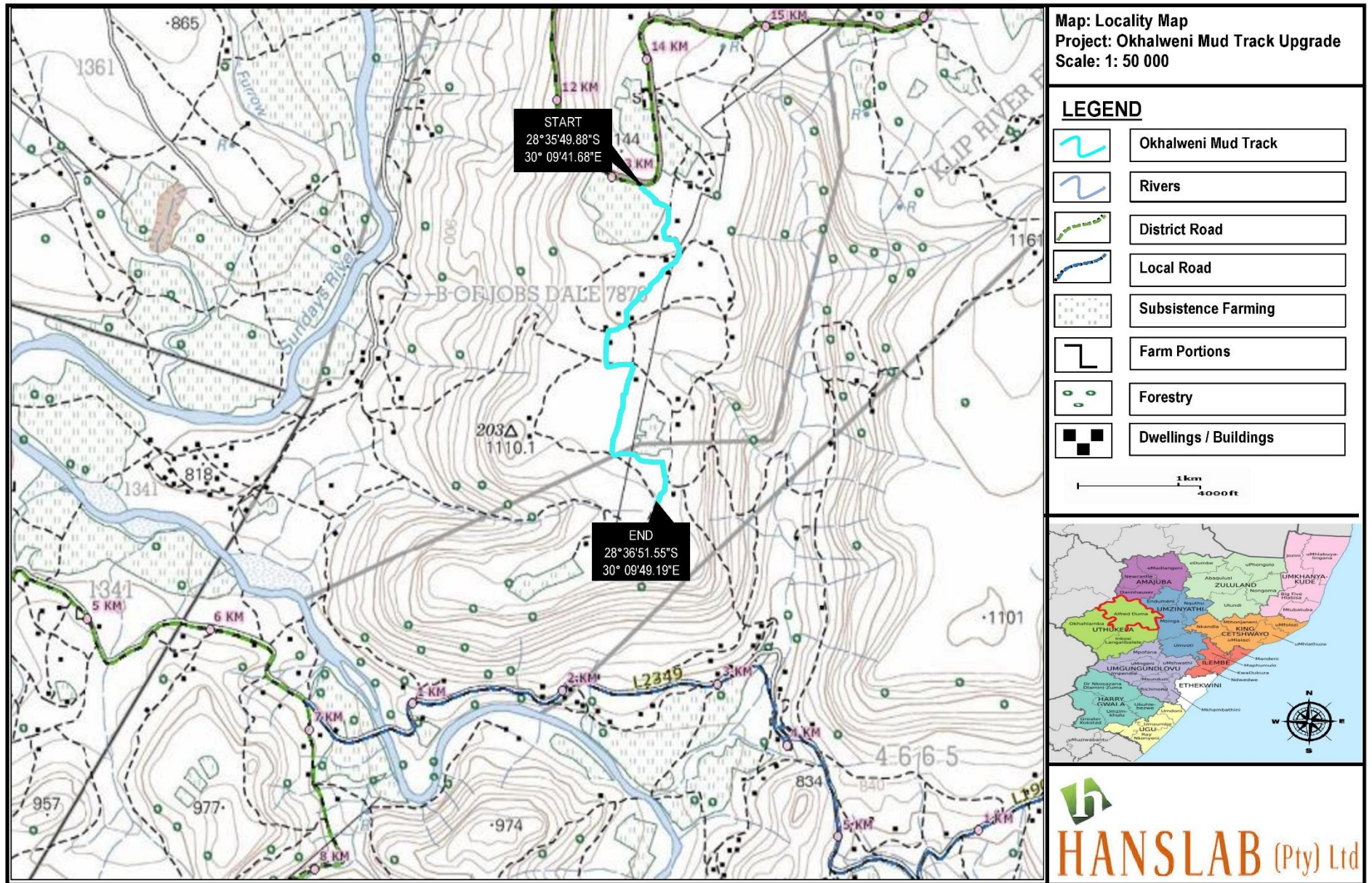


Figure 2: Showing Locality Map (Source: DOT GIS, 2018)

5. SITE DESCRIPTION

The proposed upgrade of Okhalweni mud track is within the Alfred Duma Local Municipality. During the initial site visit, several dwellings were identified along the proposed upgrade. The existing mud track can be seen to be treacherous for residents during flood events, therefore an upgrade of the mud track is of importance. The proposed site and surrounding area has been significantly eroded due to rainfall seasons. The proposed route does not traverse any watercourses, however there are portions of the route which needs to be widened to facilitate storm water control structures. These storm water structures will be as per standard Department of Transport (DOT) designs. The two specific designs will be that of meadow drains and v-drains.

A desktop analysis of the study area identified a channelled valley bottom wetland and the Sundays River approximately 1.5km away from the proposed upgrade of the Okhalweni mud track. There were no drainage lines or watercourses identified from a desktop analysis point of view. There is evidence of subsistence farming along the proposed upgrade, which is due to numerous dwellings adjacent to the existing mud track.

Table 1: Showing coordinates of proposed upgrade

PROPOSED ROUTE	LAT. (DDMMSS)	LONG. (DDMMSS)
Start Point	28°35'49.88"S	30° 09'41.68"E
Middle Point	28°36'23.74"S	30° 09'31.44"E
End Point	28°36'51.55"S	30° 09'49.19"E

Table 2: Showing coordinates for the installation of V-drains

PROPOSED ROUTE	LAT. (DDMMSS)	LONG. (DDMMSS)
Start Point	28°35'59.91"S	30° 09'47.75"E
End Point	28°36'0.71"S	30° 09'48.64"E



Photo 1: Showing existing Okhalweni mud track

6. NEED FOR THE DEVELOPMENT

The proposed development will serve as a positive impact for the community in terms of:

- Safe access for pedestrians, motorists, school children
- Providing access to basic facilities and services such as mobile clinics
- Minimizing the negative impact of flooding, and reducing soil degradation
- Increased employment opportunities for the local community

7. LISTED ACTIVITIES TRIGGERED BY PROPOSED DEVELOPMENT

GN NO. & ACTIVITY NUMBER	LISTED ACTIVITY	ACTIVITY DESCRIPTION
GNR 983, Activity 24 of Listing Notice 1 (As amended 7 th April 2017)	<p><i>The development of a road—</i></p> <p>(i) <i>for which an environmental authorisation 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</i></p> <p>(ii) <i>with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres;</i></p> <p><i>but excluding a road—</i></p> <p>(a) <i>which is identified and included in activity 27 in Listing Notice 2 of 2014;</i></p> <p>(b) <i>where the entire road falls within an urban area; or</i></p> <p>(c) <i>which is 1 kilometre or shorter.</i></p>	<p>There are portions of the route which need to be widened to facilitate storm water control structures. These storm water structures will be as per standard DOT designs. The specific designs will be that of v-drains. The construction of v-drains along the road will increase the road width to greater than 8m, thus triggering Activity 24 of Listing Notice 1.</p> <p>The road falls within a rural area.</p>

8. CONCLUSION

The site investigation assessment indicated that the proposed route does not traverse any watercourses, however there are portions of the route which needs to be widened to facilitate storm water control structures. The proposed road upgrade triggers Activity 24 of Listing Notice 1 in terms of the EIA regulation 2014, as amended. Therefore, a Basic Assessment Application, in terms of the EIA Regulations, 2014 as amended, must be lodged with the Department of Economic Development, Tourism and Environmental Affairs (EDTEA). The proposed Okhalweni mud track upgrade is a necessary development as the community is in need of safe and secure means of crossing the road, for both vehicles and pedestrians. The community will benefit directly from the proposed gravel road with associated structures.

REFERENCES

EIA Regulations (2017). General Notice Regulations (GNR983), (2014), as amended (April 2017)

O'Brien and Gere (2011). Geophysical/ Geotechnical/ Environmental Investigation: Restoration Project

Perry, B (2011). Environmental Investigation Report.

APPENDIX A – SITE PHOTOS



Photo 1: Showing dwellings along the route



Photo 2: Showing existing Okhalweni mud track

APPENDIX B – SITE REGISTER






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Project name: Okhalweni

Date: 8 NOVEMBER 2017

Site attendance register

NAME	CONTACT NUMBER	EMAIL	SIGNATURE
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