

BACKGROUND INFORMATION DOCUMENT (BID)

as a component of the
Basic Assessment Process (Environmental Impact Assessment) &
Water Use License Application
for the

**PROPOSED THUSI ACCESS, WARD 12, UMZIMKHULU LOCAL MUNICIPALITY, HARRY GWALA DISTRICT
MUNICIPALITY**

EIA REFERENCE NO: TBC

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1. CONTACT NAMES AND ADDRESSES

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

Applicant:	Environmental Consultant:
 <p>Umzimkhulu Local Municipality</p>	 <p>GREENBELT PROJECTS PO BOX 791, Umhlanga, 4320 Tel: 071 140 8350 steven@greenbeltprojects.co.za www.greenbeltprojects.co.za</p>

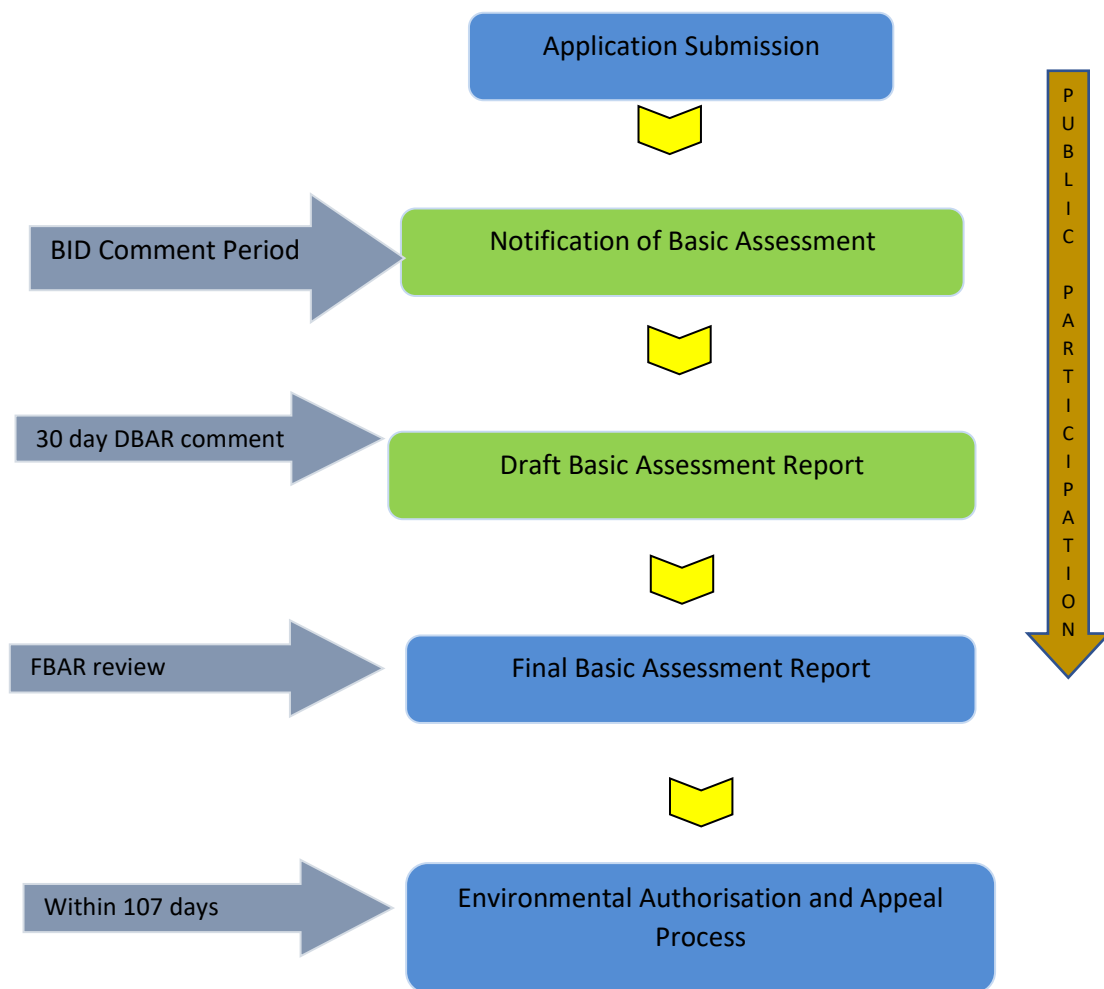
2. BACKGROUND INFORMATION THE PROJECT APPLICATIONS

Greenbelt Projects (Pty)Ltd is submitting an Application for Environmental Authorisation and a Water Use Licence Application, on behalf of the applicant, Umzimkhulu Local Municipality, for the proposed project. The proposed activity will be subject to a Basic Assessment process in terms of the National Environmental Management Act 1998, (Act No. 107 of 1998), and associated Environmental Impact Assessment Regulations 2014 (as amended 2017). In addition, a Water Use Licence Application will be submitted to the Department of Water and Sanitation in terms of the National Water Act (No.36 of 1998), 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*.

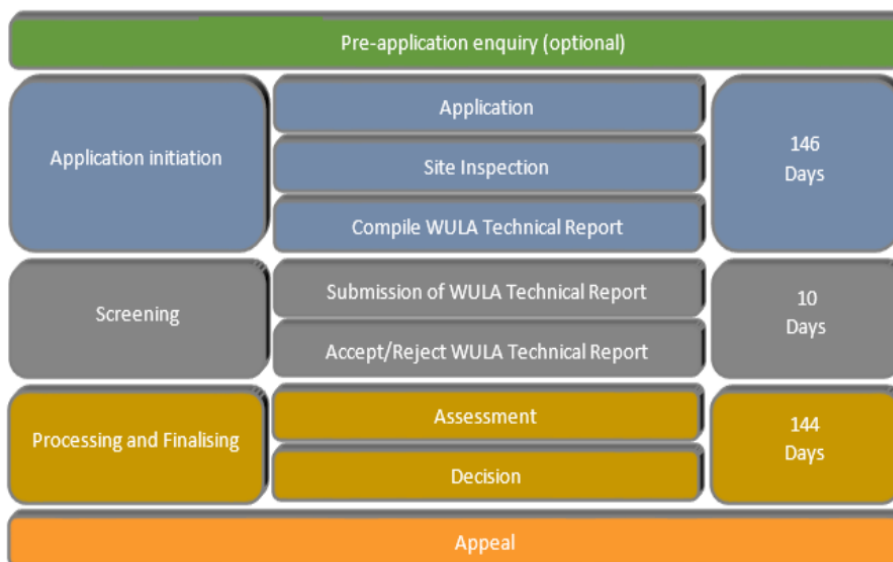


These regulations identify various activities which may have a substantial detrimental effect on the environment. In addition, the Regulations list procedures for assessing potential associated environmental impacts. Scoping forms part of the initial phase of these procedures.

The Basic Assessment can be summarised as follows:



The Water Use License Process is outlined below



The Public Participation Process



The Public Participation Process (PPP) forms part of the Basic Assessment and WULA processes, and ensure that Interested and/or Affected Parties (IAP's) 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 processes, 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 social environment.

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. All issues and comments raised by IAPs during scoping will be documented in the Comments and Responses Report, which, in turn, will be included in the Basic Assessment Report, submitted to the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs, (EDTEA), and other commenting authorities. Comments received will also be included in the Water Use Licence Application. This will assist in the identification of environmental issues that could have a negative and/or positive impact on the site and the community.

4. PROJECT LOCATION

The project is situated in Ward 12 of the Umzimkhulu Local Municipality, Harry Gwala District Municipality. The site is located approximately 30km east of Kokstad, 32km south west of Umzimkhulu and 10 km north west of Harding. The site is located at co-ordinates 30°30'22.80"S 29°44'48.73"E. The proposed project is located on the Remaining extent of Farm 145 Vaal Bank SG 21 Digit Code: NOES00000000014500000.

5. DEVELOPMENT PROPOSAL

The Umzimkhulu Municipality have proposed the construction and upgrade of 2.8km of the Thusi Gravel Access Road. The proposed project aims to allow local residents to have improved, formalised vehicular access to their homes, schools, shops and the extended road network. The proposed development is a new road construction with upgrade portions of the existing road. The project will create a formal infrastructure link from the north of Thusi to south Thusi, Vimbela and the National Route 2.

The proposed project traverses one perennial tributary of the Umbumbane River at 30°30'22.80"S 29°44'48.73"E near the project mid-point. The proposed road upgrade and construction will be constructed and complete with formal stormwater infrastructure, cut-off drains and a watercourse crossing structure. The proposed road width is expected to be a 4m wide cambered gravel access road, with 1m servitudes on either side, having a total width of 6m. The major watercourse crossing will comprise 10 x 1200mm Ø pipes. The watercourse crossing dimensions are expected to be 5m wide by 16.2m long. Ingress and egress points at the wingwalls will be shaped to conform with the new gravel road elevation. The watercourse crossing will be founded on a concrete base to support portal culverts and road pavement structure. The concrete base and portal culvert will be founded on firm ground of 200mm G7 sub base and 200mm G2 base. The proposed project is located within 3km of the Ngele Forest



Nature Reserve. The proposed road traverses an unnamed local road starting at 30°30'56.34"S 29°45'8.11"E and ending at 30°29'54.94"S 29°44'27.47"E



Plate 1. Image looking north east showing an overview of the watercourse proposed for crossing. Note the perennial nature of the Umbunbane River.



Plate 2. Image looking south overlooking the watercourse crossing towards the start point of the proposed road.

6. AFFECTED AREA

Vegetation

According to The Vegetation of South Africa, Lesotho and Swaziland, the vegetation in the study area can be classified as Midlands Misbelt Grassland (Gs9). The vegetation and landscape features comprise hilly and rolling landscapes mainly associated with a discontinuous east-facing scarp formed by dolerite intrusions. Dominated by forbe-rich, tall, sour *Themeda triandra* grasslands transformed by the invasion of native Ngongoni grass (*Aristida junciformis*). Only a few patches of the original species rich grasslands remain. The conservation status of this vegetation unit is considered Endangered with a conservation target of 23%. No protected trees or indigenous forests were identified on site or within the construction footprint. Invasive plants species were noted to have established nearer to disturbed settlement areas and comprises Black Wattle, (*Acacia Mearnsii*), Bugweed (*Solanum mauritianum*), Lantana (*Lantana Camara*) and Peanut Butter Cassia (*Senna didymobotrya*).

Fauna

The open grasslands adjacent drainage valleys and the perennial Umbunbane River vegetation is likely to provide habitat for faunal species such as avifauna, reptiles and amphibians. Domestic livestock also graze in this area.

Culture and Heritage



The presence of features of cultural or historical importance is currently unknown. A Heritage Impact Assessment has been commissioned and the findings will be presented in the Basic Assessment Report.

National and District Roads

The proposed road upgrade and construction provides a formal gravel access road with complete watercourse drainage infrastructure. The proposed road traverses an unnamed local road starting at 30°30'56.34"S 29°45'8.11"E and ending at 30°29'54.94"S 29°44'27.47"E. Access to the site is expected to be gained off the National Route 2 at existing access point at 30°31'0.63"S 29°44'48.42"E. The proposed development is unlikely to impact any provincial or national road, although slow turning construction traffic and the generation of dust may have an impact during construction phase.

Services

Powerlines and telecommunications services were noted near the proposed project. All relevant government departments or parastatals will be consulted as part of the Public Participation Process.

Topography and Drainage

The project area is located within the T52G quaternary catchment of the uMvoti to Umzimkhulu Water Management Area (11). The proposed road alignment traverses perennial watercourses of the Umbunbane River. The study area is undulating with a central valley incised by the Umbunbane River. The project high point is at 1050 masl to the north west and the low-point of 1020masl is located at the Umbunbane River crossing at the mid-point,

Geology

The study area comprises Pietermaritzburg Formation, Vryheid Formation and Volksrust Formation.

The Pietermaritzburg formation is mainly composed of dark colored carbonaceous and silt-rich shale rocks, siltstone, and mudstone with subordinate sandstone layers. This formation is only found in the easternmost section of the north eastern facies succession and is not well studied due to poor outcrops and exposures. The exposed outcrops quickly erode due to the sub-tropical climate of KwaZulu-Natal where the deposits of this formation are exclusively found. Sporadic fossil plant material and various invertebrate trace fossils have been found, and the depositional environment is thought to be shallow marine.

The Vryheid formation are dominated by fine-grained mudstone, carbonaceous shale with alternating layers of bituminous mudstone coal seams, and layered deposits of coarse grained, bioturbated immature sandstones respectively. The rock sediments are predominantly arranged in upward-coarsening cycles, although some fining-upward cycles are found in this formation's easternmost deposits. The alternating rock types observed in the Vryheid Formation indicate seasonal variations of storms and fairer weather in a pro-delta setting. The carbonaceous shales were formed below the water surface in anoxic conditions and the coal formed from compacted plant matter deposited at the bottom of peat swamps.

The Volksrust formation mainly comprises of silt rich, grey to black shale containing thin, bioturbated siltstone or sandstone lenses. Deposits of this formation interfinger laterally with the underlying Vryheid Formation and overlying Beaufort Group rock deposits. The rock sediments are fine-grained overall, indicating that the rock sediments were deposited in both lacustrine to lagoonal and shallow coastal settings.



Land use and Socio-economic structure

The Thusi Village south and north villages are rural in nature. The mid-section of the proposed road is new road construction which is undeveloped and un-occupied. Subsistence agricultural grazing land is the dominant land use, with smaller subsistence cultivated gardens closer to homesteads. The socio-economic structure can be classified as primarily low income.

7. POTENTIAL KEY ISSUES

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.

Watercourse – Access to the watercourse 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 during and after construction (rehabilitation). Construction activities within the Umbumbane River are likely to impact surface and ground water quality within the area. Altered hydrological patterns could have an ecological impact and mitigation measures will need to be implemented.

Stormwater - Stormwater management associated with the proposed development must be incorporated into the design and must take into consideration the erosion potential of the region.

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 on disturbed soil, and will present an eradication problem later should these plants set seed, especially near the watercourse.

Rehabilitation – Post Construction rehabilitation programme should be implemented for all areas to be affected by the proposed development. Rehabilitation of the damage to the watercourse during construction, (compaction and erosion), should 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 should be with indigenous vegetation.

The opportunities created by this development through social upliftment and the provision of public amenities 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.

9. REFERENCES

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

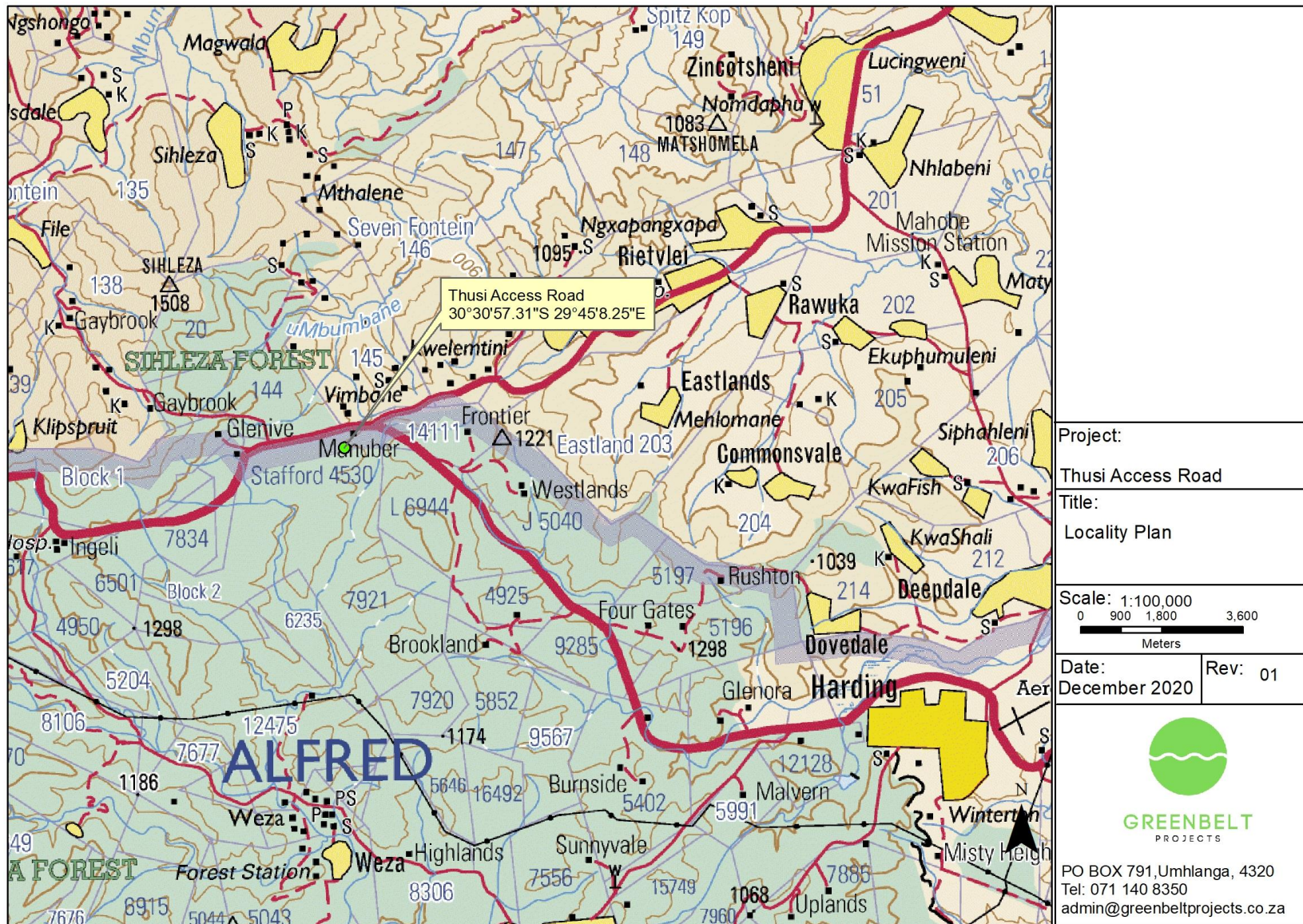


FIGURE 3: LOCALITY PLAN

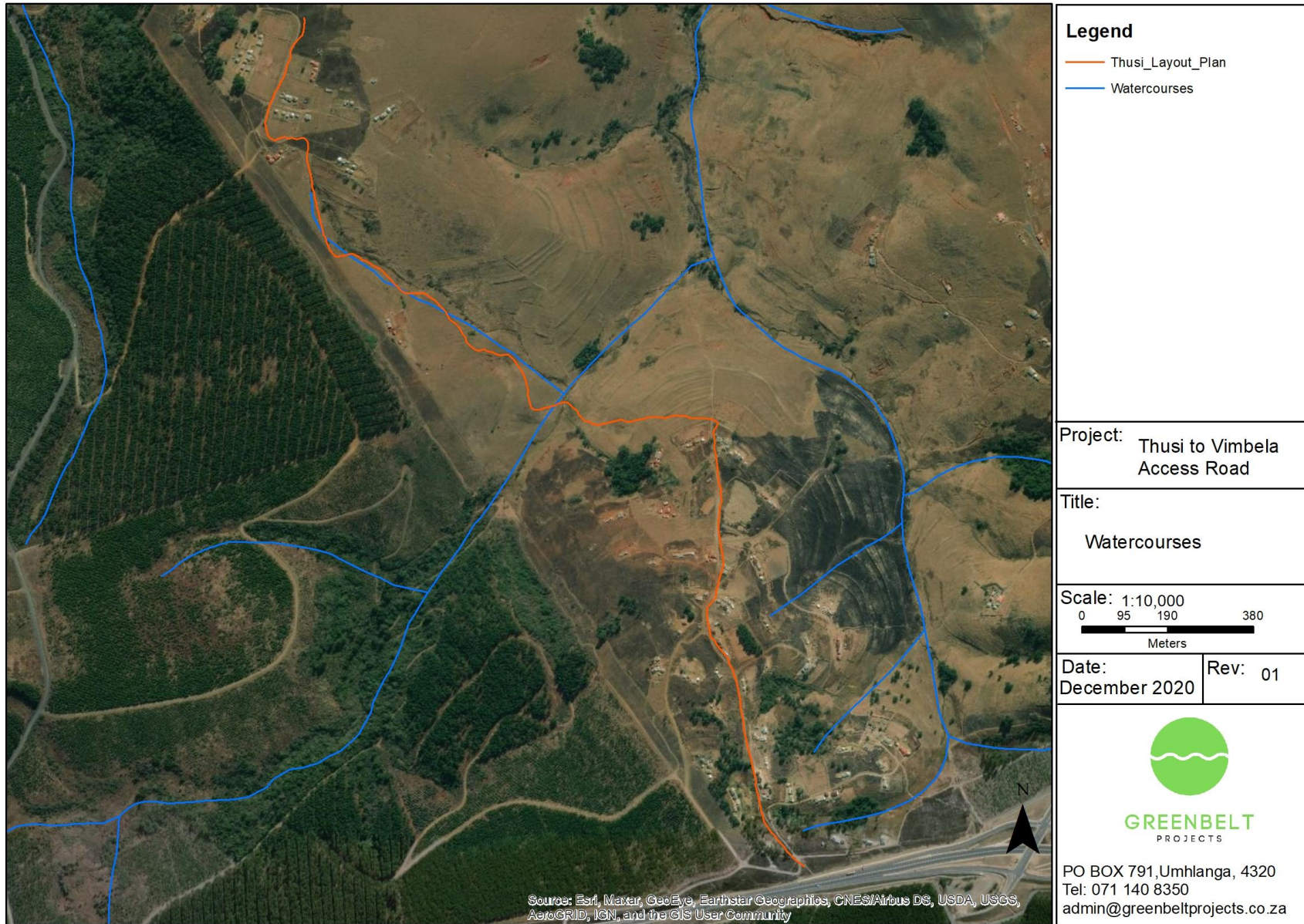


FIGURE 2. LAYOUT PLAN