



6 Indwa Place, Kloof, 3610 South Africa

Tel: [+27] (31) 764 2515  
Fax: [+27] (31) 764 2515  
Mobile: [+27] 82 772 9941  
Email: [guyn@saol.com](mailto:guyn@saol.com)

C/K 93/07200/93  
VAT Registration No: 4950171530

**DRAFT BASIC ASSESSMENT REPORT  
FOR THE  
BAKERS TRANSPORT WAREHOUSING CENTRE  
ON SUB 168 (OF 27 ) OF THE FARM UITKOMST AND  
DOORNRUG NO 852**



**June 2015**

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## APPENDICES

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## SECTION A: DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER AND SPECIALISTS

### 1. NAME AND CONTACT DETAILS OF ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

Name and contact details of the EAP who prepared this report:

Business name of EAP:	Guy Nicolson Consulting CC		
Physical address:	6 Indwa Place Kloof		
Postal address:	6 Indwa Place Kloof		
Postal code:	3610	Cell:	082 772 9941
Telephone:	031 7642515	Fax:	086 601 6084
E-mail:	guy@saol.com		

### 2. NAMES AND EXPERTISE OF REPRESENTATIVES OF THE EAP

Name of representative of the EAP	Education qualifications	Professional affiliations	Experience at environmental assessments (yrs)
Guy Nicolson	BSc. ( Hons )MSc.	IAIAsa SACNASP	25

### 3. NAMES AND EXPERTISE OF SPECIALISTS

Name of specialist	Education qualifications	Field of expertise	Section/ s contributed to in this basic assessment report	Title of specialist report/ s as attached in Appendix D
Gerald Davie	MSc. Engineering Geology	Geotechnical	Section C 3. and appendix D	Geotechnical Investigation Report
Peter Le Roux	MSc.	Vegetation	Section C 4 and Appendix D	Biodiversity Assessment
Hans Grobler	PhD.	Zoology	Section C 3 and Appendix D	Biodiversity Assessment
Roy Mottram	Ph.D	Agriculture	Section C 3 and Appendix D	Agricultural Potential Report

Basic Assessment Report : Bakers Transport

Rob Keppler	BSc. Eng.	Civil Engineering	Section B.2 and Appendix D	Engineering Report
R. Palkowski	MSc ( Transport Engineering )	Traffic Impacts	Section B.2 and Appendix D	Traffic Impact Assessment Report
R.B. Jolly	Attorney's Admission (Cape)	Town planning	Section B.2 and Appendix D	Town Planning Motivation Report

## SECTION B: SITE DESCRIPTION

### 1. PROJECT TITLE

The project title, as registered with the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs on their application for authorization form is :

“Bakers Transport Ltd new logistics and warehousing facility at Cato Ridge on Sub 168 ( of 27) of the Farm Uitkomst and Doornrug No. 852”.

### 2. SITE DESCRIPTION

#### 2.1. SITE LOCATION

The site location plan contained within Appendix A illustrates the location of the site within its surrounding environment.

As can be seen from these plans the 10.866 ha Sub 168 ( of 27 ) development applicant site, is two kilometres east of Cato Ridge, immediately north of the N3 highway and one kilometre south of the R103 provincial main road and 400m east of the District Road D12. The site is located relatively close to the Engen One Stop refuelling station which also lies adjacent to the N3 highway to the west of the site.

The geographical coordinates of the approximate centre of the site are as tabulated below :

Latitude /Longitude	Degrees	Minutes	Seconds
South	29	44	12.42
East	30	36	44.14

With the exception of the abovementioned structures, the surrounding areas of the site are very largely open and undeveloped.

The table below lists various pertinent features in the surrounding landscape, and whether they occur within the environs of the site

Land use character			Description
Natural area	YES	■	There is open land in the area of the site, but no formally conserved areas nearby
Low density residential	■	NO	There are scattered homesteads on and near the site
Medium density residential	■	NO	
High density residential	■	NO	
Informal residential	YES	■	There are a small number of informal residences living on the adjacent property owned by Engen that is situated on the western boundary of the site.
Retail commercial & warehousing	■	NO	
Light industrial	■	NO	
Medium industrial	■	NO	
Heavy industrial	■	NO	

Power station		NO	
Office/consulting room		NO	
Military or police base/station/compound		NO	
Spoil heap or slimes dam		NO	
Quarry, sand or borrow pit		NO	
Dam or reservoir		NO	
Hospital/medical centre		NO	
School/ creche		NO	
Tertiary education facility		NO	
Church		NO	
Old age home		NO	
Sewage treatment plant		NO	
Train station or shunting yard		NO	
Railway line		NO	
Major road (4 lanes or more)	YES	■	The N3 highway is located close to the southern boundary of the site.
Airport		NO	
Harbour		NO	
Sport facilities		NO	
Golf course		NO	
Polo fields		NO	
Filling station	YES	■	The Engen N3 direct access service station is located about 500m to the west of the site
Landfill or waste treatment site		NO	
Plantation		NO	
Agriculture	YES	■	There is agricultural grazing land and some small scale agriculture within 500m of the site.
River, stream or wetland		■	
Nature conservation area		NO	
Mountain, hill or ridge		NO	
Museum		NO	
Historical building		NO	
Protected Area		NO	
Graveyard		NO	
Archaeological site		NO	
Other land uses (describe)		NO	

## 2.2. SITE ACCESS AND ROAD UPGRADING REQUIREMENTS

Access to the site is via a Right of Way Servitude running parallel to the N3 highway which links to the provincial District Road D12 located to the west of the applicant site. This is illustrated on the site location plan, and also in the Traffic Impact Assessment Report.

District Road 12 is currently a gravel road is fed from the R103 main road, which is tar surfaced road located northwest of the proposed development.

The Traffic Impact Assessment Report describes the affected road network in more detail and the potential impacts on traffic of the proposed development.

After its detailed analysis of the site with the context of its own trip generation and the overall predicted increases in traffic in the rapidly developing Cato Ridge area, the Traffic Impact Assessment Report concludes that, based on its findings :

1. The development will generate 438 vehicle trips during the AM/PM peak hour split 282/156 by peak direction.
2. Whilst the R103 / D12 intersection operates at a high level of service, the additional volume will have a reasonably significant impact, necessitating mitigating measures requiring signalization and right turn refuge provision on the R103.
3. The Cato Ridge Local Area Plan ( LAP ) acknowledges that the R103 will need to be upgraded to four lanes with associated intersection upgrades. This is anticipated to occur once the total industrial area increased just over 900 000 m<sup>2</sup> gross lettable area ( GLA ), although signalization is anticipated earlier. Therefore, all necessary road works should in due course be undertaken as part of the Plan in accordance with the anticipated timetable. However, to expedite the development, it may be necessary to provide bridging finance in lieu of development levies / contribution.
4. The final access position to the site will be determined in consultation with the KZN Department of Transport, once building plans are submitted, but will be generally located as shown on the site development plan.
5. As noted in the Engineering Service Report, the applicant intends to tar the D12 district road.

### **2.3. PRESENT ZONING**

The present zoning of the site within the relevant town planning scheme of eThekweni Municipality is Agriculture 3. There will therefore be a required rezoning process undertaken in terms of the KwaZulu-Natal Planning and Development Act before the site can be developed for its intended purpose.

This rezoning process is referred to in the Town Planning Report prepared by Mr Rod Jolly that is contained within Appendix D.

### **2.4. ILLUSTRATIONS OF THE SITE**

The following illustrations of the site which are contained within Appendix A after the locality plan and are referred to and briefly discussed below.

#### **Existing Site Plan with Contours**

This figure shows the existing contours of the site and also the location of the house outbuildings that presently occur at the extreme northern apex of the triangular site. One can see from the contours that there is a relatively even and gentle fall across the site towards the N3 highway, with no distinct drainage lines or channels evident on the site.



### **Survey Plan**

The Survey plan of the site also contained within appendix A illustrates the relevant cadastral information on the site.

As can be seen from this survey plan, the site is a triangular one, with the longest side base lying adjacent to the N3 highway. There is a right of way servitude running along the base of the plan, next to and parallel with the N3 highway to permit continued access to the properties to the east of the site. This right of way servitude will remain open and undeveloped, and is not taken into account in the development area of the site

### **Durban Metropolitan Open Space System ( D'MOSS )**

The D'MOSS Map illustrates that a very small portion of the south east corner of the site is located within the D'MOSS system.

The biodiversity specialists were asked to pay particular attention to this area, and the results of their investigation are recorded in their Biodiversity Report contained within Appendix D, and which is summarised further below within section 2.8 below.

### **South African National Biodiversity Institute ( SANBI ) 2011**

The SANBI 2011 GIS data base as been investigated and a map figure derived from it produced.

As can be seen from this map, the site entire site and the wider environs it is located within are categorized by SANBI as vulnerable in terms of its present ecological conservation status. This category of vegetation does not, in its own right, trigger any requirements for an environmental authorization if it is transformed through some form of activity.

### **Photographs of the site contained within Appendix B**

The aerial photograph of the site illustrates its present general appearance and land cover and uses, as are described within the following section 2.3. The four photographs taken on the site towards the four cardinal points of the compass also illustrate its general appearance, and also some aspects of the neighbouring environment.

## **2.5. EXISTING LAND USES AND STRUCTURES**

There is an existing house and outbuildings situated at the northern apex of the triangular site. Access to this house is gained by a dirt road within a tree-lined avenue the lies close to the western edge of the site.

The rest of the site is presently undeveloped, and contains a mixture of secondary type vegetation, as described within the Biodiversity Report.

There is a minor ( probably 11kV ) electricity transmission line on gum poles crossing over the site.

## **2.6. LANDFORM AND DRAINAGE**

The site can be described as being situated on a gentle hillslope with a south to south easterly aspect. The average slope over the site is approximately 1 : 20.

Large areas of relatively level land, such as this site, are quite scarce within the Durban metropolitan area.

As can be seen with from the site plan with contours on it that is also contained within Appendix A, the highest point of the triangular site is at its northern apex, where the house is situated. From there, the site slopes relatively gently and evenly in a south easterly direction, so that the lowest part of the site is in its south eastern corner, next to the N3 highway.

Due to the even nature and fall of the site, there are no distinct drainage lines on it at, or depressions within which water might accumulate.

## 2.7. GEOTECHNICAL QUALITIES

### General overview

The geotechnical qualities of the site and their implications for developing it are provided within the Geotechnical Investigation Report contained within Appendix D, the main features of which are summarised below.

The site is underlain by colluviums and residual soils which overlie weathered sandstone of the Natal Group.

No groundwater or seepage was encountered in any of the test pits excavated on the site, due to its relatively elevated position and the free draining nature of the soils on it. These soils are also suitable for effluent disposal via French drains.

The site is considered stable and suitable for development, provided that the recommendations that are contained in the Geotechnical Report are adhered to.

### Potential geotechnical qualities with environmental implications

The table checklist below identifies relevant potential geotechnical qualities that have environmental implications associated with them.

Shallow water table (less than 1.5m deep)	<input checked="" type="checkbox"/>	NO
Dolomite, sinkhole or doline areas	<input checked="" type="checkbox"/>	NO
Seasonally wet soils (often close to water bodies)	<input checked="" type="checkbox"/>	NO
Unstable rocky slopes or steep slopes with loose soil	<input checked="" type="checkbox"/>	NO
Dispersive soils (soils that dissolve in water)	<input checked="" type="checkbox"/>	NO
Soils with high clay content (clay fraction more than 40%)	<input checked="" type="checkbox"/>	NO
Any other unstable soil or geological feature	<input checked="" type="checkbox"/>	NO
An area sensitive to erosion	<input checked="" type="checkbox"/>	NO

As can be seen from this checklist, the site has not significant issues from the perspective of what is covered within this checklist.

### **Geotechnical qualities in regard to underground fuel storage tanks**

We are advised by the applicant that there may be underground fuel storage tanks, and therefore the geotechnical specialist was specifically asked to investigate and report on the suitability of the site in this regard, and their comments from their report are summarised below.

They consider that, based on their described geotechnical qualities of the site, it is considered that there are no fatal flaws that would preclude the use installation of underground fuel storage tanks, provided that the requirements for these sorts of installations are met. However, it would be preferable to locate the tanks in the areas underlain by clay, which would retard the dispersal of any contaminant plume.

The geotechnical report recommends that some in situ permeability tests be carried out at a later stage to quantify the permeability and transmissivity of the underlying soils.

The appropriate measures to apply in regard to the installation of underground fuel storage tanks, as prescribed by the Department of Water Affairs and Sanitation, are provided within the project description Section C of this Basic Assessment Report.

## **2.8. BIODIVERSITY QUALITIES**

The specialist Biodiversity Report contained within Appendix D reports on the investigation of the site, with the intention of determining whether there are any significant biodiversity constraints to developing it.

Within this report there is first a general introduction and overview of the site, followed by separate floral and fauna assessments.

In the common concluding section of their report the biodiversity specialists state that:

- a. Extensive soil disturbance was evident, resulting in high alien plant densities, secondary grassland and the absence of species of conservation concern.
- b. None of the vegetation types were representative of the original indigenous vegetation that would have occurred on the site.
- c. The eastern D'MOSS triangle was also disturbed, with secondary grassland.
- d. Development of this property would have insignificant impacts on the adjacent D'MOSS area, or on connectivity with adjacent land, because this also comprises secondary vegetation.
- e. No faunal species of conservation significance were encountered and it unlikely that any occur.
- f. No vegetation or faunal related development constraints were noted on the site.

## **2.9. AGRICULTURAL POTENTIAL**

The Agricultural Potential Report contained within Appendix D reviews the site within its present planning and development context and then assesses its agricultural

potential. This agricultural potential is deemed to be very limited. There has been no agricultural activity on it for the last three decades.

Agricultural potential could be enhanced with through the irrigation of high value cash crops, but the Umgeni River catchment within which it is located is water stressed, and it unlikely that water from this source would ever be sufficient.

The report considers that there are more desirable land use alternatives on the site than agriculture, and that the loss of the site from potential agricultural use would not pose any threat to food security.

## **2.10. CULTURAL HERITAGE CONSIDERATIONS**

Cultural Heritage Report has been commissioned from the accredited cultural heritage practitioners within the firm of eThembeni Cultural Heritage. Their report is not presently available.

When it is available, in terms of the required procedures, it will be provided by eThembeni Cultural Heritage to Amafa aKwaZulu-Natal who will either provide their clearance for the site or, if required, prescribe the sorts of activities that will be required to be undertaken at the applicant's expense by accredited cultural heritage practitioners before construction may occur on the site, or the relevant parts of it.

## SECTION C : PROJECT AND ACTIVITY DESCRIPTION

### 3. PROJECT DESCRIPTION

#### 3.1. OVERVIEW OF THE PROPOSED DEVELOPMENT

The nature of the proposed development has been provided in notes from the project's architects, Conco Bryan Architects, and is illustrated in the figures that are contained within the Appendix C, which is comprised of the following drawings extracted from the Engineering Report

- Site Development Master Plan.
- Engineering Services Plan

The Engineering Report within Appendix D also provides additional plans of the proposed development in its appendices, and these are comprised of :

- Water Drawing
- Earthworks and Longitudinal Section Drawings

The development proposal is to create a head office for the Bakers Transport Group, together with the attendant warehousing, servicing and ancillary facilities.

No manufacturing will take place on the site. No hazardous goods are intended to be handled in the logistics and warehousing activities that are intended to occur on the site.

The warehouse component comprised of two warehouses which are intended to store "white goods" ( domestic appliances ) as related to the logistics industry. The main components of the development are comprised as follows:

1. A large office component with parking and staff facilities, including driver and general staff training.
2. A warehouse facility for "white goods" ( domestic appliances ), as related to the logistics industry.
3. A maintenance workshop component for their own fleet of trucks, with truck inspection and truck washing facilities.
4. A limited fleet refuelling facility with underground fuel storage tank, with a total capacity of less than 80 cubic metres.
5. The storage of maintenance related materials, such as tyres and spares.
6. A small general storage facility for uniforms, general maintenance.
7. Overnight parking facility for drivers and trucks.

8. Tracking facilities ( real time on road tracking ).

### **3.2.THE ENGINEERING INFRASTRUCTURE, SERVICES AND MANAGEMENT**

As described in the Engineering Infrastructure and Services Report contained within Appendix D, the development will occupy 10.62 ha of the 10.866 ha site.

In regard to engineering services, these will be designed to accommodate a development of this nature and, wherever possible to connect to the existing municipal services and infrastructure. The main features of this infrastructure are summarised from this engineering report, and illustrated in the figures that are also included within its annexures.

#### **3.2.1. Roads**

In order to provide access to the development it is intended to construct and access driveway off the existing district road D12, which links the site via a short right of way servitude.

The recommended road construction and upgrades as contained in the Traffic Impact Assessment Report, and as commented on with relevant conditions prescribed by the relevant roads authority, the KwaZulu-Natal Department of Transport will be applied to the road constructions associated with the development.

#### **3.2.2. Water**

A bulk water supply will be will be connected off the existing 150mm municipal bulk water main which is located to the to the west of the development ( Adjacent to the Engen One Stop – refer also to the engineering report's drawing No. 17612-DC04 in its annexure D )

#### **3.2.3. Waste Water Disposal**

There is no sewer reticulation in the area, and therefore the management of sewer waste water will be by manse of the use of a conservancy tank, which will act as a temporary holder of the sewage, and as described in more detail in the engineering report.

In terms of the requirement of eThekweni Municipality, the conservancy tank will be sized in order to accommodate to cater for a four day storage. The engineering report identifies the sources of waste water that will be generated on the site, and which will have to be catered for in the required storage volume of the conservancy tank. The sources of waste water are as follows :

- Staff and drivers
- Cleaning

- Refuse area cleaning and cleaning staff.

The total volume of waste water generated from these various sources is calculated as 211.6 cubic metres per day.

It is to be noted that there will be the installation and operation of a water recycling plant associated with the truck washbay area, so that the actual amount of water generated from this facility will be considerably reduced.

It is proposed that there will be four conservancy tanks constructed in the vicinity of :

1. Bakers Office / washbay.
2. Drivers' ablutions
3. Warehouse 1
4. Warehouse 2

The Engineering Services Plan contained within Appendix C illustrates the location of these conservancy tanks.

The waste water will required to be evacuated from the conservancy tanks by suction into tankers, which will then be required to be transported via these tankers to be disposed of at an approved Waste Water Treatment Plant, as approved by eThekweni Municipality.

**The following conditions will be complied with in the construction and operation of the conservancy tanks :**

1. The conservancy tanks will be constructed in accordance with the professional engineers design specifications, and it will be ensured that they are leak proof.
2. The sewage enters the conservancy tank from an inlet chamber.
3. An interseptic trap allows for the monitoring of the liquid level on the mian tank.
4. The tank is connected to an outlet valve chamber via a uPVC outflow pipe. The valve chamber allows for the suction of the sewage into a tanker to be transported to the approved waste water treatment plant for proper treatment and disposal.
5. The tank is sized to cater for four days of storage.
6. The tank will be located outside of any 1 : 100 year floodlines, and ingress of stormwater into the tanks will be prevented in their design and location.

**3.2.4. Storm water management**

The hardened development area of the site is calculated in the engineering report as 10.624 hectares, which is presently very largely covered by vegetation. Therefore,

there will be an increase in the total amount of run off, increased flood peak intensities and a likely loss in water run off quality associated with the proposed development, and also increased soil erosion potential. It is requirement of storm water management plan to mitigate against these potential impacts, through its appropriate design.

The objective of the storm water management plan within the included engineering report is to manage the storm water resources of the collective water sheds to :

- Prevent flood damage.
- Preserve the natural and beneficial functions of the natural drainage system.
- Preserve and enhance storm water quality.

The following measures will be applied as appropriate to meet these objectives : Local on-site detention, grass lined swales, stormwater infiltration systems, landscaping, which are intended to attenuate peak flood discharges to the required peak discharge rate, and to improve storm water quality.

Within the section of the engineering report dealing with storm water management the run off catchments and their run off rates are identified and calculated, and stormwater attenuation structures within the overall storm water management plan are provided, and are as summarized below.

To attenuate the flows in the identified zones A and B on the site, the required effective storage for a 30 minute storm duration, for the 1 : 50 year storm return period, is 2180m<sup>3</sup>. Any excess run off volume will be attenuated by the hardstand areas within the development. The hard stand areas are to be shaped into “upside down pyramid shaped catchments” that drain into manholes that are linked via piping leading to the proposed attenuation dam. The catchments can retain in excess of the calculated flood volume of 2180m<sup>3</sup>.

The collected storm water will then be fed through a throttling manhole (appropriately sized outflow pipe/s and flow limited in this manner to pre-development flows ) then into the existing storm water infrastructure. This is comprised of a culvert under the N3 highway that is sufficiently sized to accommodate the receiving flows. Through these attenuation methods, downstream post development flows stormwater flows from the development will be of a similar magnitude of the present, pre-development flows of the site.

The attenuation structure and pipe under the N3 is shown on the appropriate figures in the engineering report.

The following recommendations are also made in regard to stormwater management in the engineering report :

1. It is essential that appropriate erosion control measures need to be taken into consideration at the various storm water discharge points located throughout the site to prevent soil erosion, for example at headwalls and culverts.
2. Steeper water courses may require additional protection from erosion through the use of lined channels, controlled drops, in order to dissipate energy.
3. Road intersections to be designed to prevent localised flooding.



4. The stormwater system to be kept separate from the wastewater ( sewer ) drainage system.

### **3.2.5. Electrical reticulation**

The electrical engineering firm of EG Africa Consulting Engineers have been in contact with the Network Planning Section of Eskom, who will be the electricity suppliers to the development. They have lodged a formal application to the supply of electricity ( Ref. No. 135702375 for 1 MVA ).

A formal quotation is now awaited from Eskom for the new connection.

### **3.2.6. Energy Efficiency Measures**

There being no manufacturing or other energy demanding activities on the site, with large areas being devoted rather to administrative and storage functions, energy demands will be relatively low. However, the following energy conservation measures will be applied in the development :

1. The use of solar geysers for water heating for all ablution purposes.
2. Energy efficient appliances, such a light bulbs.
3. The use of as much natural light as possible in all buildings.

### **3.2.7. Water Conservation Measures**

Besides ablution and washing activities, there are no significant uses of water on the site, as no manufacturing or processing activities that will use water.

Due to the use of conservancy tanks and the use of tankers to transport waste water to a municipal sewage works, there is a strong incentive for the applicant to reduce water demand on the site.

Measures to be applied in this regard will include the installation of a water recycling plant associated with the truck washbay area, low flush and low flow showers in ablution facilities.

### **3.2.8. Solid Waste Management**

#### **Waste types**

The expected solid waste classifications for this development are General and Hazardous Wastes. General Wastes are likely to include paper, cardboard, plastics, cans, glass, small quantities of foodstuffs and vehicular tyres. Hazardous wastes would be used vehicle engine lubricants.

#### **Waste storage**

General Waste is to be stored in mobile refuse bins within a demarcated and drained bin areas.

Recyclable materials will be stored separately according to waste types.

Used vehicle stockpiles within will be stockpiled within a demarcated area, or within a waste skip.

Used vehicle lubricants will be stored in appropriate leak proof tanks within a bunded area. This stored material will be transported off the site by a specialist firm that recycles old and other lubricants, for their reuse.

#### **Waste collection and disposal**

Recyclable waste will be collected by recyclable waste collection service providers.

Collection and disposal of used vehicle tyres and engine lubricants will be done by specialist firms appointed for this purpose.

The remaining waste, which will be non-hazardous in nature will be collected and disposed of to an approved municipal solid waste disposal site. The amount of waste disposed of in this manner is anticipated to be less than 5 cubic metres per day.

#### **Waste management during construction**

Measures to be applied for the storage and disposal of waste during the construction process are prescribed within the draft Environmental Management Programme that is contained within Appendix F of this Basic Assessment Report. It is provisionally estimated that there would be average of about 3 cubic metres per day of waste created during the construction process.

#### **3.2.9. Air Emissions**

There are no manufacturing or industrial heating type industries that will occur on the development. Emissions will therefore be limited to that from the vehicles to and from and on the site. These are of a normal nature, and no special measures, besides ensuring that all vehicles are in proper condition, is required in this regard.

#### **3.2.10. Noise**

Besides the movement of vehicle on the site, there are no noise significant generating activities identified as occurring on it. It is also to noted that the site is adjacent to the very busy N3 highway.

There are no significant noise generating activities that would require noise mitigation measures that are identified as being associated with the proposed development.

#### **3.2.11. Underground fuel storage tank**

As reported on within section 3.8 of the Engineering Report, there will be the installation of underground fuel storage tanks to serve the trucks on the site. The total capacity of these tanks will be less than 80 cubic metres. The location of these tanks is indicated on the Engineering Services Plan that is included within Appendix C.

#### **Additional information requirements for underground fuel storage tanks**

It is noted in the Geotechnical Report, who were specifically requested to comment in this regard that there are no fatal flaws identified at this stage that would preclude the installation of storage tanks on the site, provided that the requirements for these types of installations are met. It is recommended in the Geotechnical Report

that some in-situ permeability tests be carried out at a later stage to quantify the permeability and transmissivity of the underlying soils.

The following information will be provided for its assessment by the Department of Water Affairs and Sanitation, and is in the process of being compiled :

1. The proximity of all surface water bodies must be established within a 1 km radius of the site.
2. The soil types, depths and permeability must be established for the fuel tank location on the site.
3. The geohydrology of the site must be assessed by visual observation and by accessing geological maps and aerial photographs of the area.
4. A borehole census must be carried out within a 1 km radius of the site.
5. A geophysical survey must be carried out if there are faults present or any other anomalies which could act as conduits to groundwater resources.
6. A borehole or boreholes must be drilled to establish the yield of an aquifer beneath the site, only if the geophysical survey has shown that an aquifer is likely to be found.
7. Floodlines relating to any rivers in the vicinity of the site must be established.

**The measures to be applied if there the installation of an underground fuel storage tank**

The following measures will be applied to the installation and operation of the underground fuel storage tanks on the site.

1. The following relevant SANS/SABS codes of practice and related measures will be complied with in the installation of any underground fuel storage tank on the site :
  - SANS 10400 TT 53 ( Sections 1 – 6 )
  - SANS 10131
  - SANS 10108
  - SANS 11535
  - SANS 10089 Parts 2 and 3 which requires :
    - The installation of a leak detection system, including observation and monitoring wells situated around the tank to facilitate early warning that a leak has arisen.
    - The provision of a plastic sheet below the tank that slopes towards an observation well.
    - Installation of leak detectors on the pressure systems.
2. The installation must comply with local authority bylaws.
3. Underground storage tank must be fitted with an overfill protection device.
4. The tank must be designed so as to reduce the risk of soil and groundwater contamination.

5. The underground tank must be dipped daily and reconciled against volume to check for losses due to leakage.
6. The condition of the tanks, associate piping and the monitoring wells must be inspected on a regular basis.
7. The tanks and product lines must be pressure tested prior to commissioning.

### 3.2.12. Earthworks

Although the site is a relatively gently sloping one, due to the nature of the development and the need to create large level platform areas, there will be significant earthworks required.

Annexure E of the of engineering services report provides the earthworks and longitudinal section drawings which illustrate the nature of the earthworks intended. These earthworks will be confined within the site, and will be properly engineered and, where required, retained in accordance with the engineer's specifications.

The measures to be applied to prevent soil erosion and dust generation during the earthworks phase of the construction of the development are contained within the draft Environmental Management Plan that is include as Appendix F to this Basic Assessment Report.

## 4. LISTED ACTIVITY DESCRIPTION

Regulation	Listed activity number	Description of the activity
Regulation 983 of 4 December 2014	27	There will be the clearing of more than 1 hectare but less than 20 hectares of indigenous vegetation on the applicant site to permit the construction of the activity.  It is to be noted from the Biodiversity Report contained within Appendix D that there are no ecosystems or species of conservation significance on the site.
Regulation 983 of 4 December 2014	28	There will be the construction of this light industrial type development on land which, although not used for agriculture for several decades ( see Agricultural Potential Report in Appendix D) in any active way, such a for crops, might have been used for some grazing of cattle. For this reason therefore the clearing of more than 1 hectare of land outside of an urban area is also listed in his application.

## **5. FEASIBLE AND REASONABLE ALTERNATIVES**

### **5.1. IN REGARD TO THE PROPERTY AND ITS LOCATION**

The level nature of the site is suitable for the large platforms and the movement of truck on it that will occur in the development.

The lack of any environmental constraints, such as wetland or vegetation of value on the site also lends itself to this development.

The Agricultural potential report demonstrates that the site is of low agricultural potential, and its removal from agriculture would not affect food security. The site has not been actively farmed for several decades.

There are also not sensitive human activities, such as schools, crèches or clinics in the area of the site, which is next to the N3 national highway.

The site has good access to the provincial main road and from there onto the N3 highway. It is therefore very well located for its intended purpose.

For the above reasons, the proposed development's location on this site is a good alternative land use.

### **5.2. IN REGARD TO THE TYPE OF ACTIVITY TO BE UNDERTAKEN**

The property has been purchased by the applicant for this purpose. They are a large and experienced company in this field, and have considered carefully the location of the site as to its suitability for their purposes.

As discussed in the Town Planning and Agricultural Potential Reports contained within Appendix D, the site is suitably located within the N3 development corridor, and is therefore very appropriate to this particular location for what is intended on it, which is for warehousing and logistics.

It is also assessed that the site is not suitable for other possible alternative uses, such as for housing, institutional use, or other forms of commercial or heavy industrial uses.

### **5.3. IN REGARD TO THE LAYOUT OF THE FACILITY**

The layout of the facility, as illustrated in the Layout Plan within Appendix C has been prepared by the project's architects and professional engineers in collaboration with the applicant.

Infrastructure and buildings have been located in an appropriate manner, and such structures which depend on drainage and topography, such as the stormwater detention structure, are located where most functionally appropriate.

It is considered therefore the proposed layout is a desirable one for the site.

#### **5.4. IN REGARD TO THE TECHNOLOGY USED IN THE FACILITY**

There is no manufacturing or processing of material on the site, and therefore the very little potential for the consideration of alternative technology.

The manner of waste water disposal by conservancy tanks is identified as an acceptable and appropriate technology in the light of the lack of any municipal sewage reticulation in the area.

There will be the installation of energy saving devices, as described above within section

#### **5.5. IN REGARD TO THE OPERATIONAL ASPECTS OF THE FACILITY**

There are no significant alternatives to what is proposed in regard to the operational alternatives to what would occur in the operation of the proposed facility.

#### **5.6. IN REGARD TO THE OPTION OF NOT IMPLEMENTING THE ACTIVITY**

The property has been purchased by the applicant for this express purpose. If this was not to occur, there would be considerable financial hardship and also operational inconvenience for the applicant.

However, besides this, there are very considerable socio-economic benefits to the local area, the local authority and the society at large that would be lost if the development were not to occur.

The potential benefits are provided below within the activity motivation section which follows below within this Basic Assessment Report. The loss of these benefits would be a significant negative impact, if the development were not to occur.

It is also to be noted, as also assessed within the final section of this report, that there are no significant negative impacts associated with implementing the development. Therefore, if the development were not to occur, there are no significant negative impacts that would thereby be avoided.

#### **5.7. OVERALL CONSIDERATION OF ALTERNATIVES**

Based on the above consideration of the various potential alternatives, the overall assessment is that there are no reasonable and feasible alternatives to the proposed development that is the subject of this application.

## 6. ACTIVITY MOTIVATION

### 6.1. SOCIO-ECONOMIC VALUE OF THE ACTIVITY

The socio-economic estimates of the value of the development are provided in answers to the set of questions that is provided in the table below :

Anticipated CAPEX value of the project on completion	<b>150 000 000</b>
What is the expected annual turnover to be generated by or as a result of the project?	10 000 000
New skilled employment opportunities created in the construction phase of the project	±50
New skilled employment opportunities created in the operational phase of the project	±20
New un-skilled employment opportunities created in the construction phase of the project	±25
New un-skilled employment opportunities created in the operational phase of the project	±15
What is the expected value of the employment opportunities during the operational and construction phase?	±25 – Full Time

### 6.2. THE NEED AND DESIRABILITY OF THE DEVELOPMENT

The table below summarizes the socio-economic benefits of this development, in terms of capital expenditure and the creation of employment, including members of previously disadvantaged communities.

Anticipated CAPEX value of the project on completion	<b>150 000 000</b>
What is the expected annual turnover to be generated by or as a result of the project?	10 000 000
New skilled employment opportunities created in the construction phase of the project	±50
New skilled employment opportunities created in the operational phase of the project	±20
New un-skilled employment opportunities created in the construction phase of the project	±25
New un-skilled employment opportunities created in the operational phase of the project	±15
What is the expected value of the employment opportunities during the operational and construction phase?	±25 – Full Time

In terms of the need and desirability for the development, its appropriateness to this location is motivated for strongly in the Town Planning and Agricultural Potential Reports contained within Appendix D.

The proposed development will lead to the productive and valuable use of presently fallow land of low agricultural potential, and which has not been used for decades.

In terms of the benefits to the community, the rezoning of the site will significantly increase the rates paid to the local municipality.

The construction of the development will create a demand for local good and services, and also employment opportunities.

For the above reasons, and as supported in more detail in the Town Planning and Agricultural Potential Reports, this proposed development is therefore assessed as being needed and desirable.

## 7. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	Administering authority:	Date:
The Constitution of the Republic of South Africa (Act 108 of 1996)	Office of the President	1996
Integrated Environmental Management (IEM) Guidelines of the National Department of Environmental Affairs and Tourism, 2002	Department of Environmental Affairs and Tourism	2002
National Environmental Management Act , 1998 (Act 107 of 1998)	Department of Environmental Affairs (DEA)	1998
National Environmental Management Act : Amendment Act ( Act 50 of 2004 )	Department of Environmental Affairs	2004
National Environmental Management : Waste Act ( Act 59 of 2008 )	Department of Environmental Affairs	2008
Environmental Conservation Act ( Act 73 of 1989 )	Department of Environmental Affairs (DEA)	1989
National Hazardous Substances Act ( Act 15 of 1973 )	Department of Health	1973
National Health Act ( Act 63 of 1977 )	Department of Health	1977



## **SECTION D : PUBLIC PARTICIPATION**

### **1. ADVERTISEMENT**

This will be included in Appendix E of the final Basic Assessment Report

### **2. COMMENTS AND RESPONSE REPORT**

After the completion of the public participation process, which will include the circulation of this draft Basic Assessment Report, all comments received will be included in Appendix E, together with a Comments and Response Report.

The following are the relevant authorities being provided with this draft Basic Assessment Report :

- Department of Water Affairs and Sanitation.
- eThekweni Municipality
- Ezemvelo KZN Wildlife
- KwaZulu-Natal Department of Transport
- South African National Roads Agency Limited.

### **3. PARTICIPATION BY DISTRICT, LOCAL AND TRADITIONAL AUTHORITIES**

The District and Local authority is eThekweni Municipality, and they are being provided with this report for their comments.

No traditional authorities are concerned with this property.

### **4. CONSULTATION WITH OTHER STAKEHOLDERS**

The following stakeholders and potential interested and affected parties are being contacted in regard to this application, with the draft Basic Assessment Report also provided to them on request :

- All adjacent property owners sharing a common boundary with the site.
- The eThekweni Municipality's Ward Councillor.

Their responses and any comments received will be included in Appendix E of the final Basic Assessment Report and will also be included within the Comments and Response Report

## **SECTION E: IMPACT ASSESSMENT**

### **1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES**

No issues have been raised at this stage in the EIA process.

The Comments and Response Report in the final Basic Assessment Report will include any comments received, and will also respond to them as may be appropriate.

### **2. 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**

#### **2.1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN PHASE**

There are no significant impact identified occurring in the planning and design phase.

There is the possibility that survey lines will be cut through the vegetation by the project's land surveyor during the planning and design phase. However, as confirmed in the Biodiversity report, there is no vegetation of significant value on the site.

There are therefore no direct, indirect, or cumulative impacts associated with this phase, and none also associated with the no development option either.

Therefore, no specific mitigation measures are required for this phase.

#### **2.2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION PHASE**

##### ***Direct impacts:***

Dust from bare soil during construction

Potential for soil erosion

Removal of the existing vegetation cover ( of low biodiversity value )

Creation of employment and the demand for goods and services.

##### ***Indirect impacts:***

No significant impacts are identified at this stage.

##### ***Cumulative impacts:***

No significant impacts are identified at this stage.

##### **Mitigation Measures**

The measures to mitigate negative impacts listed above are contained in the draft Environmental Management Programme, and will be implemented during the construction phase of the development.

### 2.3. IMPACTS THAT MAY RESULT FROM THE OPERATIONAL PHASE

***Direct impacts:***

The positive impacts will be :

- There will be the creation of employment and the increased rates to the local municipality.
- There will be increased operation efficiency for the applicant.

The negative environmental impacts will be

- There will be increased traffic on the road to and from the site.

***Indirect impacts:***

No significant impacts are identified at this stage.

***Cumulative impacts:***

No significant impacts are identified at this stage.

**Mitigating measures**

The implementation of the storm water management plan as described in the Engineering Services Report will mitigate against potential negative impacts from increased storm water run off.

The implementation of the recommended road improvement measures contained in the Traffic Impact Report, and also in any conditions from the KZN Department of Transport, will mitigate any negative impacts associated with increased road traffic.

### 2.4. IMPACTS THAT MAY RESULT FROM THE DECOMMISSIONING OR CLOSURE PHASE

It is very unlikely that there would be the decommissioning or closure of the development once it has been established.

However, besides the normal requirements, if the site is not used for a similar purpose where the existing structures would be retained, there are no significant negative impacts, of a direct, indirect or cumulative nature identified as being associated with the decommissioning or closure of the applicant's operations on the site.

An appropriate mitigating measure, if it was ever required, would be for the formulation and implementation of a specific Decommissioning and Closure Environmental Management Programme occur during this phase.

### 2.5. PROPOSED MONITORING AND AUDITING

During the construction phase of the development, an environmental control officer should be appointed to inspect and audit the site on a fortnightly basis and provide monthly compliance audit reports to the Department.

No specific monitoring and auditing phases are recommended for the operational phase of the development.

### 3. ENVIRONMENTAL IMPACT STATEMENT

Based on the preceding assessment above, and as supported also by the relevant specialist reports, the following environmental impact statement can be made in regard to :

#### **The listed activities being applied for :**

The clearance of the more than 1 hectare of vegetation associated with the construction of the proposed development is assessed causing any significant impacts, as has been assessed by the biodiversity specialists. There are no biological communities or species of conservation value on the site. The small area at the eastern corner of the site that is indicated on the eThekweni Municipality's GIS system as being included in D'MOSS is not warranted to be included, based on the more detailed biodiversity study that is reported on in the Biodiversity Report.

#### **Potential Biophysical Impacts Assessed**

In regard to the biophysical environment of air, water, soil, biological communities and ecological processes :

- **Air:** There are no significant impacts on air quality. Any minor potential impacts during the construction process from such sources such as dust can be adequately addressed by the measures contained in the Construction EMPr.
- **Water Use** . The water demands of the development will be supplied by the municipality and no significant impacts are identified in this regard.
- **Waste Water Disposal** : The waste water generated on the site will be stored in conservancy tanks and disposed of by tanker to the municipal waste water treatment works.
- **Water Quality** : There is the potential for the development to have minor negative impacts on water quality from pollution from construction materials or waste, or from soil erosion, and also from run off in the completed development. However, these can be adequately mitigated by the measures contained in the EMPr, and would be of minor, localised and reversible nature.

During the operational phase the recommended created storm water management system of the site should prevent any significant impacts on downstream water flow or water quality. The development by its nature is not a significant source of potentially polluting substances.

- **Soil:** There is the potential for soil erosion, which can be controlled through the implementation of the measures contained within the EMPr. This impact is of a minor, localised and reversible nature.
- **Biodiversity** : Based on the findings of the biodiversity specialists, there are no significant impacts on biodiversity identified with the area of proposed development.

## Potential Socio-economic Impacts Assessed

- **Socio-economic benefits** : There would be significant positive socio-economic benefits associated with the development, in the form of the employment created in the construction and operational phases, in the provision of goods and services, in revenue to the municipality in the form of rates and the charging for services, and to the national revenues in the form of taxes.
- **Potential noise impacts**  
There will be an increase in noise from vehicles on the site, in particular large trucks. However, due to the particular circumstances and location of the site, adjacent to the N3 highway, noise is not assessed as being of high significance.
- **Potential traffic impacts**  
There will be increased traffic generated from the development, as calculated in the traffic impact report. The mitigating measures contained in the Traffic Impact Report would adequately address these potential negative impacts.
- **Potential crime, insecurity and encouraging informal settlements**  
It is assessed that there will be no significant increases in crime, insecurity or informal settlements associated with the proposed development.
- **Benefits and Cost to society** : There are very significant positive socio-economic benefits to the municipality, and society in general, as identified in the socio-economic and town planning reports.

There are no significant costs to society identified in the proposed development. The provision of services, and any required upgrades of roads off the site to accommodate the development would be at the applicant's cost.

## Concluding overall assessment

No significant negative environmental impacts are identified as being associated with the development that are of such significance and magnitude as to prevent the development from occurring in the manner proposed.

There are significant positive socio-economic impacts associated with the proposed development.

The mitigation measures contained within this draft Basic Assessment Report, the various relevant specialist reports and the draft Environmental Management Programme are required to be applied during the implementation of this development.

## **SECTION F: RECOMMENDATION OF EAP**

It is considered that the information contained in this report and its appendices is considered sufficient in the view of this environmental assessment practitioner (EAP) to permit the KZN Department of Economic Development, Tourism and Environmental Affairs to make a decision in regard to granting and environmental authorization or not, and to also provide the necessary conditions of authorization thereto.

It is also assessed by this that the abovementioned Department can grant a positive environmental authorization for this application.

It is also recommended that, in any authorization granted for this development that the following mitigation measures be applied to it :

- The measures contained in the draft Environmental Management Programme contained within Appendix F.
- The recommendations contained in the Geotechnical Report included within Appendix D.
- The recommendations of the Engineering Services Report included within Appendix D.
- The recommendations contained within the Traffic Impact Assessment Report included within Appendix D.
- If there is the construction and operation of an underground diesel fuel storage tank on the site, then the implementation of the further information measures, and the anti-pollution measures, as contained above within Section 3.2.11 of this Basic Assessment Report.

## SECTION G: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plans

Appendix B: Photographs

Appendix C: Facility illustrations

Appendix D: Specialist reports

Appendix E: Public Participation Documentation

Appendix F: Draft Environmental Management Programme (EMPr)