

Basic Assessment Report



agriculture & environmental affairs

Department:
Agriculture
& Environmental Affairs
PROVINCE OF KWAZULU-NATAL

(For official use only)

EIA File Reference Number:
NEAS Reference Number:
Waste Management Licence Number:
(if applicable)
Date Received:

DC23/0028/2013
KZN/EIA/

BASIC ASSESSMENT REPORT

Submitted in terms of the Environmental Impact Assessment Regulations, 2010 promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998)

This template may be used for the following applications:

- **Environmental Authorization** subject to basic assessment for an activity that is listed in Listing Notices 1 or 3, 2010 (Government Notices No. R 544 or No. R 546 dated 18 June 2010); or
- **Waste Management Licence** for an activity that is listed in terms of section 20(b) of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) for which a basic assessment process as stipulated in the EIA Regulations must be conducted as part of the application (refer to the schedule of waste management activities in Category A of Government Notice No. 718 dated 03 July 2009).

Kindly note that:

1. This **basic assessment report** meets the requirements of the EIA Regulations, 2010 and is meant to streamline applications. This report is the format prescribed by the KZN Department of Agriculture & Environmental Affairs. Please make sure that this is the latest version.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with text.
3. Where required, place a cross in the box you select.
4. An incomplete report will be returned to the applicant for revision.
5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it will result in the rejection of the application as provided for in the regulations.
6. No faxed or e-mailed reports will be accepted.
7. The report must be compiled by an independent environmental assessment practitioner ("EAP").
8. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.

GIBELA UMKHUMBI OLWA NOBUBHA

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9. The KZN Department of Agriculture & Environmental Affairs may require that for specified types of activities in defined situations only parts of this report need to be completed.
10. The EAP must submit this basic assessment report for comment to all relevant State departments that administer a law relating to a matter affecting the environment. This provision is in accordance with Section 24 O (2) of the National Environmental Management Act 1998 (Act 107 of 1998) and such comments must be submitted within 40 days of such a request.
11. **Please note that this report must be handed in or posted to the District Office of the KZN Department of Agriculture & Environmental Affairs to which the application has been allocated (please refer to the details provided in the letter of acknowledgement for this application).**

DEPARTMENTAL REFERENCE NUMBER(S)

File reference number (EIA):	DC23/0028/2013
File reference number (Waste Management Licence):	

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:	Nemai Consulting		
Physical address:	Offices 4 and 5, 23 Jan Hofmeyer Road, Westville, 3630		
Postal address:	P.O. Box 1673, Sunninghill		
Postal code:	2157	Cell:	0832288773
Telephone:	031 266 3884	Fax:	031 266 5287
E-mail:	rivanim@nemai.co.za		

2. NAMES AND EXPERTISE OF REPRESENTATIVES OF THE EAP

Names and details of the expertise of each representative of the EAP involved in the preparation of this report:

Name of representative of the EAP	Education qualifications	Professional affiliations	Experience at environmental assessments (yrs)
Manogrie Chetty	BSc Hons Biological Sciences		4 years' experience as an EAP
Rivani Maharaj	BA Hons Environmental Management		2 years as public participation coordinator
Nicky Naidoo	BSc Eng (Chem)		20 years' experience

3. NAMES AND EXPERTISE OF SPECIALISTS

Names and details of the expertise of each specialist that has contributed to this report:

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
Mr R Phamphe	Pr.Sci.Nat-Ecological Science	Fauna and Flora	Appendix D	Proposed construction of warehousing, sales and truck facilities in

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				Estcourt, kwa-zulu natal
Jean Beater	MA (Heritage Studies)	Heritage	Appendix D	Phase 1 Heritage Impact Assessment for proposed Truck & Warehousing Facility near Estcourt
Mike Hemingway	PrEng	Geotechnical investigation	Appendix D	Proposed new N3 truck stop, Geotechnical investigation
Doug McCulloch	PrSci Nat	Wetland and Riparian Study	Appendix D	Wetland and Riparian study, Estcourt truck stop and warehouse.

SECTION B: ACTIVITY INFORMATION

1. PROJECT TITLE

Describe the project title as provided on the application form for environmental authorization:

Construction of warehousing, sales and truck facilities in Estcourt, Kwa-Zulu Natal

2. PROJECT DESCRIPTION

Provide a detailed description of the project:

Commario Investment cc proposes to construct on Portion 220 of the farm Wagondrift No 798. The proposed development will include the following:

- Communal dining area;
- Café and take-away facilities;
- Administration offices;
- Recreational hall
- Vehicle wash bay
- Overnight accommodation
- Parking for approximately 200 heavy vehicles, and
- Above ground fuel storage facility (less than 80m³);

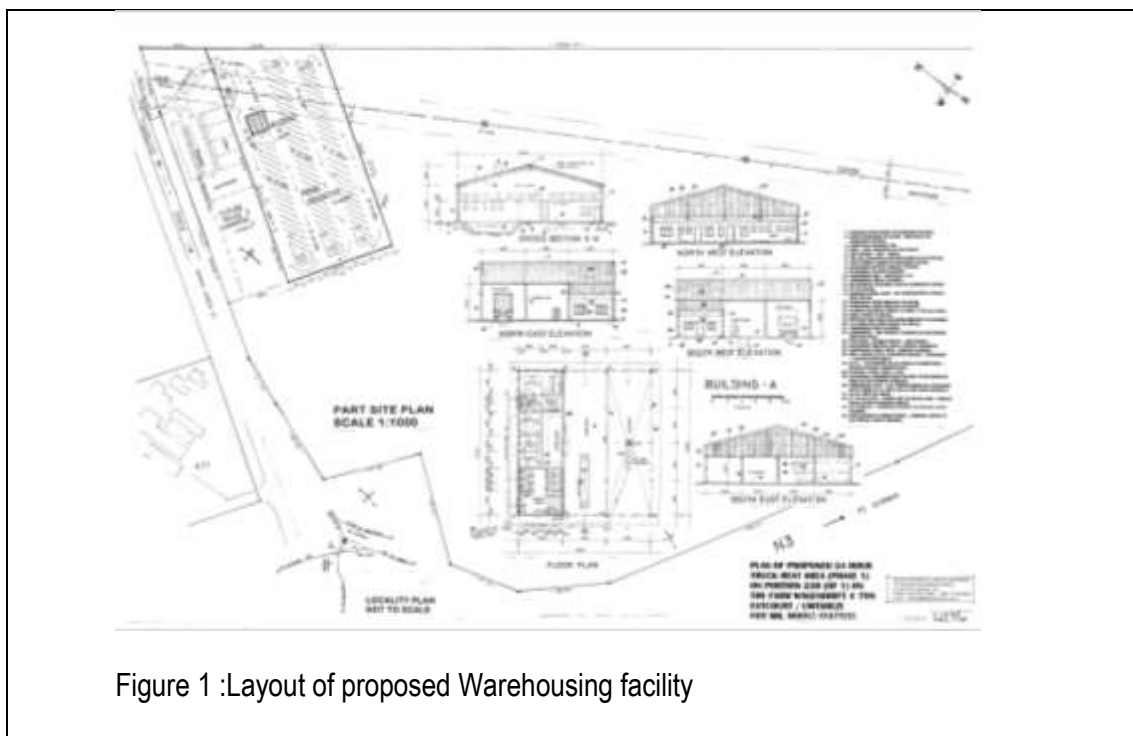


Figure 1 :Layout of proposed Warehousing facility

3. ACTIVITY DESCRIPTION

Describe each listed activity in Listing Notice 1 (GNR 544 and GNR 546, 18 June 2010), Listing Notice 3 (GNR 546, 18 June 2010) or Category A of GN 718, 3 July 2009 (Waste Management Activities) which is being applied for as per the project description:

GNR 544, 18 June 2013	11 (x) (xi)	The applicant proposes to construct warehousing for the purpose of commercial and light industrial activities, offices for businesses, truck facilities (these may include storage, maintenance and sale of these vehicles), parking areas for vehicles, above ground fuel storage facility (less than 80m ³), overnight truck resting areas with sleeping facilities for truck drivers, associated infrastructure for service provision (i.e. water, sewer, stormwater, electricity and waste), and access roads. Please note that this activity is only applicable if Alternative 2 is approved.
	23ii	The applicant proposes to construct within 32m of a watercourse. The structures are more than 50 square metres

4. FEASIBLE AND REASONABLE ALTERNATIVES

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

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- (a) the property on which or location where it is proposed to undertake the activity – no alternative property or location for this proposal has been identified
- (b) the type of activity to be undertaken - Due to the current zoning of the site has been identified as a feasible and reasonable alternative for this site.
- (c) the design or layout of the activity – Two Design layouts have been identified and assessed for the proposed warehousing facility.**
- (d) the technology to be used in the activity - Technology alternatives have not been considered for this activity as the proposal is for the construction of a petrol filling station.
- (e) the operational aspects of the activity - No feasible and reasonable alternatives for the operational aspects of the project have been identified for this project.
- (f) the option of not implementing the activity - The no go option has been considered during the assessment of this project

Describe alternatives that are considered in this report. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Preferred Alternative A1: The preferred alternative for this project will include the following,

- Communal dining area;
- Café and take-away facilities;
- Administration offices;
- Recreational hall
- Vehicle wash bay
- Overnight accommodation
- Parking for approximately 200 heavy vehicles, and
- Above ground fuel storage facility (less than 80m³);



Figure 2 : Alternative A1 Layout

Advantages

- Provision of truck stop facilities for trucks driving long distances;
- Increase in employment opportunities for the local community;
- Removal of alien vegetation from the vacant site;
- Drainage lines and wetlands will not be directly affected by alternative 1.

Disadvantages :

- Truck stop will result in increased traffic along the main road to Estcourt;
- Reduction in the amount of open space;
- Possibility of groundwater contamination during operation if leakages go undetected for the fuel storage facilities;
- Increased in traffic along the main road to Estcourt.

Alternative A2 The second alternativewill include the following,

- large light industrial sites which would contain a mix of warehouses, storage, logistics warehousing and light industrial activities.



Figure 3 : Alternative A2 Layout

Advantages

- Provision of truck stop facilities for trucks driving long distances;
- Increase in possible jobs to the local community;
- Increase in industrial opportunities;
- Removal of alien vegetation and maintenance of the site.

Disadvantages :

- Reduction in the amount of open space;
- Increased hard panned surfaces, thus increasing the possibility of run off;
- Impacts to the drainage line located across the alternative site;
- Due to increased industrial areas, higher noise levels are expected;
- The truck stop will result in increased number of traffic along the main road in Estcourt;
- Possibility of groundwater contamination during operation if leakages go undetected for the fuel storage facilities;
- Due to larger development site, there is an increased possibility of impacts to heritage resources.

No site alternatives will be considered for this project as this site has been allocated for the purpose of a Warehousing facility by the Municipality. As such the site has been zoned for a warehousing facility.

No Go Alternative means that the Truck stop and warehousing facility will not be developed.

Advantages :

- No possibilities of increased traffic;
- No possibility of increased noise levels;
- No increase in hard paved surfaces;
- No possibilities of groundwater contamination.

Disadvantages :

- The site will remain in current state with the presence of alien vegetation.
- Loss of job opportunities to the local community.

Sections B 5 – 15 below should be completed for each alternative.

5. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees, minutes and seconds. List alternative sites were applicable.

Alternative:	Latitude (S):			Longitude (E):		
	29°	02'	51.09"	29°	53'	55.57"
Alternative S1 ¹ (preferred or only site alternative)						
Alternative S2 (if any)						
Alternative S3 (if any)						

In the case of linear activities:

Alternative:	Latitude (S):			Longitude (E):		
Alternative S1 (preferred or only route alternative)						
• Starting point of the activity						
• Middle point of the activity						
• End point of the activity						
Alternative S2 (if any)						
• Starting point of the activity						
• Middle point of the activity						
• End point of the activity						
Alternative S3 (if any)						
• Starting point of the activity						
• Middle point of the activity						
• End point of the activity						

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 500m along the route for each alternative alignment.

¹ "Alternative S.." refer to site alternatives.

6. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

Alternative A1² (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the activity:

1010m ² of building; and 25000m ² of fence and light parking for vehicles
19 Hectares

Length of the activity:



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

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the site/servitude:

	N/A
	N/A

7. SITE ACCESS

Does ready access to the site exist?

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

Describe the type of access road planned:

YES	
-----	--

² "Alternative A.." refer to activity, process, technology or other alternatives.

The site is located at the intersection of the N3 highway and main road access to Estcourt South and known as Sub 220 (of 1) of the Farm Wagendrift No 798. The site will be accessed from an existing road. The entrance of the site will be from the N6 to Estcourt.



Figure 4 : Google image showing current access road.

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

8. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this report.

The site or route plans must indicate the following:

- 8.1. the scale of the plan which must be at least a scale of 1:500;
- 8.2. the property boundaries and numbers/ erf/ farm numbers of all adjoining properties of the site;
- 8.3. the current land use as well as the land use zoning of each of the properties adjoining the site or sites;

- 8.4. the exact position of each element of the application as well as any other structures on the site;
- 8.5. the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 8.6. walls and fencing including details of the height and construction material;
- 8.7. servitudes indicating the purpose of the servitude;
- 8.8. sensitive environmental elements within 100metres of the site or sites including (but not limited thereto):
 - rivers, streams, drainage lines or wetlands;
 - the 1:100 year flood line (where available or where it is required by DWA);
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation including protected plant species (even if it is degraded or infested with alien species);
- 8.9. for gentle slopes the 1metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 8.10. the positions from where photographs of the site were taken.

9. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

10. FACILITY ILLUSTRATION

A detailed illustration of the facility must be provided at a scale of 1:200 and attached to this report as Appendix C. The illustrations must be to scale and must represent a realistic image of the planned activity/ies.

11. ACTIVITY MOTIVATION

11.1. Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R5.200 000
What is the expected yearly income that will be generated by or as a result of the activity?	+ - R2.200000
Will the activity contribute to service infrastructure?	NO
Is the activity a public amenity?	NO
How many new employment opportunities will be created in the development phase of the activity?	+ -45
What is the expected value of the employment opportunities during the development phase?	+ - R2.592000
What percentage of this will accrue to previously disadvantaged individuals?	+ -95%

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How many permanent new employment opportunities will be created during the operational phase of the activity?	Approximately 25
What is the expected current value of the employment opportunities during the first 10 years?	R25000000
What percentage of this will accrue to previously disadvantaged individuals?	+80%

11.2. Need and desirability of the activity

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

The proposed site has been zoned as a Truck stop and warehousing facility by the local municipality. The site is located along the N3 which accommodates a large number of trucks.

Indicate any benefits that the activity will have for society in general:

The society in general will benefit by the proposed Truck stop and warehousing as it will provide employment during construction and operation. The proposed development will require skilled and unskilled labour, in the form for construction labourers, and cleaners.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

The local community will benefit from the proposed truck stop and warehousing facility during operational phase as approximately 20 jobs will be created.

12. 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:
South Africa's Constitution, 1996 (Act 108 of 1996), including the Bill of Rights (Chapter 2, Section 24)	National Government	1996
National Environmental Management Act, 1998 (No. 107 of 1998) (NEMA), including the NEMA Amendment Act, 2008 (No. 62 of 2008)	National Government, and National Department of Environmental Affairs	1998
NEMA EIA Regulations, 2010 (Government Notice Nos.543, 544, 545 and 546)	National Department of Environmental Affairs and Provincial Department of Agriculture, Environmental Affairs and Rural Development.	2010
National Road Traffic Act, 1996 (Act No. 93 of 1996)	Department of Transport	1996
National Environmental Management: Waste Act (Act 59 of 2008)	National Government	2008
National Heritage Resources Act (Act 25 of 1999)	AMAFA	1999
National Water Act (Act 36 of 1998)	Department of Water Affairs	1998

13. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

13.1. Solid waste management

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

YES	<input type="checkbox"/>
-----	--------------------------

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

Less than 100m ³

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

General waste will be temporarily stored on site in bulk containers (skips) and bins. The waste will then be transported for disposal at the municipal landfill (i.e. Umtshetzi Municipality landfill site) or other permitted site.
--

Where will the construction solid waste be disposed of? (provide details of landfill site)

General waste will be temporarily stored on site in bulk containers (skips) and bins. The waste will then be transported for disposal at the municipal landfill (i.e. Umtshetzi Municipality landfill site) or other permitted site

Will the activity produce solid waste during its operational phase?

YES	<input type="checkbox"/>
-----	--------------------------

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

Less than 100m ³

How will the solid waste be disposed of? (provide details of landfill site)

Any solid waste shall be disposed of at a licensed landfill site such as the Umtshetzi Municipality landfill site. Hazardous substances will be disposed at an appropriate classified waste site. Waste from the oil interceptors must be disposed of to a suitable waste-handling contractor where Safe Disposal Certificates are to be issued.
--

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

N/A

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine the further requirements of the application.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

<input type="checkbox"/>	NO
--------------------------	----

If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.

Is the activity that is being applied for a solid waste handling or treatment facility?

<input type="checkbox"/>	NO
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If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.

13.2. Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

<input type="checkbox"/>	NO
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 If yes, what estimated quantity will be produced per month?

N/A

Will the activity produce any effluent that will be treated and/or disposed of onsite?

<input type="checkbox"/>	NO
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If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.

Will the activity produce effluent that will be treated and/or disposed of at

<input type="checkbox"/>	NO
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another facility?

If yes, provide the particulars of the facility:

Facility name:

Contact

person:

Postal

address:

Postal code:

Telephone:

Cell:

E-mail:

Fax:

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

13.3. Emissions into the atmosphere

Will the activity release emissions into the atmosphere? YES

If yes, is it controlled by any legislation of any sphere of government? NO

If yes, contact the KZN Department of Agriculture & Environmental Affairs to obtain clarity regarding the process requirements for your application.

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

During the construction phase, potential sources of air pollution could include:

- Dust from bare areas that have been cleared for construction purposes;
- Fugitive dust from trucks transporting material;
- Emissions from construction equipment and machinery; and
- Tailpipe emissions from construction vehicles.

Air pollution could possibly be caused by the following sources during the operation phase:

- Potential gas emissions may be released from the tank vents during refuelling, vehicle refuelling, fuel spillage and motor vehicle exhausts.

All potential impacts can be mitigated and managed. An Environmental Management programme report (EMPr) with mitigation measures has been prepared and included as Appendix F.

13.4. Generation of noise

Will the activity generate noise? YES

If yes, is it controlled by any legislation of any sphere of government? NO

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

If no, describe the noise in terms of type and level:

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Sources of noise during the construction phase include use of construction equipment, machinery and vehicles; and activities at the construction site.

Noise during operation may be generated by vehicles entering and exiting the site, personnel and customers at the Warehousing facility and truck stop and the associated facilities, car sound systems and hooters, and ventilation equipment.

The proposed site is located across an existing RTI offices, therefore it is envisioned that the noise levels will not be significant in relation to the existing activities in the area.

14. WATER USE

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

Municipal	<input checked="" type="checkbox"/>
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

Does the activity require a water use permit from the Department of Water Affairs?

<input type="checkbox"/>	NO
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If YES, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this report.

NB : Please note that a Water use license is currently being compiled and will be included in the Final Basic Assessment Report.

15. ENERGY EFFICIENCY

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

Energy saving mechanism should be used to augment lighting such as the use of compact fluorescent lights.

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

None.

SECTION C: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different

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environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

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

- Subsections 1 - 6 below must be completed for each alternative.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	
X	

Alternative S2 (if any):

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Alternative S3 (if any):

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2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site (**Please cross the appropriate box**).

Alternative S1 (preferred site):

	Plain	
	x	

Alternative S2 (if any):

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Alternative S3 (if any):

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3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Has a specialist been consulted for the completion of this section?

YES

If YES, please complete the following:

Name of the specialist:	Mike Hemingway		
Qualification(s) of the specialist:			
Postal address:	PO Box 91, Mooi River		
Postal code:	3300		
Telephone:		Cell:	082 801 5179
E-mail:	mike.haa@bundunet.com	Fax:	086 553 9121

Are there any rare or endangered flora or fauna species (including red data species) present on any of the alternative sites?

NO

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If YES, specify and explain:

Mr Moosa Suleman telephonically appointed Hemingway and Associates on 17 October 2013 to carry out a Geotechnical Investigation for the proposed development on Sub 220 (of 1) of the Farm Wagondrift No 798 following the issue of a quotation dated 16 October 2013. The results of the investigation confirm the general Geotechnical conditions underlying the development area being Residual Siltstone subsoil's overlying the Siltstone bedrock of the Estcourt Formation, Beaufort Group, Karoo Sequence. Foundation recommendations have been provided being standard concrete strip footings for the single storey buildings founding on the dense residual siltstone soils. However, where the consistency of the subsoil's is less than dense, the economics of deep strip footings against specialized engineered foundations or soil raft foundation would have to be investigated. For column bases, these would be founded on the Siltstone bedrock. Excavation classification with respect to services will be soft to an average depth of 1.7m, at which depth the siltstone bedrock will be encountered. The percolation test carried out confirmed a poor percolation rate which precludes the use of septic tank and French drain field for the disposal of effluent from the proposed development. However, only one percolation test was carried out at a position with shallow soil cover over the bedrock and there it has been recommended that more tests are conducted after the final layout has been approved. Alternative methods of sanitation treatment have been provided. Taking all factors into account, it is considered that the geotechnical conditions prevailing at the site are generally favourable for the proposed development.

Are there any special or sensitive habitats or other natural features present on any of the alternative sites? NO

If YES, specify and explain:

N/A

Are any further specialist studies recommended by the specialist? NO

If YES, specify:

Geotechnical report attached in Appendix D

If YES, is such a report(s) attached in Appendix D? YES

Signature of specialist: N/A Date:

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

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	<input type="checkbox"/> NO	<input type="checkbox"/>	<input type="checkbox"/>
Dolomite, sinkhole or doline areas	<input type="checkbox"/> NO	<input type="checkbox"/>	<input type="checkbox"/>
Seasonally wet soils (often close to water bodies)	<input type="checkbox"/> NO	<input type="checkbox"/>	<input type="checkbox"/>
Unstable rocky slopes or steep slopes with loose soil	<input type="checkbox"/> NO	<input type="checkbox"/>	<input type="checkbox"/>

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Dispersive soils (soils that dissolve in water)	NO		
Soils with high clay content (clay fraction more than 40%)	NO		
Any other unstable soil or geological feature	NO		
An area sensitive to erosion	NO		

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

4. GROUND COVER

Has a specialist been consulted for the completion of this section? YES

If YES, please complete the following:

Name of the specialist:	Mr Ronald Phamphe		
Qualification(s) of the specialist:	Pr.Sci.Nat-Ecological Science		
Postal address:	P.O.Box 1673, Sunninghill		
Postal code:	2157		
Telephone:	011 781 1730	Cell:	
E-mail:	Ronaldp@nemai.co.za	Fax:	011 781 1731
Are there any rare or endangered flora or fauna species (including red data species) present on any of the alternative sites?			Yes <input type="checkbox"/>

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If YES,
specify and
explain:

Nemai Consulting was appointed by Commaro Investment cc to undertake a Terrestrial Ecological Assessment for the proposed construction of warehousing, sales and truck facilities in Estcourt, Kwa-Zulu Natal Province. The Commaro Investment cc proposes to construct a facility of 19 hectares that will include the warehousing for the purpose of commercial and light industrial activities, offices for businesses, truck facilities (these may include storage, maintenance and sale of these vehicles), parking areas for vehicles, above ground fuel storage facility (less than 80m³), overnight truck resting areas with sleeping facilities for truck drivers, associated infrastructure for service provision (i.e. water, sewer, stormwater, electricity and waste) and access roads. The proposed development is situated adjacent to the N3 national highway, to the south of Wagendrift Dam near Estcourt in KwaZulu-Natal. The site is located on portion 220 of the farm Wagendrift 798. The dominant landuse within the site is grazing for communal livestock, while notable adjacent landuses are relict quarry (now utilised as a storage and parking facility for a road construction company), a disused airfield to the north of the site and a landfill site to the east of the site. Severe soil erosion occurred within the drainage line and the site is heavily grazing on the adjacent slopes, resulting in a short sward.

The objective of this study was to identify species and their habitats in the proposed development footprint. To identify such species, the current ecological status and conservation priority of vegetation on the site were assessed. Potential faunal habitats were investigated in the study area and all mammals, birds, reptiles and amphibians known to occur on site or that were observed on site, were recorded. Red Data species (of both fauna and flora) that have historically been recorded and therefore, are known to occur on site, were considered in this investigation.

The study area falls within the Savanna and Wetland biomes and is characterised by KwaZulu-Natal Highland Thornveld and Alluvial Wetlands: Temperate Alluvial Vegetation units, and these vegetation types have national conservation status of *Least Threatened* and *Vulnerable* respectively. According to the data sourced from South African National Biodiversity Institute (SANBI); there are no threatened terrestrial ecosystems that were recorded in the study area. The data from KZN Conservation Plan indicates that the proposed site falls within areas of not conservation importance and is 100% transformed based on 2005 land cover.

Two Red Data plant species were recorded on site, namely *Crinum macowanii* (Cape coast lily) and *Hypoxis hemerocallidea* (Star flower/African potato). These species are listed as *Declining* and so, prior to construction, these species must be rescued and relocated to a conservation area or facility such as a nursery near the site suitable for the survival of this species. Ezemvelo KZN Wildlife must be consulted before relocation takes place. Given that two Red Data plants were observed, it is important that a qualified professional should be on site prior to construction to identify other species of conservation importance which may occur on site.

Due to habitat fragmentation and destruction of the study area, few mammals were expected to occur. Only two mammals were observed in the study area, namely Scrub hare and African mole rat. These species commonly occur in the area. While this does not preclude the presence of other smaller mammals, as well as the transitory movement of mammals across site, the relatively high degree of disturbance with transformed habitat and levels of human intrusion, is not conducive to the presence of many mammal species. The proposed construction activities are not thought to have any significant impacts on the overall conservation of mammalian diversity within the area.

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Due to the transformation of site arising from severe grazing; only the river and wetland areas offer suitable habitat for any larger birds as well as certain smaller raptor species to occur. Thirteen (13) bird species were recorded during the field survey. Species recorded were common and widespread. No Red Data bird species associated with the proposed development site were recorded within the study area.

One species of lizard observed on site was Speckled rock skink *Trachylepis punctatissima*. This species is found in a variety of habitats, wet and dry, from grassland and savanna to shrubland, including rock outcrops. From the low level of observations of reptiles noted on site it is evident that seasonality, transformation of land as well as the limited observation period were responsible for the low number of observations.

According to Frog Atlas of Southern African, only one Red data frog, the Natal Leaf-folding Frog (*Arixalus spinifrons*) has been recorded in grid cells 2929BB. Seven frog species were recorded during the field surveys and these species were common with wider distribution ranges. Suitable habitat remains for Natal-Leaf-Folding Frog in the sedge and grass dominated valley bottom wetlands.

As previously mentioned, wetlands do occur on site and according to the legislation, wetlands are defined as watercourses and any activities that are contemplated that could affect the wetlands require authorisation (Section 21 of the National Water Act, 1998 (Act No. 36 of 1998)). They are also regarded as sensitive habitats in the National Environmental Management Biodiversity Act, 2004 (Act No.10 of 2004) implying that they are afforded a higher level of protection. Once delineated, these wetland areas must be afforded an appropriate buffer zone for protection against any development.

From a broad and preliminary evaluation of the site in question, it is evident that the proposed development will have more significant indirect and off site negative impacts arising, than can be attributed to direct and on site activities. The proposed development will see the transformation of the prevailing habitat form through a number of criteria. Such transformation will see the clearance of vegetation, both primary and secondary habitat forms, alteration of surface hydraulics and more indirect effects, including changes in light regimen (electrical light pollution – ELP). Offsite impacts are also likely to arise, primarily associated with the wetland and river systems. The ability to mitigate such systems is based upon design and planning approaches to the site, engineering and ecological management of the site during and post construction and mitigation measures primarily relating to stormwater management and the control of activities on site. Some significant alterations in the bio-physical habitat can be considered to include:

1. GIBELA UMKHUMBI OLWA NOBUBHA

- Exposure of ground surfaces through removal of vegetation and excavation activities with concomitant increases in levels of erosion and increased sedimentation in the wetlands and riverine system

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- Exposure of ground surfaces through removal of vegetation and excavation activities with concomitant increases in levels of erosion and increased sedimentation in the wetlands and riverine system.
- Electrical light pollution will alter nocturnal behavioural patterns across both invertebrate and some vertebrate taxa within the surrounding region.
- Surface water delivery to the stormwater system and into the wetlands and riverine system, will alter in terms of both rate of discharge as well as the nature of the aquatic chemistry of such water.

Mitigation measures should be employed during the construction phase, however most mitigation must focus on suitable design and layout of stormwater infrastructure, as well as post construction management of activities within the site. The negative consequences of poor management of this area has significant ramifications for the immediate aquatic environment.

From an ecological perspective, the proposed development should proceed subject to the above, and mitigation measures (such as delineated buffer zone) must be employed to minimise potential impacts from the project.

Are there any special or sensitive habitats or other natural features present on any of the alternative sites? YES NO

If YES, specify and explain: N/A

Are any further specialist studies recommended by the specialist? YES NO

If YES, specify: Given that two Red Data plants were observed, it is important that a qualified professional should be on site prior to construction to identify other species of conservation importance which may occur on site.

If YES, is such a report(s) attached in Appendix D? YES NO

Signature of specialist: _____ Date:

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

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

If any of the boxes marked with an “E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

5. LAND USE CHARACTER OF SURROUNDING AREA

Cross theland uses and/or prominent features that currently occur within a 500m radius of the site and give a description of how this influences the application or may be impacted upon by the application:

Land use character			Description
Natural area	YES		The site is currently undeveloped. The proposed development will result in loss of open space.
Low density residential		NO	
Medium density residential		NO	
High density residential		NO	
Informal residential		NO	
Retail commercial & warehousing	YES		The site is located across the RTI offices. The proposed development will result in an increase in trucks along the road
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 site is located adjacent to the National road the N3. The proposed development will assist in traffic as it will have a truck stop.

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Airport		NO	
Harbour		NO	
Sport facilities		NO	
Golf course		NO	
Polo fields		NO	
Filling station		NO	
Landfill or waste treatment site		NO	
Plantation		NO	
Agriculture		NO	
River, stream or wetland		NO	
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	

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including archaeological or palaeontological sites, on or within 20m of the site?

YES	
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If YES, contact a specialist recommended by AMAFA to conduct a heritage impact assessment. The heritage impact assessment must be attached as an appendix to this report.

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Briefly explain the recommendations of the specialist:

Nemai Consulting was appointed by Commaro Investment cc represented by Mr Moosa Suleman as the independent Environmental Assessment Practitioner (EAP) to undertake the environmental assessment of the proposed construction of a facility of approximately 19 hectares on Portion 220 of the farm Wagondrift No 798 near Estcourt in the midlands of KwaZulu Natal.

Part of the environmental assessment includes a Phase 1 Heritage Impact Assessment (HIA), which serves to identify any cultural heritage resources occurring on sites which may be impacted upon by the proposed construction. If any resources are found, mitigation measures and recommendations for the protection of such resources will be provided. The report will be submitted to the Provincial Heritage Resources Authority (Amafa aKwaZulu Natali) for comment as per the National Heritage Resources Act (Act No 25 of 1999).

There is only one site alternative for the proposed project. The reason for this is that the location has been approved by the Department of Agriculture to be used for the purpose of:

- Petrol filling station and garage
- Café roadhouse
- Overnight facilities for heavy transport

In addition the need for the development has been identified in the Umtshezi Municipal Development Spatial Framework which identified the site for mixed use development.

However, there are two layout options that have been considered in this assessment.

During the site investigation, no heritage resources of significance were noted. However, the area is situated in an area of very high palaeontological significance interspersed with areas of no known palaeontological significance according to the KwaZulu Natal palaeo map hence a desktop study was undertaken to assess the presence of sensitive palaeontological material on site.

It is therefore recommended based on the assessment that the construction may proceed. However, depending on the results of the desktop study, these findings may need to be amended.

Will any building or structure older than 60 years be affected in any way?	NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	NO

If YES, please submit the necessary application to AMAFA and attach proof thereof to this report.

SECTION D: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice

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to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
 - (i) the site where the activity to which the application relates is or is to be undertaken; and
 - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
 - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
 - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
 - (v) the local and district municipality which has jurisdiction in the area;
 - (vi) any organ of state having jurisdiction in respect of any aspect of the activity (as identified in the application form for the environmental authorization of this project); and
 - (vii) any other party as required by the competent authority;
- (c) placing an advertisement in—
 - (i) one local newspaper; or
 - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
 - (i) illiteracy;
 - (ii) disability; or
 - (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—

- (i) that an application for environmental authorization has been submitted to the KZN Department of Agriculture & Environmental Affairs in terms of the EIA Regulations, 2010;
- (ii) a brief project description that includes the nature and location of the activity to which the application relates;
- (iii) where further information on the application can be obtained; and
- (iv) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE PROCESS

The EAP must ensure that the public participation process is according to that prescribed in regulation 54 of the EIA Regulations, 2010, but may deviate from the requirements of subregulation 54(2) in the manner agreed by the KZN Department of Agriculture & Environmental Affairs as appropriate for this application. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate.

Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before this application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations (regulation 57 in the EIA Regulations, 2010) and be attached as Appendix E to this report.

6. PARTICIPATION BY DISTRICT, LOCAL AND TRADITIONAL AUTHORITIES

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District, local and traditional authorities (where applicable) are all key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of this application and provided with an opportunity to comment.

Has any comment been received from the district municipality? NO

If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

No comments have been received to date. The relevant municipality will be notified of the release of the Draft Basic Assessment Report, and all comments received will be incorporated into the Final Basic Assessment Report.

Has any comment been received from the local municipality? NO

If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

No comments have been received to date. The relevant municipality will be notified of the release of the Draft Basic Assessment Report, and all comments received will be incorporated into the Final Basic Assessment Report

Has any comment been received from a traditional authority? NO

If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

N/A

7. CONSULTATION WITH OTHER STAKEHOLDERS

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders? NO

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

No comments have been received to date. Stakeholders will be notified of the release of the Draft Basic Assessment report, and all comments received will be incorporated into the Final Basic Assessment report

SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

No comments have been received to date. Interested and Affected parties will be notified of the release of the Draft Basic Assessment report, and all comments received will be incorporated into the Final Basic Assessment Report

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached as Appendix E to this report):

No comments received to date.

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

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the planning and design phase:

Alternative S1 (preferred alternative)

Direct impacts:

- No impacts were identified during the planning and design phase.

Indirect impacts:

- No impacts were identified during the planning and design phase.

Cumulative impacts:

- No impacts were identified during the planning and design phase

Alternative S2 (if any)

Direct impacts:

- No impacts were identified during the planning and design phase.

Indirect impacts:

- No impacts were identified during the planning and design phase.

Cumulative impacts:

- No impacts were identified during the planning and design phase

No-go alternative (compulsory)

Direct impacts:

- No impacts were identified during the planning and design phase.

Indirect impacts:

- No impacts were identified during the planning and design phase.

Cumulative impacts:

- No impacts were identified during the planning and design phase.

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Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

No impacts have been identified therefore mitigation measures are not required.

Alternative S2

No impacts have been identified therefore mitigation measures are not required.

b. Process, technology, layout or other alternatives

List the impacts associated with any process, technology, layout or other alternatives that are likely to occur during the planning and design phase (please list impacts associated with each alternative separately):

Alternative A1 (preferred alternative)

Direct impacts:

- No impacts were identified during the planning and design phase.

Indirect impacts:

- No impacts were identified during the planning and design phase.

Cumulative impacts:

- No impacts were identified during the planning and design phase.

Alternative A2 (if any)

Direct impacts:

- No impacts were identified during the planning and design phase.

Indirect impacts:

- No impacts were identified during the planning and design phase.

Cumulative impacts:

- No impacts were identified during the planning and design phase.

No-go alternative (compulsory)

Direct impacts:

- No impacts were identified during the planning and design phase.

Indirect impacts:

- No impacts were identified during the planning and design phase.

Cumulative impacts:

- No impacts were identified during the planning and design phase.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1:

No impacts have been identified therefore mitigation measures are not required.

Alternative A2:

No impacts have been identified therefore mitigation measures are not required.

2.2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the construction phase:

Alternative S1 (preferred site)

Direct

- **Soil and groundwater pollution–**
 - Possibilities of oil spillages from construction vehicles /, construction equipment on site.
 - The clearing of the site will result in exposed soil surfaces which may be prone to erosion, creation of dust and increase in sedimentation.
 - Possibility of groundwater contamination during installation of the fuel storage facilities;
- **Traffic**
 - The construction phase is likely to generate additional traffic in terms of construction vehicles and heavy vehicles delivering materials to the site.
- **Air–**
 - Increase in dust from construction vehicles.
 - The movements of trucks delivering construction materials and other construction vehicles will result in fuel emissions.
- **Noise–**
 - Noise associated with construction activities (e.g. vehicle movement, building, generators).
- **Aesthetics–**
 - Impacts to visual quality of the area through poor housekeeping and construction-related activities.
 - Littering and illegal dumping on site may result in an alteration of the visual character of the site
- **Safety and Security–**
 - Possibility of increased crime due to the influx of temporary construction jobs.
- **Waste–**
 - Use of veld for ablution purposes.
 - Land, air and water pollution through poor waste management practises (litter).
 - Additional waste will be disposed of at the landfill site.
- **Construction camp–**
 - Siting of construction camp – visually obtrusive, vegetation clearing, poaching, and security.
 - Improper storage of material.

- **Socio-economic aspects-**
 - Damages to property, including structures, fencing, gates, animals.
 - Positive impact of increase job opportunities in the area.
- **Destruction of Fauna and Flora**
 - Clearing of site and construction activities will disturb the fauna and flora in the area due to fuel and chemical spills.
 - The noise and vibration of the site will also disturb flora and fauna out of the site boundaries.
 - Due to the disturbance of the site, alien plant will increase across the site.
 - Vegetation and habitat disturbance due to pollution and littering on site.

Indirect impacts:

- **Safety and Security-**
 - Criminal activities associated with construction will increase.
- **Socio-economic aspects-**
 - Short term employment in the form of construction work.
 - Use of local labourers and suppliers, as far as possible (positive impact).

Cumulative impacts:

- Loss of open space.
- Increase in waste within landfill site.

Alternative S2 (if any)

No site alternative has been proposed as this site has already been zoned for a truck stop and warehousing facility by the municipality.

No-go alternative (compulsory)

Direct impacts:

- No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Indirect impacts:

- No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state

Cumulative impacts:

- No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

Alternative S2

<p><u>Soil and groundwater pollution-</u> 1 Drip trays should be placed under all</p>	<p>N/A</p>
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<p>machinery to prevent oil spillages.</p> <p>2 Soil control measures such as the use of shade cloth around the site and the use of sand bags must be used to reduce the possibility of erosion.</p> <p><u>Traffic</u></p> <p>1 Flagmen should be used during construction period to direct traffic during peak hours.</p> <p><u>Air -</u></p> <p>1 Vehicles transporting soil must be covered to reduce the amount of dust on site.</p> <p><u>Noise -</u></p> <p>1 Construction activities generating output levels of 85 dB or more will be confined to normal working hours.</p> <p><u>Aesthetics -</u></p> <p>1 Demarcated construction servitude to be screened off with appropriate material such as shade cloth.</p> <p><u>Safety and Security -</u></p> <p>1 Demarcated construction servitude to be fenced off.</p> <p>2 Compliance with Occupational Health and Safety Act (Act No. 85 of 1993).</p> <p>3 Proper supervision of employees at all times. Employees to be clearly identifiable.</p> <p><u>Waste -</u></p> <p>1 Sufficient ablution facilities to be provided at the Construction Camps. Ablution facilities to be maintained.</p> <p>2 Waste skips to be provided at the construction camp and on site. Skips to be cleaned weekly, and waste to be disposed of at a registered waste disposal site (e.g. Umtshetzi landfill site or other permitted waste disposal site).</p> <p>3 Recycling must be done on site to reduce the amount of waste being disposed of at the landfill site.</p> <p><u>Construction Camp -</u></p> <p>1 Selection of construction camp to be</p>	
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<p>undertaken in consultation with Environmental Control Officer (ECO) and landowner.</p> <ol style="list-style-type: none">2 Site plan of construction camp to be prepared, which must be approved by the ECO.3 Camp site to be demarcated and to be screened off.4 No accommodation to be provided at camp, apart from security.5 Appropriate storage facilities for fuel, paint, cement bags, and other material with a potential to cause harm to the environment. <p><u>Socio-economic aspects -</u></p> <ol style="list-style-type: none">1 Compensation for registration of construction servitude.2 Construction-related damages to be repaired by Contractor.3 Establish employment strategy. <p><u>Flora and Fauna -</u></p> <ol style="list-style-type: none">1 Measures must be taken to reduce disturbances to Flora and Fauna.2 All staff to be made aware that no flora and fauna can be poached during construction.3 Site clearing to be limited to areas only necessary for the construction activities.4 All alien vegetation must be cleared from site during construction.5 A buffer must be delineated to prevent impact on ecology.6 A qualified and / or appropriately experienced Botanist or an experienced person who knows specific vegetation types well should mark any species of conservation importance and other medicinal plants before construction commences.7 Red data plant and medicinal species such as <i>Hypoxis hemerocallidea</i> and <i>Crinum macowanii</i> must be removed prior construction and replanted during rehabilitation process.8 During site preparation, topsoil and subsoil are stripped separately from each other and must be stored separately from spoil material for use in the rehabilitation phase. It should be protected from wind and rain, as well as contamination from diesel, concrete or wastewater.9 Records of all environmental incidents must	
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<p>be maintained and a copy of these records must be made available to authorities on request throughout the project execution.</p> <p>10 Make sure construction vehicles are maintained and serviced to prevent oil and fuel leaks.</p> <p>11 Implement suitable stormwater measures during construction to manage ingress of runoff into the non-perennial river on site.</p> <p>12 Storm water control measures as specified by the Engineer shall be applied to keep soil on site by minimising silt-laden run off from all areas stripped of vegetation, including excavation stockpiles of spoil and topsoil; contaminated run off from storage areas; thereby preventing it from entering water courses.</p> <p>13 After construction programme, monitoring and control of alien weeds and invaders through hand removal; slashing (annuals) or chemical control (perennials). Chemical control may only be done by a registered Pest Control Operator upon approval from the ECO.</p> <p>14 Animals which might be residing within the designated area shall not be unnecessarily disturbed.</p> <p>15 Before construction starts, construction workers must be educated with regards to littering and poaching.</p> <p>16 The Contractor and his/her employees shall not bring any domestic animals onto site.</p> <p>17 Toolbox talks should be provided to contractors regarding disturbance to animals. Particular emphasis should be placed on talks regarding snakes.</p> <p>18 A methodology to manage fauna found on site must be developed</p> <p>19 Construction areas must be demarcated but should allow for the migration of small faunal species out of the construction zone.</p> <p>.</p>	
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b. Process, technology, layout or other alternatives

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the construction phase (please list impacts associated with each alternative separately):

Alternative A1 (Preferred alternative)

Direct

- **Soil and groundwater pollution–**
 - Possibilities of oil spillages from construction vehicles /, construction equipment on site.
 - The clearing of the site will result in exposed soil surfaces which may be prone to erosion, creation of dust and increase in sedimentation.
 - Possibility of groundwater contamination during installation of the fuel storage facilities;
- **Traffic**
 - The construction phase is likely to generate additional traffic in terms of construction vehicles and heavy vehicles delivering materials to the site.
- **Air –**
 - Increase in dust from construction vehicles.
 - The movements of trucks delivering construction materials and other construction vehicles will result in fuel emissions.
- **Noise –**
 - Noise associated with construction activities (e.g. vehicle movement, building, generators).
- **Aesthetics –**
 - Impacts to visual quality of the area through poor housekeeping and construction-related activities.
 - Littering and illegal dumping on site may result in an alteration of the visual character of the site
- **Safety and Security –**
 - Possibility of increased crime due to the influx of temporary construction jobs.
- **Waste –**
 - Use of veld for ablution purposes.
 - Land, air and water pollution through poor waste management practises (litter).
 - Additional waste will be disposed of at the landfill site.
- **Construction camp –**
 - Siting of construction camp – visually obtrusive, vegetation clearing, poaching, and security.
 - Improper storage of material.
- **Socio-economic aspects –**
 - Damages to property, including structures, fencing, gates, animals.
 - Positive impact of increase job opportunities in the area.
- **Destruction of Fauna and Flora**
 - Clearing of site and construction activities will disturb the fauna and flora in the area.

- The noise and vibration of the site will also disturb flora and fauna out of the site boundaries.
- Due to the disturbance of the site, alien plant will increase across the site.
- **Disturbance to Wetlands**
 - Point source discharge and run off entering wetlands.
 - Potential contamination of groundwater and the receiving environment by spillage and leakages
 - Pollutants such as hydrocarbons and detergents washed into the receiving environment from the development.

Indirect impacts:

- **Safety and Security** –
 - Criminal activities associated with construction will increase.
- **Socio-economic aspects** –
 - Short term employment in the form of construction work.
 - Use of local labourers and suppliers, as far as possible (positive impact).

Cumulative impacts:

- Loss of open space.
- Increase in waste within landfill site.

Alternative A2 (Alternative design)

Direct

- **Soil and groundwater pollution**–
 - Possibilities of oil spillages from construction vehicles /, construction equipment on site.
 - The clearing of the site will result in exposed soil surfaces which may be prone to erosion, creation of dust and increase in sedimentation.
 - Possibility of groundwater contamination during installation of the fuel storage facilities;
- **Traffic**
 - The construction phase is likely to generate additional traffic in terms of construction vehicles and heavy vehicles delivering materials to the site.
- **Air** –
 - Increase in dust from construction vehicles.
 - The movements of trucks delivering construction materials and other construction vehicles will result in fuel emissions.
- **Noise** –
 - Noise associated with construction activities (e.g. vehicle movement, building, generators).
- **Aesthetics** –

- Impacts to visual quality of the area through poor housekeeping and construction-related activities.
- Littering and illegal dumping on site may result in an alteration of the visual character of the site
- **Safety and Security** –
 - Possibility of increased crime due to the influx of temporary construction jobs.
- **Waste** –
 - Use of veld for ablution purposes.
 - Land, air and water pollution through poor waste management practises (litter).
 - Additional waste will be disposed of at the landfill site.
- **Construction camp** –
 - Siting of construction camp – visually obtrusive, vegetation clearing, poaching, and security.
 - Improper storage of material.
- **Socio-economic aspects** –
 - Damages to property, including structures, fencing, gates, animals.
 - Positive impact of increase job opportunities in the area.
- **Destruction of Fauna and Flora**
 - Clearing of site and construction activities will disturb the fauna and flora in the area.
 - The noise and vibration of the site will also disturb flora and fauna out of the site boundaries.
 - Due to the disturbance of the site, alien plant will increase across the site.
- **Disturbance to Wetlands**
 - Point source discharge and run off entering wetlands.
 - Potential contamination of groundwater and the receiving environment by spillage and leakages.
 - Pollutants such as hydrocarbons and detergents washed into the receiving environment from the development.
 - Construction activities are likely to increase sedimentation in the drainage line.
 - Construction activities in close proximity to the wetlands will cause disturbance to wetlands.
 - Increased volume and velocity of longitudinal surface flow through the wetland, resulting in soil erosion within the receiving environment.
- **Damage, to cultural heritage resources, archaeological sites and palaeontology**
 - Due to the size of the alternative there is a greater risk of damage, destruction, removal or alteration to cultural heritage resources, archaeological sites and palaeontology.

Indirect impacts:

- **Safety and Security** –

- Criminal activities associated with construction will increase.
- **Socio-economic aspects** –
 - Short term employment in the form of construction work.
 - Use of local labourers and suppliers, as far as possible (positive impact).
- **Cumulative impacts:**
 - Loss of open space.
 - Increase in waste within landfill site.

No-go alternative (compulsory)

Direct impacts:

- No Go means that the proposed Truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Indirect impacts:

- No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Cumulative impacts:

- No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1:

- Soil and groundwater pollution-
1. Drip trays should be placed under all machinery to prevent oil spillages.
 2. Soil control measures such as the use of shade cloth around the site and the use of sand bags must be used to reduce the possibility of erosion.
- Traffic
1. Flagmen should be used during construction period to direct traffic during peak hours.
- Air -
1. Vehicles transporting soil must be covered to reduce the amount of dust

Alternative A2:

- Soil and groundwater pollution-
1. Drip trays should be placed under all machinery to prevent oil spillages.
 2. Soil control measures such as the use of shade cloth around the site and the use of sand bags must be used to reduce the possibility of erosion.
- Traffic
1. Flagmen should be used during construction period to direct traffic during peak hours.
- Air -
1. Vehicles transporting soil must be

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<p>on site.</p> <p><u>Noise</u> -</p> <ol style="list-style-type: none"> 1. Construction activities generating output levels of 85 dB or more will be confined to normal working hours. <p><u>Aesthetics</u> -</p> <ol style="list-style-type: none"> 1. Demarcated construction servitude to be screened off with appropriate material such as shade cloth. <p><u>Safety and Security</u> -</p> <ol style="list-style-type: none"> 1 Demarcated construction servitude to be fenced off. 2. Compliance with Occupational Health and Safety Act (Act No. 85 of 1993). 3. Proper supervision of employees at all times. Employees to be clearly identifiable. <p><u>Waste</u> -</p> <ol style="list-style-type: none"> 1 Sufficient ablution facilities to be provided at the Construction Camps. Ablution facilities to be maintained. 2 Waste skips to be provided at the construction camp and on site. Skips to be cleaned weekly, and waste to be disposed of at a registered waste disposal site (e.g. Umshetzi landfill site or other permitted waste disposal site). 3 Recycling must be done on site to reduce the amount of waste being disposed of at the landfill site. <p><u>Construction Camp</u> -</p> <ol style="list-style-type: none"> 1 Selection of construction camp to be undertaken in consultation with Environmental Control Officer (ECO) and landowner. 2 Site plan of construction camp to be prepared, which must be approved by the ECO. 3 Camp site to be demarcated and to be screened off. 4 No accommodation to be provided at camp, apart from security. 5 Appropriate storage facilities for fuel, 	<p>covered to reduce the amount of dust on site.</p> <p><u>Noise</u> -</p> <ol style="list-style-type: none"> 1. Construction activities generating output levels of 85 dB or more will be confined to normal working hours. <p><u>Aesthetics</u> -</p> <ol style="list-style-type: none"> 1. Demarcated construction servitude to be screened off with appropriate material such as shade cloth. 2. <p><u>Safety and Security</u> -</p> <ol style="list-style-type: none"> 1. Demarcated construction servitude to be fenced off. 2. Compliance with Occupational Health and Safety Act (Act No. 85 of 1993). 3. Proper supervision of employees at all times. Employees to be clearly identifiable. <p><u>Waste</u> -</p> <ol style="list-style-type: none"> 1. Sufficient ablution facilities to be provided at the Construction Camps. Ablution facilities to be maintained. 2. Waste skips to be provided at the construction camp and on site. Skips to be cleaned weekly, and waste to be disposed of at a registered waste disposal site (e.g. Umshetzi landfill site or other permitted waste disposal site). 3. Recycling must be done on site to reduce the amount of waste being disposed of at the landfill site. <p><u>Construction Camp</u> -</p> <ol style="list-style-type: none"> 1. Selection of construction camp to be undertaken in consultation with Environmental Control Officer (ECO) and landowner. 2. Site plan of construction camp to be prepared, which must be approved by the ECO. 3. Camp site to be demarcated and to be screened off. 4. No accommodation to be provided at
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<p>paint, cement bags, and other material with a potential to cause harm to the environment.</p> <p><u>Socio-economic aspects -</u></p> <ol style="list-style-type: none"> 1 Compensation for registration of construction servitude. 2 Construction-related damages to be repaired by Contractor. 3 Establish employment strategy. <p><u>Flora and Fauna -</u></p> <ol style="list-style-type: none"> 1 Measures must be taken to reduce disturbances to Flora and Fauna. 2 All staff to me made aware that no flora and fauna can be pouched during construction. 3 Site clearing to be limited to areas only necessary for the construction activities. 4 All alien vegetation must be cleared from site during construction. 5 A buffer must be delineated to prevent impact on ecology. 6 A qualified and / or appropriately experienced Botanist or an experienced person who knows specific vegetation types well should mark any species of conservation importance and other medicinal plants before construction commences. 7 Red data plant and medicinal species such as <i>Hypoxis hemerocallidea</i> and <i>Crinum macowanii</i> must be removed prior construction and replanted during rehabilitation process. 8 During site preparation, topsoil and subsoil are stripped separately from each other and must be stored separately from spoil material for use in the rehabilitation phase. It should be protected from wind and rain, as well as contamination from diesel, concrete or wastewater. 9 Records of all environmental incidents must be maintained and a copy of these records must be made available to authorities on request throughout the project execution. 	<p>camp, apart from security.</p> <ol style="list-style-type: none"> 5. Appropriate storage facilities for fuel, paint, cement bags, and other material with a potential to cause harm to the environment. <p><u>Socio-economic aspects -</u></p> <ol style="list-style-type: none"> 1. Compensation for registration of construction servitude. 2. Construction-related damages to be repaired by Contractor. 3. Establish employment strategy. <p><u>Flora and Fauna -</u></p> <ol style="list-style-type: none"> 1. Measures must be taken to reduce disturbances to Flora and Fauna. 2. All staff to me made aware that no flora and fauna can be pouched during construction. 3. Site clearing to be limited to areas only necessary for the construction activities. 4. All alien vegetation must be cleared from site during construction. 5. A buffer must be delineated to prevent impact on ecology. 6. A qualified and / or appropriately experienced Botanist or an experienced person who knows specific vegetation types well should mark any species of conservation importance and other medicinal plants before construction commences. 7. Red data plant and medicinal species such as <i>Hypoxis hemerocallidea</i> and <i>Crinum macowanii</i> must be removed prior construction and replanted during rehabilitation process. 8. During site preparation, topsoil and subsoil are stripped separately from each other and must be stored separately from spoil material for use in the rehabilitation phase. It should be protected from wind and rain, as well as contamination from diesel, concrete or wastewater. 9. Records of all environmental incidents must be maintained and a
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<p>10 Make sure construction vehicles are maintained and serviced to prevent oil and fuel leaks.</p> <p>11 Implement suitable stormwater measures during construction to manage ingress of runoff into the non-perennial river on site.</p> <p>12 Storm water control measures as specified by the Engineer shall be applied to keep soil on site by minimising silt-laden run off from all areas stripped of vegetation, including excavation stockpiles of spoil and topsoil; contaminated run off from storage areas; thereby preventing it from entering water courses.</p> <p>13 After construction programme, monitoring and control of alien weeds and invaders through hand removal; slashing (annuals) or chemical control (perennials). Chemical control may only be done by a registered Pest Control Operator upon approval from the ECO.</p> <p>14 Animals which might be residing within the designated area shall not be unnecessarily disturbed.</p> <p>15 Before construction starts, construction workers must be educated with regards to littering and poaching.</p> <p>16 The Contractor and his/her employees shall not bring any domestic animals onto site.</p> <p>17 Toolbox talks should be provided to contractors regarding disturbance to animals. Particular emphasis should be placed on talks regarding snakes.</p> <p>18 A methodology to manage fauna found on site must be developed</p> <p>19 Construction areas must be demarcated but should allow for the migration of small faunal species out of the construction zone.</p> <p><u>Disturbance to wetland</u></p> <p>1. Manage the volume and velocity of surface runoff leaving the</p>	<p>copy of these records must be made available to authorities on request throughout the project execution.</p> <p>10. Make sure construction vehicles are maintained and serviced to prevent oil and fuel leaks.</p> <p>11. Implement suitable stormwater measures during construction to manage ingress of runoff into the non-perennial river on site.</p> <p>12. Storm water control measures as specified by the Engineer shall be applied to keep soil on site by minimising silt-laden run off from all areas stripped of vegetation, including excavation stockpiles of spoil and topsoil; contaminated run off from storage areas; thereby preventing it from entering water courses.</p> <p>13. After construction programme, monitoring and control of alien weeds and invaders through hand removal; slashing (annuals) or chemical control (perennials). Chemical control may only be done by a registered Pest Control Operator upon approval from the ECO.</p> <p>14. Animals which might be residing within the designated area shall not be unnecessarily disturbed.</p> <p>15. Before construction starts, construction workers must be educated with regards to littering and poaching.</p> <p>16. The Contractor and his/her employees shall not bring any domestic animals onto site.</p> <p>17. Toolbox talks should be provided to contractors regarding disturbance to animals. Particular emphasis should be placed on talks regarding snakes.</p> <p>18. A methodology to manage fauna found on site must be developed</p> <p>19. Construction areas must be demarcated but should allow for the migration of small faunal species out of the construction zone.</p> <p><u>Disturbance to wetland</u></p>
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<p>development;</p> <ol style="list-style-type: none"> 2. Avoid soil erosion; 3. Manage the volume of flow leaving the aquatic habitat within the site to within a 10% variance of the current status quo; 4. Remove the risk of petrochemical and oil spillage and leakage; 5. Prevent the export of potentially toxic substances from the development site 6. A buffer of 30m must be maintained from the drainage line and wetlands 	<ol style="list-style-type: none"> 1. Manage the volume and velocity of surface runoff leaving the development; 2. Avoid soil erosion; 3. Manage the volume of flow leaving the aquatic habitat within the site to within a 10%variance of the current status quo; 4. Remove the risk of petrochemical and oil spillage and leakage; 5. Prevent the export of potentially toxic substances from the development site 6. A buffer of 30m must be maintained from the drainage line and wetlands
<p><u>Damage, to cultural heritage resources, archaeological sites and palaeontology</u></p> <ol style="list-style-type: none"> 1. All staff involved in the construction phase should be provided with basic training in regards to the nature of heritage resource material that may be found on site and informed of their obligation to report any items found during the construction process. 2. For any chance finds, all work will cease in the area affected and the Contractor will immediately inform the Project Manager. A registered heritage specialist must be called to site for inspection. The Provincial Heritage Resources Authority-KwaZulu Natal Province (AMAFA) must be informed about the finding. 3. Permits to be obtained from AMAFA if heritage resources are to be impacted upon. 4. All heritage resources found in close proximity to the construction area, in 	<p><u>Damage, to cultural heritage resources, archaeological sites and palaeontology</u></p> <ol style="list-style-type: none"> 1. All staff involved in the construction phase should be provided with basic training in regards to the nature of heritage resource material that may be found on site and informed of their obligation to report any items found during the construction process. 2. For any chance finds, all work will cease in the area affected and the Contractor will immediately inform the Project Manager. A registered heritage specialist must be called to site for inspection. The Provincial Heritage Resources Authority-KwaZulu Natal Province (AMAFA) must be informed about the finding. 3. Permits to be obtained from AMAFA if heritage resources are to be impacted upon. 4. All heritage resources found in close proximity to the construction area, in

<p>this case the site of the potential grave, to be protected by a 5m buffer in which no construction can take place. The buffer to be highly visible to construction crews.</p> <p>5. Under no circumstances may any heritage material be destroyed or removed from site.</p> <p>6. Should any remains be found on site that is potentially human remains, the South African Police Service should also be contacted.</p>	<p>this case the site of the potential grave, to be protected by a 5m buffer in which no construction can take place. The buffer to be highly visible to construction crews.</p> <p>5. Under no circumstances may any heritage material be destroyed or removed from site.</p> <p>6. Should any remains be found on site that is potentially human remains, the South African Police Service should also be contacted.</p>
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2.3. IMPACTS THAT MAY RESULT FROM THE OPERATIONAL PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the operational phase:

Alternative S1 (preferred alternative)

Direct impacts:

- **Soil and Groundwater –**

- Possibility of spillages from vehicles.
- In the absence of the correct design standards, groundwater contamination could potentially arise during the operational phase of the proposed development.
- Point source discharge and run off entering wetlands.
- Potential contamination of groundwater and the receiving environment by spillage and leakages.

Indirect impacts:

- **Flora and Fauna**

- Exposure of ground surfaces through removal of vegetation and excavation activities with concomitant increases in levels of erosion and increased sedimentation in the wetlands and riverine system.
- Electrical light pollution will alter nocturnal behavioural patterns across both invertebrate and some vertebrate taxa within the surrounding region.
- Surface water delivery to the stormwater system and into the wetlands and riverine system, will alter in terms of both rate of discharge as well as the nature of the aquatic chemistry of

such water.

- **Safety and Security**–
 - Possibility for increase in crime due to the increase in activity that will be available on site.
- **Wetlands and Drainage lines**
 - Impacts to wetlands and drainage lines by surface run off.
- **Cumulative impacts:**
 - Increase in waste being sent to the landfill site.

Alternative S2 (if any)

No site alternatives will be considered for this project as this site has been allocated for the purpose of a Warehousing facility by the Municipality. As such the site has been zoned for a warehousing facility

No-go alternative (compulsory)

Direct impacts:

- No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Indirect impacts:

- No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Cumulative impacts:

- No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

Direct impacts:

- **Soil and Groundwater** –
 - Refuelling areas must be on impermeable surfaces. Any spill must be immediately cleaned up and disposed of as a hazardous substance.

Indirect impacts:

- **Flora and Fauna**
 - Mitigation must focus on suitable design and layout of storm water

Alternative S2

No site alternative has been proposed as this site has already been zoned as a truck stop and warehousing facility station by the local Municipality.

<p>infrastructure, as well as post construction management of activities within the site.</p> <ul style="list-style-type: none"> • <u>Safety and Security</u>– <ul style="list-style-type: none"> - Appropriate measures must be put in place to reduce the possibility of crime. • <u>Wetlands and Drainage lines</u> <ul style="list-style-type: none"> - Manage the volume and velocity of surface runoff leaving the development; • <u>Cumulative impacts:</u> <ul style="list-style-type: none"> - Waste should be recycled to reduce the amount of waste being sent to the landfill site. 	
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b. Process, technology, layout or other alternatives

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the operational phase (please list impacts associated with each alternative separately):

Alternative A1 (Preferred Alternative)

<ul style="list-style-type: none"> • <u>Soiland Groundwater</u> – <ul style="list-style-type: none"> - Possibility of spillages during re-filling of tanks, and re-fuelling of vehicles. - In the absence of the correct design standards, groundwater contamination could potentially arise during the operational phase of the proposed development. • <u>Drainage lines and wetland</u> – <ul style="list-style-type: none"> - Increase hard pan is likely to result in increased sedimentation and run off into the drainage lines and wetlands. <p>Indirect impacts:</p> <ul style="list-style-type: none"> • <u>Safety and Security</u> – <ul style="list-style-type: none"> - Possibility for increase in crime due additional activities that will be available on site. • <u>Flora and fauna</u> <ul style="list-style-type: none"> - Electrical light pollution will alter nocturnal behavioural patterns across both invertebrate and some vertebrate taxa within the surrounding region <p>Cumulative impacts:</p> <ul style="list-style-type: none"> - Increase amount of waste at the local landfill site.
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Alternative A2 (Alternative 2)

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- **Soiland Groundwater –**
 - Possibility of spillages during re-filling of tanks, and re-fuelling of vehicles.
 - In the absence of the correct design standards, groundwater contamination could potentially arise during the operational phase of the proposed development.
- **Drainage lines and wetland –**
 - Increase hard pan is likely to result in increased sedimentation and run off into the drainage lines and wetlands.
- **Heritage**
 - Due to the larger size of this alternative, there is greater risk of impacts on heritage resources

Indirect impacts:

- **Safety and Security –**
 - Possibility for increase in crime due additional activities that will be available on site.
- **Flora and fauna**
 - Electrical light pollution will alter nocturnal behavioural patterns across both invertebrate and some vertebrate taxa within the surrounding region

Cumulative impacts:

Increase amount of waste at the local landfill site.

No-go alternative (compulsory)

Direct impacts:

- No Go means that the proposed truck and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Indirect impacts:

- No Go means that the proposed truck and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Cumulative impacts:

- No Go means that the proposed truck and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1

Direct impacts:

- **Soil and Groundwater –**
 - Refuelling areas must be on impermeable surfaces. Any spill

Alternative A2

Direct impacts:

- **Soil and Groundwater –**
 - Refuelling areas must be on impermeable surfaces. Any spill must be immediately

<p>must be immediately cleaned up and disposed of as a hazardous substance.</p> <ul style="list-style-type: none"> - The underground storage tanks are designed and installed in accordance with the SABS Standards - The underground tanks must be reliable in the event of heavy rains and flooding. Underground Tanks manholes shall be impermeable and resistant to fuel. - The underground storage tanks are designed and installed in accordance with the SABS Standards. <ul style="list-style-type: none"> • <u>Drainage lines and wetland</u> <ul style="list-style-type: none"> - Sediment control barriers must be used to prevent sedimentation build up. • <u>Heritage –</u> <ul style="list-style-type: none"> - For any chance finds, all work will cease in the area affected and the Contractor will immediately inform the Project Manager. A registered heritage specialist must be called to site for inspection. The Provincial Heritage Resources Authority-KwaZulu Natal Province (AMAFA) must be informed about the finding. <p>Indirect impacts:</p> <ul style="list-style-type: none"> • <u>Safety and Security–</u> <ul style="list-style-type: none"> - Appropriate measures must be put in place to reduce the possibility of crime • <u>Electrical light pollution</u> <ul style="list-style-type: none"> - Planning and design of outside light must consider nocturnal flora and fauna. <p>Cumulative impacts:</p> <ul style="list-style-type: none"> - Waste should be recycled to 	<p>cleaned up and disposed of as a hazardous substance.</p> <ul style="list-style-type: none"> - The underground storage tanks are designed and installed in accordance with the SABS Standards - The underground tanks must be reliable in the event of heavy rains and flooding. Underground Tanks manholes shall be impermeable and resistant to fuel. - The underground storage tanks are designed and installed in accordance with the SABS Standards. <ul style="list-style-type: none"> • <u>Drainage lines and wetland</u> <ul style="list-style-type: none"> - Sediment control barriers must be used to prevent sedimentation build up. • <u>Heritage –</u> <ul style="list-style-type: none"> - For any chance finds, all work will cease in the area affected and the Contractor will immediately inform the Project Manager. A registered heritage specialist must be called to site for inspection. The Provincial Heritage Resources Authority-KwaZulu Natal Province (AMAFA) must be informed about the finding. <p>Indirect impacts:</p> <ul style="list-style-type: none"> • <u>Safety and Security –</u> <ul style="list-style-type: none"> - Appropriate measures must be put in place to reduce the possibility of crime • <u>Electrical light pollution</u> <ul style="list-style-type: none"> - Planning and design of outside light must consider nocturnal flora and fauna. <p>Cumulative impacts:</p> <ul style="list-style-type: none"> - Waste should be recycled to reduce the amount of waste being sent to the landfill site.
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reduce the amount of waste being sent to the landfill site.	
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2.4. IMPACTS THAT MAY RESULT FROM THE DECOMMISSIONING OR CLOSURE PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the decommissioning or closure phase:

Alternative S1 (preferred alternative)

Direct impacts:

While decommissioning is not anticipated, should this be required the relevant environmental laws prevailing at that point in time will be adhered to in terms of decommissioning requirements. Decommissioning will take place in consultation with and in receipt of confirmation from the relevant environmental authority.

Indirect impacts:

While decommissioning is not anticipated, should this be required the relevant environmental laws prevailing at that point in time will be adhered to in terms of decommissioning requirements. Decommissioning will take place in consultation with and in receipt of confirmation from the relevant environmental authority.

Cumulative impacts:

While decommissioning is not anticipated, should this be required the relevant environmental laws prevailing at that point in time will be adhered to in terms of decommissioning requirements. Decommissioning will take place in consultation with and in receipt of confirmation from the relevant environmental authority.

Alternative S2

No site alternative has been proposed as this site has already been zoned truck stop and warehousing facility by the local Municipality

No-go alternative (compulsory)

Direct impacts:

- No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Indirect impacts:

- No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Cumulative impacts:

- No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

Alternative S2

<ul style="list-style-type: none"> ▪ A detailed decommissioning plan must be submitted to DAEA for approval at least 30 days prior to the decommissioning of the proposed development. The plan must address the following: <ul style="list-style-type: none"> ○ Air quality ○ Soil erosion ○ Waste management ○ Waste water management ○ Stormwater management ○ Worker conduct ○ Dust ○ Landscaping, re-vegetation, stabilization and rehabilitation ○ Land contamination ○ Removal of structures associated with the seawall ○ Complaints register ▪ Prior to decommissioning the surrounding resident must notified. ▪ Decommissioning must take place only during working hours. ▪ All solid waste and rubble must be disposed of at an approved landfill site. ▪ Any wash water must be treated as contaminated and is not permitted to enter stormwater drains, the beach and/or the ocean. ▪ Rehabilitation measures must be put into place. ▪ All structures, foundations, concrete and tarred areas are demolished. Rubble must be removed by an approved contractor and taken to a licensed landfill site. Waste recycling must be encouraged. 	<p>No site alternative has been proposed as this site has already been zoned for a Truck stop and warehousing facility by the local Municipality</p>
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A long-term monitoring system must be in place to ensure total rehabilitation of the site following decommissioning

Tank Closure

- A soil and groundwater contamination investigation must be conducted to determine the presence, nature and extent of any contamination. This will provide information as to the current status of the site.
- Prior to the tanks and associated piping being closed all residue products must be carefully removed for recycling or safe disposal. Safe disposal certificates must be obtained and kept on record as proof.
- Only clean soil must be used for backfilling purposes.

Stormwater & Wastewater Management

- Waste water from the pipes and tanks must be disposed of safely if it is not suitable for disposal via the sewer system. The relevant department at the Local Municipality must be contacted with regard to the discharge of water containing waste to the sewer system.

Waste Management

- All solid waste generated from the removal of the tanks must be handled according to the precautionary principle. This implies that waste (including soils, metals and other material) should be treated as hazardous unless proven otherwise.
- All contaminated soil and other material must be disposed of at a permitted landfill site that is authorized to accept such wastes.
- Any waste material temporarily stockpiled must be adequately protected from the environment to prevent groundwater contamination

<p>Spillages</p> <ul style="list-style-type: none"> ○ Any spillages during the decommissioning of the tanks must be reported to this Department and other relevant authorities. <p>Remediation</p> <ul style="list-style-type: none"> ○ Clean-up or remediation of any contamination must be done in consultation with this Department. <p>Rehabilitation</p> <ul style="list-style-type: none"> ○ Upon decommissioning the site must be rehabilitated. 	
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b. Process, technology, layout or other alternatives

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the decommissioning or closure phase (please list impacts associated with each alternative separately):

Alternative A1

Direct impacts:

While decommissioning is not anticipated, should this be required the relevant environmental laws prevailing at that point in time will be adhered to in terms of decommissioning requirements. Decommissioning will take place in consultation with and in receipt of confirmation from the relevant environmental authority.

Indirect impacts:

While decommissioning is not anticipated, should this be required the relevant environmental laws prevailing at that point in time will be adhered to in terms of decommissioning requirements. Decommissioning will take place in consultation with and in receipt of confirmation from the relevant environmental authority.

Cumulative impacts:

While decommissioning is not anticipated, should this be required the relevant environmental laws prevailing at that point in time will be adhered to in terms of decommissioning requirements. Decommissioning will take place in consultation with and in receipt of confirmation from the relevant environmental authority.

Alternative A2

Direct impacts:

While decommissioning is not anticipated, should this be required the relevant environmental laws prevailing at that point in time will be adhered to in terms of decommissioning requirements. Decommissioning will take place in consultation with and in receipt of confirmation from the relevant environmental authority.

Indirect impacts:

While decommissioning is not anticipated, should this be required the relevant environmental laws prevailing at that point in time will be adhered to in terms of decommissioning requirements. Decommissioning will take place in consultation with and in receipt of confirmation from the relevant environmental authority.

Cumulative impacts:

While decommissioning is not anticipated, should this be required the relevant environmental laws prevailing at that point in time will be adhered to in terms of decommissioning requirements. Decommissioning will take place in consultation with and in receipt of confirmation from the relevant environmental authority.

No-go alternative (compulsory)

Direct impacts:

- No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Indirect impacts:

- No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Cumulative impacts:

- No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1

Tank Closure

- A soil and groundwater contamination investigation must be conducted to determine the presence, nature and extent of any contamination. This will provide information as to the current status of the site.
- Prior to the tanks and associated piping being closed all residue products must be carefully removed for recycling or

Alternative A2

Tank Closure

- A soil and groundwater contamination investigation must be conducted to determine the presence, nature and extent of any contamination. This will provide information as to the current status of the site.
- Prior to the tanks and associated piping being closed all residue products must be carefully removed for recycling or safe

<p>safe disposal. Safe disposal certificates must be obtained and kept on record as proof.</p> <ul style="list-style-type: none"> ○ Only clean soil must be used for backfilling purposes. <p>Stormwater& Wastewater Management</p> <ul style="list-style-type: none"> ○ Waste water from the pipes and tanks must be disposed of safely if it is not suitable for disposal via the sewer system. The relevant department at the Local Municipality must be contacted with regard to the discharge of water containing waste to the sewer system. <p>Waste Management</p> <ul style="list-style-type: none"> ○ All solid waste generated from the removal of the tanks must be handled according to the precautionary principle. This implies that waste (including soils, metals and other material) should be treated as hazardous unless proven otherwise. ○ All contaminated soil and other material must be disposed of at a permitted landfill site that is authorized to accept such wastes. ○ Any waste material temporarily stockpiled must be adequately protected from the environment to prevent groundwater contamination <p>Spillages</p> <ul style="list-style-type: none"> ○ Any spillages during the decommissioning of the tanks must be reported to this Department and other relevant authorities. <p>Remediation</p> <ul style="list-style-type: none"> ○ Clean-up or remediation of any contamination must be done in consultation with this Department. <p>Rehabilitation</p>	<p>disposal. Safe disposal certificates must be obtained and kept on record as proof.</p> <ul style="list-style-type: none"> ○ Only clean soil must be used for backfilling purposes. <p>Stormwater& Wastewater Management</p> <ul style="list-style-type: none"> ○ Waste water from the pipes and tanks must be disposed of safely if it is not suitable for disposal via the sewer system. The relevant department at the Local Municipality must be contacted with regard to the discharge of water containing waste to the sewer system. <p>Waste Management</p> <ul style="list-style-type: none"> ○ All solid waste generated from the removal of the tanks must be handled according to the precautionary principle. This implies that waste (including soils, metals and other material) should be treated as hazardous unless proven otherwise. ○ All contaminated soil and other material must be disposed of at a permitted landfill site that is authorized to accept such wastes. ○ Any waste material temporarily stockpiled must be adequately protected from the environment to prevent groundwater contamination <p>Spillages</p> <ul style="list-style-type: none"> ○ Any spillages during the decommissioning of the tanks must be reported to this Department and other relevant authorities. <p>Remediation</p> <ul style="list-style-type: none"> ○ Clean-up or remediation of any contamination must be done in consultation with this Department. <p>Rehabilitation</p> <ul style="list-style-type: none"> ○ Upon decommissioning the site must be rehabilitated.
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| <ul style="list-style-type: none"> ○ Upon decommissioning the site must be rehabilitated. | |
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2.5. PROPOSED MONITORING AND AUDITING

For each phase of the project and for each alternative, please indicate how identified impacts and mitigation will be monitored and/or audited.

Alternative S1 (preferred site)

During the construction phase an Environmental Control Officer (ECO) must be appointed to conduct the monitoring of environmental issues in accordance with the EMPr. The duties of the ECO must audit the site on a monthly basis for the duration of the construction phase.

The ECO will be responsible for the following (amongst others):

- To monitor the execution of the mitigation measures contained in the EMPr, and to ensure the safeguarding of the environment.
- To monitor compliance with the environmental authorisation(s).
- To monitor compliance with environmental legislation, in general.
- To facilitate communication between I&APs, and the Contractor.
- To inspect the construction site on a monthly basis.
- To notify the appropriate environmental authorities of significant non-compliance.
- To prepare a Monthly audit Report which will be forwarded to the project team and DAEA. This report will include a checklist and an issues list. Where non-compliance is encountered, the significance of the associated impact will be recorded, and corrective measures will be identified. The issues list will highlight the most pertinent issues that require mitigation.

Alternative S2

Not site alternative has been proposed as this site has already been zoned as a truck stop and warehousing facility by the local Municipality.

Alternative A1 (preferred alternative)

Alternative A2

<p>During the construction phase an Environmental Control Officer (ECO) must be appointed to conduct the monitoring of environmental issues in accordance with the EMPr. The duties of the ECO must audit the site on a monthly basis for the duration of the construction phase.</p> <p>The ECO will be responsible for the following (amongst others):</p> <ul style="list-style-type: none"> • To monitor the execution of the mitigation measures contained in the EMPr, and to ensure the safeguarding of the environment. • To monitor compliance with the environmental authorisation(s). • To monitor compliance with environmental legislation, in general. • To facilitate communication between I&APs, and the Contractor. • To inspect the construction site on a monthly basis. • To notify the appropriate environmental authorities of significant non-compliance. • To prepare a Monthly audit Report which will be forwarded to the project team and DAEA. This report will include a checklist and an issues list. Where non-compliance is encountered, the significance of the associated impact will be recorded, and corrective measures will be identified. The issues list will highlight the most pertinent issues that require mitigation. 	<p>During the construction phase an Environmental Control Officer (ECO) must be appointed to conduct the monitoring of environmental issues in accordance with the EMPr. The duties of the ECO must audit the site on a monthly basis for the duration of the construction phase.</p> <p>The ECO will be responsible for the following (amongst others):</p> <ul style="list-style-type: none"> • To monitor the execution of the mitigation measures contained in the EMPr, and to ensure the safeguarding of the environment. • To monitor compliance with the environmental authorisation(s). • To monitor compliance with environmental legislation, in general. • To facilitate communication between I&APs, and the Contractor. • To inspect the construction site on a monthly basis. • To notify the appropriate environmental authorities of significant non-compliance. • To prepare a Monthly audit Report which will be forwarded to the project team and DAEA. This report will include a checklist and an issues list. Where non-compliance is encountered, the significance of the associated impact will be recorded, and corrective measures will be identified. The issues list will highlight the most pertinent issues that require mitigation.
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3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative S1 (preferred site)

The proposed development will include the following:

- Communal dining area;
- Café and take-away facilities;
- Administration offices;
- Recreational hall
- Vehicle wash bay
- Overnight accommodation
- Parking for approximately 200 heavy vehicles, and
- Above ground fuel storage facility (less than 80m³);

Specialist studies attached to Appendix D have assessed in detail the duration, likelihood, and significance of potential impacts. With regard to the proposed development the potential negative impact will have no long term negative impacts of medium or high significance on the receiving environment, if the mitigation measures and management of the impacts are undertaken. The types of impact, duration of impacts and the likelihood of potential impacts actually occurring and the significance of impacts is addressed in the impacts section above and summarised below.

The main impacts associated with the petrol tanks :

- Disturbance to plants and animals.
- Soil and groundwater contamination from the possible leakages.
- Possibility of fires and explosions.
- Increased waste at landfill site.
- Increase sedimentation on wetlands and drainage lines.

With the mitigation measures properly implemented these impacts can be minimised. Mitigation measures include the following :

- Staff must be made aware of the importance and protection of plants and animals
- Refuelling areas must be on impermeable surfaces. Any spill must be immediately cleaned up and disposed of as a hazardous substance.
- The underground storage tanks are designed and installed in accordance with the SABS Standards
- The underground tanks must be reliable in the event of heavy rains and flooding. Underground Tanks manholes shall be impermeable and resistant to fuel.
- The underground storage tanks are designed and installed in accordance with the SABS Standards.
- Staff must be trained on the possibility of fire.
- Waste should be recycled to reduce the amount of waste being sent to the landfill site.
- Buffers must be put in place to reduce the possible impacts or sedimentation and runoff in wetlands and drainage lines.

All mitigation measures proposed in this report and the EMP must be adhered to

Alternative S2

No site alternative has been proposed as this site has already been zoned for a truck stop and warehousing facility by the local Municipality.

Alternative A1 (preferred alternative)

With regard to the proposed development the potential negative impact will have no long term negative impacts of medium or high significance on the receiving environment, if the mitigation measures and management of the impacts are undertaken. The types of impact, duration of impacts and the likelihood of potential impacts actually occurring and the significance of impacts is addressed in the impacts section above and summarised below.

The main impacts associated with the petrol tanks :

- Disturbance to plants and animals.
- Soil and groundwater contamination from the possible leakages.
- Possibility of fires and explosions.
- Increased waste at landfill site.
- Increase sedimentation on wetlands and drainage lines.

With the mitigation measures proposed in this report and the EMPr these impacts can be avoided.

Alternative A2

With regard to the proposed development the potential negative impact will have no long term negative impacts of medium or high significance on the receiving environment, if the mitigation measures and management of the impacts are undertaken. The types of impact, duration of impacts and the likelihood of potential impacts actually occurring and the significance of impacts is addressed in the impacts section above and summarised below.

The main impacts associated with the petrol tanks :

- Disturbance to plants and animals.
- Soil and groundwater contamination from the possible leakages.
- Possibility of fires and explosions.
- Increased waste at landfill site.
- Increase sedimentation on wetlands and drainage lines.

With the mitigation measures proposed in this report and the EMPr these impacts can be avoided.

No-go alternative (compulsory)

No Go means that the proposed truck stop and warehousing facility will not be developed therefore there will be no impacts caused by construction activities. Site will remain in current state, with scattered alien species

SECTION F. RECOMMENDATION OF EAP

Is the information contained in this report and the documentation attached hereto in the view of the EAPr sufficient to make a decision in respect of this report?

YES	

If "NO", please contact the KZN Department of Agriculture & Environmental

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Affairs regarding the further requirements for your report.

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If “YES”, please attach the draft EMPr as Appendix F to this report and list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

It is recommended that Alternative A1 be accepted from an environmental and social perspective.

The applicant must ensure that mitigation measures and controls specified in the EMPr are adhered to. The construction of the pipeline must be monitored by an independent ECO who must ensure compliance with the construction EMPr. Please see the EMPr attached as Appendix F for further details on management of the site during construction.

It is recommended that environmental construction audits be conducted on a monthly basis. In addition, a pre-construction audit and post-construction audit (PCA) must be conducted.

The contractor and his staff must attend an environmental awareness training course, presented by the ECO or a suitably qualified EO/Contractors representative, prior to construction commencing. The environmental awareness training course should cover the following key elements: 1) basic awareness and understanding of key environmental features of the work site and the surrounding environment, 2) understanding the importance of, and reasons why, the environment must be protected, 3) ways to minimize environmental impacts, and 4) requirements of the Environmental Authorization and EMPr.

Construction activities must comply with designated working hours and surrounding residents must be informed prior to the commencement of construction activities. Safety information must be prominently displayed at the construction sites(s) to warn the local community of the potential safety concerns related to the construction activities.

Emergency contact numbers must be placed at the construction site.

Adequate toilet facilities must be provided for all staff members as standard construction practice. The chemical toilets must be from a registered company and all effluent must be disposed of at an appropriate facility. Safe disposal certificates must be kept on record.

Existing infrastructure (i.e. electricity lines, water pipelines) must be identified prior to construction. Any costs associated with impacts to the existing services must be borne by the applicant.

The duration of exposed soil must be kept to a minimum and rehabilitation must be initiated as soon as construction is completed.

Materials must be stockpiled in appropriate areas where stormwater runoff cannot erode into the stockpile or cause contamination of the surrounding environment.

Dust control must be implemented throughout the construction phase through the use of a water cart.

Emissions generated from construction vehicles must be minimal and is not expected to

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significantly affect surrounding communities. This impact is only relevant to the construction phase. The construction vehicles must be regularly maintained to ensure that excessive emissions are controlled.

Any alien vegetation found within, or surrounding, the construction site must be cleared to ensure that invasion of disturbed areas does not occur.

There may not be any hunting/fishing or wildlife or poaching of wildlife or livestock on the site and no setting of snares or traps. No animals are to be harmed or harassed. Hunting or poaching must be strictly prohibited and this rule strictly monitored and enforced by the contractor and subcontractors.

Cement mixing will need to take place on a hard surface or on cement mixing trays. Cement mixing must not be permitted to occur where run-off can enter any watercourse. In addition, cement and fuels must be stored within bunded and hard surfaced areas. If the creation of a permanent bunded area is not feasible, these materials must be stored on drip trays capable of holding at least 110% of the spilled volume.

All materials must be obtained from a registered and sustainable source and all delivery notes and slips must be made available to the ECO (e.g. mined material such a stone must only be obtained from permitted quarries).

Littering must not be permitted on the site and general housekeeping must be enforced.

Waste must be stored in bins within the waste collection area in the construction camp and must not be allowed to blow around the site, be accessible by animals, or be placed in piles adjacent to the skips/bins and must be disposed of an appropriate land fill site. Safe disposal certificates must be obtained and retained on site for inspection by the ECO.

Hazardous waste must be stored on a hard surface within a bunded area and must not be allowed to enter watercourses and the surrounding environment.

All excess material and rubble must be removed from the site so as not to restrict the rehabilitation process. All excess material and rubble must go to an approved, designated landfill and a safe disposal certificate must be obtained.

Recycling should be undertaken where possible to limit the amount of waste added to the landfill site.

A spill response procedure/contingency plan must be drawn up/designed to manage spill during operation. Suitable spill kits must be available and staff must be made aware of the spill response procedure.

In the event of the discovery of any cultural or historical artefacts, the construction operations must cease and AMAFA must be contacted to investigate the finding.

SECTION G: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Draft Environmental Management Programme (EMPr)

Appendix G: Other information