Proposed Development of Further Education Training College (FET) in Msinga, Kwa-Zulu Natal

DRAFT

BASIC ASSESSMENT REPORT

DEA Reference: 14/12/16/3/3/1/1076

PREPARED BY:

NEMAI CONSULTING

DECEMBER 2013

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environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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File Reference Number:	
Application Number:	
Date Received:	

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **1 September 2012**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily 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 typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. 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 may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. 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.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.

14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included on the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?	YES	NO X

If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. PROJECT DESCRIPTION

a) Describe the project associated with the listed activities applied for

Proposed Development of Further Education Training College (FET) in Msinga, Kwa-Zulu Natal

b) Provide a detailed description of the listed activities associated with the project as applied for

Listed activity as described in GN R.544, 545 and 546	Description of project activity
Example: ***GN R.544 Item 11(3): The construction of a bridge where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.***	***A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river***
GN R.544 Item 23(ii): The transformation of undeveloped, vacant or derelict land to – (ii) residential, retail, commercial, recreational, industrial or institutional use, outside an urban area and where the total area to be transformed is bigger than 1 hectare but less than 20 hectares;	The transformation of approximately 10 hectares of land for the development of accommodation and education facilities for a new Further Education Training (FET) college in Msinga Local Municipality.
GN R.544 Item 11(3): The construction of a bridge where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.	The proposed FET college may be constructed within 32m from a watercourse.
GNR 546 Item 12: The clearance of an area of	The site is located within an area that falls within

300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation – (b) within critical biodiversity areas identified in bioregional plans;	CBA 3, vegetation will be removed as part of this upgrade.

2. 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—

(a) the property on which or location where it is proposed to undertake the activity;
(b) the type of activity to be undertaken;
(c) the design or layout of the activity;
(d) the technology to be used in the activity;
(e) the operational aspects of the activity; and
(f) the option of not implementing the activity.

Describe alternatives that are considered in this application as required by Regulation 22(2)(h) of GN R.543. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) 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.

The identification of alternatives should be in line with the Integrated Environmental Assessment Guideline Series 11, published by the DEA in 2004. Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

a) Site alternatives

Please Note: There is only one Site Alternative for the proposed project. Other site alternatives will not be considered as these sites were chosen as there is a lack tertiary facilities within the identified areas.

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
Construction of a new FET College in Msinga	28º 39´ 10.81˝S	30º 28´ 17.03˝E
Alternative 2		

Alternative 3

In the case of linear activities:

Alternative:	**Latitude (S):**	**Longitude (E):**
Alternative S1 (preferred)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S2 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S3 (if any)		
• Starting point of the activity		
• Middle/Additional 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 250 meters along the route for each alternative alignment.

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A.

b) Lay-out alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
Construction of a new FET College in Msinga - Layout A	28º 39´ 10.81″S	30º 28´ 17.03″E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Construction of a new FET College in Msinga - Layout B	28º 39´ 10.81″S	30º 28´ 17.03″E
Alternative 3		

Msinga – Layout A Description:
This option will occupy 10.9hectares as illustrated in the map below:

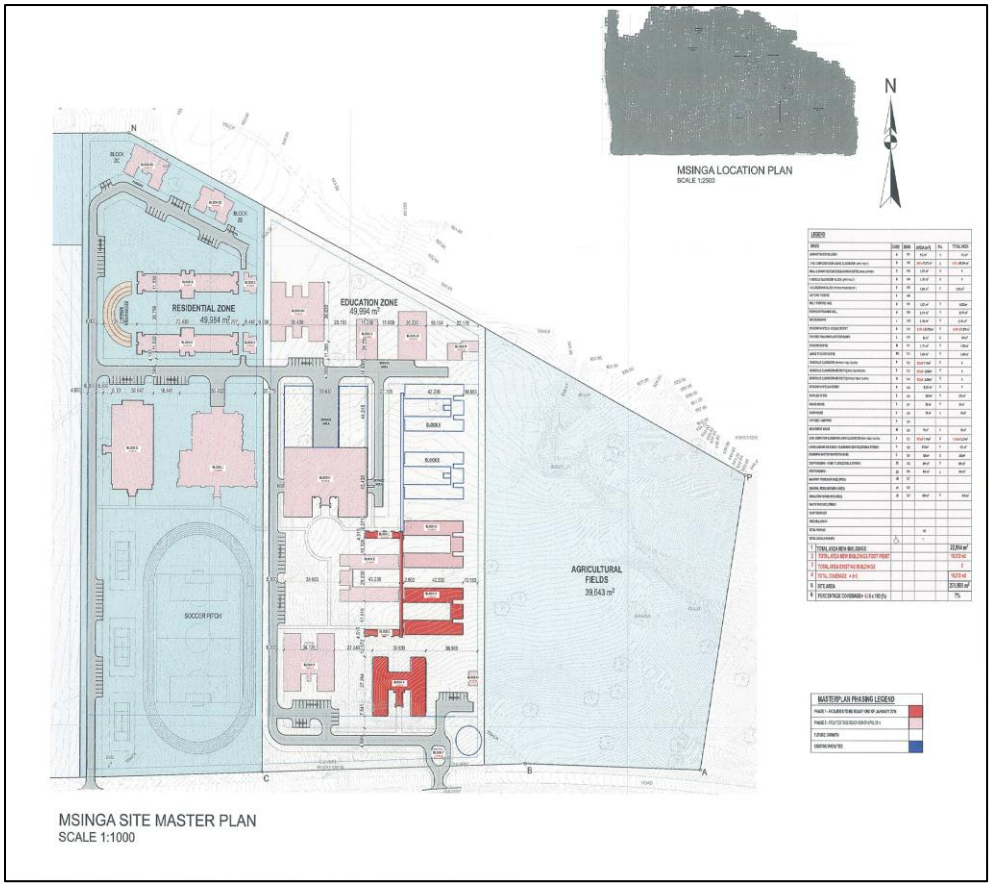

Figure 1: Map showing alternative layout A for the proposed Msinga FET College

This layout alternative will consist of the following:

- Administration building;
- 2 X Computer rooms;
- 8 X Classroom blocks with toilet facilities;
- A 14 classroom block (no toilet facility);
- A multipurpose hall;
- A workshop / training hall;
- A kitchen;
- Double storey student hostels;
- Open and Covered walkways and access ramps;
- Supplies storeroom;
- Pump house.
- Covered carports;
- Generator house;
- 2 X Computer classroom and 4 X classroom;
- Boarding master / matrons house;
- Simulator rooms;
- Student centre;
- Gate house;
- Sports pitches;
- New roads;
- Other associated infrastructure i.e. water, sewer, pipelines etc.

Msinga – Layout B Description:

This option will occupy 10 hectares as illustrated in the map below:

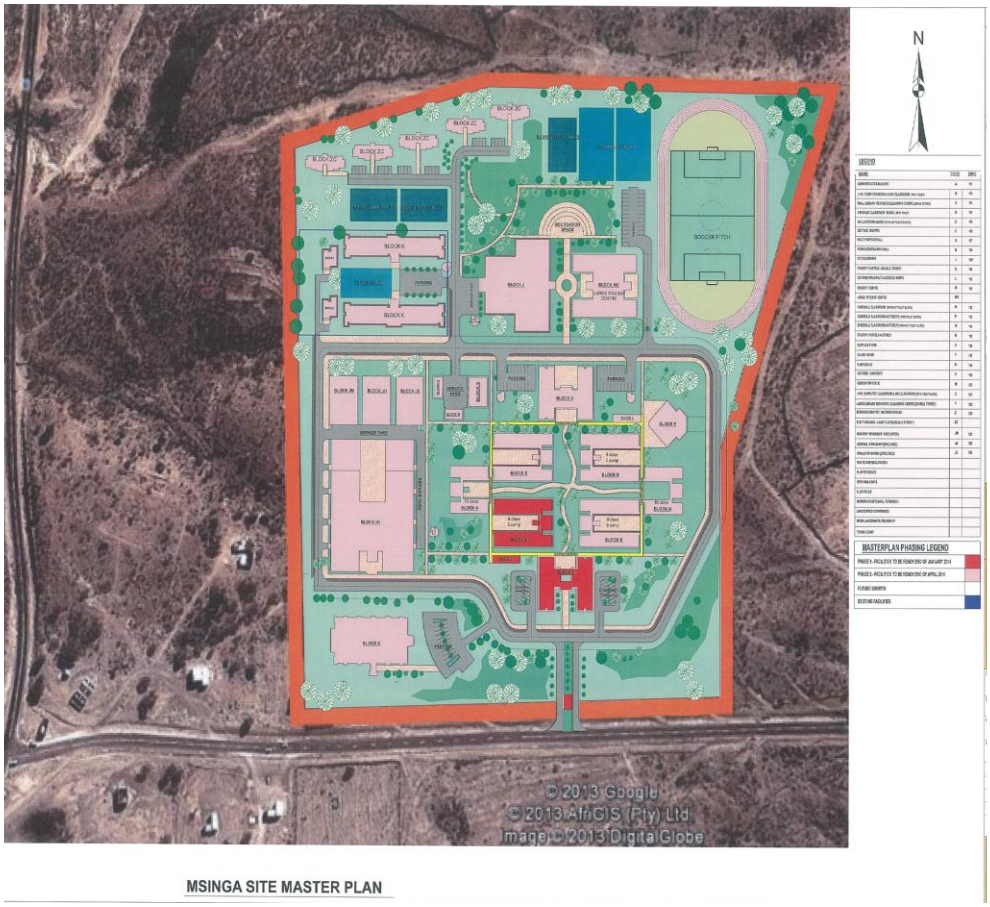

Figure 2: Map showing alternative layout B for the proposed Msinga FET College

This layout alternative will consist of the following:

- Administration building;
- 2 X Computer rooms;
- 8 X Classroom blocks with toilet facilities;
- A single storey library resource / e-learning centre;
- An 8 module classroom block with toilet facility;
- A 14 classroom block (no toilet facility);
- A lecture theatre;
- A multipurpose hall;
- A workshop / training hall;
- A kitchen;
- Double storey student hostels;
- Covered walkways and access ramps;
- 10 Module classroom (no toilet facility);
- 16 Module classroom (4 storey – with toilet facility);
- 20 Module classroom (4 storey – no toilet facility);
- 4 storey student hostels;
- Supplies storeroom;
- Pump house;
- Covered carports;
- Generator house;
- 2 X Computer classroom and 6 X classroom with toilet facilities;
- Large library resource / e-learning centre (double storey);
- Boarding master / matrons house;
- Open masonary workshop shed;
- General Workshop;
- Simulator rooms;
- Student centre;
- Staff housing; open walkways;
- Waste / skip enclosures;
- Planter boxes;
- Open walkways;
- Parking courts;
- Landscaped courtyards;

- Mash lands / water treatment;
- Tennis court, soccer pitch and recreation areas;
- New roads
- Other associated infrastructure i.e. water, sewer, pipelines etc.

c) Technology alternatives

Alternative 1 (preferred alternative)
[redacted]
Alternative 2
[redacted]
Alternative 3
[redacted]

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

Alternative 1 (preferred alternative)
[redacted]
Alternative 2
[redacted]
Alternative 3
[redacted]

e) No-go alternative

If the development does not occur, no new college facility will be built. This will result in a lack of benefit to the local communities both with respect to job opportunities and procurement. Junior practitioners that could potentially take part in the proposed project will not be trained towards professional registration. The necessary elements of educational facilities will not be in place for the intake of students at the start of the 2014 academic year as defined in the tender clarifications.

Paragraphs 3 – 13 below should be completed for each alternative.

SITE ALTERNATIVES

There is only one site alternative for the proposed project; therefore Paragraphs 3-13 below will not be repeated.

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:	**Size of the activity:**
Alternative A1[1] (preferred activity alternative)	100 000 m^2
Alternative A2 (if any)	100 000 m^2
Alternative A3 (if any)	

or, for linear activities:

Alternative:	**Length of the activity:**
Alternative A1 (preferred activity alternative)	
Alternative A2 (if any)	
Alternative A3 (if any)	

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

Alternative:	**Size of the site/servitude:**
Alternative A1 (preferred activity alternative)	150 000 m^2
Alternative A2 (if any)	150 000 m^2
Alternative A3 (if any)	

4. SITE ACCESS

Does ready access to the site exist?	YES X
If NO, what is the distance over which a new access road will be built	

Describe the type of access road planned:

Access to the site will be obtained from the existing road as illustrated in figure 3 in red. New internal roads will be constructed within the proposed site as illustrated in Figure 1, Appendix A.

[1] "Alternative A.." refer to activity, process, technology or other alternatives.

Figure 3: Map showing the existing access road to the proposed FET site in orange and the proposed site boundary in red

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.

5. LOCALITY MAP

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.). The map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s;)
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and

- locality GPS co-ordinates (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 and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection).

6. LAYOUT/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 document.

The site or route plans must indicate the following:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

7. SENSITIVITY MAP

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWA);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

8. 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.

9. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

10. ACTIVITY MOTIVATION

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

1. Is the activity permitted in terms of the property's existing land use rights?	YES X		Please explain
The land is undeveloped and used for grazing. The land makes provision for future educational infrastructure developments.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES X		Please explain
As part of the KZN Provincial Growth and Development Stagey, Education is a social necessity. The strategic objective 2.2 of the strategy refers to the provision of tertiary education systems for the youth. There is a critical urgency to deal with education challenges in the Province.			
(b) Urban edge / Edge of Built environment for the area	YES X		Please explain
The proposed FET college will not affect the Urban Edge.			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES X		Please explain
The Msinga 2012-2017 IDP identified the lack of further education institutions as a threat which must be addressed. The FET college is therefore key to the communities of Msinga. The FET college would not compromise the integrity of the municipal IDP or SDF.			
(d) Approved Structure Plan of the Municipality	YES X		Please explain
Unknown at this stage. This project is aimed at improving the education status of the local community through the provision of further education colleges in the Msinga area.			
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	YES X		
There is no EMF for the area; however, the provision of education facilities was identified as part of the local municipality's IDP.			
(f) Any other Plans (e.g. Guide Plan)	YES	NO	Please explain
Not Applicable			

3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES X		
The Msinga 2012-2017 IDP identified the lack of further education institutions as a threat which must be addressed and as such it proposed development aims to provide facilities to reduce this threat.			
4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	YES X		
The project is needed because education facilities are required for the area in order to enhance education and skills for the community.			
5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES X		Please explain
The local municipality will be requested to provide comment on this Basic Assessment Report with regards to the confirmation of services.			
6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES X		Please explain
The local municipality will be requested to provide comment on this Basic Assessment Report with regards to the infrastructure planning.			
7. Is this project part of a national programme to address an issue of national concern or importance?	YES X		Please explain
Enhancing the education and skills of the community if of importance.			
8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	YES X		Please explain
The proposed site is currently used for grazing purposes and will be located in a rural area which is located near the rural settlement cluster, which will aim to provide basic needs such as education.			

9. Is the development the best practicable environmental option for this land/site?	YES X		Please explain
A number of factors were considered in the selection of the site for the proposed FET college, such as geological conditions, topography, presence of rivers and wetlands, presence of heritage resources, biota, etc.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES X		Please explain
Negative impacts will mainly be experienced during the construction phase of the project. The Environmental Management Programme (EMPr) attached as Appendix G to this Report makes provision for management as well as mitigation measures to be implemented during both the construction and operational phases of the project. The provision of education to surrounding areas is a necessity thus this benefit outweighs any negative impacts.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES X		Please explain
It is possible that another education institution could be developed in the area in the future to add to the education of the area.			
12. Will any person's rights be negatively affected by the proposed activity/ies?		NO X	Please explain
Persons' rights will be positively affected through the provision of education. Negative impacts will mainly occur during the construction phase of the project.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?		NO X	Please explain
The project will not impact the urban edge.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES X		Please explain
SIP 14: Higher education infrastructure • Infrastructure development for higher education, focusing on lecture rooms, student accommodation, libraries and laboratories, as well as ICT connectivity. • Development of university towns with a combination of facilities from residence, retail to recreation and transport. • Potential to ensure shared infrastructure such as libraries by universities, FETs and other educational institutions.			
15. What will the benefits be to society in general and to the local communities?			Please explain
The development will enhance education and skills of the local community.			

16. Any other need and desirability considerations related to the proposed activity?	Please explain
N/A	
17. How does the project fit into the National Development Plan for 2030?	Please explain
The NDP aims to eliminate poverty and reduce inequality by 2030. According to the plan, South Africa can realise these goals by enhancing the capacity of the state, one way to do this is through provision of education for society.	
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.	
This project considers socio-economic factors (heritage, and the value of the project regarding education and skills) along with specialist studies investigating potential effects on terrestrial and aquatic environments. As independent Environmental Assessment Practioners, our task is to balance the impacts and suggest appropriate mitigation measures with the aim of minimising negative impact and enhancing benefits while promoting sustainable development.	
19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.	
The principles of NEMA have been taken into account through the consideration of the aspects and benefits of the FET college in terms of social factors as well as sustainable development. The use of specialists to identify possible impacts and mitigation measures allows for the proposed FET college to go forward in a manner than will have minimal impact on the environment.	

11. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline	Administering authority	Date
Constitution of the Republic of South Africa (No. 108 of 1996)	National and Provincial	18 December 1996
National Environmental Management Act (No. 107 of 1998)	National: Department of Environmental Affairs (DEA) Provincial: Department of Agriculture and Environmental Affairs (DAEA)	27 November 1998
Environmental Impact Assessment Regulations, 2010, promulgated in terms of Section 24(5) of NEMA.	National and Provincial	02 August 2010
National Water Act (No. 36 of 1998)	National and Provincial	26 August 1998
National Environmental Management: Biodiversity Act, 2004 (No. 10 of 2004)	National and Provincial	07 June 2004
National Environmental Management Waste Act (Act 59 of 2008)	National and Provincial	10 March 2009
National Heritage Resources Act (No. 25 of 1999)	National and Provincial	28 April 1999

Occupational Health & Safety Act (No. 85 of 1993)	National and Provincial	23 June 1993
South African Schools Act (No. 84 of 1996)	National and Provincial	6 November 1996
The Basic Education Laws Amendment Act (No. 15 of 2011)	National and Provincial	19 September 2011
Higher Education Amendment Act (No. 39 of 2008)	National and Provincial	04 February 2009
Further Education and Training Colleges Amendment Act (No. 1 of 2013)	National and Provincial	18 March 2013

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES X
If YES, what estimated quantity will be produced per month?	

Solid waste will be produced during the construction phase. The waste will be temporarily stored in designated skips on site and will then be taken off site by an appointed waste contractor to the closest registered landfill site.

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

Disposed at nearest landfill site.

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

The closest available municipal landfill site

Will the activity produce solid waste during its operational phase?	YES X	NO
If YES, what estimated quantity will be produced per month?	Less than 100m^3	

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

Solid waste during the operational phase will be temporarily stored on site in the allocated waste/ skip enclosure. The waste will be collected by the local municipality's designated waste contractor. Any other solid waste not collected by the designated municipal contractor will be taken off site to the closest registered landfill site.

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

The waste will either collected by a municipal appointed waste contractor or taken to the closest registered landfill site. The Msinga Local Municipal waste department will be contacted 033 493 0761 to identify the closest landfill site.

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

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 whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? NO X
Should any hazardous waste in the forms of oils rags, cement bags etc, be produced during either the construction or operational phase, the waste will be temporarily stored in a designated hazardous skip and the temporary storage will not exceed 35m^3 at any given time.
If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility? NO X

If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? NO X
If YES, what estimated quantity will be produced per month?
Will the activity produce any effluent that will be treated and/or disposed of on site? NO X

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.

Will the activity produce effluent that will be treated and/or disposed of at another facility? NO X
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:

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other that exhaust emissions and dust associated with construction phase activities? NO X
If YES, is it controlled by any legislation of any sphere of government?
If YES, the applicant must consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.
If NO, describe the emissions in terms of type and concentration:

Types of emissions include exhaust emissions and dust associated with construction phase activities. These emissions generated into the atmosphere will be temporary and limited to the construction phase, as the project is not anticipated to produce any emissions during the operation phase. It is recommended that all construction vehicles are regularly serviced and kept in good working condition to minimise exhaust emissions. Furthermore a water cart / truck must be used as a dust suppression measure to reduce the dust related impacts.

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?	YES	NO X

If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?	YES X	
If YES, is it controlled by any legislation of any sphere of government?		NO X

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:

An increase in noise levels is expected during the construction phase due to construction vehicles and machinery. Mitigation measures included in the Environmental Management Programme (EMPr) attached as Appendix G to this Report.

13. WATER USE

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

Municipal	

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 authorisation (general authorisation or water use license) from the Department of Water Affairs?		NO X

If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

14. ENERGY EFFICIENCY

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

None

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

None

LAYOUT ALTERNATIVES

There are two layout alternatives for the proposed project. Paragraph 3 will only be repeated. Paragraphs 4-13 below will not be repeated because the information is the same as above for the site alternative.

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:	**Size of the activity:**
Alternative A1[2] (preferred activity alternative)	100 000 m^2
Alternative A2 (if any)	100 000 m^2
Alternative A3 (if any)	100 000 m^2

or, for linear activities:

Alternative:	**Length of the activity:**
Alternative A1 (preferred activity alternative)	[redacted]
Alternative A2 (if any)	
Alternative A3 (if any)	

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

Alternative:	**Size of the site/servitude:**
Alternative A1 (preferred activity alternative)	150 000 m^2
Alternative A2 (if any)	150 000 m^2
Alternative A3 (if any)	150 000 m^2

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

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

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

Please note that this section will just be completed once for the entire site.

Section B Copy No. (e.g. A): **N/A**

2. Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section? YES X

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

Property description/physical address:

Province	Kwa-Zulu Natal
District Municipality	Umzinyathi District Municipality
Local Municipality	Msinga Local Municipality
Ward Number(s)	4
Farm name and number	Farm 4665 of Msinga
Portion number	N/A
SG Code	N0GT00000000466500000

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

Current land-use zoning as per local municipality IDP/records:

The land is currently used for grazing and is undeveloped.

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required? YES X

SITE ALTERNATIVES

There is only one site alternative for the proposed project; therefore Paragraphs 1-6 below will not be repeated.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	

Alternative S2 (if any):

Alternative S3 (if any):

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

2.1 Ridgeline		2.4 Closed valley		2.7 Undulating plain / low hills	X
2.2 Plateau		2.5 Open valley		2.8 Dune	
2.3 Side slope of hill/mountain		2.6 Plain		2.9 Seafront	

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative S1:	**Alternative S2 (if any):**	**Alternative S3 (if any):**
Shallow water table (less than 1.5m deep)	NO X		
Dolomite, sinkhole or doline areas	NO X		
Seasonally wet soils (often close to water bodies)	NO X		
Unstable rocky slopes or steep slopes with loose soil	NO X		
Dispersive soils (soils that dissolve in water)	NO X		
Soils with high clay content (clay fraction more than 40%)	NO X		
Any other unstable soil or geological feature	NO X		
An area sensitive to erosion	NO X		

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. GROUNDCOVER

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

Natural veld with scattered aliens[E]	

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.

According to the wetland and biodiversity report (Appendix D), *A tortilis* and *A. natalita* were the dominant species on site. The majority were small (< 2m) and some stunted, suggesting secondary growth as a result of historical clearing and heavy browsing by goats in particular. Grass cover was good in the central portion of the site. *Themeda triandra* was noted as well as less palatable species such as *Sporobolus pyramidalis* (figure 4). Exotic species on site include *A. americana* and *Opunita ficus-indica* (figure 5).

Figure 4: Good grass cover within the central portion of the site area.

Other species noted on site included:

Aloe marlothii *Phylanthus reticulates*

Rhus (Searsia) pentheri
Ozoroa paniculosa
Dichrostachys cinerea
Ziziphus mucronata
Euphorbia ingens
Schotia brachypetala
Euclea divinorum

Floral diversity was fairly good despite clear evidence of disturbance and representative of SVs 1.

Figure 5: The exotic *A. americana* noted on site

The following RDB species were listed and possibly occurring onsite during screening:

Crinum macowanii
Aloe linearifolia
Adenia gummifera

None were noted on site and it is unlikely that they will be encountered on the site based on the nature of the on site habitat

5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River	[redacted]	NO	[redacted]
Non-Perennial River	YES	[redacted]	
Permanent Wetland	[redacted]	NO	
Seasonal Wetland		NO	
Artificial Wetland		NO	

Estuarine / Lagoonal wetland	[redacted]	NO	[redacted]

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse (Refer to Appendix D for the Wetland Delineation Report).

According to the wetland specialist, no wetland areas were noted on site. A minor intermittent drainage line was noted within the site area. The Cwaka River (seasonal flow) and a second intermittent drainage line were noted to the north and east of the site.

The site falls on a minor water shed, where surface water drains in a westerly direction to the Cwaka River. By comparison to the surrounding undulating topography, the site is relatively flat. The most reliable indicator of water flow or possible water flow in dry areas is changes in topography. Water follows valley lines and low points by virtue of gravity. The presence of erosion channels were noted confirming the intermittent flow of water within the "valley" lines found on and adjacent to the site.

Figure 6: A minor valley which extends in a westerly direction.

No hydromorphic soils were noted on site, or associated with the identified water courses. The water courses contained and were identifiable by alluvium (Cwaka River) and shale bedrock exposed by hydraulic erosion.

Figure 7: Exposed bedrock as a result of intermittent water flow within a shallow valley.

No hygrophilous vegetation was noted on site, or associated with the identified drainage lines. Essentially there was no difference in the nature or type of vegetation present in the surrounding area and adjacent to the water courses.

6. LAND USE CHARACTER OF SURROUNDING AREA

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

Natural area		
Low density residential (rural housing)		
	School	
	Tertiary education facility	
Informal residential[A]		Agriculture
		River, stream or wetland

If any of the boxes marked with an "N "are ticked, how will this impact / be impacted upon by the proposed activity?

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

There is an informal settlement located within 500m of the proposed site. The proposed FET college will have no impact on the informal settlement and the settlement will have no impact on the proposed FET college.

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)	YES X	
Core area of a protected area?		NO X
Buffer area of a protected area?		NO X
Planned expansion area of an existing protected area?		NO X
Existing offset area associated with a previous Environmental Authorisation?		NO X
Buffer area of the SKA?		NO X

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

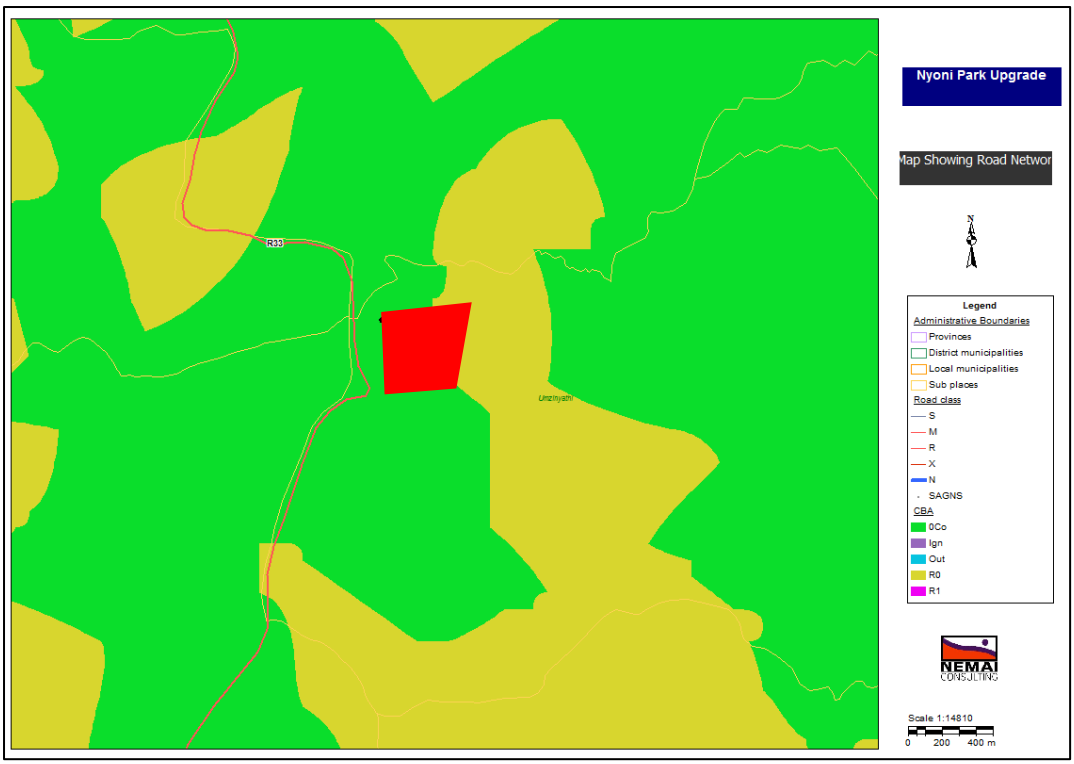

Figure 8: Map indicating the CBA areas within which the Msinga site (in red) is located

LAYOUT ALTERNATIVES

There are two layout alternatives for the proposed project. However, Paragraphs 1-6 will not be repeated because the information is the same as above for the site alternative.

7. 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 paleontological sites, on or close (within 20m) to the site? If YES, explain:	YES X

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

Masetloaka Scott Wilson (MSW) Engineers, on behalf of the Department of Higher Education and Training (DHET) has appointed Nemai Consulting to conduct an Environmental Assessment for the proposed Further Education and Training (FET) Colleges. The proposed Msinga Campus is amongst other Colleges to be built in other areas of KwaZulu Natal, KwaZulu Natal (Amafa) and the Eastern Cape.

Part of the environmental assessment includes Phase 1 of 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 of KwaZulu Natal (Amafa) for comment as per the National Heritage Resources Act (Act No 25 of 1999).

Informal graves were found scattered within the proposed site. It is therefore recommended that based on the findings of the survey the construction may not proceed until the mitigation measures provided to protect the graves are taken into consideration prior to commencement of the construction. Graves may either be relocated; this process includes social consultation of the affected relatives or, a 10m buffer fence should be placed around each grave or group of graves to protect them during the construction phase. It should be noted that no construction is allowed beyond the allocated buffer.

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

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

The following information was obtained from *Quantec I reference as Quantec Research (Pty) Ltd. (2012, May 14). RSA Regional Indicators . Lynnwood, Gauteng, South Africa.*

Region Concept	P5D04M03: Msinga Local Municipality

IT000: Employed - Formal and informal - Total (Number)	8638
UT000: Unemployed (Number)	10446
UT001: Unemployment rate (Percentage)	54.73695242

Economic profile of local municipality:
The following information was obtained from *Quantec I reference as Quantec Research (Pty) Ltd. (2012, May 14). RSA Regional Indicators . Lynnwood, Gauteng, South Africa.*

Geography	P5D04M03: Msinga Local Municipality
Industry	
0: Total	806.1556713
PA: Agriculture, forestry and fishing [SIC: 1]	66.41824973
PB: Mining and quarrying [SIC: 2]	5.978107929
SC: Manufacturing [SIC: 3]	130.8668129
SD: Electricity, gas and water [SIC: 4]	9.525477533
SE: Construction [SIC: 5]	66.06620963
TF: Wholesale and retail trade, catering and accommodation [SIC: 6]	108.1690704
TG: Transport, storage and communication [SIC: 7]	103.1600652
TH: Finance, insurance, real estate and business services [SIC: 8]	87.21625459
TI: Community, social and personal services [SIC: 92, 95-6, 99, 0]	73.74873702
TJ: General government [SIC: 91, 94]	155.0066864

Level of education:
The following information was obtained from the following source: Statistics South Africa. (2013, 11 01). Census 2011. Pretoria, Gauteng, South Africa

	No schooling	Some primary	Completed primary	Some secondary	Grade 12/Std 10	Higher	Other	Unspecified	Not applicable	Grand Total
KZN244: Msinga	34302	55764	8493	32712	14991	2436	-	60	28824	177582

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R120M
What is the expected yearly income that will be generated by or as a result of the activity?	R 134 048 750.00
Will the activity contribute to service infrastructure?	YES X
Is the activity a public amenity?	YES x
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	330
What is the expected value of the employment opportunities during the development and construction phase?	R6M
What percentage of this will accrue to previously disadvantaged individuals?	75 %
How many permanent new employment opportunities will be created during the operational phase of the activity?	58
What is the expected current value of the employment opportunities during the first 10 years?	R 84 450 713.00

What percentage of this will accrue to previously disadvantaged individuals?	75 % or more

9. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult http://bgis.sanbi.org or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

Systematic Biodiversity Planning Category				**If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan**
Critical Biodiversity Area (CBA)	[redacted]	Other Natural Area (ONA)	[redacted]	According to KZNWildlife Terrestrial Systematic Conservation Plan, it is listed as R0=Biodiversity Priority Area 3

b) Indicate and describe the habitat condition on site

Habitat Condition	**Percentage of habitat condition class (adding up to 100%)**	**Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).**
Natural	0%	
Near Natural (includes areas with low to moderate level of alien invasive plants)	100%	Floral diversity was fairly good despite clear evidence of disturbance and representative of SVs 1.
Degraded (includes areas heavily invaded by alien plants)	0%	
Transformed	0%	

(includes cultivation, dams, urban, plantation, roads, etc)		

c) Complete the table to indicate:

(i) the type of vegetation, including its ecosystem status, present on the site; and

(ii) whether an aquatic ecosystem is present on site.

Vegetation Type	Ecosystems Status
Thukela Valley Bushveld	Least Threatened

Terrestrial Ecosystems		Aquatic Ecosystems				
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)		Wetland (including rivers, depressions, channelled and unchanneled wetlands, flats, seeps pans, and artificial wetlands)		Estuary		Coastline
	Least Threatened X	YES X		NO X		NO X

d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

The site falls within the Savanna Biome and is characterised by the Thukela Valley Bushveld. The Thukela Valley Bushveld is found in KwaZulu-Natal Province: Central Thukela River basin upstream of Jameson's Drift, past Tugela Ferry to about 20km southeast of Ladysmith. Also in valleys of several major tributaries, such as the lower Mooi, Bushmans, Buffels and Sunday Rivers (Mucina and Rutherford, 2006).

The Important taxa in this vegetation type include species such as *Sclerocarya birrea, Combretum apiculatum, Spirostachys africana, Acacia tortilis, Berchemia zeyheri, Boscia albitrunca, Combretum molle, Cussonia spicata, Pappea capensis, Schotia brachypetala, Aloe marlothii, etc.*(Mucina and Rutherford, 2006).

The conservation status of this vegetation type is classified as Least threatened with a conservation target of 25%. Statutorily conserved (less than 200ha) in the Weenen Game Reserve. This vegetation unit has undergone considerable degradation over almost its entire area. In the many eroded areas, prolonged continuous overgrazing has led to the complete destruction of the grass cover (Mucina and Rutherford, 2006).

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	To be confirmed in the final BAR.
Date published	To be confirmed in the final BAR.

Site notice position	Latitude	Longitude
1	28° 39' 14.21"	30° 28' 22.61"
2	28° 39' 14.51"	30° 28' 10.37"
3	28° 39' 14.31"	30° 28' 03.27"
4	28° 39' 01.44"	30° 28' 25.93"
Date placed	To be confirmed in the final BAR	

Include proof of the placement of the relevant advertisements and notices in Appendix E1.

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 54(2)(e) and 54(7) of GN R.543.

Key stakeholders (other than organs of state) identified in terms of Regulation 54(2)(b) of GN R.543:

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
To be confirmed in the Final BAR	To be confirmed in the Final BAR	To be confirmed in the Final BAR

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP

No issues received to date. All issues raised by interested and affected parties (I&APs) will be incorporated in the Final Basic Assessment Report.

4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as Appendix E3.

No comments received to date. All comments received will be incorporated in a Comments and

Responses Report which will be attached as Appendix E3 to the Final Basic Assessment Report.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
DAEA Umzimyathi	Gerald Willis Smith	0342999667			Talana Building, 29 Beacon Street, Dundee
DWA	Mr S Govender	0313362718		govenders@dwa.gov.za	P.O.Box 1018, Durban, 4000 88 Joe Slovo Street (old Field Street, Southern life building, 9th floor, Durban
Msinga Local Municipality	FB Sithole	033 493 0761			Private Bag X530, Tugela Ferry, 3010
Umzinyathi District Municipality	Sharmaine Moodley	034 219 1500			39 Victoria Street, Princess Magogo building, Dundee
Ward 4 Councillor	MW Sokhela	082 760 4847			Msinga Tugela Ferry Main Road
Msinga Local Library	Librarian				Private Bag X530, Tugela Ferry, 3010
SAHRA / AMAFA	Information relating to the project will be uploaded onto the SAHRA website for the attention of				

	AMAFA – Weziwe Tshabalala				
KZN Wildlife	Dominic Weiners				P.O.Box 13053, Cascades, PMB 3202
Department of Transport	Roy Ryan				P/Bag x9043, PMB, 3200
Eskom	Barbara van Geens	021 980 8675		vangeensb@eskom.co.za	Eskom road, Protea Heights, Brackenseel, 7160

Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E4.

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

6. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for any activities (linear or other) where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub-regulation to the extent and in the manner as may be agreed to by the competent authority.

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included as appendix E5.

Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum 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. 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

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

Please note: The Significance value of the impacts provided below represents the overall impact score (Please refer to Impact Assessment in Appendix F which describes this fully). The Significance value in the table below refers to the overall impact score BEFORE the proposed mitigations. Please refer to Appendix F for the overall impact scores AFTER the proposed mitigations.

Activity	Impact summary	Significance	Proposed mitigation
Alternative A1 & A2: All impacts are applicable to both alternative layouts unless otherwise indicated.			
PRE-CONSTRUCTUION PHASE			
	Direct impacts:		
	Increased stormwater runoff	Low	Mitigation is straight forward and requires the implementation of suitable stormwater management measures to ensure a retardation of flow and a near natural release of stormwater into the receiving watercourse. Of the two layout options evaluated, Option B is likely to have the greatest unmitigated impacts as a result of the density of development on site. Option A appears to have a dense central development node, with areas of low density along the

Activity	Impact summary	Significance	Proposed mitigation
			eastern and western boundaries. Option A, with the inclusion of an agricultural area provides the option of instituting water harvesting for irrigation purposes. Ultimately once mitigation measures have been implemented, the difference in impact nature and intensity between the two layout options will be insignificant.
	Increased stormwater runoff	Medium	Mitigation is straight forward and requires the implementation of suitable stormwater management measures to ensure a retardation of flow and a near natural release of stormwater into the receiving watercourse. Of the two layout options evaluated, Option B is likely to have the greatest unmitigated impacts as a result of the density of development on site.
	Impact on flora due to site preparation	Medium	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. 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.
	Impact on fauna during site preparation	Medium	During site preparation special care must be taken during the clearing of the works area to minimise damage or disturbance of possibly roosting and nesting sites. Before construction commences, barricading

Activity	Impact summary	Significance	Proposed mitigation
			measures to be utilised should not restrict the movement of the fauna in the area.
	Impact on Fauna (Search and Rescue)	Medium	A qualified and / or appropriately experienced Zoologist or an experienced person who knows the animals in the region well will identify any possible Red Data fauna on site and the necessary permits to relocate fauna will be obtained if avoidance is not possible. Training of construction workers to recognise threatened animal species will reduce the probability of fauna being harmed unnecessarily.
	Indirect impacts:		
	Cumulative impacts:		
CONSTRUCTION PHASE			
	Direct impacts: Possible erosion on steep slopes and loss of top soil. Compaction of top soil through construction activities. An increased sediment load within the watercourses may impact on the water quality and habitat quality of the watercourses.	Medium	Stabilisation of cleared areas to prevent and control erosion will be actively managed. The method chosen (e.g. watering, planting, retaining structures, commercial anti-erosion compounds) will be selected according to the site-specific conditions. Construction employees to be restricted to approved access roads and walk ways. Adequate measures to be implemented for soil erosion and soil contamination as a result of hydrocarbon spills which in turn will impact vegetation on site.
	Increased stormwater runoff	Low	Mitigation is straight forward and requires the implementation of suitable stormwater management measures to ensure a retardation of flow and a near natural release of stormwater into the receiving watercourse. Of the two layout options evaluated, Option B is likely to have the greatest

Activity	Impact summary	Significance	Proposed mitigation
			unmitigated impacts as a result of the density of development on site. Option A appears to have a dense central development node, with areas of low density along the eastern and western boundaries. Option A, with the inclusion of an agricultural area provides the option of instituting water harvesting for irrigation purposes. Ultimately once mitigation measures have been implemented, the difference in impact nature and intensity between the two layout options will be insignificant.
	Increased stormwater runoff	Medium	Mitigation is straight forward and requires the implementation of suitable stormwater management measures to ensure a retardation of flow and a near natural release of stormwater into the receiving watercourse. Of the two layout options evaluated, Option B is likely to have the greatest unmitigated impacts as a result of the density of development on site.
	Infilling of drainage line	Low	The agricultural area that will be utilized for layout option A may encroach slightly into the catchment of a weak drainage line to the east of the site. No infilling will take place and the use of the surrounding land for grazing or crop production will have an insignificant effect on the hydrology. The only mitigation option would be to protect the head of the minor drainage line to the west using a buffer. The practical difference that this would make to the functioning of the system is questionable as the system is at best

Activity	Impact summary	Significance	Proposed mitigation
			intermittent and exceptionally small by comparison to the receiving river.
	Habitat Loss	Medium	The only possible mitigation option would be for the ECO to do a thorough site sweep prior to construction to ensure no important species have been over looked. If any are found these could be moved off site as part of a plant rescue program. Such an undertaking will reduce the probability biodiversity related impacts.
	Soil contamination, vegetation loss and vegetation disturbance due to fuel and chemical spills.	Medium	Employ on site personnel responsible for preventing and controlling potential soil pollution through fuel and oil leaks and spills. Make sure construction vehicles are maintained and serviced to prevent oil and fuel leaks. Emergency on-site maintenance should be done over appropriate drip trays and all oil or fuel must be disposed of according to waste regulations. Drip-trays must be placed under vehicles and equipment when not in use.
	Vegetation and habitat disturbance due to the accidental introduction of alien species.	Medium	Promote awareness of all personnel. 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 upon approval from the Environmental Control Officer.
	Vegetation and habitat disturbance due to pollution and littering during construction phase.	Low	Employ personnel on site responsible for preventing and controlling of litter. Promote housekeeping with daily clean-ups on site. Before construction commences, construction workers should be educated with regards to littering, *ad hoc* veld fires, and dumping. No fires are allowed on site.

Activity	Impact summary	Significance	Proposed mitigation
	Damage to plant life outside of the proposed development area	Low	Construction activities should be restricted to the footprint area. All workers must be trained before construction commences.
	Disturbance to animals	Low	Animals residing within the designated area shall not be unnecessarily disturbed. Before construction starts, construction workers must be educated with regards to littering and poaching. The Contractor and his/her employees shall not bring any domestic animals onto site. Toolbox talks should be provided to contractors regarding disturbance to animals. Particular emphasis should be placed on talks regarding snakes.
	Allow for safe animal passage through and specifically out of the construction site.	Low	Construction areas must be demarcated but should allow for the migration of small faunal species out of the construction zone. Fencing types must be selected for minimal disturbance to animal movement corridors (e.g. palisade fencing is preferable to diamond-mesh fencing).
	Dust from movement of construction vehicles and machinery as well as bare surface areas. Vehicles and construction machinery's emissions. Smoke from uncontrolled fires.	Low	Dust abatement measures to be implemented for construction activities. Vehicles not to travel faster than 30km on servitude road. Bare areas (i.e. siphon sections) must be watered to minimise dust. No uncontrolled fires to be allowed on site.
	Noise associated with construction activities (e.g. vehicle movement, demolition work, generators).	Low	The provisions of SANS 10103 will apply to all areas within audible distance of residents. Construction activities generating output levels of 55 dB or more will be confined to normal working hours. Construction work to be restricted to approved working hours.

Activity	Impact summary	Significance	Proposed mitigation
			Construction machinery (especially silencers) to be maintained and kept in working condition. No loud music to be played on servitude or at construction camp site.
	Visual alterations to the area. Visual impact associated with construction camp/s Adverse impacts on the landscape character and sense of place of the affected area.	Low	Construction camp to be positioned so as to minimize its visual impacts. Sound housekeeping practices to be enforced. Damage to the natural environment should be minimised. Vegetation should be cut only if absolutely necessary. The clearing of all sites should be kept to a minimum and surrounding vegetation should as far as possible be left intact.
	Development of FET College Uncontrolled access to servitude. Construction employees getting injured.	Medium	Construction methodology to make provision for development of FET College. Compliance with Occupational Health and Safety Act (Act No. 85 of 1993). Contractor to provide an Occupational Health and Safety Management Plan to the Construction Manager for approval prior to the commencement of works in terms of the Construction Regulations (2003). Proper supervision of employees at all times. Employees to be clearly identifiable. Employees to remain within the servitude and no loitering to be allowed. Access into and out of the servitude must only be via existing access roads from local public roads.

Activity	Impact summary	Significance	Proposed mitigation
			Contractor to prepare and submit, for approval, a rescue procedure for employees in the case of an injury.
	Use of veld/ riparian areas for ablution purposes. Land, air and water pollution through poor waste management practises.	Medium	Sufficient ablution facilities to be provided at the Construction Camp and along construction servitude. Ablution facilities to be maintained. No ablution facilities to be positioned within riparian areas. Suitable litter receptacles to be positioned strategically across the site at all working areas. Contractor to submit waste management plan prior to commencement. Such plan to be approved by ECO and enforced by contractor. Waste must be separated at source (e.g. containers for glass, paper, metals, plastics, organic waste and hazardous wastes).
	Job Creation	N/A	Employment creation is a positive impact therefore no mitigation measures are required.
	Education Provision	N/A	The provision of education is a positive impact therefore no mitigation measures are required.
	Damage to archaeological sites. Damage to graves.	Medium	Should remains and/or artefacts be discovered on the site during earthworks, all work will cease in the area affected and the Contractor will immediately inform the Construction Manager. Should any heritage resources be exposed during excavation or be found on site, the relevant heritage resource agency (SAHRA) must be informed and a registered heritage specialist must be called to site for inspection. For the graves : • There are two options

Activity	Impact summary	Significance	Proposed mitigation
			when dealing with graves. The first option is that the graves should be exhumed and skeletal remains to be reburied. This is an extensive process involving social consultation and permitting from SAHRA. • The second option is to place a fence around each grave or a group graves and note that no work is allowed 10 metres away from the fence. • All staff involved in the construction phase should be advised to report any heritage resources found. • 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 (Amafa) must be informed about the finding. Such heritage resources will have to be recorded and removed by a qualified heritage practitioner/archaeologist or incorporated into the project. • Permits to be obtained from the Provincial Heritage Resources Authority-KwaZulu Natal (Amafa) if heritage resources are to be impacted upon. • Under no circumstances may any heritage material be destroyed or removed from site. • Should any remains be found on site that is potentially human remains,

Activity	Impact summary	Significance	Proposed mitigation
			the South African Police Service should also be contacted.
	Indirect impacts:		
	Cumulative impacts:		
OPERATION PHASE			
	Direct impacts: Increased stormwater runoff	Low	Mitigation is straight forward and requires the implementation of suitable stormwater management measures to ensure a retardation of flow and a near natural release of stormwater into the receiving watercourse. Of the two layout options evaluated, Option B is likely to have the greatest unmitigated impacts as a result of the density of development on site. Option A appears to have a dense central development node, with areas of low density along the eastern and western boundaries. Option A, with the inclusion of an agricultural area provides the option of instituting water harvesting for irrigation purposes. Ultimately once mitigation measures have been implemented, the difference in impact nature and intensity between the two layout options will be insignificant.
	Indirect impacts:		
	Cumulative impacts: The proposed development may affect biodiversity through the encroachment of exotic vegetation following soil disturbance, in addition the maintenance of the area would disturb naturalised species within the area.	Medium	Encroachment of alien vegetation should be monitored regularly and controlled; the area must be kept clear of all invader plants as per the Conservation of Agricultural Resources Act, 1983 (Act No 43 of 1983). Rehabilitation measures must be employed until such a time as indigenous species are established.

A complete impact assessment in terms of Regulation 22(2)(i) of GN R.543 must be included as Appendix F.

Please see Appendix F.

2. 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 A1

This alternative is for the construction of a new FET College in Msinga, at the identified location using Layout alternative A1.

The key factors which formed part of evaluating the potential environmental impacts associated with the proposed project included the significance of the impacts likely to result from each of the project life-cycle phases, the receiving environment, the extent of the development footprint as well as the degree to which adverse environmental impacts could be either prevented, minimised, rehabilitated or compensated to a satisfactory level.

This alternative will result in the following positive impacts:

- Job creation;
- Provision of higher education facilitates.

The following negative impacts are however associated with this alternative:

- Increased stormwater runoff possible infilling of the drainage line;
- Habitat Loss.

The main impacts that may arise from the proposed FET College is the potential increased stormwater runoff and habitat loss. The infilling of the drainage line will not occur as a buffer will be implemented thus preventing this impact from occurring. All impacts that have been identified can be mitigated against and or minimised.

All recommendations made by the wetland specialist must be adhered to and the site specific Environmental Management Programme (EMPr) must be implemented to ensure that all potential impacts are mitigated against. The findings of the impact assessment carried out concluded that there is no fatal flaw which prevents the proposed project from proceeding provided that all recommendations are adhered to.

Alternative A2(preferred alternative)

This alternative is for the construction of a new FET College at the identified site using Layout alternative A2.

The key factors which formed part of evaluating the potential environmental impacts associated with the proposed project included the significance of the impacts likely to result from each of the project life-cycle phases, the receiving environment, the extent of the development footprint as well as the degree to which adverse environmental impacts could be either prevented, minimised, rehabilitated or compensated to a satisfactory level.

This alternative will result following positive impacts:

- Job creation;
- Provision of higher education facilitates.

The following negative impacts are however associated with this alternative:

- Increased stormwater runoff possible infilling of the drainage line;
- Habitat Loss.

The main impacts that may arise from the proposed FET College is the potential increased stormwater runoff and habitat loss. The infilling of the drainage line will not occur as a buffer will be implemented thus preventing this impact from occurring. All impacts that have been identified can be mitigated against and or minimised.

All recommendations made by the wetland specialist must be adhered to and the site specific Environmental Management Programme (EMPr) must be implemented to ensure that all potential impacts are mitigated against. The findings of the impact assessment carried out concluded that there is no fatal flaw which prevents the proposed project from proceeding provided that all recommendations are adhered to. There are slight differences in the layout options and this is not preferred.

No-go alternative (compulsory)

The 'No-Go' alternative means that the proposed development will not take place and the area will retain its status quo. If the development does not occur, no new college facility will be built. This will result in a lack of benefit to the local communities both with respect to job opportunities and procurement. The necessary elements of educational facilities will not be in place for the intake of students at the start of the 2014 academic year as defined in the tender clarifications.

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?	YES X

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

If "YES", please 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.

Based on the information contained in this report, and taking into account the outcome of the impact assessment, opinions and recommendations included in the specialist studies as well as all supporting documentation it is the recommendation of the practitioner that Environmental Authorisation (EA) be granted by the Department of Environmental Affairs (DEA) for **Alternative S1 and A1.**

Furthermore the following conditions for inclusion in the EA are recommended:

- Construction should take place during the dry season (i.e. low rainfall period);
- The Environmental Management Programme should form part of the contract with the Contractor appointed by the proponent, as a means of facilitating compliance with environmental specifications and the implementation of mitigation measures;
- Preventative measures avoiding contaminated runoff from the construction area into the watercourses, must be implemented throughout the construction phase; and

○ An Independent Environmental Control Officer (ECO) must be appointed by the proponent prior to the commencement of construction activities. The ECO's primary role will be to assess whether construction activities are implemented as per the conditions stipulated in the EA.

Is an EMPr attached?	YES	NO
	X	

The EMPr must be attached as Appendix G.

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix H.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix I.

Any other information relevant to this application and not previously included must be attached in Appendix J.

Manogrie Chetty
NAME OF EAP

SIGNATURE OF EAP

25 October 2013
DATE

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps
- *Appendix 1: Locality Map*
- *Appendix 2: Site or Route Plan*
- *Appendix 3: Sensitivity Maps*

Appendix B: Photographs

Appendix C: Facility illustration(s)
- *Appendix C1: Layout A*
- *Appendix C2: Layout B*

Appendix D: Specialist reports (including terms of reference)

Appendix 1: Wetland Assessment and Delineation and Ecological Survey
Appendix 2: Heritage Impact Assessment

Appendix E: Public Participation
Appendix 1 – Proof of newspaper advertisements
Appendix 2 – Proof of I&AP (Key Stakeholders) Notification
Appendix 3 – Comments and Responses Report
Appendix 4 – Proof of I&AP (Authorities or Organs of State) Notification
Appendix 5 – List of I&APs
Appendix 6 - Correspondence and Minutes

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information