PROPOSED UPGRADING OF THEMBINKOSI PRIMARY SCHOOL SITUATED AT ERF 803 AND 804 IN OSIZWENI D (WARD 9) IN THE NEWCASTLE LOCAL MUNICIPALITY, AMAJUBA DISTRICT, KZN

Environmental Management Programme

File Ref No (EIA): DC25/0001/2020

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NCC Ref No: N0119

PREPARED FOR:

The KZN Department of Education (KZN-DoE)

The Coega Development Corporation (CDC)

The KZN Department of Economic Development, Tourism and Environmental Affairs (EDTEA)

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ENVIRONMENTAL MANAGEMENT PROGRAMME

Completed in terms of the National Environmental Management Act, 1998 (Act No.107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2014 (as amended).

February 2020

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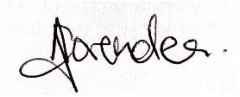
Signature				
Date	6 November 2019	3 February 2020	3 February 2020	3 February 2020

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ABBREVIATIONS

ADM	Amajuba District Municipality
BA	Basic Assessment
BAR	Basic Assessment Report
BSP	Biodiversity Sector Plan
CAR	Corrective Action Report
CBA	Critical Biodiversity Area
CDC	Coega Development Corporation
DBEC	Delta Built Environment Consultants
EDTEA	Economic Development, Tourism and Environmental Affairs
ESA	Ecological Support Area
DEAT	Department of Environmental Affairs and Tourism
DOE	Department of Education
DWS	Department of Water Affairs and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EKZNW	Ezemvelo Kwa-Zulu Natal Wildlife
EMPr	Environmental Management Programme
EO	Environmental Officer
IDP	Integrated Development Plan
MSDS	Material Safety Data Sheet
NCR	Non-Conformance Report
NEMA	National Environmental Management Act
NFEPA	National Freshwater Ecosystem Priority Area
NLM	Newcastle Local Municipality
PM	Project Manager
ROSE	Recycling Oil Saves the Environment
SAHRA	South Africa Heritage Resources Agency
SANBI	South African National Biodiversity Institute
SDC	Safe Disposal Certificate
SDF	Spatial Development Framework
SHE	Safety, Health and Environmental
TBC	To Be Confirmed

GLOSSARY OF SELECTED TERMS AND DEFINITIONS

CONTAMINATION	The release/spillage of a substance into an environment where it is not normally found, which is detrimental to that environment, its ecosystems and to humans.
CORRECTIVE (OR REMEDIAL) ACTION	Reactive response required to address an action that is in conflict with the requirements of the Site Documentation. The need for corrective action may be determined through monitoring, audits or management review.
DEVELOPER	The KZN Department of Education, an Organ of State, who is also the Applicant for the proposed Project.
DOMESTIC WASTE	Means waste, excluding hazardous waste that emanates from premises that are used wholly or mainly for residential, educational, health care, sport or recreation purposes; *(NEM: WA, Act No. 59, 2008).*
ENVIRONMENT	Means the surrounding within which humans exist and that are made up of: (i) The land, water and atmosphere of the earth; (ii) Micro-organism, plant and animal life; (iii) Any part or combination of (i) and (ii) and the interrelationships among and between them; and the physical, chemical aesthetical and cultural properties and conditions of the foregoing that influence human health and wellbeing *(NEMA, Act 107 of 1998)*.
ENVIRONMENTAL IMPACT ASSESSMENT (EIA)	Means the systematic process of identifying, assessing and reporting environmental impacts associated with an activity and includes the basic assessment report and/or scoping and environmental impact assessment report (NEMA EIA Regulations GN. R982 of 2014, as amended).
IMPACT	A description of the potential effect or consequence of an aspect of a development on a specified component of the biophysical, social or economic environment within a defined time and space.
INCIDENT	An undesired event which may result in a significant environmental impact but can be managed through internal response.
MITIGATION	Measures designed to avoid, reduce or remedy the proposed adverse impacts (*DEAT, 1998*).
MONITORING	The repetitive and continued observation, measurement and evaluation of environmental criteria to follow changes over a period of time and to assess the efficiency of control measures *(DEAT, 1998)*.
POLLUTION	Means any contamination or change in the environment caused by: • Substances; • Radioactive or other waves; or • Noise, odours, dust or heat Emitted from any activity, including the storage or treatment of waste or substances, construction and the provision of services, whether engaged in by any person or organ of state, where that change has an adverse effect on human health or wellbeing or on the composition, resilience and productivity of natural or managed ecosystems, or on materials useful to people, or will have such an effect in the future (*NEMA, Act No. 107 of 1998)*.
PROJECT	The proposed expansion of Thembinkosi Primary School situated at erf 803 and 804 in Osizweni D (Ward 9) in the Newcastle Local Municipality, Amajuba District, KwaZulu-Natal where Listed Activity No. 27 in Listing Notice 1 of 4 December 2014 (GN. R983) would be triggered, requiring environmental authorisation.
WASTE	Any substance, whether or not that substance can be reduced, re-used, recycled and recovered – (a) that is surplus, unwanted, rejected, discarded, abandoned or disposed of; (b) which the generator has no further use of for (he purposes of production; (c) that must be treated or disposed of; or (d) that is identified as a waste by the Minister by notice in the Gazette, and includes waste generated by the mining, medical or other sector, but— (i) a by-product is not considered waste; and (ii) any portion of waste, once re-used, recycled and recovered, ceases to be waste; *(NEM: WA, Act 59 of 2008).*

1 INTRODUCTION

1.1 Background

The Coega Development Corporation (Pty) Ltd (**CDC**) (the Developer's Agent) is assisting the KwaZulu-Natal Department of Education (**KZN-DoE**) (The Developer) in implementing various projects within the province of KwaZulu-Natal. NCC Environmental Services (Pty) Ltd (**NCC**) has been contracted by CDC to assist with proactive environmental management services for the "*Proposed expansion of Thembinkosi Primary School situated at erf 803 and 804 in Osizweni D (Ward 9) in the Newcastle Local Municipality, Amajuba District, KwaZulu-Natal"* (hereafter referred to as the "Project"). This Environmental Management Programme (**EMPr**) has been prepared as part of a Basic Assessment (**BA**) process to provide specific environmental guidance to the relevant Engineers and Contractors(s) for the planning, construction and rehabilitation of the proposed activities with regard to their responsibilities in terms of accountable environmental management.

The competent authority, the KZN Department of Economic Development, Tourism and Environmental Affairs (**EDTEA**), requires that an EMPr be submitted in accordance with Section 19 of the EIA Regulations published in Government Notice No. R. 982 of 4th December 2014 (as amended) (**EIA Regulations**). Section 19 should be read in conjunction with Section 24N of the National Environmental Management Act, 1998 (Act 107 of 1998), as amended and hereby referred to as '**NEMA**' throughout this document.

1.2 Scope of the EMPr

This EMPr is to be implemented by the Principal Contractor as well as any employee, agent or sub-contractor appointed to act on behalf of the DoE and the Contractor in the execution of the Project, in order to ensure environmental compliance on site. The effectiveness of the EMPr is limited by the level of adherence to the conditions set forth in the EMPr. It is further assumed that conformance to the EMPr will be monitored and audited as set out in this EMPr.

1.2.1 Description of an EMPr

This **EMPr** provides generic and site specific information on environmental management related to the Project in terms of minimising potential negative environmental impacts and enhancing positive environmental impacts during the Project. The EMPr has been compiled to form the basis of a management system to implement on this particular project to regulate and control construction-phase activities. An EMPr is a stand-alone document used to prescribe management mechanisms/ methods for the prevention of undue or reasonably avoidable adverse environmental impacts and for the enhancement of the positive environmental benefits of a given project. The EMPr is primarily based on the principles of NEMA, which

therefore bestows a 'Duty of Care' on those who cause, have caused or may in future cause pollution or degradation of the environment, as per of Section 28(1) of NEMA.

1.2.2 Purpose of this EMPr

This EMPr has been compiled to provide recommendations and guidelines for mitigation measures against environmental impacts and the monitoring thereof throughout the duration of the proposed project as to ensure that all relevant impacts are considered for the undertaking of environmentally responsible activities. The purpose of this EMPr is to provide both generic and direct specifications for "good environmental practice" for application during the planning, construction and rehabilitation (post-construction) phases of the project.

The EMPr informs the relevant project role-players (the Contractor, Project Engineers, Contractor, Environmental Control Officer (**ECO**) and all other staff employed at the site) as to their duties in the fulfilment of the environmental legal requirements during the construction and rehabilitation phase with particular reference to the prevention and mitigation of anticipated and potential negative environmental impacts. Furthermore, it aims to organise and coordinate the environmental management and mitigation measures with all construction activities implemented on the project and pragmatically describe these measures in order to prevent, reduce or otherwise manage the potential negative environmental impacts associated with the Project. Where opportunities exist to enhance any favourable impacts of the project, these have also been described in this EMPr. The objectives of an EMPr are to, but not limited to:

a) Ensure compliance with regulatory authority stipulations and guidelines which may be local, provincial, national and/or international;
b) To assign roles and responsibilities to parties involved regarding the implementation of this EMPr;
c) Verify environmental performance through information on impacts as they occur;
d) Outline mitigation measures and environmental specifications which are required to be implemented for all phases of the project in order to minimise the extent of negative environmental impacts, and to otherwise manage environmental impacts associated with the proposed project;
e) Detail specific actions deemed necessary to assist in minimising the environmental impact of the project;
f) Identify measures that could optimise beneficial impacts;
g) Create management structures that address the concerns and complaints of I&APs with regards to the Project;
h) Propose mechanisms for monitoring compliance with the EMPr and reporting thereon;
i) Specify time periods within which the measures contemplated in the final EMPr must be implemented, where appropriate.

1.2.3 Structure of the EMPr

The EMPr is divided into four Project phases. Each phase has specific issues and activities related to that period. The impacts are identified and given a brief description in line with the Project phases outlined in Regulation No. 982, Appendix 4, Section 1(d) highlighted below:

a) Planning and Design Phase

This section of the EMPr provides management principles for the planning and design phase of the Project prior to the undertaking of any construction activities. The primary environmental objective during this phase is to ensure the best suited environmental option for the Project is selected based on the final design (*i.e.* plans, drawings, layouts, surveys, environmental assessments and specialist studies) undertaken for the proposed development footprint.

b) Pre-Construction Phase

This section will provide guidelines on pre-construction activities including site establishment; environmental induction and training and awareness; site access and health and safety. Environmental actions, procedures and responsibilities are specified. Management principles are outlined and the Contractor will be required to follow these specifications to the satisfaction of the Project/Site Manager and ECO.

c) Construction Phase

This section of the EMPr provides management principles for the construction phase of the Project. Environmental actions, procedures and responsibilities specified. These specifications will to form part of any contractual documentation and the Contractor will therefore be required to comply with these specifications to the satisfaction of the Project/Site Manager and ECO.

d) Post-Construction (includes site de-establishment and Rehabilitation)

This section of the EMPr provides management principles for the rehabilitation phase of the Project. This will include best practice, procedures and responsibilities as required for various associated activities.

This EMPr is a dynamic document which can be updated as required on a continuous basis to ensure environmental best practice prevails. Any substantive EMPr amendments considered necessary must first be submitted to the Site Manager and ECO for consideration. Final amendments to the EMPr must be submitted to the authority (EDTEA) for a final decision.

1.3 Authors of the EMPr

Appendix 4(1) of the EIA Regulations, 2014, indicates that the EMPr must contain details of the EAP who prepared the document and the relevant expertise of the EAP. The EMPr has been prepared by Du Toit Malherbe and Craig Burne of NCC Environmental Services (Pty Ltd (hereafter referred to as 'NCC'). NCC is a Cape Town based environmental consulting firm with regional offices in Durban and Johannesburg. The company as extensive consulting experience in a variety of private and public sector development and construction projects throughout South Africa. The CV's of the authors are attached as **Annexure A**.

Du Toit Malherbe is an Environmental Consultant and holds a BSc Honours (Botany and Zoology) and BSc degree (Biodiversity and Ecology) from the University of Stellenbosch. Du Toit has been with the NCC since November 2011 and roles include consulting, monitoring and auditing compliance to Environmental Management Plans, Environmental Authorisations and relevant legislation during the construction of several renewable and other large-scale construction projects for various clients. Du Toit is a registered professional natural scientist with the South African Council for Scientific Professions (SACNASP) in the field of Environmental Science (registration number 118934).

Craig Burne is a Senior Environmental Consultant at NCC and has been with the company since February 2008. Craig is a registered professional natural scientist with the South African Council for Scientific Professions (SACNASP) in the field of Environmental Science with registration number 115213. Craig's qualifications include an MSc (by dissertation) in Aquatic Ecology from the University of the Witwatersrand, a BSc (Hons) in Environmental Science from the University of KwaZulu-Natal and a BSc degree with majors in Environmental Science and Zoology from Rhodes University. Craig is also an accredited SASS5 practitioner with the Department of Water and Sanitation (DWS).

1.4 Legal requirements

The Constitution of the Republic of South Africa (Act No. 108 of 1996) Section 24 states:

> ***Everyone has the right to an environment that is not harmful to their health or well-being; and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.***

As such, certain activities associated with development projects may trigger particular environmental legislative requirements, either under the various Duty of Care provisions found in some of the Environmental Acts (Section 28 of NEMA), or as identified in the NEMA Listing Notices, or other approvals which are required prior to Project commencement. Other relevant legislation is provided in **Annexure B.**

1.5 Environmental authorisation

According to section 2, subsections 1, 2 & 3 of **NEMA**, all organs of state have to apply certain principles set out in the Act when taking decisions that may significantly affect the environment. The key principles of this Act include that all "actions" approved must be economically, socially and environmentally sustainable and justifiable. It further states that "*environmental management must place people and their needs at the forefront of its concern*" and that their collective interests must be served equitably.

In accordance with NEMA and the relevant EIA Regulations, NCC engaged with EDTEA on behalf of KZN-DoE in order to assess the legal requirements to be met in order to undertake the proposed upgrade work. It was confirmed that the proposed upgrade work required an application for environmental authorisation (EA). The works carried out on the project will be undertaken in accordance with the revised NEMA EIA Regulations: GN982 of 4 December 2014. The activity requiring authorisation is referenced below:

Government Notice R983 Activity No.	Description of the relevant Basic Assessment Activity as per Listing Notice 1 (GN No. R983)	Description of the proposed development as per the project description that relates to the listed activity
Activity 27 Listing Notice 1 effected on 4 December 2014	The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	The collective area of indigenous vegetation which exists on the site will be cleared as part of the development footprint as the proposed project exceeds an area of 1 hectare, *i.e.* infrastructure and sport fields would replace the current indigenous vegetation footprint.

Project associated activities should be implemented and managed according to the best and current industry practice, as identified in the contractual, project-specific documentation. This EMPr, which forms an integral part of any contractual documents, informs the project role-players as to their duties in the fulfilment of the project objectives, with particular reference to the prevention and mitigation of environmental impacts caused by the project. Where applicable, the content of this EMPr are aligned with the requirements as set out in Section 19 (4) of the EIA Regulations.

The Contractor should note that obligations imposed by the approved EMPr are binding in terms of any agreements between the Developer Agent (CDC) and themselves and will therefore be part of the terms of additional conditions and the general conditions of contract that pertain to this Project. The Contractor shall identify and comply with all South African national and provincial environmental legislation, including associated regulations and all local by-laws relevant to the project. Key legislation currently applicable to the design, construction and implementation phases of the project must be complied with. The list of primary applicable legislation provided below (Annexure B) is intended to serve as a guideline only and is not exhaustive.

2 PRIMARY LEGISLATION

Refer to **Box 1** on following page.

2.1 Municipal By-laws

Refer to **Box 1** on following page.

Box 1: Primary Environmental Legislation and Municipal By-Laws.

National Legislation and Regulations

- **The Constitution** of the Republic of South Africa (Act 108 of 1996)
- Environment **Conservation** Act (Act 73 of 1989)
- **National Environmental Management** Act (Act 107 of 1998) (as amended)
- NEMA **EIA Regulations**, 2014 (as amended)
- National **Road Traffic** Act (Act 93 of 1996)
- National **Road Traffic** Regulations 2000 (as amended)
- National Environmental Management: **Waste Management** Act (Act 59 of 2008)
- White Paper on Integrated **Pollution and Waste Management** for South Africa
- The **White Paper** on Environmental Management Policy for South Africa
- National Environmental Management: **Air Quality** Act (Act 39 of 2004)
- National **Water** Act (Act 36 of 1998)
- **Water Services** Act (Act 108 1997)
- **Hazardous Substances** Act (Act 15 of 1973)
- **Mineral and Petroleum** Resources Development Act (Act 28 of 2002)
- National **Forest** Act (Act 84 of 1998)
- National **Veld and Forest Fire** Act of 1998 (Act No. 101 of 1998)
- National Environmental Management: **Protected Areas** Act (Act 57 of 2003)
- **Mountain** Catchment Areas Act (Act 63 of 1970)
- National Environmental Management: **Biodiversity Act** (Act 10 of 2004)
- **Alien** and **Invasive** Species Regulations, 2014
- White Paper on the Conservation and Sustainable Use of South Africa's **Biological Diversity**
- **Animals Protection** Act of 1962 (Act No. 71 of 1962)
- **Agricultural Pests** Act of 1983 (Act No. 36 of 1983)
- Conservation of **Agricultural** Resources Act (Act 43 of 1983)
- National **Heritage** Resources Act (Act 25 of 1999)
- World **Heritage** Convention Act, 1999
- National **Health** Act (Act 61 of 2003)
- **Health** Act (Act 63 of 1977)
- Occupational **Health and Safety** Act (Act 85 of 1993)
- National Dust Control Regulations, 2013
- **Noise** Control Regulations GN R 154 in GG No. 13717 of 10 January 1992 (published in terms of Section 25 of the Environment Conservation Act 73 of 1989)
- **Hazardous** Substances Act (Act 15 of 1973)
- **Fertilizers**, Farm Feeds, Agricultural Remedies and Stock Remedies Act (Act 36 of 1947)

Provincial Legislation

- Kwazulu-Natal Nature Conservation Management Amendment Act 5 of 1999
- Nature Conservation Ordinance No. 15 of 1974
- Nature and Environmental Conservation Ordinance No. 19 of 1974

Municipal By-laws[2]

Water Services By-law

There are also a number of By-laws in the Newcastle Local Municipality (NLM) that have been pre-certified by the legal services section and are currently pending with respective departments for consultation with stakeholders. As indicated in the 2018-2019 Municipal **IDP**, it is anticipated that all By-laws will be gazetted within the 2019-2020 cycle in order to enhance efficiency and effectiveness of the Municipality.

The **Community Services Section** has proposed By-laws which include:

Cemetery Crematoria;

Caravan Parks;

Fire Brigades;

Museums;

Libraries;

Disaster Management;

Prevention and Suppression of Health Nuisances;

Metered Parking;

Refuse;

Noise Control;

Pounds; and

Fare-bearing Passenger and Motor Vehicles.

The **Development Planning and Human Settlements Section** includes the following By-laws:

SPLUMA By-laws;

Building By-laws and Promotion of Green Buildings;

Newcastle Home Based Business Policy and By-Law;

Newcastle Outdoor Advertising Policy and By-law;

Placement of Shipping containers on areas under the jurisdiction of Newcastle Municipality;

Newcastle Place Naming Policy;

Review of the Urban Open Space Policy;

Policy on Establishment of Communal Housing (Residential Communes);

Informal Trading Policy and By-law; and

Municipal Land Disposal Policy.

[2]Attention is drawn to the proposed municipal By-laws, as underlined in the above list, as they will likely have relevance in the context of this Project during pre-construction planning and construction.

3 PROJECT DESCRIPTION

Reference should be made to the Basic Assessment Report (BAR) dated January 2020 for more detail regarding the project details, the affected environment and the potential environment impacts associated with the implementation of the Project.

3.1 Site Location

The site is located at erf 803 and 804 in Osizweni D (Ward 9) in the Newcastle Local Municipality, Amajuba District, KwaZulu-Natal (**Figure 1**).

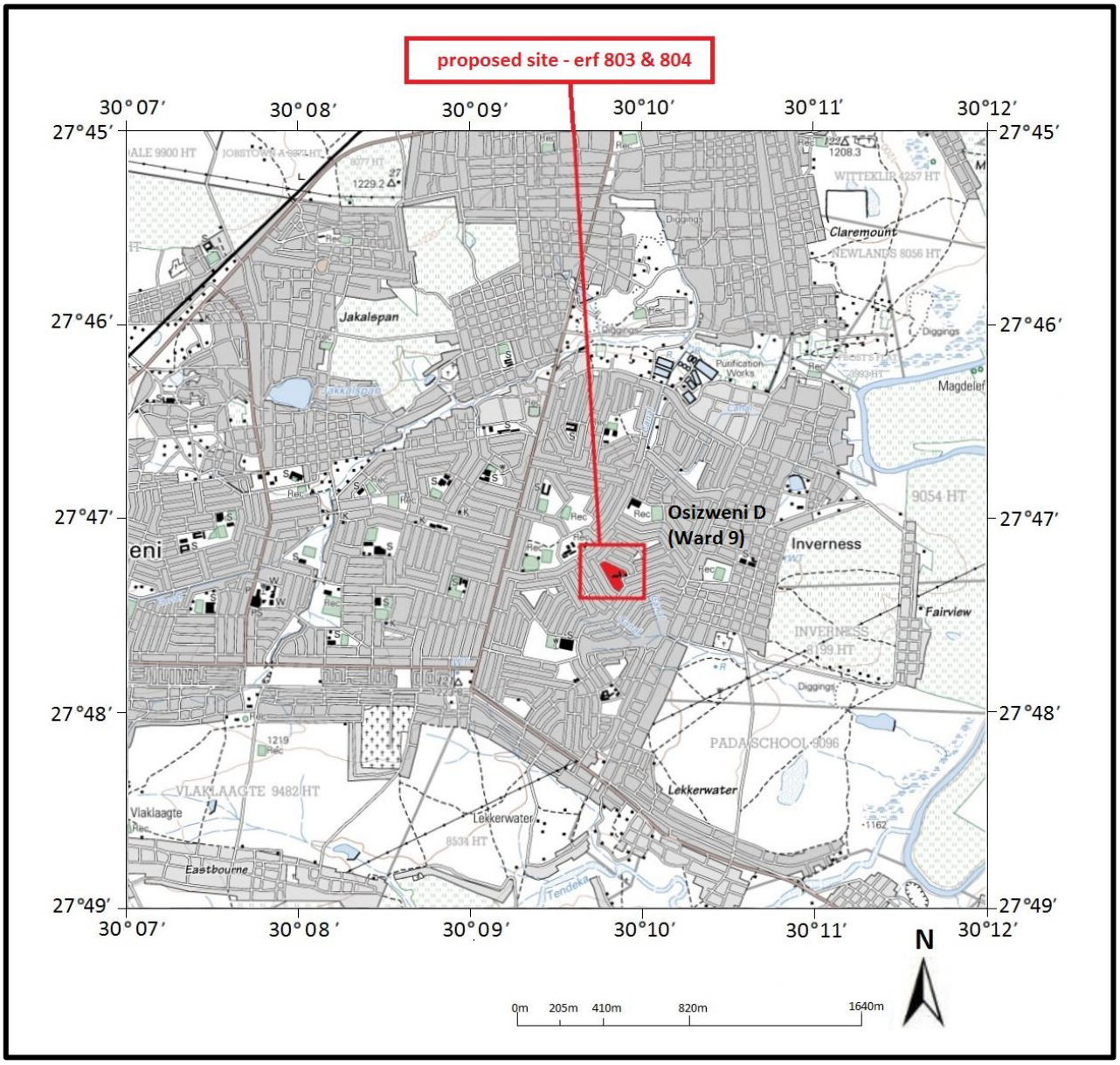

Figure 1: Location of site footprint in Osizweni D (Ward 9).

The proposed footprint in relation to environmental sensitivities is illustrated in **Figure 2**. The DEA National Screening Tool was utilised whereby the creation of a basic map shows access to and around the site footprint and whether an Industrial Development Zone (IDZ), Environmental Management Framework (EMF) or bio-regional plan applied to the specific area. As seen in **Figure 2**, there are no Biosphere Reserves, Ramsar sites or Botanical gardens within a ~5km radius from the site footprint. The site does not fall within any Critical Biodiversity Area (CBA) (**Figure 3**).

In terms of surface water and drainage, a primary river (Buffels River) meanders around the township of Osizweni in a west-east direction to the north, changing direction to flow in a southern direction to the east of the site footprint. The distance of the main river channel varies from between ~3-5km from the site footprint. No NFEPA wetlands or other mapped wetlands exist within 500m from the boundary of the site footprint and no watercourses exist within 100m from the site (**Figure 4**). Refer also to BAR Specialist Report; Appendix 7. The site does not fall within any Ecological Support Area (ESA) or Important Birding Area (IBA) and is located in an areas formally classified as "Built Settlement" (**Figure 5**). The layout plan of the proposed school infrastructure on erf 803 and erf 804 is shown in **Figure 6**.

A topographical survey of the property is included as **Annexure C** in the EMPr Annexures.

A number of additional sensitivity maps, compiled as BAR **Annexure 14** in terms of the basic assessment, can be referred to for more detail.

Figure 2: Local proximity of site footprint to environmentally sensitive areas (*Source*: DEA screening tool, 2019). There are no botanical gardens, Biosphere reserves or Ramsar sites within 5km from the property and an existing road network exists for accessing the site through an existing township. The footprint is not located in any Critical Biodiversity Areas (CBAs), which are denoted by light green shading on the map.

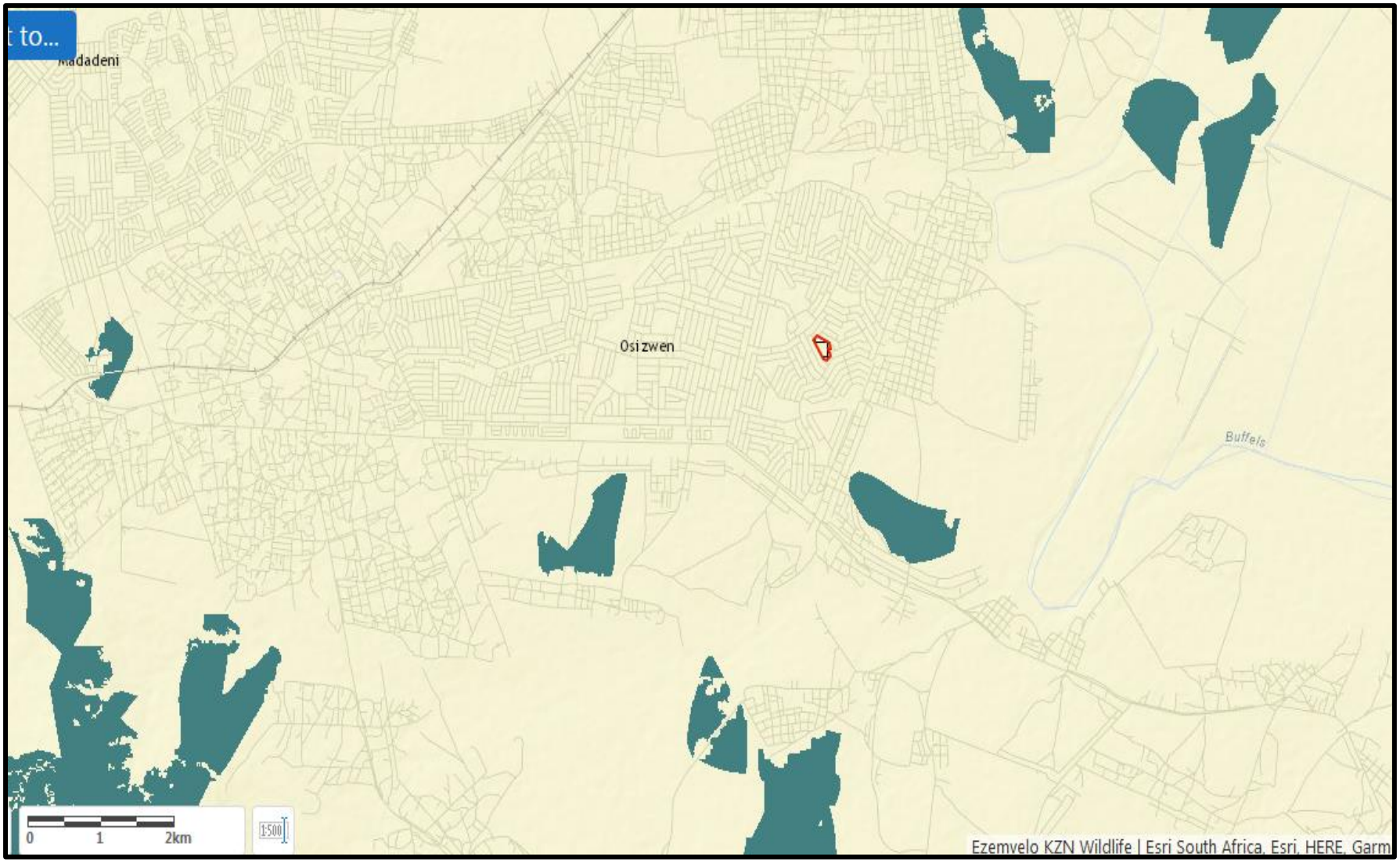

Figure 3: The site footprint (erf 803 and erf 804 outlined in red on the map) is situated in the township of Osizweni and is not located within any Critical Biodiversity Areas (CBAs), which are denoted by blue shading on the map (*Source*: KZN Biodiversity Sector Plan, 2014).

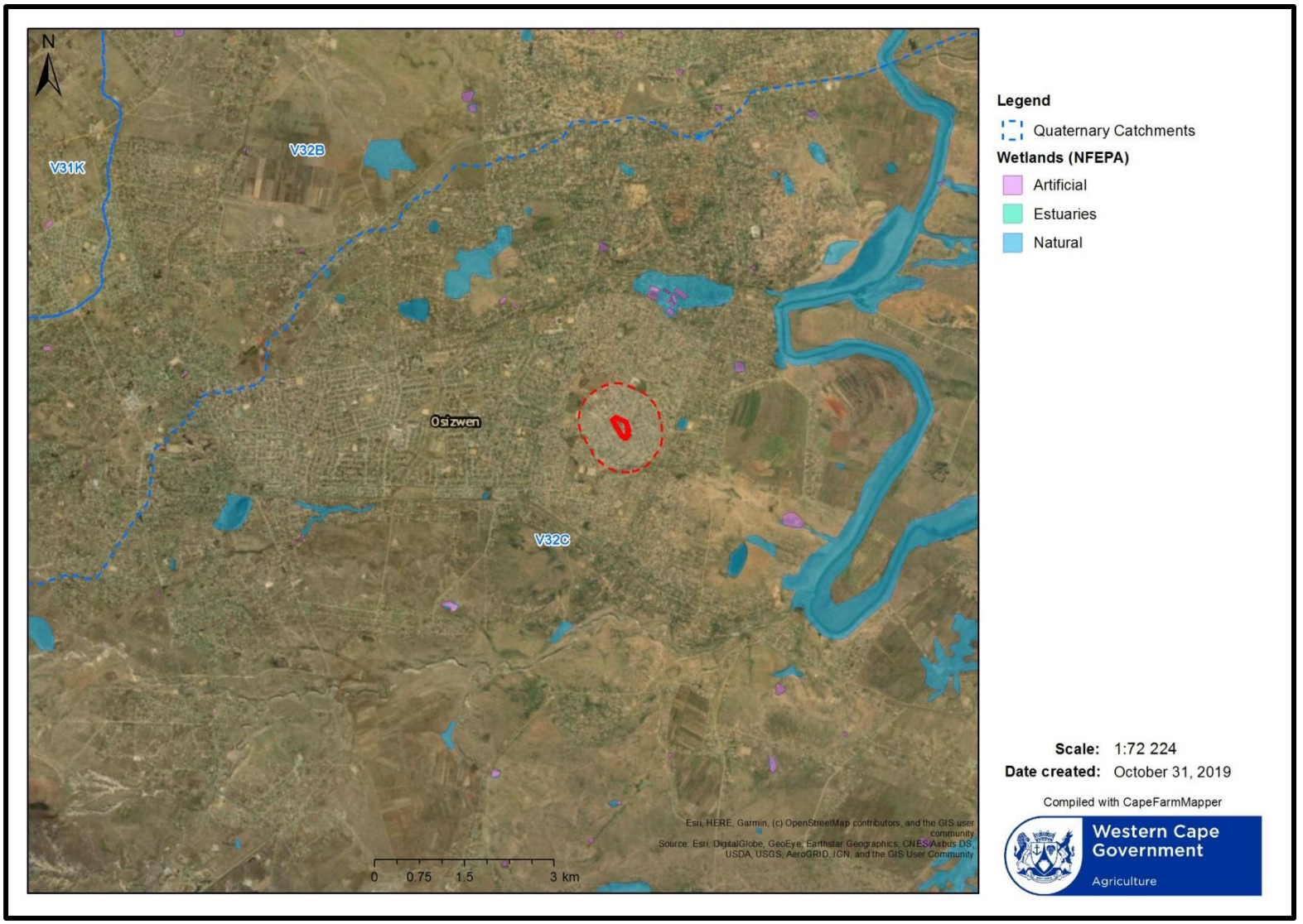

Figure 4: NFEPA rivers and wetlands indicated at a broad scale (*Primary Source*: CSIR, 2010). The site footprint is indicated in red with a 500m buffer indicated as a dotted red line.

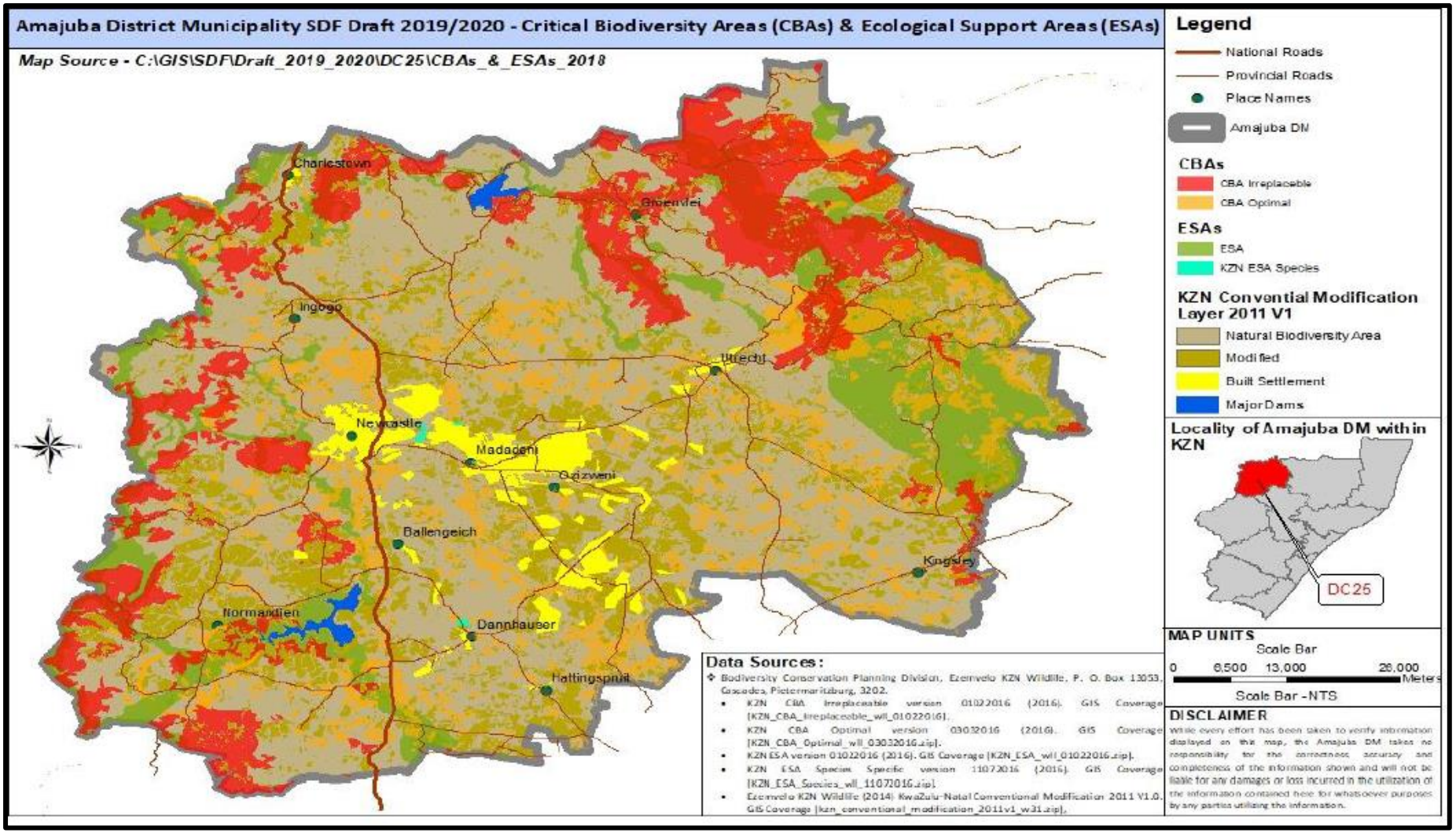

Figure 5: Biodiversity (CBAs and ESAs) in the Amajuba District Municipality. The site footprint (erf 803 and erf 804) is located in the township of Osizweni, denoted in yellow on the map as "Built Settlement" (*Source*: ADM SDF, 2019-2020).

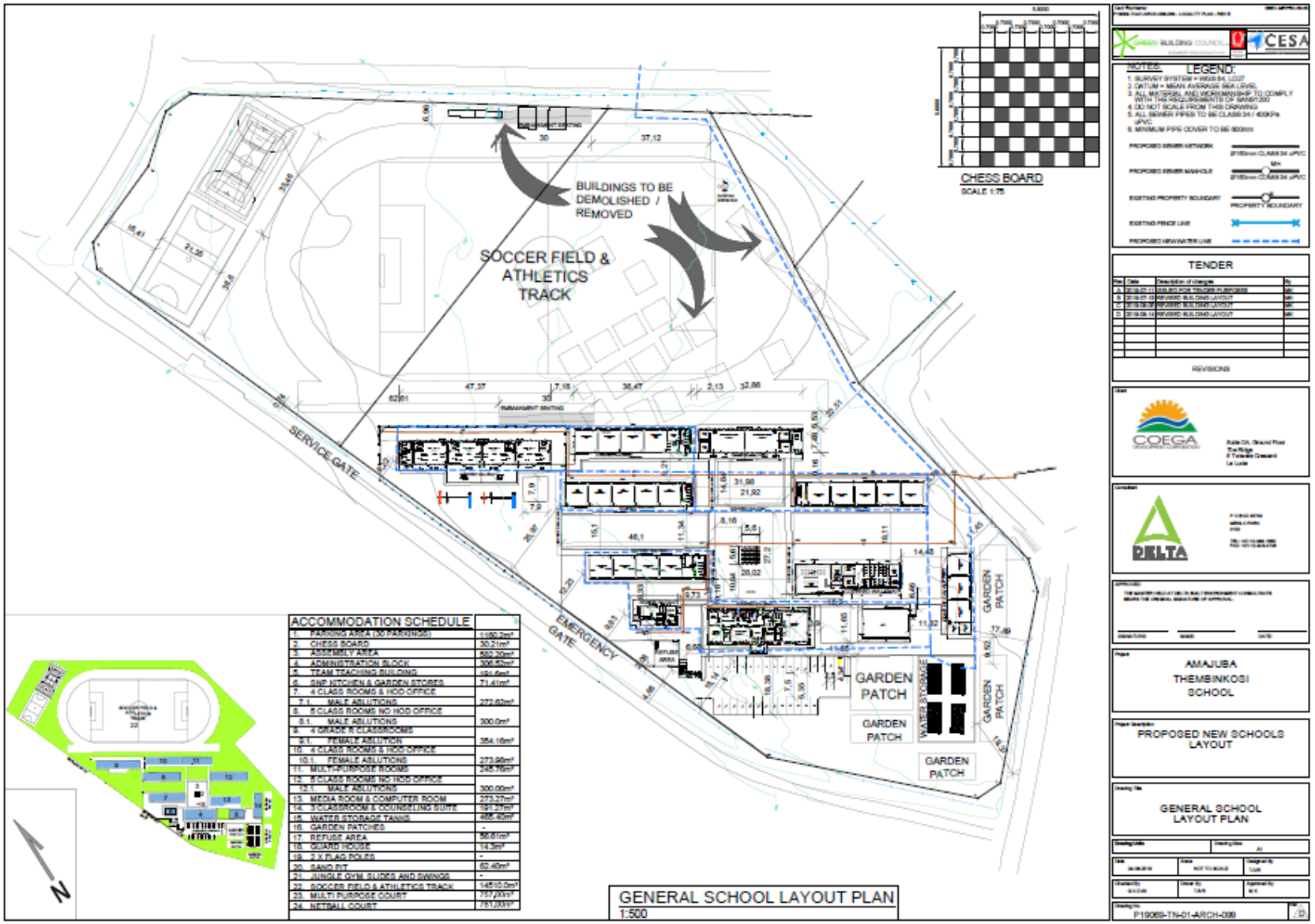

Figure 6: School layout plan on erf 803 and erf 804 (*Source*: DBEC, 2019).

3.2 Site Description

A summary description of the existing environment is provided below.

- There are no known protected areas, threatened ecosystems, CBAs or ESAs on or close to the site, according to SANBI BGIS and EKZNW data sources.
- In terms of land cover the site is located in a "Built-up" urban / peri-urban area (NGI, 2017) in the existing township of Osizweni (NLM IDP, 2019).
- In terms of the Newcastle Local Municipality's Town Planning Scheme, their spatial planning indicates erf 803 and 804 have been zoned for *Educational* purposes.
- The Project area lies within "Built up Dense Settlement" which is largely modified and degraded in terms of the Biodiversity Sector Plan (BSP) for the Amajuba District Municipality (EKZNW, 2014).
- The proposed area of development falls within an area which has a *Low* flood sensitivity (ADM SDF, 2019).
- The vegetation type of the study area is predominantly disturbed grassland. It lies within the KZN veg-type Income Sandy Grassland which has a broad conservation status considered "vulnerable".
- In terms of drainage, the Buffels River meanders around the township of Osizweni in a west-east direction to the north, changing direction to flow in a southern direction approximately 3km to the east of the site. The distance of the main river channel varies from between ~3-5km from the site footprint.
- Several natural wetlands associated with the Buffels River do exist however they are situated outside a 500m buffer zone from the development footprint.
- The diversity of wildlife (flora and fauna) within the affected area is most likely low on account of the current land use type and human activity in the surrounding area and on the property itself.
- The broad geology of the Amajuba District Municipality (ADM) consists mainly of shales (with coal in certain instances), mudstones, sandstone and siltstones of the Ecca Group, Karroo Sequence, with intrusive dolerite. In essence this geology has given rise to many of the *in situ* characteristics of soils that are found in the area.
- Sandstones and shales of the Madzaringwe Formarion (Ecca Group Arenite of Karoo Supergroup) support poorly drained sandy soils mostly of the Glenrosa form (Mucina & Rutherford, 2006).
- The topography of the general area is characterised by generally flat surfaces. The surrounding landscape consists of an area transformed into residential townships zoned for residential land use.
- Given the current local land-use (*i.e.* land zoned for education and residential), ambient noise sources and levels are expected to be lower than a typical small rural or urban area. Construction related noise is predicted to increase for the duration of the Project during standard working hours.

- Local air quality is expected to be 'good' on account of the low to medium density urban township setting and the absence of nearby heavy industry. 'Good' indicates a general absence of air pollution sources. Wood burning (higher in the winter season) and a predicted increased in dust generation (*i.e.* above the natural baseline during construction earthworks), as well as vehicle emissions, represent the most important influences on local air quality. Traffic volumes and vehicle emissions will increase temporarily during the Project however very low vehicle ownership in the medium to long term is predicted to continue in the local area.
- In terms of roads, traffic and access, the site is situated within an existing network of Class 5b residential roads. The nearest Class 3 road is situated approximately 1.6 km south of the site. The following Class 5b roads serve as the boundary of the site; Od14 Street, Od9 Street, Od3 Street and Od4 Street. Od3 Street, situated to the south of the site, can be considered as the main feeder of traffic surrounding the site, as this is the only paved road that surrounds the site. Od9 Street can also be considered as a main road surrounding the site, as it is a concrete road. Od 4 Street, at the western boundary of the site, is a gravel road. Refer also to the Traffic Impact Statement (BAR Appendix 11).
- SAHRA's Palaeo-Sensitivity map depicts the general area as being paleontologically sensitive and as such, a Heritage Field Assessment was conducted and a Protocol for Chance Finds is included (See BAR Appendix 6).

3.3 Project Overview Description

The Coega Development Corporation (Pty) Ltd (CDC) is assisting the KwaZulu-Natal Department of Education (DoE-KZN) in implementing various projects within the province of KwaZulu-Natal. This is being done under the School Building Programme of the DoE-KZN which is aimed at providing quality teaching facilities and to improve the quality of life of the previously disadvantaged communities. The aim of the project is to upgrade the informal school into a new (formal) school to provide teachers and learners with formal infrastructure which facilitates, supports and improves the teaching and learning environment. The overarching objectives of the development are:

a) To provide quality teaching facilities
b) To improve the quality of life of previously disadvantaged communities
c) To create jobs
d) To develop and transfer skills
e) To fight poverty

The property on which the development is proposed is located between Od9 and Od4 Streets in the township of Osizweni (Ward D) in the jurisdictional boundary of the Newcastle Municipality. The GPS coordinates (WGS84 datum) of the corners of the property boundary of the site footprint (erf 804 and 804) are:

Footprint Corner	Latitudinal extent	Longitudinal extent
NE	S27°47'13.33"	E30°09'46.60"
NW	S27°47'14.38"	E30°09'43.71"
SW	S27°47'23.52"	E30°09'51.78"
SE	S27°47'21.45"	E30°09'53.33"

The property erven (803 and 804) are currently zoned for educational purposes where an informal school currently exists. Thembinkosi Primary School is currently comprised of pre-fabricated containers currently used as classrooms by teachers and learners at the school. The proposed development project consists of the construction of 9 Standard classrooms, 4 Grade-R classrooms, 2 Multipurpose laboratories and Specialist Rooms, 1 Media Centre, 1 Computer Room, 1 Teaching room, an Administration block consisting of 2 Deputy Principal's offices, a General office, Printing room, 2 Sick rooms, Entrance hall, Counselling suite, Staff room with kitchenette, 3 HOD offices, Garden stores change room, Counselling suite attached to standard classroom, a General storeroom outside of the Administration block, 1 Gate house, 1 SNP kitchen, 10 Girls' toilet seats, 7 Boys' toilet seats and Urinal spaces, 4 Teacher toilet seats, 1 disabled toilet, 6 Grade R toilets, 30 parking bays, 1 soccer field, Water storage tanks, Garden patches, a Refuse area and 4 future Multi sport fields. External works will comprise of bulk earthworks, paving, stormwater disposal and water and sewer reticulation and electrical works.

3.4 Temporary Construction Activities

The development project will, during the Construction phase, include the following activities:

a) Establishing and operating a Contractor's site camp incorporating offices, car ports, storage areas, workshops, laboratories, ablution and latrine facilities, services and access.
b) Procurement and transferring materials, plant and equipment from commercial sources to and within the site's construction footprint.
c) Receiving and storing construction materials.
d) Storing construction waste and rubble for collection and disposal.
e) Site preparation, including vegetation clearance and/or removal of existing structures.
f) Earthworks, stockpiling and spoiling of materials, including any gravel, soil, rocks and boulders.
g) Excavation of trenches for the installation/connection of water and electrical services.
h) Construction of new structures, installation of services and internal infrastructure.
i) Site rehabilitation activities.

3.5 Operation Activities

The functioning and operation of the school is expected to be long-term and fully functional once Construction (*i.e.* the Project) is complete.

4 POTENTIAL ENVIRONMENTAL IMPACTS

The construction activities associated with the Project and the broad manner in which these may impact on the biophysical and human environment have been summarised in the BAR. In summary, the range of potential impacts (either positive or negative) that may be expected to occur or result from the Project include:

- Air pollution;
- Soil compaction / erosion / pollution;
- Surface and/or groundwater pollution;
- Pollution of watercourses;
- Terrestrial ecosystem and biodiversity impacts;
- Spread of invasive alien species;
- Public nuisance including public health and safety, and security;
- Landscape change and visual/aesthetic impacts;
- Socio-economic impacts;
- Cultural, historical, archaeological and/or palaeontological impacts;

It is expected that the significance of any negative impacts on the surrounding biophysical and human environment associated with the Project (*i.e.* Construction) will be largely reduced provided this EMPr is strictly adhered to. The Environmental Specifications (ES) described in Chapter 6 aim to avoid, reduce and minimise construction related adverse impacts accordingly.

The operations-related benefits can be enhanced through effective management and maintenance planning, as supported by monitoring and auditing programmes. It is recommended that an "Operation Manual/Plan" is developed by the Developer which details the protocols and procedures for relevant management and maintenance actions during the school's Operational Phase. This will require open communication and a collaborative effort between the school's management staff, the DoE and the NLM, particularly with regard to water and waste management services at the school.

5 IMPLEMENTATION, MONITORING AND REVIEW

5.1 Roles and Responsibilities

a) Competent Authority

The authorities or regulatory bodies (including various local authorities and provincial government) will be responsible for the timely processing and issuing of necessary permits or approvals if required for the proposed activities. The authorities might conduct inspections to audit compliance to any permits and conditions thereof. In such cases, the DoE, CDC and the Contractor will collaborate with the authorities and ensure compliance.

b) Project Manager / Project Engineer

The Project Manager (**PM**) will firstly regulate, control and manage activities associated with the project, and secondly monitor and minimise project associated impacts on the environment by overseeing the implementation of the EMPr. The PM will ultimately be responsible for implementing or conforming to the environmental management measures by any person acting on their behalf, including but not limited to contractors, sub-contractors or service providers associated with the project. The PM will arrange for a post-construction meeting to discuss any issues that need immediate corrective or remedial actions, or to ensure preventative actions are implemented to improve the management of the project.

c) Contractor Representative

The Contractor shall appoint an Environmental Officer (**EO**) or Safety, Health and Environmental (**SHE**) representative that is answerable to the Developer for effective implementation and monitoring of the EMPr specifications. The EO shall compile method statements for proposed activities and submit these to the Project Engineer and ECO for approval. Develop and maintain a daily on-site monitoring system to comply with the EMPr. Implement environmental training and awareness. Report on incidents, public complaints and implement corrective and preventative measures. Maintain all on-site environmental records, including waste disposal records. Ensure internal auditing of the EMPr.

d) Environmental Control Officer

The independent Environmental Control Officer (**ECO**) will ensure that environmental mitigation measures are implemented through collaboration with the PM and compile a post-construction audit report which will record the project's conformance to the EMPr. The report will be made available on completion of the works to all other stakeholders upon request. It must be noted that the responsibility of the ECO on this project is

to monitor conformance and provide advice on the implementation of the EMPr as and when needed and not to implement compliance.

5.2 Monitoring

A monitoring programme will be implemented for the duration of the Project. This programme will include:

a) A once-off monitoring inspection by the independent ECO prior to site establishment by the Contractor. The establishment of a baseline by taking selective, point-based photographs of identified environmental aspects and potential impact sites, should be done prior to Project commencement. The ECO shall retain the *pre-construction* photographic record, including any pre-existing damaged areas inside and outside the site footprint (construction area).

b) Daily and weekly monitoring by the Contractor during the Construction phase;

c) A register of all complaints from landowners or the community must be maintained on site by the Contractor. All complaints / claims shall be handled immediately to ensure timeous rectification / compensation by the responsible party and should be directed to the PM and independent ECO for review and appraisal;

d) Monthly compliance monitoring, auditing and reporting by the ECO during the Construction phase, focusing on EA and EMPr compliance. The ECO shall obtain additional photographic records *during construction* of any damaged areas requiring interim protection and/or rehabilitation. An indication of the date, time, type of damage and reason for the damage shall be recorded to ensure the responsible party is held liable. The Contractor shall be held liable for all unnecessary damage to the environment as a result of any negligent behaviour.

e) A post-rehabilitation inspection three (3) months after rehabilitation activities are complete must be conducted by the ECO and/or terrestrial ecologist to ensure conformance to the rehabilitation requirements, and where necessary, provide recommendations for any required corrective action.

f) Compilation of a close out audit report by the ECO, focusing on final EA and EMPr compliance and the success of rehabilitation completion.

5.3 Reporting Procedures

5.3.1 Documentation

The following documentation must be kept on site by the Contractor in order to record conformance to the conditions of the EA and EMPr. A site-based environmental file should include:

a) Copy of the EA and EMPr;

b) Method Statements compiled by the Contractor and approved by the PM / ECO;

c) Copy of the Rehabilitation Plan/Method Statement;

d) A set of environmental registers which include:
    i. Complaints register, including details of complaints and actions required/taken (with dates);
    ii. Incident register, including copies of notification of Emergencies and Incidents (this must be accompanied by dated photographic records);
    iii. Waste registers and waste manifests;
e) Copies of waste documentation such as Safe Disposal Certificates (SDCs);
f) Material Safety Data Sheets (MSDSs) for all hazardous substances;
g) Minutes and attendance registers of all progress meetings held;
h) Monitoring results including environmental audit and inspection reports, checklists, register of audits, etc;
i) Copies of any environmental Non-Conformance Reports (NCRs) issued;
j) Copies of any Corrective Action Reports (CARs) in response to NCRs issued;
k) Notifications of Emergencies and Incidents.

5.3.2 Method Statements

It is a statutory requirement to ensure the wellbeing of employees and the environment. To allow the mitigation measures in this document to be implemented, task-specific Method Statements should be developed for each set of tasks. A Method Statement details how and when an activity will be carried out, detailing possible dangers/risks, and the methods of control required.

The Contractor will be accountable for all actions taken in non-conformance of the approved Method Statements. The Contractor shall keep all the Method Statements and subsequent revisions on file, copies of which must be distributed to all relevant personnel for implementation. Determining which activities require a Method Statement involving environmental impacts may be decided upon by The Contractor, the ECO, the Project Manager or the Contractor themselves prior to the said activity commencing.

5.3.3 Environmental Registers

The Contractor, with assistance by the ECO, will establish various Environmental Registers (as templates) for the Project. The Contractor will ensure that the information is recorded for all complaints/incidents as per the register templates (attached as **Annexure E** at the end of this document). The Environmental Registers will form an integral part of the Project records to be transferred to the Developer's Agent (CDC) upon Project completion. These records will be kept with the EMPr, and will be made available on requested by the authorities and ECO.

5.3.4 Stakeholder Engagement

The Contractor must ensure that relevant stakeholders are informed and updated throughout the activities. Sufficient signage should be erected around the site (including at the entrance), informing the public of the activities taking place. It is suggested that signboards be erected and include the following information:

- The name of the Contractor; and
- The name and contact details of the site representative to be contacted in the event of emergencies or raising a public complaint.

5.3.5 Non-Conformance Report

A Non-Conformance Report (**NCR**) will be issued to the Contractor as a final step towards rectifying a failure in complying with a requirement of the EMPr. This will be issued by the ECO or Project/Site Manager to the Contractor in writing. Preceding the issuing of an NCR, the Contractor must be given an opportunity to rectify the issue. Should the ECO assess a non-EMPr related incident or issue and find it to be significant (e.g. non-repairable damage to the environment), it will be reported to the relevant authorities and immediately escalated to the level of a NCR.

5.3.6 Environmental Emergency Response Plan

The Contractor must compile an Environmental Emergency Response Plan/Method Statement in conjunction with and in alignment with the approved “Health and Safety Specification” for the Project. Emphasis should be placed on environmental aspects such as fire, flood and pollution incidents and prevention and any other Section 30 NEMA incidents and the associated reporting protocol. As far as any mitigation measures to prevent or avoid environmental incident and emergencies from occurring, which are within reasonable parameters for the Contractor to control, such should be specified in a project specific Plan/ Method Statement.

6 DETAILED ENVIRONMENTAL MANAGEMENT PROGRAMME

The EMPr specifies the minimum requirements to be implemented by the Contractor as per the contractual scope of works, in order to minimise and manage the potential environmental impacts and ensure sound environmental management practices. It also provides the framework for environmental monitoring throughout the Construction and Rehabilitation phases. It is essential that the EMPr requirements be systematically reviewed, understood, implemented and adhered to at all times. This section (Chapter 6) comprises the environmental specifications (ES) for the Project.

6.1 Environmental Specifications (ES)

The approach for ES implementation and the associated monitoring requirements relating to specific measures/aspects of ES implementation (for the duration of the Project) are divided into 3 stages:

a) Pre-Construction (includes Design and Project Planning)
b) Construction (included Site Establishment)
c) Post-Construction (includes Site de-establishment and Rehabilitation)

6.1.1 Scope of Application for the Environmental Specifications

The implementation of the EMPr and the associated ES are focused primarily on the principal Contractor and all sub-contractors and staff involved in the Project. The entire footprint, including the site camp, site offices, designated working areas, internal access routes and the immediate surrounding areas fall within the scope of the EMPr. Any new personnel, plant, machinery and materials brought to site will need to comply with the EMPr.

6.1.2 Environmental Principles for the Construction Phase

The following core environmental principles apply:

- Construction is a disruptive activity and maximum consideration must be given to minimising disturbances on the surrounding community and natural environment.
- Only the authorised construction 'footprint' approved for development should be utilised and occupied. No site 'creep' or increasing of the footprint to an area beyond which is authorised is permitted.
- All relevant legislation should be adhered to and all relevant permits and permissions obtained and complied with at all times. Reference should be made to BAR **Appendix 20** for a copy of the NEMA Environmental Authorisation [PENDING].
- The Contractor should foster a collaborative and cooperative relationship between the school staff and all relevant stakeholders including the authorities (*i.e.* EDTEA, DWS, DAFF, local ward councillors) any other neighbouring landowners/land users and members of the adjacent local communities.

Professional and timely communication with these parties as and when required will assist in the successful completion of the Project.

- The Contractor and other project role-players should acknowledge and sign the Letter of Acceptance (**Annexure F**) confirming their environmental commitments for the duration of the Project.
- Wherever possible, the Contractor should seek to employ local labour and maximise the involvement of small, local business enterprises into the project.

6.2 PLANNING AND DESIGN PHASE

This section covers mitigation measures and recommendations that should be considered during the planning and design stage of the Project. The Project team is responsible for ensuring that the design of the school responds to the environmental constraints and opportunities in both the Amajuba District Municipality (ADM) and Newcastle Local Municipality (NLM), as highlighted in the overarching and relevant Strategic Development Framework (SDF) and Integrated Development Plan (IDP) within have planning jurisdiction over the proposed site footprint. Planning and design activities should be undertaken in accordance with all relevant legislative requirements and that adequate consideration has been taken regarding any authority requirements and any landowner and local community concerns. Where appropriate, these should be addressed through adequate design and planning in terms of the final building plans and layout to be submitted to the Municipality, for approval.

6.2.1 Management Objective

The primary environmental objective during this phase is to ensure the best suited environmental option for the Project is selected based on the final design (*i.e.* plans, drawings, layouts, surveys, environmental assessments and specialist studies) undertaken for the proposed development footprint. The project-specific **BAR** and all respective **Appendices** and **Annexures** which supplement the **BAR** represent the overall management framework which should be adhered to during the Construction Phase. To ensure that construction activities are undertaken without significant disruption to other land uses and activities in the surrounding area, the following objective, impact management outcome and monitoring requirement has been identified:

Objective	Ensure the best suited environmental option for the Project is selected based on the final design. The final design should be based on project plans, drawings, layouts, surveys, environmental assessments and specialist studies undertaken and should be in alignment with municipal plans (SDF & IDP)
Impact Management Outcome	-The design meets the objectives and does not degrade the environment. -Design and layouts should respond to the mitigation measures and recommendations in the BAR. - Construction phase sequencing should align with current school activities with minimal impact on teachers, learners and local residents.
Monitoring	-Review of the final design by the Project Manager, Engineer, Local Municipality and Environmental Authorities prior to the commencement of Construction.

6.3 PRE-CONSTRUCTION PHASE

6.3.1 Authorisations, Permits and Licences

- All necessary authorisations, permits and licences must be obtained by the Developer/Contractor prior to the commencement of Construction.

6.3.2 Appointment of Contractor

- The Contractor must ensure that this EMPr forms part of any contractual agreements with other contractors and sub-contractors for the execution of the Project. All contractors must make adequate provision in their budgets for implementation of the EMPr.
- The Principal Contractor (including sub-contractors and suppliers) must comply with the relevant provisions of the EMPr, applicable environmental legislation, associated regulations and any applicable local By-laws.

6.3.3 Appointment of an ECO

- An independent ECO must be appointed by the holder of the EA (the Developer) at their cost to monitor the implementation of the EMPr.
- The ECO must be appointed at least 30 days prior to the commencement of any site activities, including a Search & Rescue of the site footprint. During this period the ECO will review all relevant documentation pertaining to the Project.
- Once an ECO has been appointed he/she must undertake monthly site inspections and provide monthly environmental audit reports for the duration of the construction and rehabilitation phases. Each audit report must contain the full results of the audit and should determine, by way of audit findings, whether the various aspects of the Project (audit criteria) are deemed to be *compliant*, *non-compliant* or *not applicable*. Where relevant, any *not applicable* conditions or findings must explicate any aspects (audit criteria) of construction which have not commenced or state which recommended actions may, for example, be required from any other Organs of State, Stakeholders, etc.

6.3.4 Preparation of Method Statements

- Method Statements (MS) must be submitted by the Contractor to the ECO and must be adhered to by the Contractor, sub-contractors and the PM for the duration of the Project. These can relate to water and storm water management requirements, traffic requirements, solid waste management requirements, fuel storage and filling and dispensing of fuel (diesel and petrol), hydrocarbon spills, contaminated water management, the storage of hazardous materials, standard emergency

procedures and biohazard control, and any further activities which the ECO and/or PM deem necessary.

- The ECO will monitor the implementation of the Method Statements. All copies of the statements and plans must be submitted to the appointed ECO for review.

6.3.5 Environmental Training and Awareness

It is important to ensure that the Contractor has the appropriate level of environmental awareness and competence to ensure continued environmental due diligence and ongoing minimisation of environmental harm. It is vital that all personnel are adequately trained to perform their designated tasks to an acceptable standard. The Contractor shall ensure that its employees and sub-contractors who carry out all or part of the Contractor's obligations are adequately trained with regard to the implementation of the EMPr, as well as environmental legal requirements and obligations. Training shall be conducted by the Contractor EO/SHE Officer as and when required, as determined by the ECO by means of and initial (once-off) Induction, continuous toolbox talks, awareness posters, meetings etc. General EA and EMPr requirements should form part of the formal site induction for all Contractors, sub-contractors and casual labourers, preferably in their native language.

Awareness training will be provided in a verbal and/or visual format. Induction training will be a once-off event however the Contractor should make provision for internal weekly training, holding of Toolbox Talks and displaying of environmental awareness posters. In addition to training, general environmental awareness must be fostered among the project's workforce to encourage the implementation of environmentally sound practices for the full duration of the Project. The aim is to ensure environmental accidents are minimised and good environmental compliance is continuously attained.

The environmental training is aimed at:

- Promoting environmental awareness;
- Informing the Contractor of all applicable environmental procedures, policies and programmes;
- Providing generic and simplified training on the implementation of environmental management specifications; and
- Providing job-specific environmental training in order to understand the key environmental features of the construction site and the surrounding environment.

The Contractor shall ensure that attendance records of all training interventions are kept in accordance with the record keeping and document control requirements and records must be sent to the ECO at intervals

determined by the ECO. The training records shall verify each of the targeted personnel's training experience. If necessary, the ECO and/or a translator should be called to the site to further explain any aspects of environmental or social behaviour which are unclear. Basic environmental awareness material is attached as an **Annexure D**.

6.4 CONSTRUCTION PHASE

To simplify the EMPr requirements, each aspect related to the EMPr has been addressed in the tables below under relevant sub-headings. Each action number within the tables is supported by mitigation measures and actions which will need to be adhered to / implemented by the responsible party. The terms used in the tables are briefly described below for ease of reference.

- **Mitigation Measures and Actions**

  This section indicates the environmental measures, actions and controls required to either prevent and/or minimise the potential impacts on the environment that is associated with the project.

- **Responsibility**

  This section indicates the party responsible for implementing the mitigation measures and actions laid out in the EMPr.

6.4.1 Site Establishment

Action no.	Mitigation Measures and Actions	Responsibility
1.	The Contractor shall make all efforts to establish their construction camp, offices, workshops and any other infrastructure on **previously disturbed/impacted areas** and in a manner that does not adversely affect the environment.	Contractor
2.	Prior to the establishment of the site camp/office, the Contractor will produce a site **layout plan** showing the positions of all equipment storage, waste stockpiling, fuel storage areas and other infrastructure for approval by the ECO and PM.	Contractor
3.	The construction area must be **clearly demarcated** on the layout plan, and all other areas (in particular any environmentally sensitive buffers) must be considered **no-go areas** for construction personnel.	Contractor
4.	Adequate **signage** must be placed in the area where construction will take place warning the public of the activities taking place.	Contractor
5.	For security measures, it is recommended that the site be secured and manned by security on a 24 hour basis for the duration of the Project.	Contractor
6.	The construction camp's **housekeeping** must be kept in an orderly state at all times (managing stacking, storage, waste areas, etc.)	Contractor
7.	**Vegetation** removed for the site establishment is to be kept to a minimum. No trees are to be removed, where applicable, with the exception of alien	Contractor

	weeds and invader plants.	
8.	The construction camp must be located a minimum horizontal distance of 100m from any **watercourse** and any associated riparian buffers identified on or around the site, and above the 1:100 year flood line.	Contractor
9.	The Contractor must ensure that **storm water drainage** on the camp site is such to prevent standing water and/or sheet erosion from taking place.	Contractor

6.4.2 Ablution/Sanitation

Action no.	Mitigation Measures and Actions	Responsibility
1.	Where existing and permanent ablution facilities exist on the site (*i.e.* connected to municipal wastewater system), the use of these facilities by Construction personnel is **prohibited**. The school personnel (*i.e.* staff and learners) have priority **preference** to use the permanent ablution facilities.	Contractor
2.	The Contractor must provide a minimum of one **mobile chemical toilet** per 15 persons.	Contractor
3.	The chemical toilets must be **strategically placed** and **re-positioned** (to allow easy access to workers, preferably no more than a 100m from each work area) and must not be situated within any watercourse, wetland or associated buffer.	Contractor
4.	All ablution activities must take place in these facilities, and waste material must be stored and **disposed** of at the registered waste disposal site or collected by a registered waste service provider on a regular basis. Waste disposal certificates must be kept in the Site Environmental file.	Contractor
5.	The Contractor must ensure that toilets are **serviced** (cleaned or emptied) regularly (minimum of once per week, possibly twice) and that no spillage occurs during routine servicing and maintenance.	Contractor
6.	All temporary/portable toilets must be **secured** to the ground to prevent them from toppling due to wind or any other cause.	Contractor
7.	**Unauthorised dumping** / spilling of waste from toilets into the environment and burying of waste are strictly prohibited.	Contractor
8.	If any temporary suspension of the use of existing and permanent ablution facilities results as a result of the construction programme, adequate **mobile chemical toilets** must be provided school personnel (*i.e.* staff and learners) until such time that any re-connections and/or new ablution buildings are connected to the municipal wastewater infrastructure.	Contractor

6.4.3 Access Routes and Associated Infrastructure

Action no.	Mitigation Measures and Actions	Responsibility
1.	The construction site should have strict **access control** to reduce the risks associated with vehicular transportation and pedestrian access on the site. Only existing access routes on the property should be used in addition to any additional access points to be created, as per the Project's design and layout plan.	Contractor

2.	Any **steep gradients** on site must be avoided, if applicable.	Contractor
3.	Any **No-go areas** on the site footprint (e.g. any temporary areas where school activities will run concurrently with Construction) must be indicated as such with warning signs in the relevant language (English and/or Zulu). No ecologically sensitive areas (e.g. watercourses, wetlands or protected vegetation) were identified to exist on the site.	Contractor
4.	Adequate drainage and **erosion protection** in the form of cut-off berms or trenches must be provided around the sites, where necessary.	Contractor
5.	Where applicable, the Contractor must mark **all internal access routes**. Markers should show the direction of travel to which the access route leads.	Contractor
6.	All **speed limits** must be strictly adhered to at all times.	Contractor
7.	If there are **high volumes** of construction traffic along site access routes, dust prevention measures must be implemented to reduce dust creation and to prevent any driving over adjacent areas.	Contractor
8.	Any **temporary** access routes should remain must be strictly one-way and be a maximum width of 3m.	Contractor
9.	No vendors or other similar traders must be allowed to access the site.	Contractor

6.4.4 Ecologically Sensitive and No-go Areas

Action no.	Mitigation Measures and Actions	Responsibility
1.	No ecologically sensitive areas (e.g. watercourses, wetlands or protected vegetation) or heritage sites were identified to exist on the site. Any watercourses not directly impacted by the proposed activities (*i.e.* outside a 100m buffer zone from the boundary of the site) are still considered as 'No Go' areas. This includes all water resources where risks of construction were rated as low in the surface water assessment (See **BAR Appendix 7**). These areas should not be accessed by machinery or workers for any reason. Any contractors observed within these 'No-go' areas should be fined as per a fining schedule/system setup for the Project.	Contractor
2.	Any other **No-go areas** on the site footprint (e.g. any temporary areas where school activities will run concurrently with Construction) must be indicated as such with warning signs in the relevant language (English and/or Zulu). Constant communication and planning between the Project team and School staff should be maintained to ensure minimal disturbance to school activities.	Contractor

6.4.5 Plant & Equipment Maintenance

Action no.	Mitigation Measures and Actions	Responsibility
1.	Heavy machinery and construction vehicles are to be stored in a vehicle maintenance yard which must be illustrated on the construction camp layout map.	Contractor

2.	A dedicated maintenance area must be demarcated with an impermeable surface leading to an oil-water separator or containment sump. No vehicle may be extensively repaired in any place other than in a dedicated maintenance yard, or alternatively, off site at a dedicated workshop.	Contractor
3.	Washing of vehicles is prohibited on site or at the Construction Camp and Vehicle Maintenance Yard.	Contractor
4.	Access of all maintenance and material delivery vehicles must be strictly controlled.	Contractor
5.	Vehicles and equipment must be serviced regularly to avoid the contamination of the area from oil and hydraulic fluid leaks etc.	Contractor
6.	Servicing of vehicles must be done off-site or in a dedicated service bay which is impermeable, bund and is equipped with spill kit material.	Contractor
7.	Machinery or equipment used on site must not constitute a pollution hazard in respect of hydrocarbon substances.	Contractor
8.	The Contractor must order such equipment to be repaired or withdraw from use if they consider the equipment or machinery to be polluting and irreparable.	Contractor
9.	Suitably covered receptacles must be available at all times and conveniently placed for the disposal of waste. All used oils, grease or hydraulic fluids must be placed therein and these receptacles will be removed from the site on a regular basis for disposal at a registered or licensed disposal facility.	Contractor
10.	All speed limits must be adhered to.	Contractor

6.4.6 General and Hazardous Substances and Materials

Action no.	Mitigation Measures and Actions	Responsibility
1.	Refuelling, servicing or storage of hazardous substances must not take place within 100m of any watercourse or within 500m from the outer edge (buffer) around any wetland.	Contractor
2.	Storage areas must be designated, demarcated and fenced off within the confines of the site footprint.	Contractor
3.	Hazardous Substance Storage areas should be secured, under lock and key, so as to minimise the risk of theft or unauthorised handling.	Contractor
4.	Suitable fire prevention facilities (extinguishers) must be available at all storage facilities.	Contractor
5.	All fuel storage tanks and associated facilities must be designed and installed in accordance with the relevant oil industry standards, SANS codes and other relevant requirements.	Contractor
6.	Symbolic safety signs illustrating 'No Smoking', 'No Naked Flames' and 'Danger' are to be prominently displayed in and around the fuel storage area.	Contractor

7.	Appropriate storage facilities for the storage of oils, paints, grease, fuels, chemicals and any hazardous materials to be used must be provided to prevent spillages onto the ground around the storage area(s). These pollution prevention measures for storage should include a bund wall high enough to contain at least 110% of any stored volume. Such a facility must be on an impervious surface. The storage area must be securely fenced and all hazardous substances such as fuel, oils, chemicals, etc, must be stored therein. Drip trays, a thin concrete slab or a facility with a durable PVC lining, must be installed in such storage areas with a view to prevent soil contamination and surface and ground water pollution.	Contractor
8.	The capacity of any fuel storage tank on site must be clearly displayed and the product contained within the tank clearly identified.	Contractor
9.	Only empty and externally clean tanks may be stored on the bare ground. All empty and externally dirty tanks must be sealed and stored in an area where the ground has been protected.	Contractor
10.	If fuel is dispensed from 210 litre (44 gallon) drums, the proper dispensing equipment must be used and accompanied by a drip tray. The drum must not be tipped in order to dispense fuel. The dispensing mechanism of the fuel storage tank must be stored in a waterproof container when not in use.	Contractor
11.	Any spilled/contaminated fuel, oil and chemical contaminated rags must be stored in leak-proof containers and disposed of at an approved hazardous waste site. Safe disposal certificates (SDCs) must be obtained for any hazardous wastes which are disposed of and such documentation must be maintained for record-keeping purposes on site.	Contractor
12.	Storage sites will be provided with bunds to contain any spilled liquids and materials. These storage facilities (including any tanks) must be on an impermeable surface that is protected from the ingress of stormwater from surrounding areas in order to ensure that accidental spillage does not pollute local soil or water resources.	Contractor
13.	Material Safety Data Sheets (MSDSs) must be readily available on site for all chemicals and hazardous substances to be used on site. Where possible the available, MSDSs should additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases or spillages.	Contractor
14.	Staff dealing with these materials / substances must be aware of their potential impacts and follow the appropriate safety measures.	Contractor
15.	A registered waste disposal service provider (sub-contractor) must be employed to remove any waste oil and other hazardous waste. Such waste must only be disposed of at licensed landfill sites designed to handle hazardous waste. Appropriate Safety Disposal Certificates must be provided for all hazardous waste being disposed of.	Contractor
16.	The Contractor must ensure that all staff are made aware of the health risks associated with any hazardous substances used and has been provided with the appropriate protective clothing/equipment in case of spillages or accidents and have received the necessary training.	Contractor
17.	Any cement / concrete must not be mixed directly on the ground. Mixing trays and/or impermeable sumps must be used at all mixing and supply points. Unused cement bags are to be stored so as not to be effected by rain or runoff events.	Contractor

18.	If applicable, the washing of concrete trucks on site is prohibited unless disposed of into a designated wash area approved by the ECO.	Contractor
19.	Used cement bags must be stored in weather-proof containers to prevent windblown cement dust and water contamination. Used cement bags must be disposed of on a regular basis via the solid waste management system, and must not be used for any other purpose.	Contractor
20.	All remains of excess/un-used cement or concrete must be physically removed on completion of the plaster or concrete pour section and disposed of. Washing the remains into the ground is not acceptable as soil contamination and groundwater pollution may occur.	Contractor
21.	No paint products may be disposed of on site.	Contractor
22.	Care should be taken of the storage thresholds contained in the 2014 EIA Regulation Listing Notices as well as the Waste Management Listed Activities contained in Category A and B.	Contractor
23.	The Contractor must maintain a record of the sourcing of all materials used during construction.	Contractor

6.4.7 Spills, Incidents and Pollution Control

Action no.	Mitigation Measures and Actions	Responsibility
1.	Any spillage, which may occur, must be investigated and immediate action must be taken according to the requirements of the Spill Contingency Plan. This must also be reported to the ECO and Site Manager.	Contractor
2.	In the case of a spill of hydrocarbons, chemicals, bituminous or asphalt materials in the Contractor's laydown storage/areas or on the construction site, the spill should be contained and cleaned up and the material together with any contaminated soil collected and disposed of as hazardous waste to minimise pollution risks and reduce bunding capacity.	Contractor
3.	Should a pollution incident occur on site, the Contractor must: • Implement reasonable measures immediately to contain and minimise the impacts of the incident; • Notify all persons whose health may be affected by the incident; • Undertake clean up procedures immediately; • Notify the Client of the incident immediately who will advise the employee as to the measures that should be implemented; • Record the incident in the Environmental Incident Register; and • Implement measures to prevent similar incidents from occurring in the future.	Contractor
4.	Where applicable, concrete mixing must be confined to as few areas as possible and *ad hoc* mixing is to be avoided. Any areas where concrete mortar is mixed must be cleaned up after use. Concrete mixing is to be undertaken on impervious surfaces, such as on mortar boards.	Contractor
5.	Stockpiles of soil and construction material are to be bermed to prevent any lateral spread of leachate or polluted runoff.	Contractor

6.4.8 Waste Management

6.4.8.1 General Waste

Action no.	Mitigation Measures and Actions	Responsibility
1.	General waste produced on site will likely include: • Office waste (e.g. printer cartridges, paper, plastics, packaging, etc); • Construction waste (scrap metal, wood, glass, rubble, packaging); and • General domestic waste (food, cardboards, paper, bottles, tins). An adequate number of general waste receptacles (including skips and bins) must be positioned around the Construction camp laydown area and on site (working areas) to collect all waste types and domestic refuse and to minimise littering.	Contractor
2.	Bins must be clearly marked/labelled and appropriately lined for efficient control and safe containment and disposal of waste.	Contractor
3.	Different waste bins, for different waste streams must be provided to ensure correct waste separation.	Contractor
4.	Where applicable, a demarcated area must be allocated for waste sorting and disposal on the site.	Contractor
5.	All waste receptacles must be appropriately covered to ensure waste does not affected by wind, rain or vermin.	Contractor
6.	Larger quantities of general waste produced on site (e.g. rubble) are to be collected in skips for disposal at a registered landfill site. Hazardous waste in not to be mixed or combined with general waste earmarked for disposal at the municipal landfill site.	Contractor
7.	Under no circumstances is waste to be burnt or buried on site. The excavation and use of rubbish pits on site is forbidden.	Contractor
8.	Waste bins must be cleaned out on a regular basis to prevent any windblown waste and/or visual disturbance.	Contractor
9.	All general waste must be removed from the construction areas on a daily basis and disposed of in suitable waste receptacles at the designated waste storage area in the Construction Camp.	Contractor
10.	The Contractor must ensure that all general waste is disposed of at an appropriately licensed waste disposal facility. Through exploring practical means for reducing, reusing and recycling waste generated in undertaking the activity, the Contractor should aim to produce and dispose of a minimum amount of waste as possible.	Contractor

6.4.8.2 Hazardous Waste

Action no.	Mitigation Measures and Actions	Responsibility
1.	Hazardous wastes which may be produced on site, derived from hazardous substances, include: • Oil and other lubricants, diesel, petrol, paints, solvents; • Containers that contained chemicals, oils or greases; and • Other material (e.g. used rags), soils, gravel and water contaminated by hazardous substances (oil, fuel, grease, chemicals or bitumen).	Contractor
2.	Hazardous waste is to be disposed of at a Licenced Hazardous Waste Landfill Site. A licensed waste disposal site must be identified at the inception of the Project.	Contractor
3.	Hazardous waste bins must be clearly labelled, stored in a contained area (or have a drip tray) and covered (either stored under a roof or the top of the container must be securely covered with a lid).	Contractor
4.	A hazardous waste disposal certificate, or safe disposal certificate (SDC) must be obtained from the waste removal company as evidence of correct, lawful disposal.	Contractor

6.4.8.3 Waste Water

Action no.	Mitigation Measures and Actions	Responsibility
1.	All wastewater generated from activities related to the site must be disposed of in a suitable manner so as not to cause any surface or subsurface water pollution or health hazard.	Contractor
2.	Waste water including cement-contaminated water must not be allowed to enter any stormwater infrastructure or watercourse and must be managed by the Contractor to ensure that any existing water resources beyond the site footprint are not polluted by site-based construction activity.	Contractor
3.	Where applicable, used oil / hydrocarbon-contaminated wastewater should be collected and transported to a ROSE-registered facility (https://rosefoundation.org.za/) for recycling or disposed of at an appropriate hazardous wastewater treatment facility. All SDCs are to be obtained and maintained as records by the Contractor.	Contractor

6.4.9 Emergency Preparedness

Action no.	Mitigation Measures and Actions	Responsibility
1.	An emergency fire mitigation and prevention plan / method statement should be drafted before construction to ensure preparedness toward preventing fires starting from construction or elsewhere to limit or prevent damage to surrounding areas. The fire management plan must specify how fires will be prevented from breaking out and causing damage to any surrounding areas during construction. Fire outbreaks could be a major risk	Contractor

	to human life, property and vegetation in the surrounding area.	

6.4.10 Heritage

Action no.	Mitigation Measures and Actions	Responsibility
1.	If any heritage site, grave or artefact is uncovered or discovered on site, work in the immediate vicinity must be stopped immediately. Any identified site must be clearly marked as a "No-go" area. In the event that a historical grave or heritage site is exhumed/discovered, the Heritage Resource Authority (AMAFA) should be informed immediately. A specialist archaeologist will be required to facilitate any process pertaining to such a find/discovery.	Contractor
2.	The Contractor must take reasonable precautions to prevent any person from removing or damaging any such artefact. Upon any discovery thereof, the Contractor must immediately inform the Project Manager of such discovery who, in turn, must inform AMAFA and a registered archaeologist. The Chance Find Protocol in the Heritage report (BAR Appendix 6) must be followed.	Contractor
3.	Any permits, if necessary, shall be obtained from the relevant Heritage Resources Authority (AMAFA) for the destruction/removal of any Cultural or Heritage Artefacts.	Contractor
4.	Any mitigation measures recommended by a specialist archaeologist should be followed. Work may only resume once clearance is given in writing by AMAFA and/or the archaeologist.	Contractor

6.4.11 Noise Control

Action no.	Mitigation Measures and Actions	Responsibility
1.	Neighbouring landowners / community residents adjacent to the site must be notified about Construction prior to commencement.	Contractor
2.	All construction vehicles and equipment are to be kept in good repair and must be fitted with Standard silencers prior to construction.	Contractor
3.	Where possible, stationary noisy equipment (for example compressors, generators etc. must be encapsulated in acoustic covers, screens or sheds. Portable acoustic shields should be used in the case where noisy equipment is not stationary (e.g. for drills, angle grinders, chipping hammers).	Contractor
4.	Construction activities, and particularly excessively noisy activities, are to be limited to reasonable working hours during the day.	Contractor
5.	Any machines used intermittently must be shut down in the intervening periods between work or throttled down to a minimum.	Contractor

6.	In general, operations must meet the noise standard requirements of the Occupational Health and Safety Act (Act No 85 of 1993).	Contractor
7.	Construction staff working in areas where the 8-hour ambient noise levels exceed 75dBA must wear ear protection equipment.	Contractor
8.	Noise levels must be kept within acceptable limits. All noise and sounds generated must adhere to the relevant SANS standard.	Contractor
9.	No pure tone sirens or hooters may be utilised except where required in terms of SANS standards or in the event of Emergencies.	Contractor
10.	Noise from the workforce must be controlled, toolbox talks should remind workers to keep noise to a minimum.	Contractor
11.	Noise suppression measures must be applied to all construction equipment. Construction equipment must be kept in good working order and where appropriate fitted with silencers which are kept in good working order. Should the vehicles or equipment not be in good working order, the Contractor may be instructed to remove the offending vehicle or machinery from site.	Contractor
12.	The Contractor must take measures to discourage labourers from loitering in areas and causing noise disturbances. Where possible labourers must be transported to and from the site by the Contractor or by dedicated service providers using appropriate transport.	Contractor
13.	Construction activities are to be contained to reasonable hours during normal working hours.	Contractor
14.	If applicable, neighbours are to be given at least three days warning prior to any blasting or piling activities.	Contractor

6.4.12 Dust Control

Action no.	Mitigation Measures and Actions	Responsibility
1.	If water is required to be abstracted from a water resource for construction and dust suppression purposes and if such water use falls within the ambit of a section 21 water use in terms of the National Water Act (Act 36 of 1998), it must be confirmed with the Department of Water and Sanitation (DWS) if any type Water Use Authorisation (WULA or GA) applications are required.	Developer, Contractor
2.	Any dust created during construction should not affect the school (teachers and learners), surrounding residents in the local community or any of the Contractor's workforce. Dust should not reduce the visibility for private vehicles making use of the public road passing by the site.	Contractor
3.	All construction vehicles and equipment are to be kept in good working order.	Contractor
4.	Shade cloth fencing is to be used to reduce dust aggravation in high usage/exposed areas, particularly during high wind conditions and in the drier winter season. In areas where there is a large potential for dust liberation, wet suppression using water and/or eco-friendly dust suppressants should be applied to the affected areas.	Contractor
5.	A protective vegetation layer must be established on any topsoil stockpiles in order to further reduce dust creation.	Contractor

6.	Construction activities are to be contained to reasonable hours during the day avoiding periods of sunrise and sunset.	Contractor
7.	A dust suppression register (water and/or dust suppressant usage) as well as a complaints register need to be kept and updated.	Contractor
8.	All complaints received need to be investigated with remedial action taken communicated to the affected party within 14 days.	Contractor

6.4.13 Sediment Management

Action no.	Mitigation Measures and Actions	Responsibility
1.	Before any earthworks commence, sediment control/silt capture measures (e.g. berms, bidim, silt curtains) must be installed, where appropriate, to limit any sedimentation of the existing stormwater drainage system and road network adjacent to the site. Quantities of silt fences/curtains shall be decided on site with the engineer, Contractor and ECO.	Contractor, ECO, Engineer
2.	Any installed sediment control/silt capture measures must be regularly checked and maintained (dredged, cleared, de-silted to ensure continued capacity to trap sediment and silt), and repaired where necessary.	Contractor, ECO

6.4.14 Soil and Erosion Management

Action no.	Mitigation Measures and Actions	Responsibility
1	Topsoil shall be removed from all areas cleared of vegetation, and retained (stockpiled) for future rehabilitation use, where applicable. Topsoil shall be stockpiled in areas identified by the ECO and PM not higher than 2m (or in accordance with the engineering specifications) and may not be removed from site, or used for any purpose other than in the final rehabilitation and levelling/landscaping of the site.	Contractor
2.	Topsoil stockpiles must be kept free of contaminants, not be compacted or disturbed, kept separate with any materials or equipment and domed at the top to promote runoff. Topsoil should be transferred to its intended site of storage immediately following site clearance. The period between stockpiling of topsoil and its final re-use should be as short as practically possible.	Contractor
3.	Where feasible, it is recommended that the cleared grass vegetation containing the existing seedbank be retained and stored in conjunction with topsoil stockpiles. Stockpiles that are to be stored for less than three (3) months should be covered with shade-cloth, Geotech materials or similarly suitable material to prevent erosion, and kept moderately moist in order to maintain the viability of the soil. If stockpiles are to be stored for more than three (3) months, a protective vegetation layer must be established on the topsoil in order to protect it against erosion, dust and desiccation. The stockpile must be kept moist in order to maintain the viability of the seedbank, organic matter and vegetation. Vegetation should not consist of weeds but of indigenous grass cover (sourced from the original stripped	Contractor

	grass and/ or a regional plant nursery). Reference should also be made to BAR Appendix 5 in terms of species to be used for rehabilitation.	
4.	Soil erosion on site must be prevented at all times, *i.e.* pre, during and post construction activities. Suitable erosion control measures must be implemented in areas sensitive to erosion, such as water supply points and edges of slopes. Erosion prevention / run-off attenuation measures include sand bags, logs, silt fences, stormwater catch-pits, shade nets, rip-rap, stone pitching, brush packing or temporary mulching over denuded areas, as required.	Contractor
5.	Constant cognisance of the inherent erosion risk potential of all soil and ground surfaces on the site (particularly when exposed / free of vegetation) must be taken and appropriate control and preventative measure put in place. The Contractor must take responsibility for the site to conform to all Contractual aspects and environmental standards applicable.	Contractor

6.4.15 Stormwater Management

Action no.	Mitigation Measures and Actions	Responsibility
1.	Detailed plans to control and prevent erosion by storm water must be agreed between the Contractor and Site manager/Engineer, and approved by the ECO prior to the commencement of any works, including site clearance, on any portion of the site.	Contractor, Engineer/Site Manager, ECO
2.	Earthworks on sites are to be kept to a minimum. Where any sloped embankments have to be created, stabilisation and erosion control measures must be implemented immediately.	Contractor
3.	No chemicals, fluids or hazardous substances are allowed to enter the stormwater drainage system as these could have a cumulatively detrimental effect on the flora, fauna and any aquatic life in watercourses, in the downstream environment beyond the site footprint. Regular monitoring of the site and the immediate surrounding road/drainage network should be undertaken.	Contractor
4.	No stormwater, wash water, or wastewater may be directed towards any permanent water body or wetland without the installation of a suitable filtration system to prevent pollution, including silt, from entering such water body. Watercourses and wetlands beyond the site footprint should be considered as “No go” areas and are to be avoided.	Contractor
5.	Construction activities should be scheduled to minimise the duration of exposed bare soils on site, especially on any steep slopes. The Contractor must regularly monitor the site for erosion damage after every rainfall event and rectify / rehabilitate any damage immediately. Construction activity during and after rainfall should cease. Only once the ground surface has dried out sufficiently should scheduled construction activities resume.	Contractor

6.	Run-off generated from cleared and disturbed areas/slopes must be controlled using erosion control and sediment trapping measures like silt fences, sandbags, earthen berms and synthetic logs, particularly on exposed slopes. These control measures must be established at regular intervals perpendicular to the slope to break surface flow energy and reduce erosion as well as trap sediment. Sediment barriers should be regularly maintained, cleared and repaired (where necessary) so as to ensure effective drainage.	Contractor
7.	Any erosion control and sediment trapping measures must only be removed once vegetation cover has successfully re-colonised the disturbed areas post-rehabilitation.	Contractor

6.4.16 Biodiversity (Terrestrial Ecosystem) Management

Action no.	Mitigation Measures and Actions	Responsibility
1.	Removal of indigenous vegetation must be restricted to the immediate area for construction and as instructed by the PM and ECO.	Contractor, ECO, Site Manager
2.	Any protected vegetation species identified by a botanist or ECO may not be removed or cut without a permit from the relevant Conservation Authority. The removal of indigenous/endemic shrubs or forbs must be kept to a minimum and only be removed after a *Search* and *Rescue* has been done and any necessary permits have been obtained (if applicable).	Developer, Contractor
3.	Care must be taken to avoid the introduction of alien plant species to the site and surrounding areas. Where alien plants have been introduced on to the site, they must be removed immediately. Any cleared alien vegetation must be disposed of to a suitable landfill site. Invader species and weeds must be removed and disposed of in accordance with existing legislation (Conservation of Agricultural Resource Act (No. 43 of 1983) on a regular basis.	Contractor
4.	The Contractor must develop an Action Plan/Method statement for the removal of alien invasive species and submit it to the ECO for approval.	Contractor
5.	No poaching of any animal is permitted and no animal may be killed, destroyed, hunted, trapped, snared or captured for any purpose. The removal of any protected fauna from site or surrounds is strictly prohibited, unless done so for the protection of the species with the applicable permits. Any dangerous animals should be handled by a competent person. Harsh contractual fines and penalties must be imposed and the immediate dismissal on any contract employee who is found attempting to kill, snare or otherwise harm animals.	Contractor
6.	The speed of vehicles and plant to and around the site should be limited to avoid injury of fauna and allow for sufficient safety margins.	Whole Project Team

6.5 POST-CONSTRUCTION / REHABILITATION PHASE

6.5.1 Site de-establishment

Action no.	Mitigation Measures and Actions	Responsibility
1.	On completion of the Project, the Contractor shall ensure that all temporary structures, equipment, materials, waste, litter, rubble, notice boards and structures fences used during construction are removed with minimum damage to the surrounding area.	Contractor, ECO, Project Manager
2.	The Contractor shall clean and clear the site to the satisfaction of the PM and ECO.	Contractor
3.	After construction completion, any remaining disturbed surfaces on the site footprint shall be rehabilitated by scarifying the surface and rehabilitating the areas according to the specialist recommendations (See BAR Appendix 5).	Contractor

6.5.2 Rehabilitation

Action no.	Mitigation Measures and Actions	Responsibility
1.	A rehabilitation programme should be implemented as soon as practically possible after completion of each main construction activity (once no further disturbances will occur). Locally appropriate indigenous vegetation must be used for the site in accordance to the Rehabilitation Plan/Method Statement (See BAR Appendix 5 for local indigenous species to be used).	Contractor
2.	All disturbed surfaces compacted by construction activities should be ripped and scarified to allow organic contaminants to breakdown and to promote vegetation re-establishment.	Contractor
3.	Rehabilitation or re-vegetation of disturbed areas must take place during or immediately after construction is complete once no further disturbances will take place.	Contractor
4.	Only appropriate indigenous vegetation should be used for the rehabilitation and re-vegetation within the disturbed area in accordance to the Rehabilitation Plan	Contractor
5.	Final rehabilitation must be completed within a period specified by the PM and ECO.	ECO, Project Manager
6.	All disturbed areas must be rehabilitated immediately upon completion of the project	Contractor
7.	Rehabilitation efforts must strive to ensure that no visible erosion scars remain after completion of the Contract.	Contractor
8.	Disturbed areas of natural vegetation as well as any cut and fills must be rehabilitated to prevent soil erosion.	Contractor
9.	Ideally, the timeframe for rehabilitation should be planned to coincide with the growing season to allow vegetation to establish successfully.	Contractor
10.	It may be necessary that a botanical/ecological specialist is consulted prior to the undertaking of rehabilitation and re-vegetation of all affected areas, as identified by the ECO in consultation with the Project Manager.	Project Manager, ECO

11.	Photos of all affected and rehabilitated areas must be taken during and *post* Rehabilitation in order to compare with the site condition *pre*-Construction.	Contractor ECO
12.	Rehabilitation is to be monitored by the ECO according to the requirements of the EMPr and specialist recommendations.	ECO

6.5.3 Revegetation

Action no.	Mitigation Measures and Actions	Responsibility
1.	The Project area must be monitored, for a period between 3 to 6 months after the development is complete, to ensure that: • Erosion is not taking place and re-vegetation is successful; • Any additional maintenance activities where intrusive works are deemed necessary adhere to the mitigation measures in this EMPr.	Contractor, Developer, ECO
2.	It may be necessary for the Contractor to appoint a suitably experienced landscaping Contractor/Botanist who is familiar with the local vegetation and rehabilitation methods. Such appointment must first be approved by the PM.	Contractor, Project Manager
3.	Original topsoil retained and stockpiled during construction should be used during rehabilitation.	Contractor
4.	The Contractor's Rehabilitation Method Statement should include details of any Search and Rescue requirements and the re-seeding and/or re-vegetation methods to be used for all affected area areas. This will be reviewed by the ECO prior to approval by the Site Manager. If necessary a botanical specialist should be consulted.	Contractor, ECO, Botanist
5.	The recommended method for rehabilitating disturbed areas is by collecting seed from plants in the same community in nearby undisturbed vegetation for sowing on disturbed areas. If this is not possible, indigenous grass species should be sourced from the original stripped grass and/ or a regional plant nursery. Reference should also be made to BAR Appendix 5 in terms of species to be used for rehabilitation.	Specialist Contractor

6.5.4 Erosion control measures

Action no.	Mitigation Measures and Actions	Responsibility
1.	Precautions should be taken to prevent soil erosion during the Rehabilitation Phase. Erosion control measures (e.g. application of straw mulches or soil binders to exposed soil) shall be put in place in all rehabilitated areas, including access roads, stockpiles and any other disturbed areas associated with the affected area operations.	Contractor
2.	If necessary, wind protection measures such as shade cloth screens shall be erected to protect the soil and vegetation.	Contractor

7 OPERATION OF SCHOOL

The functioning and operation of the school is expected to be long-term and fully functional once rehabilitation is complete. In terms of any future (long-term) environmental monitoring and maintenance requirements at the school, the scope of this EMPr is limited to the phases as defined in the timeframe of the Project. An Operational EMPr (OEMPr) is not considered necessary for this proposed development, should it be authorised. Once successful rehabilitation of the footprint has been verified by a post-closure audit (and report) conducted by the independent ECO, no further post-closure requirements are considered necessary. Mitigation measures, actions and responsibilities for management, beyond the construction and rehabilitation phase of the school, are recommended below.

Action no.	Mitigation Measures and Actions	Responsibility
1.	Any long-term (future) environmental monitoring and management required during the Operational Phase of the school (primarily waste management, water management and alien vegetation management) should be via written agreement between the Developer (DoE) and the Local Municipality (NLM). An "Operation Manual/Plan" is recommended to be developed detailing procedures to be followed and responsibilities for waste, water and vegetation management at the school. It should include any financial, servicing and long-term monitoring and maintenance requirements.	Developer, Local Municipality
2.	If there are any potential (future) maintenance requirements which are deemed necessary beyond the contractual Project timeframe, a specific Method Statement should be developed by each and any appointed Maintenance Contractor prior to performing any required maintenance on the school premises. Standard business procedures, in terms of requesting for quotations and approving/appointing Service Providers, should follow.	Developer, School Management, Maintenance Contractors/Service Providers

8 CONFORMANCE WITH THE ENVIRONMENTAL SPECIFICATIONS

It is necessary for the Contractor to make provisions as part of their budgets for the implementation of the EMPr. In terms of NEMA, every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment and is liable to pay costs both to the environment and human health and the preventative measures to reduce or prevent additional pollution and/or environmental damage from occurring. This is referred to as the Polluter Pays Principle. Section 28 of NEMA embodies the Polluter Pays Principle.

The Contractor is deemed not to have adhered with the Environmental Specifications/EMPr if:

- There is evidence of contravention of clauses within and beyond the boundaries of the site footprint;
- Environmental damage is caused due to negligence;
- The Contractor ignores or fails to comply with corrective or other instructions issued by the PM or ECO within a specified time; and
- The Contractor fails to respond to and adequately resolve reasonable complaints from members of the public or project stakeholders.
- The Contractor fails to conform with corrective or other instructions issued by the PM or ECO within a specific time period;

The Developer (holder of the EA) and/or the Contractor will be deemed not to have adhered with the Environmental Specifications/EMPr/EA if:

- Any unauthorised construction activities or unauthorised NEMA EIA listed activities knowingly take place in the context of those activities that are authorised for the Project.

8.1 Non- conformance

The Contractor shall act immediately when any notice of non-conformance (NCR) is received and correct whatever is the cause for the issuing of the notice. Complaints received regarding activities on the construction site pertaining to the environment shall be recorded in a dedicated register and the response noted with the date and any actions of resolution taken. The ECO should be made aware of any complaints received.

Any non-conformance to the procedures of this EMPr may also be deemed a transgression of the various statutes and laws that define the manner in which the biophysical (natural) and socio-economic

environment is managed. Any chronic or persistent negligence or failure to redress serious transgressions or contraventions shall be reported to the relevant authority for them to consider, mediate and officially advise upon on a basis that the authority deems to be environmentally fair, reasonable and justifiable.

It is recommended that the application of a penalty clause on the Project is implemented for incidents of major legal non-compliance or persistent negligence which significantly negatively impacts the environment. The Contractor will be allowed one offence and a written warning issued by the ECO or PM. Failure to rectify the offence within two (2) working weeks of the issue of the warning or a repeat offence should result in a fine, as decided by the PM or ECO. The principle of any fines or penalties should be consistent with any clauses in the contractual documentation for the Project where fines or penalties may be issued to the Contractor for any time delays/extensions or material or workmanship defects relating to the Project which are not allowed for in the contract and the associated budget.

It is recommended that the PM in collaboration with the ECO implement an integrated system of financial penalties and/or conditions for dismissal for less serious transgressions, and any others determined during the course of the Project, such as those listed below:

- Littering on site;
- Unlawful lighting of fires on site;
- Persistent or un-repaired fuel and oil leaks;
- Excess dust or excess noise emanating from site;
- Possession or use of intoxicating substances on site;
- Any vehicles being driven in excess of designated speed limits;
- Theft/removal and/or damage to any fauna, flora or cultural or heritage objects on site;
- Urination and defecation anywhere except at designated facilities;
- Any persons, vehicles or equipment related to the Project found within any designated “No-go” areas.

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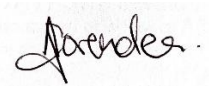

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9 EMPR ANNEXURES

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Annexure A
Curriculum Vitae of Authors

Du Toit Malherbe

Environmental Consultant

Personal Details

- Gender: Male
- Date of Birth: 1987-04-03
- Nationality: South African
- Identity: 8704035252088
- Marital Status: Single
- Drivers Licence: Codes B
- Languages: Afrikaans & English

Qualifications

BSc (Hons): Botany and Zoology, Environmental Science

- *Stellenbosch University 2009*

BSc: Biodiversity and Ecology Environmental Science

- *Stellenbosch University 2008*

Professional Certification

Professional Natural Scientist (*Pri Sci Nat*)

- *South African Council for Natural Scientific Professions (SACNASP) Registration Number: 118934*

Short Courses

Introduction to Integrated Operational Risk Management

- *NCC Environmental Services (2018)*

First Aid Level 1 and 2

- *Agisasang SATraining (2016)*

Snake ID, Treatment and Venomous Snake Handling

- *International Medical Services (2015)*

Implementing Environmental Management Systems / ISO 14001

- *Centre for Environmental Management (2014)*

Landscape Function Analysis

- *Agreenco (2013)*

Environmental Law

- *NCC Environmental Services (2013)*

Incident investigation

- *LexisNexis(2013)*

Introduction to Environmental Management

- *Centre for Environmental Management (2012)*

Years of Experience

- 8 years

NCC Environmental Services (Pty) Ltd

2011 – present

Environmental Management Consultant

Profession

Environmental Consultant
Environmental Control Officer (ECO)
Environmental Officer (EO)
Land Liaison Officer (LLO)

Duties and Responsibilities

Advised, monitored and audited compliance to the Environmental Management Plans (EMP), environmental authorisations (EA) and relevant legislation during the construction of several renewable and other energy related projects for various clients. Liaised with the holder of the authorisation, engineer and DEA. Reported and mitigated environmental impacts. Implemented an Environmental Management System (EMS) on an ISO14001 certified construction site. Mentored junior staff on multiple projects. Reviewed, executed, and maintained a rehabilitation plan. Assisted in rhino monitoring on a privately owned game farm during construction activities.

Environmental Consulting Projects 2017 - present

- Various ad hoc projects (across SA)

ECO/EO Projects 2011 - 2017

- Pinotage 400kV substation (Western Cape)
- Longyuan Mulilo De Aar Maanhaarberg Wind Energy Facility (100 MW)
- Longyuan Mulilo De Aar 2 North Wind Energy Facility (140 MW)
- Longyuan Mulilo 132 kV Transmission lines (Northern Cape)
- Mulilo Prieska Photovoltaic Energy Facility (100 MW) (Northern Cape)
- Mulilo Sonnedix Prieska PV (100 MW) (Northern Cape)
- Ingula Pumped Storage Scheme (1332 MW) (KwaZulu-Natal)
- Tabor - Witkop 400 kV & 132kV Transmission lines (Limpopo)
- Tabor 400 kV substation (Limpopo)

Other Projects 2010-2011

- Department of Geography, Stellenbosch University. Research Assistant on Fire Ecology (Stellenbosch).
- Centre for Geographical Analysis. GIS Assistant (Stellenbosch).
- Sun Biofuels: Surveyed the land intended for cultivation, identified conservation areas and assisted in biodiversity assessments (Tanzania).

Key skills

Environmental management & consulting, project management, conflict management, stakeholder engagement, problem solving, environmental inspections, auditing, compliance monitoring & implementation, conducting of applied and basic research and scientific report writing. Compilation of environmental management plans and reports, development & implementation of environmental management systems, MS Suite

Craig Burne

Senior Environmental Consultant

Profession

Environmental Consulting and Management

Qualifications

MSc (Dissertation): Freshwater Ecology

- *University of the Witwatersrand*
  2013-2015

BSc (Hons): Environmental Science

- *University of KwaZulu-Natal*
  2007

BSc: Zoology & Environmental Science

- *Rhodes University*
  2003-2005

Accredited SASS5 Practitioner

- *Departments of Water & Sanitation and Environmental Affairs*
  2019

Professional certification

Professional Natural Scientist (*Pr. Sci. Nat.*)

- *South African Council for Natural Scientific Professions (SACNASP)*
- *Membership no: 115213*

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Short courses

Environmental Law

- *Centre for Environmental Management; 2010*

Lead Auditing Course: ISO 14001

- *DQS; 2010*

Years of experience

- 12 years

Key skills/knowledge areas

- Environmental management (ISO14001)
- Environmental compliance monitoring
- Environmental risk assessment
- Environmental permitting/licensing
- Auditing & EMS implementation
- Aquatic (freshwater) ecology
- Water quality assessment/reporting
- Freshwater macroinvertebrate assessment
- Aquatic assessment & biomonitoring
- Wetland assessment & monitoring
- Alien vegetation assessment & monitoring
- Scientific report writing
- Technical proposal writing
- Basic statistical techniques
- Basic mapping
- Applied and basic research

NCC Environmental Services (Pty) Ltd

Feb 2008 – present

Previous and current roles and responsibilities

Undertaking environmental legal compliance monitoring and implementation functions on various sites including Environmental Control Officer (ECO), Environmental Auditor, and Environmental Officer (EO). Compilation and implementation of environmental method statements, rehabilitation plans, environmental risk assessments (ERAs) and construction work procedures. Water quality assessments, river rehabilitation and alien vegetation monitoring, aquatic biomonitoring and formulation of management plans.

Preparing, undertaking and reviewing customised environmental audits for various projects/clients, stakeholder engagement and customer/client relationship management, mentoring and provision of technical advice to junior staff on multiple projects, conducting rehabilitation assessments and cost estimates post-construction, closure reports, coordination of waste management and recycling programmes on civil and building construction sites, management and resourcing of sub-contractors, participation in the coordination of environmental assessments, EMPRs & environmental license/permit applications.

List of current and previous projects

Compliance Monitoring Projects:

- Daggakraal D281 Road Upgrade (Mpumalanga)
- Ingula Pumped Storage Scheme (KZN)
- Everest-Merapi 400kV transmission line construction (Free State)
- Lower Thukela Bulk Water Supply Scheme (KZN)
- Medupi 400kV Transmission Integration: Phase Alpha (Limpopo & NW)
- Mercury 765kV Substation (Free State)
- Majuba-Mfolozi 765kV transmission line construction (KZN)
- VRESAP Bulk Water Pipeline construction (Mpumalanga)
- Dube Tradeport Corporation (2018-current)

Building Projects:

- Cornubia BFS Cold Storage Facility, Durban (2015)
- Crown Cornubia Cold Storage Facility, Durban (2017)
- KZN-SANBI Botanical Garden Upgrade, Durban & Pietermaritzburg (2015 - 2017)
- Cornubia Sigma and Cornubia II, Durban (2016-2019)

Consulting Projects:

- Aquatic biomonitoring Mhlathuze River, KZN, 2019-2020 (SANRAL)
- Drinking water quality assessment, monitoring & reporting in the Port of Durban, 2019-current (Transnet National Ports Authority)
- Watercourse risk assessment, 2019 (Sabi Game Reserve)
- Thembinkosi Primary School basic assessment, 2019-current (Coega Development Corporation)
- Wetland rehabilitation, aquatic habitat assessment, wetland assessment, aquatic biomonitoring, SASS5, water quality monitoring for N2 road upgrade, KZN, 2017-current (SANRAL)
- Water resource use licensing & SANS water interpretation for 'Rocking the Daisies 2018', W. Cape (2018)
- Environmental screening/feasibility assessment, 2017 (Kalahari Films)
- Participation in basic assessment for D281 Road Upgrade, Mpumalanga, 2015-2016 (DPWRT)

Personal Details

- Gender: Male
- Date of Birth: 1982-10-26
- Nationality: South African
- Identity: 8210265850088
- Drivers Licence: Codes EB
- Languages: English (native) Afrikaans (basic)

Annexure B
Content of an EMPr

CONTENT OF THIS EMPr[1]

(1) An EMPr must comply with section 24N of the Act and include -

a) Details of -

(i) the EAP who prepared the EMPr; and

(ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae;

b) a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;

c) a map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers;

d) a description of the impact management objectives, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including -

(i) planning and design;

(ii) pre-construction activities;

(iii) construction activities;

(iv) rehabilitation of the environment after construction and where applicable post closure; and

(v) where relevant, operation activities;

e) a description and identification of impact management outcomes required for the aspects contemplated in paragraph (d);

f) a description of proposed impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated in paragraphs (d) and (e) will be achieved, and must, where applicable, include actions to -

(i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;

(ii) comply with any prescribed environmental management standards or practices;

(iii) comply with any applicable provisions of the Act regarding closure, where applicable; and

(iv) comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable;

g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);

h) the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);

i) an indication of the persons who will be responsible for the implementation of the impact management actions;

j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;

k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);

l) a program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;

m) an environmental awareness plan describing the manner in which –

(i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and

(ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and

n) any specific information that may be required by the competent authority.

[1]The content of this EMPr for the proposed Project is consistent with the requirements as set out in Section 19 (4) of the NEMA EIA Regulations, as stated in parentheses (*i.e.* Planning & Design, Pre-Construction, Construction & Post-Construction Rehabilitation). Any environmental management during the Operational Phase of the school would be achievable via an "Operation Manual/Plan" developed by the Developer (DOE) in conjunction with the local Municipality detailing procedures & responsibilities for relevant waste & water management at the school & any financial, servicing, monitoring & maintenance requirements in the long-term.

Annexure C
Topographical Survey

OPS_004_v002

Additional location and sensitivity maps are available as BAR Annexure 14

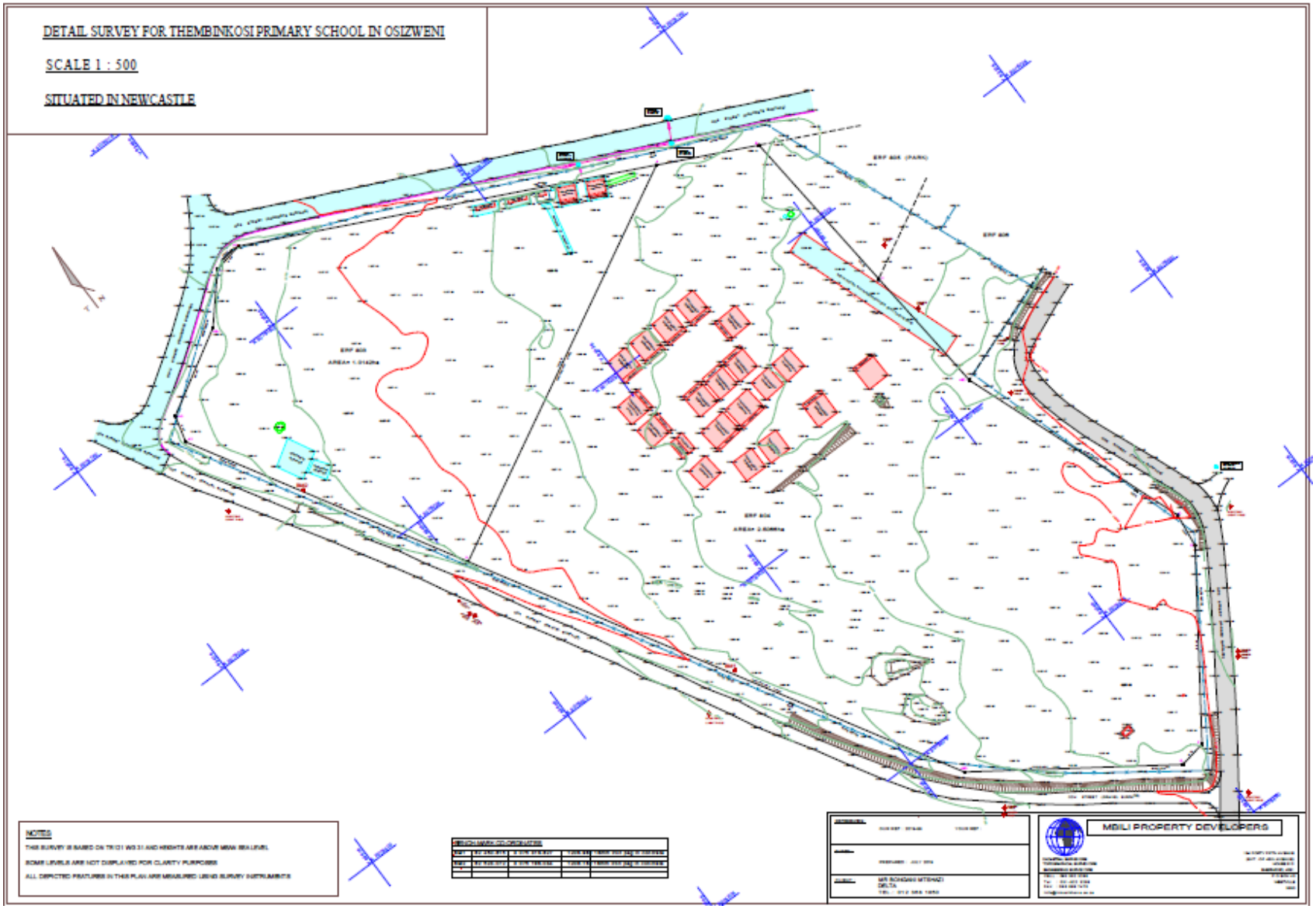

Figure C1: Topographical survey map for Thembinkosi Primary School on erf 803 and 804 (*Source*: DBEC, 2019).

Annexure D
Awareness Training

Basic Environmental Awareness Training

Workers & equipment must stay inside the site boundaries at all times.

Do not harm any animals on the site.
Report any animals on site to the site manager.

Report any petrol, oil & diesel leaks or spills to the Site Supervisor.
Use a drip tray under vehicles & machinery during refueling.

Put cigarette butts in designated bin.
Do not smoke near gas, paints or petrol.
Do not throw cigarettes into veld.

Know all the emergency phone numbers.

Do not light any fires.
Know the positions of fire fighting equipment.
Report all fires to the site supervisor.
Do not burn rubbish/vegetation.

Avoid producing dust – keep to speed limit.

Use the toilets provided.
Report full or leaking toilets to site supervisor.

Do not make loud noises around the site, especially near homes/business.
No employees to be using headphones/earphones on site.
Report noisy vehicles or machinery to the site supervisor.

Do not litter – put all rubbish into the bins provided.
Report full bins to site supervisor.

Always keep to the speed limit.
Drivers - check & report leaks.
Ensure loads are secure & do not spill.
NO vehicle/machinery washing is permitted.

Do not damage or cut down any trees or plants without the necessary permissions.
Do not pick flowers.

All employees entering site must have appropriate Personal Protective Equipment (PPE) on them at all times.

Report any breaks, floods, fires, leaks and injuries to the site supervisor.
Ask questions!

Annexure E
Environmental Registers

WASTE REGISTER TEMPLATE

Waste streams		Contractor	Service provider	Recycled / Recovered Waste								General Waste Disposed		Hazardous Waste Disposed						Comments	Collection slip received	Disposal slip received	Date Filed
Week	Slip date			Paper	Cardboard	Plastic	Scrap metal	Wood	Rubble	Printer Cartridges	Recycled Oil	General Waste	Clean cement bags	Sewage: Mobile toilets	Sewage: Coservancy tank	Chemical Waste	Oil Contaminated Waste		Sanitary Waste	Medical Waste				
				kg	kg	kg	kg	kg	m3	units	Litres	kg	kg	litres	litres	litres	litres	kg	kg	kg				

WATER USAGE TEMPLATE

Date/ Week	Water source		Water Used on site (Weekly)			Water figures (Monthly)			Comments
	Water collected at *source	Grey/ treated water	Dust suppression	Civils works	Potable water/ Offices	Monthly Abstraction	Monthly Total Used	Monthly Total Stored	
	Litres	Litres	Litres	Litres	Litres	Litres	Litres	Litres	

ENVIRONMENTAL INCIDENT / SPILL / NCR REGISTER TEMPLATE

No.	Date	Source/ Originator	Responsible party / Contractor	Type	Impact	Location	Estimated volume of spill	Significance Classification	Repeated Offence	Description of Incident	Cause	Remedial Action		Action Date	Status	Escalated to NCR
								Minor/ Moderate/ Major		What, Where, When, How, Why did it happen?		Immediate Corrective Actions	Preventative measures			
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																

COMPLAINTS REGISTER TEMPLATE

Ref No.	Notification Date	Category	Compliment, complaint or issue identified	Source of the issue	Significance of issue	Mitigation Measures		Lessons Learned	Response to initiator	Closure Status
						Corrective action	Preventive action	New or Additional controls required		

Annexure F
EMPr Acceptance

LETTER OF ACCEPTANCE OF THE EMPr

This letter is to be signed by the Principal Contractor and other project role-players, printed and kept on site.

RE: Acceptance of the Construction Environmental Management Programme

Dear Sir/Madam,

This is to state that the undersigned have received a copy of the approved Environmental Management Programme (EMPr) developed for the upgrading of Thembinkosi Primary School by NCC Environmental Services (Pty) Ltd dated February 2020. The undersigned parties hereby agree to implement and abide by the conditions and environmental specifications of the EMPr. Any contraventions of the EMPr should be recorded and appropriate corrective actions duly carried out.

Any suggested amendments and/or changes to the EMPr should be motivated and approved by the appointed Environmental Control Officer (ECO) in conjunction with the relevant Authority. Any such changes are to strictly be made in writing in terms of Chapter 5 of the 2014 NEMA EIA Regulations (as amended).

As Agreed on this day _____of_____(Month)_____(Year)

Environmental Control Officer (ECO)

Name _____ Signature _____

Date_____

Principal Contractor

Name _____ Signature _____

Date_____

Site Engineer/Agent

Name _____ Signature _____

Date_____

Developer/Client Agent (CDC)

Name _____ Signature _____

Date_____

Annexure G

Method statement guideline and basic template

Guideline for Method Statements

Method statements must be submitted to and approved by the ECO and updated/revised as may be necessary. Method statements must contain information on the following basic aspects:

- **Activity Description** - a brief description of the specific activity;
- **Specifications** - referencing relevant documents such as South African Bureau of Standards, the EMPr, the Environmental Authorisation, Legislation, etc.;
- **Drawings** - where relevant;
- **Major Equipment** - listing the major equipment that will be involved in the specific construction activity;
- **Programme** - identifying when the activity is expected to take place;
- **Construction Sequence and Method** - detailing the activity process that must be followed;
- **Resources** - resources that will be required for the activity; and
- **Environmental** - information regarding awareness, training, precautions, etc.

Basic Template

METHOD STATEMENT TEMPLATE

CONTRACT: _____

DATE: _____

PROPOSED ACTIVITY (give title of method statement and reference number from the EMPR):

WHAT WORK IS TO BE UNDERTAKEN (give a brief description of the works):

WHERE ARE THE WORKS TO BE UNDERTAKEN (where possible, provide an annotated plan and a full description of the extent of the works):

START AND END DATE OF THE WORKS FOR WHICH THE METHOD STATEMENT IS REQUIRED:

Start Date: _____

End Date: _____

HOW ARE THE WORKS TO BE UNDERTAKEN (provide as much detail as possible, including annotated maps and plans where possible):
