KWAZULU-NATAL PROVINCE
ECONOMIC DEVELOPMENT, TOURISM
AND ENVIRONMENTAL AFFAIRS
REPUBLIC OF SOUTH AFRICA

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Reference: DM/0006/2023
KZN Reference: KZN/EIA/0001889/2023

16/10/2023

E-mail Transmission

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DM/0006/2023: ENVIRONMENTAL AUTHORIZATION FOR THE CATO RIDGE LAND RELEASE AND DEVELOPMENT PROJECT ON VARIOUS PORTIONS IN CATO RIDGE, LOCATED WITHIN THE ETHEKWINI MUNICIPALITY.

The KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs has **authorized** the abovementioned project. This environmental authorization and reasons for the decision are attached herewith.

1. ENQUIRIES

Please note that:

- All queries regarding this application for environmental authorization (including the Department's decision) must be directed to the official of this Department with contact details provided on the letterhead above.
- **Only** queries regarding appeals must be submitted to the Office of the MEC (details provided below).

2. NOTIFICATION OF DECISION ON APPLICATION

In accordance with regulation 4(2) of the EIA Regulations 2014, the applicant must in writing **within 14 days** of the date of this decision ensure that

a. All registered interested and affected parties are provided with access to this decision and the reasons for the decision; and

b. The attention of all registered interested and affected parties is drawn to the fact that an appeal may be lodged against the decision in terms of the National Appeal Regulations 2014, if such appeal is available in the circumstances of the decision.

3. APPEALS

In accordance with regulation 4(1) of the National Appeal Regulations, 2014 an appellant must submit an appeal to the appeal administrator and a copy of the appeal to the applicant, any registered interested and affected party and organ of state with interest in the matter with 20 days from the date of notification of this decision.

An appellant must comply with regulation 4(2) and submit the appeal in writing, on the form obtainable from the Appeal Administrator and **by post, fax, e-mail or hand delivery** to the following address:

The Appeal Administrator,
Office of the KwaZulu-Natal MEC for Economic Development, Tourism & Environmental Affairs

FAX/ E-MAIL:	PHYSICAL:
Tel: 033- 328 8000 Mobile: 0817317361 E-Mail: Haresh.Inderlall@kznedtea.gov.za (Mr. Haresh Inderlall)	181 Hoosen Haffejee Street (formerly Berg Street) PIETERMARITZBURG 3201

Yours faithfully

for: **Head of Department**
KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs
Signed by: Ms. Mr. Sabelo S. Ngcobo
Designation: Director – Environmental Quality Management
EAP: 2022/5543

Date: 16/10/2023

cc: *Mr. Patrick Killick, Zutari (Pty) Ltd, e-mail address: Patrick.Killick@zutari.com*

KWAZULU-NATAL PROVINCE
ECONOMIC DEVELOPMENT, TOURISM
AND ENVIRONMENTAL AFFAIRS
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

In terms of regulation 36 of the Environmental Impact Assessment Regulations, 2014 as amended

Project Title: **The Cato Ridge Land Release and Development Project**

Local Municipality: **eThekwini**

Application number	:	DM/0006/2023
NEAS number	:	KZN/EIA/0001889/2023
Date of issue	:	16 / 10 / 2023
Environmental Authorisation Holder	:	Cato Ridge Development Company Ltd
Location of activity	:	Various portions in Cato Ridge

Scope of Project

The Cato Ridge Development Company Ltd (CRDC), a wholly owned subsidiary of Assmang (Pty) Limited (Assmang), is authorised to release a portion of its land in the Cato Ridge area, i.e. 351ha for the development of a light industrial, logistics, commercial, warehousing and distribution precinct. The project will be undertaken in three phases[1]:

- Phase 1 is 131-hectares;
- Phase 2 is 174-ha developed, and,
- Phase 3 is the remaining 46-ha.

The Cato Ridge Land Release and Development project is located within the Cato Ridge area in the eThekwini Metropolitan Municipality, KwaZulu Natal, as per **Annexure 2: Locality Map** attached herewith.

The Project would entail the development of a precinct aligned to the eThekwini's dry port development project and includes services such as roads, electricity, water, sewers, wastewater treatment, and stormwater services and the lease or sale of serviced industrial sites to third-party end-users (individually or collectively) for development and use.

The bulk infrastructure for the project includes the following:

- Internal Road network (7m wide with 20m reserve) with necessary traffic controls, signage, and road markings.
- Bulk electrical: comprised of new powerlines, substations, and electrical network.
- Bulk sewerage: Roadside sewer network including collection sumps and pump stations and modular wastewater treatment plant (WWTP), with a maximum capacity of 2Ml per day and effluent discharge. This facility will be incrementally developed based on demand and will be decommissioned, once the municipal trunk sewer is installed.
- Bulk water: water supply pipelines within road reserve connected with municipal supply. To service the development, the following water infrastructure will be required:
    - One elevated water tower (10m x 10m by 5m high or 0.1ha); and,
    - Water distribution pipelines.

  The water reticulation infrastructure will be finalised in consultation with the eThekwini Water and Sanitation (EWS) Department. The water pipelines will tie into the existing bulk water line. Water storage facilities, pipes and pump stations will be designed to meet the anticipated demand. The distribution system will use a gravity-fed system, but also pump water to each erf, and various connection points will be connected to the existing water network.
- Bulk stormwater: roadside pipes, drains, diversion works, attenuation ponds, and discharge points with erosion protection.
- Operations Area and Staff Facilities: Supporting infrastructures such as offices, ablution facilities, parking lots, paved areas, access roads, storage areas and access-controlled areas (subject to end-user requirements).
- Elevated water Tank.

[1] Each phase does not refer to a defined geographical area but rather the first 131ha of development which may be located anywhere within the 351ha footprint and is not limited to the "Phase 1" area identified in the layout map.

Only once site-specific development plans are available from the ultimate end-users, can site-specific assessments be undertaken which must align with the requirements of the overarching project, and any additional authorisations, licenses and permits must be identified and applied for by the responsible person/party. Site-specific infrastructure will be determined once the development or sale/lease of the property is finalised with individual end-users.

However, the study area hosts the endangered KwaZulu Natal Sandstone Sourveld (KZNSS) vegetation type and other environmental sensitivities (i.e., wetlands) and forms part of the Durban Municipality Open Space System (DMOSS). The potential loss of biodiversity and ecosystem function associated with the development has been quantified and proposed biodiversity offsets would include both the on-site establishment of protected areas and the associated implementation of mitigation measures, and off-site biodiversity offsets aimed securing, protecting and managing biodiversity offset areas within KwaZulu-Natal.

The phases are described as below:

Phase 1 – 131-ha:

- Phase 1 refers to the first 131-ha of the total development footprint.
- From the planning perspective, Phase 1 of the development refers to the area located north of the R103, mostly west of Eddie Hagan Drive, east of the D1022 Road and south of the existing Makro DC facility/warehouse.
- Phase 1 is vacant land and is situated on an elevated flat landform (plateau) with a slope of between 0%-5%.
- The eastern boundary of this area is fringed by an escarpment and the Cato Ridge Works forms the western boundary.
- The dominant land cover in Phase 1 is natural grassland with dispersed pockets of dense woodland (mostly Eucalyptus).
- Phase 1 has the presence of the Natal Corridor (Natcor) railway along the southern boundary, the existing Assmang Cato Ridge Works smelter operations on the western boundary, some residential buildings along the eastern boundary, cattle grazing and small-scale illegal sand mining. The entire Phase falls within the urban development line (UDL) and is zoned for *General Industry 2* and a small portion zoned as *Residential Smallholding 3*.

Phase 1 will entail the following:

a) **Stage 1 Biodiversity offsets:** Prior to development commencing on Phase 1, sufficient funds to identify and secure both on-site and off-site biodiversity offset areas, to compensate for the residual loss of KZN Sandstone Sourveld (KZNSS) within Phase 1, will be deposited into a dedicated conservation trust account.

The biodiversity offset objective target is to use the simpler approach to quantifying gains and losses as outlined in the KZN Biodiversity Offset Guidelines[2]. The offset target is to be based on area (hectares) as the basis for quantifying residual impacts and providing a 50% discount to areas with less than 25% of benchmark species present.

[2] Ezemvelo KZN Wildlife (EKZNW), 2013. Concise Guideline on Biodiversity Offsets in KwaZulu-Natal. Version 4 (final). Compiled by IEM

As part of the Stage 1 biodiversity offsets the identified on-site offsets areas will be secured, protected and managed for conservation purposes. The area of 378 Ha of Eastern Valley Bushveld (EVB) on-site will be included within the offset protected area and managed for a conservation purpose.

Sufficient funds to rehabilitate and manage both on-site and off-site biodiversity offset areas, associated within Phase 1, will be deposited into a dedicated conservation trust account, either as a lump sum to cover the expected management costs for the 30-year period; or, or as annual payments for the on-going management of the offset sites.

The authorisation holder will enter into a Biodiversity Offset Implementation Agreement with a suitably qualified implementing agent, the Trust and any other relevant parties in order to achieve their biodiversity offset obligations.

b) **Internal roads:** Internal access roads (7m wide, 3.5 m lane in both directions, with a 20m reserve) and service roads, with traffic controls, markings and signage, as required.
c) **Road Network upgrades of existing roads will be required once 80 hectares of land area have been developed:** Signalisation of Cato Ridge Interchange.
d) **Upgrade Eddie Hagan Drive** – The first 662m of Eddie Hagan Road will be upgraded by the Provincial Department of Transport (DOT) and the Developer will provide additional capacity. This will include upgrading the Eddie Hagan/ Assmang Access West intersection & the Eddie Hagan/R103 intersection.
e) The above upgrades can unlock approximately 160 hectares of developable area.
Bulk water: water supply pipelines within road reserve connected with municipal supply. To meet the water requirements for the development, eThekwini Municipality will need to construct a 38ML above ground reservoir within the central parts of Phase 2 development area, which will be subject to a separate Environmental Impact Assessment (EIA) and Water Use Licence Application (WULA) process.
f) **Wastewater Treatment Works (WWTW):** Installation of new 2 ML onsite WWTW (Progressively upgraded to meet demand). An onsite sewerage package plant will be established at the intersection of the R103 and Eddie Hagen (Phase 1), which will have a treatment capacity of appropriately 2 Ml. The effluent will be discharged via a pipeline, leading from Portion 50, across the R103, into the North eastern corner of Phase 3, in which the treated effluent will be disposed of into the existing wetland.
g) **Bulk Sewers:** sewer collection pipeline network, collection sump and pump station.
h) **Bulk Stormwater:** roadside pipes, drains, diversion works, attenuation ponds, and discharge points with erosion protection.
i) **Bulk electrical:** New bulk power supply line from the Assmang Cato Ridge Works (ACRW) substation (788m 33kV with 7m servitude) linking with a new substation and connecting with the 11kV roadside underground powerline reticulation system.
j) **Operations Area and Staff Facilities:** Supporting infrastructures such as offices, ablution facilities, parking lots, paved areas, access roads, storage areas and access-controlled areas (subject to end-user requirements).

Phase 2 – 174-ha

- Phase 2 refers to the next 174-ha of the total development.
- From the planning perspective, Phase 2 is the area located north of Phase 1 and the existing Cato Ridge Works (CRW) and includes the parcel of land up to an informal road on the northern boundary of the escarpment.

- Small sections of the site to the west fall outside the urban development line (UDL), but all current development areas (i.e., Phase 1, 2 and 3) fall completely within the UDL.
- Most of the site is flat with isolated sections towards the west.
- The land cover consists of natural grassland and woodland (mostly Eucalyptus) in the central areas and along the eastern border with a formal residential area towards the north.
- Phase 2 is currently subject to informal activities in the form of cattle grazing and occasional illegal sand mining, particularly along the western boundary.
- Phase 2 has attributes of a more rural site and residential houses from the KwaXimba settlement are adjacent to the site on the northern boundary. The houses are informally scattered between narrow meandering dirt roads. Local building development has been sporadic, minor in scale and confined to small pockets. Houses in the Denge and Siweni settlements are located in a small cluster on the western boundary. An existing transmission line traverses the site in a north-south direction along the western escarpment.

Phase 2 will entail the following:

a) **Stage 2 biodiversity offsets:** Stage 2 of the biodiversity offsets may only be implemented after the achievement of the Stage 1 offset obligations. To release the remaining development footprint for Phases 2 and 3, the holder of the authorisation will ensure the securing, protection and management of off-site biodiversity offset receiving areas.
Prior to land being released for development in Phase 2 and 3 biodiversity offset areas will be secured and protected, prior to and in proportion with, any land release associated with Phase 2 or 3 of the development, in accordance with a Biodiversity Offset Land Release Schedule.
Sufficient funds to identify, secure and manage off-site biodiversity offset areas will be deposited into a conservation trust account and the authorisation holder will enter into a Biodiversity Offset Implementation Agreement with a suitably qualified implementing agent, the conservation trust and any other relevant parties in order to achieve their biodiversity offset obligations related to phase 2 and 3.
b) **Internal roads:** Internal access roads (7m wide, 3.5 m lane in both directions, with a 20m reserve) and service roads, with traffic controls, markings and signage, as required.
c) **Bulk water:** water supply pipelines within road reserve connected with municipal supply.
d) **Elevated water tank**.
e) **Bulk sewers:** sewer collection pipeline network, collection chamber and pump station with rising main.
f) **Bulk stormwater:** roadside pipes, drains, diversion works, attenuation ponds, and discharge points with erosion protection.
g) **Bulk electrical:** New bulk power supply line and substation connecting with the 11kV underground powerline reticulation system serving the Phase 2 areas. Two electrification options are proposed to service Phase 2 - these are subject to agreement with Eskom:
    - Option 1 – a new substation outside of Assmang landholdings on the existing Eskom substation complex, which requires a 384m 33kV underground powerline (Cable) with a 7m servitude; or
    - Option 2 – A new substation with a 638m 132kV overhead powerline and 36m servitude, connecting with the existing Eskom overhead powerlines along the Cato Ridge escarpment, west of Phase 2.

h) **Operations Area and Staff Facilities:** Supporting infrastructures such as offices, ablution facilities, parking lots, paved areas, access roads, storage areas and access-controlled areas (subject to end-user requirements).

Phase 3 – 46-ha

- Phase 3 refers to the remaining 46-ha of the total development footprint.
- Phase 3 area is located on a section of vacant land between the N3 and the R103, adjacent south of the Cato Zulu Industrial Park and east of Bakers Transport and is entirely within the eThekwini UDL.
- The development of Phase 3 is planned for development in the 21-to-25-year period but may occur in parallel with Phase 1 if sold to future end users.
- Phase 3 is flat (between 0-5% slope) becoming more undulating towards the southeast with slopes of between 5%-50% of land cover in Phase 3 and includes grassland and wetlands areas.
- Phase 3 is currently vacant, with evidence of small-scale illegal sand mining and some illegal waste dumping. Various informal dirt roads and trails traverse the site as well as existing Eskom transmission lines which pass through the centre of the site within an Eskom servitude. There is a wetland located in Phase 3, however, this has been avoided in the current development footprint of 351-ha.

Phase 3 will entail the following:

a) **Stage 2 Biodiversity offsets**: To release the remaining development footprint for Phases 2 and 3, the holder of the EA must implement the obligations of the Stage 2 biodiversity offsets.
b) **Internal roads:** Internal access roads (7m wide, 3.5 m lane in both directions, with a 20m reserve) and service roads, with traffic controls, markings and signage, as required.
c) **Bulk sewers:** sewer collection pipeline network, new collection chamber and pump station with rising main. This will be subject to a separate EIA process, if triggers apply.
d) **Bulk Stormwater:** roadside pipes, drains, diversion works, attenuation ponds, and discharge points with erosion protection.
e) **Bulk electrical:** New bulk power supply line connecting underground to the Phase 1 substation.
f) **Operations Area and Staff Facilities:** Supporting infrastructures such as offices, ablution facilities, parking lots, paved areas, access roads, storage areas and access-controlled areas (subject to end-user requirements).

Decision

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations, December 2014 as amended, the
KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs
(hereafter referred to as the "Department")
grants environmental authorisation

to:

Cato Ridge Development Company Ltd
(herein after referred to as "the authorisation holder" or "CRDC")

Details of the contact person:
Mr. Ashley Mcleod

P.O. Box 786136
Sandton
2146

Tel no : 011 779 1300
Cell : 083 636 1056
E-mail : Ashley.Mcleod@arm.co.za

to undertake the following activities (hereafter referred to as "the activities") as described in section 2 below.

1. Activity authorised

The following activities in Government Notice Number Regulation (GNR) 983 dated 04 December 2014 as amended, are triggered by the abovementioned project:

1.1 **Description of location and listed activities**

N	0	F	T	0	0	4	6	0	0	0	0	0	0	5	0	0	0	0	0	0
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	2	0	0	0	3	9
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	1	0	0	0	2	9
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	2	0	0	0	4	1
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	1	0	0	0	2	6
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	2	0	0	0	4	0
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	1	0	0	0	2	5
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	1	0	0	0	2	4
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	1	0	0	0	2	7
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	2	0	0	0	2	9
N	0	F	T	0	0	4	6	0	0	0	0	0	0	4	8	0	0	0	0	0
N	0	F	T	0	0	4	6	0	0	0	0	0	0	4	9	0	0	0	0	0
N	0	F	T	0	0	4	6	0	0	0	0	0	0	5	0	0	0	0	0	0
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	2	0	0	0	3	9
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	1	0	0	0	2	9
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	2	0	0	1	7	2
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	2	0	0	0	4	1
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	2	0	0	2	2	4
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	1	0	0	0	2	6
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	2	0	0	0	4	3
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	2	0	0	0	4	0
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	1	0	0	0	2	5
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	1	0	0	0	2	4
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	1	0	0	0	0	0
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	1	0	0	0	2	7

N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	2	0	0	2	1	7
N	0	F	T	0	0	0	0	0	0	0	0	0	8	5	2	0	0	0	2	9

Table 2: 21 Digit Surveyor General Code

as described in the Final Environmental Impact Assessment Report (EIAR) dated June 2023 and as received by the Department on 30 June 2023.

1.2 Location of the activity:

Erf	Parcel No	Portion	Footprint	Size (ha)	Farm Name	Existing Zoning
24/851	851	24	Phase 1	8.87	RIET VALLEI 851	GENERAL INDUSTRY 2
29/851	851	29	Phase 1	77.80	RIET VALLEI 851	RESIDENTIAL SMALLHOLDING 3
39/852	852	39	Phase 1	133.06	UITKOMST & DOORNRUG 852	GENERAL INDUSTRY 2
41/852	852	41	Phase 1	16.39	UITKOMST & DOORNRUG 852	GENERAL INDUSTRY 2
RE/50	50	0	Phase 1	109.66	Rem 50	GENERAL INDUSTRY 2
25/851	851	25	Phase 2	67.71	RIET VALLEI 851	GENERAL INDUSTRY 2
26/851	851	26	Phase 2	98.23	RIET VALLEI 851	GENERAL INDUSTRY 2
RE/27/85	851	27	Phase 2	105.54	RIET VALLEI 851	GENERAL INDUSTRY 2
40/852	852	40	Phase 2	58.79	UITKOMST & DOORNRUG 852	GENERAL INDUSTRY 2
29/852	852	29	Phase 3	152.94	UITKOMST & DOORNRUG 852	RESIDENTIAL SMALLHOLDING 3

1.3 Coordinates of the project

Name of Site: Cato Ridge Land Release and Development Project: Phase 1			
Latitude /Longitude	**Degrees**	**Minutes**	**Seconds**
South	29°	43'	12.04"
East	30°	37'	4.36"

Name of Site: Cato Ridge Land Release and Development Project: Phase 2			
Latitude /Longitude	**Degrees**	**Minutes**	**Seconds**
South	29°	41'	55.01"
East	30°	37'	27.38"

Name of Site: Cato Ridge Land Release and Development Project: Phase: 3			
Latitude /Longitude	**Degrees**	**Minutes**	**Seconds**
South	29°	44'	2.23"
East	30°	37'	3.05"

Table 3: Coordinates of the site

1.4 Description of listed activities

Listing Notice / Activity No.	Activity description	Component of the project
Listing Notice 1 of the EIA Regulations, December 2014 as amended		
Activity 9	*The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or stormwater—* *(i) with an internal diameter of 0,36 metres or more; or* *(ii) with a peak throughput of 120 litres per second or more;* *excluding where—* *(a) such infrastructure is for bulk transportation of water or stormwater or stormwater drainage inside a road reserve or railway line reserve; or* *(b) where such development will occur within an urban area.*	The project includes the development stormwater pipelines (linking to the surrounding reticulation) and attenuation ponds. The bulk stormwater pipelines will be located inside and outside existing road reserves and will exceed 1000 metres in length. The bulk stormwater infrastructure between 450mm and 900mm with a peak throughput of greater than 120 litres per second. The diameter and throughput will exceed the thresholds mentioned for stormwater infrastructure.
Activity 11	*The development of facilities or infrastructure for the transmission and distribution of electricity—* *(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or* *excluding the development of bypass infrastructure for the transmission and distribution of electricity where such bypass infrastructure is—* *(b) 2 kilometres or shorter in length.*	The following transmission lines are proposed: Phase 1: Approx. 788 m long 33 kV powerline from ACRW to the new southern substation within Phase 1. Phase 2– two alternative options: • Option 1 - (eastern) requires approx. 384 m 33 kV powerlines – described as "electrical cable with 7 m servitude" below ground. The proposed substation is outside of the Assmang/CRDC landholdings and within an existing substation complex (Preferred). ***Since this is preferred, this activity is not applicable as the capacity falls below the threshold.***

		• Option 2 - (western) requires approx. 638 m 132 kV overhead powerlines with 36 m servitude. The proposed substation and powerline are proposed on Assmang/ CRDC land outside the Phase 2 footprint. ***This is also not applicable as the length of the line falls below the threshold.***
Activity 12	*The development of—* *(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or* *(ii) infrastructure (including borrow pits) or structures with a physical footprint of 100 square metres or more;* *where such development occurs—* *(a) within a watercourse;* *(b) in front of a development setback; or* *(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; —* *excluding—* *(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;* *(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;* *(cc) activities listed in Activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice*	While the revised layout avoids all watercourses and wetlands with the main development, the stormwater and effluent discharge points will take place within 32m of drainage lines and exceed 100 square metres together and therefore would trigger this activity.

	3 of 2014, in which case that activity applies; *(dd) where such development occurs within an urban area;* *(ee) where such development occurs within existing roads, road reserves or railway line reserves; or* *(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.*	
Activity 19	*The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;* *but excluding where such infilling, depositing, dredging, excavation, removal or moving—* *(a) will occur behind a development setback;* *(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;* *(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;* *(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or* *(e) where such development is related to the development of a port or harbour, in which*	Excavation, removal and infill of soil may be required to allow the placement of stormwater and effluent discharge points/structures within the watercourse will require excavation and infilling of materials. There are six stormwater outlet structures potentially located in drainage lines. While infrastructure will not cross the drainage, these structures may result in excavation or infill disturbances associated with the gabion and concrete structures and exceed 10m^3 collectively.

	case activity 26 in Listing Notice 2 of 2014 applies.	
Activity 26	*Residential, retail, recreational, tourism, commercial or institutional developments of 1 000 square metres or more, on land previously used for mining or heavy industrial purposes; —* *excluding —* *(i) where such land has been remediated in terms of part 8 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; or* *(ii) where an environmental authorisation has been obtained for the decommissioning of such a mine or industry in terms of this Notice or any previous NEMA notice; or* *(iii) where a closure certificate has been issued in terms of section 43 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) for such land.*	From the aerial imagery and based on recent site visits, there is evidence of small-scale, unlicensed sand mining at sites across the study area. A high level of sand mining activity was evident at the site of Option 2 powerline servitude, west of Phase 2 footprint. However, considering that the mining activities are illegal, this activity is not considered a trigger.
Activity 28	*Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:* *(i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or* *(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;*	The project would be developed on vacant land currently used for grazing by the surrounding communities. This development would occur outside an urban area, where the total land to be developed will exceed 1ha. This activity will therefore be applicable.

	excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.	
Activity 45	*The expansion of infrastructure for the bulk transportation of water or stormwater where the existing infrastructure- has an internal diameter of 0,36 metres or more; or has a peak throughput of 120 litres per second or more; and* *(a) where the facility or infrastructure is expanded by more than 1 000 metres in length; or* *(b) where the throughput capacity of the facility or infrastructure will be increased by 10% or more; excluding where such expansion-* *(aa) relates to transportation of water or storm water within a road reserve or railway line reserve; or* *(bb) will occur within an urban area.*	The upgrades of the bulk water supply would exceed 1,000m in length and will be located outside an urban area. Stormwater pipelines inside road reserves will comprise concrete 450mm diameter pipes.
Activity 46	*The expansion and related operation of infrastructure for the bulk transportation of sewage, effluent, process water, wastewater, return water, industrial discharge or slimes where the existing infrastructure—* *has an internal diameter of 0,36 metres or more; or* *has a peak throughput of 120 litres per second or more; and* *where the facility or infrastructure is expanded by more than 1 000 metres in length; or*	The upgrades of the bulk sewer system exceed 1 000 metres in length and will be located outside an urban area and mostly outside of road reserves as well. The dimensions of the existing water supply infrastructure is 800mm and 600mm diameter pipelines. Due to the expansion in length, and connection with these existing pipe dimensions this activity is applicable. Sewer pipelines are anticipated to be larger than 0.36m diameter and longer than 1km.

	where the throughput capacity of the facility or infrastructure will be increased by 10% or more; *excluding where such expansion—* *(aa) relates to the bulk transportation of sewage, effluent, process water, wastewater, return water, industrial discharge or slimes within a road reserve or railway line reserve; or* *(bb) will occur within an urban area.*	
Activity 56	*The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre—* *(i) where the existing reserve is wider than 13,5 meters; or* *(ii) where no reserve exists, where the existing road is wider than 8 metres.*	Road upgrades may include the widening of existing roads, including Eddie Hagen Drive.
Listing Notice 2 of the EIA Regulations, December 2014 as amended		
Activity 15	*The clearance of an area of 20 hectares or more of indigenous vegetation, excluding 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.*	This activity is applicable since the development footprint across the entire study area exceeds 20 ha in extent.
Activity 27	*The development of a road—catering for more than one lane of traffic in both directions.*	Roads will include dual-carriageway roads.
Listing Notice 3 of the EIA Regulations, December 2014 as amended		
Activity 4	*The development of a road wider than 4 metres with a reserve of less than 13,5 metres.*	The internal access roads will be 7m wide within a reserve of 20m, which will exceed the 13.5m threshold. These roads will also

	d. KwaZulu-Natal *viii. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;* *x. Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority, or zoned for a conservation purpose;*	transect CBA areas as well as D'MOSS areas.
Activity 12	*The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a Maintenance management plan.* *d. KwaZulu-Natal* *iv. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or before the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;* *v. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; xi. Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose;*	The development would result in the clearance of more than 300m^2 of indigenous vegetation and this clearing would affect endangered vegetation which is KZN Sandstone Sourveld (KZNSS) which is classified as an endangered ecosystem in terms of NEMBA, CBAs and D'MOSS areas.
Activity 14	*The development of—* *dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 10 square metres; or*	The project footprint will not intersect any mapped or delineated streams or wetlands. However, some infrastructure (specifically the effluent and

	infrastructure or structures with a physical footprint of 10 square metres or more; *Where such development occurs –* *within a watercourse;* *in front of a development setback; or* *if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse;* *d. KwaZulu-Natal* *vii. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans.*	stormwater discharge structures) will take place within 32m of watercourse, natural drainage lines and CBAs and will exceed 10 square metres in size (collectively).

Table 4: Listed Activities triggered

2. General

2.1 **Compliance with the conditions of this environmental authorisation (EA)**
In terms of section 49A (1) (c) of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, failure to comply with the conditions of this environmental authorisation constitutes an offence in terms of section 49 B (1).

2.2 **Understanding the conditions of this authorisation**
It is the responsibility of the environmental authorisation holder to understand the conditions of this authorisation. Any queries regarding this environmental authorisation must be submitted in writing to the Department as per contact details specified in condition 2.17 herewith.

2.3 **Amendments to the project and update of the EMPr**

2.3.1 Any changes to, or deviations from, the project description set out in this EA must be approved, in writing, by the Department before such changes or deviations may be effected.

2.3.2 Any subsequent amendments to the approved EMPr must also be submitted to the Department for review. The amendments must only be implemented after being approved by the Department.

2.3.3 This EA does not negate the EA holder's responsibility to comply with any other statutory requirement that may be applicable to the carrying on of the activities.

2.3.4 The Department retains the right to inspect the project area at any time during the construction and operational phases of the development in accordance with relevant legislation.

2.3.5 It is the responsibility of the EA holder to ensure that the Department is made aware of any change of ownership or contact details within **thirty (30) days** of such changes. Where applicable, an amendment application must be submitted.

2.3.6 The holder of the EA must ensure that all workers be supplied with appropriate personal protective equipment/clothing (PPE/C) and management must ensure that all staff wear the necessary PPE/C during the construction phase.

2.3.7 Please note that it is the responsibility of the EA holder to ensure the details are correct at the time of submitting any documentation, and that the documentation reaches the relevant official.

2.4 The holder must obtain a relaxation of the D'MOSS from the eThekwini Municipality Biodiversity Management Department (BMD) prior to the commencement of any land use planning application.

2.5 Visible markings showing/demarcating the buffers must be provided on site prior to the commencement of construction.

2.6 Prior to the commencement of construction, the holder must submit a Phasing Plan to the Department that clearly describes the required provision of bulk infrastructure/services (i.e. water, electricity and sewage), the layout plans, conservation requirements, etc. for each phase. The holder must ensure that each phase of the development is independently sustainable and not dependent on bulk infrastructure/services that would come online in a subsequent phase.

2.7 The holder of the EA must establish an owners/tenant association prior to the selling off / leasing of the different sites/areas so that buyers and tenants of the platforms will have to join and commit to taking responsibility for the conditions of the EA. The owners/tenant association will be legally responsible for managing the land and conditions associated therewith.

2.8 It is the responsibility of each tenant to determine the necessary requirements in terms of the EIA Regulations 2014 as amended prior to undertaking any activity on their respective sites/areas.

2.9 A qualified Geotechnical specialist must be appointed to carry out a detailed investigation of the sites for each phase of the development prior to construction to ensure that any variation in the anticipated ground conditions can be assessed, and revised recommendations made.

2.10 Electrification options must be agreed in consultation with Eskom and proof of finalized options must be submitted to the Department, CME component as per contact details as in condition 2.17 herewith.

2.11 All development plans must be submitted to the eThekwini Municipality: Plans Submission Branch for consideration and approval prior to the commencement of the project. The final approved layout plans must be submitted to the CME component – eThekwini District with contact details as specified in condition 2.17 herewith.

2.12 Should any archaeological material/heritage objects or graves be uncovered on site during construction, the point of discovery must be demarcated, and construction at that locality must cease immediately. The matter must be reported to the local police station and Amafa AkwaZulu-Natali for investigation. Construction may only commence once Amafa AkwaZulu-Natali gives a written approval to do so.

2.13 Any heritage sites, related features, artefacts or objects encountered on-site must be reported to the South African Heritage Resources Agency (SAHRA) to obtain the necessary permits before proceeding with construction.

2.14 Under no circumstances must any artefacts be removed, destroyed or interfered with by anyone on the site and the contractors and workers must be advised of the penalties associated with the unlawful removal of cultural, historical, archaeological or palaeontological artefacts, as set out in the National Heritage Resources Act (Act No. 25 of 1999, Section 51 (1).

2.15 All discoveries must be reported immediately to a heritage practitioner so that an investigation and evaluation can be carried out. Acting upon advice from these specialists, the Environmental Control Officer must advise the necessary actions to be taken.

2.16 It is recommended that a thorough research study be commissioned to investigate the possibility of regenerative grazing with cattle in the areas that will be part of the biodiversity offset program as the area has already been subjected to cattle grazing for several years. The research study can monitor the impact of managed livestock grazing on the biodiversity.

2.17 **Contact details of the Department**

The following contact details for the Department must be used for all reports, notices etc. which must be submitted to the Department:

Physical Address: 22 Dorothy Nyembe Street (previously Gardiner Street)
Marine Building, 9th Floor, Durban, 4001

Attention: Control Environmental Officer: –

Component	Email Address	Telephone No.	Cell no.
Compliance, Monitoring & Enforcement (CME)	Siyabonga.Sikhakhane@kznedtea.gov.za Yugeshni.Govender@kznedtea.gov.za	031 310 5326/ 5314	081 541 0758 082 921 9340
Environmental Impact Assessment (EIA)	Sibusisiwe.Mthimkhulu@kznedtea.gov.za Natasha.Brijlal@kznedtea.gov.za	031 310 5315	081 341 7137 079 898 0491

Pollution & Waste Management (P&W)	Shireen.Mahabeer @kznedtea.gov.za	031 310 5313	082 322 1871

Table 5: Component contact details

3. Conditions of environmental authorisation

This Environmental Authorisation (EA) is subject to the conditions set out below:

3.1. **Period of Validity**: Any of the listed activity/ies authorised must commence within **ten (10) years** from the date of issue. If commencement of the authorised activity / any of the authorised activity does not occur within that period, this authorisation lapses.

3.2. **Notification to interested and affected parties**

3.2.1 The authorisation holder must notify every registered interested and affected party, in writing and within **fourteen 14 calendar days from date of** the Department's decision to authorise the activity.

3.2.2 The notification referred to must –

3.2.2.1 Specify the date on which the authorisation was issued;
3.2.2.2 Inform the interested and affected party of the appeal procedure provided for in the National Appeal Regulations, 2014; and,
3.2.2.3 Advise the interested and affected party that a copy of the authorisation will be furnished on request.

Environmental Management Programme (EMPr)

3.3 The Environmental Management Programme (EMPr) dated June 2023 for the construction of this project as submitted for the environmental authorisation of this project complies with section 24N of NEMA and Appendix 4 of the EIA Regulations, 2014. This EMPr is hereby **approved** and must be implemented.

3.4 The EMPr must be kept on site during all phases of the development.

3.5 Non-compliance with the approved EMPr will constitute non-compliance with the conditions of this EA.

3.6 The EMPr is considered as an extension of the EA. Each official and/or worker operating on site must be educated about the EMPr and made aware of his/her responsibilities. Proof of this must be attached to the first audit report.

3.7 The approved EMPr must be:

3.7.1 Made binding on all parties operating on the site during the construction and operational phases; and,
3.7.2 Included in all contractual documentation for the construction and operational phase of the development.

3.8 A copy of the approved EMPr together with any documents that need to be attached to the EMPr must be forwarded to the CME component – eThekwini District with contact details as specified in condition 2.17 herewith.

Monitoring and Reporting to the Department

3.9 All requirements for the management, monitoring and reporting of impacts for all phases of the project must be as specified in the EMPr or environmental audit report.

3.10 An independent Environmental Control Officer (ECO)[3] must be appointed **prior** to the commencement of the construction to monitor the implementation of the approved EMPr and EA.

3.11 Should the ECO for the approved development change at any time, this must be communicated, in writing, to the CME component – eThekwini District with contact details as specified in condition 2.19 herewith within **fourteen (14) calendar days** of appointing the new ECO.

3.12 The notification in terms of condition 3.11 above must include contact details for the ECO, details pertaining to the ECO's relevant experience, and reasons for the change in ECO.

3.13 The ECO must conduct environmental audits as per the time intervals specified below:

3.13.1 **Monthly audits** must be undertaken during the construction phase. The number of audits may be reduced in frequency at times where no to minimal construction is taking place on site, but only if agreed to in writing by CME unit as per contact details in condition 2.17 herewith;
3.13.2 Audit reports must be submitted within 07 days of the audit being conducted to the CME unit as per contact details in condition 2.17 herewith; and,
3.13.3 **One (01) post construction** site visit must be undertaken. This audit report must be submitted sixty (60) days from the date that installation is completed to the Department: CME unit as per contact details in condition 2.17 herewith.

3.14 The responsibilities of the ECO must include *inter alia*:

3.14.1 Performing all tasks assigned to the ECO in the approved EMPr;
3.14.2 Keeping record of all activities on site, problems identified and transgressions noted;
3.14.3 Assisting the EA holder in ensuring/enforcing implementation of the EA and EMPr; and,
3.14.4 Providing guidance/advice that ensures implementation of appropriate environmental management measures and adherence with environmental legislation/regulations.

3.15 Records relating to monitoring and auditing must be kept on site by the ECO and made available for inspection to this Department and other relevant authorities.

[3] The ECO must be independent and have the necessary experience and qualifications to understand, interpret, monitor, audit and implement the EMPr and the conditions of this EA. Feedback must be given in the form of an audit report which must address any non-compliance that may have risen from the audit.

3.16 The activities authorised must only be carried out at the location/s as described in **section 1** above.

Written notice of the commencement of the construction

3.17 Not less than **seven (07) days** written notice must be given to the Department that the construction phase will commence. Commencement for the purposes of this condition includes site preparation. The notice must include the EIA reference number DM/0006/2023 and a date on which it is anticipated that the construction will commence.

Availability of this environmental authorisation

3.18 A copy of this environmental authorisation must be kept by the EA holder and made available to any official of the Department on request.

3.19 The Department shall not be held responsible for any damages or losses suffered by the holder or successor in title in any instance where construction may be temporarily or permanently stopped for reasons of non-compliance by the holder of the environmental authorisation with the conditions of environmental authorisation as set out in this document or any other subsequent document emanating from these conditions of environmental authorisation.

Biodiversity Offsets
*("**Secured**" is considered in terms of the biodiversity offset conditions to mean that the site has been demarcated and surveyed; a landowner agreement(s) is signed; a Biodiversity Offset Management Plan is approved; there are sufficient funds and/or securities in place to ensure that the offset receiving area can be established; and, that there are no legal, administrative other impediments for the proclamation or conservation servitude proceeding)*

3.20 The holder of the authorisation must establish biodiversity offsets to cater for the residual biodiversity impacts associated with the development, and is responsible for covering all of the costs of a biodiversity offsets implementation, including inter alia the costs of securing, establishing and protecting suitable biodiversity offset sites; and, ensuring the management of these biodiversity offset area for a conservation purpose for a minimum period of at least 30 years.

3.21 The biodiversity offset objective target is to be calculated using the simpler approach to quantifying gains and losses as outlined in the KZN Biodiversity Offset Guidelines. The offset target must be based on area (hectares) as the basis for quantifying residual impacts and must provide a 50% discount to areas with less than 25% of benchmark species present.

3.22 The biodiversity offset objective target must comprise the on-site and off-site offset of KwaZulu-Natal Sandstone Sourveld **at the ratio of a minimum of 10:1**.

3.23 Should the off-site offset of KwaZulu-Natal Sandstone Sourveld at the ratio of 10:1, not be reasonably and feasibly fulfilled by the authorisation holder, the authorisation holder may through detailed motivation and in agreement with Ezemvelo KZN Wildlife, secure portions of other conservation-worthy vegetation or habitat types that typically occur within the extended vicinity of the authorised development, or equivalent areas of

conservation-worthy biodiversity, preferably that which has been identified in accordance with section 52 of the National Environmental Management: Biodiversity Act 10 of 2004, viz. 'ecosystems that are threatened or in need of protection', **at a minimum ratio of 15:1**.

3.24 The selection of biodiversity offset receiving areas must be prioritised based on proximity to the impacted area and the need to protect local variations in species diversity; the need to ensure the protection and management of viable areas of KwaZulu-Natal Sandstone Sourveld within the eThekweni metropolitan municipal area and KwaZulu-Natal; financial considerations and the feasibility and viability of the offset sites; and, the need to consider ecological landscape level factors in order to achieve the necessary net benefit to biodiversity conservation within KwaZulu-Natal.

3.25 Biodiversity offset areas must be established, secured and protected in perpetuity through appropriate legal mechanisms including either a manner equivalent to a protected area specified in section 9 of the National Environmental Management: Protected Areas Act 57 of 2003, and preferably that of a 'nature reserve' for the off-site offsets and a minimum of a 'protected environment' for the on-site offset; or the establishment of a conservation servitude or similar legal measure, that must be registered as a condition of title against the property/ies.

3.26 The authorisation holder must cause the municipal sector plans to be amended so as to reflect the secured biodiversity offset areas being classified as a 'conservation zone' or a reasonable equivalent.

3.27 Funding for the establishment, securing, protection and management of the biodiversity offset areas must be made into a conservation trust (herein after referred to as the "Trust") that has been created for the purpose of ensuring the long term conservation management of land.

3.28 The funds required to implement a biodiversity offset are to be received, held, invested and disbursed by the Trust. The Trust deed must determine how the trust will function, the roles and responsibilities of the trustees and define the conservation and biodiversity offset objectives. This may be a dedicated conservation trust or an existing conservation trust that can meet and implement the biodiversity offset objectives.

3.29 Sufficient funds to identify and secure both on-site and off-site biodiversity offset areas, to compensate for the residual loss of KZNSS in Phase 1, must be deposited into the trust account prior to Phase 1 commencing.

3.30 Funds required for the ongoing biodiversity management of the offset sites must be deposited into the Trust either as a lump sum to cover the expected management costs for the required 30-year period for which the authorisation holder is responsible; alternatively, annual payments for the on-going management of the offset sites. In terms of the latter, the amount of money deposited into the Trust must equate to the quantum required to undertake a minimum of two years' worth of rehabilitation and management of both on-site and off-site biodiversity offset areas. Thereafter, annual quantum deposits must be made, with the first deposit being made within the first year following the commencement of construction.

Biodiversity Offset Phasing

Stage 1 Biodiversity Offset:

3.31 Prior to development commencing on Phase 1, sufficient funds to identify and secure both on-site and off-site biodiversity offset areas, to compensate for the residual loss of KZNSS in Phase 1, must be deposited into a dedicated conservation trust account.

3.32 Prior to development commencing on Phase 1, the on-site offset areas identified as areas 1, 2A and 2B, and the 378 Ha of Eastern Valley Bushveld area identified as area 3, in Figure 20 in the Biodiversity Offset Study produced by EcoPulse Environmental Consulting Services dated 23 June 2023, as attached as Annexure 4 to this environmental authorisation, must be secured.

3.33 To give effect to the on-site and off-site biodiversity offset requirements, the authorisation holder must enter into a Biodiversity Offset Implementation Agreement with a suitably qualified and experienced implementing party and/or conservation trust to ensure that the on-site and off-site offset areas are established, secured, protected and managed.

3.34 The appointed implementing party must develop a Conservation Management Plan for the implementation of the on-site biodiversity offset area; and, Biodiversity Offset Management Plans for any identified off-site biodiversity offset areas.

3.35 The appointed implementing party must ensure the implementation of both the on-site and off-site biodiversity offset obligations; and, for the on-going protection, management and maintenance of the on-site and off-site biodiversity offset areas.

Stage 2 Biodiversity Offsets:

3.36 Stage 2 of the biodiversity offsets may only be implemented after the achievement of the Stage 1 offset obligations.

3.37 The release of any of the remaining development footprint for Phases 2 and 3, is subject to the holder of the authorisation ensuring the securing, protection and management of additional off-site biodiversity offset receiving areas, for the residual KZNSS impact areas associated with Phase2 and 3.

3.38 Prior to Phase 2 and 3 commencing sufficient funds to identify and secure off-site biodiversity offset areas to compensate for the residual loss of KZNSS associated with Phase 2 and 3 must be deposited into a conservation trust account, in accordance with a Biodiversity Offset Land Release Schedule.

3.39 The authorisation holder must enter into a Biodiversity Offset Implementation Agreement with a suitably qualified implementing agent, a conservation trust and any other relevant or necessary parties in order to achieve their biodiversity offset obligations for Phase 2 and 3. Biodiversity offset areas must be secured, prior to and in proportion with, any land release associated with Phase 2 or 3 of the development, in accordance with a Biodiversity Offset Land Release Schedule.

3.40 The appointed implementing party must develop and submit to the Offset Advisory Committee established to monitor and manage the implementation of the biodiversity

offsets, Biodiversity Offset Management Plans for any identified off-site biodiversity offset receiving areas for Stage 2 of the biodiversity offsets.

Biodiversity Offset implementation and monitoring

3.41 To give effect to the implementation and monitoring of the biodiversity offset obligations, the authorisation holder must establish an Offset Advisory Committee comprised of representatives of the following organisations as permanent members: Department of Economic Development, Tourism & Environmental Affairs; Ezemvelo KZN Wildlife; eThekweni Metro: Biodiversity Management; and, the authorisation holder.

3.42 The function of the Offset Advisory Committee is to evaluate, consider and decide on proposals related to the establishment of appropriate biodiversity offset areas; acceptance of Biodiversity Offset Management Plans developed by the appointed implementing agent; and, to monitor the implementation of the biodiversity offset objectives, targets and obligations.

3.43 The authorisation holder must ensure that a terms of reference for the Offset Advisory Committee is developed between the parties, and that the committee is established and operational prior to development commencing.

3.44 The authorisation holder must cover all reasonable costs associated with the establishment and functioning of the committee and provide the secretariat and coordination functions.

3.45 Decisions of the Offset Advisory Committee must be made by a simple majority. In cases where a majority is not reached, the representative of Ezemvelo KZN Wildlife may cast the deciding vote.

3.46 The authorisation holder must ensure that conservation management effectiveness assessments of the offset areas are undertaken annually, or at such a reasonable rate agreed to in writing by Ezemvelo KZN Wildlife; and, must submit the outcome of these assessments to the Offset Advisory Committee and Ezemvelo KZN Wildlife.

Commissioning of the activity

3.47 The development must comply substantially with the Layout Plan compiled by Angela White dated 22 February 2023 depicted as **Annexure 3: Layout Plan** herewith.

3.48 Any deviations from the layout authorised in Condition 3.47 above, must be approved by the Department prior to the implementation of such deviation, in accordance with the legislation applicable at the time.

3.49 Construction must be undertaken according to the approved EMPr and must be monitored by an ECO.

3.50 The EA holder must ensure that all staff and contractors/sub-contractors/suppliers/service providers be trained on the environmental, occupational safety and/or legal responsibilities expected from them. This training must consider

language and literacy requirements as well as measures to determine the effectiveness of the training. Proof of training must be attached to the audit reports.

3.51 Further to condition 3.50 above, additional environmental awareness among contractors must be undertaken to ensure the protection of the environment in its entirety.

3.52 The location of the construction camps must be negotiated and agreed upon by the holder of the EA, the contractor and ECO for the project.

3.53 No-go areas must be demarcated. Areas undergoing rehabilitation must be avoided. Any newly disturbed areas must be timeously and suitably rehabilitated.

3.54 All on-site work and disturbance must be kept to a minimum by restricting construction activities, excavation equipment and/or sea-going equipment within the construction area.

3.55 The construction camp, additional infrastructure, access routes and any other areas that are disturbed during the construction phase must be rehabilitated after the completion of construction.

The use of hazardous materials/substances during the construction phase

3.56 The site Engineer or ECO must ensure that the storage and utilisation of potentially hazardous materials utilized during the commissioning phase such as diesel, petrol, oils and/or lubricants do not result in any form of soil and/or water contamination.

3.57 The holder of the environmental authorisation must ensure that all persons operating the facility are sufficiently trained to deal with a spill/leak or an emergency situation on site.

3.58 The following conditions refer to the storage of hazardous substances on site during the commissioning period:

3.58.1 Hazardous substances must be stored under lock and key;
3.58.2 Chemical storage areas must be protected by bunded areas. Bunded areas must be constructed of concrete blocks lined with suitably dense plastic sheeting. Fuel and oil storage tanks and drums, including internal installations and waste oil tanks, must be situated on an impermeable base within an oil-tight bund; and
3.58.3 Chemicals or hazardous substances must not be allowed to contaminate the soil or groundwater. In the event of this occurring, the necessary clean up measures must be undertaken immediately. Any soil/groundwater contaminated during construction must be removed, stored in a sealed container and disposed off at a licensed disposal facility.

Spillage

3.59 The holder of the EA must ensure that all personnel/workers on site are appropriately trained to deal with a spill/leak in accordance with relevant environmental legislative requirements.

3.60 A Spill Contingency Plan (SCP) must be compiled for the construction phase of the development and must include the following actions that need to be taken into account in the event of any spillage:

3.60.1 Stop the source of the spill;
3.60.2 Contain the spill;
3.60.3 Include measures to prevent any pollution which could impact on soil, surface and ground water during leaks and ruptures from equipment, tanks and pipes;
3.60.4 All spills must be reported to this Department's Control Environmental Officer: Pollution and Waste (P&W) Section as per contact details specified in condition 2.17 herewith as well as any other mandated authorities such as the Department Water and Sanitation (DWS)[4];
3.60.5 Provide mitigation measures in terms of soil, groundwater or other environmental impacts; and
3.60.6 The incident must be documented.

3.61 In the event of a spillage which poses a serious threat to the environment, the following Departments must be informed within **forty-eight (48)** of an incident[5] and/or emergency situation:

3.61.1 The eThekwini Municipality;
3.61.2 DWS;
3.61.3 KZN Department of Economic Development, Tourism & Environmental Affairs: P&W component as per contact details specified in condition 2.19 herewith;
3.61.4 The Local Fire Department; and,
3.61.5 Any other mandated department.

Stormwater

3.62 The following conditions are applicable regarding stormwater management on site:

3.62.1 Stormwater must be suitably managed during and after construction. Drainage must be controlled to ensure that runoff from the site does not culminate in off-site pollution downstream of any stormwater discharge;
3.62.2 Sediment-laden stormwater must not flow directly off the construction area. It must be directed into areas where sediment can settle out and be removed;
3.62.3 After every rainfall event, the contractor must check the site for erosion damage and rehabilitate this damage immediately;
3.62.4 In order to reduce erosion on site, stormwater must be attenuated and the cause of erosion must be dealt with within twenty-four (24) hours of detection in accordance with the approved EMPr;
3.62.5 Any wastewater (i.e. dirty construction water) generated must not be discharged into the natural environment. Measures to contain wastewater and to safely dispose of it must be implemented; and,
3.62.6 On completion of construction the site must be contoured to ensure free flow of run-off and to prevent ponding of water.

[4] It is the responsibility of the EA holder to ensure that all emergency contact numbers on the SCP are updated regularly.
[5] Incident' as described in terms of Section 30 of National Environmental Management Act (NEMA), Act no. 107 of 1998 (as amended)

3.63 All developable Erf/ Sites is responsible for their own stormwater design and attenuation infrastructure. This condition must be incorporated in all Purchase or Rental Agreements for each erf/stand that the holder and/or tenant is responsible to submit a stormwater management plan to the eThekwini Municipality for approval. Proof of this must be submitted to the Department: CME component as per contact details in condition 2.17 herewith.

Dust and Erosion control

3.64 Existing vegetation cover must be maintained during the construction phase. The unnecessary removal of groundcover from slopes must be prevented, especially on steep slopes.

3.65 Clearing activities must only be undertaken during agreed working times and permitted weather conditions. If heavy rains are expected, clearing activities must be delayed.

3.66 After every rainfall event, the contractor must check the site for erosion damage and rehabilitate this damage immediately. Erosion rills and gullies must be filled-in with appropriate material and silt fences or fascine work must be established along the gully for additional protection until vegetation has re-colonised the rehabilitated area.

3.67 The construction footprint must be well demarcated and fenced off from the adjacent properties to contain site activities and prevent the spread of refuse or building waste outside of work areas.

3.68 All bare slopes and surfaces to be exposed to the elements during clearing and earthworks must be protected against erosion using rows of hay-bales, sandbags and/or silt fences aligned along the contours and spaced at regular intervals (e.g., every 2m) to break the energy of surface flows.

3.69 Once shaped, all exposed/bare surfaces and embankments must be re-vegetated immediately.

3.70 If re-vegetation of exposed surfaces cannot be established immediately due to phasing issues, temporary erosion and sediment control measures must be maintained until such a time that revegetation can commence.

3.71 Wind screening (e.g. fine –mesh shade cloth fencing, or solid fencing) must be employed to prevent excessive wind-blown sand and light-weight solid waste (e.g. litter) entering the canal.

3.72 Soil must be exposed for a minimum time possible once cleared such that the timing of clearance is coordinated with the onset of construction. This will prevent wind and water erosion.

3.73 The length of open trench excavations must be kept to a minimum.

3.74 The construction site camp must be adequately protected against adverse weather conditions, particularly chemical storage areas, in accordance with the approved EMPr.

3.75 Soil erosion prevention measures and soil erosion control measures must be implemented during the construction phase as outlines in the approved EMPr, particularly in the steeper areas of the site and in sensitive areas. Additional measures must include:

3.75.1 The suitable use of sand bags or Hessian sheets, especially to prevent erosion and run-off of loose sediment into the harbour channel;
3.75.2 The prompt rehabilitation of exposed soil areas with indigenous vegetation to ensure that soil is protected from the elements;
3.75.3 The removal of vegetation only as it becomes necessary for work to proceed; and,
3.75.4 Prevent the unnecessary removal of vegetation especially on steep areas.

3.76 Topsoil must be stockpiled separate from the subsoil for use in rehabilitation processes. Stockpiles must not exceed a height of 2m on-site and must be positioned away from the watercourses or drainage lines to prevent soil from eroding directly into the watercourse or drainage lines.

Wetlands/Aquatic

3.77 All stormwater management infrastructure/ systems including collection, detention, attenuation, conveyance and outlet structures must be located outside of delineated watercourses and their respective buffer zones with allowance for outlet protection/ armouring within buffers where this is not practically feasible.

3.78 Measures must be implemented to distribute stormwater as evenly as possible to avoid point sources of discharge directly into watercourses.

3.79 Road runoff must be removed from roads via road drainage infrastructure constructed at regular intervals at the approach to watercourse crossings to avoid point source scouring at the outlets. Wherever possible, all outlets must be located outside of the delineated watercourses (wetlands/river).

3.80 Vegetated swales/side drains must be specified rather than concrete lined drainage channels (e.g., concrete V-drains). Vegetated swales/side drains must be well vegetated with appropriate species and stabilized by means of gabion or concrete cut-off walls to prevent erosion and vertical incision.

3.81 Similarly, outlets must not be piped outlets but open vegetated channels or vegetated mitre drains.

3.82 No pipelines or manholes must be established within 50m of a watercourse.

3.83 No sewer pump stations must be located within the delineated watercourses (wetlands and rivers) and must be located outside of the recommended 15m aquatic buffer zone.

3.84 An Environmental Contingency Plan for Aquatic Ecosystems must be developed to assist in the identification of potential abnormal/unforeseen environmental incidents and provide guidance on communication including notification and activation in the event of an environmental emergency. It must provide a framework of organisational responsibility

and actions to be taken in the event of an incident on, or in the immediate vicinity of the development site.

3.85 The plan must identify key personnel and their responsibilities in terms of identifying incidents, reporting on emergencies, preparing for abnormal incidents/events, and implementing measures to contain and remediate aquatic environmental hazards.

3.86 A surface water quality and aquatic bio-monitoring plan must be developed to inform the monitoring of surface water quality and aquatic habitats/biota associated with the wetland and riparian ecosystems at the site.

3.87 Surface water quality must be monitored at strategic points in the landscape and the results used to inform further management actions, remedial measures and/or the revision of mitigation strategies aimed at protecting the wetlands, rivers/streams and instream/riparian habitat on the property and downstream from water quality impacts associated with the development.

3.88 This monitoring plan must be referred to for all aspects of surface water quality monitoring and aquatic biomonitoring at the site.

Vegetation

3.89 An alien invasive plant species management and monitoring plan must be implemented during the construction and operational phase.

3.90 The applicant must incorporate locally indigenous vegetation into the landscaping of the property.

3.91 A Rescue and Relocation Programme must be compiled by a qualified specialist to rescue and relocate any endangered vegetation. The following conditions apply to the Rescue and Relocation Programme:

3.91.1 A rare and endangered plant rescue and relocation programme must be implemented prior to the commencement of construction;
3.91.2 The holder is required to engage with the specialist to appropriately collect rare and endangered species from the development footprint areas and relocate to conservation areas;
3.91.3 Rare and endangered plants must be rescued and relocated well before construction commences during times when the species are likely to be locatable. The qualified specialist must advise on the most suitable time to relocate these species;
3.91.4 The Rescue and Relocation Programme must also include the collection of seeds, where possible from the development area prior to construction commencing;
3.91.5 Specific care is to be exercised in terms of soil management and fertilizer or soil ameliorant applications. Sectors that are not considered suitable for such applications must be identified by the specialist;

3.91.6 The developer must ensure that the development/construction is largely on areas already disturbed or dominated by invasive alien vegetation and to minimise the impact on the indigenous forest;
3.91.7 All indigenous vegetation on the site must be identified and labelled prior to any construction activities;
3.91.8 All indigenous vegetation occurring within the development footprint must be transplanted and kept safely for rehabilitation purposes;
3.91.9 A nursery must be established to keep all transplanted indigenous trees for re-planting after the construction phase is complete; and,
3.91.10 A detailed inventory of all indigenous trees that reside along the route of the proposed on/off ramps must be compiled.

3.92 On-site conservation areas must be established and must include the following:

3.92.1 Restrict access to management or bone fide conservation activities. This must entail fencing (which will need to be maintained) and placing or vehicular obstructions as needed;
3.92.2 Prevent and deter the impacts on the grasslands by sand-miners by regular security and patrol presence;
3.92.3 A comprehensive system of firebreaks must be established and conducted annually. Burning must not occur more than once every two years.

3.93 Areas set aside as open space/conservation must be specifically set aside for conservation purposes.

3.94 No development or machinery is permitted within the conservation area, unless for rehabilitation purposes.

3.95 The conservation area must continually be managed so as to promote conservation and biodiversity, and not degrade the condition of the conservation area.

Fauna

3.96 An ecological corridor must be established that is wide enough as part of biodiversity management, and without these causing threats to developed areas. A minimum of 120m-150m corridor must be established.

3.97 Fencing must be erected that is permeable to fauna but prevents human access must be erected around undeveloped areas.

3.98 Areas in poor condition outside the development footprint such as the creation of one or more small artificial wetlands in these areas must be managed to provide a breeding habitat for frogs and other aquatic fauna, which would replace some of the aquatic habitats lost under the development footprint.

3.99 Monitoring of water quality and aquatic ecosystem health must be implemented in these conservation areas.

Geotechnical

3.100 A detailed geotechnical investigation must be undertaken prior to each phase of the development to confirm soil type and consistency in-situ and to allow for pile design during the construction phase.

3.101 Stabilization of any poorly drained embankments must be conducted by means of retaining measures in consultation with a qualified geotechnical engineer.

3.102 Temporary silt collection measures must be implemented on site prior to the removal/clearing of vegetation which exposes bare soil.

3.103 Groundwater seepage must be controlled with effective subsoil drains, especially where water is likely to gain ingress into the structural layers of the roadways. Further to this, the site surface must be shaped so that surface water drains away from all structures.

Traffic control and construction vehicles

3.104 Construction vehicles must be parked in a designated area which must not disrupt vehicle traffic from surrounding areas. All vehicles to remain in the parking area designated within the construction site when not in use.

3.105 Traffic control measures must be implemented should the access roads be affected by the ingress and egress of construction vehicles and equipment in accordance with the approved EMPr.

3.106 The developer must implement the upgrades to the transport/traffic infrastructure agreed to by eThekwini Transport Authority.

3.107 The volume of vehicles on-site must be restricted to ensure minimal disturbance to the area.

3.108 The contractor must take into consideration the potential movements of surrounding stakeholders.

3.109 Appropriate signage and barriers must be used to cordon off construction areas.

Wastewater treatment plant (WWTP)

3.110 The design of the WWTP, pipeline network and pump station connections must be compiled by a qualified engineer.

3.111 The new plant must comply with Guideline 12: Guideline for the design and approval of on-site (sub-surface) disposal of sewage.

3.112 Sewage disposal must comply with limits as outlined by DWA Special Discharge Quality Standards.

3.113 The capacity of the WWTP must not exceed a capacity of 2ML/day.

3.114 Construction of the WWTP, pump stations and pipeline must be conducted under the supervision of a qualified engineer.

3.115 Training must be provided to staff who work with said infrastructure to ensure the efficient management of the pump stations.

3.116 A response strategy must be in place to respond rapidly to any leaks and spills and ensure timeous clean-up and repairs in the event of an accidental spillage.

3.117 The ECO must oversee the construction of the WWTP, pipeline and connection of the pipeline to the pump station.

3.118 A groundwater monitoring plan must be developed by a geohydrologist.

3.119 Quarterly monitoring must be conducted during the operation of the WWTP.

Waste Management

3.120 All waste must be classified into different components such as dry waste, construction waste, general waste, spoil material, etc. to ensure that specific types of waste are disposed of in a responsible manner.

3.121 The holder of the EA is responsible for the removal and disposal of solid waste e.g. surplus of spoil material to a permitted waste disposal site. Should private contractors be used, then the holder of the EA must request proof of safe disposal. This must be attached to the relevant audit report.

3.122 It is the responsibility of the EA holder to identify any sources of pollution from this undertaking and to take appropriate measures to prevent any pollution of the environment.

3.123 All waste material generated during the commissioning phase, prior to being collected for safe disposal, must be stored under cover and within a designated waste collection/storage area which must be bunded and hard surfaced. Access control to this area must be properly managed.

3.124 Contaminated and/or dangerous materials must be disposed off at a licenced waste disposal facility that is authorised to accept such waste material. Proof of this must be attached to the audit report.

3.125 Waste must be disposed off in a suitable manner so as not to cause any surface water pollution or a health hazard. Proof of this must be attached to the audit report.

3.126 The recycling of suitable material (i.e. glass, paper and plastic) is encouraged and this must be managed in such a manner that this does not result in any secondary pollution. Recycling is encouraged at all times to limit waste added to the landfill site.

3.127 Any pollution or surface or groundwater must be immediately reported to DWA and the appropriate mitigation measures must be employed.

3.128 All litter and waste must be collected and kept in bins in a designated area, during both the construction and operational phases. The litter and waste must be disposed of at a licensed waste facility once the bins are full. Proof of safe disposal must be kept as records.

3.129 Waste generated during the operational period must be disposed off at a facility licensed waste disposal site in terms of section 20(b) of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), if it cannot be responsibly recycled or re-used on site or offsite. No waste material of any kind may be buried (for the sole purpose of final disposal) or burnt. The contractor responsible for the removal of the waste must supply the applicant with a certificate indicating safe disposal. Within **fourteen (14) days** of its issue, a copy of the safe disposal certificates must be forwarded to the Control Environmental Officer: P&W Component as per contact details specified in condition 2.17 herewith.

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

Operational phase

3.131 Should the activity ever cease or become redundant, the EA holder must contact the Department to determine the required actions for the rehabilitation and closure of the site.

3.132 The EA holder is responsible for compliance with the provisions for *Duty of care and remediation of damage* in accordance with section 28 of National Environmental Management Act (NEMA), Act no. 107 of 1998 (as amended). Determination of damage vests in the Department.

Availability of this environmental authorisation

3.133 A copy of this EA must be kept by the EA holder and be made available to any official of the Department on *request*.

Date of environmental authorisation: 16/10/2023

for **Head of Department:**
KwaZulu-Natal Department of Economic Development Tourism and Environmental Affairs
Signed by: Mr. Sabelo S. Ngcobo
Director: Environmental Quality Management
EAP: 2022/5543

Annexure 1: Reasons for Decision

1. Information considered in making the decision

1.1 The submission of an application for authorisation in terms of NEMA to the Department on 28 February 2023;

1.2 The Scoping Report submitted on 13 March 2023;

1.3 The Acceptance of the Scoping Report dated 17 April 2023;

1.4 The information contained in the draft Environmental Impact Assessment Report received by the Department on 15 May 2023;

1.5 The comments on the draft Environmental Impact Assessment Report submitted on 14 June 2023;

1.6 The information contained in the Final Environmental Impact Assessment Report, dated June 2023 received by the Department on 30 June 2023;

1.7 The Environmental Management Programme compiled by Zutari, dated June 2023;

1.8 The site visit conducted by the Department on 11 September 2023;

1.9 The comments received from I&APs during both the scoping phase and environmental impact assessment phase; and,

1.10 The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

2. Key factors considered in making the decision

All information presented to the Department was considered in the Department's consideration of the application. A summary of the issues which, in the Department's view as guided by section 24(4)(h) of the National Environmental Management Act, Act 107 of 1998, were of the most significance is set out below.

2.1 **Public Participation**
The public participation process complied with the requirements of Chapter 6 of the EIA Regulations, 2014 as amended, and the comments from the organs of state and interested and affected parties have been included in the Final EIAR dated June 2023.

a. **Scoping Phase**
The Scoping report (SR) was submitted to I&APs on 13 March 2023 for comment. The was accepted on the 17 April 2023 by the Department.

b. **Environmental Impact Assessment Phase**
The draft Environmental Impact Assessment Report (EIAR) was submitted on 15 May 2023 with the Final EIR submitted on 30 June 2023 to I&APs for comment.

c. **Notification and advertisements**
In accordance with the requirements of the EIA Regulations 2014, as amended, the I&AP registration period commenced with the advertisement of the project in newspapers and placement of site notices.

d. **Summary of public consultation**
The Department is satisfied that public consultation has been adequately addressed during the EIA process.

e. **I&AP comments during the Scoping and EIA Phase**
All comments and responses have been captured in the comments and response reports as part of the EIAR, dated June 2023 as prescribed in the EIA regulations December 2014, as amended. Concerns raised by I&APs have been address in the comments and response report as part of the FEIR dated 30 June 2023.

2.2 **Layout and Land Uses**
Based on the pre-feasibility study (PFS) and market assessment, light industry, general industry, warehousing, and logistics land uses are viable land use options. The study area covers an area of 1 262ha that was identified for future land uses as follows:

- Within this total study area, 307.26ha of land is now identified as leasable area for the light industry, commercial, warehousing, distribution, and logistics activities.
- The internal road networks and reserves, including bulk service infrastructure (water, electrical and sewage) to service the proposed development would cover a total area of approx. 37.43ha.
- The remaining 6.12 -ha of land identified for development is linked to the future northern leg of the KwaXimba interchange. Although the northern leg of the interchange is reflected in the development footprint and extends through the holder's land, it does not form part of this EA and will be subject to a separate EIA process by the relevant road's authority. As the Northern Leg of the interchange is included in the total 351-ha of development footprint, the associated biodiversity offset requirements for the loss of the KZNSS Grassland have been factored into the current biodiversity offset study for this project already.

The layout has considered the following:

- Land identified as rural residential (as per the current zoning). Informal settlements have encroached and therefore these areas have been designated as such, for this project. Due to the encroachment, these areas have been excluded from any future development proposal. Note, the CRDC will not develop housing, but rather avoid the occupied land.
- Existing electrical and Right of Way (RoW) servitudes and existing road reserves, cannot be developed.
- The Western landholdings (containing 378.5ha of eastern valley bushveld) cannot be developed due to topographical and environmental sensitivities and could be considered for offsetting.

2.3 Bulk Infrastructure Requirements

This includes an electrical network, water infrastructure, sewerage infrastructure, stormwater drainage system and road upgrades. Municipal Service Level Agreements would be required for water and sewer provisions.

2.3.1 Water Supply

To meet the water requirements for the development, eThekwini Municipality will construct a 38ML above-ground reservoir within the central parts of Phase 2 development area (the footprint for this facility has been accommodated in the layout plan as its located within the holder's landholding). This reservoir will be subject to a separate environmental authorisation process by eThekwini Municipality and does not fall within the ambit of this EA.

To service the developments, the following water infrastructure will be required:

- One elevated water tower (10m x 10m by 5m high or 0.1ha); and
- Water distribution pipelines.

The water reticulation infrastructure will be finalised in consultation with the eThekwini Water and Sanitation (EWS) Department. The development will tie into the existing bulk water line. Water storage facilities, pipes and pump stations must be designed to meet the anticipated demand. Water-supply systems use high-capacity wells and intakes, pumps, and pipes, as well as a power source (e.g., electricity), to drive the pumps. Water storage will be required and used to provide adequate contact time for disinfection and to meet peak demand. The distribution system will use a gravity-fed system, but also pump water to each erf, and various connection points will be connected to the existing water network.

2.3.2 Sewage

Through the phased development of the project, the sewerage requirements will gradually increase for the study area. A sewer reticulation network will extend across the development to ensure each site can be adequately serviced. A 2ML modular WWTP (105 m x 102 m) will be established near the intersection of the R103 and Eddie Hagen (within the Phase 1 area). The WWTP will comprise 250kld modules that would be brought online as demand increases. The first few developments in Phase 1 would use conservancy tanks (sealed units that would require regular emptying) until the threshold through flow is reached to initiate the first 250kℓ/d module. These conservancy tanks will be licensed by end users. The WWTP will be used to treat wastewater for the development, after which, the plant will be decommissioned, and the development will then feed into the municipal trunk line proposed along Eddie Hagen Drive in 2032. At peak, the plant will have a treatment capacity of approximately 2 ML/day. Based on the end users of the site, the exact number of hectares to be serviced by the onsite wastewater treatment plant may vary and can only be confirmed, through operational monitoring of volumes. To service the sewerage requirements for Phases 2 and 3, a collection sump and pump station will be required in each of these project areas. These pump stations will deliver effluent directly into the municipal trunk sewer line once constructed.

2.3.3 Roads and Traffic

A Traffic Impact Assessment (TIA)[6] was undertaken based on the phased development. The following roads are proposed as part of the development:

- The internal road network will be 20 m in width, including the road reserve;
- All internal roads required for the development will be a single lane in both directions. Each lane will be 3.5 m wide, totalling 7 m in width.
- The total road reserve will be 6.5 m for each lane. The purpose of the road reserve is to accommodate bulk service infrastructure for stormwater, sewer, water, and electricity; and,
- The internal road network (including access roads) will cover an area of up to 34.41ha.

The current road network has spare capacity, so the development of 80 -ha of the precinct accommodate the surrounding road systems.

The Cato Ridge area is highly dependent on the Provincial road network. The R103 runs east-west to the north of the N3, connecting to the N3 Cato Ridge Interchange to the west and via the Thousand Hills Road, it then connects to the N3 Hammarsdale interchange to the east. In the north-south direction is Eddie Hagen Drive which connects to the R103 at its southern end. The existing layout of the N3 Cato Ridge Interchange and the N3 Hammarsdale Interchange lie either side of the Cato Ridge study site. The latter was recently upgraded in 2020 and is predominantly free-flowing with two loop-ramps to and from the east. Between these two interchanges a new N3 KwaXimba interchange is being considered and would connect Eddie Hagen Dr with N3 though an intersection on the R103. Access to the development would be though four intersections, three along Eddie Hagen Dr and one off the R103.

According to the TIA, the expected impacts will be during the operation phase [congestion due to the additional transport demand associated with the day-to-day operation of the industrial developments] and during the construction phase [increase in construction activity and related traffic]. The cumulative impact on this project, considering the existing and planned developments, is assessed as being Medium – negative. The TIA was supported by eThekwini Transport Authority.

2.3.4 Electricity

To cater for the electrical demands of the phased development, the following electrical infrastructure is proposed:

Two 0.15ha (1,500m^2) substations as part of the development: one to cater for the electrical demands of Phase 1 and Phase 3 located in the south, and one to cater for Phase 2 in the north. Two options for the positioning of the Phase 2 substation and associated distribution line have been proposed. The engineering design proposals will be determined in consultation with Eskom.

The transmission lines are as follows:

[6] Traffic Impact Assessment, undertaken by Doug McFarlane and Associates, dated June 2023.

- Phase 1: Approx. 788 m long 33kV powerline from ACRW to the new southern substation within Phase 1.
- Phase 2 – two options (A worst-case scenario footprint has been used to cater for either):
    - Option 1 - (eastern) requires approx. 384m 33kV powerlines – described as "electrical cable with 7m servitude" below ground. The substation is outside of the Assmang/CRDC landholdings and within an existing Eskom substation complex.
    - Option 2 - (western) requires approx. 638m 132kV overhead powerlines with 36m servitude. The substation and powerline are proposed on Assmang/ CRDC land outside the Phase 2 footprint and the powerline would tie into the existing Eskom powerlines running along the escarpment to the west of Phase 2.

To date there has been no finalization in terms of which option will be implemented.

2.3.5 Stormwater management

The stormwater design concept for the development will comply to all Environmental and eThekwini Municipality requirements and specifications. The traditional design of stormwater drainage systems collects and confines storm water runoff as rapidly as possible to a suitable location where it can be discharged. The road network stormwater management system is designed to accommodate both the 351-hectare development footprints and the actual roads.

Site-specific stormwater management measures will be finalised, based on the final requirements of future developers. Each site-specific stormwater management plan (SWMP) will feed into the broader SWMP for the overall development footprint. The stormwater system will be implemented in a two-tier approach, whereby CRDC will provide a bulk stormwater infrastructure system for the entire site, with stormwater berms, drains and pipelines located along the roadside and these will feed into the attenuation ponds and onto the engineered discharge points to release stormwater into the natural drainage systems in a controlled fashion (energy dissipation, erosion and sedimentation controls). The second tier is the site-specific stormwater management systems by prospective end-users. They will be responsible for providing on-site stormwater management including appropriate attenuation and must tie into the precinct-wide bulk stormwater management system. The second-tier stormwater management systems can only be developed once the end-user is known and a layout plan for their site/erf and the specifications for the site-specific stormwater water management system can be determined.
A layout of stormwater infrastructure includes:
• Stormwater pipelines.
• Attenuation ponds - these will attenuate up to a 1:50-year storm event (heavy rainfall events).
• Stormwater discharge points.

Recent flooding in the Kwazulu-Natal reveals the importance of adequate stormwater management and design practices. Stormwater management must ensure that pre-and post-development stormwater runoff is equitable, as per the

Municipal stormwater policy. Additional measures recommend the use of impervious cover minimization and permeable pavements in parking areas. During construction, earthwork must be confined within the development footprint and implementation of erosion and sediment control methods to minimise soil erosion. By phasing construction, thereby limiting the exposure of bare earth at any one time, the stormwater risk to the environment is reduced. Revegetation and soil conservation minimise the impact of the activity. No comments/objections were received from eThekwini Municipality: Coastal Stormwater and Catchment Management.

2.4 Need and Desirability

The Project is in line with the surrounding land uses within a 5 km radius, which largely comprises light industry, warehousing, distribution and logistics activities. Cato Ridge has a large extent of unoccupied land, which coupled with its strategic location along the Durban-Pietermaritzburg corridor, proximity to the N3 highway and railway line, and locally available flat topography makes it a suitable location for future industrial activities. Alignment with Local Planning Policy.

Thus, Cato Ridge, due to its strategic location, advantageous topography, and intersection with key logistics, is envisaged as the next light industry, warehousing, distribution and logistics precinct for the eThekwini region. Its conversion into a light industry, warehousing, distribution and logistics precinct would respond to the increasing demand for industrial land and could potentially provide logistics support for the Port of Durban, depending on the level of Port expansion. The development of Cato Ridge is regarded as a stimulus to unlocking the potential of the surrounding areas of Mpumalanga and Hammarsdale.

However, the current development potential is constrained due to the currently limited accessibility and bulk infrastructure capacities. By improving the infrastructure, including upgrading the N3 interchanges and addressing the wastewater and sewer handling challenges, it is anticipated that the area would be fully unlocked for light industry, warehousing, distribution and logistics development. In this regard, the eThekwini Municipality has several bulk infrastructure projects targeted at the Cato Ridge area:

- Upgrade of the Hammarsdale WWTW from 9 ML to 42 ML;
- A new Cato Ridge Sterkspruit River Sewer Outfall with diameters ranging from 300 mm to 1050 mm to collect and convey the wastewater generated from the Cato Ridge and Harrison Flats areas to the proposed upgraded Hammarsdale WWTW;
- Bulk trunk sewer to connect Cato Ridge/ Harrison Flats area to Hammarsdale WWTW- the responsibility of eThekwini Municipality;
- Construction of the new KwaXimba interchange and associated northern leg, distribution roads, and access roads- a joint project being considered by the eThekwini Municipality and SANRAL.

It must be note that, should the timing for construction of the proposed municipal sewerage infrastructure projects not align with the project, then individual septic tanks/ conservancy tanks will be installed for each erf, as an interim measure (responsibility of the future end users who purchase land from CRDC).

Concerns were also raised regarding the need and desirability of developing the site, given the high conservation value of remaining KZNSS grasslands. It is considered that significant, and justifiable, social and economic benefit would result should the development proceed on the site. It was further submitted that the desirability of developing the specific site was beneficial from a spatial planning and socio-economic perspective.

2.5 Macroeconomic Assessment

Due to the limited availability of industrial land suitable for development in the eThekwini region, vacant and developable industrial land has become a strategic resource. Considering the limited amount of land available for industrial expansion, eThekwini's Outer West Region is identified by local and regional planning policy as a strategic region due to its access to the N3 logistics corridor and undeveloped industrial land. The region is, according to the eThekwini Industrial Spatial Strategy, under-developed in terms of its industrial capacity and can offer an alternative industrial-orientated investment opportunity that can build on the established industrial nodes already present in Durban and its immediate surroundings.

Cato Ridge as a node in the Outer West Region forms part of eThekwini's development drive to unlock and develop opportunities along the SIP 2 corridor (N3 corridor between Durban and Gauteng). Cato Ridge has specifically been identified as a catalyst for industrial and logistics-orientated development because of the potential the location has to act as a dry port facility or as a location that can provide access to zoned industrial land. The Cato Ridge node is furthermore also considered to be an investment location as an economic driver. By extension, Cato Ridge and its industrial development opportunities could also stimulate development in the broader Outer West Region, specifically in the Mpumalanga and Hammarsdale areas. The Cato Ridge area is identified as a high-priority economic potential area with high GDP growth, in terms of the KZN Provincial Spatial Development Framework (2022 to 2027). The logistics hubs, road, rail, fuel and other infrastructure corridors connecting Gauteng and Durban are vital to the future of the national economy, and should be designated as national competitiveness corridors. It accounts for about 46% of the gross domestic product (GDP) and would build on the Department of Transport's 2050 Vision for the Durban-Gauteng freight corridor. The logistics hub situated in Cato Ridge between Pietermaritzburg and Durban will relieve pressure on the transportation networks as it will again serve as a linking point/transhipment point in logistics networks for the flow of goods.

2.6 Vegetation[7]

The Natal Group sandstone plateau north of the N3 is well-suited to development, because of flat terrain and ease of access from, and proximity to existing roads and rail. Unfortunately, most of this is KwaZulu-Natal Sandstone Sourveld (KZNSS) of varying quality, which is considered Endangered (Skowno et al. 2018) or Critically Endangered (Jewitt 2018). Numerous threatened species or species of conservation concern was found to occur on this plateau.

This grassland is most impacted by the development, which is separated into three phases and envisage transformation of several hundred hectares of this grassland.

[7] Vegetation Assessment was undertaken by David Styles Vegetation Surveys, Advise and Consulting, dated 23 April 2023.

Other vegetation types include a large amount of Eastern Valley Bushveld, some of which is an excellent example of this vegetation type, below the plateau. Given that KZNSS is an Endangered vegetation type, even very degraded instances are valuable, especially if there is prospect of recovery. It has been indicated that loss of such grassland may not be supported. The developer did take note of this statement and the risk involved.

Phase 1 contains KwaZulu-Natal Sandstone Sourveld in good to poor condition. While the land-use avoids the great majority of species of conservation concern it still intrudes into some primary KZNSS. Ideally, development should avoid Moderate to High herbaceous species diversity grassland. If it cannot, offsets are required. Exceptional protection and management of the remaining grassland is proposed.

Phase 2 comprises a mix of KZNSS in Very Low, Low and Moderate condition, insofar as herbaceous plant diversity is concerned. The development area well avoids the area in which most species of conservation concern are concentrated. Under criteria recommended by SANBI, because of the grassland and ecosystem type and amount for transformation, the Phase 2 area nonetheless results in losses of areas with High to Very High site ecological importance.
Parts of the Phase 2 area and grassland to the west have been extensively damaged by sand-mining. The grassland is also being invaded by *Eucalyptus*, of which there are many hundreds and which occur particularly where soil has been disturbed by mining. Phase 2 appears to host a large number of cattle and be well grazed. This is certainly the outcome of overgrazing.

The vegetation in the Phase 3 development area comprises a mix of KZNSS in mainly Low but a small amount Moderate condition, some of which is also damp. It also includes transformed areas. This area has also been quite extensively damaged by unauthorized sand-mining and there does not appear to be a patrol presence to prevent this recurring, though an attempt has been made to block vehicular access. Parts are being invaded by alien species, including *Acacia mearnsii* (Black Wattle), *Eucalyptus*, and especially expanding groves of *Populus x canescens* in wetland areas or where soil is damp. A large diversity of other alien species occurs where soil has been disturbed by sand-mining, particularly in and around wetland areas. There is also some disturbance and establishment of alien invasive species along the boundaries of contiguous industrial developments, particularly *Lantana camara*. Phase 3 hosts heavy grazing. I have on occasion seen over 100 animals in this grassland, and while this does not occur every day, it does quite regularly. Unless the amount of grazing in relieved, the grassland will deteriorate further, even if species of conservation concern are able to persist around rock outcrops. Given that these grasslands are also under great pressure from informal, unauthorized and illegal actors (including grazing, sand-miners and settlement), development without or with modification, the project is be authorised based on the biodiversity offsets considerations.

2.7 Biodiversity Offset[8]:

The "mitigation hierarchy" is a planning and decision-making framework employed as part of the Environmental Impact Assessment process and aims to minimize and manage the adverse environmental impacts of the proposed development on the

[8] Biodiversity Offset Study compiled by EcoPulse, dated 23 June 2023

environment. It is important to disclose and demonstrate the measures have been taken to avoid, minimise and/or rehabilitate impacts before considering remedies to compensate for residual impacts.

Where there are significant residual environmental impacts that will require compensation or offsetting, this remedy should only be applied as a last-resort and in circumstances where these impacts cannot be practically avoided and there are significant and justifiable social and economic benefit to society.

The residual impacts must however be offset and/or compensated for, through the implementation of appropriate Biodiversity Offsets. The overarching principle of the Biodiversity Offsets must be to obtain a net benefit for biodiversity conservation within KwaZulu-Natal.

The biodiversity offset specialist study was undertaken in various phases aimed at:

- developing an understanding of the project context;
- establish the potential residual biodiversity impacts;
- obtaining an indication of grassland conditions;
- considering the potential of establishing a conservation bank to secure and manage offset sites;
- exploring various layout alternatives with the specialist botanist and faunal specialists;
- developing an offset accounting methodology that accounts for the conservation value of KZNSS based on species diversity indicators; and,
- making recommendations as to the feasibility, practicality and implementation of proposed offsets to address residual biodiversity impacts.

The biodiversity offset specialists involved in assessing the feasibility and practicality of biodiversity offsets in this specific circumstance, undertook extensive vegetation analysis, strategic offset feasibility consideration and recommended a reduced offset ratio based on these scientific investigations and circumstances. The Biodiversity offset specialist averred that for the offsets to be practical and feasible, factors such as vegetation condition; and, costs of offset establishment and long-term management be factored into finding an offset plan that could be implemented to achieve a no-nett loss approach to the biodiversity offsets.

Much of the study area is classified as Endangered KZNSS grassland. Although some areas of KZNSS on the site are in poor condition according to the Vegetation Impact Assessment, any further loss of this vegetation type is of concern. The need for the protection of the remaining areas of KZNSS is highlighted in Phase 1 of the 2020 eThekwini SEA (eThekwini Environmental Planning and Climate Protection Department, 2020).

The Biodiversity Offset study recommended biodiversity offset requirements and identified potentially suitable offset areas (both in and outside the eThekwini Metropolitan Municipality). The study further described a suggested the approach to the implementation, including a programme and cost estimations of the various interventions. The study has shown that it is potentially feasible to secure areas of

KZNSS, both within and outside of the eThekwini Metro to establish the required biodiversity offsets and suggested a two-stage approach to ensuring adequate biodiversity offsets.

The specialist botanical studies undertaken indicate that areas that have undergone historic transformations or impacts are species poor and secondary in nature. These areas are considered to no longer represent the species composition of KZNSS and may never be restored to this vegetation type. The botanical specialist therefore recommends that an approach of adjusting the offset ratios based on biodiversity and the occurrence of species of conservation significance be applied. Based on this recommendation and in line with the KZN Biodiversity Offset Guideline, the residual impacts were adjusted by applying a 50% discount to areas with less than 25% of benchmark species present.

Biodiversity Offset discussions were initially held between the CRDC, Ezemvelo KZN Wildlife (EKZNW) and the eThekwini Municipality: Biodiversity Management Department (BMD) to discuss development aspirations and to obtain guidance on how conflicts between conservation and development should be addressed. Given the sensitivity of the site and aspirations to develop much of the site, biodiversity impacts were expected to be significant and as such, the need for targeted offset investigations was confirmed.

A number of discussions were held with the relevant biodiversity authorities and specialists, differences on the approach to offset planning and design remained. The key contention of EKZNW and BMD was that an offset ratio of 1:30 should be strictly applied to compensate for the loss of any critically endangered KZNSS. Their argument centred on the approach that this ratio has been historically applied to other smaller projects in the Metro and is also aligned with the guideline ratios as in the National Biodiversity Offset Guidelines. Further to this aspect, the BMD also advocated strongly that any offsets should be implemented within the Metro boundaries so to contribute to the Metros conservation targets and aspirations.

The law requires competent authorities to properly apply their minds to each case and not to apply the standard approach rigidly. While the standard approach provided in National and Provincial guidelines may give a good indication of what ratio should be applied generally, the Department must consider all relevant factors when taking a decision on the applicable ratio. The Department has therefore critically evaluated the Biodiversity Offset Reports and, using cooperative governance mechanisms, consulted with relevant conservation authorities for advice when considering which ratio to apply in a particular case.

In this instance, and taking into consideration –

- the conservation status of the endangered ecosystem;
- the location of the proposed development and strategic importance of this development corridor within KZN;
- that the area occurs in an urban setting where there are severe spatial constraints and high development pressures, both formal and informal; and,
- the advice received from the relevant conservation authorities,

- the biodiversity offset objective target to compensate for the residual loss of KZNSS associated with the development is to be calculated at an offset ratio of 10:1.
- The reduction of the offset ratios, as suggested within the National Biodiversity Offset Guideline, in this particular circumstance must not be seen as setting any precedent. The decision to adjust these ratios has considered site specific issues; detailed vegetation quality and rehabilitation probabilities; provincial conservation imperatives and guidelines; and, cost factors related to the availability of land within the urban boundary. This approach accords with the National Biodiversity Offset Guidelines.

The biodiversity offset receiving areas (onsite and offsite) will be protected and managed according to a Biodiversity Offset Management Plan for a minimum of 30 years. The biodiversity offset receiving areas will be zoned as a *Non-User Conservation Servitude* under the Spatial Planning and Land Use Management Act (SPLUMA) (No 16 of 2013).

The Department notes that although the mitigation hierarchy has been applied, the proposed 351 Ha development footprint will result in the loss of approximately 349.8 Ha of KZNSS, a critically endangered ecosystem. The Department however considers that these residual impacts may be considered justifiable given the significance of the socio-economic benefit; the need and desirability associated with the project; and, that feasible opportunities exists to offset these residual biodiversity impacts.

Extensive consultation with the biodiversity authorities in KwaZulu-Natal and eThekwini Metro was undertaken through-out and prior to the environmental impact assessment process. These consultations resulted in detailed and thorough specialist assessments of options and alternatives for biodiversity offsets and mitigation; and, were used to inform the consideration of biodiversity offset feasibility and practically in the specific circumstances.

While the biodiversity offset study proposed an innovative and novel approach, a risk adverse and cautious approach has been applied and the KZN Biodiversity Offset Guidelines (Ezemvelo KZN Wildlife (EKZNW), 2013. Concise Guideline on Biodiversity Offsets in KwaZulu-Natal. Version 4 (final)) was used to provide an approach that is simpler to apply, implement and monitor.

The Department has considered all relevant factors in making a decision on the applicable offset ratio. The Department has critically evaluated the Biodiversity Offset Reports and consulted with relevant conservation authorities for advice when considering which ratio to apply in a particular case.

The Department has considered the conservation status of the endangered ecosystem; the location and importance of the proposed development; that the offsets are required in an urban setting with severe spatial constraints; and, the advice received from the relevant conservation authorities, in deciding to reduce the offset ratio.

The determination (and acceptance of) suitable offset ratio's and the use of various factors to establish the quantum of offsets required, is always going to be the most critical and contentious issue within the offset planning process. The Department is of the view that offset ratio's need to be site and project specific and must be practical in the circumstances. They should not be seen as punitive or create unachievable objectives. The Department is of the view that the best practical environmental option, balancing social, economic and environmental issues and concerns, has been used to inform the biodiversity offset conditions of this environmental authorization.

2.8 Fauna[9]

The revised layout is a substantial improvement on the original layout, from a faunal standpoint. The total footprint area is much reduced, and much larger areas are to remain undeveloped and are available as conservation areas. The majority of areas rated as high faunal sensitivity and some important areas rated as having moderate value have been excluded the development footprint. The additional corridors in the revised layout will allow for some continued connectivity between areas of natural habitat.

Grassland areas need to be managed through, among other things, routine use of controlled burning. From a practical standpoint, grassland corridors therefore need to be wide enough to allow for regular burning to take place without managed fires being a safety hazard.

A corridor has been included within the revised layout that links the undeveloped areas of Phase 1 and 2. Currently, it appears to have a minimum width of 120m. This is fair, but it would be preferable if this could be extended somewhat to 150m; even more would be more beneficial ecologically. In practical terms, it needs to be wide enough to be burned as part of biodiversity management, and without these causing threats to developed areas. Furthermore, some of this area is slightly degraded, and a concerted effort would need to be made to rehabilitate this area to a higher quality habitat in total (through alien plant removal, burning, cattle exclusion, possible revegetation activities etc).

It is considered acceptable for the development to be authorised given that:

- The large majority of areas considered of high faunal value have been excluded from the proposed layout.
- The layout allows for the continued functionality and connectivity of ecosystems and ecological processes to continue (assuming appropriate management of the undeveloped areas).
- The developer has committed to substantial investment in appropriate management of the undeveloped areas for biodiversity, and to adequately offsetting both on and beyond the property to compensate for biodiversity losses.
- Several negative impacts are currently substantially reducing the biodiversity value of the property. Left unhindered this will continue. Permitting partial development in return for investment in halting these impacts and improving the management of the area will be of value for the biodiversity value of the site and broader region.

[9] Addendum to Terrestrial Faunal Biodiversity Assessment, conducted by Harvey Ecological, dated February 2023.

2.9 Agriculture[10]

It is concluded that the Cato Ridge Land Development and Release Project is an acceptable project for the area where it is by CRDC. The project will not affect any crop production activities and will affect largely land with medium and low agricultural sensitivity. The only agricultural activity currently in the area, is cattle grazing by the local community that live in the vicinity of the project area. The impacts on agriculture and soil range from the reduction in grazing areas available for cattle of the local community to soil compaction and increased risk of soil erosion and pollution.
The findings of Agric Potential study revealed that the largest part of the three areas, have Moderate agricultural potential (approximately 260.8 ha). These areas have suitability for rainfed crop production and livestock farming. Approximately 66.9 ha of the development areas, have Moderate-High agricultural potential. The soil with Moderate-High agricultural potential is present in Phase 1 and Phase 2. Areas with Low-Moderate agricultural potential covers about 4.8 ha of the development areas while Low agricultural potential is found at 35.7 ha of the areas.

The significance of these impacts' ranges from moderate negative to negligible negative prior to the implementation of mitigation measures. With the mitigation measures (as included in the approved EMPr), it is expected that these impacts can be reduced to minor and negligible negative. While it is not currently known exactly what businesses will settle in the development area, it is known that it will not include any hazardous chemical industries. This exclusion limits the risk of soil pollution to that listed for the construction and operation phases.

It is recommended that in addition to the mitigation measures stipulated for soil and agricultural impacts in the EMPr, that the environmental management team of CRDC, develop best practice guidelines for the management of soil quality that can be integrated with the EMPr stipulations by the prospective future end users. It is further recommended that a thorough research study be commissioned to investigate the possibility of regenerative grazing with cattle in the areas that will be part of the biodiversity offset program. While the aim of the biodiversity off-set program is the conservation of the habitat and species diversity of the KZNSS grasslands, the area has already been subjected to cattle grazing for several years. If a research study can monitor the impact of managed livestock grazing on the biodiversity of the area and also study the positive impacts of regenerative agriculture on soil quality, especially soil carbon content, it may be highly beneficial to the local community if they can continue with cattle grazing in parallel to the project.

2.10 Heritage Impact Assessment[11]

The Cato Ridge land development and release project impacts on a number of heritage resources. Many of the structures found in all phases of the development were dilapidated with some in advanced state of dilapidation with only the foundations or building material visible. Some of the structures are farmsteads and associated buildings. Confirmation of the age of some of the structures still needs to be undertaken but only one intact structure is of heritage significance as there are potential graves associated with the structure. In addition, the structure is inhabited.

[10] Agricultural Assessment conducted by TerraAfrica, dated 15 March 2023.
[11] Heritage Impact Assessment conducted by JLB Consulting, dated 14 October 2022 & Updated January 2023.

The graves and some archaeological sites that were previously found in Phase 1 of the development have been excluded from the revised development footprint. It is therefore the opinion of the specialist that the activity be authorised as the mitigation measures provided for all phases of the development are included in the approved EMPr and will be adhered to and implemented.

2.11 Landscape and Visual Impact Assessment (LVIA)[12]

The project area consists of a mix between the natural and built environments with local topographical variations and existing clumps of trees and berms, allowing for some visual screening opportunities in isolated locations. The busy transportation networks, existing light industrial and mining-related infrastructure and dispersed rural houses offer a diverse visual character. Visual quality tends to decrease as there is an increase in industrial activities, and as such, the visual sensitivity of the different phases varies, and receptors may value the existing undeveloped (green land) within the urban and developed environment.

The intensity of the landscape and visual impacts can be reduced to some degree through the implementation of mitigation measures, which include building aesthetics (architectural guidelines on finishes and colours), lighting design, visual screening, the positioning of buildings on sites and the inclusion of an overall landscape master plan for the project area. The change in landscape and visual character is also positive as the development will consolidate industrial development, and with the implementation of enhancement/mitigation measures, could potentially ameliorate the negative visual impacts of old infrastructure and derelict open areas within the Study Area. The implementation and monitoring of the proposed mitigation measures, such as architectural guidelines and the landscape master plan, could also further offer a sense of orientation and urban hierarchy which can positively contribute to the overall sense of place. The recommendations provided for all phases of the development are included in the approved EMPr and will be adhered to and implemented.

2.12 Socio-Economic Impact Assessment[13]

The Cato Ridge area has already experienced a significant influx of people in search of work in nearby industrial areas. It is likely that this existing impact will continue to see an increase in population influx, exacerbated by the high unemployment rates in the country. Consequently, there is likely increased pressure on local resources, services, and infrastructure, including the development of informal settlements. In addition, the development, including other key developments in the area will result in several economic benefits for local communities through direct and multiplier effects. These effects are usually stimulated by wage bills, local and regional procurement spending, and investment into local economic development (LED) and skills development. The findings of the SIA indicate that the recommended mitigation measures are expected to reduce the significance of the negative impacts to acceptable levels, while positive impacts will on average be significantly enhanced to maximise benefits to surrounding communities. It is recommended that the CRCD and end users to respectively consider the mitigation and maximisation measures included in the assessment to decrease the effect of negative impacts on communities and maximise the effect of positive impacts on communities. These measures have been

[12] Landscape and Visual Impact Assessment conducted by Create Landscape Architecture and Consulting (Pty) Ltd, dated 02 March 2023.
[13] Socio-Economic Impact Assessment conducted by Zutari, dated 19 April 2023.

included in the approved EMPr for the project and will be adhered o and implemented. Additionally, it is recommended that the land release project be authorised since the no-go alternative would continue to negatively impact CRCD-owned lands. Finally, the land release project is also expected to have a number of positive socio-economic impacts.

2.13 Traffic Impact Assessment [14]

The quantity of traffic generated by a change in land use has been well studied both locally and worldwide. Although there could be variations due to localised conditions, the confidence level that the demand for transport of people and goods will increase has a high confidence rating.

In the event that the project does not proceed, there would be no impacts associated with the construction phase. It is expected, however, that traffic levels would continue to increase in the Cato Ridge area as it would continue to be developed and densified for rural/residential purposes or other potential land uses. While a lighter traffic type is likely, the inevitable increase in traffic will result in congestion and the eventual need for upgrades of the road network and intersections would still be required in future, be that at a slower rate. This was assessed as being Minor – negative.
The land surrounding this specific development has already begun to be developed for similar land uses as is proposed by this developer and there is also pressure from surrounding communities to develop for residential purposes. The potential cumulative impact is that all of these developments occur concurrently, compounding the impact proportionately. The impact on congestion together with the ongoing development of the surrounding areas. The cumulative impact on this project, within this context, is assessed as being Medium – negative.
The recommendation is that the development be allowed to proceed.

2.14 Aviation Obstacles Assessment[15]

Although the three phases of the development fall within 8 km of a civil aviation aerodrome, as per the results of the web-based national screening tool, and are attributed a high sensitivity rating, the obstacle limitation surfaces (OLS) assessment indicates that the land use development on the three phases of the development will not impact the identified airstrips/ airfields. If deemed necessary by the South African Civil Aviation Authorities (SACAA), the holder will liaise with Air Traffic Navigation Services (ATNS) directly for the related evaluation. To date there has been no concerns from SACAA.

2.15 Air Quality Impact Assessment[16]

From the pre-feasibility studies the project had indicated that light industry, general industry, warehousing and logistics land uses proved to be viable land use options from a eThekwini Town Planning Regulations. The viable land use zones are light and general industry. It is not likely that these land uses will impact negatively on the surrounding community and that the ambient air quality standards is still achievable. It was further rerecommended by the specialist that the land not be used for residential purposes.

[14] Traffic Impact Assessment conducted by Doug McFarlane and Associates, dated June 2023.
[15] Initial Obstacle Limitation Surface Assessment conducted by Zutari, dated 14 October 2022.
[16] Atmospheric Impact Report compiled by EnviroNgaka (Pty) Ltd, 18 January 2022.

2.16 Climate Change Risk and Vulnerability Assessment (CCRVA)[17]

The project's vulnerability and resilience to climate change is assessed in the CCRVA through an analysis of available datasets. It must be noted that climate data was extracted and analysed at the finest scale possible. Modelling climate variables is challenging and thus most datasets for future climate are at a coarser resolution than observed or reanalysed climate data. Whilst every effort was made to use data from the relevant location, some data may represent an aggregation of a larger area. This introduces a level of uncertainty and higher variance than projections at regional or continental scales, however, the overall trend remains similar, and the interpretation is likely to remain the same. Where necessary, non-statistical adjustments have been made based on the historical trend.

Although some of the climate change risks are considered low, there is significant uncertainty in how climate change impacts may manifest and impact the infrastructure and operations of the future land use of the Cato Ridge Project. Adaption measures and recommendation have been included in the approved EMPr which will be adhered to and implemented.

2.17 Green House Gas Emissions Inventory[18]

Construction related emissions for the project are deemed immaterial. In the short-term there are no significant reductions for construction-related emissions that can be achieved. The project will be aligned to and operate within the standard construction's methods in South Africa. From the perspective of the project impacts on or contribution to climate change, the project should be granted environmental authorisation based on the medium significance rating of the emissions generated during the project operations. Recommendations have been included in the approved EMPr and will be adhered to and implemented.

2.18 Geotechnical Investigation[19]

The test pit locations were determined by considering topography, geological variability, and site coverage. One hundred and fourteen (114) test pits were excavated within the study area. The test pits were profiled in accordance with South African standards and were backfilled after profiling. Representative samples from the test pits were taken and submitted to a certified laboratory for testing. Representative samples were collected and submitted to a laboratory for foundation indicator, compaction, chemical (pH and conductivity), standard consolidation and lump testing. The site is underlain by tillite (Dwyka Group) which is in turn overlain by the shales and siltstones of the Pietermaritzburg Formation which are underlain by sandstones of the Vryheid Formation. Groundwater seepage was encountered at six sites located in low-lying areas or floodplains.

The investigation concluded the site is suitable for the development and recommendations for development have been addressed in the approved EMPr. Detailed investigations will be conducted to inform the detailed infrastructure and foundation design processes during the construction for each phase of the development.

[17] Climate Change Physical Risk and Vulnerability Assessment compiled by Promethium Carbon, dated 17 March 2023.
[18] Specialist Greenhouse Gas Emission Inventory compiled by Promethium Carbon, dated March 2023.
[19] Geotechnical Investigation undertaken by Aurecon, dated 07 February 2020.

2.19 **Geohydrology impacts[20] (Geomeasure Group, 2023)**

The main pollution source identified on site would be the modular wastewater treatment plant (WWTP) and associated reticulation network. The development will include a sewer collection pipeline network, collection sumps, pump stations and a 2 megalitre (ML) modular WWTP and effluent discharge pipeline. The modular WWTP will be decommissioned, once the municipal trunk sewer is established. This will be subject to a separate process.

The main geohydrological risk in terms of sewage pipelines, pump stations and WWTP is the failure of the systems resulting in accidental spillages. Whilst the site is underlain by consolidated sediments, spillages, especially if they are not attended to urgently, could infiltrate into the shallow groundwater depending on the size of the spillage. If the shallow and deep aquifers are geohydrologically linked, then impacts could migrate to the deep aquifer. In addition, the tributaries in the valley line to the west of the site could be impacted through baseflow. However, the spillage would need to be substantial to result in any significant impacts. If managed and maintained correctly, however, the risks of accidental spillages are low. Recommendations have been included in the EA and in the approved EMPr.

2.20 **Hydropedological[21]**

Several risks during the construction and operational phase of the development were identified. Based on the 351-ha development layout plan the following will likely contribute to the impacts of hydropedological flow drivers, and soil quality and may compromise surface water quality in the nearby watercourse:

The resource management objectives (RMO) for any wetland unit would be to maintain the current PES and EIS post-development or be improved by implementing dedicated stormwater features/structures. The severity of a sub-catchment scale can be improved by incorporating stormwater attenuation back into the environment. However, the way water is discharged into receiving wetland systems needs to be regulated, as high flow velocities could impact wetland health.

A 15 m hydropedological buffer is proposed for wetlands, streams, and rivers, however, it is known that Eco-Pulse (2022) has proposed wetlands buffers that supersede the hydropedology buffers. The purpose of the buffers is to limit direct disturbance/edge effects to the wetland and riparian habitats, reduce sediment/erosion impacts through sediment trapping by vegetated buffer strips, and contribute to dealing with water quality impacts (such as nutrient enrichment from surface runoff). The recommended buffer zones will also contribute to maintaining areas of terrestrial habitat as well as hydropedological soil flow processes.

The stormwater management plan describes the discharge of accumulated stormwater back to the receiving environment, via 11 stormwater attenuation ponds. Discharge from the modular WWTP will likely not impact the hydropedology processes of the site, however, minor hydropedology process changes may occur at the discharge point (i.e. responsive shallow soils may become saturated, but will maintain similar flow processes).

[20] Geohydrological Investigation conducted by Geomeasure Group, dated 2023.
[21] Hydropedology Assessment conducted by GCS, dated 18 April 2023.

Overall, the assessment does not find any grounds or identify high hydropedological risks to not proceed with the development. This is grounded that the mitigation measures have been included in the approved EMPr and will be implemented during the construction and operational phases of the development.

2.21 Hydrological impacts[22]

A detailed desktop hydrological investigation was undertaken. Input from the wetland assessment, stormwater management plan and flood assessment was used to guide the impact significance assessment.
The findings and recommendations are:

- The nearby watercourses are in a modified condition due to significant historical encroachment and woody invasion.
- The site is located outside of the 1:100-year flood event.
- The significance of the impact of the proposed development on water quality is moderate during both the construction and operation phases.
- The significance of the impact of the proposed development on surface runoff is moderate during both the construction and operation phases but can be considered to be minor as per intervention/mitigation measures.
- The significance of the impact of the proposed development on local hydrology is minor during both the construction and operation phases.
- Strict adherence to best practice guidelines, spill management and erosion control must be throughout operation of the development.
- Regular maintenance of culverts must be undertaken to ensure that the flood risk is not increased due to blockages by debris.
- Stormwater interventions have been recommended based on calculated peak discharge.

There are no fatal flaws exist from a hydrological perspective. This is largely due to the existing state of the site and its surrounding area, its position in the catchment, its projected state if not developed and the assumed proposed intervention measures.

A key component of the investigation will be potential flood areas, accommodation of peak storm events, best practice erosion control and the general impact of the development on downstream surface water resources for water users in the catchment. Assess the pre-mitigation impacts of changes to the hydrological system (up- and down-stream), based on effluent discharge and increased stormwater runoff. The proposed stormwater discharge points are directed towards the Sterkspruit to the south (tributary of the Umlazi river) and of the Mshwathi system to the north east (tributary of the Umngeni).

Mitigation measures:

- Stormwater will allow for clean water to be released and allowed to infiltrate;
- Gutters and drains should be monitored to ensure blockages are not present and sediments/contaminants are not present;
- Revegetation must occur below the quarry and batching areas; and
- Strategic cut off drains must be placed along roads.

[22] Hydrological Impact Assessment conducted by NatureStamp, dated March 2023.

2.22 Floodlines[23]

The floodline assessment undertaken in the PFS phase of the project is not an impact assessment but informs the baseline for other assessments. Based on the 351-ha layout, the project does not intersect any the 1:100-year floodlines.

2.23 Aquatic and wetland impacts[24]

A total of thirty-nine (39) watercourse units were delineated within the study area through a combination of desktop mapping and selective infield sampling. The impact potential screening assessment indicates that a total of nine (9) individual wetland HGM units and ten (10) river/stream units are at risk of being potentially measurably impacted during the construction and operational phases of the proposed development. These watercourse units were taken forward for detailed infield assessment. The PES of the wetland units assessed ranged from largely modified ('D' category) to moderately modified ('C' category). Streams units ranged from 'D' (severely modified) to 'B' (largely natural). EIS ratings for wetland process units ranged from Low to High. High EIS ratings were typically driven by the importance of wetland units in contributing to biodiversity maintenance, as these units are categorised as a critically endangered ecosystem type according to the latest national biodiversity assessment.

The most important wetlands were typically in fair condition, with large intact or semi-intact buffer areas that make them important priority areas for meeting regional, provincial, and national ecosystem conservation targets. EIS ratings for stream process units assessed ranged from Low to Moderate. Moderate EIS categories were assigned to those stream units that were moderately modified/largely intact, had moderate to high connectivity to upstream watercourses and retained relatively intact buffer zones. All these factors collectively contribute to the likelihood that these units play an important role in biodiversity maintenance or act as important wildlife corridors.

The key construction phase concern is the alteration of watercourse hydrological and geomorphological processes as construction activities in the catchment areas of onsite watercourses will result in a temporary reduction in catchment vegetation cover which could be associated with increased runoff and increased sediment supply to watercourses, especially where bare soils are exposed during peak rainfall periods. Should these impacts occur they are however likely to be temporary and are unlikely to significantly affect long-term ecological processes associated with onsite watercourses. If poorly managed hydrological and geomorphological impacts on Water Resource Management could be of a 'minor' ecological significance. There is no infrastructure planned within any onsite watercourses as part of the construction phase of the development. The planned development areas also do not encroach into the preliminary recommended watercourse buffer zones. There are therefore no planned direct impacts to freshwater habitat areas during the construction phase of this development. The key operation phase concern is stormwater management and the potential alteration of watercourse hydrological and geomorphological processes, and the discharge of treated wastewater into the environment from the proposed package sewerage treatment plant and the potential impacts on surface water quality. Under a realistic poor mitigation scenario these impacts are considered 'Moderate – Negative'

[23] Floodline Assessment conducted by Aurecon, dated 2019.
[24] Wetland & Aquatic Ecosystem Impact Assessment conducted by EcoPulse, dated 16 March 2023.

for each project phase. The significance of these impacts can however be reduced to 'Minor – Negative' under a realistic good mitigation scenario. Mitigation to related operational phase impact significance should focus on adhering to recommended watercourse buffer zones, wetland rehabilitation and management, stormwater management design and maintenance, and the design of the proposed onsite sewage package treatment plant. The mitigation measures will be implemented and adhered to during construction and operation, that the significance of impacts to the surrounding freshwater environment can be reduced to such an extent that it would acceptable for the development.

2.24 Alternatives

a. Location Alternatives

Location alternatives refer to alternative properties as well as alternative sites within the same property. One of the need and desirability factors relating to the selection of the study area for the project is the lack of alternative suitable flat land available for logistics/warehousing purposes in the Cato Ridge region, which is found in the "Valley of a Thousand Hills" and which places limitations on the development of large industrial sites. The location of the project is limited to the property owned by Assmang and CRDC, and have no intention of seeking out alternative sites for development, as their focus is limited to the release of land under their ownership

The updated macroeconomic study reviews the desirability of the project and cites a potential alternative site on the western edge of Cato Ridge (Camperdown) that could be suitable for the establishment of a new, much larger, logistics hub. The study explains that this alternative site could satisfy the objective and align with local planning policy relating to light industry, warehousing, distribution and logistics precinct development in the Cato Ridge area. However, as the alternative site is not presently owned by the CRDC, nor do CRDC intend to purchase and develop any alternative sites, the alternative site does not meet the "feasibility" criterion and cannot be included in this application. CRDC's focus is to release some of their current lands for appropriate development, of which light industry, warehousing, distribution and logistics fit the demand and align with spatial planning for the area.

Additionally, and of critical strategic importance is the proximity and access to the existing railway line and infrastructure, which is a key motivation for the location of the dry port, warehousing and logistics activities at Cato Ridge and, together with the proximity to the N3, elevates the strategic location of this site and aligns it with the National Infrastructure Plan Strategic Infrastructure Project (SIP) 2: Durban-Free State-Gauteng logistics and industrial corridor.

b. Layout Alternatives

789-ha layout (2019):
At the commencement of the Pre-Feasibility Study (PFS) in 2019 a 788.72 ha (rounded up to 789-ha) area within the 1262 ha study area owned by Assmang and its subsidiaries was identified as potentially developable and the layout was produced to inform initial investigations and discussions. This is referred to as the

original layout. This layout was conceptual and did not contain any details concerning the erf and road (and other services) networks.

609-ha Layout (June 2022):
Based on the findings of the initial botanical and wetland assessment, highly sensitive ecological areas were identified, which resulted in the reduction of the original development footprint to 609-ha, by minimising the layout to avoid these key environmental features. After the PFS, and based on engagement with relevant authorities and stakeholders, a revised site layout was compiled (June 2022). The development footprint of 609-ha was divided into 3 Phases. This layout was assessed by the specialist team in preliminary impact assessment. Earlier layouts were refined and were no longer considered "reasonable" alternatives, as the refinements were made in response to various environmental, technical or other constraints to the project. These layouts have been assessed, but are not carried forward as alternatives to the current layout.

486-ha Layout (July 2022)
The 609-hectare footprint was presented to eThekwini: BMD and Ezemvelo Wildlife. Based on various concerns raised by the environmental authorities, the appointed design engineers then reviewed the project layout, together with the CRDC. Through this process, the areas containing high-quality KZNSS grassland were excluded (where reasonable) from the development footprint, particularly in the northern and eastern parts of the development footprint. Based on requests from BMD and the biodiversity offset specialists, a 120m (at the narrowest point) wide ecological corridor was also included to achieve ecological connectivity across the development. In addition, areas to the south, along the wetland, were also reduced to avoid any losses to the wetland. To further protect the wetland, a 17m buffer area was also included, based on the wetland specialist's recommendation for low-impact activities. Through the avoidance of the wetland and minimisation of the development footprint on high-value KZNSS grassland, the development footprint was further reduced to 486-ha.

369.2-ha Layout (October 2022)
Concurrent with the above process, an "Ecological Development Scenario" was developed by the biodiversity offset, flora and faunal specialists. This scenario identified approximately 156 ha of good-quality KZNSS grassland that should be preserved. As a result, the CRDC then further reduced the 486-ha development footprint to align with the "Ecological Footprint" as far as practically possible.
Following pre-application meeting discussions with the Department of Economic Development, Tourism and Environmental Affairs (EDTEA) engagement with the eThekwini Municipality regarding bulk services, traffic and engineering studies, biodiversity offset engagements and engineering studies, and assessment of financial viability, the ecological development scenario was not accepted in its entirety. Changes were made to the Ecological Footprint and a refined layout with a development footprint of 369.2-ha was proposed over 3 project phases.

353.3-ha Layout (November 2022)
Ongoing consultations with relevant stakeholders and authorities in the scoping phase, The Project layout underwent more refinements to further reduce the

footprint to the greatest extent possible and also respond to reduce the roads in the ecological corridor between Phase 1 and Phase 2. This resulted in a 353.3-ha layout, which was distributed to the relevant specialists to inform their EIA phase impact assessments.

351-ha layout (May 2023)

Following the release of the 353.3-ha layout, ongoing discussions with engineering and environmental teams continued to result in further minor refinements as well as an exercise by CRDC to review and align the layout with the cadastral information, were identified and resolved. Additionally, a 3.89 ha section of wetland located on Phase 3 (i.e. The property known as Rem 29) that was previously indicated as part of a combined development footprint has also been removed from the combined footprint. While this wetland will not be developed, the property, including the portion of the wetland may still be sold off in Phase 1, but the wetland section is not developable. These minor refinements have resulted in the current 351-ha layout. Note that specialist assessments still refer to the previous 353.3-ha footprint area, but these changes do not materially affect the assessments.

A comparison between the original and current layout shows how the project layout has, through the consultative process and inputs by specialists, engineers and various stakeholders and authorities, including important inputs from the biodiversity offsetting process, resulted in the minimisation of the project layout by over 55%, from 789-ha to the current 351-ha.

c. Land Use Alternatives

Industrial Land Use Concept:

The concept of a regional industrial park was investigated, as the study area is designated as an intended industrial development zone in the Cato Ridge LAP, the N3 Corridor Development Study and the Cato Ridge Logistics Hub catalytic project. A warehousing and distribution-orientated industrial/commercial component is considered a natural response. The Assmang landholdings are close to the main routes and are considered well-situated for logistics and distribution facilities. The PFS found that the area directly south of the N3 is suitable for small, medium and micro enterprises (SMME) facilities where tenants can capitalise on accessibility and visual awareness from the N3. Other areas are close to existing manufacturing and heavy industry and the clustering of activities can create unique opportunities for similar uses. To use that land for a logistics hub, the land needs to be appropriately zoned. CRDC has adopted the zoning that has already been applied to the land and that is already documented as "General Industrial 2" in the Outer West Town planning Scheme.

Urban (Residential) Land Use Concept:

The PFS investigated the trend in residential development in the Cato Ridge area. The residential component is expected to expand westward and south from the existing built-up area on CRDC land south of the N3 which is not the subject of the current EIA. These new residential developments are on the periphery of Cato Ridge and should be characterised by low-density single-residential dwellings. In the PFS, a conceptual framework is presented which indicates proposed residential land use and offices south of the N3.

The AmaXimba community lives along the northern border of the Cato Ridge development area. This community has limited access to job opportunities as well as community and retail facilities. SMME units are proposed close to the AmaXimba community to provide affordable commercial and general industry space for entrepreneurs to start or grow their businesses.

Ecotourism Land Use:
In the Outer West Development Corridor Study & Cato Ridge LAP (2012), it is proposed that appropriately designed and managed tourism accommodation and facilities along the northern edge of the Harrison Flats plateau, with public viewing spaces along the edge of the Valley of Thousand Hills. The development is proposed to be separated from the light industry, warehousing, distribution and logistics developments by public open space areas. In addition, the Outer West Development Corridor Study & Cato Ridge LAP (2012) states that Eddie Hagan Drive is a significant tourism route and that a landscape buffer should be established on both sides of the road to screen the development.

In the eThekwini Municipal Spatial Development Framework (MSDF) 2020-2021, it is reported that the Outer West planning region within which The Project is located is considered to be an Environmental Management Priority Area, to provide opportunities for strategic Industrial Expansion and related employment opportunities, and to have the potential for tourism-related opportunities. The Cato Ridge area is already associated with industrial land uses. In an earlier layout, there was a proposal to include low-impact eco-estate but the feasibility was questioned by Ezemvelo Wildlife and the BMD. Ecotourism, as a standalone use as an alternative to land development, does not prove to be a viable solution to create employment and generate sufficient income to sustain the region. A substantial part of KZNSS can be protected within eco-industrial estates but this will require substantial development to justify the protection of the KZNSS from an economic perspective.
The concept of an eco-village, agri-village and associated land uses was investigated. Refer to Figure 3830. While this conceptual land use was not taken forward by CRDC, owing to the focus on industrial development, there is potential for future development of ecotourism-associated land uses in the designated conservation area. Although consideration has been given to the development of an Eco-Estate on some portions of the land, such land use is considered to provide limited economic benefits to the surrounding communities.

Land uses such as warehousing would create more jobs and be regarded as a key driver for employment.

Conservative layout - avoidance of KZNSS:
Two urban development concepts were prepared in the PFS. One concept provided a framework for optimal site development whilst the second concept presents a more conservative approach focused on avoiding areas of KZNSS. The areas of KZNSS are predominately north of the N3 and cover a total of approximately 566 ha within the study area. The conservative concept retains the commercial node as well as the SMME and light industry sites close to the AmaXimba whilst the light industry and medium industry sites are located towards the CRW. In some

instances, the proposed road layout has been located on the border of the nondevelopable areas. This is to enable future development of a portion of the environmentally sensitive areas.

d. Design Alternatives

Gradation of Erf Sizes:

The PFS indicates that the project includes a diversity of erf sizes to accommodate the change in demand and supply, and to allow for multiple erven to be consolidated to form a larger site or the subdivision of a larger site into smaller sites, in response to market demand.

With the AmaXimba living along the northern boundary of the land development area, it is important to scale the industrial erven to reduce the impact on the AmaXimba community. SMME units are proposed directly adjacent to the residential development, to stimulate the local economy, allow for participation by the AmaXimba community in Cato Ridge development, and to control potential health and aesthetic impacts. These smaller SMME units would provide affordable commercial and general industry space for entrepreneurs to start or grow their businesses. The smaller erf sizes will preclude activities with greater health and aesthetic (odour, dust and noise) impacts, such as warehousing or service industries, and associated heavy vehicle traffic in those areas closest to the existing residential communities.

Smaller erf sizes are provided for along the north-eastern boundary of Phase 1, and the northern boundary of Phase 2. Erf sizes are indicative only and will be determined by the needs of the individual future end users.

e. Technology Alternative

Alternative Designs of Bulk Sewerage Infrastructure

CRDC is proposing to facilitate the development and release of land, as municipal bulk sewer infrastructure is upgraded by the eThekwini Metro. The eThekwini Municipal Spatial Development Framework (MSDF) 2020-2021 highlights the need for an upgrade of the Hammarsdale WWTW located in the Hammarsdale Industrial Area, which has a design (hydraulic) capacity of 27 Ml/day. The very high-strength industrial effluent received has resulted in the processing capacity of the plant being de-rated to approximately 10 Ml/day. The plan is to build new reactors to allow the plant to have a processing capacity of 27 Ml/day, based on the current high-strength effluent characteristics. While the additional capacity at Hammarsdale WWTW can be reactivated, the Municipality would require a good economic justification due to the high capital cost of the refurbishment.

The Municipality is also planning to build a new gravity bulk sewer line that will connect the Cato Ridge/ Harrison Flats area to Hammarsdale. The timeline for implementation is estimated at 10 years due to the extensive environmental, water use licence and MMFA processes required. There are also plans to further upgrade the WWTW to 42 ML in future should developments justify it. eThekwini Municipality has indicated that it is vital for them to have agreements in terms of the phasing of the development so that they can adequately plan for future capacity upgrades.

Given the delays associated with the implementation of the Municipal bulk sewer infrastructure and the timing of the phases of the development, the CRDC has proposed installing a modular WWTP upfront to cater for Phase 1 and Phase 3, while most of Phase 2 will connect into the future municipal trunk line. The first of the end-users in Phase 1 may need to install conservancy tanks as an interim measure until sufficient sewage flow is available to commission the first 250 kℓ/d module of the planned 2 Mℓ/d WTP. Once a connection can be made to the proposed municipal gravity bulk/ trunk sewer line and the Hammarsdale WWTW has been upgraded (outside of the scope of this EIA), the modular WWTP will be decommissioned. Decommissioning of the WWTP is a listing activity under NEMA (Activity 31 of Listing Notice 1) and an application and process will be undertaken at the time to permit the closures and decommissioning of this facility.

f. The 'No Go' Alternative

The no-go option, or no-go alternative, should the Cato Ridge Land Development and Release Project not proceed, would be that CRDC does not pursue any development of the land. The site will remain in the ownership of CRDC/ Assmang and the status quo will be retained for the site.

The worst-case scenario for the no-go option is considered and compared with the worst-case scenario of the preferred development alternative. While the landowner has obligations to manage and control activities on the land in accordance with various legal requirements and NEMA's *Duty of Care* principle there are uncertainties around the fate of the site in the absence of the development.

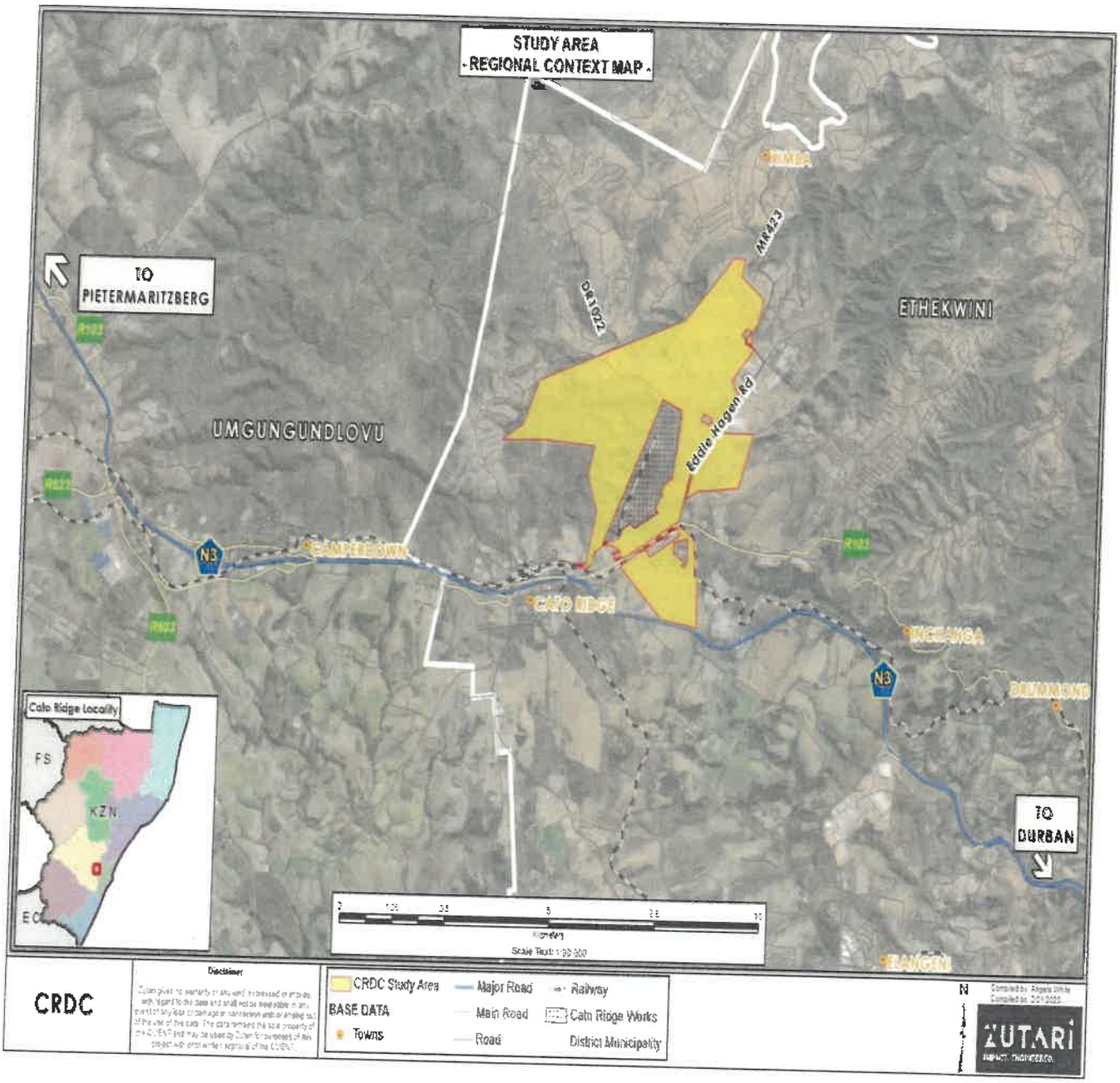
Extrapolating the existing land use practices under a no-go development option, it is assumed that incursions onto the property for illegal sand mining, waste dumping, grazing (including burning) and informal settlements would continue. The landowner would continue to manage the areas together with law enforcement to the extent possible. However, in the absence of additional income to facilitate an intensified management approach to the land, and with a worst-case scenario perspective, it is assumed that these impacts would continue and possibly escalate as the surrounding rural communities continue to expand and densify, creating increasing demand for the land and its resources and the landowner and law enforcement would not be able to fully control these activities (extrapolating current observations).

The opportunity cost associated with the project (preferred alternative) was considered with the no-go option. While the significant negative impacts associated with the preferred alternative, as assessed by various specialists, would not realise, nor would the various beneficial social and economic investments and benefits, including local economic growth and employment opportunities, associated with the project be realised. While the loss of these predicted benefits cannot be counted as a negative impact linked with the no-go option (as they do not form part of the current baseline) they do exist as opportunity costs and must be considered as the project may contribute meaningfully to eThekwini and KwaZulu-Natal's socioeconomic development objectives at a time when South Africa is facing a significant challenge linked with a shortage of economic investment and development. This opportunity is quantified in the needs and desirability motivation for The Project where it is

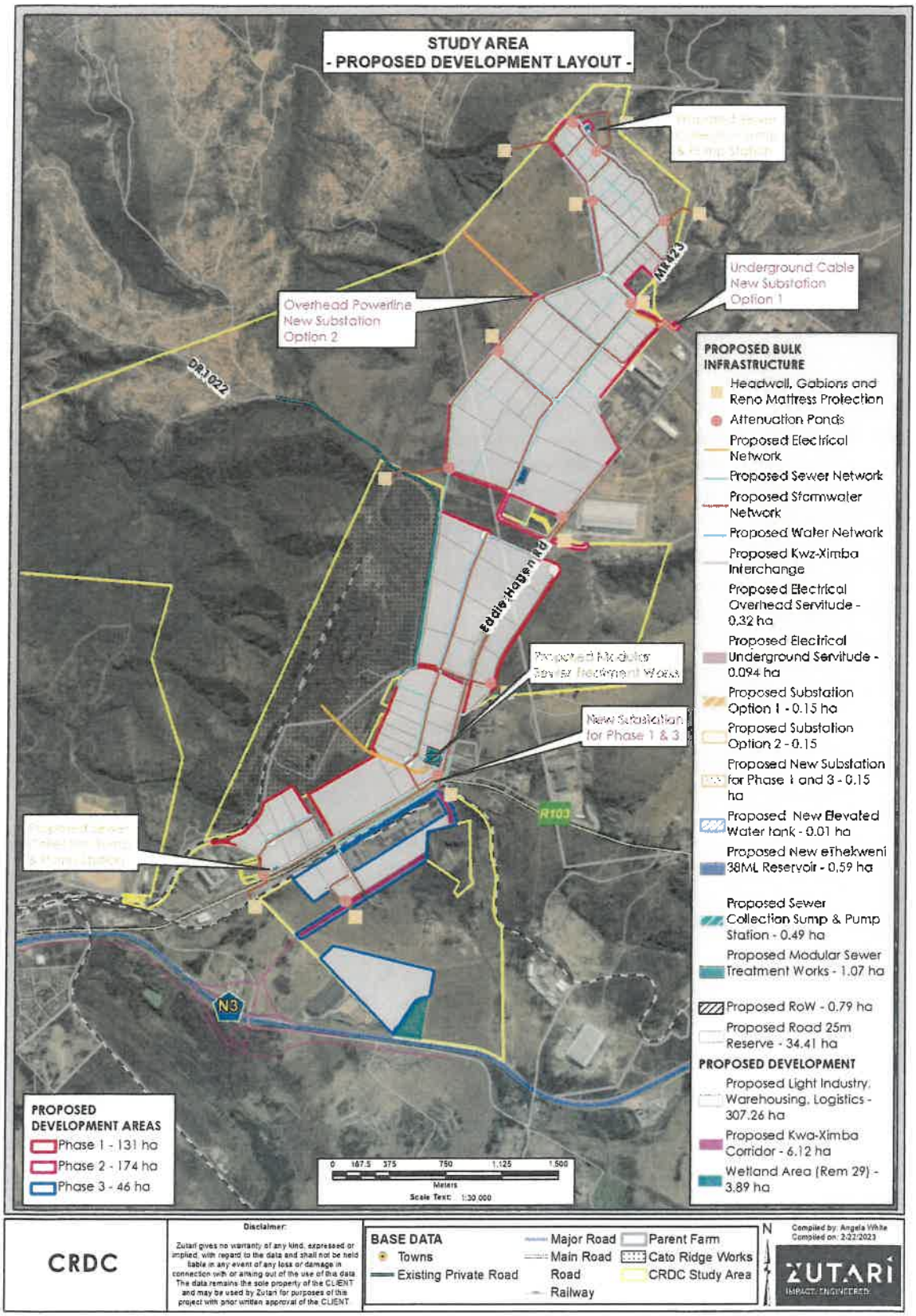
discussed as a component of the National Infrastructure Plan 2050 (NIP): Strategic Integrated Projects (SIPS).
Anticipated impacts relating to not implementing the activity include a likely increase in pressures related to the grazing of livestock, illegal sand mining and encroachment by informal settlements on the holder's landholdings. These issues that may complicate the development potential of the site and impact biodiversity, in particular, the ecological integrity of the KZNSS, and associated ecosystem services within the study area. CRDC have a long-standing agreement with the KwaXimba Tribal Authority, whereby communities seek to benefit from the project in the study area, conditional upon the protection of the landholdings from further pressures. Ongoing land pressure is likely to continue on this site, based on current and historical activities. Without ongoing management efforts, the current land pressures will continue to deteriorate and impact the ecology on site. A responsible trade-off approach to development could potentially ensure longer-term conservation outcomes of the Nationally Endangered KZNSS grasslands.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the proposed activity will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the proposed activity can be mitigated to acceptable levels. **The development of the Cato Ridge land release and development project is accordingly granted.**

Annexure 2: Locality Map



Annexure 3: Layout Plan



Annexure 4: On-site Biodiversity Offset areas