



REFERENCE: 16/3/1/2/A3/54/2004/12
NEAS REFERENCE: WCP/EIA/0001211/2013
DATE OF ISSUE: 25 August 2022

The Municipal Manager
City of Cape Town
P.O. Box 2815
CAPE TOWN
8000

Attention: Mr. Antonio Vieira

E-mail: Antonio.Vieira@capetown.gov.za

Dear Sir

APPLICATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) ("NEMA") AND THE ENVIRONMENTAL IMPACT ASSESSMENT ("EIA") REGULATIONS, 2010 AND 2014 (AS AMENDED): PROPOSED ESTABLISHMENT OF THE PRECINCT 2 MIXED-USE DEVELOPMENT AND ASSOCIATED INFRASTRUCTURE ON PORTIONS 0, 38 AND 43 OF FARM NO. 794, SOMERSET WEST.

1. With reference to the above application, the competent authority hereby notifies you of its decision to **grant** Environmental Authorisation, attached herewith, together with the reasons for the decision.
2. In terms of Regulation 10(2) of the EIA Amendment Regulations, 2010, you are instructed to ensure, within 12 (twelve) calendar days of the date of this decision, that all registered interested and affected parties are provided with access to and reasons for the decision, and that all registered interested and affected parties are notified of their right to appeal.
3. Your attention is drawn to Chapter 7 of the EIA Amendment Regulations, 2010, which prescribes the procedure to be followed in the event of appeals being lodged. This procedure is summarised in the attached Environmental Authorisation.

Yours faithfully

MR. ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)
DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

CC: (1) Mr. Walter Fyvie (GIBB (Pty) Ltd.)
(2) Ms. Azanne van Wyk (City of Cape Town)
(3) Ms. Aneesa Mohamed (City of Cape Town)
(4) Ms. Zikhona Wana (GIBB (Pty) Ltd.)

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REFERENCE: 16/3/1/2/A3/54/2004/12
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ENVIRONMENTAL AUTHORISATION

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) (“NEMA”) AND THE ENVIRONMENTAL IMPACT ASSESSMENT (“EIA”) REGULATIONS, 2010 AND 2014 (AS AMENDED): PROPOSED ESTABLISHMENT OF THE PRECINCT 2 MIXED-USE DEVELOPMENT AND ASSOCIATED INFRASTRUCTURE ON PORTIONS 0, 38 AND 43 OF FARM NO. 794, SOMERSET WEST.

With reference to your application for the abovementioned, find below the outcome with respect to this application.

DECISION

By virtue of the powers conferred on it by the NEMA and the EIA Regulations, 2010 and 2014 (as amended), the competent authority herewith grants Environmental Authorisation to the applicant to undertake the list of activities specified in Section B below with respect to the preferred alternative as included in the final EIA Report dated 11 March 2022.

The development of the Watsonia and Triangle Areas are not approved in this decision. These areas cannot be developed until they have been remediated and an Asbestos Clearance issued by an approved Asbestos Inspection Authority. The Watsonia Area is depicted by the orange polygon and the Triangle Area is depicted by the blue polygon on Annexure 2: Site Plan.

The granting of this Environmental Authorisation (hereinafter referred to as the “Environmental Authorisation”) is subject to compliance with the conditions set out in Section E below.

A. DETAILS OF THE HOLDER OF THIS ENVIRONMENTAL AUTHORISATION

City of Cape Town
c/o Mr. Antonio Vieira
P.O. Box 2815
CAPE TOWN
8000

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Fax: (086) 202 9801
E-mail: Antonio.Vieira@capetown.gov.za

The abovementioned applicant is the holder of this Environmental Authorisation and is hereinafter referred to as “the holder”.

B. LIST OF ACTIVITIES AUTHORISED

Listed Activity	Activity/Project Description
<p>Listing Notice 1 of the EIA Regulations, 2010 (as amended):</p> <p>Activity 9: <i>"The development of facilities or infrastructure exceeding 1 000 metres in length for the bulk transportation of water, sewage or storm water -</i> <i>(i) with an internal diameter of 0,36 metres or more;</i> <i>or</i> <i>(ii) with a peak throughput of 120 litres per second or more;</i></p> <p><i>excluding where -</i> <i>(a) such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or</i> <i>(b) where such construction will occur within an urban area but further than 32 metres from a watercourse, measured from the edge of the watercourse".</i></p>	<p>The proposed development will include the construction of water, sewage and storm water infrastructure, in excess of 1000m in length.</p>
<p>Activity 11: <i>"The construction of:</i> <i>(i) canals;</i> <i>(ii) channels;</i> <i>(iii) bridges;</i> <i>(iv) dams;</i> <i>(v) weirs;</i> <i>(vi) bulk storm water outlet structures;</i> <i>(vii) marinas;</i> <i>(viii) jetties exceeding 50 square metres in size;</i> <i>(ix) slipways exceeding 50 square metres in size;</i> <i>(x) buildings exceeding 50 square metres in size; or</i> <i>(xi) infrastructure or structures covering 50 square metres or more</i></p> <p><i>where such construction occurs within a watercourse or within 32 metres of a watercourse, measures from the edge of a watercourse, excluding where such construction will occur behind the development setback line".</i></p>	<p>Storm water infrastructure, buildings, infrastructure or structures will be constructed within, or within 32m of watercourses.</p>
<p>Activity 18: <i>"The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from</i></p> <p><i>(i) a watercourse;</i> <i>(ii) the sea;</i> <i>(iii) the seashore;</i></p>	<p>The development proposal entails the removing or moving, dredging, excavation, infilling or depositing of material of more than 5m³ from the watercourses.</p>

<p>(iv) <i>the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater –</i></p> <p><i>but excluding where such infilling, depositing, dredging, excavation, removal or moving</i></p> <p>(i) <i>is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or</i></p> <p>(ii) <i>occurs behind the development setback line”.</i></p>	
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Listed Activity	Activity/Project Description
<p>Listing Notice 2 of the EIA Regulations, 2010 (as amended):</p> <p>Activity 15: <i>“Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20ha or more;</i></p> <p><i>except where such physical alteration takes place for:</i></p> <p>(i) <i>linear development activities; or</i></p> <p>(ii) <i>agriculture or afforestation where activity 16 in this Schedule will apply”.</i></p>	<p>The proposed mixed-use development will have a footprint of approximately 100ha, and will be established on land which is currently predominantly vacant and undeveloped.</p>

Listed Activity	Activity/Project Description
<p>Listing Notice 3 of the EIA Regulations, 2010 (as amended):</p> <p>Activity 12: <i>“The clearance of an area of 300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.</i></p> <p>(a) <i>Within any critically endangered or endangered ecosystem listed in terms of Section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</i></p> <p>(b) <i>Within critical biodiversity areas identified in bioregional plans;</i></p> <p>(c) <i>Within the littoral active zone or 100 metres inland from the high water mark of the sea or an estuary, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas”.</i></p>	<p>More than 300m² of critically endangered vegetation will be cleared.</p>

<p>Activity 13: <i>"The clearance of an area of 1ha or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, except where such removal of vegetation is required for:</i></p> <p>(1) <i>the undertaking of a process or activity included in the list of waste management activities published in terms of section 19 of the national Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), in which case the activity is regarded to be excluded from this list.</i></p> <p>(2) <i>the undertaking of a linear activity falling below the thresholds mentioned in Listing Notice 1 in terms of GN No. 544 of 2010.</i></p> <p>c) In the Western Cape:</p> <p>(i) <i>In an estuary;</i></p> <p>(ii) <i>Outside urban areas, the following:</i></p> <p>(aa) <i>A protected area identified in terms of NEMPAA, excluding conservancies;</i></p> <p>(bb) <i>National Protected Area Expansion Strategy Focus areas;</i></p> <p>(cc) <i>Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</i></p> <p>(dd) <i>Sites or areas identified in terms of an International Convention;</i></p> <p>(ee) <i>Core areas in biosphere reserves;</i></p> <p>(ff) <i>Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</i></p> <p>(gg) <i>Areas seaward of the development setback line or within 1 kilometre of the high-water mark of the sea if no such development setback line is determined.</i></p> <p>(iii) <i>In urban areas, the following:</i></p> <p>(aa) <i>Areas zoned for use as public open space;</i></p> <p>(bb) <i>Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose;</i></p> <p>(cc) <i>Areas seaward of the development setback line;</i></p> <p>(dd) <i>Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined".</i></p>	<p>The proposed development will require the clearance of more than 1ha of vegetation within 100m of watercourses.</p>
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Listed Activity	Activity/Project Description
<p>Listing Notice 1 of the EIA Regulations, 2014 (as amended):</p> <p>Activity 19: <i>"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;</i></p> <p><i>but excluding where such infilling, depositing, dredging, excavation, removal or moving -</i></p> <ul style="list-style-type: none"> <i>(a) will occur behind a development setback;</i> <i>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</i> <i>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</i> <i>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</i> <i>(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies".</i> 	<p>The development proposal entails the removing or moving, dredging, excavation, infilling or depositing of material of more than 10m³ from the watercourses.</p>
<p>Activity 26: <i>"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; -</i></p> <p><i>excluding -</i></p> <ul style="list-style-type: none"> <i>(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</i> <i>(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</i> <i>(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".</i> 	<p>The proposed mixed-use development will be undertaken on a site which has previously been used for heavy industrial purposes.</p> <p>Remediation of the contaminated soils and groundwater has been undertaken in a phased manner by the previous landowner since the early 1990's. Such remediation work was undertaken in line with international best practice guidelines. However, none of the remediation activities were undertaken in accordance with Part 8 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) as remediation pre-dated this legislation.</p>
<p>Activity 28: <i>"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></p>	<p>The proposed site was zoned and used for agricultural use on or after 01 April 1998 and is located outside the urban area.</p>

<p>(i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or</p> <p>(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;</p> <p>excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes".</p>	
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Listed Activity	Activity/Project Description
<p>Listing Notice 2 of the EIA Regulations, 2014 (as amended):</p> <p>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 -</p> <p>(i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan".</p>	<p>More than 20ha of indigenous vegetation will be cleared.</p>

Listed Activity	Activity/Project Description
<p>Listing Notice 3 of the EIA Regulations, 2014 (as amended):</p> <p>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.</p> <p>i. Western Cape</p> <p>i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</p> <p>ii. Within critical biodiversity areas identified in bioregional plans;</p> <p>iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas;</p> <p>iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land</p>	<p>More than 300m² of critically endangered vegetation will be cleared.</p>

<p>was zoned open space, conservation or had an equivalent zoning; or</p> <p>v. On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister”.</p>	
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The abovementioned list is hereinafter referred to as “the listed activities”.

The holder is herein authorised to undertake the following related to the listed activities:

The proposed development entails the establishment of the Precinct 2 mixed-use development and associated infrastructure on Portions 0, 38 and 43 of Farm No. 794, Somerset West.

The proposed mixed-use development will have a development footprint of approximately 100ha and will comprise of residential, mixed-use bulk (light industrial, office, retail and institutional) and open space land uses, supported by associated service infrastructure such as access, water, sewer, storm water and electricity.

The commercial bulk, residential densities and typologies associated with the proposed development will be determined at the time of further subdivision applications to the City of Cape Town and upon implementation. The proposed development will be implemented in phases.

Open space areas will be incorporated which will primarily be associated with the Paardevlei Wetland and the protection of the Melcksloot.

All services (*i.e.*, water supply, solid waste removal and sewage disposal) will connect to the municipal infrastructure. Electricity will be obtained from the City of Cape Town.

Access:

Access will be obtained via four points as follows:

- Centenary Interchange and Link Road (via R44), serving south-bound vehicles (in) and north-bound vehicles (out) along the R44. The current link, terminating in Old Paardevlei Road will extend onto the site, and will be one of the major accesses and links serving the site;
- Old Paardevlei Road (via R44) will provide access primarily for north-bound vehicles along the R44 (not able to access the Centenary Link), as well as from The Triangle (via Gutshe Road). It is not likely to be used by south-bound vehicles as these have the option of using Centenary Link, and due to it being a fairly circuitous route option;
- De Beers Avenue (via R44), skirting the southern boundary of Precinct 1, and will provide access mainly to the western part of the precinct. It is likely to be used by the north and south-bound vehicles along the R44, as well as from the eastern section of De Beers Avenue; and
- WR Quinan Boulevard (via Beach Road), which is likely to serve vehicles primarily using Beach Road itself, and very few from the R44. The Boulevard will provide primary access to the Foundry Precinct, whereas access to Precinct 2 from the R44 will involve circuitous routing, with more direct alternatives available (e.g. De Beers Avenue, Old Paardevlei Road).

The development of the Watsonia and Triangle Areas are not approved in this decision. The full motivation for the removal of these two areas is provided in Annexure 3: Reasons for the Decision.

C. LOCATION AND SITE DESCRIPTION

The listed activities will be undertaken on Portions 0, 38 and 43 of Farm No. 794, Somerset West.

Portions 0, 38 and 43 of Farm No. 794 are bounded to the east by Old Paardevlei Road, to the southeast by Broadway Boulevard, and to the south by De Beers Avenue. The area immediately south of the site has been developed as Paardevlei Precinct 1, for mixed-use purposes.

The property is surrounded by a number of well-established residential suburbs: Macassar to the west, Strand to the east and southeast and Somerset West to the north and northeast. The "Interchange", a mixed-use development is situated immediately to the northeast, and the Somerset Mall and "commercial triangle" are situated to the immediate east.

The Paardevlei Wetland is located directly south of the site, between the existing Precinct 1 development and the proposed Precinct 2 development.

Land to the west and southwest remains largely undeveloped, except for occasional buildings related to the previous industrial use of the site and which are leased by various small businesses, and the De Beers soccer facility.

SG 21 digit codes are:

Portion 0 of Farm No. 794: C06700000000079400000

Portion 38 of Farm No. 794: C06700000000079400038

Portion 43 of Farm No. 794: C06700000000079400043

Co-ordinates:

Latitude: 34° 04' 42.98" S

Longitude: 18° 48' 03.27" E

Refer to Annexure 1: Locality Plan and Annexure 2: Site Plan.

hereinafter referred to as "the site".

D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

GIBB (Pty) Ltd.
c/o Ms. Zikhona Wana
P.O. Box 63703
GREENACRES
6057

Tel.: (041) 509 9163

Fax: (041) 363 9300

E. CONDITIONS OF AUTHORISATION

Scope of authorisation

1. The holder is authorised to undertake the listed activities specified in Section B above in accordance with and restricted to the preferred alternative, described in the EIA Report dated 11 March 2022 on the site as described in Section C above.
2. Authorisation of the activities is subject to compliance with the conditions set out in this Environmental Authorisation. The holder must ensure compliance with the conditions by any person acting on his/her behalf, including an agent, sub-contractor, employee or any person rendering a service to the holder.
3. The holder must commence with, and conclude, the listed activities within the stipulated validity period which this Environmental Authorisation is granted for, or this Environmental Authorisation shall lapse and a new application for Environmental Authorisation must be submitted to the competent authority.

This Environmental Authorisation is granted for–

- (a) A period of ten (**10**) years, from the date of issue, during which period the holder must commence with the authorised listed activities; and
 - (b) A period of fifteen (**15**) years, from the date the holder commenced with an authorised listed activity, during which period the authorised listed activities for the construction phase, must be concluded.
4. The activities that have been authorised may only be carried out at the site described in Section C above in terms of the Environmental Management Programme ("EMPr").
 5. Any changes to, or deviations from the scope of the description set out in Section B and Condition 2 above must be accepted or approved, in writing, by the competent authority before such changes or deviations may be implemented. In assessing whether to grant such acceptance/approval or not, the competent authority may request such information to evaluate the significance and impacts of such changes or deviations, and it may be necessary for the holder to apply for further authorisation in terms of the applicable legislation.

Notification of authorisation and right to appeal

6. The holder must in writing, within 12 (twelve) calendar days of the date of this decision and in accordance with Regulation 10(2) -
 - 6.1 notify all registered interested and affected parties ("I&APs") of –
 - 6.1.1 the outcome of the application;
 - 6.1.2 the reasons for the decision as included in Annexure 3;
 - 6.1.3 the date of the decision; and -
 - 6.1.4 the date of issuing of the decision;
 - 6.2 draw the attention of all registered I&APs to the fact that an appeal may be lodged against the decision in terms of Chapter 7 of the EIA Regulations, 2010 (as amended) detailed in section G below;

- 6.3 draw the attention of all registered I&APs to the manner in which they may access the decision;
- 6.4 publish a notice in the newspapers contemplated in Regulation 54(2)(c) and (d), and which newspaper was used for the placing of advertisements as part of the Public Participation Process, that –
 - 6.4.1 informs all I&APs of the decision;
 - 6.4.2 informs all I&APs where the decision can be accessed; and -
 - 6.4.3 informs all I&APs that an appeal may be lodged against the decision in terms of Chapter 7 of the Regulations; and -
- 6.5 provide the registered I&APs with-
 - 6.5.1 the name of the holder (entity) of this Environmental Authorisation;
 - 6.5.2 the name of the responsible person for this Environmental Authorisation;
 - 6.5.3 the postal address of the holder;
 - 6.5.4 the telephonic and fax details of the holder; and -
 - 6.5.5 an e-mail address, if any.

Commencement

- 7. The listed activities, including site preparation, must not commence within 20 (twenty) calendar days from the date the applicant notified the registered I&APs of this decision.
- 8. In the event that an appeal is lodged with the Appeal Administrator, the effect of this Environmental Authorisation is suspended until such time as the appeal is decided. In the instance where an appeal is lodged the holder may not commence with the activity, including site preparation, until such time as the appeal has been finalised and the holder is authorised to do so.

Written notice to the competent authority

- 9. A minimum of 7 (seven) calendar days' notice, in writing, must be given to the competent authority before commencement of construction activities. Commencement for the purpose of this condition includes site preparation.
 - 9.1 The notice must make clear reference to the site details and EIA Reference number given above.
 - 9.2 The notice must also include proof of compliance with the following conditions described herein:
Conditions: 6, 7, 11, 15, 22.1, 23, 28, 31 and 33.

Management of activity

- 10. The draft EMPr dated 11 March 2022 (as compiled by GIBB (Pty) Ltd.) and submitted as part of the application for Environmental Authorisation must be amended to include the following:
 - 10.1 As per the commitments made by the Human Settlements Directorate of the City of Cape Town, in their letter dated 03 May 2022:
 - 10.1.1 Specify ways in which any contaminated groundwater that may be encountered during the construction phase, will be disposed of;
 - 10.1.2 Provide a list of alternative water sources for the purpose of watering landscaped areas, given the water shortage in the Western Cape

- area, as well as the recommendation not to utilise groundwater on site;
- 10.1.3 Updated details must be provided on the Agrochemical Dump and New Chemicals Soakaway areas;
 - 10.1.4 A Standard Operating Procedure ("SOP") must be developed for the Notification, Assessment and Response Plan, should buried waste materials be uncovered;
 - 10.1.5 Provisions to ensure all contractors and construction workers are briefed regarding the SOP and the use of standard construction Personal Protective Equipment ("PPE");
 - 10.1.6 Compile a Phase 1 Site Assessment Report in accordance with the National Department of Environmental Affairs Framework for the Management of Contaminated Land, 2010 should more waste, other than asbestos be uncovered on site; and
 - 10.1.7 Groundwater monitoring must be resumed and a Groundwater Monitoring Report (which includes the post May and October 2022 monitoring results) must be submitted to the Department of Environmental Affairs and Development Planning ("DEA&DP") Directorate: Pollution and Chemicals Management and the Department of Water and Sanitation for record purposes.
- 10.2 A map, which superimposes and clearly indicates all environmentally sensitive areas, as indicated in the specialists' reports, *i.e.*, the Paardevlei Wetland, ecological corridors, areas of medium and high botanical sensitivities etc., as well as the buffers required for these areas. A buffer area must also be included along the southern boundary of the proposed development, *i.e.*, along the boundary between the site and the Paardevlei Wetland.
- 10.2.1 The extent of the Watsonia and Triangle areas (not authorised) must be clearly demarcated on the site sensitivity map (with co-ordinates provided for the boundary extent of these two areas).
- 10.3 The findings of the frog survey that was conducted during the winter of 2022 and which is associated with the updated Faunal Report dated 03 February 2022. The findings must be appended to the EMPr.
- 10.3.1 Any additional mitigation measures which have been identified by the specialist, based on the findings of the winter survey, must be incorporated in the EMPr.
11. The updated EMPr must be submitted to the competent authority for approval before the commencement of construction activities.
12. An application for amendment to the EMPr must be submitted to the competent authority in terms of Chapter 5 of the EIA Regulations, 2014 (as amended) if any amendments are to be made to the outcomes of the EMPr, and these may only be implemented once the amended EMPr has been authorised by the competent authority.
13. The EMPr, including the Operational Phase EMPr for the Paardevlei Wetland, must be included in all contract documentation for all phases of implementation.

14. A copy of the Environmental Authorisation and the EMPr must be kept at the site where the listed activities will be undertaken. Access to the site referred to in Section C above must be granted and, the Environmental Authorisation and EMPr must be produced to any authorised official representing the competent authority who requests to see it for the purposes of assessing and/or monitoring compliance with the conditions contained herein. The Environmental Authorisation and EMPr must also be made available for inspection by any employee or agent of the applicant who works or undertakes work at the site.

Monitoring

15. The holder must appoint a suitably experienced Environment Control Officer ("ECO"), for the duration of the construction phase to ensure compliance with the provisions of the EMPr and the conditions contained in this Environmental Authorisation.

The ECO must–

- 15.1 be appointed prior to commencement of any construction activities commencing;
- 15.2 ensure compliance with the EMPr and the conditions contained herein;
- 15.3 keep record of all activities on site; problems identified; transgressions noted, and a task schedule of tasks undertaken by the ECO;
- 15.4 remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed;
- 15.5 provide the competent authority with copies of the ECO reports within 30 days of the project being finalised; and
- 15.6 conduct two weekly site inspections during the construction phase.

Environmental audit reports

16. The holder must, for the period during which the Environmental Authorisation and EMPr remain valid -
 - 16.1 ensure that the compliance with the conditions of the Environmental Authorisation and the EMPr is audited;
 - 16.2 submit an environmental audit report four (4) months after commencement of the construction phase to the relevant competent authority;
 - 16.3 submit an environmental audit report six (6) months after completion of the construction phase to the relevant competent authority; and
 - 16.4 submit an environmental audit report every five (5) years while the Environmental Authorisation remains valid.
17. The environmental audit reports must be prepared by an independent person with expertise and must address the objectives and contain all the information set out in Appendix 7 of the EIA Regulations, 2014 (as amended).

In addition to the above, the environmental audit report, must -

- 17.1 provide verifiable findings, in a structured and systematic manner, on–
 - (a) the level of compliance with the conditions of the Environmental Authorisation and the EMPr and whether this is sufficient or not; and
 - (b) the extent to which the avoidance, management and mitigation measures provided for in the EMPr achieve the objectives and outcomes of the EMPr and highlight whether this is sufficient or not;

- 17.2 identify and assess any new impacts and risks as a result of undertaking the activity;
 - 17.3 evaluate the effectiveness of the EMPr;
 - 17.4 identify shortcomings in the EMPr;
 - 17.5 identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMPr;
 - 17.6 indicate the date on which the construction work was commenced with and completed or in the case where the development is incomplete, the progress of the development and rehabilitation;
 - 17.7 include a photographic record of the site applicable to the audit; and
 - 17.8 be informed by the ECO reports.
18. The holder must, within 7 days of the submission of the environmental audit report to the competent authority, notify all potential and registered I&APs of the submission and make the report available to anyone on request and, where the holder has such a facility, be placed on a publicly accessible website.

Specific conditions

19. Surface or ground water must not be polluted due to any actions on the site. The applicable requirements with respect to relevant legislation pertaining to water must be met.
20. An integrated waste management approach, which is based on waste minimisation and incorporates reduction, recycling, re-use and disposal, where appropriate, must be employed. Any solid waste must be disposed of at a waste disposal facility licensed in terms of the applicable legislation.
21. Should any heritage remains be exposed during excavations or any actions on the site, these must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape (in accordance with the applicable legislation). Heritage remains uncovered or disturbed during earthworks must not be further disturbed until the necessary approval has been obtained from Heritage Western Cape. Heritage remains include archaeological remains (including fossil bones and fossil shells); coins; indigenous and/or colonial ceramics; any articles of value or antiquity; marine shell heaps; stone artifacts and bone remains; structures and other built features; rock art and rock engravings; shipwrecks; and graves or unmarked human burials.

A qualified archaeologist must be contracted where necessary (at the expense of the applicant and in consultation with the relevant authority) to remove any human remains in accordance with the requirements of the relevant authority.

22. The following recommended measures provided by Heritage Western Cape, as included in the EMPr, must be implemented:
- 22.1 An appointed archaeologist must monitor any site clearance and groundwork, prior to construction commencing in all areas identified to have heritage and archaeological significance, including but not limited to:
 - An area of 40m either side of the Melcksloot;
 - The area of the identified 19th Century midden; and
 - An area of 5m either side of the Melcksloot extension;

- 22.2 Over and above the indicative landscape plan tabled that must be adhered to as far as possible, domestic plantings and significant trees must be retained where possible and where environmentally feasible; and
- 22.3 That the height limits referred to in the "Views and Height Limitations Diagram" are adhered to.
23. The two asbestos-contaminated areas (*i.e.*, Watsonia Area and Triangle Area as depicted in Figure 1 of this Environmental Authorisation), as well as their immediate surrounding areas (buffers), which are not authorised, must be regarded as no-go areas and must be fenced off before commencement of any construction activities.
24. The remediation of the two asbestos-contaminated areas must be undertaken prior to the development of adjacent portions of the proposed development, to minimise the potential exposure to dust which may be generated during the remedial activities.
25. Groundwater abstraction may not take place on the site, except for the purposes of groundwater assessments and/or monitoring.
26. Should any excavations require the dewatering or disposal of made water (*i.e.*, water abstracted from excavations), the water may not be disposed of, to the storm water drains on the site due to elevated salinity and potential contaminants.
27. Major infrastructure may not be developed within the mapped areas of medium and high botanical sensitivity. Only footpaths may be developed.
28. A botanical search and rescue program must be undertaken in the appropriate season (May to September) prior to commencement of any bulk earthworks or construction activities.
29. All trans-locatable and conservation worthy plant species (mainly succulents and bulbs) must be translocated from the developable areas on the site to the on-site open space conservation areas.
30. The conservation areas may not be brush cut, except where firebreaks or paths are needed.
31. An EMPr for the Open Space Conservation Area must be compiled (with input from a suitably qualified botanist), which includes annual invasive alien vegetation (perennials, grasses and herbs) management and control (methodology as per Martens *et al*, 2021); ongoing vegetation rehabilitation, including the replanting of large numbers of suitable locally indigenous species typical of seasonally wet Swartland Shale Renosterveld and Lourensford Alluvium Fynbos (as advised by the botanist). The EMPr for the Open Space Conservation Area must be submitted to the competent authority for approval before the commencement of construction activities.
32. The EMPr for the Open Space Conservation Area must also include the management requirements for the conservation and long term maintenance of the ecological and faunal corridors, the freshwater and storm water systems and how these link with the existing Operational Phase EMPr for the Paardevlei Wetland.

33. The Paardevlei Wetland must be fenced off before commencement of the construction phase to ensure that construction activities do not encroach onto the Wetland.
34. The Paardevlei Wetland, its wetland margins and buffer areas, the storm water corridors and other open space areas must be managed as “no go” areas for all construction personnel and vehicles, unless they are engaged in specific activities related to the establishment or construction of these areas.
35. Allowance must be made for the short-term irrigation of landscaped channels, if necessary, until the proposed development is complete and channelled flow has been established.
36. Irrigation may not be carried out using nutrient-enriched water (e.g. treated sewage effluent).
37. Major corridors between the Paardevlei Wetland and the Langvlei-Lourens River link, and along the Main Drain must be a minimum of 75m wide, and must comprise flatly graded areas and be landscaped so as to approximate natural heterogeneity and must be vegetated with appropriate terrestrial and wetland indigenous vegetation.
38. In the event that the Somchem Drain (or other drainage channel) is retained along the western edge of the site, this must also be managed as a major corridor, with a minimum width of 50m, and potentially wider from a terrestrial faunal perspective.
39. Water saving mechanisms and/or water recycling systems must be installed in order to reduce water consumption that include *inter alia*, the following:
 - 39.1 Dual-flush toilet systems.
 - 39.2 All taps must be fitted with water saving devices, that is, tap aerators, flow restrictors and low flow shower heads.
 - 39.3 Water-wise landscaping must be done.
40. The development must incorporate energy/electricity saving measures, which include *inter alia*, the following:
 - 40.1 Use of energy efficient lamps and light fittings. Low energy bulbs must be installed, and replacement bulbs must also be of the low energy consumption type.
 - 40.2 Street lighting must be kept to a minimum and down lighting must be used to minimize light impacts. Streetlights must be switched off during the day.
 - 40.3 All geysers must be covered with geyser “blankets”.
 - 40.4 The installation of solar water heaters and solar panels must be considered for all buildings.

F. General matters

1. Notwithstanding this Environmental Authorisation, the holder must comply with any other statutory requirements that may be applicable when undertaking the listed activities.

2. If the holder does not commence with the listed activities within the period referred to in Condition 3, this Environmental Authorisation shall lapse for the activities, and a new application for Environmental Authorisation must be submitted to the competent authority. If the holder wishes to extend the validity period of the Environmental Authorisation, an application for amendment in this regard must be made to the competent authority prior to the expiry date of the Environmental Authorisation.
3. The holder must submit an application for amendment of the Environmental Authorisation to the competent authority where any detail with respect to the Environmental Authorisation must be amended, added, substituted, corrected, removed or updated. If a new holder is proposed, an application for amendment in terms of Part 1 of the EIA Regulations, 2014 (as amended) must be submitted.

Please note that an amendment is not required if there is a change in the contact details of the holder. In this case, the competent authority must only be notified of such changes.

4. The manner and frequency for updating the EMPr is as follows:
Amendments to the EMPr, other than those mentioned above, must be done in accordance with Regulations 35 to 37 of the EIA Regulations, 2014 (as amended) or any relevant legislation that may be applicable at the time.
5. Non-compliance with a condition of this Environmental Authorisation or EMPr may render the holder liable to criminal prosecution.

G. APPEALS

Appeals must comply with the provisions contained in Chapter 7 of the NEMA EIA Regulations, 2010.

1. An appellant must –
 - 1.1 submit a Notice of Intention to Appeal to the Minister, within 20 (twenty) calendar days of the date of the decision.
 - 1.1.1 If the appellant is an applicant, the appellant must provide each person and Organ of State which was a registered I&AP in relation to the applicant's application, within 10 days of having submitted the notice with the Minister, with—
 - (a) a copy of the notice lodged with the Minister; and
 - (b) a notice indicating that the appeal submission will be made available on the day of lodging it with the Minister and where and for what period the appeal submission will be available for inspection by such person or Organ of State.
 - 1.1.2 If the appellant is a person other than an applicant, the appellant must provide the applicant, within 10 days of having lodged the notice with the Minister, with-
 - (a) a copy of the notice lodged with the Minister; and
 - (b) a notice indicating where and for what period the appeal submission will be available for inspection by the applicant.

- 1.2 submit the appeal within 30 (thirty) calendar days after the lapsing of the 20 (twenty) calendar days contemplated in Regulation 60(1), for the submission of the Notice of Intention to Appeal;
 - 1.3 that a responding statement may be made on the appeal within 30 (thirty) calendar days from the date the appeal submission was lodged with the Minister; and -
 - 1.4 if a respondent introduces any new information not dealt with in the appeal submission of the appellant, the appellant is entitled to submit an answering statement to such new information to the Minister within 30 days of receipt of the responding statement.
2. A person, Organ of State or applicant who submits a responding or answering statement in terms of Regulation 63 must within 10 (ten) calendar days of having submitted the responding or answering statement, serve a copy of the statement on the other party.
 3. All Notice of Intention to Appeal and Appeal forms must be submitted in hard copy by means of one of the following methods:

By post: Attention: Mr. Marius Venter
 Western Cape Ministry of Local Government, Environmental
 Affairs and Development Planning
 Private Bag X9186
 CAPE TOWN
 8000

By facsimile: (021) 483 4174; or -

By hand: Attention: Mr. Marius Venter (Tel: 021 483 3721)
 Room 809
 8th Floor Utilitas Building, 1 Dorp Street, Cape Town, 8001

PLEASE NOTE: No appeal, responding and answering statement may be lodged by e-mail.

4. A prescribed Notice of Intention to Appeal form and Appeal form as well as assistance regarding the appeal processes is obtainable from the office of the Minister at: Tel. (021) 483 3721, E-mail DEADP.Appeals@westerncape.gov.za or URL <http://www.westerncape.gov.za/eadp>.

H. DISCLAIMER

The Western Cape Government, the Local Authority, committees or any other public authority or organisation appointed in terms of the conditions of this environmental authorisation shall not be responsible for any damages or losses suffered by the holder, developer or his/her successor in any instance where construction or operation subsequent to construction is temporarily or permanently stopped for reasons of non-compliance with the conditions as set out herein or any other subsequent document or legal action emanating from this decision.

Your interest in the future of our environment is appreciated.

Yours faithfully

MR. ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)
DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING

DATE OF DECISION: 25 AUGUST 2022

CC: (1) Mr. Walter Fyvie (GIBB (Pty) Ltd.)
(2) Ms. Azanne van Wyk (City of Cape Town)
(3) Ms. Aneesa Mohamed (City of Cape Town)
(4) Ms. Zikhona Wana (GIBB (Pty) Ltd.)

Email: wfyvie@gibb.co.za
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FOR OFFICIAL USE ONLY:

EIA REFERENCE NUMBER: 16/3/1/2/A3/54/2004/12
NEAS EIA REFERENCE NUMBER: WCP/EIA/0001211/2013



ANNEXURE 2: SITE PLAN

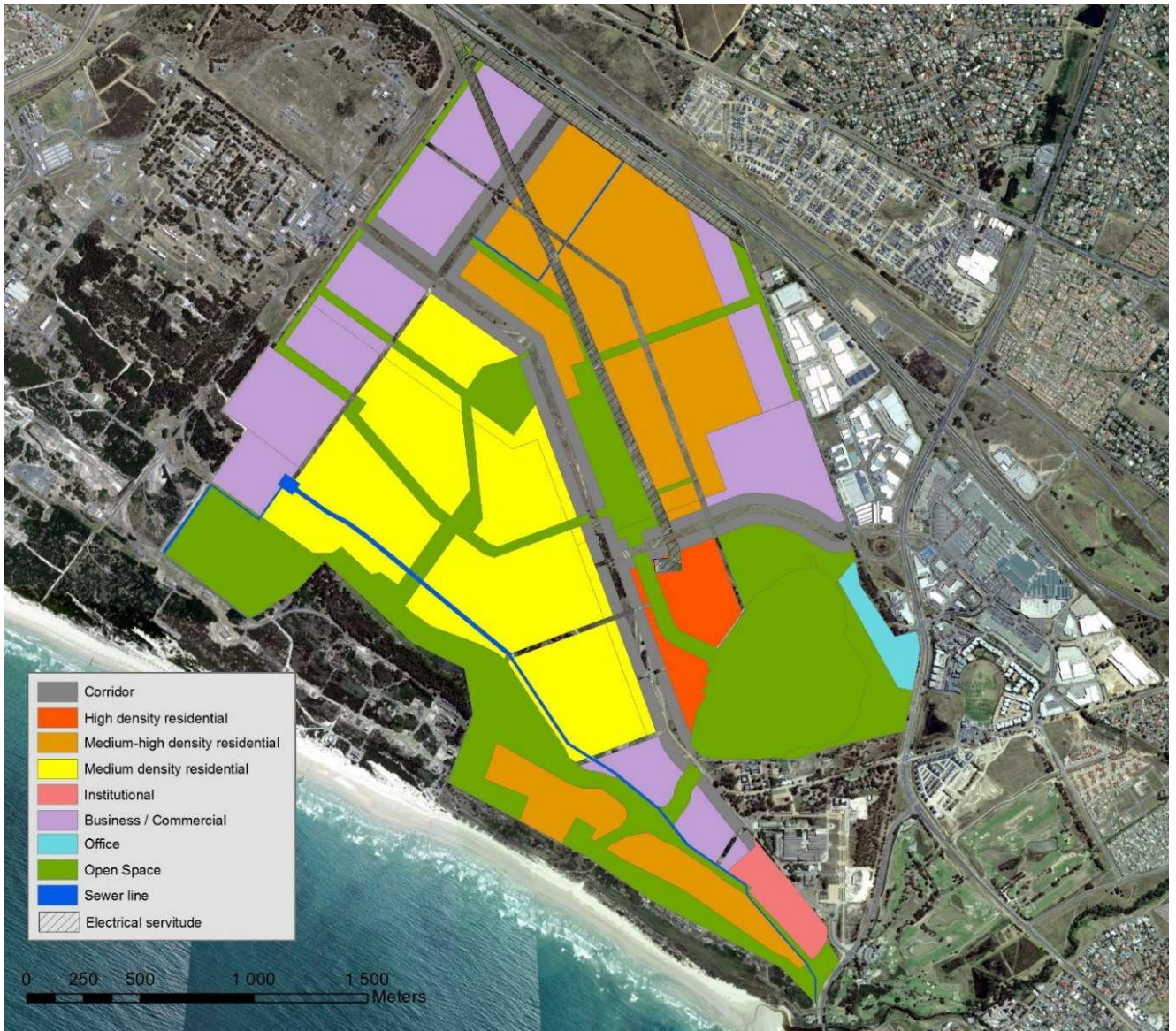


Figure 1: The two asbestos-contaminated areas that are not approved, i.e., Watsonia and Triangle Areas. The Watsonia Area is depicted by the orange polygon and the Triangle Area is depicted by the blue polygon.



ANNEXURE 3: REASONS FOR THE DECISION

In reaching its decision, the competent authority, *inter alia*, considered the following:

- a) The information contained in the following:
- The application form received by the competent authority on 05 November 2012;
 - The final Scoping Report and Plan of Study for EIA as received by the competent authority on 29 April 2013;
 - The status update received on 11 July 2014;
 - The letter received on 23 January 2015 indicating that the specialist studies have been revised;
 - The e-mail received from the EAP on 15 September 2015 indicating that the land has been sold and that the City of Cape Town will be the new applicant;
 - The request for an extension of time in which to submit the final EIA Report dated and received by the competent authority on 25 May 2016;
 - The letter from the competent authority dated 15 June 2016, granting an extension of time by nine months;
 - The status update dated and received by the competent authority on 13 March 2017;
 - The request for an extension of time in which to submit the final EIA Report dated and received by the competent authority on 04 April 2017;
 - The letter from the competent authority dated 28 April 2017, granting an extension of time by six months;
 - The amended application form received on 12 April 2017;
 - The status update dated and received by the competent authority on 03 August 2018;
 - The amended application form and final EIA Report received by the competent authority on 30 October 2019;
 - The letter from the competent authority dated 15 January 2020, requesting amendments to the EIA Report;
 - The status update dated and received by the competent authority via electronic mail correspondence on 15 December 2020;
 - The letter from the competent authority dated 08 January 2021, granting an extension of time until 15 July 2021;
 - The status update dated and received by the competent authority via electronic mail correspondence on 08 July 2021;
 - The letter from the competent authority dated 12 July 2021, granting an extension of time until 15 January 2022;
 - The letter from the competent authority dated 27 August 2021, requesting the specialist studies to be updated;
 - The status update dated 26 November 2021, as received by the competent authority via electronic mail correspondence on 29 November 2021;
 - The letter from the competent authority dated 01 December 2021, granting an extension of time until 31 March 2022;
 - The status update dated 25 March 2022, as received by the competent authority via electronic mail correspondence on 28 March 2022;
 - The letter from the competent authority dated 31 March 2022, granting an extension of time until 05 May 2022;
 - The final EIA Report dated 11 March 2022, as received by the competent authority via electronic mail correspondence on 04 May 2022; and
 - The EMPr submitted together with the final EIA Report;
- b) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the NEMA;

c) The comments received from I&APs and the responses provided thereon, as included in the final EIA Report dated 11 March 2022;

d) The meetings held on:

Date: 05 September 2018 -

Attended by: Mr. Mervin Olivier and Ms. Sarah Baxter (now Caulfield) of GIBB (Pty) Ltd.; and Ms. Rondine Isaacs and Ms. Natasha Bieding of the DEA&DP.

Date: 06 August 2021 -

Attended by: Ms. Sarah Caulfield and Ms. Zikhona Wana of GIBB (Pty) Ltd.; and Ms. Taryn Dreyer and Ms. Rondine Isaacs of the DEA&DP.

Date: 10 September 2021 -

Attended by: Ms. Sarah Caulfield and Ms. Zikhona Wana of GIBB (Pty) Ltd.; Mr. Anthony Damonze, Ms. Lauren King and Ms. Stephanie Coetzee of the City of Cape Town; Mr. Nigel Burls of Nigel Burls and Associates; and Ms. Taryn Dreyer and Ms. Rondine Isaacs of the DEA&DP.

Date: 22 March 2022 -

Attended by Ms. Zikhona Wana of GIBB (Pty) Ltd.; Ms. Taryn Dreyer and Ms. Rondine Isaacs of the DEA&DP.

Date: 23 August 2022 -

Attended by Ms. Zikhona Wana of GIBB (Pty) Ltd.; Ms. Taryn Dreyer and Ms. Rondine Isaacs of the DEA&DP.

e) This application was submitted in terms of the previous EIA Regulations, 2010 and was pending at the time of the promulgation of the EIA Regulations, 2014 (as amended). Some of the listed activities herein authorised may not have been listed under the previous EIA Regulations, but are now listed in terms of the EIA Regulations, 2014 (as amended). In accordance with Regulation 53(3) of the EIA Regulations, 2014 (as amended) these activities may be authorised as if applied for.

All information presented to the competent authority was taken into account in the consideration of the application for environmental authorisation. A summary of the issues which, according to the competent authority, were the most significant reasons for the decision is set out below.

1. Public Participation

The Public Participation Process comprised of the following:

- Advertisements were placed in the "*Helderberg District Mail*" and "*Die Burger*" newspapers on 06 December 2012, respectively;
- Notices were placed at strategic points along Old Paardevlei Road and surrounding the site;
- Letters were distributed by hand, fax, post and e-mail on 06 December 2012;
- A copy of the draft Scoping Report was placed at the Somerset West Public Library;

- The draft Scoping Report was made available from 06 December 2012 until 04 February 2013;
- The final Scoping Report was made available from 15 April 2013 until 07 May 2013;
- The draft EIA Report was made available from 13 November 2013 until 13 January 2014;
- The final EIA Report was placed on the website of the EAP for the duration of the commenting period;
- A copy of the final EIA Report was placed at the Somerset West Public Library on 21 April 2017;
- E-mails were sent on 21 April 2017 to announce the availability of the final EIA Report;
- Letters were posted via registered mail on 25 April 2017 to adjacent landowners;
- The final EIA Report was made available from 21 April 2017 until 22 May 2017;
- An advertisement was placed in the "Distrikspos" newspaper on 03 February 2022 to announce the availability of the revised final EIA Report;
- A notice was placed on site to announce the availability of the revised final EIA Report;
- E-mails were sent on 07 February 2022 to announce the availability of the revised final EIA Report;
- A copy of the revised final EIA Report was placed at the Somerset West Public Library on 08 February 2022;
- The revised final EIA Report was placed on the website of the EAP; and
- The revised final EIA Report was made available from 08 February 2022 until 09 March 2022.

Authorities consulted

The authorities consulted included the following:

- DEA&DP Directorate: Pollution & Chemicals Management;
- DEA&DP Directorate: Waste Management;
- Western Cape Department of Agriculture;
- Heritage Western Cape;
- City of Cape Town;
- Department of Water and Sanitation;
- Western Cape Department of Transport and Public Works; and
- CapeNature.

Concerns and objections were raised by I&APs during the EIA process with concerns relating to *inter alia*, the exclusion of the Paardevlei Wetland and the management thereof; groundwater impacts; heritage aspects; and contamination issues amongst others.

These concerns were adequately addressed. The competent authority is satisfied that the Public Participation Process that was followed met the minimum legal requirements. All the objections, comments and responses that were raised were responded to and included in the EIA Report.

2. Alternatives

The original proposal was to consolidate and then subdivide the affected portions into four separate erven as follows:

Erf	Extent in ha	Proposed land use
1	78.6	Mixed-use, commercial, industrial, residential, institutional (school) and open space
2	5.4	Mixed-use, industrial and public street
3	7.5	Mixed-use, commercial and public street
4	9.6	Public open space

Preferred layout alternative – herewith authorised:

The preferred alternative entails the establishment of the Precinct 2 mixed-use development on Portions 0, 38 and 43 of Farm No. 794, Somerset West.

The proposed mixed-use development will have a development footprint of approximately 100ha and will comprise of residential, mixed-use bulk (light industrial, office, retail and institutional) and open space land uses, supported by associated service infrastructure such as access, water, sewer, storm water and electricity.

The commercial bulk, residential densities and typologies associated with the proposed development will be determined at the time of further subdivision applications to the City of Cape Town and upon implementation. The proposed development will be implemented in phases.

Open space areas will be incorporated which will primarily be associated with the Paardevlei Wetland and the protection of the Melcksloot.

All services (*i.e.*, water supply, solid waste removal and sewage disposal) will connect to the municipal infrastructure. Electricity will be obtained from the City of Cape Town.

Access:

Access will be obtained via four points as follows:

- Centenary Interchange and Link Road (via R44), serving south-bound vehicles (in) and north-bound vehicles (out) along the R44. The current link, terminating in Old Paardevlei Road will extend onto the site, and will be one of the major accesses and links serving the site;
- Old Paardevlei Road (via R44) will provide access primarily for north-bound vehicles along the R44 (not able to access the Centenary Link), as well as from The Triangle (via Gutshe Road). It is not likely to be used by south-bound vehicles as these have the option of using Centenary Link, and due to it being a fairly circuitous route option;
- De Beers Avenue (via R44), skirting the southern boundary of Precinct 1, and will provide access mainly to the western part of the precinct. It is likely to be used by the north- and south-bound vehicles along the R44, as well as from the eastern section of De Beers Avenue; and
- WR Quinan Boulevard (via Beach Road), which is likely to serve vehicles primarily using Beach Road itself, and very few from the R44. The Boulevard will provide primary access to the Foundry Precinct, whereas access to Precinct 2 from the R44 will involve circuitous routing, with more direct alternatives available (*e.g.* De Beers Avenue, Old Paardevlei Road).

Reasons for the preferred alternative:

The preferred layout envisages a mix of commercial/business uses and medium to high density residential development around a structured open space system which is defined by storm water and environmental requirements, and accommodates the historic informants including the view corridors and viewsheds. This is the preferred alternative for the following reasons:

- The preferred layout includes extensive areas of open spaces, *i.e.*, the Paardevlei Wetland and a broad area around the eastern, southeastern and northern shores that will be zoned open space, as well as the key ecological and storm water management corridors included in the integrated Storm Water Master Plan for the area.
- The conceptual landscape plan for the Paardevlei Wetland allows for specific land uses in and around the Wetland and its associated open space and ecological buffer areas.

- Provision is made for a robust ecological corridor around the eastern and southern edges of the Paardevlei Wetland, linking with the existing ecological buffer area (between Precinct 1 and the Paardevlei Wetland).
- Provision is made for the filtration/treatment of runoff from the broader development area, upstream of the Paardevlei Wetland.
- Alignment of major open space routes that accord with the alignments required for the creation of ecological corridors through the site. The following corridors will be facilitated by the preferred layout:
 - Open vegetated channels from the Heldervue, Triomf and other drains;
 - Links with the *Juncus kraussii* Wetlands to the west of the Paardevlei Wetland, along the northern development zone; and
 - Links with the Crescent Bypass (in the vicinity of Wetland A).
- The alignment of Weyland Boulevard Drive incorporates the heritage requirements of the existing buildings on the site.
- No major infrastructure (footpaths only) is allowed within the areas indicated as medium and high botanical sensitivity.

“No-Go” Alternative:

This alternative entails maintaining the *status quo* and as such, the site will not be developed. This alternative was not deemed as preferred as the proposed development will augment the economic activities, provide for much needed housing, light industrial, office, retail, institutional and open space land uses and the benefits to the holder and creation of jobs would not be realised. The “no-go” alternative is therefore not warranted.

Motivation for the exclusion of the Watsonia and Triangle Areas:

The Watsonia and Triangle Areas are considered to pose an unacceptable risk to human health. These areas cannot be developed until they have been remediated and an Asbestos Clearance issued by an approved Asbestos Inspection Authority. A precautionary approach requires that remediation of the asbestos contaminated areas be undertaken prior to the development of adjacent portions of the proposed Precinct 2 development, to minimise the potential exposure to dust which may be generated during the remedial activities.

3. Impacts, assessment and mitigation measures

3.1 Activity Need and Desirability

Portions 38 and 43 of Farm No. 794 and Farm No. 794 are zoned for noxious “Risk Industry”, in terms of the City of Cape Town’s Development Management Scheme. With the closure of the explosive manufacturing facilities, the fertilizer factory and the various chemical production facilities, as well as the proposed development, the zoning is no longer appropriate. Rezoning of the properties to allow for a mixed-use development can be seen as reducing the possible impacts associated with the current zoning.

Mixed-use zoned properties are in demand within the City of Cape Town. The Interchange Industrial Township to the northeast is zoned General Industrial and General Business and comprises a mix of light industry, commercial offices, “big box” retail and storage facilities. The proposed development will therefore be an extension of the existing industrial and mixed-use developments in the area. The site is located in a serviced area and is within the urban edge.

The Paardevlei property went through an extensive remediation process to ensure that the land is suitability for urban development. The remediation, followed by the redevelopment of the land, will ensure the rehabilitation of identified natural assets, as

well as the gradual opening of the natural assets to the public and the re-establishment of the connection with the coastline.

The proposed development conforms to the planning requirements of the Provincial Spatial Development Framework ("PSDF") (March 2014, revised 2019), City of Cape Town Municipal Spatial Development Framework ("MSDF") (2018) and the Helderberg District Plan (2013).

PSDF (2019):

The proposed development provides for diversified economic opportunities by expanding employment opportunities, maximising land uptake through higher bulk allocations and makes efficient use of bulk infrastructure. The proposed development will provide for urban restructuring at a significant scale, not only through the actual development of the land and incorporating it back into the existing urban environment, but also through making opportunities available for institutional development, thereby strengthening the City's social and institutional framework. In addition, it will allow for the provision of residential opportunities in close proximity to employment opportunities. The proposed Precinct 2 development is therefore in line with the principles of the PSDF (2018).

MSDF (2018):

The MSDF (2018) and Helderberg District Plan (2013) recognise the need for land holdings to be integrated within the functioning urban environment of Cape Town. The MSDF (2018) identifies the site as an "emerging node" and the entire site is identified in the District Plan for Industrial use and mixed-use intensification with a clearly identified network of open space and linking routes.

The MSDF (2018) identifies the Paardevlei property for urban and industrial development, and identifies the site, as well as the Interchange and the Commercial Triangle, as an emerging sub-metropolitan node. The planning for the proposed Precinct 2 development accommodates the proposed future activity route connecting Khayelitsha and Macassar to Strand and Somerset West as indicated in the MSDF (2018), and supports Key Strategy 1 viz: "*to build an inclusive, integrated and vibrant city*". The proposed development aims to achieve exactly this objective. The proposed mixed-use high intensity development supports the strategy and policies as set out in the MSDF (2018).

In terms of Key Strategy 2 of the MSDF (2018), viz: "*Manage urban growth and create a balance between urban development and environmental protection*", the site does not fall within an identified precautionary area (noise, flood prone, mineral etc.) and is specifically identified as developable in the short to medium term. The wetland areas within the greater site are identified and the coastal zone (Farm No. 790) is identified as a critical biodiversity core area, both of which are fully accommodated within the overall plan for the site and that of the proposed development. The site is specifically excluded from both the agricultural and aquatic networks of the metropole. Re-development of the site is supported by and supports this strategy.

Helderberg District Plan (2013):

The District Plan identifies the Interchange and Paardevlei as the major economic opportunity zone for the Helderberg District. The Helderberg District Plan (2013) identifies the site for "*Mixed Use Intensification - areas identified for intensified economic activity and where residential densification should be promoted*", as well as "*New Industrial development*", an "*Activity Route*" which is proposed to link Macassar to Somerset West

and a network of open space corridors. This is an appropriate designation to accommodate the proposed development.

Through the mixed-use land use model, the proposed development responds appropriately to the City's vision for a multi-purpose, intensified, sustainable urban development. The proposed mixed-use development responds to the demand for opportunities in terms of economic development and employment creation. The proposed development promotes the demand and development of future residential components on the balance of the site, and so strengthen the overall mixed use development of the site.

The site is one of the largest pieces of undeveloped land left within the confines of the City's identified "Consolidation Area". The site is well connected to the metropole via the N2 freeway and a commuter railway line as well as with the towns of Stellenbosch and Paarl via the R44. As such, the site is ideally located in terms of contributing towards economic growth in the metropole and the creation of additional employment opportunities.

The proposed development will contribute largely to the local and regional economies. This will result in numerous job opportunities as well as new business sales which will have a positive input into the Gross Domestic Product of the Helderberg District areas. The proposed development conforms to the settlement pattern recommended in the MSDP (2018) and District Plan (2013). The increased employment and income levels for the Helderberg District community, as well as the financial impact on the local authorities, will benefit the local community in terms of quality of life and social upliftment, thus promoting long term sustainability.

3.2 Botanical impacts

A Botanical Impact Assessment Report dated 03 May 2013 and an updated report dated 02 December 2021, were compiled by Nick Helme Botanical Surveys, to assess the potential botanical impacts of the proposed development.

The City of Cape Town's Biodiversity Network ("BioNet") has not mapped any natural vegetation on the site and there are thus no identified Critical Biodiversity Areas on the site.

The site originally supported four different vegetation types, *i.e.*, Cape Flats Sand Fynbos, Cape Flats Dune Strandveld (coastal), Swartland Shale Renosterveld (in the northern portion) and Lourensford Alluvium Fynbos (eastern areas). According to the National List of Threatened Ecosystems in Need of Protection (2011), three of the vegetation types are gazetted as critically endangered on a national basis, with Cape Flats Dune Strandveld gazetted as endangered. Due to the high levels of soil disturbance, no significant remaining patches of any one of these vegetation types are present on the site.

According to the Botanical Impact Assessment Report, the historical intensive agricultural and industrial activities on the site effectively eliminated most shrubs, and thus most of the remaining natural vegetation is dominated by herbs, grasses and some low succulents. The long history of soil disturbance has resulted in a high diversity and number of alien invasive plants, notably annual and perennial grasses and herbs, which together cover between 40 and 80% of the site.

Most of the site was ploughed, scraped or ripped more than fifty years ago. Only relatively small patches of partly natural vegetation remain, which are species poor. The patches occur in slight depressions, which suggests that regular mowing and bush-cutting may have been an important reason causing species loss, as the area would have been brush cut to suppress fire. The dominant indicator species in many of these small patches is brakkoraal (*Salicornia pillansii*), a succulent which is capable of surviving waterlogging in winter and total desiccation in summer, and is often suggestive of slightly saline soils.

Alien annual grasses are abundant as are indigenous *Cynodon dactylon* (kweek) and alien herbs such as ribwort and Patterson's curse. *Pennisetum clandestinum* (kikuyu) is a very common alien perennial grass. Additional water dependent indigenous species include pencil sedge, *Juncus oxycarpus* and *Spiloxene aquatica* (sterretjie). The bulb *Ornithogalum thyrsoides* (tijenks) may be common in places.

A survey undertaken during December 2021, provided new information regarding vegetation around the Paardevlei Wetland. The eroded clays support a number of very rare and unusual plant species, in spite of the long history of disturbance. A possible new (undescribed) species of *Ficinia* was recorded along with *Aspalathus acuminata*, *Tenaxia stricta*, *Aspalathus recurva*, *Thesium* sp. and *Lobelia limosa*.

At least two confirmed plant species of conservation concern were recorded during the surveys, and there is a moderate likelihood that other species of conservation concern occur in viable numbers, but remain undetected. The unusual *Ficinia* sedge may also turn out to be of conservation concern, but identification is still pending.

Aspalathus recurva is red listed as vulnerable. About 20 plants were found in sandy loams east of the Paardevlei Wetland in a well-drained area dominated by alien grasses. This is deemed to be a small, but viable population.

Lobelia limosa is currently red listed as data deficient, but is very rare in seasonally wet clays from Wellington to Somerset West and should be up-listed to endangered. This is the second extant, confirmed locality for the species, and its presence on the site is thus highly significant. The tiny plants (less than 10mm tall) are abundant in a very small area (less than 0.1ha) that is seasonally inundated by the Paardevlei Wetland.

The botanical sensitivity of the site ranges from low to high, but ecological value may be higher. An area of medium botanical sensitivity has been mapped east of the Paardevlei Wetland, which is driven by the presence of seasonal wetlands (depressions) that escaped some of the regular brush cutting in the past, and which today support a higher geophyte diversity than adjacent areas, with species such as *Pauridia capensis*, *Ornithogalum thyrsoides*, *Sparaxis bulbifera* and *Eleocharis limosa*.

Three patches of high botanical sensitivity have been mapped, with the largest being along the eastern shale edges of the Paardevlei Wetland, being home to two recorded plant species of conservation concern. The other two smaller patches are seasonal wetlands with species including those noted with medium sensitivity, plus additional sedges such as *Bolboschoenus maritimus*, *Isolepis* spp., *Cyperus* spp., *Juncus oxycarpus*, *Baeometra uniflora* and *Cyperus thunbergii*.

More than 80% of the site is deemed to be of low botanical sensitivity.

The construction phase will impact on the remaining, partly natural habitats within the development footprint (approximately 80ha). It is not likely that any plant species of conservation concern will be lost within the development footprint, as none have been recorded here. Although the *Aspalathus recurva* occurs within the development footprint, it is within an area designated as open space, which will not be disturbed.

No high sensitivity vegetation will be lost, as all patches of high sensitivity are outside of the proposed development footprint, except for a portion near the Eskom substation. Most (more than 80%) of the medium sensitivity patch is outside the development footprint. As such, more than 95% of the proposed development will be within areas of low botanical sensitivity.

The high levels of previous site disturbance mean that ecological patterns and processes are currently barely present, and thus the proposed loss will be of medium intensity at most.

The botanical specialist confirmed that the preferred layout is likely to have a low to medium negative before mitigation, and an overall acceptable low negative botanical impact, after mitigation. The botanical specialist's recommendations have been included in the EMPr.

3.3 Freshwater Impacts

A Freshwater Impact Assessment Report dated August 2013, was compiled by The Freshwater Consulting Group cc, and an Addendum dated January 2022, was compiled by Liz Day Consulting (Pty) Ltd., to assess the potential freshwater impacts of the proposed development.

The whole of the site falls within the catchment area of the Lourens River. Runoff enters the Lourens River from the site via the so-called Main Drain, which is the downstream end of a network of artificial drainage trenches that dissect the site.

Three major wetlands are present on the site, namely the Langvlei, Paardevlei and Wagenfeldt Wetlands. A number of artificial depressional wetlands also occur to the northeast and southeast of the Paardevlei Wetland. In addition to local precipitation, the site receives runoff from five external surface water drainage sources, which include:

- The Triomf and Heldervue Drains, which convey storm water runoff from areas to the northeast of the site, towards the Langvlei Wetland;
- The Somchem Drain, which drains a portion of the adjacent Denel/Somchem property to the west of the site, and also discharges into the Langvlei Wetland;
- The Crescent Bypass, which receives runoff from the area northeast of the site, and discharges this into the eastern edge of Paardevlei Wetland itself; and
- The Melksloot Canal, an artificial channel that historically conveyed water from the Lourens River into the Paardevlei Wetland by means of an adjustable (now defunct) sluice gate, set in a weir across the upper reaches of the channel.

The Main Drain channel passes into the Lourens River at its estuary, via the Lourens River outfall, which was constructed in 2020. The lower Main Drain was also reconfigured in accordance with the Storm Water Master Plan Design for this system.

Associated with the proposed development are the Paardevlei Wetland, a number of isolated (artificial) wetlands northeast and south of the Paardevlei Wetland, the so-called "Small vlei" just north of Paardevlei Wetland, various artificial drainage channels

(Triomf Drain, a section of the Farm Bypass Drain and the Crescent Bypass), and a highly degraded *Pennisetum macrourum* Wetland situated near the substation. Although the Main Drain is not included in the proposed development, both the Paardevlei Wetland and the Farm Bypass Drain discharge into the Main Drain into the Lourens River.

Paardevlei Wetland:

The Paardevlei Wetland is the most ecologically important of the wetlands occurring on the site. The Wetland receives water through channelled (artificial) storm water inflows and has a formal, managed and adjustable outflow. Under natural conditions, the Paardevlei Wetland was a seasonally inundated, isolated depressional wetland, which would have received water from a combination of surface and shallow subsurface flows.

The natural condition has, however, been altered over time. The Wetland was deepened and extended by the installation of low berms during its use as a storage reservoir whilst under the ownership of African Explosives and Chemical Industries ("AECI"). During subsequent reshaping exercises, the berms were removed, polluted sediment on the base was removed and an adjustable offtake system was installed on the southern edge. The offtake was designed to facilitate a managed dry-season draw-down of water from the Wetland, which is a key component of its management as a seasonal wetland. A number of islands were also created to improve bird habitat quality. Most of the Wetland, however, comprises far shallower expanses of water, dominated in the permanently wet margins of the deep-water areas by *Phragmites australis* reeds, with sedges such as *Juncus kraussii* and *Bolboschoenus maritimus*. There is also other wetland vegetation associated with seasonal wetlands, on the flat shelving wetland margins that dry out in summer and are shallowly inundated in winter.

No fish or invertebrate studies have been carried out on the Paardevlei Wetland since its rehabilitation in 2009 and it is possible that some fish have made their way into the Wetland via the Crescent Bypass. Monthly bird counts indicate an increasing diversity of wading and swimming birds in the Wetland since its rehabilitation, and the establishment of breeding populations of Blue Crane in the vicinity. In January 2022, the Wetland supported large numbers of aquatic and other birdlife, responding to a variety of seasonally varying aquatic and terrestrial habitats.

The ecological importance and sensitivity of the Paardevlei Wetland is assessed to be B/C, indicative of medium to high importance, in a system that is considered highly sensitive to changes in hydrological regime, but with only medium sensitivity to changes in water quality. The present ecological state of the Paardevlei Wetland is assessed as Category C, indicative of a system that is moderately modified from its natural condition.

The most significant impacts currently affecting the system comprise invasion by alien vegetation, invasion by opportunistic alien or indigenous vegetation (e.g. *Typha capensis*) and species such as kikuyu grass and Paterson's curse.

The Main Drain:

The Main Drain is an artificial channel that provides an outlet from the site into the Lourens River Estuary. It is crossed by a sewer and is channelised through the Langvlei Wetland, picking up flows from the Somchem and Heldervue Drains, as well as minor drains that dissect the alluvial wetlands in the northwestern portion of the site.

The channel has been re-configured in places, following extensive remediation of the surrounding area, and exists today as a steep-sided trench, densely vegetated along much of its course by *Typha capensis* and *Bolboschoenus maritimus*. A berm extends along the southern edge of the channel. This berm is vegetated by weeds and alien kikuyu grass (*Pennisetum clandestinum*).

On the eastern boundary of the site, the Main Drain is joined by the Crescent Bypass downstream of WR Quinan Road, and the combined channel passes along the eastern site boundary as far as the Lourens River Estuary. Immediately west of the confluence with the Lourens River is the Wagenfeldt Sluit, or Wagenfeldt Wetland. The lower Main Drain no longer links into these Wetlands, but since 2020 has been diverted into the Lourens River Estuary, which it enters via a formalised outlet structure, in all but major floods.

The Main Drain has low conservation importance, being a wholly artificial system that actively contributes to the drainage and degradation of upstream wetlands such as the Langvlei Wetland. It is, however, likely to play a role in water quality amelioration, with its densely vegetated channel providing potential ecosystem services such as sediment trapping and contributing to nutrient uptake and the trapping of heavy metals, phosphorus and other contaminants upstream of the Lourens River.

Pennisetum macrourum Wetland:

The Wetland has been highly modified as a result of anthropogenic activities and functions as a wetland depression. The Wetland is moderately invaded by *Acacia saligna*. Indigenous wetland vegetation includes patchy *Pennisetum macrourum*, with sparse *Eleocharis limosum*. The Wetland is extensively grassed with *Cynodon dactylon*.

The development of the substation and a gravel access road, as well as artificial channelling of runoff across the site through minor drainage lines, have altered the flow regimes in the Wetland. The ecological importance of this Wetland is assessed as low to medium while the sensitivity is categorised as medium. The present ecological state is Category D (largely modified, but still a sustainable wetland habitat in its current trajectory and environment).

Major impacts on the Wetland include invasion by alien vegetation, changes in flow regime, changes in topography/geomorphology (fragmentation) and grazing.

Minor wetlands abutting the Paardevlei Wetland (Wetlands A, B, C, D and Small Vlei):

Wetlands A, B and D are classified as inland wetlands. Wetlands B and D are considered artificial, whilst Wetland A is assumed to be an artificial wetland depression. Wetland C forms part of the Paardevlei Wetland, and was in part created as part of wetland rehabilitation activities.

During the wet season, inundated portions of the Wetlands are dominated by *Bolboschoenus maritimus*, and stands of *Aponogeton* spp. (dwarf water blommietjies) and *Spiloxene aquatica*. The Small Vlei was originally densely invaded by *Typha capensis* bulrush. It was, however, a wholly artificial system, fed by flows diverted from the Melcksloot. Since the flows have not been passed into the Paardevlei Wetland for some years, the wetland functions as a seasonally shallowly inundated system, assumed to be fed only by localised runoff and precipitation.

Wetland A and B have been accorded an ecological importance and sensitivity of Class B. Wetland C is included as a marginal wetland depression within the greater

Paardevlei Wetland. Wetland D appears to be shallow, seldom inundated and generally provide poor levels of wetland function within an already degraded/disturbed surrounding. The Small Vlei is of low ecological importance and low to medium sensitivity. The major impact on the Wetlands is invasion by alien vegetation.

The preferred layout takes cognisance of the following recommendations regarding the establishment of ecological corridors:

- It provides for a robust ecological corridor around the eastern and southern edge of the Paardevlei Wetland, linking with the existing ecological buffer area between Precinct 1 and the Paardevlei Wetland;
- The preferred layout provides for the filtration/treatment of runoff from the broader development area, upstream of the Paardevlei Wetland;
- Alignment of major open space routes that accord with the alignments required for the creation of ecological corridors through the site. The following corridors will be facilitated by the preferred layout:
 - Open vegetated channels along the downstream (Paardevlei Wetland) end of the diverted Heldervue, Triomf and other drains;
 - Links with the *Juncus kraussii* Wetlands to the west of the site, along the northern development zone; and
 - Links with the Crescent Bypass (in the vicinity of Wetland A).

All of the above will facilitate the creation of sustainable ecological corridors through an increasingly developed urban matrix, and provide opportunities for water quality filtration and the dissipation of storm water runoff. It will also allow for the creation of nodes of localised indigenous wetland and terrestrial habitats across the broader site, and link to existing nodes of importance.

The proposed development will result in the infilling of the artificially excavated seasonally inundated wetlands in the area to the northeast of the Paardevlei Wetland abutting Old Paardevlei Road (Wetland D). The loss of the 1.5ha *Pennisetum macrourum* Wetland in the northwestern part of the site is also likely. The fact that all of these wetlands are artificial and created over clayey substrate means, however, that their re-creation in other similar areas is possible, and their loss is not thus considered irreplaceable.

The above wetland losses are rated as medium to low significance, given their artificial and degraded nature, and the fact that rehabilitation of the Paardevlei Wetland has already resulted in the creation of extensive areas of high quality seasonal wetland, making the adjacent wetlands potentially less locally valuable, although their contribution to the availability of isolated seasonal pools is recognised.

The Small Vlei lies in an area demarcated as open space, but potentially subject to reconfiguration as a storm water treatment area, upslope of the Paardevlei Wetland. The Small Vlei is considered an artificial wetland of low conservation importance and its loss or alternative reconfiguration for storm water management purposes is considered of negligible ecological consequence.

The loss, re-alignment or reconfiguration of artificial drainage trenches through the site and in the adjacent spaces is considered of negligible ecological consequence, with the proposed storm water/ecological corridors providing improved ecological connectivity, habitat quality and water quality amelioration functions.

The proposed development is considered acceptable from an aquatic ecosystem perspective. With the full implementation of the Operational Phase EMPr for the Paardevlei Wetland, the proposed development can achieve ecological, social or economic potential

The Paardevlei Wetland is excluded from the proposed development footprint, and as such, structures or infrastructure will not be constructed within the boundaries of the Wetland, or its buffer areas. The exclusion of the Paardevlei Wetland from the development footprint, however, does not mean that the Wetland does not form part of the proposed development. Hence, an Operational Phase EMPr has been developed and approved for the express purpose of ensuring the continued existence and enhanced functioning of the Paardevlei Wetland, in parallel with the proposed development.

A Storm Water Master Plan was approved for the whole area, including the proposed Precinct 2 development. The approved Operational Phase EMPr for the Paardevlei Wetland also received a Water Use License Authorisation from the Department of Water and Sanitation. Since a Water Use License has been issued for the larger Paardevlei property, any amendments to the Operational Phase EMPr must be done via an amendment of the Water Use License.

Since the proposed mixed-use development falls within the regulated area of 500m boundary radius of a wetland, it triggers water uses in terms of section 21(c) and (i) of the National Water Act, 1998 (Act No. 36 of 1998). A Water Use Authorisation and registration application must therefore be applied for and be obtained from the Department of Water and Sanitation, prior to commencing with the activities.

3.4 Heritage impacts:

A Phase I Heritage Impact Assessment Report dated 21 August 2008, was compiled by Melanie Attwell and Associates, and a Phase II Heritage Impact Assessment Report dated February 2013, was compiled by Chris Snelling, to assess the potential heritage impacts associated with the proposed development.

The site has been identified as having cultural and historic significance. The heritage analysis of the site began in 1995 with a year-long heritage and archaeological survey undertaken by the Archaeology Contracts Office.

A major landmark within the site is the Paardevlei Wetland which constitutes a place of potential scenic and recreational amenity. The historic remnants are to a large extent the result of the activities and manufacturing systems, which occurred on the site. As a result, the entire site has been divided into historic activity areas, which assist in the identification of the remaining historic character.

The Agricultural Remnant:

A number of farm buildings remain and generally date from before 1914. These are scattered and isolated buildings with considerable architectural and historical interest and are considered to be conservation-worthy. Of particular interest is the farm silo, which is considered a rare example of its type, and the Melcksloot, which dates to about 1760, and which leads water away from the Lourens River towards the Paardevlei Wetland. This is the oldest (and only) earth construction on the site and is of great historical value. It may also be considered an archaeological site.

The agriculture nature of the site has been substantially impacted by the development of the industrial and commercial area in the Interchange, and although individual buildings may retain their charm, the agricultural nature and character of the area is tenuous at best.

The Administrative and Residential Area:

There are two significant clusters of buildings; the first being the Crescent Housing, a cluster of middle management residences set around a crescent of green space; and the administrative buildings set around an incomplete square at the end of inner De Beers Avenue now called Baker Square.

The Industrial Manufacturing and Engineering Area:

The manufacture of explosive was a self-contained process and the site has its own power station. A large portion of the Northern Corridor to the northwest falls within this area. There were manufacturing sites and include the landmark Kynoch Fertilizer Factory that has been demolished.

The Disused Explosives Manufacturing and Packing Area:

This area is now empty as the area has been cleared and the contaminated area being remediated. A substantial canopy of *Eucalyptus* trees remains, which characterise the otherwise featureless spaces. Some of these treed areas fall within the Northern Corridor.

The Disused Controlled Labour Area:

The Zwelihle hostel area contains a series of buildings which have been added to over the years. The earlier buildings are remarkably intact and remain a valuable example of labour history. The buildings contained a recreation area, two churches, a trading store, graveyards, a hospital and other services. The area was fenced and access was controlled.

The buildings have little aesthetic merit and reflect a harsh and controlled lifestyle. Nevertheless, the site is exceptionally important in the early black labour history of Cape Town.

A portion of the N2 is directly adjacent to the site. The N2 between Macassar and the Strand is identified as a S1 Scenic Route or an area of high scenic quality. However, there has been considerable development along this part of the N2 and much of it does not enhance the scenic qualities of the area which has degraded over time.

There are five structures remaining on the site which are older than 60 years, most of which have been identified as conservation-worthy. There are no Grade 1 or 2 buildings of heritage significance. Conservation-worthy buildings have been graded as being of local significance. However, the Melcksloot (part of which runs through the site) has been graded as Grade 2 or being of provincial significance.

There are two areas which fall outside of the previously endorsed Phase I HIA Report (conducted by Attwell and Associates in 2006 and 2008). These are a portion of land to the southwest of the previous area and a portion of land to the south of the Paardevlei Wetland.

The portion of land to the south of the Paardevlei Wetland is acknowledged as being part of the historic core and no development is planned for this area. The portion of land to the southwest of the previously identified areas contains a few built remnants of

the industrial manufacturing and engineering area, however, the structures and area are of no significance.

The Phase II Heritage Impact Assessment evaluated three options for the site. The three options were extensively tested against these and other endorsed design informants and the heritage resource indicators as detailed in the Phase I Heritage Impact Assessment. The Phase II Heritage Impact Assessment found that both Options 1 and 2 provided far more recognition to the identified cultural significance of the rural landscape remnant within the overall context of the future mixed-use and high density environment envisaged for the AECI site than was provided for in the endorsed recommendations.

Option 2 was identified as being the option that fully complied with all the endorsed design recommendations and indicators. Option 1 is the specialist's preferred option in that this option specifies a smaller development model in the proposed open space/green area of the site and recognised that the treatment of the old paddock area to the north of the Paardevlei Wetland should be conducted in a holistic manner (in order to recognise continuity of the historic land pattern).

It is further noted that both Option 1 and 2 provided more opportunity for greater recognition of all the identified historic remnants within the site (the land mark significance of the "Silo" and appropriate recognition and use of the "Melcksloot Extension" being good examples).

A final recommendation was made by Heritage Western Cape on the Phase II Heritage Impact Assessment Report, which is included in the EMPr, as follows:

- An appointed archaeologist must monitor any site clearance and groundwork prior to construction commencing in all areas identified to have heritage and archaeological significance, including but not limited to:
 - An area of 40 m either side of the Melcksloot;
 - The area of the identified 19th Century midden; and
 - An area of 5m either side of the Melcksloot extension;
- Over and above the indicative landscape plan tabled that should be adhered to as far as possible, domestic plantings and significant trees should be retained where possible and where environmentally feasible; and
- That the height limits referred to in the "Views and Height Limitations Diagram" are adhered to.

3.5 Faunal impacts:

A Terrestrial Invertebrates Assessment and Compliance Statement dated 09 January 2022, was compiled by AfriBUGS CC; a Faunal Report dated 25 October 2013, was compiled by JAH Environmental Consultancy, and an updated Faunal Report dated 03 February 2022, was compiled by JAH Consultancy, to assess the potential faunal impacts associated with the proposed development.

Six priority species of vertebrate animals were identified for surveys in Precinct 2 and the Paardevlei Wetland. Two species were confirmed present and a further two are considered probable visitors to the site. The frog has still to be surveyed during winter 2022.

A total of 23 Cape Dwarf Chameleon records had previously been recorded on the site. These were all from along the edge of the Paardevlei Wetland. A total of 217 Cape Dwarf Chameleon observations were made during the two November 2021 field

surveys, 193 from within the site and 23 from adjacent localities. Chameleons were observed in three habitat types: reeds and sedges along the edge of the Paardevlei Wetland, stands of alien trees, and remnant Cape Flats Sand Fynbos. Several clusters of alien trees (*Eucalyptus* and *Acacia* species) within the site are inhabited by Cape Dwarf Chameleons.

A number of various species of reptiles and amphibians were also recorded and comprise two snake, two lizard and five frog species. A few calling bouts of a single Cape Rain Frog (*Breviceps rosei*) was also heard within the western reaches of the site. A chorus of Painted Reed Frogs (*Hyperolius marmoratus*) could be heard in the distance, and it seemed to originate from well off the site.

African Marsh Harrier and Black Harrier were not recorded during the field site visit. However, the species may still inhabit or visit the Paardevlei Wetland. Striped Flufftail (*Sarothrura affinis*) was recorded during the site visit in the southwestern corner of the Paardevlei Wetland. The call was heard coming from tall reeds between the Paardevlei and the pedestrian walkway. An abandoned nest was found nearby. Fynbos/Hottentot Buttonquail (*Turnix hottentottus*) was not recorded during the field site visit. However, the species may still inhabit the site. The Paardevlei Wetland does not offer the preferred habitat for *T. hottentottus* and the species is therefore considered unlikely to occur.

The Striped Flufftail was confirmed on site in the southwestern portion of the Paardevlei Wetland in the marginal vegetation (reeds and dry vegetation) between the Wetland and the pedestrian walkway. It is likely that this species occurs in other portions of marginal vegetation bordering the Wetland. If present, both Harrier species are likely to nest close to the Wetland with the African Marsh Harrier nesting over the water and the Black Harrier immediately adjacent to the Wetland, but on the vlei side of the pedestrian walkway.

The Buttonquail is unlikely to occur in the degraded grassland habitat as it has been previously disturbed (ploughed), is currently used for grazing, and does not match the habitat requirement for this species.

A number of birds were found nesting on the ground and among rocks on the banks of the Paardevlei Wetland, *inter alia*, Blacksmith Lapwing, Kittlitz's Plover, Three-banded Plover and Whiskered Tern. Two other species of conservation concern were recorded on site, *i.e.*, a pair of Blue Cranes (*Anthropoides paradiseus*) along the northern section of the Paardevlei Wetland and multiple pairs of Maccoa Ducks (*Oxyura maccoa*) on the water in the most southwestern portion of the Paardevlei Wetland.

The Paardevlei Wetland supports a great abundance of breeding birds and a high species richness of over 50 species of birds, amongst which three species of conservation concern were confirmed. The Paardevlei Wetland and marginal vegetation is of high sensitivity and is therefore deemed a no-go area. The alien vegetation and degraded grassland are considered very low sensitivity.

The clearance of sites within the proposed development will destroy faunal habitats and at least some of their associated fauna. This is a high-intensity impact with permanent negative consequences for fauna. However, the amount of sensitive habitat within the site itself is small relative to the whole area, therefore this constraint is relatively minor in terms of its spatial extent.

The Cape Dwarf Chameleon is extensively distributed on the site. The chameleon is relatively widely distributed because of its ability to use stands of alien vegetation as habitat, in addition to indigenous shrubs. Because of the species' vulnerability to wildfires, it is highly desirable to have several blocks of suitable habitat, and for these blocks to be separated by firebreaks.

The flat topography and complete lack of rocky fynbos habitat indicates that the site is entirely unsuitable for *Aneuryphymus montanus* and no grasshoppers remotely resembling this species were observed. *Frankenbergerius opacus* was also not observed.

Although insect activity was moderately high, no specimens of any of the three invertebrate species of conservation concern were observed. Given the state of the habitats it is highly unlikely that any of these species will occur on the site. The ant fauna is dominated by the invasive Argentine Ant (*Linepithema humile*), which was observed in many locations across the site. Several indigenous ant species were, however, collected, and these included at least one undescribed *Solenopsis* species. The proposed development will not have a serious detrimental impact on the long-term survival of *Solenopsis* as the species is present in natural habitats elsewhere.

No impacts on any of the three species of conservation concern are expected to occur as a result of the proposed development. Due to unsuitable habitat for the species of conservation concern and the transformed nature of the habitat, the site is considered of low sensitivity for terrestrial invertebrate species.

A frog survey was conducted during the winter of 2022, and is in addition to the updated Faunal Report dated 03 February 2022. However, it is not anticipated that the frog survey will lead to major changes in the recommendations of the Faunal Report, since most potential habitat for frogs is already included in the corridors and buffers. The outcome of the frog survey will improve the actions/mitigation measures contained in the EMP. The survey is therefore not fundamental to the outcome of this decision.

3.6 Contamination Status Assessment:

A Contamination Status Report dated January 2019, was compiled by SRK Consulting.

The site was formerly part of the AECl Somerset West landholding and includes portions of a former mercury fulminate plant, ammonium nitrate warehouse, storage area (Main Stores), the Kynoch Fertiliser Plant, farming areas, as well as structures and infrastructure associated with these land uses.

Following the decision by AECl to cease operations on the property, a phased site assessment process was adopted by the landowner to assess land contamination impacts associated with the historical land uses. This process comprised three broad phases:

- A historical review;
- Site assessment (where deemed necessary by the historical review); and
- Remediation (where deemed necessary by the site assessment).

Paardevlei Farms:

Cattle farming was practiced on the property from the 1700's and continues today. Apart from fertilizer application to facilitate the growing of fodder, the farming areas were located outside of the AECl factory operations. The area was assessed as part of

the Kynoch Fertiliser Area and not found to be impacted and no remedial actions were required.

Paardevlei surrounds:

The eastern and western banks of the Paardevlei Wetland formed part of the former operational areas. On the eastern bank, explosives testing took place in a 100m² area, known as the "Mettagang". The building was decontaminated and decommissioned in accordance with the explosive regulations at the time.

The western bank comprised three investigation areas, the Crock Dump, Shooting Range and Acid Line. No impacted soils were identified along the acid pipeline route and no remedial actions were therefore required. Contaminated soil from the Shooting Range (lead) and the waste from the Crock Dump were excavated and disposed of at a specially created hazardous waste monocell (located at Vissershok Landfill). Sampling of the residual soil confirmed that these areas have been successfully remediated.

Dog Camp Dump:

A formal waste disposal area for general waste and waste from the nearby Vynide Factory was located adjacent to the Dog Camp. The remediation strategy involved the excavation, segregation and screening of the waste material. Following the removal of all visually contaminated material, sampling of the residual soil was undertaken and confirmed that all contaminated material had been removed. Due to the presence of asbestos sheeting in the waste, an asbestos survey was undertaken and an Asbestos Clearance was issued for the area.

Kynoch Fertiliser Area:

The decommissioning of the plant commenced in 1987. The portion of the former Kynoch Fertiliser Plant which forms part of the Precinct 2 site was largely impacted by several small point sources within the historical factory area (Bone Meal Plant, Transformer Stations, SFS Plant and Loop Line Dump).

The soil beneath the Bone Meal Plant foundation had a pesticide odour, although the concentrations were below human health screening levels. The soil was excavated and bio-remediated until no pesticide odours were apparent.

A sump beneath the foundation contained putrescible organic residues, which were excavated and disposed of at the monocell. No polychlorinated biphenyls were detected in soil underlying the transformer house and no remediation in this area was undertaken.

The SFS area was excavated to bedrock and the contaminated soil disposed of at the monocell. The SFS excavations were backfilled with soil sourced from the adjacent Triangle property development. The Loop Line Dump was a backfilled railway line excavation looping around the main fertilizer building. The backfill material consisted of rubble/waste arising from the fertilizer factory. The waste materials were excavated, sorted and classified for disposal to the monocell (asbestos waste) or reused on-site. Following the removal of all waste material, the loop line was backfilled with screened soil from adjacent areas.

Mercury Fulminate Area:

The Mercury Fulminate Plant was demolished in 1974/75, and as part of the decommissioning, the area was drenched in calcium polysulfide and ripped. All

contaminated soil was disposed of at the monocell. Soil sampling of the residual soils confirmed that all mercury species were below the soil clean-up target levels.

Main Stores Area:

The area was tilled to a depth of approximately 0.5m to uncover any buried rubble or waste materials. Uncovered rubble was segregated and screened on site and the rubble removed to the on-site crusher for recycling. A small area of buried waste materials (gypsum and copper) was uncovered adjacent to the railway line and was excavated and disposed of at the monocell. No remedial actions were required in the wax storage area. Following the tilling of the area, confirmatory soil sampling was undertaken, and the results were all below the soil clean-up target levels.

Salt Pans Area:

The Salt Pans were constructed to manufacture sodium chloride from sea water, for use in the SFS Plant. Based on the results of the site assessment, no remedial actions were required within the southern pan.

Ammonium Nitrate Warehouse:

The remediation of the Ammonium Nitrate Warehouse area comprised the excavation and land-farming of soil impacted by soluble ammonium which posed a risk to concrete foundations. Following the excavation of soluble ammonium impacted soil, the surrounding area was tilled to uncover any buried rubble. During the excavation both friable and bound asbestos materials were uncovered. The soil was excavated and disposed of at the monocell. Confirmatory activity-based sampling was conducted and an Asbestos Clearance Certificate was issued for the area.

Asbestos Areas:

Two areas impacted by asbestos containing materials, *i.e.*, the Watsonia Area and the Triangle Area, intersect the boundary of the site. In September 2018, SRK Consulting conducted soil sampling in these areas to determine if the contaminated soil extends into the proposed Precinct 2 development site. Respirable fibres were identified in both areas and fibre bundles of chrysotile, amosite and crocidolite asbestos were present in soil samples. The results indicate that these areas require remedial interventions prior to development as the areas pose an unacceptable risk to human health. A precautionary approach requires that the remediation of the asbestos contaminated areas is undertaken prior to the development of adjacent portions of the proposed Precinct 2 development, to minimise the potential exposure to dust which may be generated during the remedial activities.

Conclusion:

The contaminated areas identified (excluding the Watsonia and Triangle Areas) have been remediated, as:

- The residual soil concentrations are below the soil clean-up target levels; and
- The Watsonia and Triangle Areas are therefore not suitable for re-development (including residential land use) until they have been remediated and an asbestos clearance issued by an Approved Asbestos Inspection Authority.

The DEA&DP Directorate: Pollution and Chemicals Management, in their comment dated 25 April 2022, notes that portions of the Watsonia and Triangle Areas pose an unacceptable risk to human health and requires remediation and agrees with the recommendation that the two sites should not be considered for development until asbestos remediation has been undertaken. These areas have therefore been excluded from this Environmental Authorisation.

In response to comments received from the DEA&DP Directorate: Pollution and Chemicals Management, the Human Settlements Directorate committed in a letter dated 03 May 2022 to the following, which must be included in the amended final EMP:

- Ways will be investigated on how to dispose of any contaminated groundwater that may be encountered during the construction phase;
- The investigation of alternative water sources for the purpose of watering landscaped areas, given the water shortage in the Western Cape area, as well as the recommendation not to utilise groundwater on site;
- Updated details will be provided on the Agrochemical Dump and New Chemicals Soakaway areas, although both these areas fall outside the site and are therefore not associated with the proposed development;
- A SOP will be developed for the Notification, Assessment and Response Plan should buried waste materials be uncovered;
- Compilation of a Phase 1 Site Assessment Report in accordance with the National Department of Environmental Affairs Framework for the Management of Contaminated Land, 2010 should more waste other than asbestos be uncovered on site; and
- Resume groundwater monitoring and submit a Groundwater Monitoring Report post May and October 2022 to the DEA&DP Directorate: Pollution and Chemicals Management and the Department of Water and Sanitation.

3.7 Groundwater impacts

A Hydrogeological Report dated 28 October 2018, was compiled by SRK Consulting, to assess the potential groundwater impacts associated with the proposed development.

The water quality in the primary aquifer is generally saline and unusable for potable or domestic irrigation use without some form of desalination treatment. The siting of boreholes along the northeastern portion of the site (above the 10m contour) may provide groundwater of suitable quality for irrigation use. These boreholes may, however, compromise the post remediation monitoring programme and modify the established boundaries of the contaminant plumes. Groundwater abstraction may therefore not take place on the site, except for the purposes of groundwater assessments and/or monitoring, as per Condition 25 of this Environmental Authorisation. Should this be required, suitable calculated exclusion zones will be required to prevent the capture of contaminated groundwater.

The concentrations of contaminants in the Kynoch Plume (fluoride), Ammonium Nitrate Plume (Ammonium and Nitrate), and Sulfur Stockpile Plume (sulfate and pH) are not considered to represent a risk to site workers during the construction phase and specific PPE is not required. Should construction workers be potentially exposed to groundwater in the Mercury Fulminate Plume and Agrochemicals Plume, the PPE required must be stipulated as part of the Occupational Health and Safety files and risk assessments prior to commencement of any work.

The contaminant plumes arising from historical impacts are not considered to pose an unacceptable risk to human health or environmental receptors (in the absence of groundwater abstraction). Should any excavations require the dewatering or disposal of made water (*i.e.*, water abstracted from excavations), the water may not be disposed of to the storm water drains on the site, due to elevated salinity and potential contaminants.

3.8 Storm water impacts:

To manage the storm water generated by the larger Paardevlei property the City of Cape Town commissioned the development of a Storm Water Master Plan. This Master Plan obtained an Environmental Authorisation on 27 November 2015 (referenced: 16/3/1/1/A3/54/2045/12).

The storm water management infrastructure to be installed on the site has been designed in accordance with the approved Master Plan, and incorporates the following principles:

- Runoff from the site will drain to the Paardevlei Wetland;
- Runoff will be redirected along the road reserve boundary of the Old Paardevlei Road side drain into Paardevlei Wetland;
- Water quality will be managed primarily at source, with the Paardevlei Wetland acting as a regional treatment control facility;
- The Paardevlei Wetland will provide attenuation of storm water that is generated by the proposed development;
- External catchments (including the Triomf Catchment; the Crescent Bypass Catchment; a portion of Farm Bypass; Old Paardevlei Road; a portion of the Northern Zone Diversion Channel the Heldervue Catchment; and the Schonenberg Catchment) have been incorporated into the storm water management planning;
- The existing Melcksloot will be retained; and
- The storm water system will accommodate runoff from both major and minor storm events.

The proposed storm water management system will be designed to accommodate runoff from both major and minor storm events and is categorised as follows:

Primary System:

- Accommodate runoff generated by a storm up to a maximum of 1:5 year return interval;
- Runoff will be conveyed along kerbs and channels to catch pits/inlets into the underground pipe systems; and
- The primary systems discharge into the bulk systems.

Secondary System:

- Accommodate runoff generated by a storm in excess of a 1:5 year return interval, up to a maximum 1:50 year return interval;
- Runoff will be conveyed within the roads and will function in conjunction with the Primary System; and
- The Secondary System will discharge at the designed low points into bulk systems.

Bulk System:

- Accommodate runoff from both Primary and Secondary Systems during all storm events up to the 1:100 year return interval;
- Runoff will be conveyed in side or open drains; and
- The open channels will be designed to enter the Paardevlei Wetland above the winter water level of 5m above sea level.

Based on the approved Storm Water Management Plan, the following storm water quality controls are proposed:

- The Paardevlei Wetland will form part of the storm water quality treatment plan for the proposed Precinct 2 development, but will only perform a polishing function;

- The polishing function will equate to an average of 25% of the water quality volume entering the Paardevlei Wetland from contributing sub-catchments within the Paardevlei Macro Site, which includes the proposed Precinct 2 development;
- The remaining 75% will be treated within the precincts of the Paardevlei Macro Site and treatment facilities will be positioned upstream of the Paardevlei Wetland;
- On-site storm water quality controls will be specified for individual property developments to address the quality shortfall targets not achieved by the Paardevlei Wetland. Such controls may include:
 - Treatment of roof and parking runoff;
 - Installation of litter traps, gully grids and rakes;
 - Construction of oil/grit interceptors downstream from oil-using industries; and
 - Introduction of an operational procedure and maintenance programme for onsite storm water infrastructure; and
- Additional treatment measures are proposed to pre-treat and reduce the concentration of pollutants at storm water hotspots.

3.9 Geotechnical impacts:

A Geotechnical Report dated October 2018, was compiled by HHO Consulting Engineers, to assess the potential geotechnical impacts associated with the proposed development.

The site geology comprises several geological units of differing age, origin and composition that also vary in presence and extent within the site. The geological units are essentially topsoil, transported soils, ferricrete, aeolian soils, littoral deposits, residual and weathered Tygerberg Formation, as well as fill, reworked and contaminated materials. Groundwater seepage was recorded in many of the test pits.

The site can be divided into five geotechnical zones. Zone 1 covers the northern and eastern portions of the site and is characterised by some transported soils overlying residual and weathered Tygerberg Formation rock at 1.5m depth or shallower. Groundwater seepage occurs at 0.4m to 1.8m depth and nodular to hardpan ferricretes were recorded sporadically.

Zone 2 covers the central and western portions of the site and is characterised by thicker transported soils overlying aeolian (dune) and littoral (beach) deposits with weathered Tygerberg Formation rock at 1.5m to 3.0m depth. Groundwater seepage occurs intermittently at between 0.7m and 1.5m depth.

Zone 3 covers roughly the southern half of the site and is made up of aeolian soils and littoral deposits to significant depth. Scattered nodular and hardpan calcretes also occur in this zone.

Zone 4 is an isolated zone entirely within Zone 1 and comprises fill materials to at least 1.80m depth. The fill materials are variable and do not appear to have been placed in a controlled manner.

Zone 5 comprises contaminated land and is made up of areas where phosphates were stored; where sulphur was disposed/treated/windrowed or where ammonium nitrate was stored/disposed on the site in the past. The depth of contaminated materials in these areas typically does not exceed 1.5m below existing ground levels.

Other relatively distinct regions within the site are:

- An area in the northwestern corner of the site where stockpiles of what is inferred to be spoiled material are located;
- An area along the southern site boundary where wetland and surface water exist;
- The Paardevlei Reserve on the eastern side of the site, which is a “no development area”; and
- An area in Zone 3, in the southern portion of the site, where rehabilitation and reconstruction of the dunes has taken place.

3.10 Traffic impacts:

A Traffic Impact Assessment Report dated February 2017, was compiled by HHO Africa, and a Macro Transport Impact Assessment Report dated 30 May 2019, was compiled by Aurecon South Africa (Pty) Ltd., to assess the potential traffic impacts associated with the proposed development

The existing transport network comprises of the following:

Major roads:

- The N2 to the north of the site;
- Trunk Road 2 (R102) to the north of the site; and
- Main Road 27 (R44).

Intermediate roads:

- Beach Road to the southeast;
- Main Road Somerset West to the north of the site; and
- Various link roads such as Centenary Drive, Old Paardevlei Road, De Beers Road and Victoria Road along the R44 south of the N2.

Rail:

- The Bellville-Strand commuter single track railway line to the north of the site, with the Firgrove Station to the west and the Somerset West Station to the east.

Access:

- Access 1: The Centenary Interchange which gives access to the Triangle and also to the proposed Main Activity Spine Road of Paardevlei.
- Access 2: Old Paardevlei Road at grade signalised intersection which gives access to the Triangle and also links to the proposed Main Activity Spine Road for northbound traffic.
- Access 3: De Beers Road which gives access to the northern part of Precinct 1. The road is a private road, hence the potential capacity of this link through to WR Quinan is limited.
- Access 4: WR Quinan Boulevard which gives access to the south of Precinct 1 and also links to the proposed Precinct 2 and Precinct 3.
- Access 5: The proposed Paardevlei Interchange will give access to the N2 and Main Road from the North and West.
- Access 6: Potential future link road(s) through the Somchem site to the west linking with Macassar Road, although this link road(s) is considered to be long term access, pending agreements with Somchem.

Access 1 will be the main access from the north, off the R44. Access 2 will be the main access from the southeast. Access 3 currently provides access only to the northern portion of Paardevlei Precinct 1, but will be connected to WR Quinan Boulevard although only with a two-lane road with low capacity due to reserve limitations. Access 4 provides access to the southern portion of Paardevlei Precinct 1 and will also be linked to the Activity Spine Road via WR Quinan Boulevard and to the Paardevlei Interchange.

The proposed Precinct 2 development will be developed over an extended period and mini Traffic Impact Assessments will be required to confirm that the infrastructure at the time can accommodate the application traffic.

The site is served mainly by the N2 and R102 along the northern boundary and the R44 and Beach Road on the eastern boundary. A few road improvements are planned to accommodate increased traffic on the network. These include the upgrade of sections of the N2 to 3 lanes per direction, extending the N2 eastwards through the Strand to Sir Lowry's Pass and upgrading of the R44 between Beach Road and Somerset Main Road to 3 lanes per direction. The latter is required due to the outstanding R44 corridor bulk.

A total of approximately 11 500 trips are generated by Precincts 1, 2 and 3, respectively. An estimated 25% of trips is internal trips *i.e.*, reside and work in the Paardevlei area. The remainder has origins or destinations outside the Paardevlei area.

Various modelling scenarios were considered to evaluate the network conditions through the various development stages. Development thresholds were determined for the respective precincts to ensure that the network will be able to accommodate the demand.

The short-term evaluation (without the extension of or improvements to the N2) and 25% of the proposed Precinct 2 added, shows that conditions remain close to capacity, but peak periods do not exceed 2 hours. The medium term (less than 15 years) evaluation with 100% of the proposed Precinct 2 (also without the N2 extension, but with the provision of the Paardevlei half diamond interchange) indicates that the N2 west of the Paardevlei Interchange is under pressure and requires upgrade to a third lane. It also indicated that the Centenary Interchange is also under pressure and requires dualling of the northbound ramp onto the R44. If the N2 is extended in the medium term, the conditions will improve on certain roads (R102 east of De Beers Interchange and on sections of the R44) due to a shift in road user's patterns. For the long-term evaluation, the network will be more congested, especially sections of the N2 which experience peak periods longer than 2 hours. The R44 will also remain near capacity.

The threshold of the proposed Precinct 2 development, before the Paardevlei Interchange is required, will be about 25%. The half diamond Paardevlei Interchange can accommodate the full development although the N2 remains at capacity with extended Peak period.

The Helderberg basin is poorly provided with public transport services relative to the rest of the Metropole. As a consequence, the vehicle composition remains 90-95% private vehicles, 2% heavy vehicles and the remainder busses (1%) and minibus taxis.

The Transport Department of the City of Cape Town concurred with the Traffic Impact Assessment undertaken for the proposed development, which satisfactory identifies all the bulk road infrastructure needed to sustain the proposed Precinct 2 development.

3.11 Socio-economic impacts

A High Level Economic Impact Assessment Report dated 14 June 2013, was compiled by the Bureau for Economic Research, University of Stellenbosch and an Opportunity Analysis Report dated 12 October 2019, was compiled by Urban-Econ Development Economists, to assess the potential socio economic impacts associated with the proposed development.

The Helderberg area is mostly residential with small pockets of industrial and commercial activities. The area is relatively far from the main commercial and industrial areas in the Cape Metro. The proposed site can, therefore, play an important role in connecting the Helderberg area to the broader Metro area by creating economic and housing opportunities.

The Helderberg area has a small commercial property market compared to other areas in Cape Town. The Helderberg area is price competitive compared to the rest of Cape Town, with more affordable rentals available for retail, office and industrial property. Industrial activities in the Helderberg area is mostly light industrial, with smaller units available.

A large number of households and commercial space will be accommodated on the site.

Based on the current market trends and new developments, there will be an estimated demand for housing in the Helderberg area for 9702 units by 2028, which is approximately 60% of the total housing capacity of the site. Additionally, when considering the market trends as well as planned new developments, there is potential for additional commercial property development in the Helderberg area in future. It is estimated that by 2028 there will be a Net Effective Demand of 131 922m² for retail, 125 834m² for office, and 152 027m² for industrial development. Over the 10-year period, it is estimated that there will be a demand for 409 783m² of commercial space at the site, which is approximately 60% of what is envisioned for the site.

3.12 Dust, noise and visual impacts

Potential dust, noise and visual impacts are anticipated during the construction phase. However, no significant potential dust, noise and visual impacts are anticipated as these impacts will be mitigated by the implementation of the mitigation measures included in the EMPr.

The development will result in both negative and positive impacts.

Negative Impacts:

- Loss of indigenous vegetation;
- Potential impacts on aquatic ecosystems; and
- Potential traffic, heritage and faunal impacts.

Positive impacts:

- Employment opportunities will be created during the construction and operational phases of the development;
- Provision of a robust ecological corridor around the southern edge of the Paardevlei Wetland, linking with the vlei outfall to the Main Drain;
- Optimal use of available land; and
- Contribution to the local economy.

National Environmental Management Act Principles

The National Environmental Management Act Principles (set out in section 2 of the NEMA, which apply to the actions of all Organs of State, serve as guidelines by reference to which any Organ of State must exercise any function when taking any decision, and which must guide the interpretation, administration and implementation of any other law concerned with the protection or management of the environment), *inter alia*, provides for:

- the effects of decisions on all aspects of the environment to be taken into account;
- the consideration, assessment and evaluation of the social, economic and environmental impacts of activities (disadvantages and benefits), and for decisions to be appropriate in the light of such consideration and assessment;
- the co-ordination and harmonisation of policies, legislation and actions relating to the environment;
- the resolving of actual or potential conflicts of interest between Organs of State through conflict resolution procedures; and
- the selection of the best practicable environmental option.

In view of the above, the NEMA principles, compliance with the conditions stipulated in this Environmental Authorisation, and compliance with the EMPr, the competent authority is satisfied that the proposed listed activities will not conflict with the general objectives of integrated environmental management stipulated in Chapter 5 of the NEMA and that any potentially detrimental environmental impacts resulting from the listed activities can be mitigated to acceptable levels.

You are reminded of your general duty of care towards the environment in terms of Section 28(1) of the NEMA which states: *"Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment."*

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