



**REFERENCE:** 16/3/3/1/A5/37/2056/22  
**NEAS REFERENCE:** WCP/EIA/0001207/2022  
**DATE OF ISSUE:** 13 June 2023

The Board of Directors  
Urban Land Joostenberg (Pty) Ltd.  
5 Marianne Close  
**SOMERSET WEST**  
7130

**Attention: Mr. Gavin Wurz**

E-mail: [123gavin@mweb.co.za](mailto:123gavin@mweb.co.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, 2014 (AS AMENDED): PROPOSED ESTABLISHMENT OF THE LUCULLUS GARDENS MIXED-USE DEVELOPMENT ON PORTIONS 3, 5, 7, 10, 14, 19, 32, 33, 37, 38, 39 AND 51 OF FARM NO. 725, JOOSTENBERGVLAKE.**

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 4 of the EIA Regulations, 2014 (as amended), you are instructed to ensure, within 14 days of the date of the Environmental Authorisation, 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 2 of the Appeal Regulations, 2014 (as amended), 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) Ms. Adél Groenewald (Doug Jeffery Environmental Consultants (Pty) Ltd.) E-mail: [adel@dougjeff.co.za](mailto:adel@dougjeff.co.za)  
(2) Ms. Sonja Warnich-Stemmet (City of Cape Town) E-mail: [sonja.warnichstemmet@capetown.gov.za](mailto:sonja.warnichstemmet@capetown.gov.za)



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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, 2014 (AS AMENDED): PROPOSED ESTABLISHMENT OF THE LUCULLUS GARDENS MIXED-USE DEVELOPMENT ON PORTIONS 3, 5, 7, 10, 14, 19, 32, 33, 37, 38, 39 AND 51 OF FARM NO. 725, JOOSTENBERGVLAKTE.**

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, 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 Basic Assessment Report (“BAR”) dated March 2023.

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

Urban Land Joostenberg (Pty) Ltd.  
c/o Mr. Gavin Wurz  
5 Marianne Close  
**SOMERSET WEST**  
7130

E-mail: [123gavin@mweb.co.za](mailto:123gavin@mweb.co.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><b>Listing Notice 1 of the EIA Regulations, 2014 (as amended):</b></p> <p><b>Activity 9:</b>  <i>"The development of infrastructure exceeding 1000 metres in length for the bulk transportation of water 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 infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve or railway line reserve; or</i>  <i>(b) where such development will occur within an urban area".</i></p>	<p>The proposed site is located outside an urban area and infrastructure exceeding 1000m in length for the bulk transportation of water and storm water will be established.</p>
<p><b>Activity 10:</b>  <i>"The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes –</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 infrastructure is for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes inside a road reserve or railway line reserve; or</i>  <i>(b) where such development will occur within an urban area".</i></p>	<p>The proposed site is located outside an urban area and infrastructure exceeding 1000m in length for the bulk transportation of sewage will be established.</p>
<p><b>Activity 19:</b>  <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>  <i>(a) will occur behind a development setback;</i>  <i>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</i></p>	<p>The development proposal entails the removing or moving, dredging, excavation, infilling or depositing of material of more than 10m<sup>3</sup> from the watercourse.</p>

<p>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</p> <p>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>(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".</p>	
<p><b>Activity 24:</b>  "The development of a road -</p> <p>(i) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or</p> <p>(ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres;</p> <p>but excluding a road -</p> <p>(a) which is identified and included in activity 27 in Listing Notice 2 of 2014;</p> <p>(b) where the entire road falls within an urban area; or</p> <p>or</p> <p>(c) which is 1 kilometre or shorter".</p>	<p>The development proposal entails the development of roads longer than 1km with a reserve wider than 13.5m.</p>
<p><b>Activity 27:</b>  "The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for -</p> <p>(i) the undertaking of a linear activity; or</p> <p>(ii) maintenance purposes undertaken in accordance with a maintenance management plan".</p>	<p>More than 1ha of indigenous vegetation will be cleared.</p>
<p><b>Activity 28:</b>  "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:</p> <p>(i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or</p> <p>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>	<p>The proposed site was zoned for agricultural use on or after 01 April 1998 and is located outside an urban area.</p>

Listed Activity	Activity/Project Description
<p><b>Listing Notice 3 of the EIA Regulations, 2014 (as amended):</b></p> <p><b>Activity 4:</b>  <i>"The development of a road wider than 4 metres with a reserve less than 13,5 metres.</i></p> <p><b>i. Western Cape</b></p> <ul style="list-style-type: none"> <li>i. <i>Areas zoned for use as public open space or equivalent zoning;</i></li> <li>ii. <i>Areas outside urban areas;</i>  <ul style="list-style-type: none"> <li>(aa) <i>Areas containing indigenous vegetation;</i></li> <li>(bb) <i>Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined; or</i></li> </ul> </li> <li>iii. <i>Inside urban areas:</i>  <ul style="list-style-type: none"> <li>(aa) <i>Areas zoned for conservation use; or</i></li> <li>(bb) <i>Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority".</i></li> </ul> </li> </ul>	<p>Internal roads (wider than 4m) will be constructed on areas containing indigenous vegetation.</p>
<p><b>Activity 12:</b>  <i>"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.</i></p> <p><b>i. Western Cape</b></p> <ul style="list-style-type: none"> <li>i. <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></li> <li>ii. <i>Within critical biodiversity areas identified in bioregional plans;</i></li> <li>iii. <i>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;</i></li> <li>iv. <i>On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or</i></li> <li>v. <i>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".</i></li> </ul>	<p>More than 300m<sup>2</sup> of critically endangered vegetation will be cleared.</p>

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 Lucullus Gardens mixed-use development and associated infrastructure on Portions 3, 5, 7, 10, 14, 19, 31, 32, 33, 37, 38, 39 and 51 of Farm No. 725, Joostenbergvlakte.

Approximately 65% of the proposed development will be allocated to development parcels. The remaining 35% will be used for roads and green systems, including storm water management.

The proposed development will be as follows:

<b>Land use</b>	<b>Units/area</b>
Residential units	2525 units
Business	237 300m <sup>2</sup>
Retail	41 900m <sup>2</sup>
Institutional	77 600m <sup>2</sup>
Industry	46 700m <sup>2</sup>
Other (research and development)	89 300m <sup>2</sup>
Total bulk	2525 units plus 492 800m <sup>2</sup> bulk

Zonings, land uses and densities:

The proposed zonings will comprise Mixed-use, General Business, General Residential, Community, Open Space for private open space systems as well as Transport and Utility zonings for roads and services infrastructure. The proposed land uses will be clustered across the site to form different development precincts.

The mixed-use areas will comprise a variety of land uses such as residential with retail and business or light industry, education and institutional uses. The mixed-use areas will comprise the largest percentage of land uses across the site.

The residential component will be clustered in two areas across the site; along the southern boundary to relate to the existing Joostenbergvlakte, and as a small pocket in the north. The residential areas will incorporate appropriate non-residential uses. Residential uses are also proposed across the mixed-use areas.

The life sciences precinct will comprise of various components including manufacturing, production, research and development, clinical research, and design related to companies, businesses, and research institutions dedicated to improving organism life e.g., pharmaceuticals, biotechnology, medical devices, biomedical technologies and food sciences. These components will be organised in a linear form with the manufacturing/production uses located closer to the western edge of the site. The research, development design and application components will be positioned closer to the centre to allow for connectivity to the hospital and medical campus.

The hospital will be centrally located between Zandvliet, Kiewiet and Swallow Streets. The hospital site will be further connected through a range of non-motorised transport routes to the larger development.

In terms of the educational and institutional components, a 1200-learner school, a 500-student hospital campus and a 250-bed hospital will also be established. There will also be capacity for other institutional uses within the mixed-use areas.

The proposed development will be implemented in five phases that will link to five external bulk road projects. The bulk road projects will ensure that the external road network operates acceptably.

Access, roads and parking:

Vehicular access will be achieved through the extension of three primary roads, namely Lucullus Road, Amadeus Drive and Zandvliet Drive, and in future through the connection of two secondary roads, Kiewiet Street and Swallow Street. Additional access north of Amadeus Drive will be provided off lower order roads such as Canary Road and the proposed station link road off Lucullus Road.

The primary and secondary road network will act as the main spatial structuring system for the proposed development and will create a hierarchical movement system. Due to its road class and position along the edge of the development, Lucullus Road will be treated as a mobility corridor, while Kiewiet and Swallow Streets are envisioned to become the main activity streets within the proposed development. Amadeus and Zandvliet Drives will be the primary east-west connectors across the site. Lower order roads will provide additional connectivity in a grid like system and will provide individual access to development blocks.

All roads and streets will provide for pedestrian movement, cycle lanes, landscaping, and roadside parking, where applicable.

The Urban Design Framework will provide for street parking, parking courts within green streets, private surface parking courts within development parcels and basement parking. The provision of well-located surface parking courts will be located close to high bulk land uses while allowing connectivity to green systems and non-motorised transport routes.

Basement parking will be provided within areas where specific land uses require a pedestrian-focused environment. The principle of one-third public (at ground), and two-thirds private parking within basements is proposed within specific high-density areas. The phased road construction will be implemented in accordance with the recommendations of the Traffic Impact Assessment dated May 2022.

Services provision:

The existing water system to County Fair and the irrigation supply lines within existing servitudes will be maintained. Water supply, solid waste removal and sewage disposal services will be supplied by the City of Cape Town and electricity by Eskom.

The proposed development will be approximately 133.06ha in size.

## **C. LOCATION AND SITE DESCRIPTION**

The listed activities will be undertaken on Portions 3, 5, 7, 10, 14, 19, 31, 32, 33, 37, 38, 39, and 51 of Farm No. 725, Joostenbergvlakte.



Portions 3, 5, 7, 10, 14, 19, 31, 32, 33, 37, 38, 39 and 51 of Farm No. 725, Joostenbergvlakte are located north of the Joostenbergvlakte Smallholdings, between Canary and Lucullus Street.

To the west is the Buhrein Estate and to the north of Buhrein and west of the properties is a future City of Cape Town development. To the east is the rural hinterland and several productive farms. To the north is the Fisantekraal low-income housing area as well as the Greenville development.

The SG 21-digit codes are:

<b>Property number</b>	<b>SG 21-digit code</b>
Portion 3	C05500000000072500003
Portion 5	C05500000000072500005
Portion 7	C05500000000072500007
Portion 10	C05500000000072500010
Portion 14	C05500000000072500014
Portion 19	C05500000000072500019
Portion 31	C05500000000072500031
Portion 32	C05500000000072500032
Portion 33	C05500000000072500033
Portion 37	C05500000000072500037
Portion 38	C05500000000072500038
Portion 39	C05500000000072500039
Portion 51	C05500000000072500051
RE/31/725	C05500000000072500031

Co-ordinates:

<b>Land portion</b>	<b>Co-ordinates</b>
Portion 3	Latitude: 33° 49' 18.13" S Longitude: 18° 43' 44.29" E
Portion 5	Latitude: 33° 48' 53.59" S Longitude: 18° 43' 06.91" E
Portion 7	Latitude: 33° 48' 43.08" S Longitude: 18° 43' 08.46" E
Portion 10	Latitude: 33° 48' 49.35" S Longitude: 18° 43' 35.45" E
Portion 14	Latitude: 33° 49' 02.51" S Longitude: 18° 43' 58.15" E
Portion 19	Latitude: 33° 49' 13.39" S Longitude: 18° 44' 01.14" E



Portion 32	Latitude: 33° 49' 00.07" S Longitude: 18° 43' 12.96" E
Portion 33	Latitude: 33° 48' 59.61" S Longitude: 18° 43' 23.97" E
Portion 37	Latitude: 33° 48' 59.18" S Longitude: 18° 43' 35.10" E
Portion 38	Latitude: 33° 49' 08.57" S Longitude: 18° 43' 37.82" E
Portion 39	Latitude: 33° 49' 08.03" S Longitude: 18° 43' 48.93" E
Portion 51	Latitude: 33° 49' 19.09" S Longitude: 18° 43' 22.44" 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")**

Doug Jeffery Environmental Consultants (Pty) Ltd.  
c/o Ms. Adél Groenewald  
P.O. Box 44  
**KLAPMUTS**  
7625

Tel.: (021) 875 5272  
E-mail: [adel@dougjeff.co.za](mailto:adel@dougjeff.co.za)

#### **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 BAR dated March 2023 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 twenty (**20**) years, from the date the holder commenced with an authorised listed activity, during which period the authorised listed activities 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 approved 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 of the authorisation must in writing, within 14 (fourteen) calendar days of the date of this decision –
  - 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;
    - 6.1.3 the date of the decision; and
    - 6.1.4 the date of issue 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 the National Appeal Regulations, 2014 (as amended);
  - 6.3 draw the attention of all registered I&APs to the manner in which they may access the decision; and
  - 6.4 provide the registered I&APs with:
    - 6.4.1 the name of the holder (entity) of this Environmental Authorisation,
    - 6.4.2 name of the responsible person for this Environmental Authorisation,
    - 6.4.3 postal address of the holder,
    - 6.4.4 telephonic and fax details of the holder,
    - 6.4.5 e-mail address, if any;
    - 6.4.6 the contact details (postal and/or physical address, contact number, facsimile and e-mail address) of the decision-maker and all registered I&APs in the event that an appeal is lodged in terms of the National Appeal Regulations, 2014 (as amended).

### **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, 14 and 23.

### **Management of activity**

10. The draft EMPr dated November 2022 (as compiled by Doug Jeffery Environmental Consultants (Pty) Ltd.) is hereby approved and must be implemented.
11. 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.
12. The EMPr must be included in all contract documentation for all phases of implementation.
13. 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**

14. 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–

- 14.1 be appointed prior to commencement of any construction activities commencing;
- 14.2 ensure compliance with the EMPr and the conditions contained herein;
- 14.3 keep record of all activities on site; problems identified; transgressions noted, and a task schedule of tasks undertaken by the ECO;
- 14.4 remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed;

- 14.5 provide the competent authority with copies of the ECO reports within 30 days of the project being finalised; and
- 14.6 conduct two weekly site inspections during the construction phase.

### **Environmental audit reports**

- 15. The holder must, for the period during which the Environmental Authorisation and EMPr remain valid -
  - 15.1 ensure that the compliance with the conditions of the Environmental Authorisation and the EMPr is audited;
  - 15.2 submit an environmental audit report four (4) months after commencement of the construction phase to the relevant competent authority;
  - 15.3 submit an environmental audit report six (6) months after completion of the construction phase to the relevant competent authority; and
  - 15.4 submit an environmental audit report every five (5) years while the Environmental Authorisation remains valid.
- 16. 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 -

- 16.1 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;
  - 16.2 identify and assess any new impacts and risks as a result of undertaking the activity;
  - 16.3 evaluate the effectiveness of the EMPr;
  - 16.4 identify shortcomings in the EMPr;
  - 16.5 identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMPr;
  - 16.6 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;
  - 16.7 include a photographic record of the site applicable to the audit; and
  - 16.8 be informed by the ECO reports.
- 17. 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**

- 18. 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.
- 19. 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.

20. 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.

21. As per the recommendations provided in the Noise Impact Assessment Report dated 23 May 2022, and compiled by Mackenzie Hoy Consulting Acoustics Engineers, the following must be implemented:
  - 21.1 A noise management plan must be compiled by a registered professional acoustic engineer for the proposed hospital to reduce the possible noise generated from Heating, Ventilation and Air Conditioning ("HVAC"), water and heat pumps, backup generates etc., which may increase the overall sound pressure level for the area.
  - 21.2 The noise management plan must be incorporated in the EMPr.
22. The holder of the Environmental Authorisation must, at all times, ensure that the activities comply with the Noise Regulations in terms of the relevant legislation.
23. A search and rescue for the near-threatened species, the *Bradypodion pumilum* (Cape Dwarf Chameleon) must be undertaken by a suitably qualified herpetologist prior to construction, due to the high likelihood of occurrence in the development area and the conservation status of this species.
24. Water saving mechanisms and/or water recycling systems must be installed in order to reduce water consumption that include *inter alia*, the following:
  - 24.1 Dual-flush toilet systems.
  - 24.2 All taps must be fitted with water saving devices (*i.e.*, tap aerators, flow restrictors and low flow shower heads).
  - 24.3 Water-wise landscaping must be established.
25. The development must incorporate energy/electricity saving measures, which include *inter alia*, the following:
  - 25.1 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.
  - 25.2 Street lighting must be kept to a minimum and down lighting must be used to minimise light impacts. Streetlights must be switched off during the day.
  - 25.3 All geysers must be covered with geyser "blankets".
  - 25.4 The installation of solar water heaters and solar panels must be considered for all buildings.

## 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.

## F. APPEALS

Appeals must comply with the provisions contained in the National Appeal Regulations, 2014 (as amended).

1. An appellant (if the holder of the decision) must, within 20 (twenty) calendar days from the date notification of the decision was sent to the holder by the competent authority -
  - 1.1 Submit an appeal in accordance with Regulation 4 of the National Appeal Regulations, 2014 (as amended) to the Appeal Administrator; and
  - 1.2 Submit a copy of the appeal to any registered I&APs, any Organ of State with interest in the matter and the decision-maker *i.e.*, the competent authority that issued the decision.
2. An appellant (if NOT the holder of the decision) must, within 20 (twenty) calendar days from the date the holder of the decision sent notification of the decision to the registered I&APs -

- 2.1 Submit an appeal in accordance with Regulation 4 of the National Appeal Regulations, 2014 (as amended) to the Appeal Administrator; and
  - 2.2 Submit a copy of the appeal to the holder of the decision, any registered I&AP, any Organ of State with interest in the matter and the decision-maker *i.e.*, the competent authority that issued the decision.
3. The holder of the decision (if not the appellant), the decision-maker that issued the decision, the registered I&AP and the Organ of State must submit their responding statements, if any, to the appeal authority and the appellant within 20 (twenty) calendar days from the date of receipt of the appeal submission.
  4. The appeal and the responding statement must be submitted to the address listed below:

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  
8<sup>th</sup> Floor Utilitas Building, 1 Dorp Street, Cape Town, 8001

**Note:** For purposes of electronic database management, you are also requested to submit electronic copies (Microsoft Word format) of the appeal, responding statement and any supporting documents to the Appeal Authority to the address listed above and/ or via e-mail to [DEADP.Appeals@westerncape.gov.za](mailto:DEADP.Appeals@westerncape.gov.za).

5. A prescribed appeal form as well as assistance regarding the appeal processes is obtainable from Appeal Authority at: Tel. (021) 483 3721, E-mail [DEADP.Appeals@westerncape.gov.za](mailto:DEADP.Appeals@westerncape.gov.za) or URL <http://www.westerncape.gov.za/eadp>.



## G. 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

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

**DATE OF DECISION: 13 JUNE 2023**

CC: (1) Ms. Adél Groenewald (Doug Jeffery Environmental Consultants (Pty) Ltd.) E-mail: [adel@dougjeff.co.za](mailto:adel@dougjeff.co.za)  
(2) Ms. Sonja Warnich-Stemmet (City of Cape Town) E-mail: [sonja.warnichstemmet@capetown.gov.za](mailto:sonja.warnichstemmet@capetown.gov.za)

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**FOR OFFICIAL USE ONLY:**

**EIA REFERENCE NUMBER: 16/3/3/1/A5/37/2056/22**

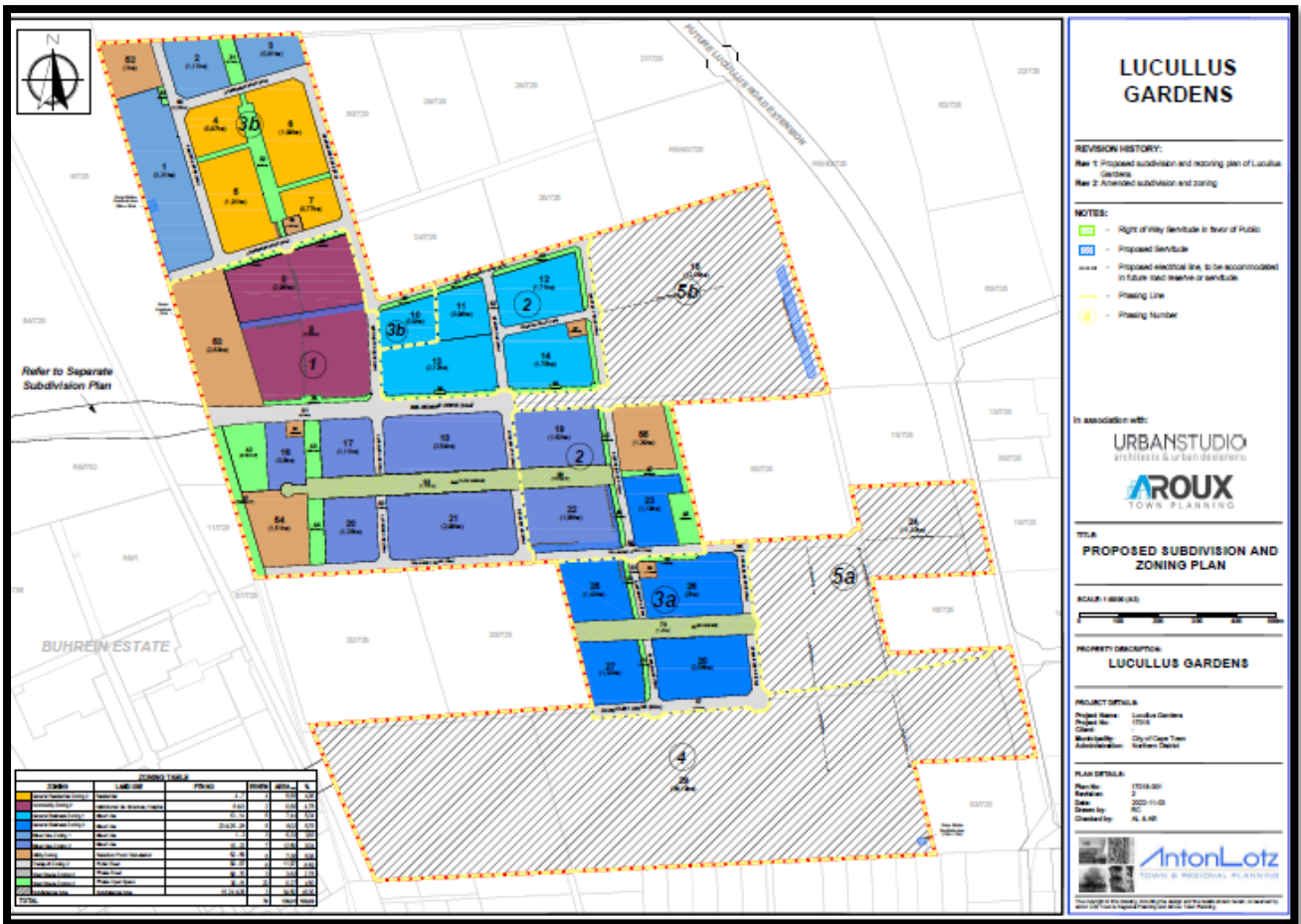
**NEAS EIA REFERENCE NUMBER: WCP/EIA/0001207/2022**







# ANNEXURE 2: SITE PLAN



### ANNEXURE 3: REASONS FOR THE DECISION

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

- a) The information contained in the application form received by the competent authority via electronic mail correspondence on 29 November 2022; the BAR dated March 2023, as received by the competent authority via electronic mail correspondence on 03 March 2023; and the EMPr submitted together with the BAR;
- 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 BAR dated March 2023.
- d) The pre-application meeting held on 24 November 2021:

Attended by: Ms. Taryn Dreyer and Ms. Rondine Isaacs of the Department of Environmental Affairs and Development Planning ("DEA&DP"); Mr. Doug Jeffery and Ms. Adél Groenewald of Doug Jeffery Environmental Consultants (Pty) Ltd.; Mr. Anton Lotz of Anton Lotz Town and Regional Planning and Mr. Mark Teuchert of Lazercor Developments.

The pre-application meeting held on 08 February 2022:

Attended by Ms. Taryn Dreyer and Ms. Rondine Isaacs of the DEA&DP and Ms. Adél Groenewald of Doug Jeffery Environmental Consultants (Pty) Ltd.

- e) No site visits were conducted. The competent authority had sufficient information before it to make an informed decision without conducting a site visit.

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:

- Notices were placed on site on 06 June 2022;
- Notices were also displayed at Joostenbergvlakte Cafe in Lucullus Street on 06 June 2022;
- E-mails were sent on 25 January 2022 to potential I&APs, adjacent landowners and occupiers of the site;
- E-mails were sent on 06 June 2022 to announce the availability of the pre-application BAR;
- The pre-application BAR was placed at the Kraaifontein Public Library on 06 June 2022;
- An advertisement was placed in the "Tygerburger" newspaper on 08 June 2022;
- An electronic copy of the pre-application BAR was placed on the EAPs website;
- E-mails were sent on 21 June 2021 to announce that the commenting period on the pre-application BAR has been extended until 01 August 2022;
- The pre-application BAR was made available from 09 June 2022 until 01 August 2022;
- E-mails were sent on 23 November 2022 and 28 November 2022 to announce the open house meeting to be held on 07 December 2022;
- Follow-up e-mails were sent on 06 December 2022 to announce the open house meeting to be held on 07 December 2022;

- An open house meeting was held on 07 December 2022 at the Monument Park High School in Kraaifontein;
- E-mails were sent on 29 November 2022 to announce the availability of the draft BAR;
- The draft BAR was placed on the EAP's website for the duration of the commenting period; and
- The draft BAR was made available from 29 November 2022 until 20 January 2023.

### **Authorities consulted**

The authorities consulted included the following:

- CapeNature;
- City of Cape Town;
- DEA&DP Directorate: Biodiversity and Coastal Management;
- DEA&DP Directorate: Pollution and Chemicals Management;
- DEA&DP Directorate: Waste Management;
- Department of Agriculture, Land Reform and Rural Development;
- Eskom;
- Heritage Western Cape;
- PRASA;
- Western Cape Department of Agriculture;
- Western Cape Department of Transport and Public Works;
- Department of Water and Sanitation; and
- South African National Roads Agency Limited ("SANRAL").

Concerns were raised by I&APs during the commenting periods with concerns relating to *inter alia*, dust impacts, noise impacts, visual impacts, agricultural impacts, the cultural landscape, scale of the development and traffic. These concerns were adequately addressed, as a Traffic Impact Assessment, Noise Impact Assessment and Agricultural Agro-Ecosystem Specialist Assessment and Site Sensitivity Verification Report were conducted.

The competent authority is satisfied that the Public Participation Process that was followed met the minimum legal requirements. All the comments and responses that were raised were responded to and included in the BAR.

## **2. Alternatives**

The following layout alternatives were considered:

### Initial development option:

The spatial structure of the initial development option was largely determined by the position of Lucullus Road, which cuts through the site and which was envisioned as a mobility route and activity corridor.

The hospital and life sciences precincts were centrally located at the intersection of Lucullus Road and Amadeus Drive, with the idea of a central node or Central Business District ("CBD"). Light industrial areas were positioned along the northern and western boundaries of the site as a buffer between the residential areas and surrounding vacant land.

Additional residential areas were positioned along the southern boundary to relate to the existing Joostenbergvlakte, while mixed-use areas were interspersed across the development. The centrality of Lucullus Road and the envisioned CBD node was the primary spatial structuring element.

Subsequently, the routes for the major roads (Lucullus Road, Amadeus Drive, Zandvliet Drive) were realigned and the number of properties as part of the development proposal was

reduced. This led to a reduction in connectivity across the site and influenced the positioning of land uses into clusters or development precincts. As such, the initial development option was discarded.

Alternative A:

Alternative A is similar to the preferred alternative. The proposed land uses for Alternative A include mixed-use, residential, life sciences and a hospital. These land uses are clustered across the site to form different development precincts. The distinct differences between Alternative A and the preferred alternative relate to the proposed storm water detention ponds and the irrigation ponds.

Alternative B (preferred alternative – herewith authorised):

The preferred alternative entails the establishment of the Lucullus Gardens mixed-use development and associated infrastructure on Portions 3, 5, 7, 10, 14, 19, 31, 32, 33, 37, 38, 39 and 51 of Farm No. 725, Joostenbergvlakte.

Approximately 65% of the proposed development will be allocated to development parcels. The remaining 35% will be used for roads and green systems, including storm water management.

The proposed development will be as follows:

<b>Land use</b>	<b>Units/area</b>
Residential units	2525 units
Business	237 300m <sup>2</sup>
Retail	41 900m <sup>2</sup>
Institutional	77 600m <sup>2</sup>
Industry	46 700m <sup>2</sup>
Other (research and development)	89 300m <sup>2</sup>
Total bulk	2525 units plus 492 800m <sup>2</sup> bulk

Zonings, land uses and densities:

The proposed zonings will comprise Mixed-use, General Business, General Residential, Community, Open Space for private open space systems as well as Transport and Utility zonings for roads and services infrastructure. The proposed land uses will be clustered across the site to form different development precincts.

The mixed-use areas will comprise a variety of land uses such as residential with retail and business or light industry, education and institutional uses. The mixed-use areas will comprise the largest percentage of land uses across the site.

The residential component will be clustered in two areas across the site; along the southern boundary to relate to the existing Joostenbergvlakte, and as a small pocket in the north. The residential areas will incorporate appropriate non-residential uses. Residential uses are also proposed across the mixed-use areas.

The life sciences precinct will comprise of various components including manufacturing, production, research and development, clinical research, and design related to companies, businesses, and research institutions dedicated to improving organism life e.g., pharmaceuticals, biotechnology, medical devices, biomedical technologies and food sciences. These components will be organised in a linear form with the manufacturing/production uses located closer to the western edge of the site. The research,



development design and application components will be positioned closer to the centre to allow for connectivity to the hospital and medical campus.

The hospital will be centrally located between Zandvliet, Kiewiet and Swallow Streets. The hospital site will be further connected through a range of non-motorised transport routes to the larger development.

In terms of the educational and institutional components, a 1200-learner school, a 500-student hospital campus and a 250-bed hospital will also be established. There will also be capacity for other institutional uses within the mixed-use areas.

The proposed development will be implemented in five phases that will link to five external bulk road projects. The bulk road projects will ensure that the external road network operates acceptably.

#### Access, roads and parking:

Vehicular access will be achieved through the extension of three primary roads, namely Lucullus Road, Amadeus Drive and Zandvliet Drive, and in future through the connection of two secondary roads, Kiewiet Street and Swallow Street. Additional access north of Amadeus Drive will be provided off lower order roads such as Canary Road and the proposed station link road off Lucullus Road.

The primary and secondary road network will act as the main spatial structuring system for the proposed development and will create a hierarchical movement system. Due to its road class and position along the edge of the development, Lucullus Road will be treated as a mobility corridor, while Kiewiet and Swallow Streets are envisioned to become the main activity streets within the proposed development. Amadeus and Zandvliet Drives will be the primary east-west connectors across the site. Lower order roads will provide additional connectivity in a grid like system and will provide individual access to development blocks.

All roads and streets will provide for pedestrian movement, cycle lanes, landscaping, and roadside parking, where applicable.

The Urban Design Framework will provide for street parking, parking courts within green streets, private surface parking courts within development parcels and basement parking. The provision of well-located surface parking courts will be located close to high bulk land uses while allowing connectivity to green systems and non-motorised transport routes.

Basement parking will be provided within areas where specific land uses require a pedestrian-focused environment. The principle of one-third public (at ground), and two-thirds private parking within basements is proposed within specific high-density areas. The phased road construction will be implemented in accordance with the recommendations of the Traffic Impact Assessment dated May 2022.

#### Services provision:

The existing water system to County Fair and the irrigation supply lines within existing servitudes will be maintained. Water supply, solid waste removal and sewage disposal services will be supplied by the City of Cape Town and electricity by Eskom.

The proposed development will be approximately 133.06ha in size.



This is the preferred alternative for the following reasons:

The spatial structure is largely determined by the re-alignment of the major roads (Lucullus Road, Amadeus Drive, Zandvliet Drive) and distinguishing between mobility routes and connectivity routes. Lucullus Road, the future mobility route, will be positioned along the edge of the site connecting up to Greenville, and will no longer act as an activity corridor. The road in line with Kiewiet Street will be considered the main road or activity spine for the proposed development. An additional mobility route will be Amadeus Drive, while additional connectivity routes will be Zandvliet Drive and a road in line with Swallow Street.

The hospital precinct will still be centrally positioned, and together with a portion of the life sciences precincts, will act as the central focus for the proposed development. Due to the over-supply of surrounding residential uses, the residential component has been greatly reduced with the residential precincts being positioned in a band along the southern boundary of the site and north of the institutional cluster. The green system will be integrated with the storm water system which runs both along the edges of development blocks and through it, while the detention ponds will be positioned along the edge of the site at low points. The integrated green system reinforces the higher-order spatial structure and provides a secondary movement network across the site and links with the road system. The preferred alternative is in line with the relevant planning policies and also take into account the environmental aspects.

"No-Go" Alternative:

This alternative entails maintaining the *status quo* and as such, the proposed mixed-use development will not be established. This alternative was not deemed as preferred, as the proposed development will augment the economic activities, provide for much needed housing and the benefits to the holder and creation of jobs would not be realised. The "no-go" alternative is therefore not warranted.

### **3. Impacts, assessment and mitigation measures**

#### **3.1 Activity Need and Desirability**

Portions 3, 5, 7, 10, 14, 19, 32, 33, 37, 38, 39 and 51 of Farm No. 725, Joostenbergvlakte are all zoned Agriculture, except for Portion 31 of Farm No. 725, which is zoned Transport Zone 2.

The proposed development is in line with the Provincial Spatial Development Framework ("PSDF") (2014), based on the following:

- The PSDF acknowledges the need for housing and alleviating the housing backlog; and
- The PSDF highlights job creation as a priority and the proposed development will provide economic opportunities through the provision of temporary employment during construction and permanent employment through the provision of business, retail and industry.

The site is located in an area earmarked for "Consolidation Areas" as per the City of Cape Town Spatial Development Framework ("SDF") (2018). Consolidation Areas are areas where the City is "*committed to servicing existing communities and where new development will be subject to infrastructure capacity*". The SDF (2018) acknowledges that housing is needed to address the housing backlog, therefore, the proposed development is in line with the SDF (2018).

In terms of the Northern District Plan (May 2014), residential and commercial developments are seen as undesirable, therefore, the proposed development is not

consistent with the Northern District Plan May (2014). However, the SDF (2018) is a higher order plan, and the District Plans are subservient to the SDF (2018). In terms of the Draft 2022 Northern District Plan, which has already gone through a comprehensive Public Participation Process and in the process of being approved, the site is earmarked as a “new development area” and located within the urban edge.

The proposed mixed-use development supports the following land use principles of the Spatial Planning and Land Use Management Act, 2013 (Act No.16 of 2013) (“SPLUMA”) and the Western Cape Land Use Planning Act, 2014 (Act No.3 of 2014) (“LUPA”):

#### Spatial Justice:

- Improved use of land: The proposed mixed-use development will ensure a more desirable use of the land as a local node.
- Improved access to land: With the focus on a mixed-use node with open space providing employment, residential, community and commercial offerings, improved access will be ensured to the larger community.
- The proposed development will ensure the improved access to and utilisation of land and the provision of employment and residential opportunities within close proximity to medium and low-income areas within the region.

#### Spatial Sustainability:

- Promote land development that is spatially compact and resource-frugal: The proposed development will optimally utilise the available land by offering a mix of land uses. The development footprint areas will be compact and of a higher density, but with significant green spaces to create an appropriate urban-rural transition and to limit its impact on the agricultural resources and rural landscape.
- Protection of prime, unique and high potential agricultural land: The existing subdivisions have undermined the viability of the land units for agricultural production and the bulk of these units are utilised as residential smallholdings which have prevented agricultural use.
- Promote the effective and equitable functioning of land markets: The proposed development will add value to the land with the intended development rights. This will positively enhance the economic potential of the land market by making the low and middle-income areas more desirable, due to its proximity to job opportunities and economic and social opportunities.
- Consider all current and future costs for the provision of infrastructure and social services: The proposed development will link to existing bulk and road infrastructure whilst making a significant contribution to future infrastructure cost given development charges payable. In addition, the proposed development will provide significant community-accessible facilities and infrastructure to surrounding communities.
- Promote land development in locations that are sustainable and limit urban sprawl: Given the site's location within the urban edge and higher density growth corridor identified since 2012, the proposed development is not regarded as typical low density and uncontrolled urban sprawl, but the implementation of the City's vision for this sector of the metropolitan area. The site's location will ensure the sustainability of the proposed development, considering the needs and opportunities within a local and regional context that will be addressed.
- Result in communities that are viable: The proposed development will create substantial employment opportunities within a predominant residential periphery and contribute to economic growth and sustainability that will directly benefit the viability of the surrounding communities.

- Sustained protection of the environment: The development proposal will prioritise long-term social, economic and environmental benefits.
- The proposed development contributes to spatially compact land development as it will ensure that the site is developed at a higher average density. The proposed development plan also provides for a mixed-use environment within a largely low to medium income residential area.

#### Efficiency:

- Optimise the use of existing resources, infrastructure, agriculture, land, minerals and facilities: The proposed development optimises the use of existing resources and infrastructure as it will link to existing infrastructure networks offering adequate capacity surrounding the site. All infrastructure upgrades and linkages will be funded by the proposed development.
- Integrated cities and towns should be developed: The proposed mixed-use development will ensure an integrated urban environment by means of:
  - Integrating the social, economic, institutional and physical aspects of land development;
  - Integrating residential and employment opportunities (retail, commercial etc.);
  - Including a diverse combination of land uses within a single development precinct;
  - Providing higher density residential opportunities and intensification of a mix of land uses to prevent long-term urban sprawl; and
  - Promoting the quality and functionality of the public spatial environment.
- The proposed development optimises the use of existing networks and infrastructure as it densifies development on a site within an approved urban edge.

#### Spatial Resilience:

- Flexibility in spatial plans, policy and land use management systems to ensure sustainable livelihoods in communities most likely to suffer the impact of economic and environmental shocks: Allowing flexibility in spatial plans and policies concerned, as provided for by this legislative principle, will ensure sustainable livelihoods by creating employment opportunities and the viable use of the land in question.
- The proposed development will utilise the package of plans process to allow flexibility in the roll-out of the development vision according to market opportunity thereby facilitating a more responsive and resilient development.

Although the proposed development will utilise an area of 5ha or more of agricultural land that has been cultivated or irrigated, it is exempted from obtaining a section 53 LUPA approval in terms of Regulation 10(2)(b) of the Western Cape Land Use Planning Regulations, 2015: Amendment, 2019, *i.e.*, a proposed land development that is specifically provided for in the applicable local Municipal Spatial Development Framework.

#### Cape Town Municipal Spatial Development Framework ("MSDF") (2018):

The site is situated within the Incremental Growth and Consolidation Areas. The proposed development will contribute to the diversification of mono-use residential patterns by creating a multi-functional local node that will provide services and facilities closer to the residential neighbourhoods to the west and north.

Given the site's location at the intersection of proposed major roads, its proximity to existing infrastructure networks and the opportunity to upgrade bulk services capacity, the proposed development will make a major contribution to the completion and

upgrading of services capacity needed for the 20-year land use scenario. All infrastructure upgrades will be funded by the proposed development and will thus not have a negative impact on the financial sustainability of the City. The development will create various economic and employment opportunities within the residential hinterland thereby reducing pressure on road and transport infrastructure elsewhere in the City.

The proposed development is aligned with the imperatives and policy guidelines as provided for by the MSDP (2018). The positive impact of the proposed development in terms of socio-economic benefit is further enhanced through the sensitive response to the site's location adjacent to the rural hinterland and Joostenberg Smallholdings which has guided the urban design concept and layout.

#### Cape Town Densification Policy (2012):

The proposed development is in line with the Densification Policy, pertaining to the following key considerations:

- The mixed-use nature allows for the horizontal and vertical integration of suitable and compatible residential and non-residential land uses within the same area or on the same parcel of land. The proposed design facilitates an appropriate intensity of land uses that facilitates a vibrant local urban environment and which could be linked with Okavango Road and the Bellville CBD via a road-based public transport service.
- The proposed development will create a mix and clustering of urban activities and land uses at a location of high accessibility, exposure, convenience and urban opportunity.
- Considering the requirements of the densification policy, the proposed development will:
  - Ensure optimal and efficient use of infrastructure, services, facilities and land;
  - Support the development of a viable public transport system;
  - Ensure that the scale and character are appropriate to the immediate context;
  - Support the development of mixed land uses, providing for vitality, opportunities and integrated living environments; and
  - Contribute to place-making and the development of attractive and safe urban environments.

#### City of Cape Town Transit Orientated Development ("TOD") Strategic Framework:

The nature of the proposed development and its location at the intersection of a number of higher order roads, which will also serve as public transport routes, and the proximity of the Malmesbury railway line, conforms to the general principles of the TOD Strategic Framework. The proposed mixed-use node will create concentrations of employment, commercial development, social amenities and civic functions, that will generate the thresholds required to support a sustainable public transport system.

#### City of Cape Town Integrated Development Plan (2017 -2022):

Direct jobs will be created over a long period due to the nature and scale of the proposed development. Direct jobs will benefit the communities in the surrounding areas during the construction and operational phases. The proposed development will ensure a substantial direct investment into the City of Cape Town and represents a significant indirect investment, but more specifically induced benefits from the spending of wages and salaries in the area. The use of local people during the construction phase and the introduction of local training and education initiatives will assist to underpin the principle. The large residential component will support the development of integrated communities and transit oriented urban growth and

development, in particular with the proposed linkage with the railway line that will support the mobility of the residents.

The proposed development offers opportunities to instill social development principles as it offers and facilitates access to economic opportunities and support new business development. The objectives to 'build and promote safe households and communities' and 'enhancing access to services' are further underpinned by the nature and scope of the proposed development. The proposed development will include business, retail, industry and institutional components that will contribute towards "getting people to the job and jobs to the people".

### 3.2 Agricultural impacts

An Agricultural Agro-Ecosystem Specialist Assessment and Site Sensitivity Verification Report dated 07 January 2022, was compiled by Johann Lanz to assess the potential agricultural impacts associated with the proposed development.

According to the specialist report, the soils across the site are generally deep, very sandy soils with drainage limitations. The soils are limited by their sandy texture with consequent low water and nutrient holding capacity and by their limited drainage. Almost all the soils are suitable for vegetable production, which does not require very "good" agricultural soils. The soils are not suitable for quality wine production and have limited suitability for fruit.

There is minimal groundwater available for irrigation. Water availability both in terms of quality and quantity is limited, which constrains production potential and economic viability. Agricultural activity on the site comprises mainly intensive vegetable production under irrigation and some cut flowers grown in tunnels. The vegetable production on site is part of a larger vegetable farming operation that utilises additional land in the surrounding area. The primary other land use across the site is residential.

The agricultural impact of the proposed development will be the permanent exclusion of potential future agricultural production from the site. However, the economic viability of farming on the site is severely constrained and likely to become increasingly non-viable in the future. This is due to soil limitations, limited irrigation water availability, the fragmented and non-viable size of the land units, and in particular the high levels of continuous theft of produce and production infrastructure. Because it is likely to become increasingly non-viable for farming, the site cannot be considered a priority for preserving as agricultural production land. It is likely that all agricultural production will be lost in future.

The agricultural specialist assessment concluded that the agricultural impact due to the loss of agricultural land is of very low significance. The proposed development will thus not have an unacceptable negative impact on the agricultural production capability of the site.

The Western Cape Department of Agriculture indicated in a correspondence dated 24 January 2023 that they have no objection against the proposed development.

### 3.3 Botanical impacts

A Terrestrial Biodiversity Compliance Statement dated 05 November 2021, was compiled by Bergwind Botanical Surveys & Tours CC to assess the potential botanical impacts associated with the proposed development.



According to the Terrestrial Biodiversity Compliance Statement, the central part of the site, which appears to support natural vegetation, is in fact highly disturbed and vegetated with woody and herbaceous alien invasive plant species. There is also infestation by alien invasive trees in some parts.

The site is entirely transformed and there is no evidence that it can revert to natural Cape Flats Sand Fynbos. As such, the site has a very low sensitivity from a terrestrial biodiversity perspective. The Terrestrial Biodiversity Compliance Statement concluded that the proposed development will have a very low impact on the biophysical environment.

### 3.4 Freshwater impacts

An Aquatic Biodiversity Impact Assessment Report dated May 2022, was compiled by BlueScience to assess the potential freshwater impacts associated with the proposed development.

The site is located within the upper reaches of the Mosselbank River in the Diep River System. A small, northern portion of the site drains northwards towards the Mosselbank River. Some aquatic features occur on the site and the site is located within a wider area considered to be of low aquatic biodiversity combined sensitivity.

Most of the site is cultivated with patches of *Acacia saligna* woodland. The only indigenous plants and associated with the aquatic features are kweek grass, bulrushes, sedges such as *Bolboschoenus maritimus* and *Cyperus denudatus* and arum lilies. The wetland areas had, in places, been invaded by kikuyu grass.

The aquatic features on the site mostly occur at the dams or are associated with furrows and canals. The furrows and canals accommodate runoff from the agricultural lands, particularly in winter. There are no National Freshwater Ecosystem Protected Area ("NFEPA") rivers mapped in or adjacent to the site. A natural seep wetland has been mapped within the centre of the site. The artificial wetlands on the site tend to be dominated by bulrush. The FEPA wetlands mapped on the site all comprise existing larger dams and are thus not of ecological significance.

The City of Cape Town's wetland layer includes all the dams and associated wetland habitats on the site as wetland habitats, but recognises that nearly all are off-channel dams. There are only two mapped areas not indicated as dams, one along Canary Street on the western border that is a dam and a large area that is mapped as a seep.

The drainage lines that crossed the site have been completely altered by past agricultural activities such as the excavation of drainage channels, infilling of cultivated areas, construction of off-channel dams and the associated abstraction of groundwater to fill the dams. In places, the entire top layer of sand has been bulldozed, leaving excavations and heaps of soil. The resultant mapping of the wetland areas is associated with the current altered flow path and topographical modifications.

The area that has been mapped as a seep area appears to have been associated with the original watercourse that drained through the area, although there is an area slightly to the south of the mapped area that may have been associated with the watercourse. This area has, however, been completely modified by agricultural activities as well as the excavation and infilling of material. The area is dominated by *Cynodon dactylon* with alien kikuyu grass dominating adjacent to the dams and furrow. The water supplying the area is primarily from seepage from the dams and an

adjacent furrow, with only marginal wetland habitat remaining in the wider area that is again linked to the adjacent dam and furrows.

The wetland areas are largely artificial and are considered to be in a seriously modified ecological condition as a result of surrounding land use disturbances. The wetlands that occur on the site are the result of water storage and use practice, with these surface water features being supplied by groundwater that is pumped into the storage dams and then released into the furrows for irrigation. The wetland areas provide limited ecosystem services which mostly relate to water quality amelioration and flood attenuation.

The wetlands are considered to be of low ecological importance and sensitivity, and only provide refuge and corridors for movement in the transformed landscape.

The freshwater specialist study concluded that the proposed development will result in a low negative impact over the long term with the implementation of mitigation measures. The loss of wetland functionality as a result of the proposed development, as well as the potential flow and water quality impacts of the development, will largely be mitigated by the creation of corridors and wetland areas. The freshwater specialist's recommended mitigation measures have been included in the EMPr for implementation.

### 3.5 Noise impacts

A Noise Impact Assessment Report dated 23 May 2022, was compiled by Mackenzie Hoy Consulting Acoustics Engineers to assess the potential noise impacts associated with the proposed development.

According to the Noise Impact Report, the rating level for the area (suburban districts with little road traffic) are as follows:

- Night time (22h00 - 06h00): 40dBA; and
- Day time (06h00 - 22h00): 50dBA.

The current residual noise levels exceed the values by 5dBA due to traffic noise along Lucullus Street. The residual noise level for the area is exceeded not due to the presence of manufacturing activities or the proposed development, but due to the level of traffic volume experienced from Lucullus Street. The traffic volumes along Lucullus Road will reduce over the night-time period, as with the levels of the proposed development. This will bring the sound pressure levels within the existing rating level for the area.

The hospital will increase traffic levels within the area for people visiting and attending to medical emergencies. There will be three sources of noise:

- Noise from increased traffic levels;
- Noise from various medical vehicles (sirens, deliveries etc.); and
- Noise from mechanical equipment being HVAC, heat pumps, backup generators etc.

The noise generated from the various mechanical equipment on site will be subject to various sound proofing measures. These measures will be required to reduce the overall noise generated on site to the required rating levels. The noise generated by various medical vehicles (*i.e.*, sirens etc.) will be required to only be operated once outside of the area. *i.e.*, once on the N1.



The proposed development does not require a Noise Management Plan, except for the proposed mechanical equipment required by the hospital site, as the proposed development will generate noise below the residual level and rating levels for the area during the day-time period. The noise specialist's recommendations have been included as a condition of this Environmental Authorisation and the EMPr.

The traffic levels experienced at the site during the day will be considerably louder than the residual level and rating levels for the area due to traffic noise from Lucullus Street. The predicted noise level from the development as measured on the plot boundary, once it is completed, will be equal to the existing residual noise levels.

### 3.6 Faunal impacts:

A Faunal Compliance Statement dated October 2022, was compiled by Biodiversity Africa to assess the potential impacts on fauna and a Specialist Entomologist Compliance Statement dated 01 November 2021, was compiled by Dr Casparus Crous and Dr Gabriella Kietzka to assess the potential impacts on insects associated with the proposed development.

According to the Specialist Entomologist Compliance Statement, the proposed development is unlikely to impact on terrestrial animal species (*A. montanus*, *C. peringueyi* and *P. aesculapius*). There are no suitable, undisturbed areas that meet the necessary habitat conditions required to support the species.

No individuals of any of the species of conservation concern were collected or observed at the sampled sites. There are also no other records of the species being present on the site. The site is degraded and the habitat characteristics do not resemble those required by any of the species of conservation concern. Furthermore, the surrounding environment is mostly urbanised and therefore the area is of low sensitivity for terrestrial animal species. It is therefore not anticipated that the species currently utilise the site and it is unlikely that the area represents suitable habitat for conservation in the future.

The Faunal Compliance Statement concluded that the site is unlikely to have a high species richness or abundance of faunal species. Faunal utilisation of the site for permanent shelter is considered to be low with the majority of species utilising the site for foraging or passage to neighbouring farms. The site does not offer significant habitat for the persistence of terrestrial faunal species occurring within the area.

No threatened or near-threatened faunal species is expected to occur on the site, except for the Cape Dwarf Chameleon (*Bradypodion pumilum*). Although the species has a high likelihood to occur in the area, the site itself is of very low ecological importance to the species. The faunal specialist's recommendations have been included as a condition of this Environmental Authorisation and the EMPr.

### 3.7 Traffic impacts:

A Transport Impact Assessment ("TIA") Report dated May 2022, was compiled by Innovative Transport Solutions to assess the potential traffic impacts associated with the proposed development.

According to the TIA Report, the following intersections have existing capacity constraints:

- Intersection 9: Darwin Road/Mostert: operates at a Level of Service ("LOS") E during the morning peak hours. The intersection is currently being upgraded to a double

lane roundabout and will operate acceptably (LOS A) during the peak hours once the upgrade is completed.

- Intersection 10: Darwin Road/Dan King: operates at a LOS F/E during the morning/afternoon peak hours. The intersection is currently being upgraded to a double lane roundabout and will operate acceptably (LOS A) during the peak hours once the upgrade is completed.
- Intersection 22: N1 Southern Terminal/Maroela: operates at a LOS E during the afternoon peak hours. A separate southbound right-turn lane, plus a separate northbound left-turn lane is recommended. The intersection will operate at acceptable LOS C during both peak hours, after the upgrade is implemented.
- N1 Freeway Interchanges: The N1 Freeway/Okavango, Brighton, Lucullus/Maroela interchanges are currently experiencing operational constraints. SANRAL has confirmed that the designs for the upgrade of the interchanges will be completed within the next two years and construction of these interchange upgrades will be completed within the next five years. Since the interchanges will be upgraded within the next five years; and the first phase of the proposed development will only become operational after five years; and since the interchanges are located further than 1.5km from the development accesses (TMH16), they were excluded from the capacity analyses evaluated in the TIA Report.
- The other intersections operate at acceptable LOS and no additional mitigation measures are recommended.

The 2026 background traffic will deteriorate the intersection operations. Various intersection and road link upgrades must be implemented within the area. Once the road upgrades are in place, the study intersections will operate at acceptable levels of service. However, intersection 19 (Lucullus Road/Waarburg) will operate at a LOS F during the peak hours, experience operational constraints and therefore requires additional upgrades. A northbound right-turn lane must be constructed, and the intersection control be changed to a traffic signal. This upgrade is required as part of the N1-Gateway project, and will ensure that the intersection operates at acceptable LOS B/C during the peak hours. The other intersections will operate at acceptable LOS and no additional mitigation measures are recommended.

A significant portion (approximately 55%) of the proposed development attraction trips can originate from the residential areas directly west of the site. Due to the large size of the proposed development, the bulk roads phasing was evaluated in five phases, which is linked to five external bulk road projects. The bulk road projects will ensure that the external road network operates acceptably.

Currently, the main constraints are the interchanges along the N1 (*i.e.*, Okavango/Brighton/Lucullus/Maroela), as well as capacity along Lucullus Road between the N1 Freeway and the site. These interchange upgrades must be in place for phase 2 to proceed. Similarly, phase 2 requires local intersection upgrades along Lucullus Road, within the existing 16m wide road reserve. Although it might be possible to construct turning lanes along Lucullus Road within this road reserve, the intersection splays are insufficient to enable the implementation of the intersection upgrades.

#### 2026 Phase 1 total traffic conditions:

This phase will use the existing counter-flow spare capacity of the road network. A single lane road per direction, between Darwin Road and the proposed development, including a road over rail bridge, must be constructed. For intersection 7 (Darwin/Amadeus Road), a double circulation lane roundabout must be constructed.

The current northbound left-turn volumes at the Darwin/Amadeus Road intersection are relatively high. A significant portion of these trips will redistribute southwards along Darwin Road, once the upgrades which is currently in progress, is completed. The extension of Zandvliet between Darwin Road and Okavango Road will also result in the redistribution of these trips and ultimately the reduction of the northbound left-turn volumes at the Darwin/Amadeus Road intersection.

Intersection 11 (Brighton/Darwin) is expected to operate close to capacity at a LOS E during the afternoon peak hours. No additional upgrades are recommended for Intersection 11 since the Phase 2 upgrades (as well as the extension of Zandvliet between Darwin and Okavango Roads) will enable redistribution of development trips on the surrounding road network. This redistribution will ensure that Intersection 11 operates acceptably.

#### 2026 Phase 2 total traffic conditions:

- This phase aims to complete the road network. The following upgrades are recommended: Road link: Lucullus Road single lane per direction. This phase could include the construction of the new Lucullus Road carriageway between the N1 and the proposed development (while the existing road is used during construction) or the upgrade of the existing road, depending on the status of the Lucullus Road EIA process.
- Intersection 3 (Okavango/Amadeus): Upgrade the traffic signal phasing to include a dedicated northbound right-turn phase plus an overlap westbound left-turn phase. With this upgrade, this intersection will operate at acceptable LOS C/B.
- Development Accesses: Including intersections 12, 13, 14, 15 and 16. The minimum recommended geometry and control includes single lanes on all approaches with free flow along Amadeus and Lucullus Roads and stop control on the side roads.
- Intersection 17 (Lucullus/Suikerbekkie): Construct separate north and southbound right-turn lanes, with free flow along Lucullus Road and stop control on the side roads. With this upgrade, this intersection will operate at acceptable LOS D/C.
- Intersection 18 (Lucullus/Owl): Construct separate north and southbound right-turn lanes, with free flow along Lucullus Road and stop control on the side roads. With this upgrade, this intersection will operate at acceptable LOS C/D.
- Intersection 19 (Lucullus/Waarburg): Construct a separate westbound left-turn lane. With this upgrade, this intersection will operate at acceptable LOS B/C.
- Intersection 20 (Lucullus/Tarentaal): A separate northbound right-turn lane will ensure that this intersection operates acceptably during the peak hours.
- Intersection 21 (Lucullus/N1 Northern Terminal): Change the eastbound left-turn lane into a left turn continuous slip lane, construct a separate southbound left-turn lane as well as a northbound right-turn lane. With these upgrades, the intersection will operate at acceptable LOS D.
- Intersection 22 (Lucullus/Maroela/N1 Southern Terminal): Construct a separate northbound left turn continuous slip lane. With this upgrade, the intersection will operate at acceptable LOS C during the peak hours.

- Intersection 23 (Maroela/Sandringham/Industria): Construct a separate northbound left-turn lane. With this upgrade, the intersection will operate at acceptable LOS C/D.

#### 2031 Phase 3 and 4 total traffic conditions:

These phases aim to increase network capacity, by dualling Amadeus and Lucullus Roads.

The following road link and intersection upgrades are recommended as part Phase 3:

- The Amadeus Road dualling.
- Intersection 3 (Okavango/Amadeus): Construct an additional northbound right-turn lane, additional east and westbound through lanes, as well as a dedicated westbound left-turn slip lane. With this upgrade, the intersection will operate at acceptable LOS D/C.
- Intersection 4 (Okavango/Pinehurst): Construct an additional eastbound right-turn lane, as well as a southbound left-turn lane. With this upgrade, the intersection will operate at acceptable LOS D/C.
- Intersection 5 (Okavango/Langeberg): Construct additional short (*i.e.*, third) north and southbound through lanes. With this upgrade, the intersection will operate at acceptable LOS C/D.
- Intersection 6 (Brighton/Klipling): Construct a separate northbound shared through and left-turn lane, and a separate southbound left-turn slip lane. With this upgrade, the intersection will operate at acceptable LOS A/C.
- Intersection 7 (Darwin/Amadeus): Construct a northbound left-turn slip lane as well as a short receiving lane on the westbound exist. With this upgrade, the intersection will operate at acceptable LOS C/D. The northbound left-turn volumes are likely to reduce substantially, once the Zandvliet Road link between Darwin and Okavango Road is complete, hence rendering this upgrade unnecessary/abortive.
- Intersection 9 (Darwin/Mostert): Construct a separate westbound left-turn lane. With this upgrade, the intersection will operate at acceptable LOS A.
- Intersection 11 (Darwin/Brighton): Construct separate left-turn lanes on all intersection approaches. With this upgrade, the intersection will operate at acceptable LOS A/D.

#### 2036 Phase 5 total traffic conditions:

This phase aims to further expand the road network and to improve access to public transport facilities. The following upgrades are recommended:

- Public Transport: Construct a new railway station directly north of Zandvliet Street.
- Road Link: Construct Zandvliet Street between Darwin Road and the development.

Based on the capacity analyses as well as the EMME model output, it is evident that the proposed development can be accommodated acceptably, provided that specific road network links are in place. The following can be concluded based on the 2040 EMME model output:

- Lucullus Road will operate acceptably with two through lanes per direction, except for the section between the N1 Freeway and Waarburg Street that will require three lanes per direction.

- Amadeus will operate acceptably with two through lanes per direction and Zandvliet will operate acceptably with only one through lane per direction.
- The total two-way demands along Amadeus and Zandvliet Streets are slightly higher than the demands along Lucullus Road, as confirmed by probe data.
- The proposed development can be implemented acceptably, without Lucullus Road between Amadeus Road and Lichtenburg Road. This section of Lucullus Road should be implemented as part of future development to the north of the Lucullus Gardens development.
- The R300 will fulfil a very important north-south function in the future, to support and reduce the current traffic demands along Okavango Road.
- The EMME model confirms that the road network will operate acceptably for the total (Phase 5) traffic scenario. It is recommended that the intersection operations and proposed upgrades be confirmed in future TIA updates.

#### Pedestrians and cyclists:

There are no sidewalks along Lucullus Road. There is, however, a gravel shoulder on both sides of the road, which is used by pedestrians. Pedestrian sidewalks of at least 2m wide should be implemented along all roads throughout the proposed development. Cyclist routes should also be provided along Lucullus Road, Amadeus Road and Zandvliet Street.

#### Public transport:

The main public transport routes in the vicinity of the site run along the N1 and Maroela Street. These routes are serviced by minibus taxis (MBT) and buses.

#### Conclusion:

The traffic study investigated the macro-level transport impacts, expected as part of the proposed development. Due to the large size of the development, it was evaluated in five phases, which is linked to five external bulk road upgrade projects. The TIA recommended that the transport impact study be updated every five years or as part of each bulk release project, to confirm details of intersection upgrade requirements.

The TIA Report concluded that, if the bulk release projects as well as intersection upgrades recommended in the TIA Report are in place, the impacts of the proposed development will be sufficiently mitigated.

### 3.8 Visual impacts

A Visual Impact Assessment Report dated October 2021, was compiled by Antoinette Raimond Landscape Architectural Consulting to assess the potential visual impacts associated with the proposed development.

A ridgeline, which is located northeast of the site, is located on land which appears fairly flat and open, limits views from and toward the site from Joostenbergvlakte East-Rural and beyond. The site has a west to west-south-western aspect. Another minor ridgeline south of the site limits views from the N1 when travelling west towards Cape Town.

The site's southern edge borders existing small-holdings; the eastern edge borders existing smallholdings and agriculture; the northern edge borders vacant land, and the western edge borders the existing gravel surfaced Canary Street, leading north to Fisantekraal.



The view catchment area for the site is approximately 4-5km in extent and is defined by the topography of the region. Receptors west of the site, located on a northwest, west and south western aspect (*i.e.*, facing the site) are most exposed to the proposed development.

Views from many of the neighbourhoods are screened by existing development. Only the houses/apartments of Buhrein Estate immediately adjacent to the railway line have views towards the site. In addition, Buhrein Estate will screen the proposed development from other neighbourhoods within Kraaifontein. Similarly, the site will not be visible from most parts of Okavango Road due to existing developments west of it.

The zone of visual influence is limited to the houses/apartments of Buhrein Estate immediately adjacent to the railway line and parts of Pinehurst and Uitzicht will have long distance views towards the site. This will lessen in time due to proposed development east of Okavango Road. The visual absorption capacity is moderate *i.e.*, partial screening provided by topography, vegetation and structures in the landscape.

The site can be categorised as rural cropland, however, Joostenbergvlakte (south) and Kraaifontein (west) can be categorised as rural parkland or suburban neighbourhoods, respectively. The landscape is undulating with minor ridgelines running south and east of the site. The visual absorption capacity is therefore moderate *i.e.*, partial screening provided by topography, vegetation and structures in the landscape.

Visually sensitive areas include the cultivated landscape east of the site also referred to as the Joostenbergvlakte Cultural Landscape and sections of the upper tributaries of the Mosselbank River. The Joostenbergvlakte Cultural Landscape has been reclassified as having a low sensitivity due to the way the agricultural theme has been incorporated into the northeastern section of the site. The upper tributaries of the Mosselbank River have been classified as having a low sensitivity partly because of the distance between the receptors and the site and partly because views from the site will largely be screened by topography, vegetation and existing structures.

The apartments of Buhrein Estate immediately adjacent to the railway line has been classified as highly sensitive, the Joostenbergvlakte Smallholdings have been classified as moderately sensitive, parts of the suburbs of Uitzicht and Pinehurst have been reclassified as receptors with a low sensitivity and the Malmesbury railway line has been classified as moderately sensitive. The N1, Okavango Road, Klipheuwel Road (R302) and the R312 all remain classified as receptors with a low sensitivity.

The landscape character of the area will be altered by the density and the scale of the proposed development, however, the landscape character is not of high scenic value. To mitigate the change in landscape character, the groups/clumps and lines/avenues of trees which make a positive contribution to the landscape should be retained. In addition, an appropriate interface between the proposed development and the apartments of Buhrein Estate immediately adjacent to the railway line, Joostenbergvlakte Smallholdings (south and east) and Joostenbergvlakte Cultural Landscape should be provided.

The view onto the site may be obstructed by vegetation, buildings and other infrastructure. Furthermore, the majority of the areas looking down onto the site are a fair distance from the site. As such, the intensity of the visual impact will be medium without mitigation, and low with the implementation of mitigation measures. Mitigation

in this situation focuses on screening the site as far as possible to minimise the visual intrusion.

### 3.9 Groundwater impacts

A Groundwater Impact Assessment Report dated 24 October 2022, was compiled by GEOSS South Africa (Pty) Ltd., to assess the potential groundwater impacts associated with the proposed development.

The aquifer that directly underlies the site is unconfined. A clay layer underlies the unconsolidated sands, separating the unconsolidated aquifer from the fractured aquifer. The fractured (secondary) aquifer has an average borehole yield of 2.0 to 5.0L/s.

According to the National Groundwater Archive database, there is only one borehole located within a 1km search area of the site. According to the City of Cape Town Database, there are twelve boreholes located in the residential area to the south of the site. An assessment of the Water Use Authorisation and Registration Management System Database revealed that there are five registered boreholes within 1km of the site. The boreholes are used for irrigation on Portion 7 of Farm No. 725 and the surrounding farmlands to the southeast of the site. There are thus a large number of groundwater users surrounding the site.

Groundwater use across the area is relatively low as most boreholes are unused. Where boreholes are used, only small volumes are used for irrigation. Demand for groundwater use has decreased due to decreasing agricultural activity and due to the water quality not being sufficient.

The site is located on a highly permeable intergranular aquifer which has a very high vulnerability classification, indicating that the aquifer has high susceptibility to contamination from anthropogenic activities. The inference that the primary aquifer is perched means that the fractured aquifer is not susceptible to the same risks.

Groundwater abstraction mainly occurs from the secondary fractured aquifer as the primary aquifer is unproductive for large-scale abstraction. The groundwater study concluded that the proposed development poses a moderate risk of contamination to the aquifer that is considered to have a very high vulnerability to contamination.

### 3.10 Storm water impacts

Runoff from the site will be managed by constructing public regional storm water management facilities at the low lying areas along the western boundary. The storm water facilities will reduce the flow rates and maintain predevelopment flows while treating the runoff quality prior to entering the downstream system. The following has been considered with regards to the storm water facilities:

- The facility will control the runoff quantity and rate of storm water flow to reduce the threat of flooding downstream of the site;
- The facility will improve the quality of the runoff by implementing pre-treatment forebays, aquatic bench and micro pools to best management practice standards;
- The facility will be unlined in certain areas to encourage groundwater recharge;
- The facility will be sized to reduce the peak flows to its pre-development flow peaks for various storms up to and including a 1:50 year return interval storm;
- The facility will provide an opportunity to establish wetland vegetation in the aquatic bench since the high water table aids in the formation and recreation of wetland habitats;



- Various storm water management facilities have been considered, including storm water ponds and storm water wetlands;
- The storm water pond type is the most appropriate facility and addresses the freshwater specialist's recommendations; and
- A new outfall route was investigated to avoid discharging storm water into the existing Buhrein system.

The storm water strategy is as follows:

- Only 0.9m<sup>3</sup>/s of runoff from external catchments can be accommodated in the Buh-Rein storm water system;
- All storm water runoff from the site must be redirected to a new outfall system provided along Amadeus Drive and must avoid any discharge from entering Buh-Rein Estate;
- The new outfall system has been routed to coincide with the conceptual designs of Portions 8, 50 and 60 of Farm No. 725 and allowed to discharge into a Mosselbank tributary;
- All runoff within the proposed development extent will be directed to new public regional storm water facilities sized to treat runoff quality and attenuate into the outfall system;
- Development pockets will be encouraged to implement bio-retention areas as part of their Storm Water Management Plan to promote groundwater recharge;
- The post development runoff from these pockets are calculated on assumed catchment parameters to obtain peak runoff flows; and
- Future detailed Site Development Plan applications must be accompanied by Storm Water Management Plans and verify runoff from the site and provide outflow hydrographs to confirm flows into the drainage system.

### 3.11 Socio-Economic impacts:

A Socio-Economic Impact Assessment Report dated May 2022, was compiled by Multipurpose Business Solutions to assess the potential socio-economic impacts associated with the proposed development.

The proposed development has a clear focus on healthcare, research and development, industrial and commercial uses. Residential components are added to the mix to make it a truly mixed-use project that will significantly contribute to providing employment opportunities for those residing in the development and the areas surrounding the site.

Temporary employment opportunities for people with different types and levels of skills will be created during the construction phase. Various employment opportunities will accrue due to the construction of the top structures with some employment being associated with the introduction of bulk and internal services. The proposed development can sustain on average 1425 job opportunities per annum if constant productivity is assumed. It is estimated that 1742 job opportunities can be sustained on average per annum over 20 years.

The Cape Metropolitan Area and Western Cape economies will benefit from the proposed development due to the procurement of goods and services and the spending of wages and salaries. An initial amount of R7038 million will be introduced with varying expenditure over the 20 years envisaged for the construction phase. The total capital expenditure is estimated to be R9232 million (including external infrastructure).

The proposed development will create new employment opportunities for people with different types and levels of skill. There are high unemployment rates in the Cape Metropolitan Area and job creation during operations will have a significant positive impact. An estimated total of 9526 direct employment opportunities will accrue if the proposed development is implemented and all components of the project are built and fully operational at capacity. New development will create opportunities for small businesses in the goods and services sectors. Monetary benefits accrue to the Cape Metropolitan Area in the form of property rates and other utility charges such as water and electricity.

### 3.12 Dust impacts

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

The development will result in both negative and positive impacts.

#### **Negative Impacts:**

- Potential agricultural, traffic and botanical impacts;
- Potential storm water and visual impacts; and
- Potential impacts on the watercourses.

#### **Positive impacts:**

- Employment opportunities will be created during the construction and operational phases of the development;
- Optimal use of available vacant land;
- Additional residential opportunities in the Joostenbergvlakte area; 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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