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DATE OF ISSUE: 17 September 2021

The Board of Directors
HOH Agri (Pty) Ltd.
8 Robinson Way
EDGEMEAD
7441

Attention: Mr. Wezley Ferreira

E-mail: wezley@hydroorganic.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 A CONTROLLED ENVIRONMENT HORTICULTURAL FARMING OPERATION ON PORTION 39 OF KLEIN DASSENBERG FARM NO. 20, ATLANTIS.

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) Mr. Nicholas Gates (NCC Environmental Services (Pty) Ltd.)
(2) Mr. M. Theron (City of Cape Town)

E-mail: nicka@ncc-group.co.za
E-mail: Morne.Theron@capetown.gov.za

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 A CONTROLLED ENVIRONMENT HORTICULTURAL FARMING OPERATION ON PORTION 39 OF KLEIN DASSENBERG FARM NO. 20, ATLANTIS.

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 May 2021.

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

HOH Agri (Pty) Ltd.
c/o Mr. Wezley Ferreira
8 Robinson Way
EDGEMEAD
7441

Cell: 074 317 0894
E-mail: wezley@hydroorganic.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>Listing Notice 1 of the EIA Regulations, 2014 (as amended):</p> <p>Activity 12: <i>"The development of-</i></p> <ul style="list-style-type: none"> <i>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or</i> <i>(ii) infrastructure or structures with a physical footprint of 100 square metres or more;</i> <p><i>where such development occurs-</i></p> <ul style="list-style-type: none"> <i>(a) within a watercourse;</i> <i>(b) in front of a development setback; or</i> <i>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; -</i> <p><i>excluding-</i></p> <ul style="list-style-type: none"> <i>(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</i> <i>(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</i> <i>(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;</i> <i>(dd) where such development occurs within an urban area;</i> <i>(ee) where such development occurs within existing roads, road reserves or railway line reserves; or</i> <i>(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared".</i> 	<p>Infrastructure/structures of more than 100m² will be constructed within 32m from the edge of a watercourse.</p>
<p>Activity 19: <i>"The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</i></p> <p><i>but excluding where such infilling, depositing, dredging, excavation, removal or moving -</i></p> <ul style="list-style-type: none"> <i>(a) will occur behind a development setback;</i> <i>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</i> 	<p>The development proposal entails the removing or moving, dredging, excavation, infilling or depositing of material of more than 10m³ 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>Activity 27: "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 - (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan".</p>	<p>More than 1ha of indigenous vegetation will be cleared.</p>

Listed Activity	Activity/Project Description
<p>Listing Notice 3 of the EIA Regulations, 2014 (as amended):</p> <p>Activity 2: "The development of reservoirs, excluding dams, with a capacity of more than 250 cubic metres.</p> <p>i. Western Cape</p> <p>i. A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>ii. In areas containing indigenous vegetation; or</p> <p>iii. Inside urban areas: (aa) Areas zoned for use as public open space; or (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority, or zoned for a conservation purpose".</p>	<p>A storm water retention pond with a capacity of more than 250m³ will be established.</p>
<p>Activity 12: "The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>i. Western Cape</p> <p>i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</p>	<p>More than 300m² of critically endangered vegetation will be cleared.</p>

<ul style="list-style-type: none"> ii. <i>Within critical biodiversity areas identified in bioregional plans;</i> 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 or even in urban areas;</i> 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> 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> 	
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The abovementioned list is hereinafter referred to as "the listed activities".

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

The proposed development entails the establishment of a controlled environment horticultural farming operation on Portion 39 of Klein Dassenberg Farm No. 20, Atlantis. Approximately 10ha of the property will be utilised for Controlled Environment Agriculture ("CEA") growing areas for high-intensity farming as well as the establishment of operational and ancillary buildings. The growing area will include tomato, cucumber, pepper, lettuce and strawberry cultivation. The proposed development footprint is approximately 195 000m².

The following facilities will also be established:

- Approximately 10ha of CEA units;
- Cleaning, sorting and packing hall;
- Cold storage;
- Multi-purpose facility;
- General storage facility;
- Waste Water Treatment Works;
- Storm water detention pond;
- Offices; and
- Security building and infrastructure.

In addition to the growing areas and administration buildings, the farm will have its own nursery facilities to produce seedlings for production on the farm as well as for sale to farmers. The farm also includes Training and Research Development Units. An area of 9.78ha is required for buildings, roads and services.

The facility will be split into a North and South section by the on-site watercourse and associated buffer areas. The North and South sections will be connected by an internal road system including a low-level road crossing across the watercourse supported by a pipe culvert system to support the roadway across the stream. Subterranean pipelines for services such as irrigation water, sewage and storm water will run adjacent to the access road.

An area of approximately 14.22ha will consist of open areas, buffer areas, watercourses and connecting corridors and will be designated no-go areas. The no-go areas contain indigenous vegetation which includes Species of Conservation Concern, and the watercourse which dissects the property into a North and South. The North and South will be connected via a buffer and protected in perpetuity through a dedicated Conservation Management Plan. Rehabilitation, including the propagation of the Species of Conservation Concern will be undertaken in accordance with a dedicated Rehabilitation Plan.

All infrastructure will be designed to convey storm water run-off via pipes and natural channels to a collection pond for treatment and/or reuse. Effluent (sewerage) will be collected and treated on-site and re-used to supplement water use in the irrigation system, thus contributing to a reduction in the abstraction of water from the aquifer.

The Waste Water Treatment Works will be that of the Becon Watertech system, or a similar system, which is a configured bio-filter domestic sewage treatment process capable of producing treated effluent quality that meets the South African General Authorisation Standards. The Becon Watertech configuration is based on the trickling filter process and deploys the Rotating Biological Contactor ("RBC") derivative. The inclusion of an air scrubbing unit with a spray-tower scrubber to assist with potential odours emanating from the on-site sewer treatment facility will be explored, or systems which serve a similar function.

Access to the site will be via the Klein Dassenberg Road. An entrance from the Klein Dassenberg Road will be established across the right-of-way servitude roadway which will be registered along the boundary of Portions 39 and 40 of Farm No. 20, Atlantis. The servitude road will have a dimension of 105m x 30m.

The main access collector backbone road will be a class 5 road. The road will be used more frequently since it will be the main link between the packhouse and sorting areas and the individual greenhouse structures. The road will be formalised with storm water drainage and will have a hard-wearing surface consisting of a two track 3-block track.

The interlinking access roads between the greenhouse structures will also be class 5 roads. The internal access roads will be constructed with a G5 wearing course to improve durability and suppress dust on the roadway during frequent use. The road will be shaped with a 2.5% cross fall to facilitate storm water drainage. Side channels will be provided to assist in storm water management.

Water will be abstracted from the underlying aquifer via boreholes. The total daily water demand for the proposed development is 500m³/day or 182 500m³/annum.

The following additional infrastructure is required for the water supply system:

- Pumping equipment inclusive of valves, electrical motors, electrical control systems, backflow prevention and piping works;
- New storage tanks;
- Treatment facility and associated infrastructure and equipment prior to discharge of water into the water network for the use in the hydroponic system and for domestic consumption areas;
- Additional water storage tanks for firefighting purposes, which do not require treatment of the water quality; and

- Interconnecting the back-up borehole to the system, inclusive of all associated equipment and infrastructure required for the integration into the water supply system.

Monitoring wells will be installed before the construction phase is completed. A set of one shallow and one deep monitoring borehole will be installed up-gradient of the site to determine the quality of groundwater entering the site, as well as one down-gradient of the site so that any groundwater impacts from the site can be detected and dealt with timeously.

The exact positions of the monitoring boreholes will be determined pre-construction and after approval has been obtained to attain the best position to intercept groundwater and to select the best position to identify impacts which may stem from the proposed development.

C. LOCATION AND SITE DESCRIPTION

The listed activities will be undertaken on Portion 39 of Klein Dassenberg Farm No. 20, Atlantis.

The farm is located on the southern side of Klein Dassenberg Road and midway between the R304 to the west and the N7 to the east. To the east and west of the farm is undeveloped land.

The SG 21-digit code is: C01600000000002000039

Co-ordinates:

Latitude: 33° 35' 49.54" S

Longitude: 18° 32' 28.39" 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")

NCC Environmental Services (Pty) Ltd.

c/o Mr. Nicholas Gates

26 Bell Close

Westlake Business Park

WESTLAKE

7945

Tel.: (021) 702 2284

E-mail: nickg@ncc-group.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 May 2021 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 five (**5**) years, from the date the holder commenced with an authorised listed activity, during which period the authorised listed activities for the construction phase, must be concluded.
4. The activities that have been authorised may only be carried out at the site described in Section C above in terms of the approved 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 22.1.

Management of activity

- 10. The draft Environmental Management Programme ("EMPr") dated April 2021 (as compiled by NCC Environmental Services (Pty) Ltd.), including the Dust Management Plan, Construction Method Statement for Working within a Watercourse, Aquatic Monitoring Plan, Aquatic Rehabilitation Plan, Vegetation Rehabilitation Plan and Conservation Management Plan and submitted as part of the application for Environmental Authorisation are 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 monthly 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 three months after commencement of the construction phase to the relevant competent authority;
 - 15.3 submit an environmental audit report six 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 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. 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.
22. All the recommendations provided in the Freshwater Delineation and Assessment Report dated September 2020 and compiled by NCC Environmental Services (Pty) Ltd., as included in the EMPr, must be implemented. However, the following must also be implemented:
- 22.1 The Sout River, wetland and riparian areas and their respective buffers must be treated as areas of higher ecological sensitivity/no-go areas and must as such be delineated before commencement of construction.
 - 22.2 A buffer of at least 32m must be established around the Sout River, wetland and riparian areas.

- 22.3 Any infrastructure for the storage, transport, recycling, treatment and/or disposal of bulk quantities of sewerage or waste water on site may not take place directly in or within 45m from the identified freshwater resources.
 - 22.4 The identified freshwater features must be avoided at all times and must be considered no-go areas for construction vehicles and personnel.
 - 22.5 Adequate 'no-go' signage must be placed at a suitable, visible location adjacent to the freshwater features.
 - 22.6 Construction activities (*i.e.*, the road and watercourse/drift crossing) in close proximity to the delineated freshwater resources must, as far as possible, be undertaken during the low rainfall season/drier summer months.
 - 22.7 Construction activities in the Sout River must cease during significant rainfall events (*i.e.*, more than 10mm) to allow sufficient time for soils to dry out. Daily rainfall measurements and on-site monitoring by the appointed contractor are therefore required.
 - 22.8 Where applicable, the gradient between the edge of the infrastructure and the watercourse must not exceed a 1:3 slope and where necessary, additional support structures must be installed to limit slope failure and instability and serve as erosion protection.
 - 22.9 Construction camps/offices, equipment storage/laydown areas, parking for plant and vehicles, waste storage areas, hazardous substances storage and ablution facilities must be located more than 32m from any freshwater resource.
 - 22.10 Any chemicals and hazardous substances must be stored in impermeable, waterproof receptacles and/or bunded areas and on drip trays when used on site.
 - 22.11 'Temporary footprints' must be fenced/cordoned off and maintained throughout the project timeframe with a suitable and practical buffer distance for any 'temporary footprints' being more than 100m from freshwater resources.
 - 22.12 No storage or dumping of any excavated soils (*i.e.*, stockpiles), equipment or materials (including rubble) is allowed within and in close proximity to freshwater resources.
 - 22.13 All stockpiles must be protected from erosion, stored on flat areas where run-off will be minimised and be surrounded by erosion berms.
23. The following recommendations provided in the Botanical Assessment Report dated September 2020 and compiled by Capensis Ecological Consulting (Pty) Ltd., as included in the EMPr, must be implemented:
- 23.1 The sensitive areas to be excluded from the development footprint must be surveyed to determine if they are accurately aligned with the botanical and freshwater sensitivities on the site.
 - 23.2 The ECO and/or botanist must be present to ensure that the populations of *Aspalathus retroflexa* subsp. *bicolor* are not damaged and are correctly incorporated into the no-go areas during the surveying exercise.
 - 23.3 The no-go areas must be physically marked to ensure they are completely avoided during construction.
24. All no-go areas including buffers must be appropriately fenced to deter trampling and the creation of thoroughfare footpaths.
25. A record of daily pumping volumes, pumping times, static and dynamic water levels measurements must be kept and must be reviewed by a qualified

- geohydrologist at least twice a year to accurately assess the long term sustainability of all new and existing boreholes proposed for irrigation on the site.
26. A set of one shallow and one deep monitoring boreholes must be installed up-gradient and down-gradient of the site.
 27. The exact position of the boreholes must be determined through a geophysical investigation to attain the best position to intercept groundwater, in addition to attaining the best position to identify impacts from the proposed development.
 28. Water saving mechanisms and/or water recycling systems must be installed in order to reduce water consumption that include *inter alia*, the following:
 - 28.1 Dual-flush toilet systems.
 - 28.2 All taps must be fitted with water saving devices, that is, tap aerators, flow restrictors and low flow shower heads.
 - 28.3 Water-wise landscaping must be done.
 29. The development must incorporate energy/electricity saving measures, which include *inter alia*, the following:
 - 29.1 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.
 - 29.2 All geysers must be covered with geyser “blankets”.
 - 29.3 The installation of solar water heaters and solar panels must be considered for all buildings.
 30. The requirements of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), must be adhered to.

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

8th 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.

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 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

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

DATE OF DECISION: 17 SEPTEMBER 2021

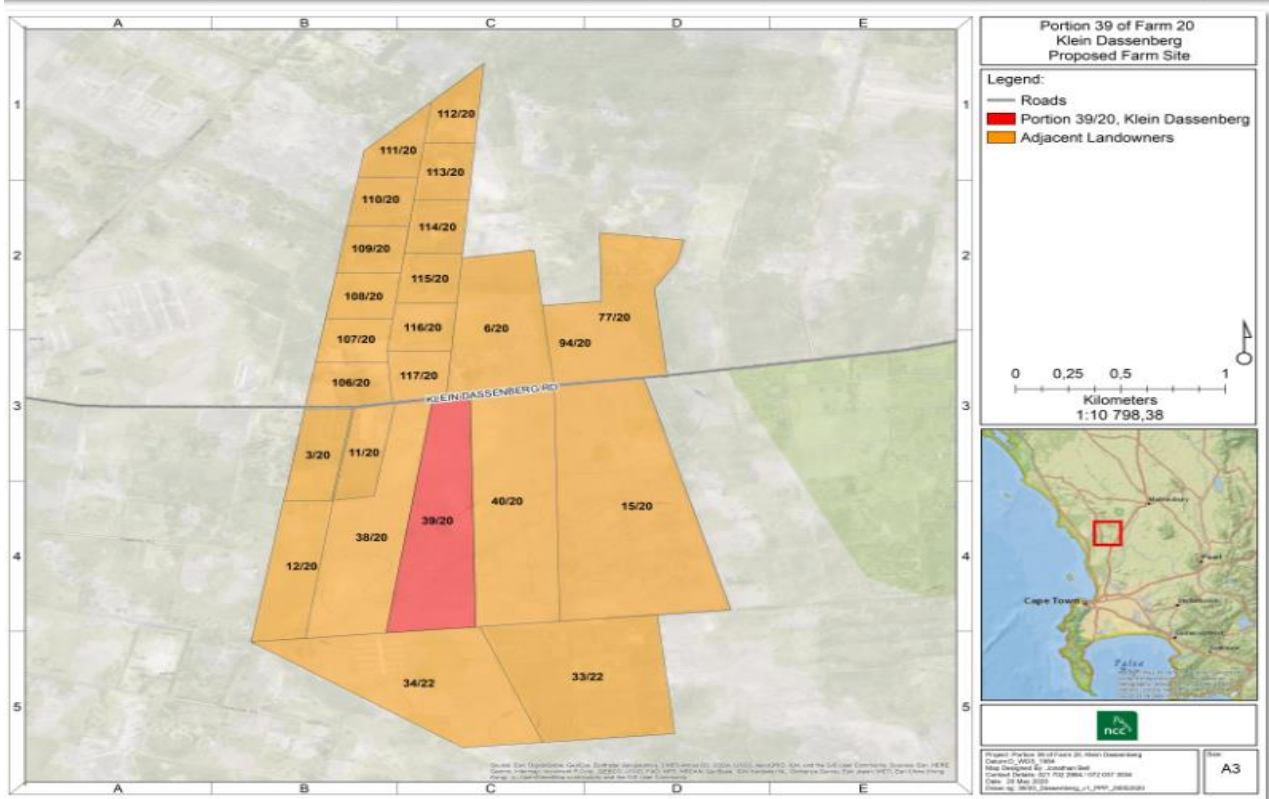
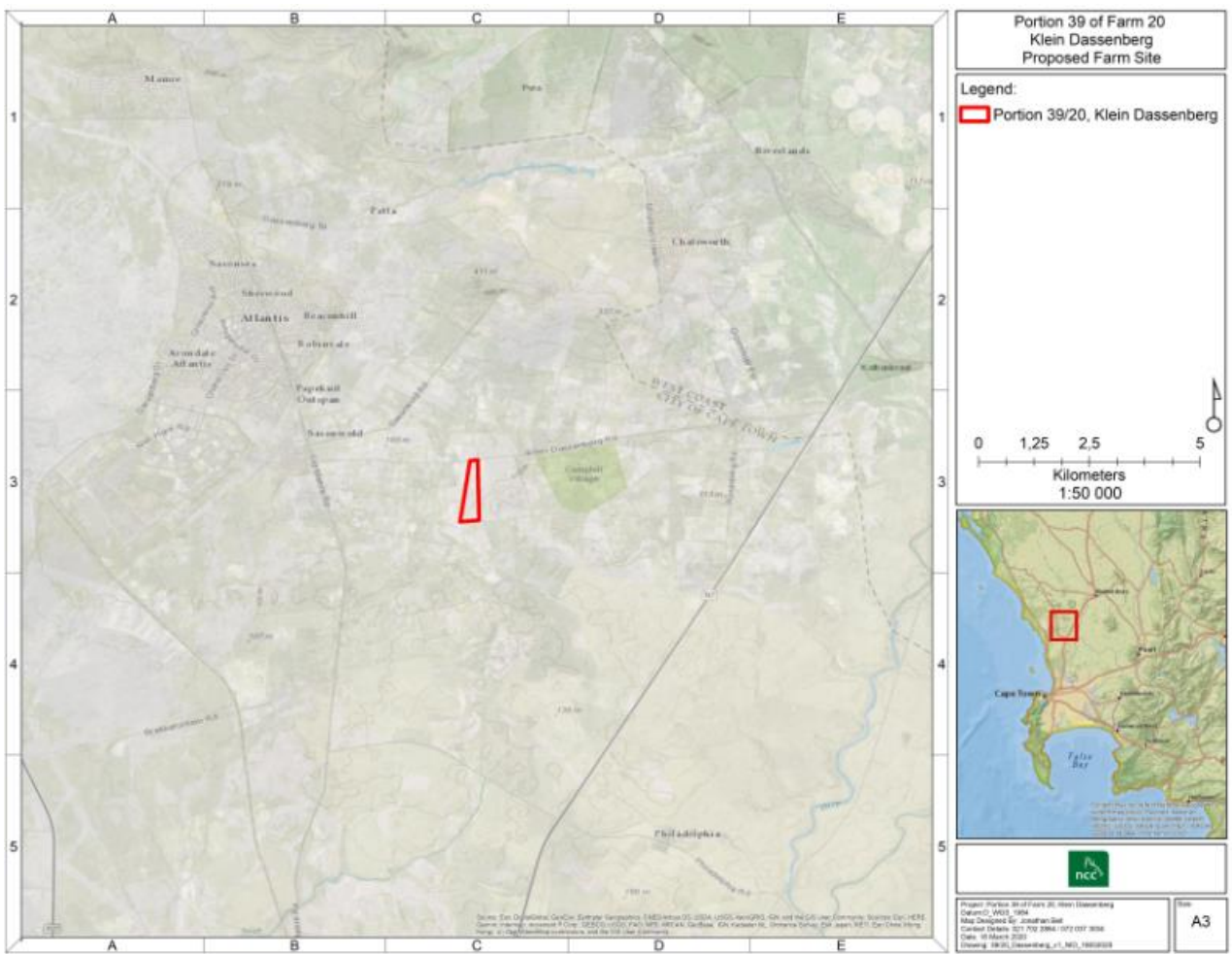
CC: (1) Mr. Nicholas Gates (NCC Environmental Services (Pty) Ltd.)
(2) Mr. M. Theron (City of Cape Town)

E-mail: nickg@ncc-group.co.za
E-mail: Morne.Theron@capetown.gov.za

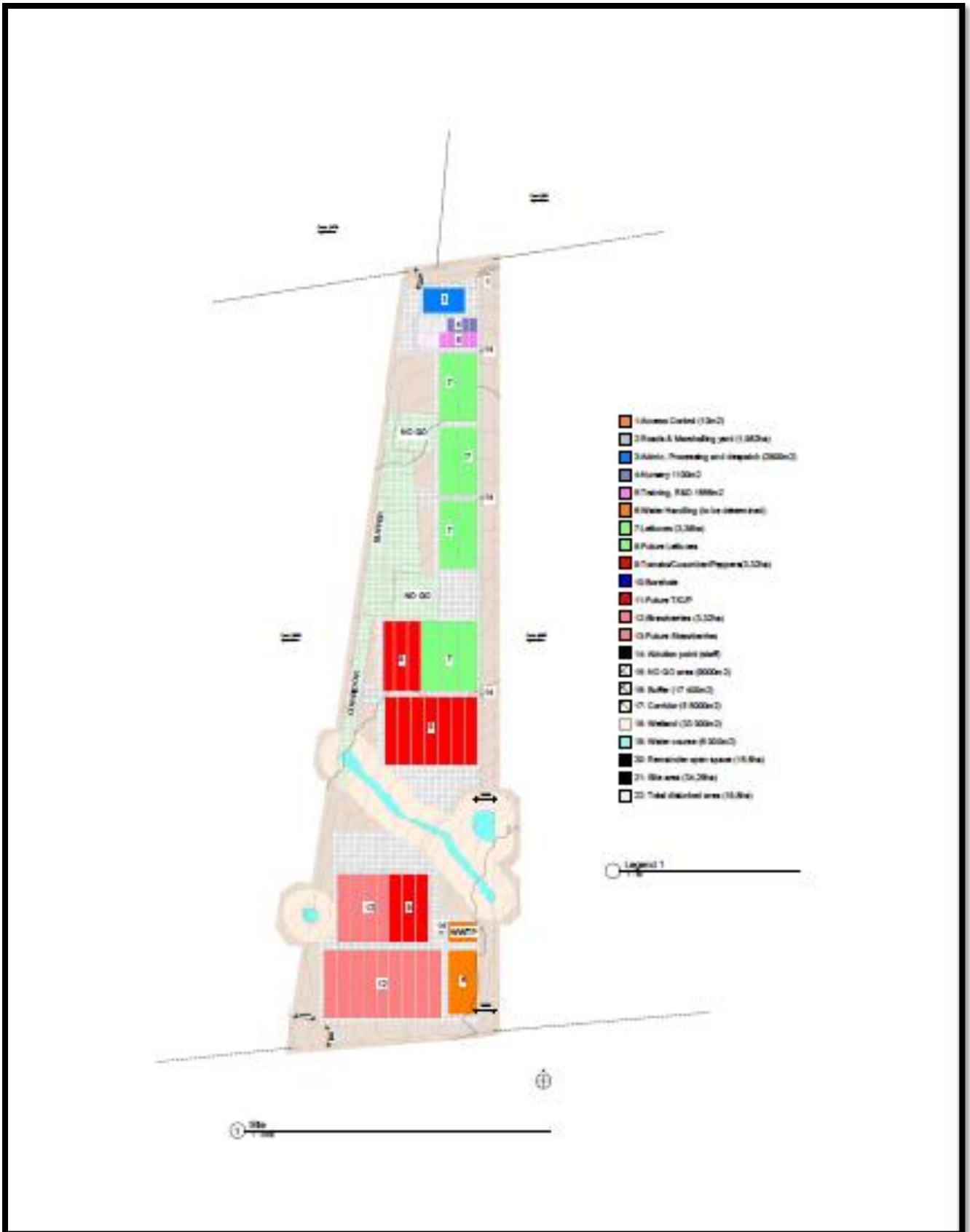
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NEAS EIA REFERENCE NUMBER: WCP/EIA/0000875/2021

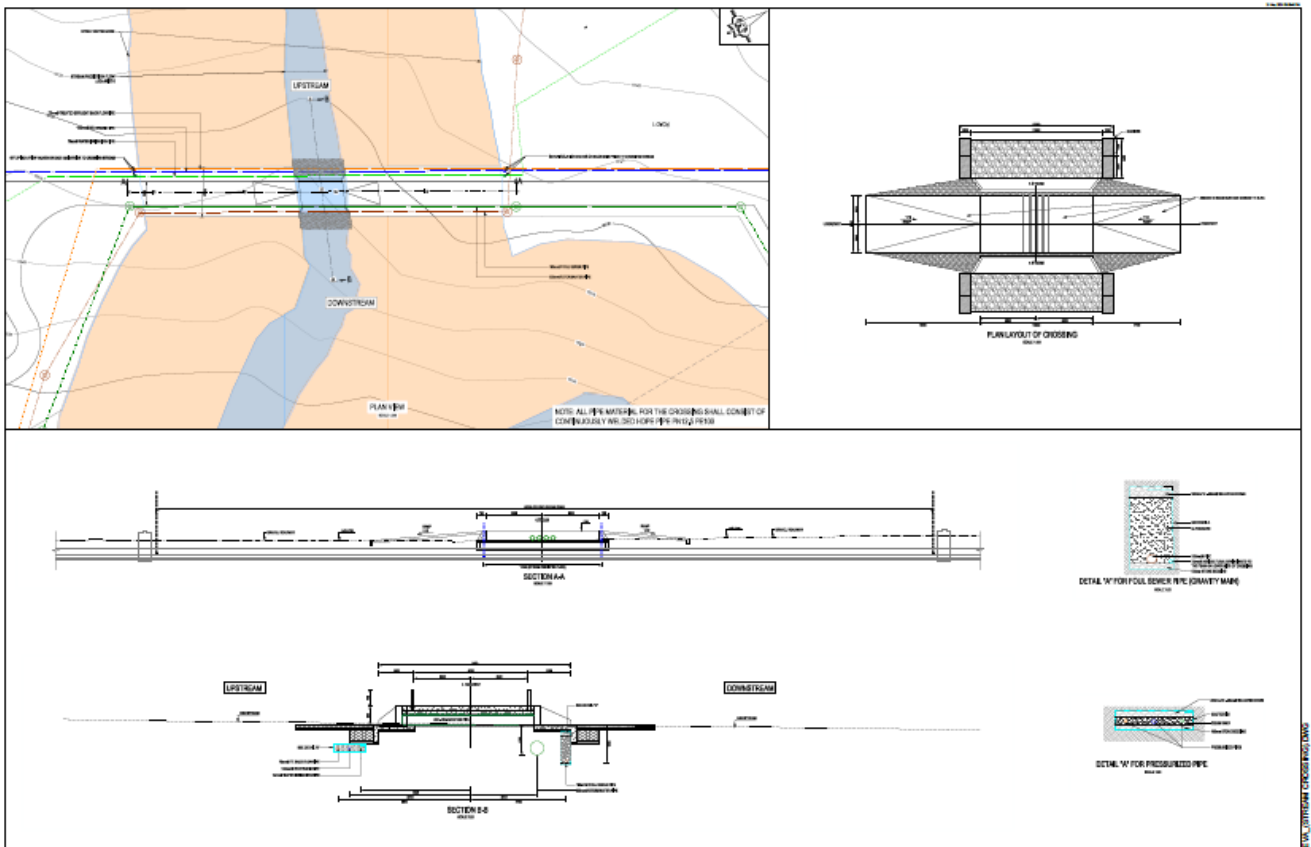
ANNEXURE 1: LOCALITY PLAN



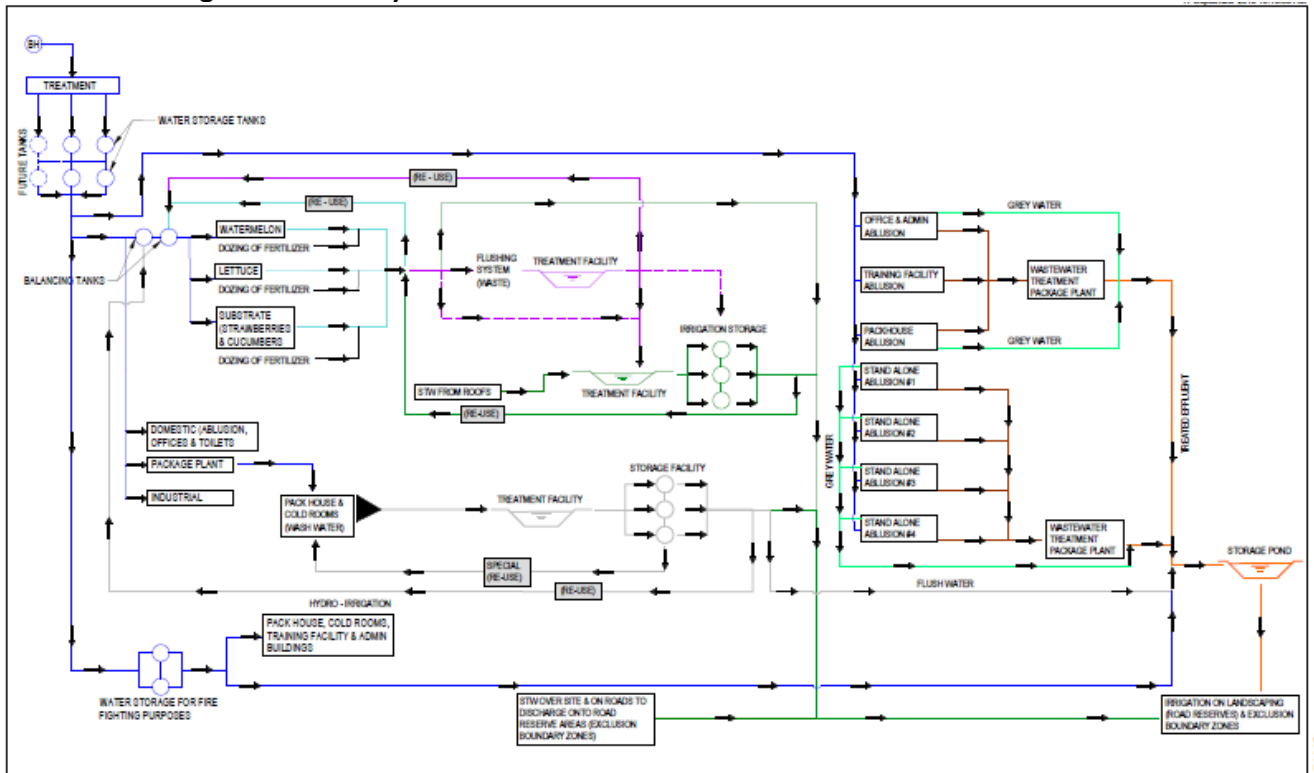
ANNEXURE 2: SITE PLAN



Stream crossing:



Water balancing schematic layout:



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 dated 12 February 2021, as received by the competent authority via electronic mail correspondence on 24 February 2021; the BAR dated May 2021; the EMPr submitted together with the BAR; the additional information received by the competent authority via electronic mail correspondence on 02 June 2021 and 04 June 2021; and the comment from the Department of Water and Sanitation received via electronic mail correspondence on 14 June 2021, respectively;
- 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 May 2021;
- d) 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:

- A Background Information Document was hand delivered to neighbouring property owners on 10 November 2020;
- Notifications were sent via e-mail and SMS on 10 November 2020 and 11 November 2020, respectively;
- A notice was placed on the perimeter fence of the property adjacent to the R304 on 10 November 2020;
- An advertisement was placed in the "Weskus Nuus" newspaper on 10 November 2020;
- Posters were placed on the information boards at the supermarket at the end of the R304 closest to Atlantis (Engen Saxonwold) on 10 November 2020;
- Posters were also displayed at the Wesfleur and Avondale Public Libraries on 10 November 2020;
- The pre-application BAR was made available for download on the website of NCC Environmental Services (Pty) Ltd., for the duration of the public participation process;
- The pre-application BAR was made available from 10 November 2020 until 10 December 2020;
- E-mails were sent on 08 April 2021 to announce the availability of the draft BAR;
- Follow-up emails were sent on 09 April 2021 to announce the correct dates for the review of the draft BAR;
- The draft BAR was made available from 08 April 2021 until 10 May 2021;
- E-mails were sent on 04 June 2021 to registered I&APs which incorporated the detailed design of the storm water attenuation dam, stream crossing, and water balance; and
- An e-mail was sent on 01 July 2021 to the Department of Water and Sanitation to address the comments raised by the Department of Water and Sanitation.

Authorities consulted

The authorities consulted included the following:

- Heritage Western Cape;
- Department of Water and Sanitation;
- Various departments within the City of Cape Town;
- Department of Environmental Affairs and Development Planning ("DEA&DP") Directorate: Pollution and Chemicals Management;
- DEA&DP Directorate: Waste Management;
- Western Cape Department of Transport and Public Works;
- Western Cape Department of Agriculture;
- Department of Agriculture, Land Reform and Rural Development;
- CapeNature; and
- Department of Trade and Industry.

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

2. Alternatives

Activity alternatives:

CEA is the preferred alternative as opposed to traditional farming methods. CEA is largely driven by resource scarcity and changing climatic conditions which place increased stress on conventional farming practices. CEA optimises plant growing conditions, thereby resulting in higher plant quality and larger production volumes whilst ensuring resource efficiency.

CEA has a number of advantages compared to traditional open field agriculture, as follows:

- CEA produces between 4 and 20 times the amount of produce on the same area of land as traditional open-field agriculture as it allows for higher density and faster growth.
- A reduction in water usage through reduced waste and evaporation in a controlled environment setting as well as the deployment of drip-fed irrigation technology.
- CEA reduces water consumption by up to 90% compared to traditional agriculture.
- CEA significantly reduces the use of harmful insecticides and herbicides and depending on the growing media, can even eliminate the use of such chemicals through hydroponics and soilless cultures.
- CEA enables the use of a variety of soilless growing media allowing for the production of food in less fertile areas.
- CEA enhances the opportunity for year-round cultivation and to provide fresh produce on a consistent basis, reducing the requirement for transporting food from elsewhere and issues related to the wastage of food when gluts occur.

The following design alternatives have been investigated:

Alternative 1:

This alternative entails the establishment of a controlled environment horticultural farming operation on Portion 39 of Klein Dassenberg Farm No. 20, Atlantis. Alternative 1 is similar in design to the preferred alternative but entails the total clearance of the site and the infilling of the aquatic features. This alternative was therefore rejected.

Preferred design alternative – herewith authorised:

The preferred alternative entails the establishment of a controlled environment horticultural farming operation on Portion 39 of Klein Dassenberg Farm No. 20, Atlantis. Approximately 10ha of the property will be utilised for CEA growing areas for high-intensity farming as well as the

establishment of operational and ancillary buildings. The growing area will include tomato, cucumber, pepper, lettuce and strawberry cultivation. The proposed development footprint is approximately 195 000m².

The following facilities will also be established:

- Approximately 10ha of CEA units;
- Cleaning, sorting and packing hall;
- Cold storage;
- Multi-purpose facility;
- General storage facility;
- Waste Water Treatment Works;
- Storm water detention pond;
- Offices; and
- Security building and infrastructure.

In addition to the growing areas and administration buildings, the farm will have its own nursery facilities to produce seedlings for production on the farm as well as for sale to farmers. The farm also includes Training and Research Development Units. An area of 9.78ha is required for buildings, roads and services.

The facility will be split into a North and South section by the on-site watercourse and associated buffer areas. The North and South sections will be connected by an internal road system including a low-level road crossing across the watercourse supported by a pipe culvert system to support the roadway across the stream. Subterranean pipelines for services such as irrigation water, sewage and storm water will run adjacent to the access road.

An area of approximately 14.22ha will consist of open areas, buffer areas, watercourses and connecting corridors and will be designated no-go areas. The no-go areas contain indigenous vegetation which includes Species of Conservation Concern, and the watercourse which dissects the property into a North and South. The North and South will be connected via a buffer and protected in perpetuity through a dedicated Conservation Management Plan. Rehabilitation, including the propagation of the Species of Conservation Concern will be undertaken in accordance with a dedicated Rehabilitation Plan.

All infrastructure will be designed to convey storm water run-off via pipes and natural channels to a collection pond for treatment and/or reuse. Effluent (sewerage) will be collected and treated on-site and re-used to supplement water use in the irrigation system, thus contributing to a reduction in the abstraction of water from the aquifer.

The Waste Water Treatment Works will be that of the Becon Watertech system, or a similar system, which is a configured bio-filter domestic sewage treatment process capable of producing treated effluent quality that meets the South African General Authorisation Standards. The Becon Watertech configuration is based on the trickling filter process and deploys the Rotating Biological Contactor ("RBC") derivative. The inclusion of an air scrubbing unit with a spray-tower scrubber to assist with potential odours emanating from the on-site sewer treatment facility will be explored, or systems which serve a similar function.

Access to the site will be via the Klein Dassenberg Road. An entrance from the Klein Dassenberg Road will be established across the right-of-way servitude roadway which will be registered along the boundary of Portions 39 and 40 of Farm No. 20, Atlantis. The servitude road will have a dimension of 105m x 30m.

The main access collector backbone road will be a class 5 road. The road will be used more frequently since it will be the main link between the packhouse and sorting areas and the

individual greenhouse structures. The road will be formalised with storm water drainage and will have a hard-wearing surface consisting of a two track 3-block track.

The interlinking access roads between the greenhouse structures will also be class 5 roads. The internal access roads will be constructed with a G5 wearing course to improve durability and suppress dust on the roadway during frequent use. The road will be shaped with a 2.5% cross fall to facilitate storm water drainage. Side channels will be provided to assist in storm water management.

Water will be abstracted from the underlying aquifer via boreholes. The total daily water demand for the proposed development is 500m³/day or 182 500m³/annum.

The following additional infrastructure is required for the water supply system:

- Pumping equipment inclusive of valves, electrical motors, electrical control systems, backflow prevention and piping works;
- New storage tanks;
- Treatment facility and associated infrastructure and equipment prior to discharge of water into the water network for the use in the hydroponic system and for domestic consumption areas;
- Additional water storage tanks for firefighting purposes, which do not require treatment of the water quality; and
- Interconnecting the back-up borehole to the system, inclusive of all associated equipment and infrastructure required for the integration into the water supply system.

Monitoring wells will be installed before the construction phase is completed. A set of one shallow and one deep monitoring borehole will be installed up-gradient of the site to determine the quality of groundwater entering the site, as well as one down-gradient of the site so that any groundwater impacts from the site can be detected and dealt with timeously.

The exact positions of the monitoring boreholes will be determined pre-construction and after approval has been obtained to attain the best position to intercept groundwater and to select the best position to identify impacts which may stem from the proposed development.

This is the preferred alternative for the following reasons:

- The aquatic features and areas of botanical significance are avoided.
- Less vegetation will be cleared.
- The proposed development incorporates no-go and buffer areas, as well as the rehabilitation of certain areas.
- The design considerations as recommended by the botanical and freshwater specialists will be implemented, as buffers will be established around sensitive floral and aquatic features.

"No-Go" Alternative:

This alternative entails maintaining the *status quo* and as such, the proposed controlled environment horticultural farming operation will not be established. This alternative was not deemed as preferred as employment opportunities will not be realised. The opportunity to conserve the sensitive botanical and freshwater features will also be lost.

3. Impacts, assessment and mitigation measures

3.1 Activity Need and Desirability

The site is zoned for Agriculture. The proposed development is therefore in line with the designated zoning as it is intended to produce various vegetables.

The proposed development is predicted to employ, train and educate more than 200 people and create sustainable permanent jobs in the area, which has a high unemployment rate in the Western Cape. The technology to be used allows for year round/continuous cultivation and harvest, therefore seasonal workers are not required.

In addition to the growing areas and administration buildings, the farm will have its own nursery facilities to produce seedlings for production on the farm as well as for sale to farmers. The farm also includes Training and Research Development Units which will minimise risk when training new labour.

Production machinery for cleaning, sorting, packing (conveyers, scales, tables, strapping & wrapping) will be utilised, but on a manual basis, so that more employment opportunities are created. It is anticipated that approximately 150 metric tons of produce will be harvested per week. The establishment of an effective and efficient post-harvest facility with adequate cold storage facilities will allow for further reductions in the proportion of crops lost through spoilage.

Farm worker employment strategy:

- The holder plans to partner with local Non-Governmental Organisations ("NGOs") such as Yes4Youth and Harambee to help find the best suited workers for the farm.
- The holder will focus on the employment of uneducated and unemployed local women and youth in Atlantis, as they will impact most on their community and households.
- The holder plans to specifically target those looking for growth and education so that they may rise within the farm hierarchy and become future agricultural entrepreneurs. Through the education and certification of farmers that have completed the requisite training courses at the farm, the holder will be in a position to play an important role in enabling farm workers to secure the necessary finance to acquire modern agricultural technologies by acting as a conduit and middleman between investors and farmers.
- It is intended to, where possible, employ disabled people who are currently in the care of NGOs like Orion, Camphill and Emmanuel.

The proposed development will create employment opportunities during the construction phase and will provide construction workers with an opportunity to improve their skill set and experience in the construction industry. The proposed development will therefore significantly contribute towards the socio-economic value of the area.

The proposed development will create significant numbers of unskilled, semi-skilled and skilled jobs in the greenhouses, post-harvest facility, site maintenance and office jobs, while creating further indirect jobs along the value chain.

All farm workers who would like to study will have a safe place to study, healthy food and mentorship. The holder plans to educate their employees to a National Vocational Qualification level equivalent to Matric, with the help of NGOs like The Sustainability Institute and IkamvaYouth.

The Provincial Spatial Development Framework, 2014 ("PSDF") promotes sustainable farming practices that generate positive socio-economic returns and activities that do not pose significant risks to the environment, which is proposed by the CEA Farm. The PSDF promotes sustainable farming activities that generate positive socio-economic

returns and that do not pose significant risks to the environment which is proposed by the proposed development.

The site is located in an area of agricultural significance in accordance with the City of Cape Town Municipal Spatial Development Framework, 2018 ("MSDF"). The MSDF refers to the Klein Dassenberg Smallholdings Development Framework, which indicates that activities that are in line with the provisions of the Klein Dassenberg Smallholdings Development Framework along the eastern edge of the R304, will be supported. The proposed development is considered to fall within the boundaries of the Klein Dassenberg Smallholdings Development Area as outlined in the Framework.

3.2 Botanical impacts

A Botanical Assessment Report dated September 2020 has been compiled by Capensis Ecological Consulting (Pty) Ltd to assess the botanical impacts associated with the proposed development. The site is located in an area of high botanical sensitivity as the vegetation type, Atlantis Sand Fynbos, is listed as critically endangered and endangered. The entire site is included in the City of Cape Town Biodiversity Network and is classified as "Other Natural Areas".

Limited agricultural activities, including grazing currently occur on the site. The overall condition of the vegetation on the site is degraded to highly degraded. The original overstorey shrub layer has been completely removed and the site is dominated by low to very low vegetation.

Despite the lack of indigenous shrubs, the site is still dominated by indigenous species. The most dominant species are kweek, polgras and *Dasispermum hispidum*. Exotic grasses such as ripgut brome, wild oats and ryegrass are common, as are agricultural weeds such as lotus and vetch.

The site has mostly been kept free of the invasive Port Jackson willow (*Acacia saligna*). Piles of cleared Port Jackson are visible on the site and a low density of seedlings are emerging. Two large established patches of the species have been left on the site.

Indigenous annuals are fairly common on the site and include *Nemesia affinis*, *Phyllopodium cephalophorum*, *Lyperia tristis* and the reenblom (*Dimorphotheca pluvialis*). Succulents include varkslaai (*Conicosia pugioniformis*) and *Carpanthea pomeridiana*. Bulbs occur in low densities throughout the site.

The critically endangered *Aspalathus retroflexa* subsp. *bicolor* occurs in two small populations (total of approximately 10 plants) and is located in two localities. The species is only known from approximately 6 small and very fragmented populations. Any new populations found are therefore regarded as regionally significant.

One Species of Conservation Concern is found on the edges of the seasonally wet areas, the endangered *Hermannia procumbens* subsp. *myrrhifolia*. Approximately 40 plants are found on the site and is therefore a regionally significant population.

The near threatened *Ficinia pygmaea* is found sporadically throughout the seasonally wet areas. Another potentially threatened Species of Conservation Concern, the endangered *Manulea* cf. *augei*, is found in the vicinity of the seasonally wet areas, however, the identification has not been confirmed.

A low sensitivity rating is applied to the greater part of the site for the following reasons:

- (i) The vegetation on the site is degraded to highly degraded and does not represent the original vegetation in terms of diversity and composition;
- (ii) The site does not provide connectivity between intact remnants;
- (iii) The area has low to moderate rehabilitation potential; and
- (iv) The site is included in the BioNet as "Other Natural Area", which was confirmed during the site visit by the botanical specialist.

A high sensitivity rating is applied to the areas that contain the Species of Conservation Concern and the seasonally wet areas for the following reasons:

- (i) Two of the Species of Conservation Concern, namely the critically endangered *Aspalathus retroflexa* subsp. *bicolor* and the endangered *Hermannia procumbens* subsp. *myrrhifolia* are both regionally significant populations; and
- (ii) The seasonally wet areas are inherently sensitive as wetlands. Two other Species of Conservation Concern have been identified in the area (*Ficinia pygmaea* and *Manulea* cf. *augei*).

The two regionally significant populations of Species of Conservation Concern and the seasonally wet areas are deemed to be highly sensitive and will be regarded as no-go areas. An area of 30-40m around each population will be established to protect the two sub-populations of *Aspalathus retroflexa* subsp. *bicolor*. The two populations will be connected via a buffer and protected in perpetuity through a Conservation Management Plan. A Rehabilitation and Conservation Management Plan has been compiled and is included as part of the EMPr. Rehabilitation of this area, including the propagation of the Species of Conservation Concern, will be undertaken. The no-go areas will be connected via a corridor along the western boundary of the site.

The exclusion of the high sensitivity areas and buffers from the development footprint will reduce the botanical impact to low-medium negative. The conservation and rehabilitation of the high sensitivity areas will reduce the impact of the proposed development significantly and can result in a low positive impact.

The proposed development is acceptable from a botanical perspective and can result in a positive outcome for conservation with the implementation of mitigation measures.

3.3 Freshwater Impacts

A Freshwater Assessment Report dated September 2020 was compiled by NCC Environmental Services (Pty) Ltd., to assess the potential freshwater impacts associated with the proposed development.

A non-perennial river, the Sout River, originates at the western extremity of the site flowing more-or-less in a south-easterly direction. A distinct riparian vegetation zone, showing typical zonation towards terrestrial species, is not apparent from within and adjacent to the watercourse. No restios, sedges, rushes, bulrushes, eriocaulons or yellow-eyed grasses are present.

An artificial un-channelled valley-bottom wetland is present on the site. No active channel connects the wetland to any watercourse. Previous agricultural activities have modified the original vegetation associated with the wetland in a significant way. The wetland is not afforded any international protection status, however, it has a degree of formal protection being considered a Freshwater Ecosystem Priority Area.

Freshwater biodiversity on the site is considered to be low and there are no freshwater Ecological Support Areas or freshwater Critical Biodiversity Areas on the site.

A Fish Support Area for the freshwater fish species Cape galaxias has been delineated within the same locality of the site. However, the very infrequent to no surface flow conditions for the Sout River means the proposed development will have no direct impacts on the species and other fish species and their respective habitats.

The freshwater specialist study concluded that the site is of low sensitivity for aquatic biodiversity. The freshwater specialist's recommendations have been included in the conditions of this Environmental Authorisation and the EMPr.

3.4 Geohydrological impacts

A Geohydrological Report dated July 2020 was compiled by Geomayim Groundwater Consulting (Pty) Ltd., to assess the potential geohydrological impacts associated with the proposed development.

Two existing boreholes supply water to the proposed development. The boreholes are situated in the upper northern section (EHPBH2) and mid-section (EHPBH). The boreholes are not geohydrological linked and can be used as independent water supply sources.

There are groundwater users but no surface water users within a 2km radius of the site. Seven of the ten identified boreholes are used for domestic consumption, irrigation or livestock farming.

The borehole to be used has been subjected to a pump/yield test to determine its safe sustainable yield as a bulk water supply source. To determine if the proposed borehole will affect existing neighbouring boreholes, an existing on-site borehole was monitored for the entire duration of the pump test and the results indicated no influence over a 48-hour period.

Only one of the two boreholes will be used as a water supply source. The second borehole will not be used due to its close proximity to the no-go areas and will most likely be included as part of the water quality monitoring plan to monitor the impact on the water quality of the deeper fractured rock aquifer.

A Water Use License Application has been submitted to the Department of Water and Sanitation. The Geohydrological Report indicated that potential leaks and accidental spillage could impact on groundwater beneath and down-gradient of the site. As such, mitigation measures were recommended by the specialist. These recommendations have been included in conditions of this authorisation and the EMPr.

3.5 Bulk services infrastructure

Water supply:

The water supply will be obtained from the existing borehole situated along the northwestern corner of the site (EHPBH2) and another (EHPBH) as backup. The abstracted water will be stored in tanks and treated on site so that it is fit for human consumption.

Water usage will not exceed 500 000 litres per day. Water supply is required for irrigation purposes and to wash harvested crops in preparation for packaging, storage and collection/delivery to the client. Water will also be used for domestic purposes, the air-conditioning system of the packhouse, administrative buildings and the farm manager who will be living on the site and staff who will need potable water for consumption and ablutions.

The floor area of the packing facility also needs to be washed-down and cleaned on a daily basis. It is intended to use treated storm water and treated effluent from the storm water retention pond and foul sewer treatment plant for the wash-down. Treated effluent can also be used to flush the toilets.

Water will further be recycled and can also be supplemented with treated storm water run-off. Rainwater harvesting will be done and used for dust control or wash water for green house floors. Excess treated storm water run-off will be used for irrigation of the building buffer zone areas.

Bulk irrigation is required, and the irrigation demand will be supplied by storm water runoff that will be stored in a wet detention pond, treated and re-used in a continuous cycle.

The 30m Building Buffer Zone areas around the perimeter of the site will function as private open spaces. These areas will be irrigated with the surplus treated storm water run-off that will not be re-used in the hydroponic system. The storm water run-off will be treated, and heavy metals be removed. The treated run-off will be stored in an open detention pond (wet pond), where evaporation will assist in dispersing the water. The system will support vegetative growth on the site as well as to protect the downstream properties from receiving large volumes of concentrated run-off from the site.

Sewerage treatment:

There is no formal sewer connection that links the site to the Atlantis sewer network. Therefore, on-site treatment of effluent is required. The following sewerage infrastructure is required:

- A 160mm diameter outfall sewer;
- A 200mm diameter outfall sewer; and
- A Waste Water Treatment Works.

The Waste Water Treatment Works will be that of the Becon Watertech system, or a similar system, which is a configured bio-filter domestic sewage treatment process. The treatment facility will be located along the lower southeastern corner of the site. The proposed Waste Water Treatment Works will include the following:

- A primary phase separation through septic tanks;
- A secondary settling tank; and
- Trickle filtering.

The inclusion of an air scrubbing unit with a spray-tower scrubber to assist with potential odours emanating from the on-site sewer treatment facility will be explored, or systems which serve a similar function.

The biological contractor derivative plant is not affected by overloading of the sewer system. Daily desludging is not required as sludge is continuously returned to the septic tank and normally requires desludging once every 12 months. Separate sealed septic tanks assist the system to eliminate any smells and odours. The capacity of the septic tank is designed in accordance with recommendations imposed by the South African Institute of Water Pollution Control. The treated effluent will be discharged into the upper compartments of the storm water retention pond for final polishing and settlement. The treated effluent will comply with the special limit of water quality under SANS 241-1:2015.

The brine will be collected and stored on-site in a bunded and controlled partitioned area which will be collected and removed weekly to be disposed of at the City of Cape Town Waste Water Treatment Works and an independent specialist contractor will be employed. Primary brine treatment will be done on-site to either minimise the brine volume, to recover a solid waste or to recover valuable salts and a business partner will be utilised.

Storm water management:

There is no formal storm water drainage system or treatment system on the site. The greenhouses will generate storm water runoff equivalent to a 10.8ha impervious area and therefore storm water management is required to prevent erosion and localised flooding. The areas between the greenhouses will be used as an infiltration area for storm water from small downpours. Surface drainage, channels, overland escapes and underground pipes will be formalised to convey storm water to a storm water retention pond, to cater for run-off during intense downpours.

The major storm water system will address downstream flood damage risks, and each individual area and its associated infrastructure on the site will be designed such that the downstream post-development flood risks are no greater than that of the pre-development flood risks.

The major storm water system will consist of detention dams, open channels, roadways and other hard impermeable surfaces, as well wetlands that will manage storm water. The storm water discharged from the sub-catchment will be accommodated in the major storm water system where capacity will be allowed for to convey the run-off from a 1:50 year storm event.

The main storm water system will be the water that is collected from the greenhouses and surrounding areas (sub-catchments 1, 2 and 3) which will be transported by underground pipes to the eastern side of the property. From here it will discharge into a series of five earth swales sloping to the south. Any storm water overflowing down to the final swale, situated above the natural drainage line, will be conveyed to the storm water retention pond south of the site. Storm water from the greenhouses situated in sub-catchment 4 will flow directly into the retention pond. Storm water will be treated in the retention pond where after it will be pumped back into the irrigation system.

Individual sub-catchments will be served by underground pipe networks as well as open channels flowing to the swales that will follow the natural fall to the south. The first three swales will accommodate run-off from sub-catchments 1 and 2 with a total storage of approximately 900m³ plus freeboard. The remaining two swales will accommodate run-off from sub-catchment 3 that will have an approximate storage capacity of 520m³ plus freeboard. The storm water retention pond will thus cater for the overflow from the swales plus the 850m³ runoff from sub-catchment 4. An additional pond along the southern border will be used for emergency overflows.

The minor storm water system will consist of measures provided to accommodate storm water runoff within "green" areas and convey the run-off to the major storm water system *i.e.*, road storm water, catch pits, channels and collector pipes.

Electricity supply:

The site is situated within Eskom's supply area, in close proximity to Dassenberg Farmers 2 (11kV network). Eskom indicated that, with minor network configuration changes, it is possible to shift the network to Dassenberg Farmers 1 (11kV) with no additional

strengthening required. The holder will be responsible for the bulk connection infrastructure and related costs.

With the de-loading of the feeders and associated modifications to the network, bulk electricity supply can be made available. However, capacity cannot be reserved until a formal application is submitted and the resulting bulk contribution fees are paid by the holder.

An application has been submitted to support the Eskom investigation into the possible network changes and/or supply to the site. Costs will be finalised and provided by Eskom once the supply network analysis has been done internally by Eskom. The capacity can only be reserved, once the acceptance of a budget quote issued by Eskom has been established.

3.6 Traffic impacts

A Traffic Impact Assessment Report dated February 2021 was compiled by BVi Consulting Engineers Western Cape (Pty) Ltd., to assess the potential traffic impacts associated with the proposed development.

The main external road network in the vicinity of the site consists of the N7, Regional Route 304 (R304) and Klein Dassenberg Road (DR01134). The capacity analysis for the existing 2021 scenario revealed that Klein Dassenberg Road currently operates at Level of Service ("LOS") A, *i.e.*, free flow conditions during both peak periods. There is currently no development on Portions 39 and 40 of Farm Klein Dassenberg No. 20, which means that the access point of Portion 40 also currently operates at free flow conditions and does not influence Klein Dassenberg Road in any way.

Trips generated during the construction phase will primarily comprise the transportation of planting materials, personnel, construction and other facility materials. These trips will comprise of normal, medium and heavy vehicles. Another contributor to trips generated during the construction phase will be daily commuters/workers.

It is anticipated that 10% of the workers will make use of private vehicles who will travel from their permanent or temporary residences to the site on a daily basis. The remainder of the workers (90%) will be transported to the site via buses or minibus-taxis. The quantities of the vehicles will fluctuate and will depend on the number of workers, costs, routes and operating hours. It is estimated that 70% of workers will make use of minibus-taxis and the remaining 30% of workers will make use of buses, which translates to nine minibus-taxis and one bus twice a day.

The produce will be transported to various supermarkets with either 10-ton or 5-ton trucks and it is estimated that between eight and sixteen trucks will travel to and from the site on a weekly basis, translating to three trucks per day. Another contributor to trips generated during the operational phase will be daily commuters/workers. It is anticipated that the number of workers during the operational phase will be similar to that of the construction phase, *i.e.*, 200 workers. This essentially means that the number of trips will also be similar.

The future traffic demand and capacity for Klein Dassenberg Road and/or the Portion 40 access road (background traffic and construction phase 1) indicates the intersection will operate at acceptable LOS during both peak periods, *i.e.*, stable flow. The future traffic demand and capacity for Klein Dassenberg Road and/or the Portion 40 access road (background traffic growth and traffic generated during the second

construction phase) indicates the intersection will operate at acceptable LOS during both peak periods, i.e., stable flow.

An access point is situated northeast of the site, off Klein Dassenberg Road. The existing access point of the adjacent property (Portion 40 of the Farm Klein Dassenberg No. 20) will be utilised, as the spacing requirement for a new access point cannot be met. As such, a right-of-way servitude is currently being registered between Portions 39 and 40. Furthermore, to comply with the minimum spacing requirements, the existing access gate of Portion 40 will be relocated opposite the access of Portion 6. The access points of Portions 6 and 40 will function as a two-way stop control intersection.

Access control in the form of a boom and security building will be provided on the site. It is anticipated that with the implementation of the right-of-way servitude, queueing at the Klein Dassenberg Road/Portion 40 access road intersection will not be an issue.

The Western Cape Department of Transport and Public Works indicated in an electronic mail correspondence dated 03 December 2020 that they have no objection against the proposed development.

3.7 Dust, noise and visual impacts

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

The development will result in both negative and positive impacts.

Negative Impacts:

- Potential impacts on aquatic ecosystems;
- Potential noise, traffic and visual impacts; and
- Loss of indigenous vegetation.

Positive impacts:

- Areas of high sensitivity will be rehabilitated and maintained;
- Employment opportunities will be created during the construction and operational phases of the development;
- Contribution to the local economy; and
- Diversification and increase in agricultural activities on existing agricultural land.

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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