



**REFERENCE:** 16/3/3/1/B1/4/1054/22  
**NEAS REFERENCE:** WCP/EIA/0001149/2022  
**DATE OF ISSUE:** 24 MARCH 2023

The Board of Directors  
Lactalis SA (Pty) Ltd  
Strand Road  
**STELLENBOSCH**  
7600

**Attention: C. Fagan**

Tel. (021) 809 1400  
Email: connie.fagan@lactalis.co.za

**APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014, (AS AMENDED): PROPOSED WASTEWATER TREATMENT WORKS ("WWTW") AND ASSOCIATED INFRASTRUCTURE FOR LACTALIS FACTORY ON THE REMAINDER OF FARM NO. 695 BONNIEVALE**

1. With reference to the above application, the Department 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 Environmental Impact Assessment 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 ("I&APs") are provided with access to and reasons for the decision, and that all registered I&APs are notified of their right to appeal.
3. Your attention is drawn to Chapter 2 of the National Appeal Regulations, 2014 (as amended), which prescribes the appeal procedure to be followed. This procedure is summarized in the attached Environmental Authorisation.

Yours faithfully

**MR. ZAAHIR TOEFY**

**DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)**

**DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING**

CC: (1) I. Eggert (Amathemba Environmental Management Consulting CC) Email: ingrid@inclover.co.za  
(2) Municipal Manager (Langeberg Municipality) Email: mm@langeberg.gov.za  
(3) T. Brunings (Langeberg Municipality) Email: tbrunings@langeberg.gov.za  
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## ENVIRONMENTAL AUTHORISATION

### APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014, (AS AMENDED): PROPOSED WASTEWATER TREATMENT WORKS ("WWTW") AND ASSOCIATED INFRASTRUCTURE FOR LACTALIS FACTORY ON THE REMAINDER OF FARM NO. 695 BONNIEVALE

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 National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") and the Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended), the Competent Authority herewith **grants Environmental Authorisation** to the applicant to undertake the listed activities specified in Section B below with respect to the Site Alternative 2 and Technology Alternative A1, described in the Basic Assessment Report ("BAR"), dated November 2022.

The applicant for this Environmental Authorisation is required to comply with the conditions set out in Section E below.

#### A. DETAILS OF THE APPLICANT FOR THIS ENVIRONMENTAL AUTHORISATION

Lactalis SA (Pty) Ltd  
% C. Fagan  
Strand Road  
**STELLENBOSCH**  
7600

Tel. (021) 809 1400  
Email: connie.fagan@lactalis.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 activities	Activity/Project Description
<p>EIA Regulations Listing Notice 1 of 2014: Activity Number 12: The development of—</p> <ul style="list-style-type: none"> <li>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or</li> <li>(ii) infrastructure or structures with a physical footprint of 100 square metres or more;</li> </ul> <p>where such development occurs—</p> <ul style="list-style-type: none"> <li>(a) within a watercourse;</li> <li>(b) in front of a development setback; or</li> <li>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; —</li> </ul> <p>excluding—</p> <ul style="list-style-type: none"> <li>(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</li> <li>(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;</li> <li>(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;</li> <li>(dd) where such development occurs within an urban area;</li> <li>(ee) where such development occurs within existing roads, road reserves or railway line reserves; or</li> <li>(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.</li> </ul>	<p>Some development components (or portions thereof) will be within 32m of the Breede River as well as one of its tributaries and will exceed the 100m<sup>2</sup> threshold.</p>
<p>Activity Number 19: The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p>	<p>Approximately 40m of the discharge pipeline and outfall infrastructure will be located within the Breede River's wetlands and riparian habitat. Installation of this infrastructure will require excavation and movement of soil of approximately 50m<sup>3</sup>.</p>

<p>(a) will occur behind a development setback;</p> <p>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</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 Number 25: The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres.</p>	<p>The WWTW will have the capacity to treat 2 500m<sup>3</sup> of effluent per day.</p>
<p>Activity Number 28 Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:</p> <p>(i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or</p> <p>(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;</p> <p>excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.</p>	<p>The proposed WWTW will form part of the industrial facility, will be approximately 2ha in extent and will be located on land previously used for agricultural purposes.</p>
<p>EIA Regulations Listing Notice 3 of 2014: Activity Number 4: The development of a road wider than 4 metres with a reserve less than 13,5 metres.</p> <p><b>i. Western Cape</b></p> <p>i. Areas zoned for use as public open space or equivalent zoning;</p> <p>ii. Areas outside urban areas;</p> <p>(aa) Areas containing indigenous vegetation;</p> <p>(bb) 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</p> <p>iii. Inside urban areas:</p>	<p>The proposed access road will be up to 8m wide. The development of a section of approximately 80m of the access road nearest to the R317 will require the removal of indigenous vegetation.</p>

<p>(aa) Areas zoned for conservation use; or (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority.</p>	
<p>Activity Number 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><b>i. Western Cape</b></p> <p>i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</p> <p>ii. Within critical biodiversity areas identified in bioregional plans;</p> <p>iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas;</p> <p>iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or</p> <p>v. On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.</p>	<p>The proposed associated infrastructure that forms part of the WWTW will require the removal of more than 300m<sup>2</sup> of endangered indigenous vegetation.</p>

The abovementioned list is hereinafter referred to as "**the listed activities**".

The holder is herein authorised to undertake the development in respect of the following alternative:

The development of a WWTW with the capacity to treat a maximum of 2 500m<sup>3</sup> of waste effluent per day with a development footprint of approximately 10 277m<sup>2</sup>. The WWTW will comprise of the following:

- Inlet channel and screens to remove coarse material. Two skips are proposed to temporarily store coarse and fine screenings.
- Equalisation/buffer dam that can cater for 24 hours production (2 500m<sup>3</sup>), which will serve to equalise the pH and overall composition of the effluent prior to the treatment process.
- A Dissolved Air Flotation ("DAF") unit that will be housed in a brick wall structure with an Inverted Box Rib ("IBR") roof cladding with the associated tank blower, drywell for feed pumps, a sump, vertical shaft mixers, decanter feed pumps, decanter units, polyelectrolyte makeup unit, poly dosing pumps, laboratory, staff amenities, control room, motor control room and standby generator.

- A Clarifier (26m round concrete structure).
- An Activated Sludge Reactor with mechanical slow speed surface aerators. This rectangular concrete structure will be divided into two zones, i.e., an aerobic zone and an anoxic zone. The reactor also includes smaller structures like a recycle chamber, recirculating aquaculture systems ("RAS") recirculation sump, WAS extraction sump, deaeration tank and an activated sludge contact zone.
- A service water tank.
- A yard, including a skip collection area for solid by-products and parking.

The following technology will be used:

Conventional Activated Sludge ("CAS") - Aerobic wastewater treatment is a process where bacteria utilize oxygen to degrade organic matter (generally quantified as biochemical oxygen demand or BOD) and other pollutants involved in various production systems. The degradation of BOD is achieved through aerobic bacteria in a system. The bacteria utilize oxygen as an electron receptor in order to convert the organic material (BOD or oxygen demand) to carbon dioxide. Via this process they multiply, which in turn creates more bacteria to break down more BOD. With aerobic treatment, micro-organisms convert organics into carbon dioxide and new biomass (sludge) in the presence of oxygen. Although aerobic systems require higher amounts of energy for aeration and produce more sludge than anaerobic systems, they play a necessary role in the wastewater treatment train. These systems allow industrial processors to meet strict environmental requirements so that wastewater can be discharged safely.

The following associated infrastructure form part of the proposal:

- A compacted gravel access road of approximately 580m in length with a maximum width of 8m. Allowance will be made for stormwater side drains. Approximately 165m of the road comprise an existing gravel road.
- An approximately 1 500m long service trench of approximately 2m wide with additional allowance of 2m on either side (6m in total). The trench will house:
  - A rising main of approximately 1 500m in length, 273mm in diameter and throughput capacity of 2 500m<sup>3</sup>/day (28l/s), to carry untreated effluent from the factory to the new WWTW;
  - A pipeline of approximately 1 500m in length, 273mm in diameter and throughput capacity of 2 500m<sup>3</sup>/day (28l/s), to convey treated effluent from the WWTW to the discharge point at the Breede River (at the factory riverbank);
  - Electrical supply cable (1 000kVA). The supply will tap off from the overhead line next to the R317; and
  - A potable water supply pipeline (1 500m long, 25mm in diameter and 250ml/s throughput capacity).
- Calamity/emergency temporary effluent retention dam of 2 000m<sup>3</sup> at the factory pump station. This will entail a semi-submerged, plastic-lined soil dam, which will normally be empty, only to be used in case of emergency to prevent contamination of the Breede River. This dam can accommodate 24-hours' worth of effluent production. Most repairs/biological rectification will be resolved within a 24-hour timeframe, however, as a backup, the effluent can also be pumped to the existing 600 000m<sup>3</sup> effluent storage dam for irrigation until the issue has been resolved. Trenches will be installed around the yard area where the calamity dam is proposed and where the existing pumping infrastructure is located. These trenches will serve to prevent river contamination in the event of a primary system failure.

### C. SITE DESCRIPTION AND LOCATION

The listed activities will be undertaken on the Remainder of Farm No. 695, Bonnievale, at the following co-ordinates:

WWTW:

Latitude (S)	Longitude (E)
33° 57' 09.02"	20° 05' 41.52"

Service trench and access road:

Start point:

Latitude (S)	Longitude (E)
33° 57' 07.72"	20° 05' 44.02"

Middle point:

Latitude (S)	Longitude (E)
33° 57' 10.55"	20° 06' 06.79"

End point:

Latitude (S)	Longitude (E)
33° 56' 55.93"	20° 06' 26.95"

Calamity dam:

Latitude (S)	Longitude (E)
33° 56' 57.14"	20° 06' 25.80"

The SG digit code is: C0730000000069500000

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

The above is hereinafter referred to as "**the site**".

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

Amathemba Environmental Management Consulting CC

% I. Eggert

P.O. Box 3420

**TYGERVALLEY**

7536

Cell: 083 278 7107

Email: ingrid@inclover.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, Site Alternative 2 and Technology Alternative A1, described in the Basic Assessment Report ("BAR"), dated November 2022, at the site as described in Section C above.
2. 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 five (5) years, from the date of issue, during which period the holder must commence with the authorised listed activities.
  - (b) A period of 5 years, from the date the holder commenced with the authorised listed activities, during which period the authorised listed activities must be concluded.
3. The holder shall be responsible for ensuring 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.
  4. Any changes to, or deviations from the scope of the alternative described in Section B 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 information, in order 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.

#### **Written notice to the Competent Authority**

5. Seven calendar days' notice, in writing, must be given to the Competent Authority before commencement of construction activities. The notice must:
  - 5.1 make clear reference to the site details and EIA Reference number given above; and
  - 5.2 include proof of compliance with the following conditions described herein:  
Conditions: 6, 7, 8 and 10

#### **Notification and administration of appeal**

6. The holder 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 as included in Annexure 3;
    - 6.1.3 the date of the decision; and
    - 6.1.4 the date when the decision was issued.
  - 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 Appeals Regulations, 2014 (as amended) detailed in Section G below;
  - 6.3 draw the attention of all registered I&APs to the manner in which they may access the decision; 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, of the holder; and
- 6.4.6 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 2014 National Appeals Regulations (as amended).

- 7. The listed activities, including site preparation, must not commence within 20 (twenty) calendar days from the date the applicant notifies the registered I&APs of this decision. In the event that an appeal is lodged with the Appeal Authority, the effect of this Environmental Authorisation is suspended until the appeal is decided i.e. the listed activities, including site preparation, must not commence until the appeal is decided.

### **Management of activity**

- 8. The draft Environmental Management Programme ("EMPr") submitted as part of the application for Environmental Authorisation must be amended and must then be re-submitted to the Competent Authority for approval prior to commencement of construction:
  - 8.1 The following section of the Operational EMPr must be amended as follows:
    - 8.1.1 Section 4.6. "Breede River Discharge point" must include method statements for the maintenance activities associated with the discharge point. The method statements must include aspects relating to:
      - Frequency of maintenance activities.
      - Access requirements
      - Methodology and equipment to be utilised
      - Whether specialist oversight is required
      - Record-keeping requirements (including photographic evidence if needed).
- 9. The EMPr must be included in all contract documentation for all phases of implementation.

### **Monitoring**

- 10. The holder must appoint a suitably experienced environmental control officer ("ECO"), before commencement of any construction activities to ensure compliance with the EMPr and the conditions contained herein.
- 11. The ECO must conduct one site visit prior to the commencement of construction and site clearance activities. Monthly monitoring inspections must be undertaken during the construction phase. Environmental Compliance Reports must be compiled and must be submitted to the Competent Authority every second month for the duration of the construction phase. The final Environmental Compliance Report must be submitted to the Competent Authority within one month of construction having been completed.
- 12. A copy of the Environmental Authorisation, EMPr, audit reports and compliance monitoring reports must be kept at the site of the authorised activities, and must be made available to anyone on request, including a publicly accessible website.
- 13. Access to the site referred to in Section C must be granted, and the environmental reports mentioned above 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.

### **Auditing**

14. In terms of Regulation 34 of the NEMA EIA Regulations, 2014, the holder must conduct environmental audits to determine compliance with the conditions of the Environmental Authorisation and the EMPr. The Environmental Audit Report must be prepared by an independent person that is not the ECO referred to in Condition 10 or the EAP and must contain all the information required in Appendix 7 of the NEMA EIA Regulations, 2014 (as amended).

Environmental Audit Reports must be submitted to the Competent Authority during the construction phase. The first Environmental Audit Report must be submitted three months after the commencement of construction activities and every six (6) months thereafter. A final Environmental Audit Report must be submitted within three months of the construction phase having been completed.

The holder must, within 7 days of the submission of an environmental audit report to the Competent Authority, notify all potential and registered I&APs of the submission and make the report immediately available to anyone on request and on a publicly accessible website (where the holder has such a website).

### **Specific Conditions**

15. Should any heritage remains be exposed during excavations or any other actions on the site, these must immediately be reported to the Provincial Heritage Resources Authority of the Western Cape, Heritage Western Cape. 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: meteorites, archaeological and/or paleontological remains (including fossil shells and trace fossils); coins; indigenous and/or colonial ceramics; any articles of value or antiquity; marine shell heaps; stone artefacts and bone remains; structures and other built features with heritage significance; rock art and rock engravings; and/or graves or unmarked human burials including grave goods and/or associated burial material.

16. A qualified archaeologist and/or palaeontologist must be contracted where necessary (at the expense of the holder) to remove any heritage remains. Heritage remains can only be disturbed by a suitably qualified heritage specialist working under a directive from the relevant heritage resources authority.

## **F. GENERAL MATTERS**

1. Notwithstanding this Environmental Authorisation, the holder must comply with any other statutory requirements that may be applicable when undertaking the listed activities.
2. Non-compliance with a condition of this Environmental Authorisation or EMPr may render the holder liable to criminal prosecution.
3. If the holder does not commence with the listed activities within the period referred to in Condition 2, this Environmental Authorisation shall lapse for that activity/ies, 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.

4. 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.

5. The manner and frequency for updating the EMPr is as follows:  
Amendments to the EMPr 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.

## **G. 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 the 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:                      Western Cape Ministry of Local Government, Environmental Affairs and  
Development Planning  
Private Bag X9186  
CAPE TOWN  
8000; or

By facsimile: (021) 483 4174; or

By hand: Attention: Mr Marius Venter (Tel: 021 483 2659)  
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 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 2659, E-mail DEADP.Appeals@westerncape.gov.za or URL <http://www.westerncape.gov.za/eadp>.

## H. DISCLAIMER

The Western Cape Government, the Local Authority, committees or any other public authority or organisation appointed in terms of the conditions of this EA 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: 24 MARCH 2023

CC: (1) I. Eggert (Amathemba Environmental Management Consulting CC) Email: [ingrid@inclover.co.za](mailto:ingrid@inclover.co.za)  
(2) Municipal Manager (Langeberg Municipality) Email: [mm@langeberg.gov.za](mailto:mm@langeberg.gov.za)  
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(5) C. van der Walt (Department of Agriculture) Email: [cor.vanderwalt@westerncape.gov.za](mailto:cor.vanderwalt@westerncape.gov.za)  
(6) M. Mmbadi (BGCMA) Email: [mmmbadi@bgcma.co.za](mailto:mmmbadi@bgcma.co.za)

## ANNEXURE 1: LOCALITY MAP



Rem. Farm 695

Legend

Map Center: Lon: 20°5'48.5"E  
Lat: 33°57'2.9"S

Scale: 1:36 112

Date created: March 10, 2023



Western Cape  
Government  
FOR YOU

Agriculture

Figure 1: Location of the proposed development.

## ANNEXURE 2: SITE DEVELOPMENT PLAN



Figure 2: Site development plan for the proposed development.

### **ANNEXURE 3: REASONS FOR THE DECISION**

In reaching its decision, the Competent Authority considered, amongst others, the following:

- a) The information contained in the Application Form dated 18 August 2022, the final BAR dated November 2022 and the EMPr submitted together with the final BAR;
- b) Relevant information contained in the Departmental information base, including the Guidelines on Public Participation and Alternatives (dated March 2013);
- c) The objectives and requirements of relevant legislation, policies and guidelines, including Section 2 of NEMA;
- d) The comments received from I&APs and responses to these, included in the BAR dated November 2022; and
- e) The balancing of negative and positive impacts and proposed mitigation measures.

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 during the consideration of the application for Environmental Authorisation. A summary of the issues that were considered to be the most significant for the decision is set out below.

#### **1. Public Participation**

The public participation process included:

- identification of and engagement with I&APs;
- fixing notice boards at locations within and around the area where the listed activities are to be undertaken on 30 August 2022;
- giving written notice to the owners and occupiers of land adjacent to the site where the listed activities are to be undertaken, the municipality and ward councillor, and the various Organs of State having jurisdiction in respect of any aspect of the listed activities on 30 August 2022;
- the placing of a newspaper advertisement in the 'Breederivier Gazette' on 30 August 2022; and
- making the in-process draft BAR available for comment from 31 August 2022.

The Department is satisfied that the Public Participation Process that was followed met the minimum legal requirements and all the comments raised and responses thereto were included in the comments and response report.

Specific alternatives, management and mitigation measures have been considered in this Environmental Authorisation and EMPr to adequately address the concerns raised.

#### **2. Alternatives**

The proposed development entails the construction of a WWTW and associated infrastructure. The alternatives assessed as part of this application relate to different site alternatives (on the same property), technology alternatives and the "no-go" alternative, and are discussed below.

## 2.1 Site Alternatives

### 2.1.1 Site Alternative 1

This alternative site is located on Remainder Farm No. 695, Bonnievale close to the northern boundary of the property, at the top of the "koppie" nearest to the Breede River. The access road and service infrastructure would extend beyond this property, onto Farm No. 694, Bonnievale.

This alternative is not preferred for the following reasons:

- The access road and service infrastructure would be required to extend beyond the applicant's property, which would present landownership complications.
- The development footprint will overlap with intact Breede Shale Renosterveld and is located closest to the Breede River.
- This alternative is least desirable from a botanical and freshwater perspective.

### 2.1.2 Site Alternative 2 (Herewith Authorised)

This alternative will be located to the south of alternative 1.

This alternative is preferred for the following reasons:

- The WWTW footprint will be on an area of a disused dam, historically used by Lactalis to store effluent.
- The road and service trench footprint will be routed through fallow ploughed lands, within road reserves and existing transformed areas, except where it will intersect a small patch of highly degraded indigenous vegetation.

### 2.1.3 Site Alternative 3

This alternative will be located to the south of alternative 2.

This alternative is not preferred because it would have a higher visual impact to Bonnievale Winery and R317 users compared to Site Alternative 2.

## 2.2 Technology Alternative A involves Aerobic Wastewater Treatment. Three Aerobic Wastewater Treatment technologies were considered and are discussed below.

### 2.2.1 Technology Alternative A1 (Herewith Authorised)

Conventional Activated Sludge ("CAS") - Aerobic wastewater treatment is a process where bacteria utilize oxygen to degrade organic matter (generally quantified as biochemical oxygen demand or BOD) and other pollutants involved in various production systems. The degradation of BOD is achieved through aerobic bacteria in a system. The bacteria utilize oxygen as an electron receptor in order to convert the organic material (BOD or oxygen demand) to carbon dioxide. Via this process they multiply, which in turn creates more bacteria to break down more BOD. With aerobic treatment, micro-organisms convert organics into carbon dioxide and new biomass (sludge) in the presence of oxygen. Although aerobic systems require higher amounts of energy for aeration and produce more sludge than anaerobic systems, they play a necessary role in the wastewater treatment train. These systems allow industrial processors to meet strict environmental requirements so that wastewater can be discharged safely.

This alternative is preferred because the CAS system is flexible, robust and cost-effective. Operational and maintenance costs are expected to be lower than the other options investigated.



### 2.2.2 Technology Alternative A2

Mixed Bed Bioreactor ("MBBR") is a process whereby the media is placed in the wastewater in a very high concentration and aerated to provide aeration and mixing. The biomass is attached to the media and consumes the Biochemical Oxygen Demand ("BOD") or Chemical Oxygen Demand ("COD") within the water as it comes along. The upstream screening for the removal of grit and grease is required, but particles smaller than 3mm are allowed to pass and even a manual screening is acceptable. In contrast to the Membrane Bio Reactor ("MBR") the MBBR only uses bacteria for the breakdown of impurities. MBBR plants contain particles (e.g., produced from UV-stabilised polyethylene), on which bacteria grow, developing a biofilm on the free moving particles, which reduces the impurities and, therefore, the sludge mass (but not as effectively as an MBR plant). Sludge settlement is required after the bioreactor in the form of lamella technology.

### 2.2.3 Technology Alternative A3:

Membrane bio-reactor (MBR) is the combination of a membrane process like microfiltration or ultrafiltration with a biological wastewater treatment process, the activated sludge process. MBR technology is based on the combination of conventional activated sludge treatment together with a process filtration through a membrane with a pore size between 10 nm and 0.4 microns (micro/ultrafiltration), which allows sludge separation. The membrane is a barrier that retains all particles, colloids, bacteria and viruses, providing a complete disinfection of treated water.

Furthermore, it can operate at higher concentrations of sludge (up to 12 g/l instead of the usual 4 g/l in conventional systems), which significantly reduces the volume of the reactors and sludge production.

Alternatives A2 and A3 are not preferred for the following reasons:

- These treatment technologies were considered to be unfeasible and unreasonable due to the higher operational costs associated with this design; and
- These alternatives pose the risk that it cannot sufficiently deal with the effluent generated by the factory.

### 2.2.4 Technology Alternative B

Anaerobic treatment is a process where wastewater or material is broken down by micro-organisms without the aid of dissolved oxygen. However, anaerobic bacteria can and will use oxygen that is found in the oxides introduced into the system or they can obtain it from organic material within the wastewater. Anaerobic treatment is an energy-efficient process in which micro-organisms transform organic matter in the wastewater into biogas in the absence of oxygen. To achieve this oxygen-free environment, the entry of air into anaerobic tanks is prevented, typically by a gastight cover.

Anaerobic treatment is often used to treat warm industrial wastewater, and the process offers several benefits over aerobic treatment, including lower energy requirements, less chemicals, and less sludge production. The sludge is stable and safe to use as a soil enhancer. Methane-rich biogas is produced through the anaerobic process.

This alternative is not preferred for the following reasons:

- The Chemical Oxygen Demand of the Lactalis Bonnievale plant is too low to support this treatment option, therefore it is unfeasible.
- Lactalis, the holding company of Lactalis SA, have extensive international experience of these types of plants, mostly negative.

### 2.3 "No-Go" Alternative

The "no-go" option was considered and is not preferred because the factory will be required to reduce effluent volumes generated by its production processes, which in turn will require downscaling and the related job losses. Additionally, there is a significant high risk of water pollution, should the effluent dam's banks burst and should additional untreated effluent be discharged into the Breede River. The degradation of water quality in the riverine and wetland habitat of the Soutpans Tributary will continue.

## 3. Impact Assessment and Mitigation measures

### 3.1 Activity Need and Desirability

The existing processes at the Lactalis (previously Parmalat) dairy facility in Bonnievale includes cleaning and pasteurization activities, which produces industrial effluent on a daily basis. Currently, partially treated effluent is stored and irrigated on surrounding land in accordance with requisite approvals. With the increase in production at this facility, there is a need for a dedicated WWTW on site, to improve the quality of the effluent prior to irrigation or discharge into the Breede River. The proposed WWTW will improve the capacity, functioning and operational efficiency of the existing process in which wastewater is treated. The effluent that will be released into the environment (through irrigation or river discharge) as a result of the new WWTW will be treated to the General Limit Standards outlined by the Department of Water and Sanitation in accordance with the current Water Use Licence dated 22 April 2021. The proposed development will sustain existing employment opportunities as well as create additional employment opportunities in both the construction and operational phases.

### 3.2 Biodiversity and Biophysical Impacts

#### Freshwater impacts associated with the construction of the WWTW and associated infrastructure

According to the Freshwater Impact Assessment dated July 2022, compiled by D. Ollis of Inland Waters Consultancy, the main freshwater ecosystems that will be affected by the proposed WWTW are the section of the Breede River adjacent to and downstream of the proposed discharge point, an unnamed tributary of the Breede River that originates to the west of the R317, and which enters the Breede River adjacent to the Lactalis factory site, and a disused dam (in the footprint of the WWTW) and artificially excavated drainage line which likely served as an overflow from the disused dam when this dam was still in use. The latter was incorrectly mapped as a non-perennial river feature and does not constitute a watercourse as confirmed during a site visit undertaken by the Freshwater specialist on 4 May 2022. A natural drainage line in pristine condition flows in a confined valley to the west of the proposed WWTW. While this system is highly sensitive, the WWTW proposal will not impact on this watercourse as it is situated beyond the watershed, in the adjacent (westward draining) catchment.

The specialist concludes that there has been a large degree of alteration of the natural habitat and biota within the affected reach of the Breede River (Ecological Category D) and a serious degree of alteration in the unnamed tributary stream (Ecological Category E). Both systems are currently affected by impacts on their water quality and flow regimes, with alien fauna and vegetation species present. Overall, the conservation importance for the two systems were considered to be high for the Breede River, and moderate for the unnamed tributary. Through the implementation of the specialist's recommendations and the EMPr (to be amended as per Condition 8), the impacts on aquatic features will be mitigated.

#### Freshwater impact associated with the irrigation area

Irrigation with treated wastewater will impact on surface water resources in the irrigation area, located approximately 3 km to the south of the Lactalis factory. The potentially affected watercourses in this regard are:

- an unchanneled valley-bottom wetland within the 'Soutpans Tributary', an unnamed tributary of the Soutpansrivier, which ultimately flows into the Breede River.
- The riverine section of the Soutpans Tributary, below the unchanneled valley-bottom wetland.
- The valley- bottom wetland, which constitutes most of the Soutpans Tributary.

Most of the runoff from the irrigation area located approximately 3 km to the south of the Lactalis factory drains into an unnamed tributary of the Soutpansrivier. Most of the Soutpansrivier watercourse is a valley-bottom wetland. Although the western portion of the irrigation area drains westward towards the Soutpansrivier watercourse (located on the other side of the R317 road), a number of cut-off drains on the property capture the runoff and presumably divert it back towards some of the irrigation dams. As such, this watercourse does not appear to be directly affected by runoff from the irrigation area. The hydrology and geomorphology of the wetland are rated to be largely modified (Ecological Category D). The instream and riparian zones of the riverine section of the Soutpans Tributary, from below the unchanneled valley-bottom wetland to the confluence with the Soutpansrivier, was also found to be largely altered (Category D). The overall conservation importance ratings for these freshwater ecosystems were rated as moderate-high for the unchanneled valley-bottom wetland section of the Soutpans Tributary, moderate for the riverine section of the Soutpans Tributary and high for the Soutpansrivier watercourse (a valley-bottom wetland). Through the implementation of the specialist's recommendations and the EMP (to be amended as per Condition 8) the impacts on aquatic features will be mitigated.

#### Botanical impact associated with the development of the WWTW and associated infrastructure

According to the Botanical Impact Assessment dated June 2022, compiled by D. McDonald Bergwind Botanical Surveys & Tours CC, there is no natural vegetation remaining in the footprint of the site proposed for the WWTW and most of the road and service trench routes due to past transformation (disused dam, ploughing, agriculture, road infrastructure, etc.). The only area that contains a small patch of extremely degraded and disturbed Breede Shale Renosterveld occurs west of the R317. Breede Shale Renosterveld is classified as an endangered ecosystem in terms of Section 52 of the National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004) ("NEMBA"). The road and service trench footprint will be routed through fallow ploughed lands, road reserves and existing transformed areas, except where it will intersect with the aforementioned small patch of Breede Shale Renosterveld. The specialist concluded that the site is in a very poor condition and that the impacts associated with the construction of the WWTW and associated infrastructure are expected to have a very low negative significance rating. Through the implementation of the specialist's recommendations and the EMP (to be amended as per Condition 8) the impacts on vegetation will be mitigated adequately.

### 3.3 Heritage Impacts

In a comment from Heritage Western Cape, dated 30 May 2019, it was confirmed that no additional studies are required since no impacts on heritage resources are anticipated.

### 3.4 Groundwater Impacts

According to the Groundwater Impact Assessment dated 10 August 2022, compiled by G. Muller of GEOSS South Africa (Pty) Ltd, it has been determined that there are few to no groundwater users surrounding the proposed WWTW and effluent disposal site. The groundwater quality of the area falls within the "poor" (300 – 1 000 mS/m) classification, as indicated by regional datasets. Given the low vulnerability of the aquifer, the risk of potential contamination to the fractured

aquifer is considered to be low. Additionally, the proposed WWTW will result in treated effluent with a higher quality than what is currently produced at the Lactalis factory. Through the implementation of the specialist's recommendations and the EMPr (to be amended as per Condition 8) the impacts on groundwater will be mitigated.

The development will result in both negative and positive impacts.

**Negative Impacts:**

- Impacts of low significance are anticipated for degraded areas of indigenous vegetation.
- The proposed development will have a discharge point located in the Breede River, however, mitigation measures for these impacts are addressed in the EMPr and design of the WWTW.

**Positive impacts:**

- The WWTW will improve the quality of treated effluent before it is stored and irrigated on surrounding land and/ or discharged into the Breede River.
- The impacts on groundwater will be reduced because the quality of the treated effluent will be better than the current partially treated effluent that is being irrigated on the dedicated irrigation areas.
- Employment opportunities will be sustained, and new opportunities will be created during the construction and operational phase.

**4. National Environmental Management Act Principles**

The NEMA 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.

**5. Conclusion**

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.

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