



**Western Cape
Government**

Environmental Affairs and
Development Planning

Directorate: Development Management (Region 1)

REFERENCE: 16/3/3/1/A6/50/2046/19
ENQUIRIES: RONDINE ISAACS
DATE OF ISSUE: 2020 -03- 25

The Municipal Manager
City of Cape Town
Transport and Urban Development Authority
PO Box 9181
CAPE TOWN
8000

Attention: Mr Mark Pinder

Tel.: (021) 400 4918
Fax: (021) 400 2902

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:

PROPOSED PHASE 2 EXTENSION OF HOUMOED AVENUE AND THE UPGRADING OF THE MASIPHUMELELE SETTLEMENT, SUNNYDALE AND MASIPHUMELELE

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, 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, which prescribes the procedure to be followed in the event of appeals being lodged. This procedure is summarized in the attached Environmental Authorisation.

Yours faithfully

**DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)
DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING**

Copied to: (1) Ms Ingrid Eggert/Ms Sadia Chand (Chand Environmental Consultants)

Fax: (086) 665 7430



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Attention: Mr Mark Pinder

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Dear Sir

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:

PROPOSED PHASE 2 EXTENSION OF HOUMOED AVENUE AND THE UPGRADING OF THE MASIPHUMELELE SETTLEMENT, SUNNYDALE AND MASIPHUMELELE

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

ENVIRONMENTAL AUTHORISATION

DECISION

By virtue of the powers conferred on it by the NEMA and the EIA Regulations, 2014, the competent authority herewith grants Environmental Authorisation to the applicant to undertake the list of activities specified in Section B below as included in the Basic Assessment Report ("BAR") dated 2 December 2019.

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

A. DETAILS OF THE HOLDER OF THIS ENVIRONMENTAL AUTHORISATION

City of Cape Town
 Transport and Urban Development Authority
 c/o Mr Mark Pinder
 PO Box 9181
 CAPE TOWN
 8000
 Tel.: (021) 400 4918
 Fax: (021) 400 2902

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

B. LIST OF ACTIVITIES AUTHORISED

Government Notice No. R. 983 of 4 December 2014 –

Listed Activity	Activity/Project Description
<p>Activity 19: <i>"The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</i></p> <p><i>but excluding where such infilling, depositing, dredging, excavation, removal or moving -</i></p> <ul style="list-style-type: none"> <i>(a) will occur behind a development setback;</i> <i>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</i> <i>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</i> <i>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</i> <i>(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies".</i> 	<p>The development proposal entails the removing or moving, dredging, excavation, infilling or depositing of material of more than 10m³ from portions of wetlands.</p>
<p>Activity 48: <i>"The expansion of -</i></p> <ul style="list-style-type: none"> <i>(i) infrastructure or structures where the physical footprint is expanded by 100 square metres or more; or</i> <i>(ii) dams or weirs, where the dam or weir, including infrastructure and water surface area, is expanded by 100 square metres or</i> 	<p>The expansion of structures and infrastructure will exceed 100m² and will take place inside and within 32m from a watercourse.</p>

<p>more;</p> <p>where such expansion occurs -</p> <ul style="list-style-type: none"> (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; <p>excluding -</p> <ul style="list-style-type: none"> (aa) the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such expansion activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies; (dd) where such expansion occurs within an urban area; or (ee) where such expansion occurs within existing roads, road reserves or railway line reserves". 	
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Government Notice No. R. 985 of 4 December 2014 –

<p>Activity 23: "The expansion of –</p> <ul style="list-style-type: none"> (i) dams or weirs where the dam or weir is expanded by 10 square metres or more; or (ii) infrastructure or structures where the physical footprint is expanded by 10 square metres or more; <p>where such expansion occurs -</p> <ul style="list-style-type: none"> (a) within a watercourse; (b) in front of a development setback adopted in the prescribed manner; or (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; <p>excluding the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.</p>	<p>Infrastructure and structures will be expanded by more than 10m² within a wetland and within 32m from a wetland.</p>
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<p>i. Western Cape</p> <p>i. Outside urban areas:</p> <p>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p> <p>(cc) World Heritage Sites;</p> <p>(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(ee) Sites or areas listed in terms of an international convention;</p> <p>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p>(gg) Core areas in biosphere reserves; or</p> <p>(hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined".</p>	
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The abovementioned list is hereinafter referred to as "the listed activities".

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

The proposed project entails the Phase 2 extension of the existing portion of Houmoed Avenue from Fish Eagle Park in the west up to Lekkerwater Road in the east. The proposed project also entails the upgrading of the informal settlement currently located to the north of the existing formal housing in Masiphumelele.

Proposed road extension:

The length of the road extension is approximately 940m and spans seven properties. The road runs inside the southern fringes of the adjacent wetland, which forms part of the greater Noordhoek wetland system. The road will form the definitive hard boundary between the wetland and the informal settlement to be upgraded.

The 20m wide road reserve will comprise of the following:

- A 3.4m wide vehicular lane in both directions with a 1.5m wide cycle lane in both directions;
- A 2m wide sidewalk on both sides; and
- A 3.4m road verge (for fill embankments, a retaining wall structure etc.).

Vehicular access will be provided off the proposed new section of Houmoed Avenue to the upgraded settlement at the extension of Pokela Road and pedestrian access will be available at the intersection of the extended Riverside Road. A further pedestrian access will be provided off a proposed new internal road to the western section of Houmoed Avenue.

A 2-3m high solid retaining wall is proposed as the edge treatment between the proposed road and the wetland. The wall will therefore also form a physical barrier between the wetland and the residential area. In addition, there will be a 2m high wall between the roadway and the upgraded settlement, which will act as a noise barrier and to reduce traffic generated noise levels to within acceptable limits outside of peak hours. The wall will be designed such that it allows for the passage of pedestrians and fauna without compromising the acoustic properties.

Proposed upgrading of the informal settlement:

It is proposed to maximise the housing opportunities that can be provided in the space between the proposed road alignment and the existing formal housing in Masiphumelele. Approximately 1500 households can be housed in this area, thereby necessitating the relocation of approximately 1000 households. The number of housing opportunities is dependent on the housing typology that will ultimately be decided upon in the detailed design phase.

All informal structures inside and to the north of the road corridor will be removed and all portions of remnant wetland inside the road corridor will be infilled to accommodate the road extension. All informal structures will also be removed in the area south of the new Houmoed Avenue extension up to the existing formal residential area of Masiphumelele to allow for infilling and the establishment of urban infrastructure and upgrading of the area. This will be undertaken in a phased manner.

Significant bulk earthworks are required to elevate the site above the 100-year flood level and to provide for adequate storm water management. Significant storm water interventions are also proposed as part of the Stormwater Management Plan and includes extensive pre-treatment of storm water prior to final discharge to the wetland.

Offset site:

Remainder of Farm 4836, Noordhoek (Remainder Cape Farm 933) contains suitable wetland habitat, is already in the ownership of the City of Cape Town and managed by the South African National Parks ("SANParks"). The site has been identified as an ideal property for the required wetland offsets to compensate for the loss of wetland since 1998 due to infilling for informal housing structures and the loss of wetland associated with the proposed Phase 2 road extension.

Measures to achieve wetland ecosystem conservation gains as part of the Wetland Offset Strategy on Remainder of Farm 4836, Noordhoek (Remainder Cape Farm 933), intends to secure the wetland portions of the site for conservation into perpetuity, through appropriate legal mechanisms. A conservation-worthy portion of 149.2 ha has been identified on the wetland offset site. The conservation-worthy portion of land will be subdivided off the remainder of the property (please refer to Annexure 3 for a map of the offset site).

The appropriate mechanism/instrument will be identified by the City of Cape Town in consultation with relevant Organs of State, including SANParks and CapeNature within 24 months of this decision and implementation will be initiated within 3 months from agreement on the mechanism. Rezoning is required once the conservation-worthy portion has been subdivided off the remainder of the property.

C. LOCATION AND SITE DESCRIPTION

The listed activities will take place in Masiphumelele and the western edge of Sunnydale. A small portion of the proposed Phase 2 extension of Houmoed Avenue will fall into an existing road reserve running west off Lekkerwater Road. The road will extend from this point at Lekkerwater Road and run through what is currently the northern fringe of the informal settlement of Masiphumelele to link up with the section of the existing Houmoed Avenue in the west, at Fish Eagle Park.

The greater Noordhoek wetland system lies to the northwest of the site, with the Pick 'n Pay reedbed forming the northwestern edge of the site. The site is bound to the south by the formal residential portion of Masiphumelele and to the east by private single residential dwellings and general industrial dwellings in the east.

In the area surrounding Lekkerwater Road in the east, four privately owned properties will be partially affected by the proposed Phase 2 extension of Houmoed Avenue. Erven 66/944 and 67/944 currently house a privately run school for children of the area. Erf No. 5/944 is used as a single residential property and Erf No. 8/944 is used for general industrial purposes.

A portion of property owned by SANParks to the west of the site will also be impacted by the road. Agreement has been obtained from the Department of Environment, Forestry and Fisheries in terms of Section 24(C)(3) of the NEMA for the Department of Environmental Affairs and Development Planning ("DEA&DP") to become the competent authority for the listed activities relating to the development proposal.

The SG 21-digit codes of the affected land parcels are as follows:

Land Parcel	SG 21-digit code
CA944-5 or Erf No. 4931	C01600370000493100000
CA944-66 or Erf No. 4929	C01600370000492900000
CA944-67 or Erf No. 4930	C01600370000493000000
CA945-25 or Erf No. 4928	C01600370000492800000
CA945-re or Erf No. 4927	C01600370000492700000
CA945-8 or Erf No. 4941	C01600370000494100000
4198-RE - Remainder Erf No. 4198	C01600370000419800000

Co-ordinates of the upgraded informal settlement:

Latitude: 34° 07' 38.47" S
 Longitude: 18° 22' 29.11" E

The co-ordinates of the route are given below (~ 100m intervals):



	Latitude (S)	Longitude (E)
Point 1	34° 07' 31.54"	18° 22' 47.92"
Point 2	34° 07' 32.63"	18° 22' 44.46"
Point 3	34° 07' 33.57"	18° 22' 40.35"
Point 4	34° 07' 34.91"	18° 22' 36.65"
Point 5	34° 07' 35.87"	18° 22' 33.24"
Point 6	34° 07' 36.97"	18° 22' 29.71"
Point 7	34° 07' 37.71"	18° 22' 25.65"
Point 8	34° 07' 37.99"	18° 22' 21.52"
Point 9	34° 07' 39.04"	18° 22' 17.35"
Point 10	34° 07' 42.36"	18° 22' 16.84"

Refer to Annexure 1: Locality Plan and Annexure 2: Route Map.

hereinafter referred to as "the site".

Offset Location:

Remainder of Farm 4836, Noordhoek (Remainder Cape Farm 933) has been identified as the wetland offset site. The property abuts a portion of the Table Mountain National Park to the south and west, with the residential estate of Lake Michelle to the east and smallholdings to the north and northwest (Annexure 3).

The SG 21-digit code is: C01600370000483600000

Co-ordinates:

Latitude: 34° 11' 17.44" S

Longitude: 18° 37' 75.54" E

Refer to Annexure 3: Locality Plan of offset site.

D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER (“EAP”)

Chand Environmental Consultants
c/o Ms Sadia Chand/Ingrid Eggert
PO Box 238
PLUMSTEAD
7801
Tel.: (021) 762 3050
Fax: (086) 665 7430

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 2 December 2019 on the site as described in Section C above.
2. The holder must ensure compliance with the conditions by any person acting on his/her behalf, including an agent, sub-contractor, employee or any person rendering a service to the holder.
3. The holder must commence with, and conclude, the listed activities within the stipulated validity period which this Environmental Authorisation is granted for, or this Environmental Authorisation shall lapse and a new application for Environmental Authorisation must be submitted to the competent authority.
This Environmental Authorisation is granted for–
 - (a) A period of ten (**10**) years, from the date of issue, during which period the holder must commence with the authorised listed activities; and
 - (b) A period of twenty (**20**) years, from the date the holder commenced with an authorised listed activity, during which period the authorised listed activities 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 “Environmental Management Programme” (“EMPr”).
5. Any changes to, or deviations from the scope of the description set out in Section B and Condition 2 above must be accepted or approved, in writing, by the competent authority before such changes or deviations may be implemented. In assessing whether to grant such acceptance/approval or not, the competent authority may request such information to evaluate the significance and impacts of such changes or deviations, and it may be necessary for the holder to apply for further authorisation in terms of the applicable legislation.

Notification of authorisation and right to appeal

6. The holder of the authorisation must in writing, within 14 (fourteen) calendar days of the date of this decision –
 - 6.1 notify all registered Interested and Affected Parties 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 Interested and Affected Parties to the fact that an appeal may be lodged against the decision in terms of the National Appeals Regulation, 2014;
 - 6.3 draw the attention of all registered Interested and Affected Parties to the manner in which they may access the decision; and
 - 6.4 provide the registered Interested and Affected Parties 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 Interested and Affected Parties in the event that an appeal is lodged in terms of the National Appeals Regulations 2014.

Commencement

7. The listed activities, including site preparation, must not commence within 20 (twenty) calendar days from the date the applicant notified the registered Interested and Affected Parties 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 activities, 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. 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 21.

Management of activity

10. The EMPr (submitted with the BAR to the competent authority on 2 December 2019), is hereby approved and must be implemented.
11. An application for amendment to the EMPr must be submitted to the competent authority in terms of Chapter 5 of the EIA Regulations, 2014 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 and rehabilitation phases of implementation.

The ECO must—

- 14.1 be appointed prior to commencement of any land clearing or 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; and
- 14.5 provide the competent authority with copies of the ECO reports within 30 days of the project being finalised.

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 to the relevant competent authority during the construction phase. The holder must submit the first audit report six months after commencement of the construction phase

- and a second audit report twenty-four (24) months after the first audit report; and
- 15.3 submit an environmental audit report every five (5) years thereafter while the Environmental Authorisation remains valid.
16. The environmental audit report 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.

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 Interested and Affected Parties 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 holder and in consultation with the relevant authority) to remove any human remains in accordance with the requirements of the relevant authority.

21. Wetlands and other natural areas outside the road reserve must be treated as no-go areas and must be demarcated as such, before the commencement of construction activities.
22. Sediment trapping measures such as silt curtains, cut-off trenches and/or settlement sumps must be placed down-slope of areas that are to be cleared or disturbed during construction, to minimize sediment runoff into adjacent wetland areas.
23. Excess soil, rock or other material may not be dumped or temporarily stored in the wetland.
24. The holder must conduct the construction phase activities as far as possible during the dry/summer season to minimize impacts on the wetland.
25. A 2m high solid barrier must be erected along the road verge between the residential plot boundaries and the road alignment from Fish Eagle Park to Lekkerwater Road. The barrier must be a continuous solid structure with constant element height.
26. The conceptual design of the solid barrier must be to a landscape architect's specification and must be signed off by a registered professional acoustics engineer.
27. Remainder of Farm 4836, Noordhoek must be secured for conservation into perpetuity, as a wetland offset for the Phase 2 Houmoed Avenue extension project.
 - 27.1 The appropriate mechanism/instrument must be identified by the City of Cape Town in consultation with relevant Organs of State, including SANParks and CapeNature within 24 months of this decision and implementation must be initiated within 3 months from agreement on the mechanism.
 - 27.2 The holder may not commence with construction activities until the agreement has been signed.
 - 27.3 Proof of the identified mechanism/instrument for conservation into perpetuity must be submitted to competent authority for record purposes.
28. All the conditions/recommendations/mitigation measures made by the various specialists involved in the proposed Phase 2 Houmoed Avenue

extension project, as contained in the approved EMPr, must be strictly implemented and adhered to.

29. Water saving mechanisms and/or water recycling systems must be installed in order to reduce water consumption that include *inter alia*, the following:
 - 29.1 A dual-flush toilet system.
 - 29.2 All taps must be fitted with water saving devices, that is, tap aerators, flow restrictors and low flow shower heads.
 - 29.3 Water-wise landscaping must be done.
30. The development must incorporate energy/electricity saving measures, which include *inter alia*, the following:
 - 30.1 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.
 - 30.2 Street lighting must be kept to a minimum and down lighting must be used to minimize light impacts. Street lights must be switched off during the day.
 - 30.3 All geysers must be covered with geyser 'blankets'.
31. 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.

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 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 GN No. R. 982 of 4 December 2014 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 Interested and Affected Parties, 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 Interested and Affected Parties -
 - 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 Interested and Affected Party, 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 Interested and Affected Party 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: 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 M. Venter (Tel.: (021) 483 2659)
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 the Appeal Authority at: Tel. (021) 483 2659, 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 ZAHIR TOEFY

DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

DATE OF DECISION: 25/03/2020

CC: (1) Ms Ingrid Eggert/Ms Sadia Chand (Chand Environmental Consultants)

Fax: (086) 665 7430

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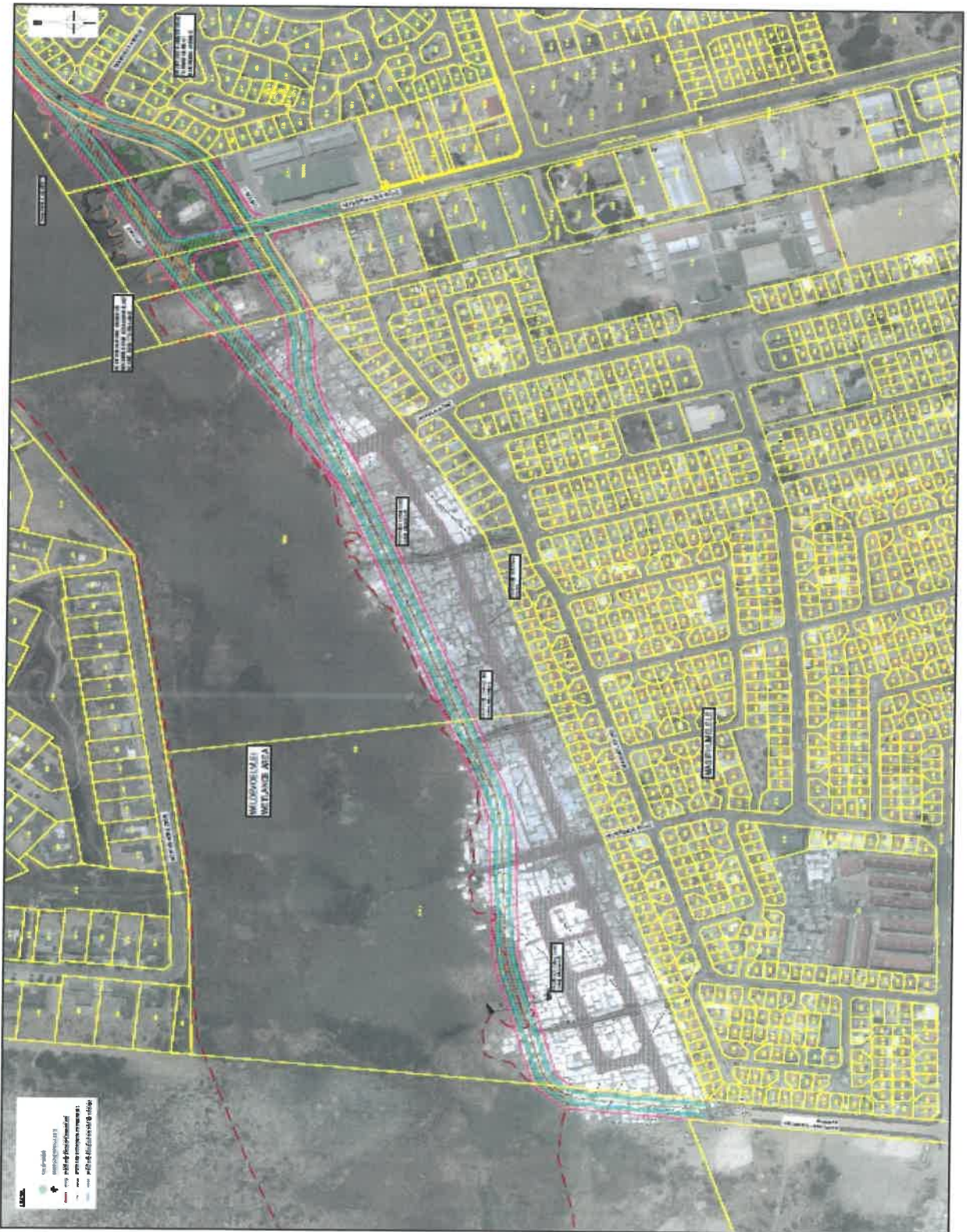
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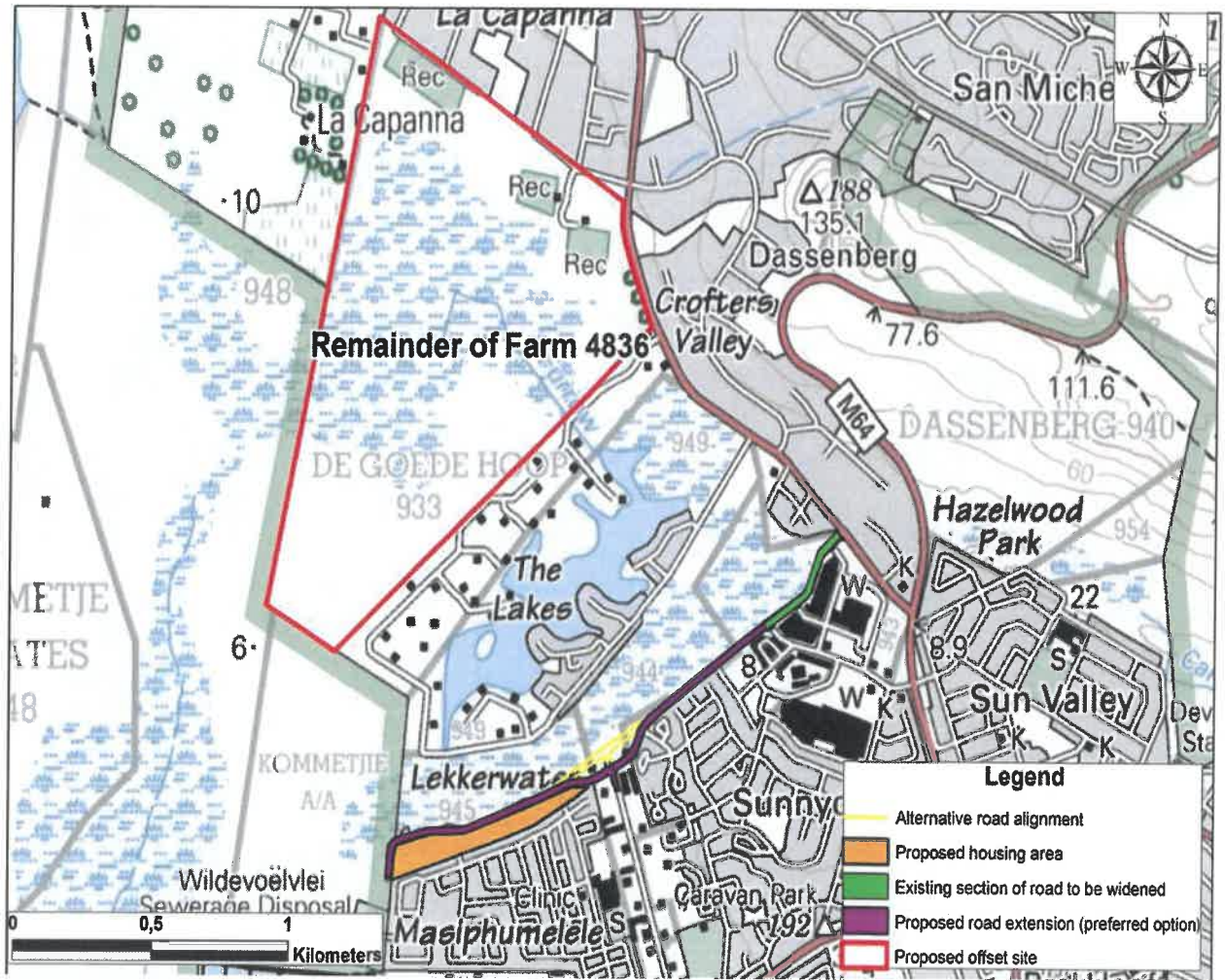
ANNEXURE 1: LOCALITY PLAN



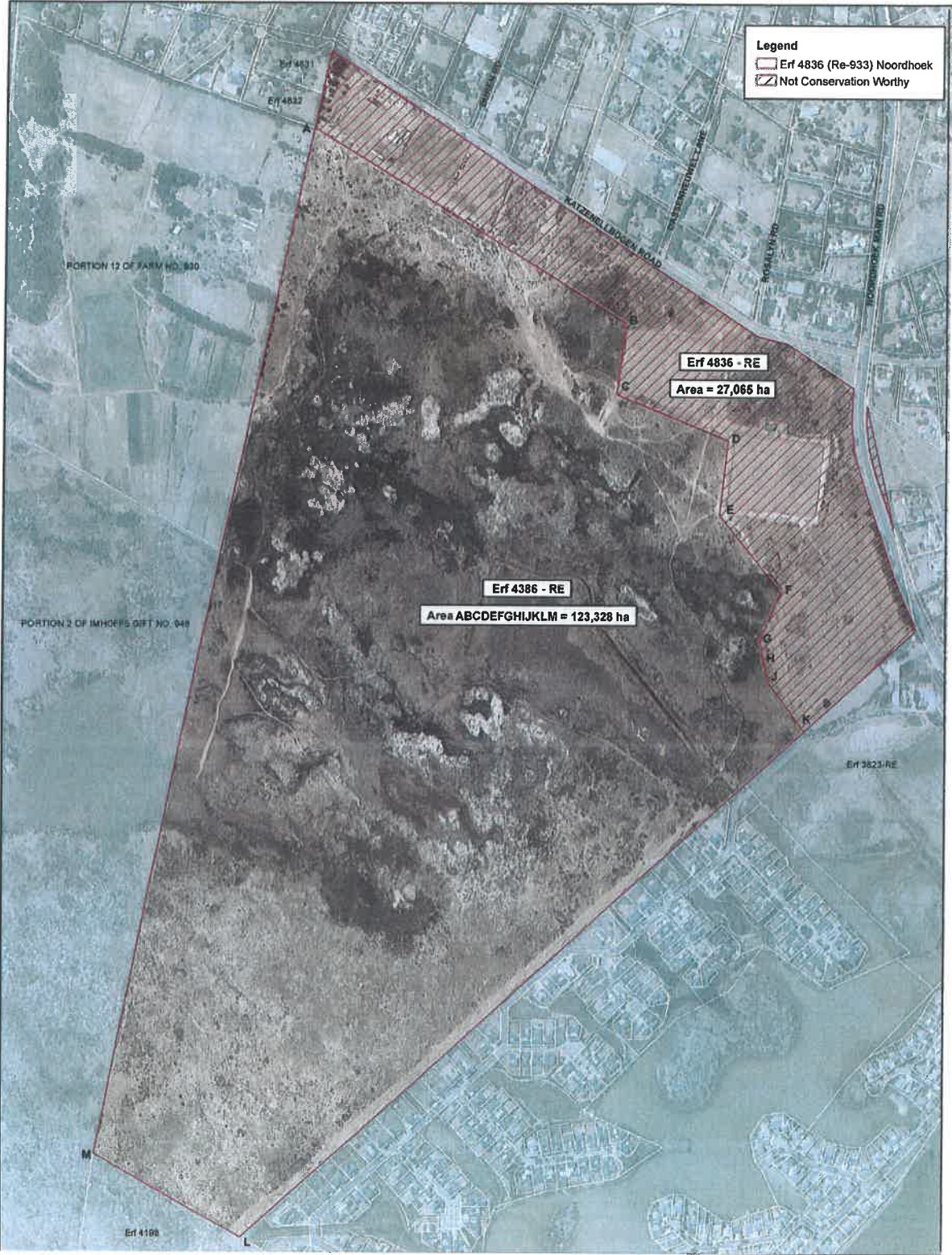
ANNEXURE 2: ROUTE MAP



ANNEXURE 3: LOCALITY PLAN OF OFFSET SITE



ANNEXURE 3: LOCALITY PLAN OF OFFSET SITE (CONSERVATION AREA)



ANNEXURE 4: 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 6 September 2019, as received by the competent authority on the same date; the BAR dated 2 December 2019 and the EMPr submitted together with the BAR; and the comment from the Department of Water and Sanitation received by the competent authority on 17 December 2019;
- b) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the NEMA;
- c) The comments received from Interested and Affected Parties ("I&AP's") and the responses provided thereon, as included in the BAR dated 2 December 2019;
- d) The pre-application meeting held on:

Date: 18 July 2018

Attended by: Mr Eldon van Boom, Mr Maboe Nthejane, Ms Rondine Isaacs and Ms Ayesha Hamdulay of the DEA&DP; and Ms Ingrid Eggert of Chand Environmental Consultants.

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

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

1. Public Participation

The Public Participation Process undertaken during the pre-application (previously withdrawn EIA application referenced 16/3/3/1/A6/50/2025/18) and formal EIA application process:

Pre-application process (previously withdrawn EIA application referenced 16/3/3/1/A6/50/2025/18):

- Focus Group Meetings were held with various key representatives and residents on 16 November 2017 and identified Masiphumelele community leaders on 21 August 2017;
- An informational pamphlet in English and isiXhosa was distributed to residents of Masiphumelele on 14 September 2017 and 18 September 2017;
- A dedicated hotline was made available from 14 September 2017 to Masiphumelele residents;
- A second Focus Group Meeting was held with identified Masiphumelele community leaders on 23 November 2017;
- An advertisement was placed in the "False Bay Echo" newspaper on 19 April 2018;
- A notice board was placed on site;

- Formal notifications were sent via email and post on 19 April 2018 to notify all I&AP's and relevant Organs of State of the project and the opportunity to comment on the pre-application BAR;
- The pre-application BAR was made available from 20 April 2018 to 21 May 2018;
- Formal notifications were sent via email and post on 4 May 2018 to registered I&AP's informing them that the 30-day public review period of the pre-application BAR was extended by 14 days;
- The pre-application BAR was thus made available from 20 April 2018 until 4 June 2018;
- One-on-one meetings were held with adjacent landowners and a property owner on 10 May 2018;
- A Focus Group Meeting was held with the residents of Lake Michelle on 5 June 2018;
- Two combined open house events were hosted for the Phase 1 and Phase 2 proposals and were held at the Masiphumelele Community Hall on 16 May 2018 and King of Kings Baptist Church on 23 May 2018; and
- Formal notifications were sent via email and post on 29 April 2019 to all registered I&AP's informing them of the withdrawal of the EIA application referenced 16/3/3/1/A6/50/2025/18.

Formal EIA application process:

- Formal notifications were sent via email and post on 12 September 2019 to potential I&AP's regarding the availability of the draft BAR;
- An advertisement was placed in the "False Bay Echo" newspaper on 12 September 2019;
- Two noticeboards were placed on site;
- The draft BAR was made available from 13 September 2019 to 14 October 2019; and
- A copy of the consultation BAR was submitted to the competent authority, representatives of the relevant State Departments and other Organs of State. They were requested to provide comment on the consultation BAR as required in terms of the EIA Regulations, 2014 (as amended).

Authorities consulted

The authorities consulted included the following:

- Directorate: Pollution and Chemicals Management of the DEA&DP;
- CapeNature;
- City of Cape Town;
- SANParks;
- Department of Water and Sanitation; and
- Heritage Western Cape.

The competent authority is satisfied that the Public Participation Process that was followed met the minimum legal requirements.

2. Alternatives

No Location, technology, activity or operational alternatives were considered for the development proposal. Options in terms of storm water management were considered and incorporated into the design of the Phase 2 extension of Houmoed Avenue.

To consider other alternatives that link the existing Houmoed Avenue section with Lekkerwater Road will necessitate further encroachment into the wetland area and this is not considered reasonable or feasible. Two route alternatives were investigated for the eastern portion of the Phase 2 extension of Houmoed Avenue, in the vicinity of

Lekkerwater Road. Under both alternatives, the road will follow the same route, from the existing portion of Houmoed Avenue in the west, along the northern fringes of the informal settlement roughly up to Pokela Road. From here, two route alternatives are proposed for the eastward link into Lekkerwater Road.

The Preferred Alternative (Route Alternative 1) will curve slightly to the south to extend along the northern edge of Erf No. 8/944 and tie into the existing northern end of Lekkerwater Road. Lekkerwater Road will be extended northwards (along the western boundary of Erf No. 5/944) by approximately 100m and will tie into the proposed horizontal alignment of Alternative 2.

Route alternative 2 will continue in a straight line eastwards, to run roughly through the middle of Erven 66/944 and 67/94. Lekkerwater Road will be extended northwards along the western boundary of Erf No. 5/944, Sunnydale by approximately 100m and will tie into the proposed horizontal alignment of the Alternative 2 Houmoed extension.

From a botanical, freshwater, social, forward urban planning and transport planning perspective, Route alternative 1 is deemed the preferred alternative for the Phase 2 extension of Houmoed Avenue. The botanical specialist indicated that Route alternative 1 presents no impacts to the Milkwood trees. From a freshwater perspective, Route alternative 1 is preferable as it results in a smaller proportional loss (15%) of the remaining fringing wetland of the Pick 'n Pay Reedbed versus the 30% that would be lost under Alternative 2.

Route alternative 1 (preferred alternative – herewith authorised):

The proposed project entails the Phase 2 extension of the existing portion of Houmoed Avenue from Fish Eagle Park in the west up to Lekkerwater Road in the east.

The length of the road extension is approximately 940m and spans seven properties. The road runs inside the southern fringes of the adjacent wetland, which forms part of the greater Noordhoek wetland system. The road will form the definitive hard boundary between the wetland and the informal settlement to be upgraded.

The 20m wide road reserve will comprise of the following:

- A 3.4m wide vehicular lane in both directions with a 1.5m wide cycle lane in both directions;
- A 2m wide sidewalk on both sides; and
- A 3.4m road verge (for fill embankments, a retaining wall structure etc.).

Vehicular access will be provided off the proposed new section of Houmoed Avenue to the upgraded settlement at the extension of Pokela Road and pedestrian access will be available at the intersection of the extended Riverside Road. A further pedestrian access will be provided off a proposed new internal road to the western section of Houmoed Avenue.

A 2-3m high solid retaining wall is proposed as the edge treatment between the proposed road and the wetland. The wall will therefore also form a physical barrier between the wetland and the residential area. In addition, there will be a 2m high wall between the roadway and the upgraded settlement, which will act as a noise barrier and to reduce traffic generated noise levels to within acceptable limits outside of peak hours. The wall

will be designed such that it allows for the passage of pedestrians and fauna without compromising the acoustic properties.

"No-Go" Alternative:

The No-Go alternative means abandoning the proposal of extending Houmoed Avenue and upgrading the informal settlement. The No-Go alternative would thus maintain the status quo.

In response to increasing traffic congestion, road improvements and upgrading of the transport network in the area and surrounds is a key priority for the City of Cape Town. Furthermore, it is critical that the informal settlement be upgraded, and should this not be realized, the living conditions will continue to be undesirable and unacceptable. In addition, the poor quality storm water and raw sewage that enter the wetland will continue, which is also undesirable and unacceptable. The No-Go alternative was therefore deemed to be undesirable and abandoned.

3. Impacts, assessment and mitigation measures

3.1 Activity Need and Desirability

The proposed site (road reserve) is located within an Incremental Growth and Consolidation area whereby the City commits to servicing existing communities and new development will depend on the infrastructure capacity. As a housing and road infrastructure project which will directly support the current needs of particularly Masiphumelele, the proposal is directly aligned with the spatial vision of the area.

The proposal will contribute to inward urban growth and integration and thus not conflict with the overarching spatial vision for the City. The proposal is consistent with the three spatial strategies outlined in the Municipal Spatial Development Framework ("SDF") which is drawn from the local Integrated Development Plan ("IDP").

The proposal will assist in transforming Masiphumelele informal settlement into a better serviced neighbourhood with the potential to contribute to social and economic integration of the greater Masiphumelele. The proposed road will provide a link between the informal settlement and the greater urban area thus contributing to better integration of groups which is presently spatially separated.

The proposed Phase2 road extension will support urban development in the area. The road link will alleviate existing traffic congestion in the greater area, especially to those accessing Ou Kaapse Weg from the valley to commute to other areas in the metropole for employment. It will particularly provide an additional route for Masiphumelele to access public transport and Sunnysdale's commercial node.

The project also forms part of the City's Congestion Management Programme which sets out the expenditure and interventions aimed at addressing traffic congestion in Cape Town between 2015 and 2020. As such, the Houmoed Avenue extension has been identified as a prioritized infrastructure project.

The proposal specifically supports the objective to “Promote and Foster Social Inclusion” which aims at addressing spatial segregation through transport and planning.

The City's Southern District Plan includes the proposed Houmoed Avenue road extension as a planned connector route in terms of transport planning in the district. The full formalization and integration of Masiphumelele into the valley is a specific proposal of the Plan. Since the project constitutes the formalization and integration of Masiphumelele, the proposal is clearly aligned with the relevant District Plan proposals.

The District Plan states that the development of an appropriate interface with the natural area along the urban edge is vital and that a roadway and low-density community facility are regarded as the most effective edges. Thus, the Phase 2 extension of Houmoed Avenue will provide for a suitable interface between urban development and the natural area. The layout that proposes Houmoed Avenue at the northern edge of the upgraded settlement is therefore also aligned with the District Plan principle of using a roadway as an appropriate interface between the natural area and the urban environment.

The upgrading of the informal settlement will improve the living conditions of those currently residing in the informal structures. The Southern District Plan mentions the specific need to fully integrate Masiphumelele into the valley. The project will therefore significantly contribute to the objective. Furthermore, the Phase 2 Houmoed Avenue extension is considered a priority project in the SDF and IDP.

The Phase 2 Houmoed Avenue extension is considered a priority project for the City given the urgency to resolve significant road congestion in the valley. Extensive traffic studies and analyses were undertaken in the greater area to inform the City's forward planning and decision-making on the required road infrastructure. Various scenarios were investigated to determine the most appropriate solution. Two of the scenarios considered Phase 1 and Phase 2 of the Houmoed Avenue extension (respectively). Results of the investigation highlighted the dire need for both phases of the Houmoed Avenue extension as part of the traffic alleviation solution and forward transport planning in the valley. Even with the implementation of the Houmoed Avenue extension some intersections will continue to operate at over capacity conditions. Current and future traffic volumes therefore necessitate the proposed link road.

With respect to the Houmoed Avenue link from Fish Eagle Park to Lekkerwater Road (Phase 2 extension), the project will serve to:

- Provide redundancy in the road network and the necessary peak period traffic capacity;
- Provide an additional access route to serve Masiphumelele;
- Provide an alternative and more convenient transport route to Kommetjie Main Road for Masiphumelele residents;
- Provide a physical barrier between the vlei and Masiphumelele;
- Provide access to much needed municipal services;
- Provide a publicly accessible edge along the wetland; and
- increase public safety and security.

3.2 Biophysical Impacts

Impacts on vegetation:

Although the site falls inside an area of 'Other Natural Vegetation' as included in the City of Cape Town Biodiversity Network, it is now transformed with informal dwellings. The vegetation has been disturbed over an extended period of time and has now been completely replaced by informal dwellings.

The only species of conservation importance is the milkwood tree. One large group of milkwood trees and a number of individual specimens occur on private property to the east of the site, surrounded by gardens and hard infrastructure.

Several alien and/or weedy plant species were noted along the edge of the wetland, including Port Jackson willow, rooikrans, kikuyu grass, buffalo grass, and a number of other grasses and herbs that are common weeds in disturbed areas.

The site is deemed to have a moderate to low rehabilitation potential. However, considering the current condition of the area and the ecological value in terms of processes, the conservation value of the site is considered low within the regional context.

Impacts on aquatic features:

The proposed route starts at the end of Houmoed Avenue in the west, adjacent to Fish Eagle Park industrial area, and links up with the northern end of Lekkerwater Road to the east, passing through the informal portion of Masiphumelele along the way.

There are no Freshwater Ecosystem Priority Areas ("FEPA's") in the vicinity of the site and no rivers traverse the site. The City of Cape Town's Wetlands Map indicates the presence of a significant wetland area, most of which has been categorised as an Aquatic Ecological Support Area. This wetland is locally known as the "Pick n Pay reedbed" and forms part of the broader Noordhoek Wetland System.

The dominant vegetation within the permanently saturated reedbed is the common reed and bulrush. Along the southern edge of the reedbed, which is seasonally to semi-permanently saturated, is a band of fringing vegetation dominated by sedges and rushes. Most of the fringing vegetation along the southern edge of the western portion of the reedbed wetland has, however, been lost through infilling for housing and other disturbances.

Almost all of the area to the south of the western portion of the reedbed wetland has been infilled for housing in Masiphumelele and is no longer ecologically functional, despite the continued existence of subsurface seepage below the fill material in places.

The Pick 'n Pay reedbed wetland was rated to be of moderate to high conservation importance, since this wetland:

- Fulfils some functional roles within the catchment, with a number of regulating and supporting ecosystem services such as flood attenuation, sediment trapping, and nutrient and toxicant assimilation likely to be provided to an intermediate level by the wetland;

- Provides aquatic habitat to some indigenous flora and fauna, possibly including Red Data species (such as the endangered Western Leopard Toad);
- Represents a degraded but threatened habitat type, namely a semi-natural depression wetland within an endangered vegetation type (Hangklip Sand Fynbos) in the greater Cape Town metropolitan area;
- Is ecologically degraded but has relatively high potential for rehabilitation;
- Has been identified as an aquatic Critical Ecosystem Support Area ("CESA") in terms of a municipal biodiversity conservation plan;
- Functions as a buffer area between terrestrial systems and ecologically important aquatic ecosystems forming part of the Noordhoek Wetland System located downstream within a protected area to the north-west; and
- Is of a reasonable size, forming an integral part of the reasonably extensive and ecologically important Noordhoek Wetland System.

While no FEPA's have been mapped in the study area, the City of Cape Town's wetland prioritisation layer categorised most of the Pick 'n Pay reedbed wetland as a CESA.

No ecologically functional wetland remains in the entire area earmarked for the upgrading of housing or along most of the proposed road route. In the case of the preferred Route alternative 1, most of the areas consist of historically infilled wetland.

Approximately 1500m² (0.15ha) of ecologically functional wetland will be lost for the preferred Route Alternative 1. This represents a proportional loss of:

- Approximately 15% of the total extent of fringing wetland that remains along the southern edge of the portion of reedbed wetland situated adjacent to Masiphumelele; and
- An estimated proportional loss of approximately 0.3% of the Pick n Pay reedbed wetland as a whole.

The long-term loss of wetland associated with the proposed Phase 2 Houmoed Avenue extension to Lekkerwater Road through the lower portion of Masiphumelele is rated to be a negative ecological impact of low to very low significance for the preferred Route alternative 1.

The proposed rehabilitation of approximately 2-2.5ha of wetland habitat along the northern edge of the proposed road represents a positive impact which will compensate for the loss of wetland associated with the proposal. The implementation of the wetland rehabilitation measures signifies a positive impact of at least low to medium significance for freshwater ecosystems.

Proposed wetland offset site:

The Remainder of Farm 4836 has been identified as the wetland offset site. The property is currently zoned "Limited Use".

The northern and northeastern portions of the property are highly transformed consisting of sports fields in the northeast and horse-riding facilities with an associated network of paths in the north. Further south the site consists of a mosaic of wetlands and terrestrial dune fields dominated by Hangklip Sand Fynbos vegetation. These areas are relatively natural in terms of their present ecological

condition, although they are impacted by the encroachment of alien invasive and other disturbances such as a network of horse and pedestrian paths across the site.

The wetlands on the offset site are according to the City's Wetlands Map, sand fynbos depression wetlands, located near to the interface with dune strandveld wetlands closer to the coastline towards the west. As such, the wetlands on the site are of the same type as the wetlands for which an offset is required. The wetlands on the site were categorised as an Aquatic Critical Biodiversity Area - Category 1 ("CBA1"). As such, the wetlands are of very high conservation importance at a municipal level.

The majority of the wetland area, except for the northern portion, is surrounded by dune fields dominated by relatively ecologically intact terrestrial Hangklip Sand Fynbos vegetation. Within the wetland itself there is a moderate diversity of indigenous vegetation across the site.

Although the wetland is in a relatively good ecological condition compared to many wetlands in the broader study area, there are a number of impacts on the present ecological state of the wetland.

The proposed wetland offset strategy aims to secure increased protection levels for the wetlands on the Remainder of Farm 4836 and to improve the functioning of wetlands on the subject property through the implementation of wetland rehabilitation interventions.

The Remainder of Farm 4836 is an ideal site for improving the protection status of wetlands forming part of the greater Noordhoek Wetland System. The property contains a diversity of natural habitats including extensive wetland areas that are in relatively good ecological condition.

Impacts on fauna:

Numerous mammal species were observed or are known to occur near the site and none of these species are of conservation concern. The study area is unlikely to support the listed Girdled Lizard as it lacks the right habitat, but the listed Cape Dwarf Chameleon will occur in the area. Other reptiles that will be supported include several snake species.

Due to habitat type and condition, few of the listed amphibian species will be present in the area. The Cape Platanna may occur in the area however it is more likely that the Common Platanna has taken over the area.

The endangered Western Leopard Toad breeds in the Noordhoek Wetlands System. However, since Masiphumelele is very heavily developed and not a favourable habitat for toads, it is not likely that many toads are moving through the area to breed in the vlei.

The open water areas are deemed important for numerous avifaunal species that occur in the area, however this is located some distance from the Phase 2 site. The only area of some importance is the reedbeds along the margin of the development area. The dense reedbeds are breeding habitat for many of the

smaller passerines as well as wetland-associated species. The proposed site is highly disturbed and thus not important for fauna.

3.3 Traffic impacts

The Transport Impact Assessment Report compiled by HHO Africa dated June 2016, contains the following conclusion for the Phase 2 extension of Houmoed Avenue:

Sections of Ou Kaapse Weg between Noordhoek Road and Kommetjie Main Road, and Kommetjie Main Road between Corsair and Houmoed Avenue operate at very low levels of service during the weekday peak periods in the peak direction of travel.

The recent introduction of the upgrading and signalization of the Ou Kaapse Weg/Noordhoek Road Intersection has had the following impact during peak periods:

- Increased the traffic capacity in the northbound direction by the introduction of an additional northbound through lane;
- Reduced the capacity in the southbound direction by signalizing the existing single southbound through lane; and
- Increased capacity in the eastbound direction by providing two eastbound right turn lanes at the eastbound approach.

Due to the current congestion along Ou Kaapse Weg in the southbound direction during the PM peak period, motorists destined for Fish Hoek, particularly, turn left into Corsair Way at the Buller Louw Avenue Intersection and 'rat run' through Sun Valley to reach Kommetjie Main Road and thereafter through Fish Hoek to Main Road to travel southwards.

The current congestion along Kommetjie Main Road has a major impact on bus and taxi services travelling between the public transport interchange at Fish Hoek Station and the residential townships of Masiphumelele and Ocean View, as well as to and from the employment opportunities in Fish Hoek itself, and also in Fish Eagle Park and Heron Park Industrial areas.

The following sections of the road network in the study area are extremely well utilized by recreational cyclists over weekends and public holidays and to a much lesser extent on normal weekdays:

- Kommetjie Main Road to the west of Ou Kaapse Weg;
- Ou Kaapse Weg between Kommetjie Main Road and Noordhoek Road; and
- Noordhoek Road itself.

While there are no formal cycle facilities on any of the above sections of the network, there are surfaced shoulders along Kommetjie Main Road, and narrow surfaced shoulders along Noordhoek Road to the west of Houmoed Avenue. Along the upgraded section of Noordhoek Road, between the new Sun Valley Mall secondary access and Ou Kaapse Weg, shoulders have been removed to accommodate turn lanes, and kerbed islands have been introduced at the secondary access to the new Sun Valley Mall which constrain the roadway and create dangerous "pinch points" for cyclists.

The major pedestrian movements and facilities in the study area are as follows:

- Along Kommetjie Main Road between Sunnydale Road and Pokela Road in Masiphumelele: There is a pedestrian footway along the northern edge of Kommetjie Main Road to accommodate this movement. The footway extends further to the west along Kommetjie Main Road as far as Houmoed Avenue, which gives access to Fish Eagle Park.
- Along Noordhoek Road: There are surfaced shoulders along both sides of Noordhoek Road to the west of Houmoed Avenue which are utilized by pedestrians and cyclists. On the section between Ou Kaapse Weg and the new secondary access to Sun Valley Mall, there is a new pedestrian facility along the southern edge of the road reserve. There are no pedestrian facilities between the above access and Houmoed Avenue.
- Across Ou Kaapse Weg in the vicinity of Buller Louw Avenue Intersection: There are formal pedestrian crossings at the signalized intersection to accommodate pedestrians accessing the Long Beach and Sun Valley Mall, from the Sun Valley residential area.

There is an existing well utilized trading area on the east side of Ou Kaapse Weg just to the south of Longboat Road, and a well utilized pick up and drop off area on the west side of Kommetjie Main Road. Informal trading also takes place in the northwest quadrant of the Ou Kaapse Weg/Kommetjie Main Road Intersection, while pick-up and drop-off of casual labourers also takes place at this intersection.

It is evident that the critical sections of the network are operating at over capacity conditions. In this regard the following major deficiencies in the network should be noted:

- The lack of capacity at the Kommetjie Main Road/Capri Drive Intersection;
- The narrowing down of Kommetjie Main Road just to the west of Ou Kaapse Weg in the westbound direction from two lanes to one lane;
- The narrowing down of Ou Kaapse Weg in the vicinity of Longboat Road to one lane in each direction;
- The existing phasing at the Buller Louw Avenue Intersection, where northbound traffic capacity is limited due to the startup phase for southbound traffic during the AM peak periods;
- The lack of formal provision for cyclists especially along Ou Kaapse Weg and Noordhoek Road, particularly in the vicinity of the secondary access to Sun Valley Mall; and
- The provision of only one southbound through lane at the newly upgraded and signalized Ou Kaapse Weg/Noordhoek Road Intersection.

The existing capacity constraints on the external road links serving the study area *i.e.*, Ou Kaapse Weg and Main Road, particularly between Clovelly and Kalk Bay, result in traffic operating at capacity conditions during the peak periods. The resolution of this important issue will be the subject of a separate study soon to be commissioned by Transport for Cape Town ("TCT").

A conceptual layout design has been prepared for the road network within the study area, in which a four lane dual carriageway cross section has been introduced for Ou Kaapse Weg, between Noordhoek Road and Kommetjie Main Road, and for Kommetjie Main Road between Corsair Road and Houmoed Avenue. Ultimately, the four lane section of Kommetjie Main Road will be extended

as far west as Slangkop Road. At all major intersections, separate single and double, left and right turn lanes have been provided where appropriate. In addition, public transport priority lanes have been provided along Kommetjie Main Road in the vicinity of the intersection with Ou Kaapse Weg.

A traffic model for the study area and surrounds has been set up to test the impact of two future land use scenarios, *i.e.*, 2018 and 2028, for developments in the study area, and three alternative road network scenarios. The model has been used to assess the ability of the planned upgrading of the road network to accommodate the additional peak period traffic generated by the development scenarios under consideration.

A number of road network alternatives has been considered for accommodating future traffic growth in the study area. These include the upgrading proposals for Ou Kaapse Weg and Kommetjie Main Road in the study area as well as the completion of the future Houmoed Avenue link, between Kommetjie Main Road and Noordhoek Road.

Trip generation rates for the proposed land uses in the study area have been based on the NDoT Trip Generation Rate Guidelines. Generalized shifts towards public transport of 20% for the retail and residential land uses, and 30% for the industrial land uses have been assumed *i.e.*, normal trip rates, which already reflect a proportion of public transport use, have been reduced by these proportions.

The existing 2015 traffic flows have been increased by factors of 1.25 and 1.35 for the AM and PM peak hours respectively to obtain the 2015 unconstrained flows for the base traffic scenario. The generated traffic for the 2018 and 2028 development scenarios has been added to the 2015 base scenario to obtain the future 2018 and 2028 unconstrained traffic scenarios.

The performance of future transport network in the study area has been assessed by examining the level of service at which critical intersections and links in the network will operate for the future land use scenarios.

As indicated in the intersection and link analyses, for unconstrained 2015 and 2018 development scenarios, all intersections and links in the upgraded network in the study area will operate at acceptable levels of service with the exception of the section of Ou Kaapse Weg to the north of Noordhoek Road, in the northbound direction of travel, during the PM peak hour.

For the 2028 development scenario, a number of links in the network will operate at over capacity conditions during AM and PM peak hours including Ou Kaapse Weg to the north of Noordhoek Road.

For scenarios where the partial and full Houmoed links are introduced, the critical links and intersections will operate at or just over capacity conditions indicating that the partial or full Houmoed links are essential for the internal road network in the study area to accommodate the 2028 development scenario. In addition, Lekkerwater Road and Houmoed Avenue will also operate at capacity conditions. The Ou Kaapse Weg to the north of Noordhoek Road will operate at well over capacity conditions.

Finally, it should be noted that in order to obtain the 2018 and 2028 development scenario traffic flows, the generated traffic for these scenarios was added to the 2015 unconstrained traffic flows and not to the existing 2015 measured traffic flows. Thus, these future traffic scenarios represent relatively unconstrained traffic conditions.

Kommetjie Main Road is a major public transport route between the public transport interchange located at Fish Hoek Station on the southern suburbs railway line, and the residential townships of Masiphumelele and Ocean View, as well as to and from employment opportunities in Fish Eagle Park and Heron Park industrial areas, and also the Longbeach Mall/Sun Valley Mall commercial node.

In this regard, the latest Integrated Public Transport Network ("IPTN") Plan has identified the Kommetjie Main Road route as a future feeder route in the metropolitan Integrated Rapid Transit ("IRT") system. The current concept layout plan for Kommetjie Main Road, includes additional public transport priority lanes through the major intersection of Kommetjie Main Road with Ou Kaapse Weg to ensure that public transport vehicles are not delayed by normal traffic, especially during peak AM and PM periods.

Public transport stops have also been included in the concept layout plan at all major intersections along Kommetjie Main Road and also Ou Kaapse Weg and Noordhoek Road.

In the concept layout plan for Ou Kaapse Weg and Kommetjie Main Road, the following major Non-Motorized Transport ("NMT") facilities have been proposed:

- Along the northern edge of Kommetjie Main Road, a 4m wide NMT facility has been provided between Ou Kaapse Weg and Pokela Road at the entrance to Masiphumelele and a 3m wide facility up to Houmoed Avenue. Further westward, a 2m wide sidewalk will be provided up to Wireless Road. Along the southern edge of Kommetjie Main Road, a 2m wide sidewalk has been provided along the full extent of the project.
- Along Ou Kaapse Weg, 3m wide NMT facilities have been provided along both sides of the roadway between Kommetjie Main Road and Noordhoek Road, while 2m wide sidewalks have been provided along Noordhoek Road between Ou Kaapse Weg and the northern leg of Houmoed Avenue.
- Full 2.4m shoulders have been provided along both Kommetjie Main Road and Ou Kaapse Weg, and also along the section of Noordhoek Road between Ou Kaapse Weg and Houmoed Avenue. The shoulders will provide cyclists a safe area within which to ride between the major intersections. At major intersections, where exclusive left turn lanes are provided, a dedicated cycle lane is developed, and a special treatment is applied to ensure that drivers of vehicles are made aware of the cyclists.

3.4 Storm water impacts

The existing five open channels that discharge directly into the wetland will be consolidated into five underground channels. The five existing outfalls are located at the common boundary between the informal and informal sections of Masiphumelele. The outfalls will be remodeled to include new litter traps, with silt traps and low-flow diversions to sewer. Each structure will have a built-in grid for the

collection of debris during large storm events and will allow for the required access for maintenance works.

Major storms and all overland flow will be routed along the internal roads, which will act as wide shallow channels, directing the flow into the major storm water drainage system and avoid flooding of the housing area. The culverts will then be rerouted to three outfalls into the wetland.

Two of the outfalls will link to 'treatment trains' that will have concrete outfall slabs with baffles, stilling basins comprising gabions and reno mattress structures and planted wet swales of approximately 130m in length with reinforced base to allow for the required maintenance. Steps in the northern berm of each swale will act as lateral weirs and discharge high flows into the adjacent wetland area to the north, preventing the concentration of flows at the main outlet of the swale. The design of the system is therefore such that flood damage is prevented whilst maximum nutrient removal takes place. The remaining outfall at the wetland will be formalized.

All new stormwater catch pits in the system will be equipped with active peat cushions to absorb hydrocarbons. The high water table and saturated soil conditions in the area will necessitate dump rock drainage blankets and conventional longitudinal sub-surface drains to accommodate sub-surface flows of groundwater. The stormwater system was designed to avoid flooding of the area and all properties abutting the wetland at all costs.

3.5 Noise impacts:

The maximum applicable noise level limit will be exceeded by as much as 13dB during peak hour traffic conditions for the Phase 2 Houmoed Avenue extension. The maximum applicable noise level limit will be exceeded up to 30m away from the proposed road alignment site boundary.

The recommended mitigation measures will significantly reduce noise at the site boundary by more than 12dB. The maximum applicable noise level limit will be exceeded at the residents immediately adjacent to the proposed road alignment during peak traffic hours.

A 2m solid barrier will be erected along the road verge between the Masiphumelele residential plot boundaries and the road alignment from Fish Eagle Park to Lekkerwater Road. The noise barrier will be a continuous solid structure with constant element height and may be fabricated to allow the passage of pedestrians and fauna without compromising the acoustic properties.

The mitigation will thus serve to reduce the significance of noise disturbance from high negative to low negative.

The proposed development will result in both negative and positive impacts.

Negative impacts include:

- Potential safety related impacts from construction vehicles on road users, adjacent properties and contractors;
- Potential damage to roads by large trucks and other heavy construction vehicles;

- Loss of a portion of fringing wetland;
- Potential pollution and loss of wetland habitat and ecosystem services, particularly but not limited to the development phase;
- Loss of completely transformed Hangklip Sand Fynbos and impacts on Milkwood Trees;
- Construction related impacts on freshwater systems;
- Loss of faunal habitat due to transformation of currently intact habitat along the wetland and its margins; and
- Some light, noise and dust impacts.

The competent authority took into consideration the abovementioned negative impacts and although some impacts cannot altogether be prevented/avoided, they can be mitigated/reduced to acceptable levels.

Positive impacts include:

- The proposed development will create temporary employment opportunities during the construction phase;
- Increased access for the greater public to the wetland area;
- Deterrence of unlawful encroachment into the wetland area through the development of a hard edge; and
- Alleviation of traffic congestion for the greater Kommetjie/Noordhoek area.

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 activity can be mitigated to acceptable levels.

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