

REFERENCE: 16/3/3/1/B4/22/1070/20
NEAS REFERENCE: WCP/EIA/0000844/2020
DATE: 14 SEPTEMBER 2021

The Municipal Manager
Stellenbosch Municipality
PO Box 17
STELLENBOSCH
7600

Attention: Mr D Louw

Tel: (021) 808 8213
Email: Deon.Louw@stellenbosch.gov.za

Dear Sir

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT ("EIA") REGULATIONS, 2014 (AS AMENDED): KAYAMANDI NORTHERN EXTENSION WATER SUPPLY PUMP STATIONS, PIPELINES AND A 10ML RESERVOIR, STELLENBOSCH

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 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 ("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 Appeal Regulations, 2014, which prescribes the appeal procedure to be followed. This procedure is summarised in the attached Environmental Authorisation.

Yours faithfully

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

Cc: (1) Catherine Smith (AECOM (Pty) Ltd) Email: catherine.smith@aecom.com/ dalian.govender@aecom.com
(2) Schalk van der Merwe (Stellenbosch Municipality) Email: Schalk.VanDerMerwe@stellenbosch.gov.za
(3) Johru Robyn (Stellenbosch Municipality) Email: johru.robyn@stellenbosch.gov.za
(4) Alana Duffell-Canham (CapeNature) E-mail: aduffell-canham@capenature.co.za
(5) Ryan Apolles (DEADP) Email: Ryan.Apolles@westerncape.gov.za

REFERENCE: 16/3/3/1/B4/22/1070/20
NEAS REFERENCE: WCP/EIA/0000844/2020
ENQUIRIES: Samornay Smidt
DATE OF ISSUE: 14 SEPTEMBER 2021

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): KAYAMANDI NORTHERN EXTENSION WATER SUPPLY PUMP STATIONS, PIPELINES AND A 10ML RESERVOIR, STELLENBOSCH

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 Preferred Alternative, as described in the Basic Assessment Report ("BAR"), dated May 2021.

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

Stellenbosch Municipality
c/o Mr. Deon Louw
PO Box 17
STELLENBOSCH
7600

Tel: (021) 808 8213
Email: Deon.Louw@stellenbosch.gov.za

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

B. LIST OF ACTIVITIES AUTHORISED

Listed Activities	Activities/Project Description
<p>EIA Regulations Listing Notice 1 of 2014 -</p> <p>Activity Number: 9</p> <p><i>The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or storm water -</i></p> <ul style="list-style-type: none"> <i>(i) with an internal diameter of 0,36 metres or more; or</i> <i>(ii) with a peak throughput of 120 litres per second or more;</i> <p><i>excluding where -</i></p> <ul style="list-style-type: none"> <i>(a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve or railway line reserve; or</i> <i>(b) where such development will occur within an urban area.</i> 	<p>The proposed project includes the development of a bulk water supply pipeline of approximately 3 200 m in length, with an internal diameter of 450mm and a flow rate of approximately 75-154ℓ/s. The southern half of the route (1400m in length) is located outside the urban area.</p>
<p>Activity Number: 12</p> <p><i>The development of -</i></p> <ul style="list-style-type: none"> <i>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or</i> <i>(ii) infrastructure or structures with a physical footprint of 100 square metres or more;</i> <p><i>where such development occurs -</i></p> <ul style="list-style-type: none"> <i>(a) within a watercourse;</i> <i>(b) in front of a development setback; or</i> <i>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; —</i> <p><i>excluding –</i></p> <ul style="list-style-type: none"> <i>(aa) the development of infrastructure or structures within existing ports or harbours that will not</i> 	<p>The proposed pipeline route crosses a wetland, and the footprint will exceed 100m².</p>

<p><i>increase the development footprint of the port or harbour;</i></p> <p><i>(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</i></p> <p><i>(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activities applies;</i></p> <p><i>(dd) where such development occurs within an urban area;</i></p> <p><i>(ee) where such development occurs within existing roads, road reserves or railway line reserves; or</i></p> <p><i>(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.</i></p>	
<p>Activity Number: 19</p> <p>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 watercourse;</p> <p><i>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</i></p> <p><i>(a) will occur behind a development setback;</i></p> <p><i>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</i></p> <p><i>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</i></p> <p><i>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</i></p> <p><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>	<p>The proposed project will result in the depositing into and / or excavating and removal of more than 10 m³ of material from a watercourse.</p>

<p>EIA Regulations Listing Notice 3 of 2014 –</p> <p>Activity Number: 12</p> <p><i>The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</i></p> <p>i. <i>Western Cape</i></p> <p>i. <i>Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</i></p> <p>ii. <i>Within critical biodiversity areas identified in bioregional plans;</i></p> <p>iii. <i>Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas;</i></p> <p>iv. <i>On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or</i></p> <p>v. <i>On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.</i></p>	<p>Clearance of approximately 10 200 m² of critically endangered indigenous vegetation will be required for the proposed Kayamandi Bulk Water Supply Project. A portion of the development will also be located in the Papegaaiberg Nature Reserve.</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 alternative that includes the listed activities as it relates to the proposed development:

The proposed Kayamandi Bulk Water Supply project entails the construction of the following components with a combined approximate footprint of 2.5ha:

1) A 75 to 154 litre per second (ℓ/s) pump station and associated infrastructure

- It will be located at the existing Papegaaiberg Reservoir and pump station site in the Papegaaiberg Nature Reserve.
- The pump station footprint, including generators, diesel storage and associated infrastructure will have a footprint of approximately 3000m².
- Associated with the pump station will be a satellite construction camp of approximately 400m².

2) A rising main pipeline

- The pipeline will take water from the proposed new pump station at the existing Papegaaiberg Reservoir to the proposed new Kayamandi Northern Reservoir.
- It will be approximately 3 200m in length, with an internal diameter of 450mm.
- Associated infrastructure includes scour chambers (5-7 small chambers, each with an approximate 10m² footprint).
- The infrastructure will have an approximate footprint of 3 200m² and the construction footprint (trench) will range between 6-6.5m wide (20 800m²).
- To accommodate the above, a 50m wide pipeline corridor has been assessed along the length of the pipeline route, within which a 15-20m construction corridor is required (64 000m²), with the following exceptions:
 - The *wetland crossing* – within the wetland buffer area (15m on either side of the delineated wetland) no application corridor applies. A maximum construction corridor of 6.5m will be catered for.
 - *Azania/Watergang informal settlement* – the pipeline passes between the newly established Watergang / Azania Township and the Kayamandi Township, where space is limited to a jeep track and walking path through this area. The pipeline will be placed in the available space (an approximate 6.5m width).
 - *Enkanini informal settlement (east of existing Kayamandi Reservoir)* – the pipeline route continues southwards and follows the gravel road past the eastern side of the existing Kayamandi Reservoir. In this section, a small informal settlement has established on both sides of this road and available space is less than 6m wide, constricted to 3-4m wide in places due to dwellings or structures encroaching on the road. A minimum construction corridor of 6.5m wide is however required and therefore the identified structures must be relocated to make way for the proposed pipeline. Once completed, a 6-6.5m wide pipeline servitude will be kept clear of development.

3) A 560 m pipeline

- The pipeline will be routed from the proposed Kayamandi Northern Reservoir back along the rising main pipeline to Azania / Watergang (i.e. in parallel to the northern section, thus the total length of the pipeline footprint is still 3200m).
- The pipeline will have a maximum internal diameter of approximately 450mm.
- Its footprint is included in that of the rising main pipeline.

4) The Kayamandi Northern Reservoir

- The reservoir will have a 10 mega litre (Ml) capacity and together with its associated infrastructure, such as valve chambers and flow meters, will cover an area of approximately 1600m².
- It will be fed from the existing Papegaaiberg Reservoir via the proposed new rising main pipeline.
- Provision will be made for a construction camp with a laydown area with a maximum footprint of 4000m².
- The proposed reservoir and construction campsite will be located within the surveyed area for the proposed reservoir site.

C. SITE DESCRIPTION AND LOCATION

The listed activities will be undertaken approximately 3 km north of Stellenbosch and adjacent to the existing Papegaaiberg, Kleinvallei and Kayamandi reservoirs. The properties include Farm No. 181, Farm Watergang No. 182, No. 182/1, No. 183/5, Farm Grootvlei No. 183, No. 183/23, No. 183/36, and No. 183/60.

The SG21 digit codes are:

C06700000000018100000
 C06700000000018200000
 C06700000000018200001
 C06700000000018300000
 C06700000000018300005
 C06700000000018300023
 C06700000000018300036
 C06700000000018300060

Co-ordinates of the properties:

Coordinates of all the proposed activities on the property or properties (sites):	Farm No.	Latitude	Longitude
	181	33° 55' 45.16" South	18° 50' 46.20" East
	182/1	33° 55' 16.35" South	18° 50' 16.08" East
	182	33° 55' 5.03" South	18° 50' 15.24" East
	183	33° 54' 57.34" South	18° 49' 59.90" East
	183/5	33° 54' 59.73" South	18° 50' 09.93" East
	183/23	33° 54' 48.89" South	18° 49' 59.36" East
	183/36	33° 54' 57.36" South	18° 50' 04.19" East
	183/60	33° 54' 57.34" South	18° 49' 59.91" East

Co-ordinates for the linear activities:

	Latitude	Longitude
Start	33° 54' 52.95" South	18° 50' 0.83" East
Middle	33° 55' 32.19" South	18° 50' 26.02" East
End	33° 56' 15.86" South	18° 50' 45.85" East

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

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

D. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

AECOM SA (Pty) Ltd
 c/o Ms C Smith
 Waterside Place, South Gate, Tyger Waterfront
 Carl Cronje Drive,
BELLVILLE
 7535

Cell: 079 501 5303

Email: Catherine.Smith@aecom.com

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, as described in the BAR dated May 2021 on the site as described in Section C above.
2. The Environmental Authorisation is valid for a period of **five years** from the date of issue, within which commencement must occur.
3. The development must be concluded within **ten years** from the date of commencement of the listed activities.
4. 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.
5. 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

6. Seven calendar days' notice, in writing, must be given to the Competent Authority before commencement of construction activities.
 - 6.1 The notice must make clear reference to the site details and EIA Reference number given above.
 - 6.2 The notice must also include proof of compliance with the following conditions described herein:

Conditions: 7, 8, 9, 12 and 19 (as appropriate in the specific circumstances of this condition).

Notification and administration of appeal

7. The holder must in writing, within 14 (fourteen) calendar days of the date of this decision–
 - 7.1 notify all registered Interested and Affected Parties ("I&APs") of –
 - 7.1.1 the outcome of the application;
 - 7.1.2 the reasons for the decision as included in Annexure 3;
 - 7.1.3 the date of the decision; and
 - 7.1.4 the date when the decision was issued.

- 7.2 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;
- 7.3 draw the attention of all registered I&APs to the manner in which they may access the decision;
- 7.4 provide the registered I&APs with:
 - 7.4.1 the name of the holder (entity) of this Environmental Authorisation,
 - 7.4.2 name of the responsible person for this Environmental Authorisation,
 - 7.4.3 postal address of the holder,
 - 7.4.4 telephonic and fax details of the holder,
 - 7.4.5 e-mail address, if any, of the holder, and
 - 7.4.6 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).
8. The listed activities, including site preparation, must not commence within 20 (twenty) calendar days from the date the applicant notified the registered I&APs of this decision. 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 activities

9. The draft Environmental Management Programme ("EMPr") submitted as part of the application for Environmental Authorisation is hereby approved and must be implemented.
10. The EMPr must be included in all contract documentation for all phases of implementation.
11. The Final Maintenance Management Plan ("MMP") dated 27 May 2021 must be updated to include method statements for each of the identified maintenance related activities that will be undertaken in future, irrespective of whether it will entail potential emergency work or routine maintenance activities. The MMP cannot be adopted if this requirement has not been met. The required method statements must include a clear step-by-step plan to inform the responsible person(s) on the process and actions to take in a sequential and logical manner for the successful implementation of the specified maintenance/emergency maintenance activity, which aims to prevent or reduce the impact of undertaking the maintenance related work. Time periods must be provided within which routine maintenance actions contemplated need to be implemented and an indication must be given whether the maintenance activities will be repeated and at what frequency. The updated MMP must be re-submitted to the Department for formal adoption before commencement of any of the maintenance activities included in the MMP.

Monitoring

12. The holder must appoint a suitably experienced environmental control officer ("ECO") before commencement of any land clearing or construction activities to ensure compliance with the EMPr and the conditions contained herein.
13. A copy of the Environmental Authorisation, EMPr, MMP, 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.
14. 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

15. In terms of Regulation 34 of the NEMA EIA Regulations, 2014 (as amended), 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** (not the EAP that managed this EIA process or the ECO appointed in terms of condition 12 above) and must contain all the information required in Appendix 7 of the NEMA EIA Regulations, 2014 (as amended).

The holder must undertake the first environmental audit three months after commencement of the construction phase and undertake the subsequent environmental audits and submit the Environmental Audit Reports to the Competent Authority once a year during the construction phase. The final Environmental Audit Report must be submitted to the Competent Authority within six months after completion of the construction phase of the development.

The holder must, within 7 days of the submission of each of the above-mentioned reports to the Competent Authority, notify all potential and registered I&APs of the submission and make the report available to anyone on request and on a publicly accessible website (if applicable).

Specific Conditions

16. 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 artifacts 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.

17. A qualified archaeologist and/or paleontologist 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.

18. The relevant requirements with respect to occupational health and safety must be adhered to at all times.
19. A copy of the Relocation Action Plan and Livelihoods Restoration Plan and written confirmation that this has been successfully implemented and completed must be submitted to this Department prior to the commencement of construction activities within the Enkanini Informal Settlement Area.

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 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.
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 on which 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 on which 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 Organs 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 Organs 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

By facsimile: (021) 483 4174; or

By hand: Attention: Mr Marius 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 Appeal Authority at: Tel. (021) 483 3721, E-mail DEADP.Appeals@westerncape.gov.za or URL <http://www.westerncape.gov.za/eadp>.

H. DISCLAIMER

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

Your interest in the future of our environment is appreciated.

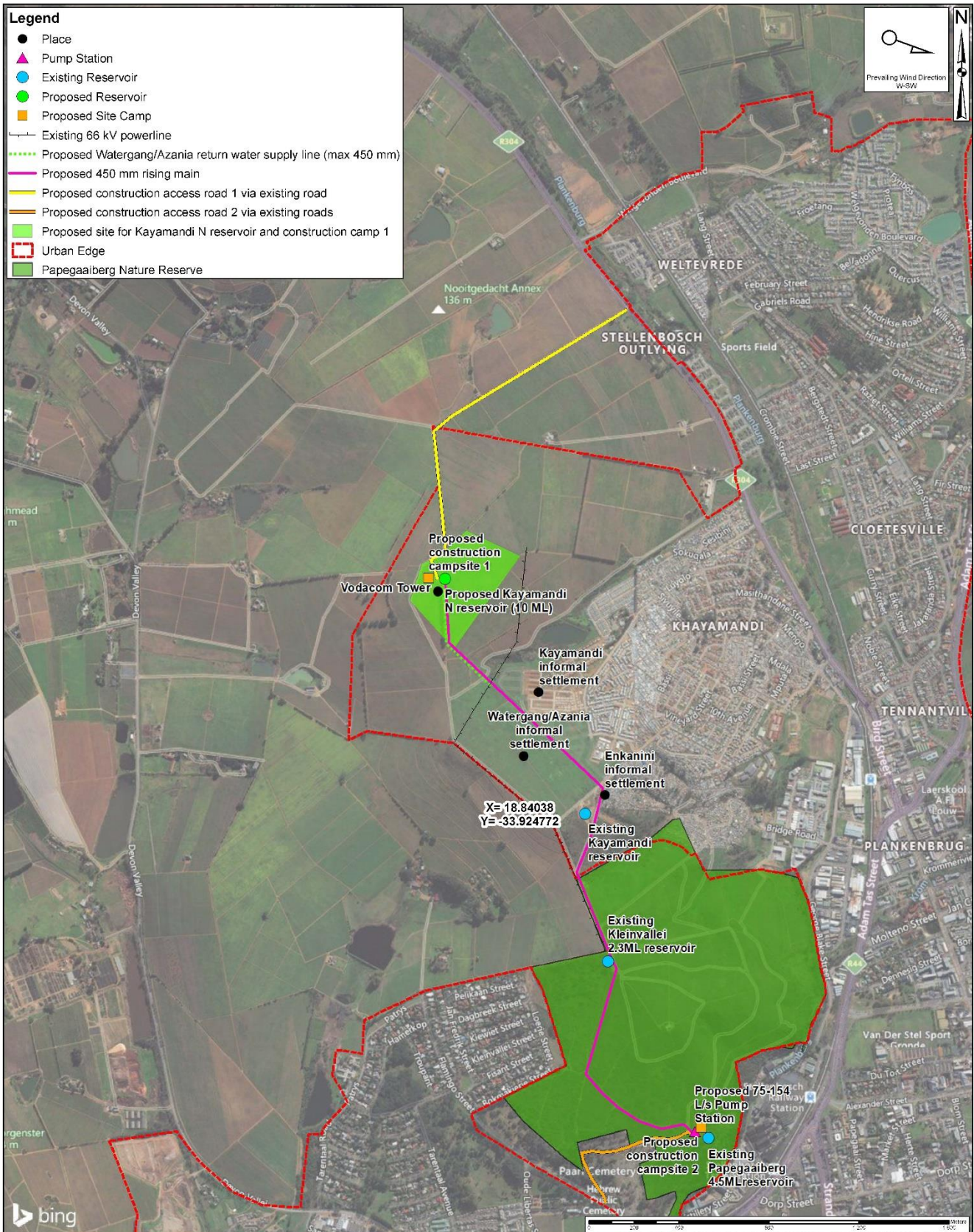
Yours faithfully

MR. ZAAHIR TOEFY
DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 1)

DATE OF DECISION: 14 SEPTEMBER 2021

Cc: (1) Catherine Smith (AECOM (Pty) Ltd) Email: catherine.smith@aecom.com/dalian.govender@aecom.com
(2) Schalk van der Merwe (Stellenbosch Municipality) Email: Schalk.VanDerMerwe@stellenbosch.gov.za
(3) Johru Robyn (Stellenbosch Municipality) Email: johru.robyn@stellenbosch.gov.za
(4) Alana Duffell-Canham (CapeNature) E-mail: aduffell-canham@capenature.co.za
(5) Ryan Apoles (DEADP) Email: Ryan.Apolles@westerncape.gov.za

ANNEXURE 1: LOCALITY MAP



Project Title:	Kayamandi Bulk Water Supply and Associated Works	Scale 1:15 000 <small>(When page size is A3 portrait)</small>	Figure 1
Map Title:	Locality Map	Projection: Transverse Mercator Datum: Harlebeesthoek, 1984 Central Meridian: 19.0 Compiled By: GA Mosee GIS QC By: Approved By: P Mashau Date Saved: 2020-11-24 Project Number: 00001470 Map Ref: Env_LocalityMap_2.mxd Revision: 00	Sources: © 2020 Microsoft Corporation © 2020 Maxar © CNES (2020) Distribution Airbus DS © 2020 HERE
<small>Whilst every care has been taken in compiling the information on this map, AECOM cannot accept responsibility for any inaccuracies. © Copyright</small>			
		<small>L:\Legacy\GISData\7_Projects\00607470_KayamandiBulkWater\mxd\Env_LocalityMap_2.mxd</small>	

ANNEXURE 2: SITE PLAN THE PUMPSTATION:



CONSULTANT
CAPE TOWN
PO BOX 12, DUBLIN, 7800
TEL: 021 461 1500
FAX: 021 461 1501
WWW.AECOM.COM

127 (R.F.) 600 7552 (M)
R.F. 10: 1000 7552 (M)

PROJECT

**KAYAMANDI
BULK WATER SUPPLY
AND ASSOCIATED WORKS**

**KAYAMANDI,
STELLENBOSCH
CLIENT**



**STELLENBOSCH
MUNICIPALITY**

NOTES

1. ALL INFORMATION MUST BE KEPT UP TO DATE.
2. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE WORKS AND SHALL BE RESPONSIBLE FOR THE OBTAINING OF ALL NECESSARY APPROVALS AND PERMITS.
3. THE DESIGNER SHALL BE RESPONSIBLE FOR THE OBTAINING OF ALL NECESSARY APPROVALS AND PERMITS.
4. THE DESIGNER SHALL BE RESPONSIBLE FOR THE OBTAINING OF ALL NECESSARY APPROVALS AND PERMITS.
5. THE DESIGNER SHALL BE RESPONSIBLE FOR THE OBTAINING OF ALL NECESSARY APPROVALS AND PERMITS.

ISSUE / REVISION

NO.	DATE	DESCRIPTION	ISSUED BY

DRAWING CHECKS

DESIGNED BY	CHECKED BY	DATE

APPROVAL CONSULTANT

NAME	DATE	SIGNATURE

THE MASTER PLAN AT THE AECOM/CAPE TOWN OFFICE BEARS THE ORIGINAL SIGNATURES OF APPROVAL.

BUILDING/FACILITY ZONE

PUMP STATION

PROJECT NUMBER
60607470

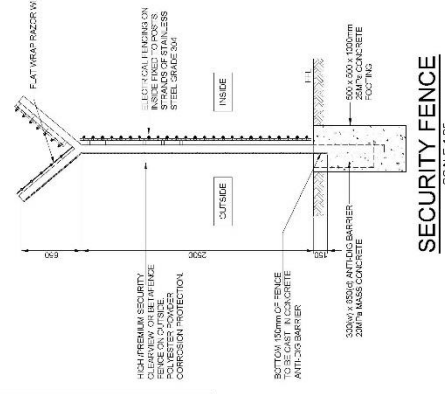
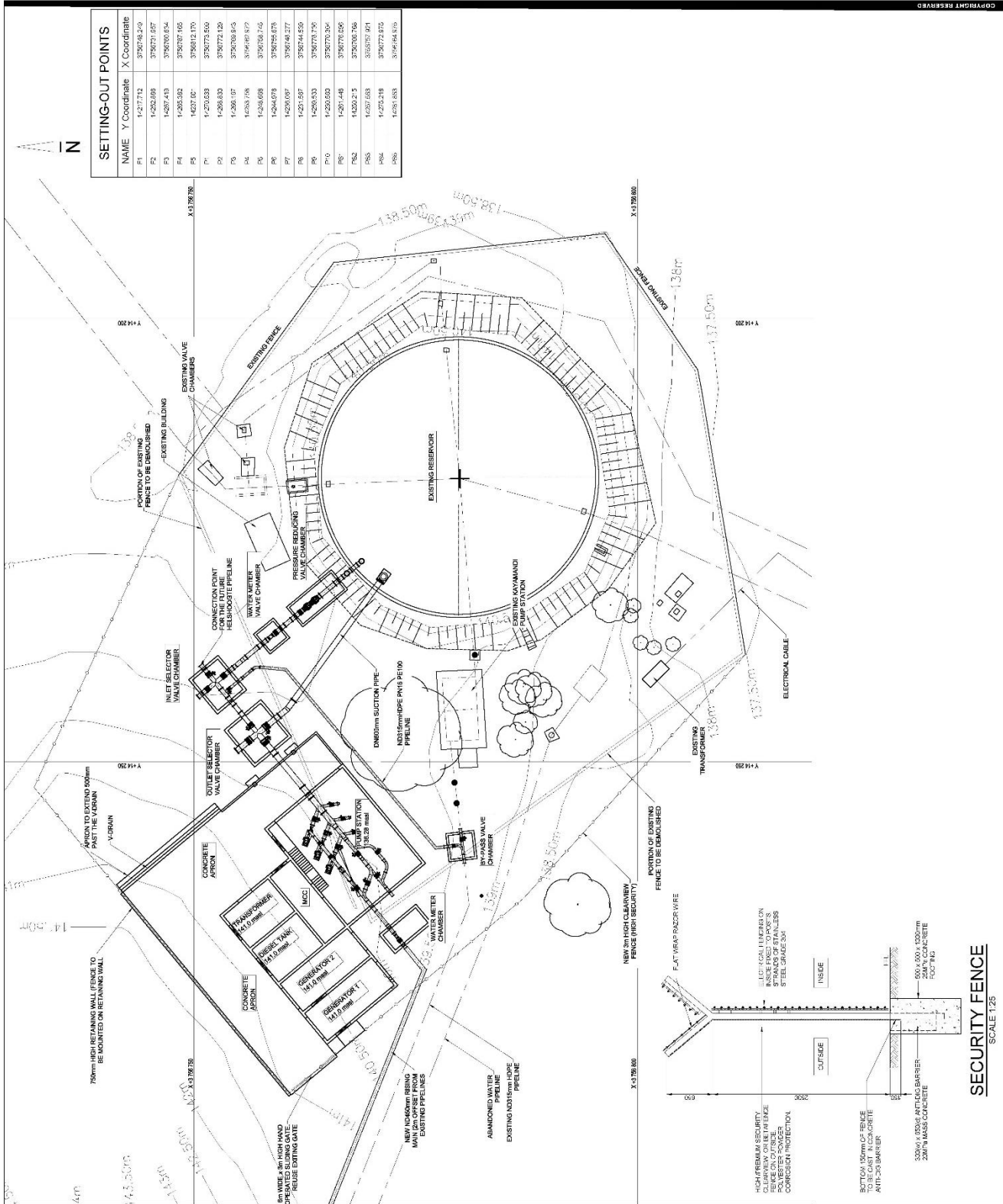
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GENERAL LAYOUT AND SETTING OUT POINTS

DISCIPLINE
WATER SYSTEMS

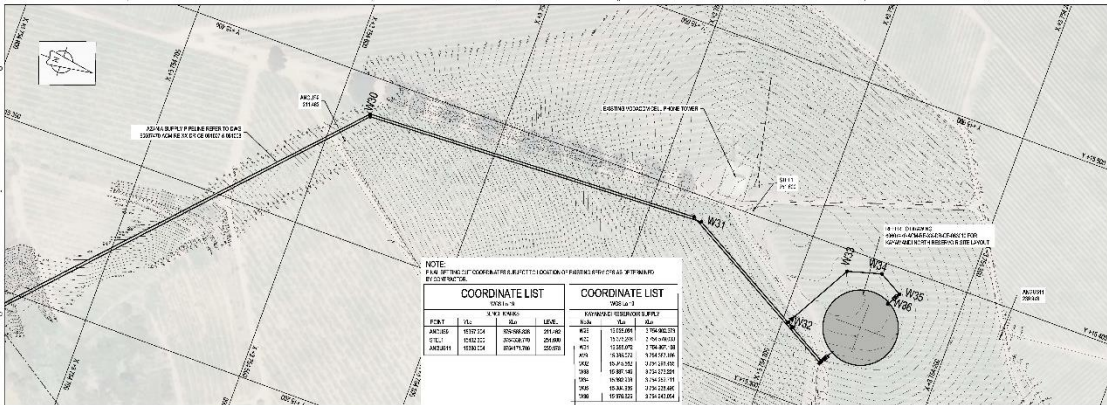
DRAWING NUMBER
60607470-ACM-PS-XX-DR-CE-084001-T-0

SCALE
AS SHOWN

SETTING-OUT POINTS		
NAME	Y Coordinate	X Coordinate
P1	1237.113	379278.249
P2	1426.688	379271.657
P3	1426.410	379270.634
P4	1426.592	379267.165
P5	1427.007	379261.170
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P11	1426.673	379258.675
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P14	1426.533	379278.735
P15	1426.500	379270.306
P16	1426.148	379270.086
P17	1426.213	379205.766
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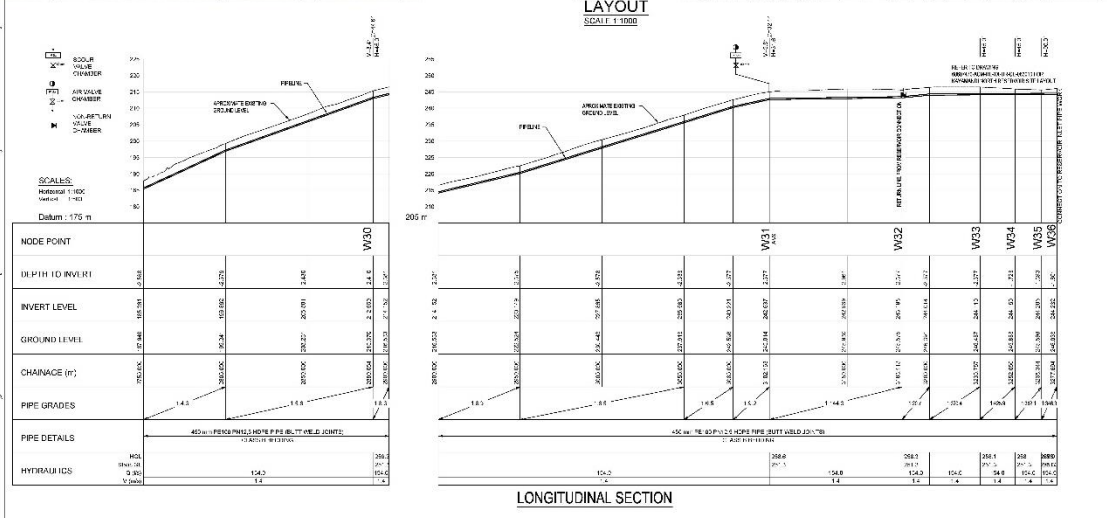
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Fax: +27 (0) 21 511 1001
www.aecom.com

PROJECT
KAYAMANDI BULK WATER SUPPLY AND ASSOCIATED WORKS

CLIENT
STELLENBOSCH WATER BOARD

LEGEND
--- PROPOSED PIPELINE
--- EXISTING PIPELINE
--- EXISTING WATER MAINS



NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL STANDARD FOR WATER SUPPLY SYSTEMS (SANS 10400).

2. THE PIPELINE SHALL BE INSTALLED AT A MINIMUM DEPTH OF 1.00m TO THE TOP OF THE PIPE.

3. THE PIPELINE SHALL BE INSTALLED AT A MINIMUM DEPTH OF 1.00m TO THE TOP OF THE PIPE.

4. THE PIPELINE SHALL BE INSTALLED AT A MINIMUM DEPTH OF 1.00m TO THE TOP OF THE PIPE.

ISSUE / REVISION

NO.	DATE	DESCRIPTION	BY	CHKD
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DRAWING CHECKS

NO.	DATE	DESCRIPTION	BY	CHKD
1	2024-01-01	ISSUE FOR TENDER	XXX	YYY

APPROVAL CONSULTANT

NAME: XXX
SIGNATURE: [Signature]
DATE: 2024-01-01

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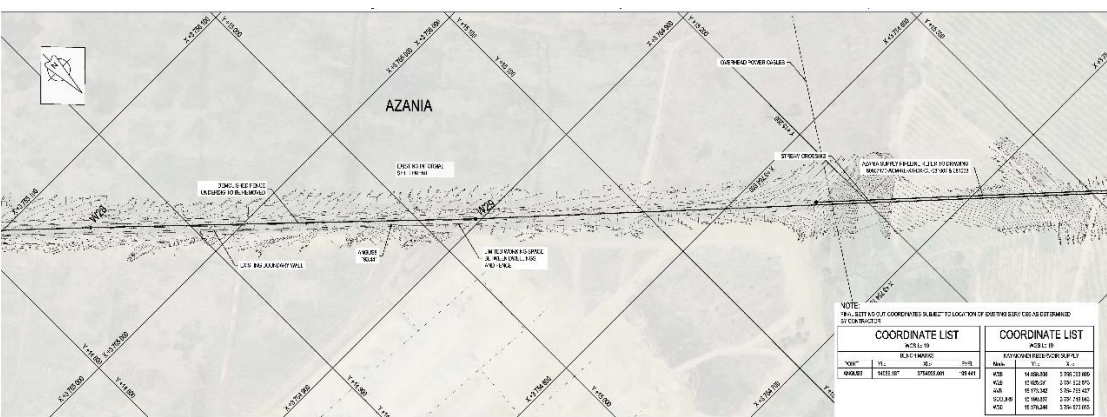
PROJECT NUMBER
60697470

SHEET TITLE
PLAN & LONGITUDINAL SECTION: SHT 6 OF 6

DISCIPLINE
WATER SYSTEMS

DRAWING NUMBER
60697470-AC-WP-XX-ER-CE-001000-1-0

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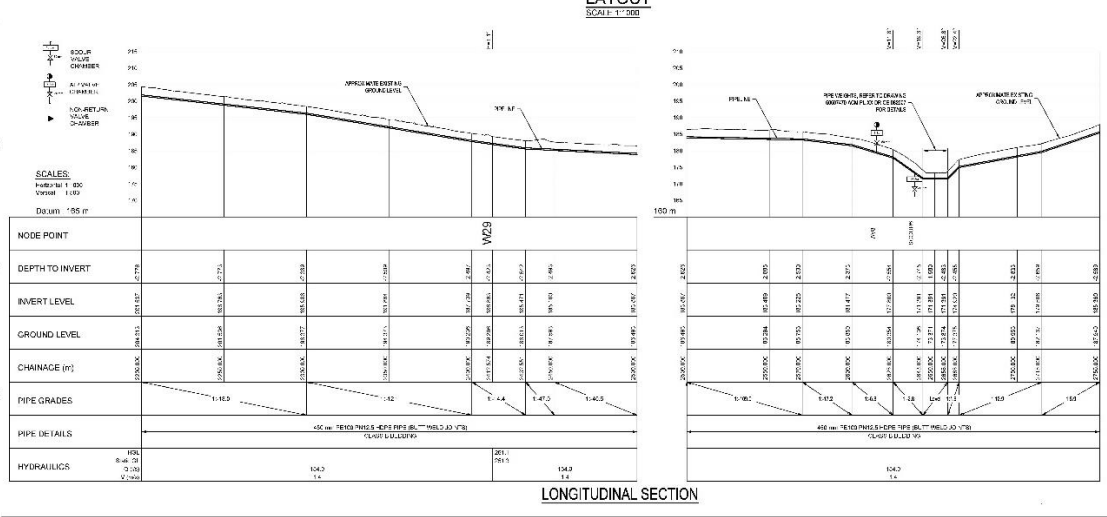
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PROJECT
KAYAMANDI BULK WATER SUPPLY AND ASSOCIATED WORKS

CLIENT
STELLENBOSCH WATER BOARD

LEGEND
--- EXISTING PIPELINE
--- EXISTING WATER MAINS
--- EXISTING WATER MAINS



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DRAWING CHECKS

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1	2024-01-01	ISSUE FOR TENDER	XXX	YYY

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PROJECT NUMBER
60697470

SHEET TITLE
PLAN & LONGITUDINAL SECTION: SHT 6 OF 6

DISCIPLINE
WATER SYSTEMS

DRAWING NUMBER
60697470-AC-WP-XX-ER-CE-001000-1-0

SCALE
AS SHOWN



LEGEND

---	EXISTING PIPES
---	EXISTING STRUCTURES
---	EXISTING WATER PIPES

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1. ALL DIMENSIONS ARE TO CENTRE UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE.
3. ALL DIMENSIONS ARE TO BE VERIFIED ON SITE.

ISSUE / REVISION

NO.	DATE	DESCRIPTION	BY	CHKD

DRAWING CHECKS

DESIGNED	BY: []	DATE: []
CHECKED	BY: []	DATE: []
APPROVED	BY: []	DATE: []

APPROVAL CONSULTANT

DATE: []

PLAN & LONGITUDINAL SECTION: SHT 4 OF 8

DISCIPLINE
WATER SYSTEMS

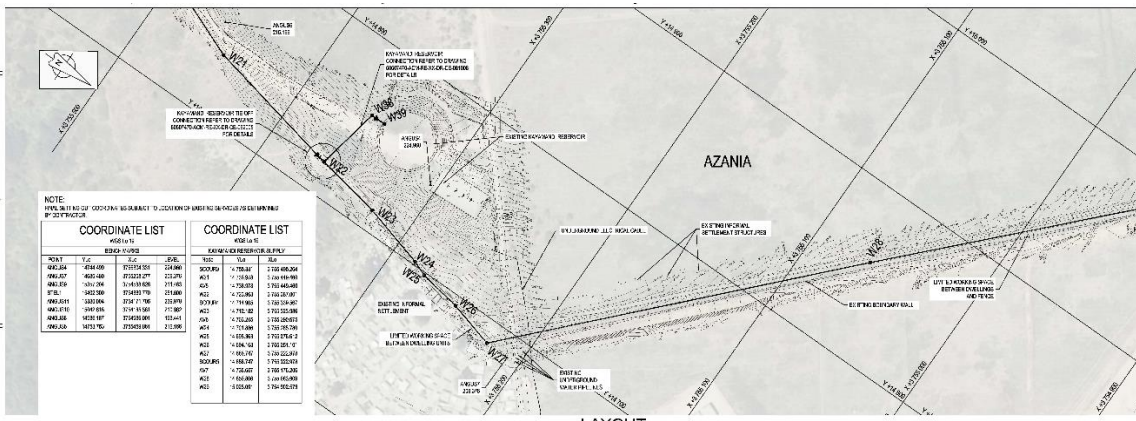
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PLAN & LONGITUDINAL SECTION: SHT 4 OF 8

DISCIPLINE
WATER SYSTEMS

DRAWING NUMBER
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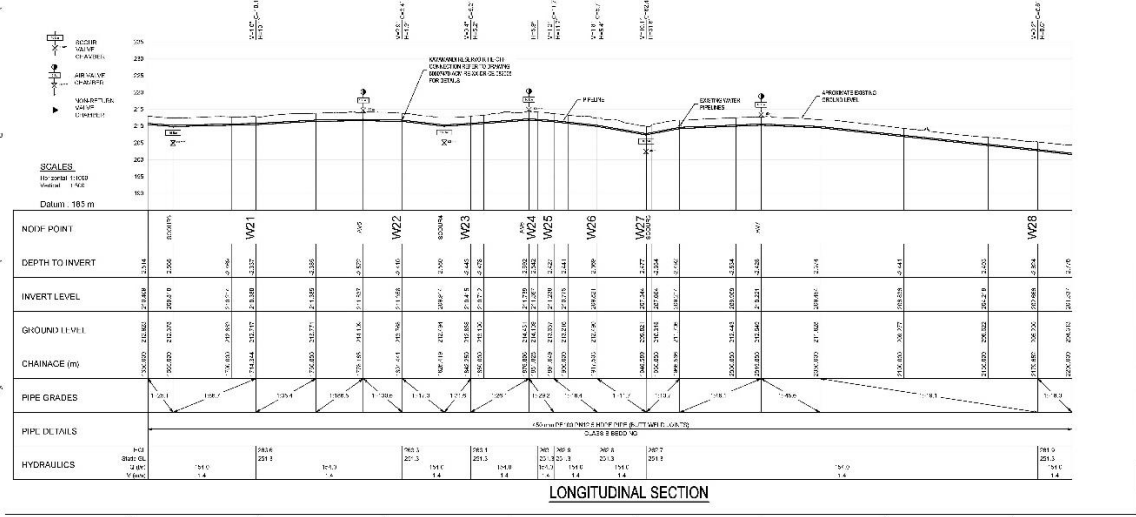


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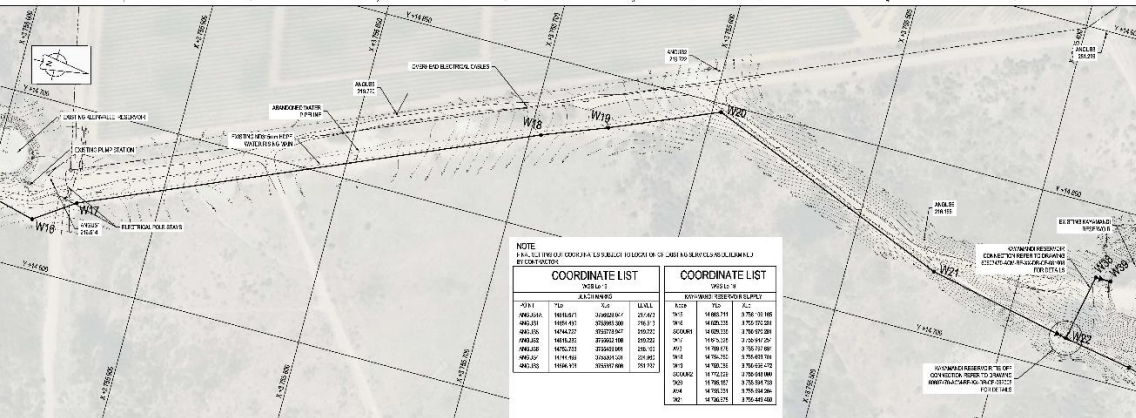
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1002	424.000	2152.000	1002	424.000	2152.000
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LAYOUT SCALE 1:1000



LONGITUDINAL SECTION

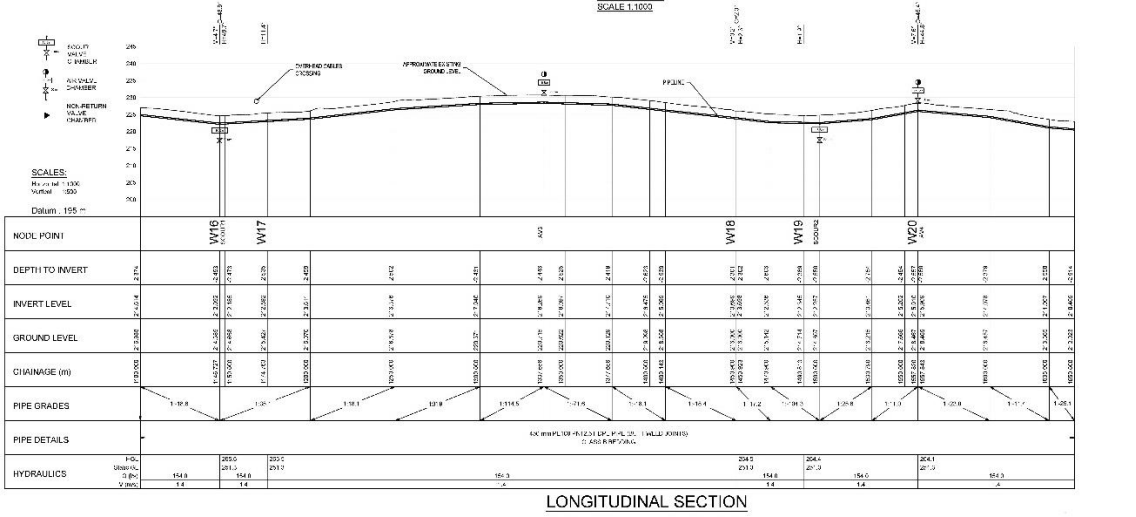


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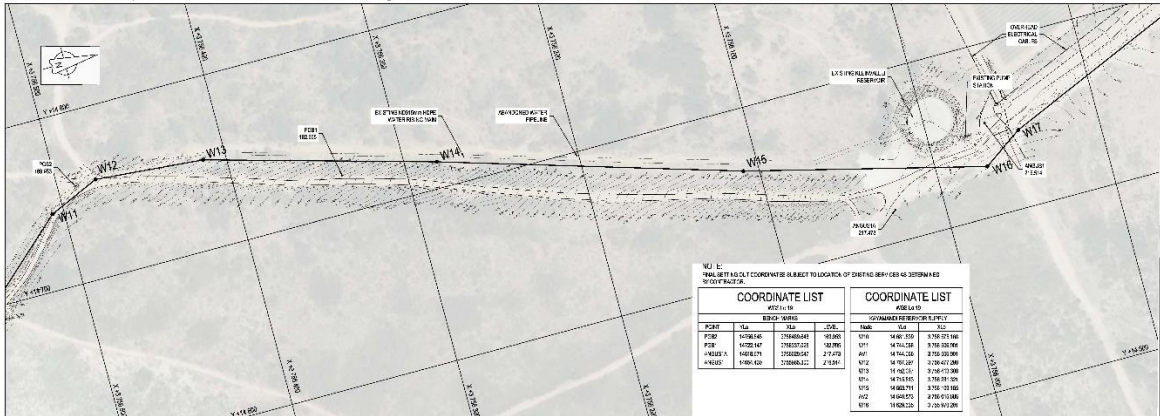
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LAYOUT SCALE 1:1000



LONGITUDINAL SECTION



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PROJECT
KAYAMANDI BULK WATER SUPPLY AND ASSOCIATED WORKS

KAYAMANDI
STELLENBOSCH
CLIENT
STELLENBOSCH MUNICIPALITY

STELLENBOSCH
MUNICIPALITY

LEGEND

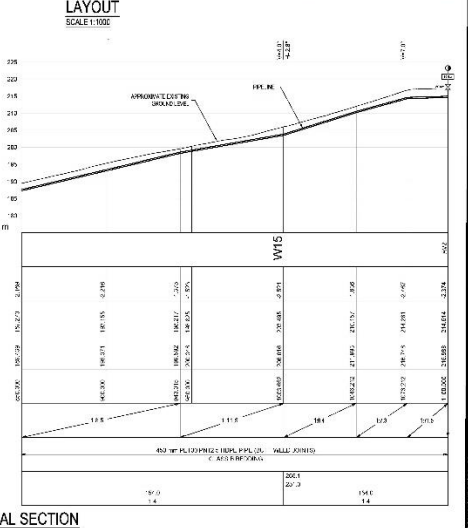
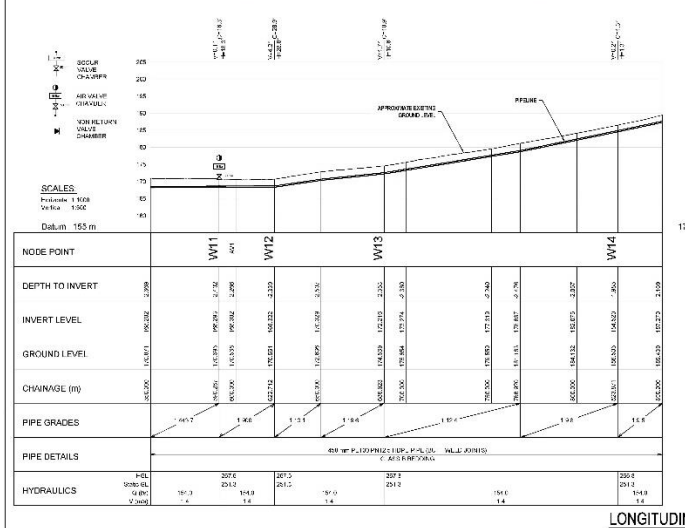
- EXISTING PIPE
- EXISTING WATER MAINS
- EXISTING WATER PIPES

NOTES

1. CONSULTANT NOT RESPONSIBLE FOR THE ACCURACY OF THE DATA PROVIDED BY THE CLIENT.
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3. THE CLIENT IS RESPONSIBLE FOR THE ACCURACY OF THE DATA PROVIDED BY THE CLIENT.

NOTE: ALL POINT COORDINATES SUBJECT TO LOGBOOK OF SURVEY SERVICES AS REFERRED TO IN CONTRACT.

COORDINATE LIST				COORDINATE LIST			
NODE 1-6				NODE 7-10			
POINT	Y	X	Z	POINT	Y	X	Z
WT1	1000000	1000000	1000	WT7	1000000	1000000	1000
WT2	1000000	1000000	1000	WT8	1000000	1000000	1000
WT3	1000000	1000000	1000	WT9	1000000	1000000	1000
WT4	1000000	1000000	1000	WT10	1000000	1000000	1000
WT5	1000000	1000000	1000				
WT6	1000000	1000000	1000				



LONGITUDINAL SECTION

LEGEND

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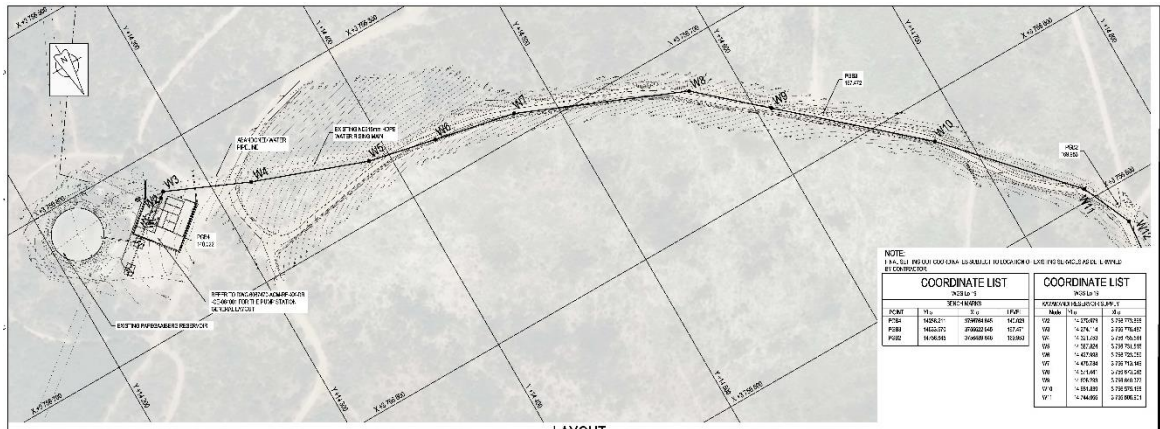
NAME: _____ DATE: _____

PROJECT NUMBER: 60607470

SHEET TITLE: PLAN & LONGITUDINAL SECTION: SHT 2 OF 6

DISCIPLINE: WATER SYSTEMS

DRAWING NUMBER: 60607470-ACM-P-XX-DR-CE-081002-T-0



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PROJECT
KAYAMANDI BULK WATER SUPPLY AND ASSOCIATED WORKS

KAYAMANDI
STELLENBOSCH
CLIENT
STELLENBOSCH MUNICIPALITY

STELLENBOSCH
MUNICIPALITY

LEGEND

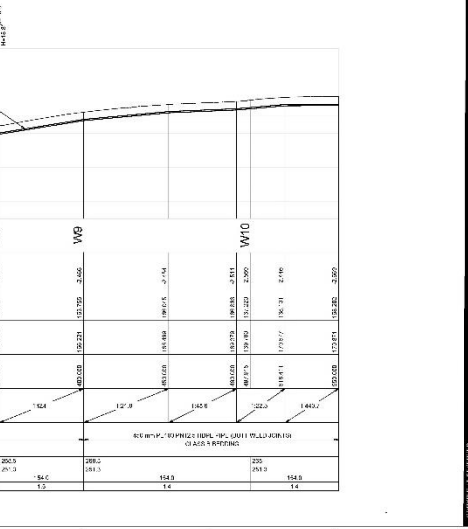
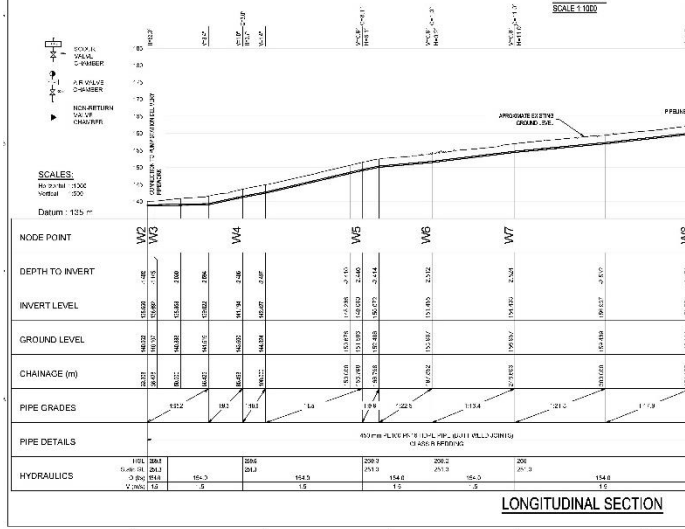
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COORDINATE LIST				COORDINATE LIST			
NODE 7-10				NODE 11-14			
POINT	Y	X	Z	POINT	Y	X	Z
WT7	1000000	1000000	1000	WT11	1000000	1000000	1000
WT8	1000000	1000000	1000	WT12	1000000	1000000	1000
WT9	1000000	1000000	1000	WT13	1000000	1000000	1000
WT10	1000000	1000000	1000	WT14	1000000	1000000	1000



LONGITUDINAL SECTION

LEGEND

- EXISTING PIPE
- EXISTING WATER MAINS
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APPROVAL CONSULTANT

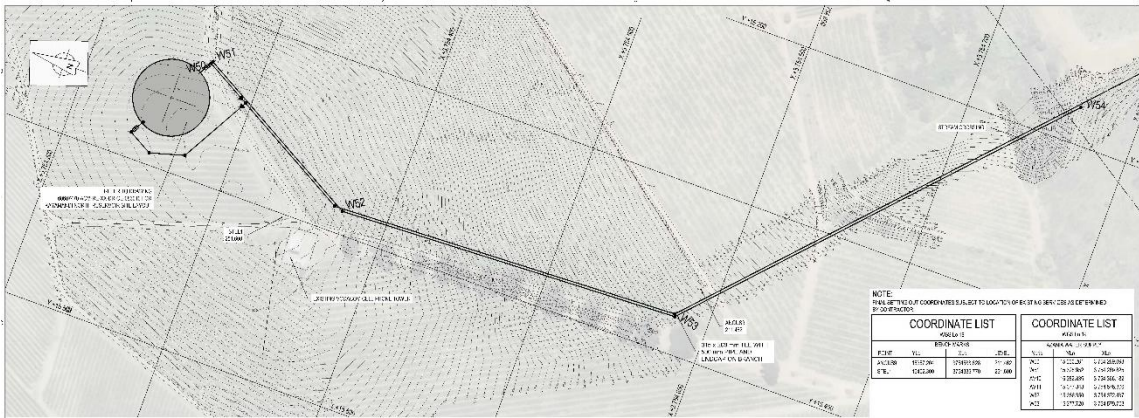
NAME: _____ DATE: _____

PROJECT NUMBER: 60607470

SHEET TITLE: PLAN & LONGITUDINAL SECTION: SHT 3 OF 6

DISCIPLINE: WATER SYSTEMS

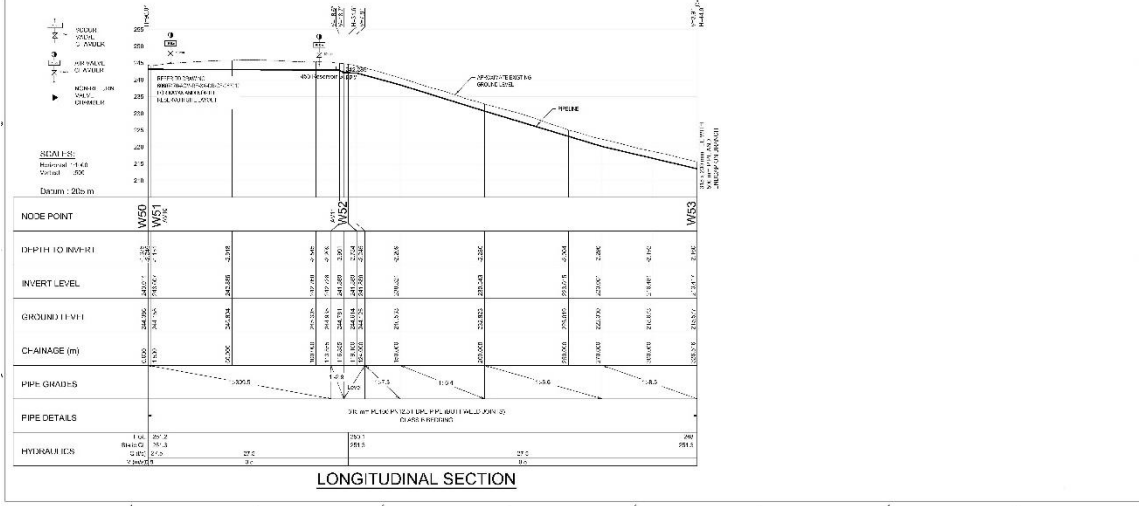
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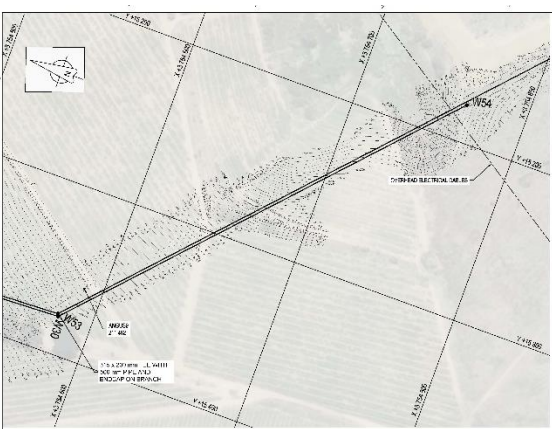
NOTE: PLAN SETTING OUT COORDINATES SUBJECT TO LOCAL OR OFFICIAL SURVEY (SEE REFERENCE) FOR CORRECTIONS

COORDINATE LIST				COORDINATE LIST			
W1 & W2				W3 & W4			
LINE	FROM	TO	COORDINATE	LINE	FROM	TO	COORDINATE
W1	1	2	1000000.00	W3	1	2	1000000.00
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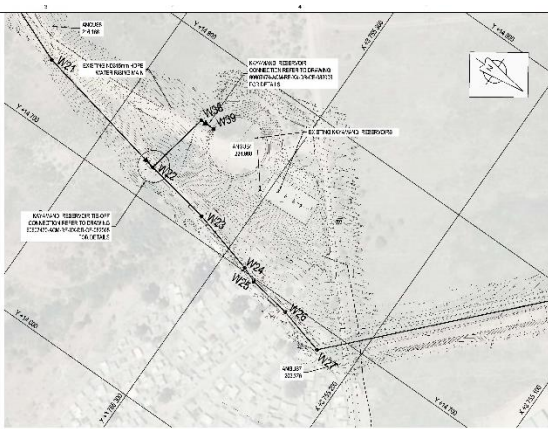
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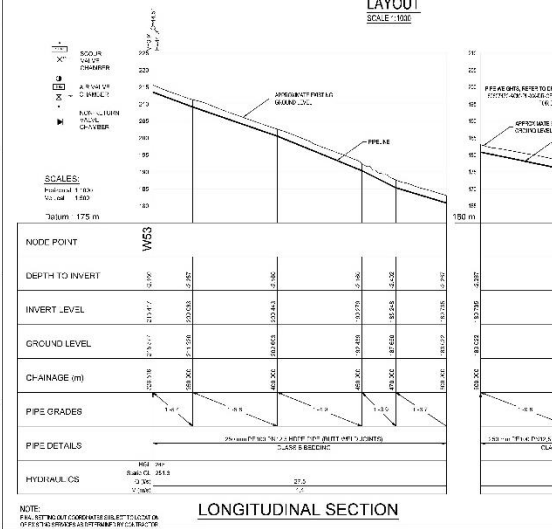
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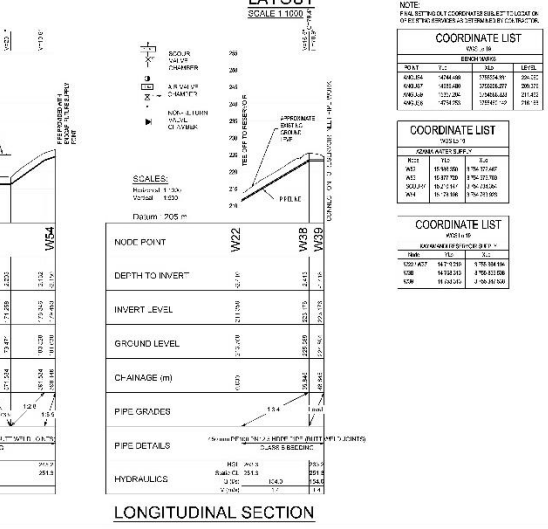
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LONGITUDINAL SECTION



LONGITUDINAL SECTION

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CAPE TOWN
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PROJECT
KAYAMANDI BULK WATER SUPPLY AND ASSOCIATED WORKS

KAYAMANDI
STELLENBOSCH
CLIENT
STELLENBOSCH MUNICIPALITY

STELLENBOSCH
MUNICIPALITY

LEGEND
PIPELINE
PIPELINE

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NO.	DATE	DESCRIPTION	BY

APPROVAL CONSULTANT

PROJECT NUMBER
6007470

SHEET TITLE
PLAN & LONGITUDINAL SECTION SH1 1 OF 2

DISCIPLINE
WATER SYSTEMS

DRAWING NUMBER
6007470-ACH-PL-XX-DR-01-01007-T-0

SCALE
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PROJECT
KAYAMANDI BULK WATER SUPPLY AND ASSOCIATED WORKS

KAYAMANDI
STELLENBOSCH
CLIENT
STELLENBOSCH MUNICIPALITY

STELLENBOSCH
MUNICIPALITY

LEGEND
PIPELINE
PIPELINE

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NO.	DATE	DESCRIPTION	BY

DRAWING CHECKS

NO.	DATE	DESCRIPTION	BY

APPROVAL CONSULTANT

PROJECT NUMBER
6007470

SHEET TITLE
PLAN & LONGITUDINAL SECTION SH1 2 OF 2

DISCIPLINE
WATER SYSTEMS

DRAWING NUMBER
6007470-ACH-PL-XX-DR-01-01007-T-0

SCALE
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ANNEXURE 3: REASONS FOR THE DECISION

In reaching its decision, the Competent Authority considered, *inter alia*, the following:

- a) The information contained in the Application Form dated December 2020, the EMPr submitted together with final BAR dated May 2021;
- 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 the National Environmental Management Act, 1998 (Act No. 107 of 1998);
- d) The comments received from I&APs and responses to these, included in the BAR dated May 2021; 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 in 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;
- 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 6 November 2019 and on 10 December 2020;
- fixing notice boards at the site where the listed activities are to be undertaken on 7 November 2019 and 10 December 2020;
- the placing of a newspaper advertisement in the "Eikestad Nuus" on 7 November 2019 and 10 December 2020;
- circulating the in-process draft BAR to I&APs from 10 December 2020; and
- circulating the in-process revised draft BAR to I&APs from 28 April 2021.

The Department is satisfied that the Public Participation Process that was followed met the minimum legal requirements and 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

An alternative site was not considered as the proposed reservoir will be fed from the existing Papegaaiberg Reservoir. Activity alternatives, such as drilling boreholes to source the required water supply, was not deemed feasible. The proposed reservoir will be located at the highest point above the Kayamandi township, to provide the maximum possible pressure to the downstream area. Various pumpstation positions were considered based on electricity availability, risk to future vandalism and integration with the existing water distribution network. The pipeline routes were informed by existing pipeline alignments and existing roads to limit the potential environmental impact. The above considerations gave rise to the below preferred alternative.

Preferred Design Alternative (Herewith Authorised)

The proposed Kayamandi Bulk Water Supply project entails the construction of the following components with a combined approximate footprint of 2.5ha:

1) A 75 to 154 litre per second (ℓ/s) pump station and associated infrastructure

- It will be located at the existing Papegaaiberg Reservoir and pump station site in the Papegaaiberg Nature Reserve.
- The pump station footprint, including generators, diesel storage and associated infrastructure will have a footprint of approximately 3000m².
- Associated with the pump station will be a satellite construction camp of approximately 400m².

2) A rising main pipeline

- The pipeline will take water from the proposed new pump station at the existing Papegaaiberg Reservoir to the proposed new Kayamandi Northern Reservoir.
- It will be approximately 3 200m in length, with an internal diameter of 450mm.
- Associated infrastructure includes scour chambers (5-7 small chambers, each with an approximate 10m² footprint).
- The infrastructure will have an approximate footprint of 3 200m² and the construction footprint (trench) will range between 6-6.5m wide (20 800m²).
- To accommodate the above, a 50m wide pipeline corridor has been assessed along the length of the pipeline route, within which a 15-20m construction corridor is required (64 000m²), with the following exceptions:
 - The *wetland crossing* – within the wetland buffer area (15m on either side of the delineated wetland) no application corridor applies. A maximum construction corridor of 6.5m will be catered for.
 - *Azania/Watergang informal settlement* – the pipeline passes between the newly established Watergang / Azania Township and the Kayamandi Township, where space is limited to a jeep track and walking path through this area. The pipeline will be placed in the available space (an approximate 6.5m width).
 - *Enkanini informal settlement (east of existing Kayamandi Reservoir)* – the pipeline route continues southwards and follows the gravel road past the eastern side of the existing Kayamandi Reservoir. In this section, a small informal settlement has established on both sides of this road and available space is less than 6m wide, constricted to 3-4m wide in places due to dwellings or structures encroaching on the road. A minimum construction corridor of 6.5m wide is however required and therefore the identified structures must be relocated to make way for the proposed pipeline. Once complete a 6-6.5m wide pipeline servitude will be kept clear of development.

3) A 560 m pipeline

- The pipeline will be routed from the proposed Kayamandi Northern Reservoir back along the rising main pipeline to Azania / Watergang (i.e. in parallel to the northern section, thus the total length of the pipeline footprint is still 3200m).
- The pipeline will have a maximum internal diameter of approximately 450mm.
- Its footprint is included in that of the rising main pipeline.

4) The Kayamandi Northern Reservoir

- The reservoir will have a 10 mega litre (Mℓ) capacity and together with its associated infrastructure, such as valve chambers and flow meters, will cover an area of approximately 1600m².
- It will be fed from the existing Papegaaiberg Reservoir via the proposed new rising main pipeline.
- Provision will be made for a construction camp with a laydown area with a maximum footprint of 4000m².

The proposed reservoir and construction campsite will be located within the surveyed area for the proposed reservoir site.

"No-Go" Alternative

The no-go alternative was considered. However, it was not preferred since not proceeding with the proposed project would result in a lack of water supply for Kayamandi, as well as for the future housing and development schemes in Kayamandi and the surrounding areas.

3. Impact Assessment and Mitigation measures

3.1 Activities need and desirability

The Stellenbosch Municipality's IDP (2017-2022) indicates that, as the population of Stellenbosch continues to grow, there is an increased pressure on bulk infrastructure and that aging infrastructure in particular, presents a challenge that the municipality groups into short, medium and long term goals to maintain, update and replace. Kayamandi is currently subjected to pressure for outward expansion, mainly from new residents moving to Stellenbosch. This migration of people causes increased pressure on municipal services, such as water, sanitation and electricity supply. Therefore, to supply Kayamandi, as well as the future housing and development schemes in the surrounding area with sufficient water, it is proposed that the municipality upgrades its bulk water supply network. Consequently, the proposed Kayamandi Northern Extension Water Supply project is an essential bulk infrastructure requirement that will ensure adequate water supply to the surrounding community and will accommodate the increased and future development in the immediate and surrounding area.

3.2 Biophysical Impacts

The proposed reservoir site is currently used for agricultural activities and services (cellular base station) and the pumpstation and pipeline route will be located on agricultural land, vacant, degraded land, informal residential areas and the Papegaaiberg Nature Reserve, which is a formally protected area. The northern edge is bordered by the Kayamandi settlement, the western edge by commercial farms whilst the Stellenbosch town centre is located to the east. The vegetation types found within the nature reserve include Swartland Granite Renosterveld (Critically Endangered) and Swartland Shale Renosterveld (Critically Endangered). The construction of the pumpstation and the pipeline will result in the clearance of the critically endangered Swartland Granite Renosterveld vegetation in the Papegaaiberg Nature Reserve. A 50m wide corridor within the nature reserve was assessed, but the project will have a maximum construction footprint of approximately 20m wide. The pipeline route will utilise existing adjacent roadways and disturbed areas of the existing parallel pipelines and infrastructure as much as possible, but will still require vegetation clearance in certain areas to create

the necessary construction corridor. Based on the findings of the Botanical Impact Assessment dated 9 March 2020, prepared by NCC Environmental Services, the vegetation that will be cleared for the proposed development is in a good and fair condition. No species of conservation concern were observed in the assessed corridor during the field visit, although the potential does exist that there it may be present. The vegetation removal will be kept to a minimum and with the implementation of the recommended mitigation measures and active rehabilitation in accordance with the Botanical Rehabilitation Plan dated 21 April 2021, the significance of the potential botanical impact can be reduced from high significance to medium significance. CapeNature was consulted in this regard and is in support of the proposed development subject to strict adherence to the above.

Three unchanneled valley bottom wetlands were identified within the assessment area. A section of the pipeline route will encroach into one of the unchanneled valley bottom wetlands. The average ecosystem service score for the affected wetland was determined to be intermediate, the integrity seriously modified and the ecological importance and sensitivity moderate. Based on the specialist findings (Wetland Baseline and Impact Assessment dated December 2019, compiled by The Biodiversity Company), with the implementation of the recommended mitigation measures, the significance of the potential impacts and risk will be low for all phases of the proposed development. In addition, an Aquatic Rehabilitation Plan dated 21 April 2021 was developed for implementation during and following the construction phase of the proposed wetland crossing. Apart from the crossing itself, the implementation of a 15m buffer area around the three identified wetlands was deemed suitable.

An application for a General Authorisation ("GA") in terms of the National Water Act, 1998 (Act 38 of 1998) has been submitted to the Department of Water and Sanitation, which will further investigate the watercourse related impacts.

3.3 Social impacts

A section of the pipeline route past the eastern side of the existing Kayamandi Reservoir is aligned through a small informal settlement that has established on both sides of the gravel road. As a result, very limited space is available space to construct the pipeline within this section. The available corridor is less than 6m wide, constricted to 3-4m wide in places due to dwellings and/or structures encroaching on the road. This poses a problem, since a minimum construction corridor of 6.5m wide is required. Since no alternative pipeline route is available, the only option is to remove the dwellings and structures to allow for sufficient space to construct the pipeline. The proposed development will result in the physical displacement and relocation of five households (11 structures). The Stellenbosch Municipality Housing Department has been engaging the affected residents with regards to relocating the identified structures in the area to accommodate the proposed pipeline. A re-blocking plan was developed by the municipality, which entails moving the affected residents and structures to the open space within the same area of Enkanini. The Social Impact Assessment dated August 2020 was undertaken by SRK Consulting to assess the potential impact of the pipeline on the structures and people that need to be relocated. Identified impacts include loss of assets due to the removal of informal structures, a medicinal and food garden, as well as the loss of livelihoods due to the removal of a market stall in the pipeline corridor. It was recommended that a Relocation Action Plan and Livelihoods Restoration Plan is required to guide the resettlement activities before construction in this area can begin. This has been included as a condition of this environmental authorisation.

In summary, the proposed development will result in both negative and positive impacts.

Negative Impacts:

- The development will have a negative biophysical impact due to the loss of indigenous vegetation and the potential impacts associated with the wetland crossing. These impacts will however be mitigated to an acceptable level with the implementation of the recommended mitigation measures, the preferred alternative and adherence to the EMPr and Rehabilitation Plans.
- The proposed development will result in the displacement and relocation of five households and the loss of livelihoods. A Relocation Action Plan and Livelihoods Restoration Plan is required to guide the resettlement activities before construction in this area can be begin. This has been included as a condition of this environmental authorisation.
- During the construction phase traffic, noise, visual and dust impacts can be expected, which will only be temporary and is expected to be negligible with the implementation of the EMPr.

Positive impacts:

- The proposed development will improve service delivery in terms of bulk water supply for Kayamandi and the surrounding developing area.
- Temporary employment opportunities will be created during the construction phase.

4. National Environmental Management Act Principles

The National Environmental Management 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 National Environmental Management Act, 1998 (Act No. 107 of 1998) and that any potentially detrimental environmental impacts resulting from the listed activities can be mitigated to acceptable levels.

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