

ANNEXURE A:

*Previous Letter of Approval / Amendment of
Conditions of Approval / Approved Subdivision
Plan*

15/4/19/5; 15/4/19/4/M Engelbrecht
C 616413 (Item)

1 November 2010

Nel & De Kock Stads en Streeksbeplanners
Posbus 1186
GEORGE
6530

PER GEREGISTREERDE POS

Meneer

**RESTANT VAN DIE PLAAS VYF-BRAKKEFONTEINEN NO. 220, MOSSELBAAI:
VOORGESTELDE HERSONERING, ONDERVERDELING EN UITLEGPLAN
(HIGHLAND ESTATE)**

Met verwysing na u aansoek in bogemelde verband wens ek u mee te deel dat my Raad se Uitvoerende Burgemeesterskomitee ingevolge Raadsbesluit T150-10/2010 soos volg besluit het:

- "1. That the application in terms of Section 17, Ordinance 15 of 1985 for the rezoning of a Portion ($\pm 53,7$ ha) of the Remainder of the Farm Vyf-Brakkefonteinen Nr. 220, Mossel Bay from "Agricultural Zone" to "Subdivisional Area" be approved.
2. That the application in terms of Section 24, Ordinance 15 of 1985 for subdivision of the Remainder of the Farm Vyf-Brakkefonteinen Nr. 220, Mossel Bay into two portions (Remainder; Portion A= $\pm 53,7$ ha) and the subsequent subdivision of Portion A into 85 Single Residential erven; 6 Group Housing sites; 4 Public Open Spaces erven and public roads as indicated on the submitted layout plan no. HB/C/205/4 be approved subject to the following alterations:
 - 2.1 That Erf 1 be removed from the layout plan because it is too for removed and does not form part of the general layout.
 - 2.2 That Erf 90 be removed from the layout because the proposed group housing erf is too small and consists of only 4 erven which does not adhere to group housing norms and standards.

3. That the Layout Plan Nr. HB/C/205/4 be approved subject to the abovementioned alterations.
4. That the above approvals are subject to the following conditions in terms of Section 42(1), Ordinance 15 of 1985:
 - 4.1 That no departures from the Mossel Bay Town Planning Scheme Regulations, 1984 will be allowed. The densities of the Group Housing sites must not exceed 20 units per hectare.
 - 4.2 That rainwater from roofs must be collected and stored in rainwater tanks. No taps linked to piped, potable water may be installed outside buildings. Any water used in gardens or outside buildings must only be collected rainwater.
 - 4.3 That all buildings must be fitted with water saving devices such as low flow showerheads and double flush toilets.
 - 4.4 That all residential dwellings must be fitted with and use solar hot water systems. These solar hot water systems must not be installed as an afterthought. They should be an integral part of the design of buildings.
 - 4.5 That energy efficient lighting must be used. Street lighting must be low level, preferably of the bollard type.
 - 4.6 That no buildings are allowed on slopes of 1:4 and steeper.
 - 4.7 That the applicant compile, submit and implement a storm water management plan for the entire property so as to attenuate the storm water runoff from the catchment area west of the N2 Freeway.
 - 4.8 That a Home Owners Association (HOA) be established in terms of Section 29, Ordinance 15 of 1985. The responsibilities of the HOA must be stipulated in the service agreement.
 - 4.9 That the developer/owner concludes a service agreement with the Municipality before any installation of services and construction work is commenced with.
 - 4.10 That the necessary development contributions, applicable at the time of payment in terms of Council Policy, are paid to Council and that the calculation of these development contributions be incorporated in the service agreement.
 - 4.11 That the installation of electrical infrastructure will be for the cost of the developer/owner and to the satisfaction of the Director: Electro Technical Services in addition to the development contribution.
 - 4.12 That the necessary services plans and storm water drainage plans be submitted for approval by the Director: Civil Services, Director: Electro Technical Services and Director: Town Planning and Building Control, before any development or construction takes place.

- 4.13 That the developer must compile and submit an acceptable phase development plan for the installation of services, roads and residential units to Mossel Bay Municipality for approval.
- 4.14 That all internal infrastructure be supplied and installed by the developer/owner. Responsibility for maintenance will be incorporated in the service agreement.
- 4.15 That public open spaces be surveyed and registered in the name of the Municipality by the developer for his own account.
- 4.16 That the Municipality be provided with the necessary SG-diagrams/general plan free of charge after subdivision has been completed.
- 4.17 That the developer must contact Telkom in the planning stages of the development to give them the opportunity to co-ordinate the provision of telecommunication services with other services.
- 4.18 That the following conditions as stipulated by SANRAL in their letter dated 28 January 2010 be included as conditions of approval:
 - 4.18.1 That the erven within the land development area shall be designed and laid out in accordance with the Layout Plan Nr. HB/C/205/4 dated June 2009, which layout is hereby approved.
 - 4.18.2 That prior to the approval of a general plan over that portion of the layout relating to sites adjoining the national road, where minor changes are required, the layout may be amended with the written approval of the SANRAL.
 - 4.18.3 That where substantial amendments to that portion of the layout relating to sites adjoining the national road are required, the written approval of the SANRAL shall be required.
 - 4.18.4 That upon approval of a general plan over the sites adjoining the national road, the layout may be amended or cancelled in terms of Section 37 (2) of the Land Survey Act, (Act 8/1997) with the prior consent of the SANRAL.
 - 4.18.5 That no structure or other thing (including anything which is attached to the land on which it stands even though it does not form part of that land) shall be erected, laid or establish within the land development area within a distance of 10 meters from the boundary of the national road without the written approval of the SANRAL.
 - 4.18.6 That the provisions of paragraph 4.18.5 above shall be recorded, at the cost of the developer, in the title deeds of each of the sites that are adjacent to the national road.

- 4.18.7 That a permanent 2m brick wall or security fence must be erected on the boundary of the land development area and the national road reserve. Detailed plans of the proposed wall or security fence must be submitted to the SANRAL for approval prior to the erection thereof. The maintenance of the wall/security fence will be the responsibility of the property owner/successor in title.
- 4.18.8 That no direct access or egress from the land development area to the national road shall be permitted. Access must be obtained from Kameeldoring Avenue.
- 4.18.9 That the SANRAL will not be liable for any damage or diminishment in value of the land development area arising out of any impact on the proposed development as a result of existing or future stormwater drainage from the national road.
- 4.18.10 That such facilities that are necessary for the control and disposal of storm water from the land development area shall be constructed to the satisfaction of the SANRAL.
- 4.18.11 That no free standing advertising signs will be allowed in terms of Regulations on Advertising on or visible from the National Road as published in Government Gazette no 6968 dated 22 December 2000.
- 4.18.12 That the SANRAL shall not be held liable to any party should it be found at any time in future that noise , air pollution and light pollution emanating from the national road presents a problem to the development adjacent to the national road. The developer/successor in title/local authority (advise) shall be responsible for taking such steps as may be necessary to reduce the impact of such noise, air and/or light pollution.
- 4.18.13 That the provisions of paragraph 4.18.12 above shall be recorded in the title deeds of each of the properties within the township.
- 4.18.14 That the written confirmation of the SANRAL, that the conditions referred to herein have been fulfilled to its satisfaction, shall be required prior to the opening of any township register with respect to the sites that are adjacent to the national road. That applicant/developer shall provide SANRAL with a certificate from a professional consulting engineer certifying that the design and construction of all services and other improvements referred to in these conditions has been undertaken to the required standards.

- 4.19 That the conditions stipulated by the Department of Health in their letter dated 29 February 2009 be included as conditions of approval:
 - 4.19.1 That Mossel Bay Municipality must provide all potable water for the development.
 - 4.19.2 That all sewerage is to be connected to the Mossel Bay sewer system.
 - 4.19.3 All refuse is to be incorporated into the Mossel Bay solid waste system.
5. That the recommendations of the Traffic Impact Assessment (VELA VKE, 2005) be adhered to.
6. That the following conditions set by the District Roads Engineer in his letter O/TR/33/1 received on 13 September 2010 be noted and executed:
 - 6.1 The applicant must make the required contributions to the Mossel Bay Municipality in terms of its policy, applicable at the time, for bulk services contributions for the proposed upgrading of Louis Fourie Road (TR33/1) from km 13,5 to km 14,6 as depicted on Plan Nr. VKE04200/100/01.
 - 6.2 Should the Municipality have no general policy for contributions towards bulk services regarding roads, the applicant's *pro rata* contributions towards the upgrading of the relevant section of TR33/1 shall be calculated in accordance with the latest conservative estimate, prepared by competent Consulting Engineers, for the proposed upgrading of Louis Fourie Road (TR33/1), from km 13,5 to km 14,6, as depicted on Plan Nr. VKE04200/100/01.
 - 6.3 This department shall not contribute towards the proposed upgrading of TR33/1.
 - 6.4 The developer will be responsible for the proportionate cost of a traffic impact study and construction costs pertaining to the second access road to the area. The Directorate: Technical Services will be responsible for the co-ordination and funding arrangements of the abovementioned traffic impact assessment and construction cost of the project.
7. That any upgrading to Kameeldoring Avenue, Boekenhout Avenue and Wassenaar Road will be for the account of the applicant/developer.
8. That Council and the developer/applicant must take note of the letter received from the Department of Transport and Public Works dated 9 February 2010.
9. That an ecologically compatible fire management plan for the rejuvenation of renosterveld biodiversity must be developed and implemented.

10. That the recommendations of the Environmental Sensitivity Analysis prepared by Nick Helme Botanical Surveys (Nick Helme, 2005) be adhered to.
11. That all conditions of authorisation contained in the Environmental Authorisation (EA) dated 6 October 2009 be strictly adhered to.
12. Notwithstanding the environmental authorisation and the other conditions of approval the applicant must still comply with any other statutory requirements that may be applicable to the undertaking of the activity/development.
13. That the applicant be informed of his right of appeal in terms of Section 44, Ordinance 15 of 1985."

Geliewe daarop te let dat u 'n reg het om skriftelik appél aan te teken teen my Raad se besluit na die Direkteur: Geïntegreerde Omgewingsbestuur, Streek A, Privaatsak X9086, Kaapstad, 8000, binne 21 dae vanaf datum van hierdie skrywe.

'n Afskrif van u appél moet hierdie kantoor ook binne 21 dae bereik.

Die uwe


DIREKTEUR: STADSBEPLANNING & BOUBEHEER

/jk

b-5 brakkefonteinen 220 a wens

15/4/19/5;15/4/19/4/M Engelbrecht
C 1087073 (Item)

13 Desember 2013

Nel & De Kock Stads- en Streeksbeplanners
Posbus 1186
GEORGE
6530

Meneer/Mevrou/Mejuffrou

**RENT VAN DIE PLAAS VYF-BRAKKEFONTEINEN NO 220, MOSSELBAAI:
VOORGESTELDE HERSONERING EN ONDERVERDELING (HIGHLAND
ESTATE): VOORGESTELDE WYSIGING VAN VOORWAARDES IN GEVOLGE
ARTIKEL 42 VAN DIE ORDONNANSIE OP GRONDGEBRUIKBEPLANNING**

Met verwysing na u aansoek in bogemelde verband wens ek u mee te deel dat die Raad ingevolge Raadsbesluit E283-12/2013 soos volg besluit het:

"After negotiations between the applicant and the Director: Technical Services and Director: Planning & Integrated Services as well as further reports, attached hereto, from the consultants involved, such as SMEC, as well as the Provincial Road Engineer, it be recommended that Council's conditions be amended in terms of Section 42 of the Land Use Planning Ordinance (Ordinance 15 of 1985) to read as follows:

- Paragraph 4.15: "That the zoning of the open spaces be Private Open Space and registered in the name of the developer or his legal representative."
- Paragraph 6.4: This paragraph, which determines that the developer should contribute proportionately to the cost of a traffic impact study for the construction of a second access road to the area, must be deleted as the developer has already done such a study.
- Paragraph 7: "That the developer be responsible for a pro-rata contribution to the total amount of R992 874,00 (VAT included) for the upgrade of the Louis Fourie/Boekenhout junction, while no upgrades are required for the Boekenhout/Kameeldoring and Kameeldoring/ Wassenaar junctions."

- Paragraph 8: This condition, which according to a letter from the Department of Transport and Public Works dated February 9, 2010, requires the closure of Minor Road 6802 but can now be deleted since the municipality has undertaken the deproclamation of it in conjunction with Provincial Roads Authority."

Die uwe

DIREKTEUR: BEPLANNING & GEÏNTEGREERDE DIENSTE

/jk

b-5brakke 220 e283-12-2013 aw

ANNEXURE B:

Municipal Confirmation Letter – Lapsing Date



MOSSSEL BAY MUNICIPALITY
MOSSSELBAAI MUNISIPALITEIT
UMASIPALA MOSSEL BAYI

Tel, Imfonomfono: +27 (44) 606 5000
Fax, ifeksi: +27 (44) 606 5062
e-mail: admin@mosselbay.gov.za
web: www.mosselbay.gov.za

In antwoord verwys na nommer
In reply quote number
Xa Uphendula chaza Le Nombolo

15/4/19/5;15/4/19/4/J Roux
C 1094799

28 Augustus 2015

Nel & De Kock Stads- en Streeksbeplanners
Posbus 1186
GEORGE
6530

Meneer

**RESTANT VAN DIE PLAAS VYF-BRAKKEFONTEINEN NO 220, MOSSSELBAAI:
VOORGESTELDE HERSONERING EN ONDERVERDELING (HIGHLAND
ESTATE):**

Met verwysing na U navraag en verwysing na die skywe gedateer 13 Desember 2013 waarin Raadsbesluit E283-12/2013 vervat is:

Dit word hiermee bevestig dat die bogenoemde goedkeuring op 13 Desember 2018 in terme van Ordinasie 15 van 1985 verval. .

Ek hoop U vind die bogenoemde in orde.

Die uwe

DIREKTEUR: BEPLANNING & GEÏNTEGREERDE DIENSTE

/jk
b-5brakke 220 e283-12-2013 aw

ANNEXURE C:

Extension of Validity Period of Approval



MOSSSEL BAY MUNICIPALITY
MOSSSELBAAI MUNISIPALITEIT
UMASIPALA MOSSSEL BAYI

Tel, Imfonomfono: +27 (44) 606 5000
Fax, ifeksi: +27 (44) 606 5062
e-mail: admin@mosselbay.gov.za
web: www.mosselbay.gov.za

In antwoord verwys na nommer 15/4/19/2; 15/4/19/4
In reply quote number /M Engelbrecht
Xa Uphendula chaza Le Nombolo C 5237902 (Item)

*2007 Rapport Dorp van die Jaar
2016 National Greenest Town
2017 Kwêla Town of the Year!*

10 May 2019

Marike Vreken Planners CC
PO Box 2180
KNYSNA
6570

PER REGISTERED POST

Sir/Madam

**APPLICATION FOR EXTENSION OF VALIDITY PERIOD OF APPROVAL FOR
REZONING & SUBDIVISION IN TERMS OF SECTION 15 OF THE MOSSSEL BAY BY-
LAW ON MUNICIPAL LAND USE PLANNING, 2015: REMAINDER OF THE FARM
VYF-BRAKKEFONTEINEN NO 220 (HIGHLAND ESTATE)**

Your application in the above regard refers. It was resolved under Resolution DP17-05/2019 as follows:

"That the extension of the approval period in respect of the rezoning and subdivision of Remainder of the Farm Vyf-Brakkefontein No 220 as contained in Council Resolution T150-10/2010 read together with Council Resolution E283-12/2013, be approved in terms of Section 60 of the Mossel Bay By-Law on Municipal Land Use Planning, 2015 subject to the following condition in terms of Section 66 of the said By-Law:

1. That the approval is valid until 21 August 2020.
2. That bulk capacity availability must be re-applied for via the services agreement process and therefore no future bulk services capacity is guaranteed by this extension approval.
3. That waste management and refuse removal must meet the satisfaction of the Director: Community Services.
4. That the developer addresses the possible geological stability concerns regarding development in the applicable area as stipulated in the report compiled by Outeniqua Geotechnical Services dated 8 October 2018 to the satisfaction of the Mossel Bay Municipality prior to the installation of services and submission of building plans.

5. That for clarification purposes it should be noted that condition 4.8 under Council Resolution T150-10/2010 regarding the establishment of a Home Owners Association be applicable only to the Group Housing sites and not the Single Residential erven.
6. That the public road be surveyed and registered in the name of the Municipality by the owner/developer for his own account prior to the transfer of the first residential property."

Please note that you have a right to appeal in writing to the Municipal Manager, Mossel Bay Municipality, PO Box 25, Mossel Bay, 6500 within 21 calendar days from date of this letter.

Attached please find for information an extract of Article 35, 79 and 80 of the Mossel Bay Municipal By-Law on Municipal Land Use Planning to explain the appeal process.

Yours faithfully

A handwritten signature in black ink, consisting of a stylized 'J' followed by a horizontal line and a small flourish.

DIRECTOR: PLANNING & INTEGRATED SERVICES

/jk

Western Cape Government • Wes-Kaapse Regering • URhulumente weNtshona Koloni

PROVINCE OF THE WESTERN CAPE

Provincial Gazette Extraordinary

7473

Friday, 21 August 2015

PROVINSIE WES-KAAP

Buitengewone Provinsiale Koerant

7473

Vrydag, 21 Augustus 2015

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(*Reprints are obtainable at Room M21, Provincial Legislature Building, 7 Wale Street, Cape Town 8001.)

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Functioning of Tribunal for municipal area

78. (1) The meetings of the Tribunal contemplated in Section 75(1)(a) must be held at the times and places as the chairperson may determine.
- (2) If an applicant or a person whose rights or legitimate expectations will be affected by the approval of an application, requests to make a verbal representation at a meeting of the Tribunal, he or she must submit a written request to the Administrator at least 14 days before that meeting.
- (3) The Chairperson may approve a request contemplated in Subsection (2), subject to reasonable conditions.
- (4) An application may be considered by the Tribunal by means of—
- (a) the consideration of the written application and comments; or
- (b) an oral hearing.
- (5) The application may be considered in terms of Subsection (4)(a) if it appears to the Tribunal that the issues for determination of the application can be adequately determined in the absence of the parties by considering the documents or other material lodged with or provided to it.
- (6) An oral hearing may be held—
- (a) if it appears to the Tribunal that the issues for determination of the application cannot be adequately determined in the absence of the parties by considering the documents or other material lodged with or provided to it; or
- (b) if such hearing would assist in the expeditious and fair disposal of the application.
- (7) If appropriate in the circumstances, the oral hearing may be held by electronic means.

Appeals

79. (1) The executive authority (*executive committee/executive mayor of the municipality/ if the municipality does not have an executive committee or executive mayor, a committee of councillors*) is the Appeal Authority in respect of decisions of the Tribunal or an authorised employee contemplated in Sections 68(a) or (b) and a failure to decide on an application as contemplated in Section 58.
- (2) A person whose rights are affected by a decision contemplated in Subsection (1) may appeal in writing to the Appeal Authority within 21 days of notification of the decision.
- (3) An applicant may appeal in writing to the Appeal Authority in respect of the failure of the Tribunal or an authorised employee to make a decision within the period contemplated in Section 57(1) or (2), any time after the expiry of the period contemplated in those sections.
- (4) An appeal is lodged by serving the appeal on the Municipal Manager in the form determined by the Municipality and, in the case of an appeal contemplated in Subsection(2), within the period contemplated in Subsection (2).
- (5) When the Appeal Authority considers an appeal, it must have regard to—

- (a) the provisions of Section 65(1), read with the necessary changes; and
- (b) the comments of the Provincial Minister contemplated in Section 52 of the Land Use Planning Act.

Procedure for appeal

80. (1) An appeal is invalid if—

- (a) in the case of an appeal contemplated in in Section 79(2), it is not lodged within the period referred to in that section; and
- (b) it does not comply with this section.

(2) An appeal must set out the following—

- (a) the grounds for the appeal which may include the following grounds:
 - (i) that the administrative action was not procedurally fair as contemplated in the Promotion of Administrative Justice Act, 2000 (Act 3 of 2000);
 - (ii) grounds relating to the merits of the land development or land use application on which the appellant believes the Tribunal or authorised employee erred in coming to the conclusion that the Tribunal or authorised employee did, as the case may be;
- (b) whether the appeal is lodged against the whole decision or a part of the decision;
- (c) if the appeal is lodged against a part of the decision, a description of the part;
- (d) if the appeal is lodged against a condition of approval, a description of the condition;
- (e) the factual or legal findings that the appellant relies on;
- (f) the relief sought by the appellant; and
- (g) any issue that the appellant wishes the Appeal Authority to consider in making its decision; or
- (h) in the case of an appeal in respect of the failure of a decision maker to make a decision, the facts that prove the failure;

- (3) An applicant who lodges an appeal must submit proof of payment of appeal fees as may be determined by the Municipality to the Municipal Manager. **R1 067.00**
- (4) An applicant who lodges an appeal must simultaneously serve notice of the appeal on any person who commented on the application concerned and any other person as the Municipality may determine.
- (5) The notice must be served in accordance with Section 35.
- (6) The notice contemplated in Subsection (5) must invite persons to comment on the appeal within 21 days of being notified of the appeal.

- (7) The appellant must submit proof of service of the notice as contemplated in Subsection (5) to the Municipal Manager within 14 days of the date of notification.
- (8) If a person other than the applicant lodges an appeal, the Municipal Manager must give written notice of the appeal to the applicant within 14 days of receipt thereof.
- (9) An applicant who has received notice of an appeal in terms of Subsection (8) may submit comment on the appeal to the Municipality within 21 days of being notified.
- (10) The Municipality may refuse to accept any comments on an appeal after the closing date for those comments.
- (11) The Municipal Manager—
 - (a) may request the Provincial Minister within 14 days of the receipt of an appeal to comment in writing on the appeal within 60 days of receipt of the request;
 - (b) must notify and request the Provincial Minister within 14 days of the receipt of an appeal to comment on the appeal within 60 days of receipt of the request in respect of appeals relating to the following applications:
 - (i) a development outside the Municipality's planned outer limit of urban expansion as reflected in its Municipal Spatial Development Framework;
 - (ii) if the Municipality has no approved Municipal Spatial Development Framework, a development outside the physical edge, including existing urban land use approvals, of the existing urban area;
 - (iii) a rezoning of land zoned for agricultural or conservation purposes;
 - (iv) any category of land use applications as may be prescribed by the Provincial Minister; and
 - (c) must on receipt of an appeal in terms of this section notify the applicant in writing whether or not the operation of the approval of the application is suspended.
- (12) An authorised employee must draft a report assessing an appeal and must submit it to the Municipal Manager within—
 - (a) 30 days of the closing date for comment requested in terms of Subsection (6) and (9), if no comment was requested in terms of Subsection (11); or
 - (b) 30 days of the closing date for comments requested in terms of Subsection (11).
- (13) The Municipal manager must within 14 days of receiving the report contemplated in Subsection (12) submit the appeal to the Appeal Authority.
- (14) The Municipal Manager or an employee designated by him or her must—
 - (a) liaise with the Appeal Authority and the parties concerned regarding any appeal lodged with the Appeal Authority;
 - (b) maintain a diary of meetings of the Appeal Authority;

- (c) allocate a meeting date for, and appeal number to, an appeal;
- (d) arrange the attendance of members of the Appeal Authority at meetings;
- (e) arrange venues for the Appeal Authority;
- (f) perform the administrative functions in connection with the proceedings of the Appeal Authority;
- (g) ensure that the proceedings of the Appeal Authority are conducted efficiently and in accordance with the directions of the Appeal Authority;
- (h) arrange the affairs of the Appeal Authority so as to ensure that time is available to liaise with other organs of state regarding the alignment of integrated appeal procedures;
- (i) notify the parties concerned of decisions and procedural directives given by the Appeal Authority;
- (j) keep a record of all appeals lodged as well as the outcome of each, including—
 - (i) decisions of the Appeal Authority;
 - (ii) on-site inspections and any matter recorded as a result thereof;
 - (iii) reasons for decisions; and
 - (iv) proceedings of the Appeal Authority; and
 - (v) keep records by any means as the Appeal Authority may deem expedient.
- (15) An appellant may, at any time before the Appeal Authority makes a decision on an appeal submitted by the appellant, withdraw the appeal by giving written notice of the withdrawal to the Municipal Manager.
- (16) The owner of land must in writing inform the Municipality if he or she has withdrawn the power of attorney given to his or her former agent and confirm whether he or she will personally proceed with the appeal.

Consideration by Appeal Authority

81. (1) An appeal may be considered by the Appeal Authority by means of—
- (c) the consideration of the written appeal and comments; or
 - (d) an oral hearing.
- (8) The appeal may be considered in terms of Subsection (1)(a) if it appears to the Appeal Authority that the issues for determination of the appeal can be adequately determined in the absence of the parties by considering the documents or other material lodged with or provided to it.

- (b) the personal benefits which accrue to the holder of rights in terms of the restrictive condition;
 - (c) the personal benefits which will accrue to the person seeking the removal, suspension or amendment of the restrictive condition if it is amended, suspended or removed;
 - (d) the social benefit of the restrictive condition remaining in place in its existing form;
 - (e) the social benefit of the removal, suspension or amendment of the restrictive condition; and
 - (f) whether the removal, suspension or amendment of the restrictive condition will completely remove all rights enjoyed by the beneficiary or only some of those rights.
- (6) An approval to remove, suspend or amend a restrictive condition comes into operation—
- (a) if no appeal has been lodged, after the expiry of the period contemplated in Section 79(2) within which an appeal must be lodged; or
 - (b) if an appeal has been lodged, when the Appeal Authority has decided on the appeal.
- (7) The Municipality must cause a notice of the decision to amend, suspend or remove a restrictive condition to be published in the *Provincial Gazette* after the decision comes into operation as contemplated in Subsection (6) and notify the Registrar of the decision.

Endorsements in connection with removal, suspension or amendment of restrictive conditions

34. (1) An applicant at whose instance a restrictive condition is removed, suspended or amended must, after the publication of a notice contemplated in Section 33(7) in the *Provincial Gazette*, apply to the Registrar of Deeds to make the appropriate entries in, and endorsements on, any relevant register or title deed to reflect the removal suspension or amendment of the restrictive condition.
- (2) The Registrar of Deeds may require proof of the removal, suspension or amendment of a restrictive condition from the applicant including the submission of the following to the Registrar of Deeds:
- (a) a copy of the approval;
 - (b) the original title deed; and
 - (c) a copy of the notice contemplated in Section 33(7) as published in the *Provincial Gazette*.

CHAPTER IV

APPLICATION PROCEDURES

Manner and date of notification

35. (1) Any serving of a notice or notification or acknowledgement given in terms of this By-Law must be in writing and may be issued to a person—
- (a) by delivering it by hand to the person;
 - (b) by sending it by registered mail—
 - (i) to that person's business or residential address; or
 - (ii) in the case of a juristic person, to its registered address or principal place of business;

- (c) by means of data messages contemplated in the Electronic Communications and Transactions Act, 2002 (Act 25 of 2002), by sending a copy of the notice to the person, if the person has an email address or other electronic address; or
 - (d) where an address is unknown despite reasonable enquiry, by publishing it once in the *Provincial Gazette* and once in a local newspaper circulating in the area of that person's last known residential or business address.
- (2) The date of notification in respect of a notice served or given to a person in terms of this By-Law—
 - (a) when it was served by certified or registered post, is the date of registration of the notice; and
 - (b) when it was delivered to that person personally, is the date of delivery to that person;
 - (c) when it was left at that person's place of residence, work or business in the Republic with a person apparently over the age of sixteen years, is the date on which it was left with that person;
 - (d) when it was displayed in a conspicuous place on the property or premises to which it pertains, is the date that it is posted on that place; or
 - (e) when it was e-mailed or sent to an electronic address, is the date that it was received by that person as contemplated in the Electronic Communications and Transactions Act, 2002.
- (3) The Municipality may determine specific methods of service and notification in respect of applications and appeals including—
 - (a) information specifications relating to matters such as size, scale, colour, hard copy, number of copies, electronic format and file format;
 - (b) the manner of submission and communication with the Municipality;
 - (c) the method by which a person may be notified;
 - (d) other information requirements; and
 - (e) other procedural requirements.

Procedures for applications

- 36.
 - (1) An applicant must comply with the procedures in this Chapter and, where applicable, the specific procedures provided for in Chapter III of this By-Law.
 - (2) An applicant may apply simultaneously for different types of applications for land development in terms of Section 15(2).

ANNEXURE D:

*Addendum to Environmental Authorisation &
Correction Notice*

REFERENCE: 16/3/3/5/D6/38/0009/18
ENQUIRIES: Shireen Pullen
DATE OF ISSUE: 29 MAR 2019

The Manager
Joao da Nova Beleggings BK
P. O. Box 355
MOSSEL BAY
6500

Attention: Mr. L. Nel

Tel: (044) 695 1582
Fax: (044) 695 0262

Dear Sir

APPLICATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014: APPLICATION FOR AMENDMENT OF THE ENVIRONMENTAL AUTHORISATION ISSUED ON 6 OCTOBER 2009 FOR THE PROPOSED REZONING AND DEVELOPMENT OF THE REMAINDER OF THE FARM VYF BRAKKEFONTEIN NO. 220, MOSSEL BAY

With reference to your application for the amendment of the environmental authorisation issued on 6 October 2009, Reference Number: EG12/2/1-74 Remainder of the Farm Vyfbrakkefontein 220, Mossel Bay (5076), find below the amendment to the Environmental Authorisation in respect of this application.

ADDENDUM TO ENVIRONMENTAL AUTHORISATION

A. DECISION

1. By virtue of the powers conferred on it in terms of Regulation 30 of the Environmental Impact Assessment Regulations, 2014, the Department has decided to amend the Environmental Authorization issued on 6 October 2009, Reference Number: EG12/2/1-74 Remainder of the Farm Vyfbrakkefontein 220, Mossel Bay (5076) as follows –
 - 1.1 Section A, the Description must read as follows:
The proposed activity involves the change in land use from agricultural to residential. It is proposed to establish the following on the property:
 - 223 X Group Housing Erven (with only 1 unit per erf);
 - 1 X General Residential Erf (frail care/assisted living facility);
 - 1 X Local Business Erf (neighbourhood shop);
 - An internal private road network (with a road reserve of 10m and 16m wide);

- Provision of large private open spaces (approximately 34,76ha): the large green belt along the southern boundary and along the northern-eastern boundary with footpaths; and
- A gated development is proposed with access via the existing public road, Wassenaar Street which is situated along the eastern boundary of the property).

In addition, hereto the following associated infrastructure will be constructed:

- An internal road network consisting of approximately 203 00m².
- An internal water reticulation network;
- Bulk service infrastructure for sewage removal;
- Stormwater drainage structures and Stormwater pipelines; and
- Electricity reticulation, substations and street lighting.

1.2 The above proposal would be implemented approximate to the lay-out plan dated October 2016, done by Marike Vreken Unban and Environmental Planners and attached to the Final Report for Amendment of Environmental Authorisation (Ref: 16/3/3/5/D6/38/0009/18) as "Proposed new layout plan November 2017"

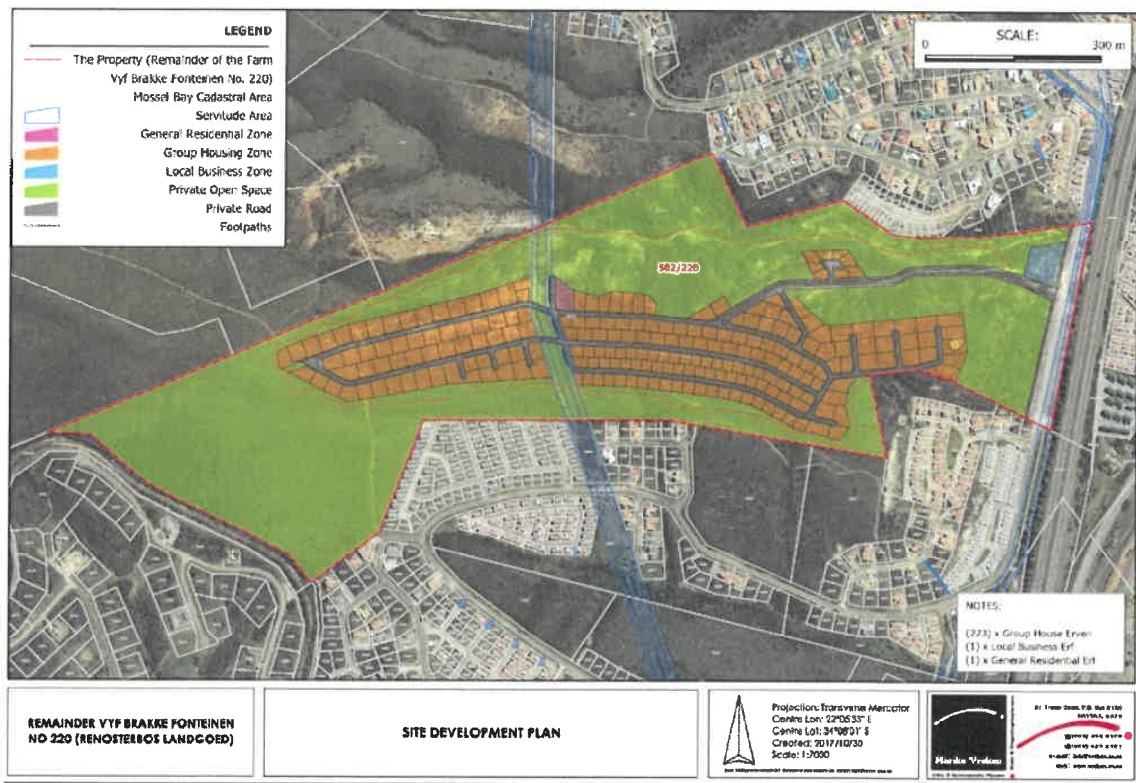


FIGURE 1: NEW AMENDED LAY-OUT

2. This amendment (Addendum) to the Environmental Authorisation allows for the following:
 - 2.1 An increase of 13 additional erven with the inclusion of the frail care/assisted living unit (a maximum of 12 single bed rooms) and the neighbourhood shop.
 - 2.2 The addition of a row of erven below the previously authorised road;
 - 2.3 To gate the development into a security estate so the internal roads proposed are now private roads.
 - 2.4 The remainder of the site (private open space) is proposed to be conserved as part of a Conservation Management Plan.
3. This amendment will also affect a small amount of high sensitivity vegetation not previously approved to build the required service infrastructure to support the new proposed layout as follows:
 - 3.1 6 x Stormwater outlet structures (gabion type headwalls) shown as green place marks on the figure below (of course to be installed on the edge of the internal road);
 - 3.2 Approximately 227m of sewer pipeline (show as blue lines on figure below) will also require a disturbance width of about 10m wide which will result in a total disturbance area of 2270m² within high botanical sensitive areas.
 - 3.3 2 x sewer manholes (will fall within the 10m wide disturbance area) shown as purple place mark on imagery."



FIGURE 2: BULK SERVICES INFRASTRUCTURE PROPOSED WITHIN THE HIGHLY SENSITIVE VEGETATION AREA

4. This amendment is for the sole purpose of addressing the housing need that changed in the last 10 years since the development was approved. The need for affordable housing is aimed at the middle income families or individuals.
5. All other information contained in the Environmental Authorisation issued on 6 October 2009, Reference Number: EG12/2/1-74 Remainder of the Farm Vyf Brakkefontein 220, Mossel Bay (5076) remains unchanged and is still in force.

B. REASONS FOR THE DECISION:

In reaching its decision, the Department took, *inter alia*, the following into consideration:

1. The application is for a substantive amendment to the Environmental Authorisation.
2. The Public Participation Process (PPP) that complies with Regulation 41 of the EIA Regulations that was undertaken and which included the following:
 - 2.1 A pre-application PPP was undertaken for this amendment application;
 - 2.2 The pre-application report was made available for 30 days from 18 May 2018 until 18 June 2018;
 - 2.3 A newspaper advertisement was placed in the Mossel Bay Advertised on 18 May 2018 inviting all I&APs to register;
 - 2.4 State Departments were notified 16 May 2018;
 - 2.5 The Draft Impact Assessment Report was circulated for comment from 13 April to 19 May 2017;
 - 2.6 Adjacent landowners and land users were notified in writing on 17 May 2018;
 - 2.7 A Site Notice was placed on 17 May 2018;
 - 2.8 The local Municipality confirmed that sufficient capacity is available to provide the proposed amended lay-out with civil services and electricity;
 - 2.9 An electronic copy of the document was made available on the SES website at <http://www.sescc.net/index.php?comp=article&op=view&id=424>.
 - 2.10 The following State Departments were afforded an opportunity to comment on the proposed amendment:
 - Breede-Gouritz CMA
 - Department of Water and Sanitation
 - CapeNature
 - Eden District Municipality
 - Heritage Western Cape
 - Western Cape Government: Department of Agriculture
 - Western Cape Government: Department of Environmental Affairs and Development Planning (Coastal Management
 - South African National Roads Agency Limited (SANRAL)
 - Garden Route District Municipality
 - Mossel Bay Municipality
 - Department of Agriculture, Fisheries and Forestry
 - Western Cape Government: Department of Transport and Public Works
 - Ward Councillor
 - 2.11 The Final Impact Assessment Report was made available to the public, registered I&APs and stakeholders for a 30-day review & comment period.
3. Although the proposed amendment will result in the loss of approximately 2 hectares additional highly sensitive vegetation, the Botanical Specialist indicated that no plant species of conservation concern were observed in the study area or within the approved development footprint. According to the botanical specialist the part of the site that will be lost is not essential for achieving regional conservation targets and its loss will not have more than a medium negative ecological impact at a regional scale.
4. During the operational phase of the development, a positive botanical impact is expected to occur to the biophysical environment, which surrounds the proposed development site, because the fynbos in this area is currently unmanaged and is invaded with aliens that are prone to fire at any stage. The new layout proposes a gated development and it is proposed that the private spaces will be managed in accordance

with a Conservation Management Plan (CMP) that will be compiled, as soon as the Home Owners Association has been established.

5. According to the visual specialist, the new development layout is preferred slightly over the approved development lay-out in terms of visual impact.
6. The Mossel Bay Municipality confirmed that they have sufficient unallocated capacity for services to support the proposed amendment.
7. Applicant's Motivation:
 - 7.1 The applicant motivates that the housing market has experienced changes since the development was approved 10 years ago and the need for more affordable, middle income housing within Mossel Bay has increased.
 - 7.2 This inspired the applicant to relook and amend the approved development layout plan to maximize the investment on the property and to allow for more affordable housing and a higher density residential development.
 - 7.3 The Botanical specialist report findings indicated that the botanical loss is an acceptable one, provided that it is accompanied by guaranteed ecological management of the higher conservation value areas on the site.
 - 7.4 Furthermore, the aim is to improve on the quality / species diversity of the surrounding high sensitive vegetation by means of the implementation of a Conservation Management Plan for the vegetation in the private open space areas.
 - 7.5 The applicant further motivates that the 223 Group Homes will, once sold, increase municipal income base through property tax, which will aid in the municipalities goal of establishing long term economic growth. Through the developments' concept of an integrated holistic development, a unique attraction is provided to Mossel Bay which will increase the long term local expenditure.
8. The applicant also submits that, because the amended proposal includes a frail care facility, the development is also expected to improve the health care situation of the local area. The frail care component of the Development will take pressure off the local hospital, whilst the main objective of the unit is to provide a caring service for the residents and owners of Renosterbos, external patients are also welcome.
9. Planning Motivation:
 - 9.1 There is a demand and under-supply of affordable middle-income housing in Mossel Bay. The smaller residential properties allow for more affordable housing opportunities;
 - 9.2 The development allows for small and large erven, which caters for a broader market.
 - 9.3 The smaller residential properties allow for more cost-effective service delivery for the proposed development;
 - 9.4 The proposed amendment will allow for communal refuse areas and also for links to connect the residential component with the large green belt; and
 - 9.5 The proposed frail-care centre will provide a much-needed service to a generation of people that is in need of such services. People will be able to live near the institution that provide them with the necessary medical services required by them.
10. The applicant submits that the proposed amendment will result in a development with a more viable community which includes recreational amenities and a shop that caters for the daily needs such as fresh bread and milk.
11. The applicant also submits that the proposed amendment will result in a development which will give an enormous boost to the local economy, creating a vast range of employment opportunities, not only during construction phase, but also in the operational

phase. The continues demand, for nurses, maintenance, domestic workers, doctors, general staff, garden services, security, services will keep this socio-economic benefit alive for years to come.

12. Objections were received from some interested and affected parties, including CapeNature. This Department is of the opinion that these issues were adequately addressed by the Environmental Assessment Practitioner (EAP).
13. The positive Socio-economic benefits during construction as well as operation outweighs the negative botanical impact. In addition hereto, the operational phase benefit of the implementation of the CMP is another advantage of granting the proposed amendment.

C. CONDITIONS

1. The applicant must, in writing, within **14 (fourteen)** calendar days from the date of the Department's decision –
 - 1.1 notify all registered interested and affected parties registered in the previous EIA process of –
 - 1.1.1 the outcome of the application;
 - 1.1.2 the reasons for the decision;
 - 1.1.3 the date of the decision; and
 - 1.1.4 the date of issue of the decision;
 - 1.2 draw the attention of all registered interested and affected parties registered in the previous EIA process to the fact that an appeal may be lodged against the decision in terms of the National Appeals Regulations, 2014 in section D below;
 - 1.3 draw the attention of all registered interested and affected parties registered in the previous EIA process to the manner in which they may access the decision.
2. The holder of the environmental authorisation must within thirty (30) calendar days of the issue of this amendment decision, provide the competent authority with written proof of compliance with condition 1 above.
3. A Conservation Management Plan (CMP) must be compiled as soon as the Home Owners Association has been established (and funded by the HOA). Appropriate professionals will be employed by the HOA to compile and implement the CMP to the benefit of the fynbos vegetation. It must include alien vegetation removal and a fire burning regime and it must take the approved EMP into account and the findings of the 2017 botanical assessment.
4. All recommendations made by the Botanical Specialist, the Traffic Specialist, as well as the Visual Specialist must be implemented and strictly adhered to.
5. A 15m wide fire break must be implemented around the development and maintained throughout the operational phase.
6. A Landscaping Plan must be compiled as per the EMPr.
7. An Architectural Design Plan must be compiled as per the EMPr.

8. Should any evidence of graves, human burials, archaeological and paleontological material be discovered during the execution of activities, all works should be stopped and Heritage Western Cape (HWC) must be notified immediately.
9. All mitigation measures mentioned in the Final Impact Assessment Report must be implemented and strictly adhered to.

D. APPEALS

Appeals must comply with the provisions contained in the National Appeal Regulations 2014 (refer to Government Notice R.993 of 8 December 2014).

1. An appellant must –
 - 1.1. submit an appeal in accordance with Regulation 4 to the appeal administrator, within 20 (twenty) calendar days from the date the applicant notified registered I&APs of this decision.
 - 1.2. if the appellant is the applicant, provide any registered I&AP, any Organ of State and the decision-maker with a copy of the appeal lodged with the appeal administrator;
 - 1.3. if the appellant is a person other than the applicant, provide any registered I&AP, any Organ of State and the decision-maker with a copy of the appeal lodged with the appeal administrator;
2. The applicant (if not the appellant) the decision-maker, I&APs and Organ of State must submit their responding statement, if any, to the appeal authority and the appellant within 20 days from the date of receipt of the appeal submission.
3. The appeal form/s must be submitted by means of one of the following methods:

By post: Attention: Jaap de Villiers
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 J. de Villiers (Tel: 021 483 3721)
Room 809
8th Floor Utilitas Building, 1 Dorp Street, Cape Town, 8001

By e-mail: Jaap.DeVilliers@westerncape.gov.za
4. A prescribed appeal form, as well as assistance regarding the appeal processes is obtainable from the office of the appeal authority/ a't: Tel. (021) 483 3721, E-mail Jaap.deVilliers@westerncape.gov.za or URL <http://www.westerncape.gov.za/eadd>.

E. DISCLAIMER

The Western Cape Government, the Local Authority, committees or any other public authority or organisation appointed in terms of the conditions of this Addendum to 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. GAVIN BENJAMIN

DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 3)

DATE OF DECISION: 29/03/2019

Cc. Mossel Bay Municipality

Mr. E. Enslin

Mr. S Kleinhans

Sharples Environmental Services cc

Fax: (044) 690 5786

Fax: (044) 695 2145

Fax: (044) 874 5953

Email: steve@sharples.co.za



REFERENCE: 16/3/3/5/D6/38/0009/18
ENQUIRIES: Shireen Pullen
DATE OF ISSUE: 02 APRIL 2019

The Manager
Joao da Nova Beleggings BK
P. O. Box 355
MOSSEL BAY
6500

Attention: Mr. L. Nel

Tel: (044) 695 1582
Fax: (044) 695 0262

Dear Sir

CORRECTION NOTICE: ADDENDUM TO THE ENVIRONMENTAL AUTHORISATION ISSUED ON 29 MARCH 2019 FOR THE PROPOSED REZONING AND DEVELOPMENT OF THE REMAINDER OF THE FARM VYF BRAKKEFONTEIN NO. 220, MOSSEL BAY

1. The abovementioned Addendum to the Environmental Authorisation ("EA") which was issued on 29 March 2019 refers.
2. Please be informed that in terms of Section 47A(1)(b) of the National Environmental Management Act, 1998 (Act no. 107 of 1998, as amended), Paragraph 1 of Section A of the Addendum to the Environmental Authorisation issued on 29 March 2019 is hereby corrected to read as follows:

"By virtue of the powers conferred on it in terms of Regulation 30 of the Environmental Impact Assessment Regulations, 2014, the Department has decided to amend the Environmental Authorization issued on 6 October 2009, Reference Number: EG12/2/1-74 Remainder of the Farm Vyf Brakkefontein 220, Mossel Bay (5076) as follows –"

3. Paragraph 1.2 of Section A of the Addendum to the Environmental Authorisation issued on 29 March 2019 is hereby corrected to read as follows:

"The above proposal would be implemented approximate to the lay-out plan created 30 October 2017, done by Marike Vreken Unban and Environmental Planners.

4. Reasons for Correction Notice:

- 4.1. To correct a typographical error as the date in paragraph 1 of the aforementioned Addendum refers to 6 October 20019 instead of 6 October 2009;

4.2. To correct a typographical error as the date in paragraph 1.2 of the aforementioned Addendum states that the date of the lay-out plan is October 2016 instead of 30 October 2017.

5. Please ensure that reference is made to this Correction Notice in all future correspondence and that this Notice is at all times attached to the Environmental Authorisation when distributed.

Yours faithfully



MR. GAVIN BENJAMIN

DIRECTOR: DEVELOPMENT MANAGEMENT (REGION 3)

DATE OF DECISION: 02 APRIL 2019

Cc. Mossel Bay Municipality
Mr. S Kleinhans

Sharples Environmental Services cc

Fax: (044) 690 5786
Fax: (044) 874 5953
Email: steve@sharples.co.za

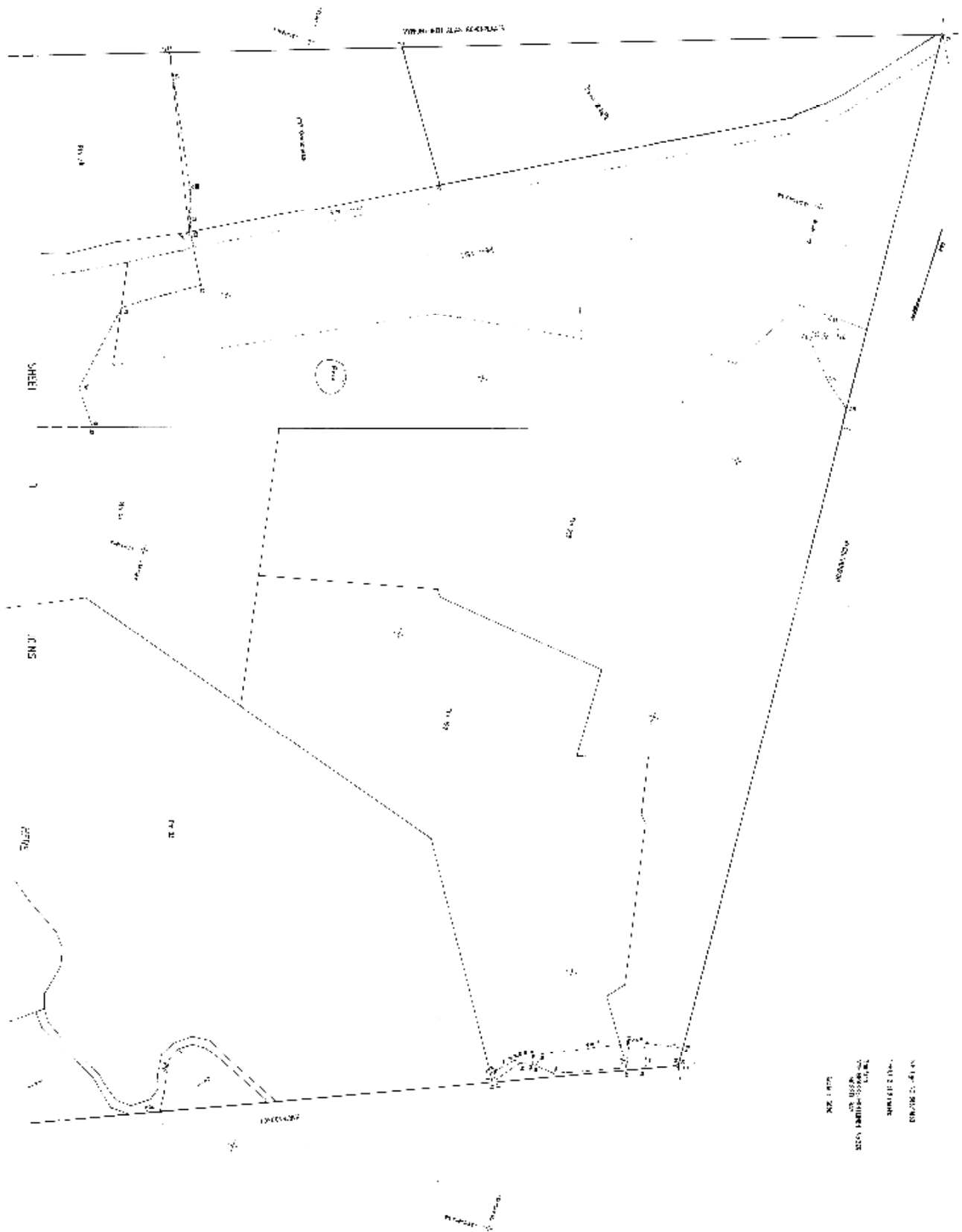
ANNEXURE E:

*Deduction Plan: Remainder of the Farm No
220 (SG No 383/1863)*

The design letter A B C D E F G
 numbers 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1

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Deduction Plan 383/1863 Sht. 2



ANNEXURE F:

Power of Attorney & Company Resolution

JOA DA NOVA BELEGGINGS (PTY)LTD
REG NO 200501068107

(Name of Company, Partnership, Trust or Close Corporation)

RESOLUTION

Resolution passed at the meeting of the Shareholders/ Partners/ Trustees/ Members held in GEORGE on the 11 day of April 2016.

Resolved that _____ in his capacity as _____, be and is hereby authorized to do whatever may be necessary to give effect to this resolution and to enter into and to sign such documents necessary to proceed with the applications as specified hereunder on behalf of the Company/ Partnership/ Trust/ Close Corporation with such modification as he/ she in his/ her sole discretion shall deem fit, his/ her signature to be conclusive proof that the documents which bear it are authorised in terms hereof.

DESCRIPTION OF PROPERTY:

.PORTION 502 OF THE FARM VYF BRAKKE FONTEINEN NO 220, MOSSEL BAY

NATURE OF APPLICATION:

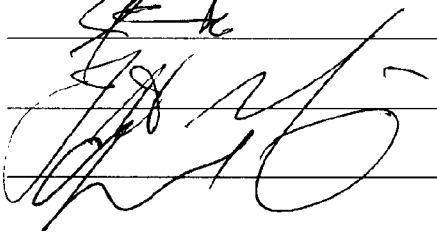
AMENDMENT OF APPROVED LAYOUT AND AMENDMENT OF CONDITIONS OF APPROVAL

SIGNATURE OF SHAREHOLDERS/ PARTNERS/ TRUSTEES/ MEMBERS:

NAME:

JACOBUS SWART
JOHAN NEL
P. ANDRÉ NEL

SIGNATURE:

SPECIAL POWER OF ATTORNEY

We, Johan Nel, Andre Nel, Jacobus Swart
Sca Das Nova Beleggings Pty Ltd the undersigned,

do hereby nominate, constitute and appoint
THE AUTHORISED AGENTS OF MARIKE VREKEN TOWN & REGIONAL PLANNERS CC and duly
authorised employees of Marike Vreken Town Planners CC
with power of Substitution to be *my/our lawful representatives in *my/our application for:

AMENDMENT OF APPROVED LAYOUT AND AMENDMENT OF CONDITIONS OF APPROVAL

on

PORTION 502 OF THE FARM VYF BRAKKE FONTEINEN NO 220, MOSSEL BAY

In addition to apply for such amendments of any zoning schemes / structure plans as may
be deemed necessary and to make other necessary application and further to represent
*me/us at any inquiry in relation to the abovementioned matters and generally do
whatever may be necessary or desirable to procure the approval of the application, by
virtue of those present and whatever our said representative have to date done herein.

Signed at GEORGE on this 11 day of April 2016

SIGNED:

SIGNED:

SIGNED:

In the presence of the undersigned witnesses:

AS WITNESSES:

1.

2.

ANNEXURE G:

*Mossel Bay Municipality - Application Form /
Application Fee / Proof of Payment*



MOSSEL BAY MUNICIPALITY
P O Box 25
Mossel Bay
6500

Tel No: +27(44) 606 5000
Faks No: +27(44) 606 5062
e-mail: admin@mosselbay.gov.za
www.mosselbaymun.co.za

FOR OFFICE USE ONLY

Municipal stamp (RECORDS):

SCAN/COLLAB/FILE NO:

Application for:

NeoLMS Ref: _____

LAND USE PLANNING APPLICATION FORM

IN TERMS OF SECTION 15 OF THE MOSSEL BAY BY-LAW ON MUNICIPAL LAND USE PLANNING, 2015

KINDLY NOTE:

- The complete application form together with all the required information and documentation as listed in Part F of the application form must be submitted in duplicate (2).
- Application fees are non-refundable and must be paid on date of submission.
- The applicant is responsible for the Public Participation Process in consultation with the relevant municipal official as per the How-to Guide for Public Participation Process.
- The applicant is liable for all costs related to the Public Participation Process including advertisement costs in respect of publication of the application.

PART A: APPLICANT DETAILS

First name(s)	MARIKE		
Surname	VREKEN		
South African Council for Planners (SACPLAN) registration number (if applicable)	1101		
Company name (if applicable)	MARIKE VREKEN URBAN & ENVIRONMENTS PLANNERS		
Postal Address	21 TROTTER STREET		
	KNYSNA	Postal Code	6570
Email	info@vreken.co.za		
Tel	044 382 0420	Cell	082 927 5310

PART B: LAND USE PLANNING PRE-APPLICATION CONSULTATION

Has there been a pre-application consultation?	Y ☒	N ☐	If yes, attach the minutes of the pre-application consultation.
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PART C: PROPERTY DETAILS (in accordance with title deed)					
Erf Number, Suburb & Town / Portion & Farm Number	Physical Address / Locality of Farm	Name of Registered Owner(s)	Current Zoning	Current Land Use	Extent m ² /ha
Remainder of the Farm Vyf Brakke Fonteinen No. 220, Mossel Bay	The application area is located between Hartenbos Heuwels and Mossel Bay, west of the Bay View residential area and west of the N2 National Road.	JOAO DA NOVA BELEGINGS PTY LTD	Subdivisional Area	Vacant	845,7421 ha

PART D: DETAILS OF PROPOSAL	
Brief description of proposal <u>only</u> (Attach a detailed written motivation*):	
See attached motivation report.	
(i)	The amendment of the approved subdivision plan on Portion 502 (A Portion of The Remainder) of the Farm Vyf Brakke Fonteinen No. 220, in terms of Section 15(2)(k) of Mossel Bay Municipality Standard By-Law on Municipal Land Use Planning, to allow: § (224) x 'General Residential Zone I' Erven (Group Housing) § (1) x 'Business Zone III' Erf (Neighbourhood Shop) § (4) x 'Open Space Zone II Erven' (Private Open Space) § (1) x 'Transport Zone III Erf' (Private Road) § (1) x 'Transport Zone II Erf' (Public Street) (ii) A consent use for a 'retirement resort' on Portion 502 (A Portion of the Remainder) of the Farm Vyf Brakke Fonteinen No. 220, in terms of Section 15(2)(o) of Mossel Bay Municipality Standard By-Law on Municipal Land Use Planning, to allow frail care / assisted living facilities.

*A written motivation for an application should be based on the criteria referred to in section 65 of the said legislation, namely:

- Desirability of the proposed utilisation of land and any guidelines issued by the Provincial Minister regarding desirability of proposed land uses. (The following is especially important: the influence of the proposal on the existing character of the area and rights of residents with regard to property values, privacy, view, sunlight, etc. and the influence of the proposal on surrounding facilities such as schools, open spaces and other community facilities if the application leads to an increase in the residents of the area).
- Investigations carried out in terms of other laws that are relevant to the consideration of the application.
- The impact of the proposed land development on municipal engineering services including influence on traffic and/or parking of the area.
- Applicable policies of the Municipality that guide decision making.
- Applicable provisions of the zoning scheme.
- Consideration of the following forward planning documents: Integrated Development Plan (IDP), including the Spatial Development Framework (SDF) for the Municipality; IDP and SDF for the District Municipality, where applicable; Applicable local SDF adopted by the Municipality; Applicable Structure Plans; Provincial SDF; and Regional SDF in Section 18 of SPLUMA and LUPA or provincial regional SDF.
- Policies, principles and planning and development norms and criteria set by the National and Provincial Government.
- Land development principles as referred to in Section 42 of the Spatial Planning Land Use Management Act, 2013 (Act 16 of 2013) (SPLUMA) and Chapter VI of the Land Use Planning Act, 2014 (Act 3 of 2014) (LUPA).

PART E: LAND USE PLANNING APPLICATIONS IN TERMS OF SECTION 15 OF THE MOSSEL BAY BY-LAW ON MUNICIPAL LAND USE PLANNING, 2015 AND APPLICATION FEES PAYABLE

Tick	Type of application	Cost
☐	2(a) rezoning of land;	R2097.00
☐	2(b) permanent departure from the development parameters of the zoning scheme;	R1523.00 (R 766.00 for building line relaxation application)
☐	2(c) departure granted on a temporary basis to utilise land for a purpose not permitted in terms of the primary rights of the zoning applicable to the land;	R1154.00 (R 953.00 for house shop application)
☐	2(d) subdivision of land that is not exempted in terms of section 24, including the registration of a servitude or lease agreement;	R1523.00 (+ R64 / erf above 10 erven)
☐	2(e) consolidation of land that is not exempted in terms of section 24;	R1523.00
☐	2(f) removal, suspension or amendment of restrictive conditions in respect of a land unit;	R2097.00
☐	2(g) permission required in terms of the zoning scheme;	R721.00
☐	2(h) amendment, deletion or imposition of conditions in respect of an existing approval;	R2106.00
☐	2(i) extension of the validity period of an approval;	R1053.00
☐	2(j) approval of an overlay zone as contemplated in the zoning scheme;	R0-00
☒	2(k) amendment or cancellation of an approved subdivision plan or part thereof, including a general plan or diagram;	R2886.00
☐	2(l) permission required in terms of a condition of approval;	R721.00
☐	2(m) determination of a zoning;	R1200.00
☐	2(n) closure of a public place or part thereof;	R1200.00
☒	2(o) consent use contemplated in the zoning scheme;	R1200.00 (R953.00 for house shop application)
☐	2(p) occasional use of land;	R595.00
☐	2(q) disestablish a home owner's association;	R595.00
☐	2(r) rectify a failure by a home owner's association to meet its obligations in respect of the control over or maintenance of services;	R1200.00
☐	2(s) permission required for the reconstruction of an existing building that constitutes a non-conforming use that is destroyed or damaged to the extent that it is necessary to demolish a substantial part of the building.	R595.00
*Fees to be determined for financial year 2017/2018 TOTAL:		R4086.00

PART F: SUPPORTING INFORMATION AND DOCUMENTATION FOR LAND USE PLANNING APPLICATION

KINDLY NOTE:

- The following documentation must be attached to this application form.
- The Municipality may request any other information deemed necessary for the purpose of this application.
- Incomplete applications will not be accepted by the Municipality.

YES	NO	
☒	☐	Power of attorney if applicant is not owner
☒	☐	Written motivation
☒	☐	Locality plan
☒	☐	Layout Plan

PART F (CONTINUED):		
YES	NO	
☒	☐	Full copy of the title deed
☒	☐	S.G. diagram / General plan extract (download at: http://csg.dla.gov.za/esio/searchindex.htm)
☐	☒	Bondholder's consent (if applicable)
☐	☒	Conveyancer's certificate (if applicable)
☐	☒	Home owner's association consent / proof of failure of Home owner's association (if applicable)
☒	☐	Any additional documents or information identified in the pre-application consultation minutes (if applicable)
☐	☒	Proof of lawful use right (if applicable)
☐	☒	Copy of original approval letter (if applicable)
☐	☒	Other
Please provide reasons if any of the documents listed above have been omitted:		
SECTION G: DECLARATION		
I hereby wish to confirm the following :		
1.	That the information contained in this application form and accompanying documentation is complete and correct.	
2.	I'm aware that it is an offense in terms of Section 86(1)(e) to supply particulars, information or answers knowing the particulars, information or answers to be false, incorrect or misleading or not believing them to be correct.	
3.	I am properly authorized to make this application on behalf of the owner and (where applicable) that a copy of the relevant power of attorney or consent are attached hereto.	
4.	Where an agent is appointed to submit this application on the owner's behalf, it is accepted that correspondence from and notifications by the Municipality in terms of the by-law will be sent only to the agent and that the owner will regularly consult with the agent in this regard.	
5.	That this submission includes all necessary land use planning applications required to enable the development proposed herein.	
6.	I confirm that the relevant title deed(s) have been read and that there are no restrictive title deed restrictions, which impact on this application, or alternatively an application for removal/suspension or amendment forms part of this submission.	
7.	I am aware that development charges to the Municipality in respect of the provision and installation of external engineering services are payable by the applicant as a result of the proposed development.	
8.	I am aware that I am fully responsible for ensuring that Public Participation Process is carried out in accordance with the How-to Guide for Public Participation Process and that I will bear all related costs.	
Applicant's signature:  Date: 06/08/2019		
Full name: Marike Hendrika Vreken		
FOR OFFICE USE ONLY		

Municipal Stamp

Received by:

BEPLANNING & EKONOMIESE ONTWIKKELING/ PLANNING & ECONOMIC DEVELOPMENT

Mosselbaai Munisipaliteit, Privaatsak X29, Mosselbaai, 6500
Mosselbay Municipality, Private Bag X29, Mossel Bay, 6500
Tel no: 044-606 5073

Montagu Place Gebou, 4^{de} Vloer, Montagustraat 111, Mosselbaai
Montagu Place Building, 4th Floor, 111 Montagu Street, Mossel Bay

OWNER/EIENAAR:	AAN: TO: Marike
ERF NR: REMAINDER OF FARM 220	VAN: Evan Jacobs FROM:
JOB: JOB 307693 – R 1260.00 (CONSENT USE) JOB 307680 – R 3030.00 (AMMENDMENT OF AN APPROVED SUBDIVISION PLAN) TOTAL: R 4290.00	DATUM: DATE: 08/08/2019
<u>ONDERWERP:</u> <u>BANKBESONDERHEDE VIR INTERNET BETALINGS – STADSBEPLANNING</u>	<u>SUBJECT:</u> <u>BANKING DETAILS FOR INTERNET PAYMENTS - TOWN PLANNING</u>

INTERNET BETALINGS:

Kies Mosselbaai Munisipaliteit op die lys van voorafgekeurde begunstigdes op jou bank se internetbankdiens-webtuiste.

DIREKTE BETALING:

Mosselbaai Munisipaliteit,
BANK REKENINGNOMMER: 1134644809 Takkode: 198765-NEDBANK

Gebruik asb. **VERWYSINGSNOMMER: 000000906845**
as begunstigde verwysing.
Stuur asb. bewys van betaling aan ejacobs@mosselbay.gov.za

DIRECT PAYMENT:

Mossel Bay Municipality
BANK ACCOUNTNO: 1134644809 BRANCHCODE: 198765-NEDBANK

Please use this **REFERENCE NUMBER: 000000906845**
as beneficiary reference
Please send proof of payment to ejacobs@mosselbay.gov.za

BAIE DANKIE/THANK YOU – Evan Jacobs
THANK YOU

THE MUNICIPALITY OF MOSSEL BAY

20 CONSENT USE

NAME AND ADDRESS OF OWNER:

SERVICES CHARGES:

S20 - CONSENT USE (SEC 15 (2) (O) 1260.00

TOTAL DUE: 1260.00

6500

TEL: 0824477591

SIGNATURE

FOR OFFICE USE ONLY

JOB NUMBER: 307693, CAPTURED BY USER EJ1 (EVAN JACOBS) ON 08/08/19

RECEIPT NUMBER

CASHIER

RECEIPT DATE

STREET ADDRESS: VYF-BRAKKE-FONTEINEN.

~~ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED~~

>>>>>>>Notice<<<<<<<<<<

The application fee/s are payable at the Municipal Offices in Marsh Street, Mossel Bay. Applications will not be registered before proof of payment has been received. The applicable fees are only valid for the present financial year ending end of June. Late payments will be charged in accordance with the new tariffs.

Your cooperation will be appreciated.

COMMENTS :

Eff: 906845

Consent use

POSBUS 25

DATE REQUIRED: 08/08/19

SERVICES CHARGES:

Z10 - AMEND/CANCEL-APPROVED SUBDIVIS030.00

TOTAL DUE: 3030.00

TEL: 0824477591

SIGNATURE

FOR OFFICE USE ONLY

TOR NUMBER: 307680, CAPTURED BY USER EJ1 (EVAN JACOBS) ON 08/08/19

RECEIPT NUMBER

CASHIER

RECEIPT DATE

STREET ADDRESS: VYF-BRAKKE-FONTEINEN,

ERF: 220000

>>>>>>>NoIce<<<<<<<<<<

The application fee/s are payable at the Municipal Offices in Marsh Street, Mossel Bay. Applications will not be registered before proof of payment has been received. The applicable fees are only valid for the present financial year ending end of June. Late payments will be charged in accordance with the new tariffs.

Your cooperation will be appreciated.

COMMENTS :

Eft: 906845

Amendment of an approved subdivision plan



NOTIFICATION OF PAYMENT

To Whom It May Concern:

First National Bank hereby confirms that the following payment instruction has been received:

Date Actioned	: 09 Aug 2019
Time Actioned	: 08:55:25
Trace ID	: VODSYW834RYF

Payer Details

Payment From	: Marike Vreken Town Planners - Business Account
Cur/Amount	: ZAR4,290.00

Payee Details

Name	: Mosselbay Municipality
Bank	:
Branch Code	:
Reference	: 000000906845

END OF NOTIFICATION

To authenticate this Payment Notification, please visit the First National Bank website at fnb.co.za, select Contact Us+Tools and then select "Verify Payment" and follow the on-screen instructions.

Our customer (the payer) has requested FirstRand Bank Limited to send this notification of payment to you. Should you have any queries regarding the contents of this notice, please contact the payer. FirstRand Bank Limited does not guarantee or warrant the accuracy and integrity of the information and data transmitted electronically and we accept no liability whatsoever for any loss, expense, claim or damage, whether direct, indirect or consequential, arising from the transmission of the information and data.

ANNEXURE H:

Title Deed (T7026/97)

(4)

DE KLERK & VAN GEND

Prokureurs, Notarisse, Aktebesorger

Volksskas Gebou

Adderleystraat

Kaapstad

SEELREG
DUTY

R.....

FOOI
EE

R. 100,00

Opgestel deur my

Transportbesorger

PT LATEGAN

TRANSPORTAKTE

T 7026 197

HIERBY WORD BEKEND GEMAAK

DAT WILLEM PETRUS MALHERBE

Aktebesorger, voor my, Registrateur van Aktes in Kaapstad, verskyn het, behoorlik daartoe gemagtig deur 'n volmag geteken te MOSSELBAAI op 4 November 1996 en aan hom verleen deur:

1. ANDRE NEL

Identiteitsnommer: 560629 5062 00 3

Getroud buite gemeenskap van goed

2. RONALD ROOKEN SMITH

Identiteitsnommer: 260815 5036 00 5

Getroud, welke huwelik beheer word deur die Wette van Engeland

3. JOHANNES HENDRIK NEL

Identiteitsnommer: 581101 5057 00 8

Getroud buite gemeenskap van goed

Welke Prokurasie hede aan my getoon is

FOR FURTHER ENDORSEMENTS SEE
VIN VERDERE ENDORSEMENTE SIEN

P. 13

P 13

SERTIFIKAAT VAN GEREISTREERDE TITEL UITGEREIK CERTIFICATE OF REGISTERED TITLE ISSUED	
TEN OPSIGTE VAN IN RESPECT OF	<u>Gedekte 197</u> : <u>155,7851</u> HA RESTANT REMAINDER <u>689,9567</u> HA
T <u>9027.97</u>	 REGISTRATEUR/REGISTRAR
<u>28 01 97</u>	

SERTIFIKAAT VAN GEREISTREERDE TITEL UITGEREIK CERTIFICATE OF REGISTERED TITLE ISSUED	
TEN OPSIGTE VAN IN RESPECT OF	<u>GEN 218 VAN DIE PLAAS VYF BRAKKE - FONTEINEN</u> NO 220 = <u>24,0040</u> HA RESTANT REMAINDER <u>478,9527</u> HA
T <u>53064.97</u>	 REGISTRATEUR/REGISTRAR
<u>10 06.97</u>	

VIR ENDOSSEMENTE KYK BLADSY
FOR ENDORSEMENTS SEE PAGE

14

EN die Komparant het verklaar dat Nademaal die hiernavermelde eiendom waarlik en wettiglik verkoop is op 4 Oktober 1996 en die Komparant in sy voormelde hoedanigheid hiermee in volle en vrye eiendom sedeer en transporteer aan en ten gunste van:

JOAO DA NOVA BELEGGINGS BK
no CK94/36705

Hul administrateurs of gemagtigdes

RESTANT van die plaas VYF BRAKKE FONTEINEN nr 220, in die Munisipaliteit Mosselbaai, Afdeling Mosselbaai, Provinsie Wes Kaap.

GROOT: 845,7421 (Aghonderd Vyf en Veertig komma Sewe Vier Twee Een) hektaar

EERSTE OORGEDRA kragtens Grondbrief gedateer 1 Desember 1870 (Mosselbaai Erfpagte Boekdeel 2 nr 37) met 'n kaart wat daarop betrekking het en gehou kragtens Transportakte nr T16431/1977 en T18868/1987 wat betref 1/2 aandeel elk.

A. ONDERHEWIG aan die voorwaardes waarna verwys word in Transportakte nr 23 gedateer 2 Augustus 1888.

B. ONDERHEWIG VERDER aan die bepalinge van die servituut waarna verwys word in die endossement gedateer 22 Maart 1922 op gesegde Transportakte no 23 gedateer 2 Augustus 1888, welke endossement as volg lees:

"REGISTRATION OF SERVITUDE

By Deeds of Trfr nos 2185 & 2186 dated 16 March 1922 a certain right of way 9.45 metres wide from the Main Road over the remainder of the said farm "Voorbaai" held hereunder has been granted to and in favour of the owners of the land thereby conveyed as will more fully appear on reference to the said Transfers."

T/ feres registration number	
GEWYSIG KRAGTENS ART 4 (1) VAN AMENDEED IN TERMS OF SECTION 4 (1)	
WET 47 VAN 1937 OM TE LEES: (b) OF ACT 47 OF 1937 TO READ:	
CK Nr 94/36705/23	
BC 74936 97	5.12.97
J. J. Olivier REGISTRAR	

Gedeelte 250 = 15,0944 ha

GETRANSPORTEER AAN	TRANSFERRED TO
L. T. P. MENKEN	OTHERS
RESTANT/REMAINDER 463 8583 ha	
T 116592/97	5.12.97
J. J. Olivier REGISTRAR	

Restant
Kragtens Transportakte No T 116592/97
is Restant van binnegemelde erendom geregig aan
in padserwituigebied soos aangedui deur die
figuur NPQR657U op Kaart LG Nr 1396/97
oor Ged 250 van die plaas Vyf-Brakke-
Fontein No 220 grootte 15,0944 ha.

Soos meer volledig sal blyk uit gesegde Transportakte

Aktekantoor
Kaapstad

5.12.97

J. J. Olivier
Registateur van Aktes

- C. **ONDERHEWIG VERDER** aan die bepalinge van die volgende endossement gedateer 27 May 1963 op gesegde Transportakte no 23 gedateer 2 Augustus 1888, naamlik:

"ENDORSEMENT IN TERMS OF SECTION 11(1) OF ACT NO 37 OF 1955
Remainder Para 1

A portion of the hereinmentioned property in Para 1, measuring $\pm$ 5 948 square metres has been expropriated by the Railway Administration in terms of Section 3(i) of Act no 37 of 1955. Vide Notice of Expropriation no C127/62. Application dd 17/5/1963 and plans filed herewith & Cpt. WF311/E."

- D. **ONDERHEWIG VERDER** aan die terme van die volgende endossement gedateer 9 December 1965 op die gemelde Transportakte no 4201 gedateer 19 Februarie 1965, naamlik:

"ENDOSSEMENT KRAGTENS ARTIKEL 11 VAN WET 37/1955 SOOS
GEWYSIG DEUR ARTIKEL 2 VAN WET 29/1963

'n Padserwituut 6,30 meter wyd op en oor binnegemelde eiendom (para 1) is deur die S.A. Spoorweë en Havens Administrasie onteien, kragtens Artikel 2(1) van Wet 70/1957 saamgelees met Wet 37/1955. Vide ont kennisgewing S.A.S. & H.) nr C49/65 en aansoek gedat 24/11/1965, en plan EX 615 ES hiermee geliasseer."

- E. **ONDERHEWIG VERDER** aan die bepalinge van die endossement gedateer 11 Julie 1967 op die gemelde Transportakte no 4201 gedateer 19 Februarie 1965, wat as volg lees:

"Para 1

ENDOSSEMENT KRAGTENS ARTIKEL 31(6) VAN WET 47 VAN 1937 (SOOS
GEWYSIG)

Gedeelte van die eiendom hiermee vermeld in Para 1 soos hieronder beskrywe is, is onteien deur die Provinsiale Administrasie van die Kaap die Goeie Hoop, kragtens Ar 130 van Ord no 15 van 1952 saamgelees met Art 2(3) van Ord nr 3 van 1936.



-15-

Eeb 4942 mead: 97m²

GEWANT/ONTEER AAN	TRANSFERRED TO
Palm Trust Nr. 17308899	
RESTANT/REMAINDER	463,8486 ha.
T 093449/2001	(2)
2001-11-08	Dabuschoeg
	REGISTRAR

Registrasie	Registration
DIE IDENTITEITSNUMMER VAN DIE	THE IDENTITY NUMBER OF THE
Troublee	
IS VERANDER NA	IS CHANGED TO
NR CK 1994/0367 OS/23	
01/2001	Dabuschoeg
	REGISTRAR

2001-11-08

Servituut No.	geregistreer die
Servitude No.	registered this
Toestemming met	Consent with
Consent with	
Foutief	
REGISTRAR	

SERTIFKAAT VAN GEREISTREERDE TITEL UITGEREEM CERTIFICATE OF REGISTERED TITLE ISSUED	
TEM OPSIGTE VAN IN RESPECT OF	Erf 15989 = 1,5588 ha
	RESTANT REMAINDER 463,8486 ha
T 000039357/2003	
2003-05-07	REGISTRAR

16
no further endorsements

RESTANT:

T 7026/1997

Bl. 16

Kragtens Notariale Akte no. K 800001060 * 2003, is die
binnegemelde eiendom onderhewig aan 'n
servituutgebied, welke servituutgebied voorgestel
word deur die figuur A B C D E F op Servituutkaart
no. 1175/2000,
ten gunste van die Munisipaliteit van Mosselbaai.

Soos meer volledig sal blyk uit gesegde Notariele
Akte.

AKTEKANTOOR
KAAPSTAD

.....
REGISTRATEUR VAN AKTES

04 NOV 2003

Vide onteieningskennisgewing nr R/N17/1121 dd 20/10/66 geliasseer as onteieningscaveat 441/67 plan 3 geliasseer hiermee.

Para 1 = groot $\pm$ 50,1705 hektaar vide kaart nr 3."

- ✓ F. **ONDERHEWIG VERDER** aan die terme van die endossement gedateer 25 Junie 1968, op gesegde Transportakte no 4201 gedateer 19 Februarie 1965, welke endossement soos volg lees:

"Para 1

ENDOSSEMENT KRAGTENS ART 11 VAN WET 37/1955

Soos gewysig deur Art 2 van Wet 29/1963

'n Padserwituut 6,30 meter wyd op en oor die eiendom in para 1 hierin, is deur die SA Spoorweë en Hawens Administrasie onteien kragtens Art 2(1) van Wet 70/1957 saamgelees met Wet 37/1955 onderworpe aan sekere voorwaarde, soos meer volledig sal blyk uit ont caveat nr 324/68, aansoek ged 22/5/1968 en plan WF317 ES hiermee geliasseer."

- G. **ONDERHEWIG VERDER** aan die terme van die volgende endossement gedateer 18 September 1970 op die gesegde Transportakte no 4201 gedateer 19 Februarie 1965, welke endossement as volg lees:

"Para 1

ENDOSSEMENT KRAGTENS ARTIKEL 31(6) VAN WET 47 VAN 1937 (Soos gewysig)

'n Gedeelte van die eiendom hierin vermeld in para 1 groot $\pm$ 15,6317 hektaar is onteien deur die Munisipaliteit van Mosselbaai kragtens Art 130 van Ord 19 van 1951 soos gewysig. Vide onteieningskennisgewing nr A14/28 dd 3/1/1970 geliasseer as onteienings caveat Ex 1842/69 planne in tweevoud geliasseer hiermee."

Endossement

000000393 • 2004

Kragtens Kansellasieooreenkoms no K 3 5
gedateer 4-3-2004, is voorwaarde 0
op bladsy 8 nou gekanselleer.

Aktekantoor
Kaapstad



Registrateur van Aktes

23 APR 2004

For further end see pg 18

23 APR 2004

- H. ONDERHEWIG VERDER** aan die terme van die volgende endossement gedateer 18 Februarie 1972, op gesegde Transportakte 4201 gedateer 19 Februarie 1965, welke endossement lees as volg:

Restant Para 1

"ENDOSSEMENT KRAGTENS ARTIKEL 31(6) VAN WET 47 VAN 1937 (SOOS GEWYSIG)

'n Gedeelte van die eiendom hierin vermeld, groot 7,5678 hektaar is onteien deur die Administrateur van die Kaap Provinsie kragtens Art 130 van Ord 15 van 1952 saamgelees met Art 2(3) van Ord 3 van 1936. Vide Onteieningskennisgewing nr R/N 17/1121 dd 19/5/70 geliasseer as onteienings caveat 123/72 planne geliasseer hiermee."

- I. ONDERHEWIG VERDER** aan die terme van die endossement gedateer 19 Desember 1977 op Transportakte nr T16431/77 welke endossement soos volg lui:

"By Notarial Deed no K1124/1977 dated 28 October 1977 the property withinmentioned held hereunder is subject to a right in favour of Electricity Supply Commission to convey electricity thereover, together with ancillary rights, and subject to conditions, as will more fully appear from reference to said Notarial Deed (and diagram) grosse whereof is annexed hereto."

- J. ONDERHEWIG VERDER** aan die terme van die endossement gedateer 29ste September 1978 op gemelde Transportakte nr T16431/1977 welke endossement soos volg lui:

"Kragtens die Akte van T24484/78 gedateer hierdie dag is die restant van die plaas Vyf-Brakke-Fontein no 220, groot 1027,5951 Ha onderhewig aan die voorwaardes opgelê deur die Administrateur van die Kaap in terme van Art 9 van Ord 33/1934.

- 19 -

Restant

FOR FURTHER ENDORSEMENTS SEE
VIR VERDERE ENDOSSEMENTE SIEN

B1, 20

Kraglens Not. Akte K 934/2004 S gedatees 5/8/2004,
is die binnegemelde eieners onderkoning aan in servituut
van kragleiding Lgv Munisipaliteit van Mosselbaai 2000
voorgesel deur die lyne NBP en KDEP&L op LG kaart
no. 1615/1985.

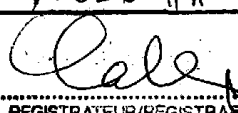
Aan meer volledig sal lyk uit gesegde Not. Akte.

Aktekantoor

Kaapstad


Registrateur van Aktes
07 SEP 2004

FLF 5852 = 312 m²

GETRANSPORTEER AAN TUTU FUR KOP BLEGINGS BK		TRANSFERRED TO	
RESTANT/REMAINDER		462,2586 HA	
T 000035012 / 2d06			
23 MAY 2006		REGISTRATEUR/REGISTRAR	

Kraglens toestemming van die Suid-Afrikaanse
raad nasionale sadagutskap gedatees 10.4.2006
is voornamend Q(a) op bladsy 9 twee
hoe gekansellees.

Aktekantoor
Kaapstad

23 MAY 2006


Registrateur van Aktes

- "(a) Die eienaar van hierdie erf is verplig om sonder betaling van vergoeding, toe te laat dat hoofgasleidings, elektrisiteits-, telefoon-, en televisiekabels en/of -drade en ander waterpype en die rioolvuil en dreinerings, insluitende stormwater van enige ander erf of erwe, oor hierdie erf gevoer word indien dit deur die plaaslike owerheid nodig geag word, en wel op die wyse en plek wat van tyd tot tyd redelikerwys vereis word. Dit sluit die reg op toegang te alle redelike tye tot die eiendom in met die doel om enige werke met betrekking tot bogenoemde aan te lê, te wysig, te verwyder of te inspekteer.
- (b) Die eienaar van hierdie erf is verplig om sonder vergoeding op die erf die materiaal te ontvang of uitgrawings op die erf toe te laat al na vereis word, sodat die volle breedte van die straat gebruik kan word omrede van die verskil tussen die hoogte van die straat soos finaal aangele en die erf tensy hy verkies om steunmure te bou tot genoeg van en binne 'n tydperk wat die plaaslike owerheid bepaal.

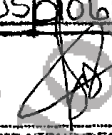
Soos meer volledig sal blyk uit die gesegde Transportakte."

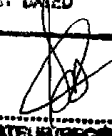
K. ONDERHEWIG VERDER aan en **GEREGTIG** op die terme van die endossement gedateer 29ste September 1978 op gemaakte Transportakte nr T16431/1977, 'n gedeelte van welke endossement soos volg lui:

"By virtue of Notarial Deed of Servitude K761/78S dated 15/9/1978 the Remainder of the farm Vyf-Brakke-Fontein nr 220 meas: 1027,5951 Ha held hereunder is:

- A. ENTITLED to a servitude of right of way 12 metres wide over the remainder of Ptn 89 of the farm Vyf-Brakke-Fontein nr 22 meas:- 119,7624 Ha held by T16429/1977 the centre of which servitude right of way is represented by the line b, c on diagram 6/1978 filed with T24484/78 to allow entrance and exit between the two parts the said Remainder of the farm Vyf-Brakke-Fontein nr 220 which is divided by the Main Road.

- 20 -

ENDOSSEMENT KRAGTENS ARTIKEL 27D VAN WET 61 VAN 1973	ENDORSEMENT BY VIRTUE OF SECTION 27D OF ACT 61 OF 1973
BINNEGEMELDE BESLOTE KORPORASIE IS OMSKEP IN 'N MAATSKAPPY EN STAAN NOU BEKEND AS	WITHINMENTIONED CLOSE CORPORATION HAS BEEN CON- VERTED INTO A COMPANY AND IS NOW KNOWN AS
Joao Da Nova Beleggings (Edms) Bpk	
NO 2005/10681/07	
BC 067810/07(1)	
2007-08-13	REGISTRATEUR/REGISTRAR

ENDOSSEMENT KRAGTENS ART. 68 (1) VAN WET 47 VAN 1937	ENDORSEMENT BY VIRTUE OF SECT. 68 (1) OF ACT 47 OF 1937
PERSOONLIKE BERNATUUT IN VOOR- WAARDE 9 OP BLADSY 9 ENDOSSEMENT GEDATEER MET VERVAL	IND. PERSONAL BERNATITUDE IN CON- TAINMENT 9 ON PAGE 9 ENDORSEMENT DATED HAS LAPSED
BC 067811/07(2)	
	
2007-08-13	REGISTRATEUR/REGISTRAR

Remaindres

SERTIFIKAAT VAN GEREISTREERDE TITEL UITGEREIK CERTIFICATE OF REGISTERED TITLE ISSUED	
TEN OPSIGTE VAN IN RESPECT OF	GedeeHe 249 = 65,1405 Ha RESTANT REMAINDER 397,1181 Ha
T 000063878/20073	
	
2007-08-13	REGISTRATEUR/REGISTRAR

for further endorsement SEE PG 21

T7026/97

BLADSY 21.....

RESTANT:

KRAGTENS notariële akte van serwituut K 000995/07 /2007S is die hierinvermelde eiendom onderhewig aan die volgende voorwaardes opgele deur **DIE SUID AFRIKAANSE NASIONALE PADAGENTSKAP BEPERK** Nr.1998/009584/06 in terme van Art 49 van Wet 7/1998 tydens die goedkeuring van die onderverdeling van **DIE RESTANT** van die plaas VYF- BRAKKE-FONTEINEN NR 220, Afdeling Mosselbaai, groot 462,2586ha wat as volg lui:

1. Met die uitsondering van bestaande bouwerke, mag geen bouwerk of enigiets anders hoegenaamd sonder die skriftelike goedkeuring van Die Suid-Afrikaanse Nasionale Padagentskap Beperk binne 'n afstand van 10 meter, gemeet vanaf die nasionale padreserwegrens, opgerig word nie.
2. 'n Permanente 2 meter baksteenmuur of sekuriteitsheining moet opgerig word op die gemeenskaplike grens van die nasionale pad en die eiendom. Detailplane van die voorgestelde muur/sekuriteitsheining moet aan Die Suid-Afrikaanse Nasionale Padagentskap Beperk voorgelê word vir skriftelike goedkeuring.
3. Geen direkte toegang tot of uitgang vanaf bogenoemde eiendomme na die nasionale pad sal toegestaan word nie. Toegang sal verkry word via Adriaanweg en Mayixhaleweg, soos aangedui op Plan no MB/C/215/3.

4. Die Suid-Afrikaanse Nasionale Padagentskap Beperk sal nie aanspreeklik gehou word vir enige skade of waardevermindering van die eiendom wat voortspruit uit enige impak wat die ontwikkeling wat hiermee goedgekeur word mag hê op die huidige stormwater dreinerings van die eiendom. Die Suid-Afrikaanse Nasionale Padagentskap Beperk behou die reg voor om enige voorwaardes in hierdie verband neer te lê wat redelik geag word onder die omstandighede.
5. Geen losstaande advertensie-teken sal toegelaat word nie ingevolge Regulasies op Advertering op of sigbaar vanaf Nasionale Paaie soos gepubliseer in die Staatskoerant no 6968 gedateer 22 Desember 2000.

13 AUG 2007

AKTEKANTOOR
KAAPSTAD



REGISTRATEUR VAN AKTES

- 7
- B. SUBJECT to a servitude right of way 12 metres wide depicted by the line a, b on diagram 6/1978 annexed to T24484/78 which servitude is in favour of Portion 47 of the farm Vyf-Brakke-Fonteinen no 220 meas: 111,3764 Ha held by Deed of T24484/78 dated this day.
As will more fully appear from the said Notarial Deed."

L. ~~ONDERHEWIG VERDER~~ aan en GERECHTIG op die terme van die endossement gedateer 1 April 1980 op gemelde Transportakte nr T16431/1977, 'n gedeelte van welke endossement soos volg lui:

"By virtue of Deed of Transfer no T8152/80 dated this day in respect of portion 48 (ptn of ptn 39) of the farm Vyf-Brakke-Fonteinen no 220 meas: 87,3346 ha; the remainder of within property is:

1. SUBJECT to a servitude area in extent 7329 square metres indicated by the figure A L M on diagram 2798/79 annexed to the above deed of Transfer for the purpose of a road along the line A L on abovementioned diagram in favour of abovementioned property.
2. ENTITLED to a servitude right of way 7 metres wide over portion 48 of the farm Vyf-Brakke-Fonteinen no 220 meas: 87,3346 ha held by abovementioned diagram Deed of Transfer, which servitude right of way is represented by the line a b on diagram 2798/79 annexed to the above Deed of Transfer.
As will more fully appear from the above Deed of Transfer."

M. ~~ONDERHEWIG VERDER~~ aan die terme van die endossement gedateer 18 Januarie 1979 op gemelde Transportakte nr T16431/1977 welke endossement soos volg lui:

"ENDOSSEMENT IN TERMS OF SECTION 31(6) OF AT 47 OF 1937 (AS AMENDED)

Portion of the herein mentioned property meas $\pm$ 270 square metres has been expropriated by Prov Admin of the Cape in terms of section 27 of the Road Ord

19/76 vide notice of expropriation no R/N 17/1743 dd 5-12-1978 filed as exprop EX1184/78 plans in duplicate filed herewith."

N. **ONDERHEWIG VERDER** aan 'n servituut reg van weg 7 (sewe) meter wyd ten gunste van Gedeelte 101 van die plaas Vyf-Brakke-Fonteinen nr 220, oor die restant van die plaas Vyf-Brakke-Fonteinen nr 220, die middel waarvan geïdentifiseer en aangetoon word deur die kromlyn xw aangetoon op kaart nr LG7815/1983 geheg aan Transportakte nr T18867/1987.

O. **GEREGTIG VERDER** aan 'n servituut reg van weg 7 (sewe) meter wyd oor Gedeelte 101 van die plaas Vyf-Brakke-Fonteinen nr 220, ten gunste van die restant van die plaas Vyf-Brakke-Fonteinen nr 220, welke reg van weg 'n bestaande pad is met twee bestaande toegange tot die restant van die gemelde plaas Vyf-Brakke-Fonteinen nr 220, middel van welke servituut van reg van weg geïdentifiseer word deur die kromlyn w.v.u.t. met uitgawe v.y. en u.z. op die gemelde kaart nr LG 7815/1983 geheg aan Transportakte nr T18867/1987.

P. **ONDERHEWIG VERDER** aan die volgende voorwaardes soos vervat in Transportakte nr T18867/1987 en T18868/87 opgelê deur die Administrateur van die Provinsie Kaap die Goeie Hoop tydens die goedkeuring van die onderverdeling van die plaas Vyf-Brakke-Fonteinen nr 220 ingevolge Artikel 9 van Ordonnansie nr 33 van 1934, naamlik:

- a) Die eienaar van hierdie erf (grond) is verplig om sonder betaling van vergoeding, toe te laat dat hoofgasleidings, elektrisiteits-, telefoon-, en televisiekabels en/of -drade, hoof- en ander waterpype en die rioolvuil en dreinerings, insluitende stormwater van enige ander erf of erwe, oor hierdie erf gevoer word, en dat bopgrondse installasies soos mini-substasies, meter kiosks en dienspale daarop geïnstalleer word, indien dit deur die plaaslike owerheid nodig geag word, en

wel op die wyse en plek wat van tyd tot tyd redelikerwys vereis word. Dit sluit die reg op toegang te alle redelike tye tot die eiendom in met die doel om enige werke met betrekking tot bogenoemde aan te lê, te wysig, te verwyder of te inspekteer.

- b) Die eienaar van hierdie erf (grond) is verplig om sonder vergoeding op die erf die materiaal te ontvang of uitgrawings op die erf toe te laat al na vereis word, sodat die volle breedte van die straat gebruik kan word omrede van die verskil tussen die hoogte van die straat soos finaal aangele en die erf tensy hy verkies om steunmure te bou tot genoeg van en binne 'n tydperk wat die plaaslike owerheid bepaal.

Q. ONDERHEWIG aan die volgende voorwaardes soos vervat in Transportakte nr T18867/87 en T18868/87 opgelê deur die Nasionale Vervoerkommissie tydens die goedkeuring van die onderverdeling van die plaas Vyf-Brakke-Fonteinen nr 220 ingevolge die bepalings van Artikel 12 van Wet 54 van 1971 soos gewysig, naamlik:

- ~~a)~~ Die grond mag nie sonder die skriftelike goedkeuring van die Kommissie verder onderverdeel word nie.
- b) Tensy die Kommissie skriftelike goedkeuring tot die teendeel verleen mag die grond slegs vir bona-fide-boerderybedrywighede en gruisgroef doeleindes gebruik word en op die grond mag daar slegs daardie geboue of bouwerke opgerig word wat in direkte verband staan met bona fide-boerderybedrywighede en gruisgroef-bedrywighede op die grond.
- c) Geen winkel, ander besigheid of nywerheid van watter aard ookal mag op die grond gevestig of bedryf word sonder die kommissie se skriftelike goedkeuring nie.

- d) Met die uitsondering van bestaande bouwerke mag geen bouwerk of enigiets anders hoegenaamd sonder die skriftelike goedkeuring van die Kommissie binne 'n afstand van 60 meter, gemeet vanaf die nasionale padreserwegrens, opgerig word nie. Die gruisgroef moet op 'n afstand van ten minste 60 meter, gemeet vanaf die nasionale padreserwegrens, tot stand gebring word en geen skietwerk mag binne 'n afstand van 200 meter, gemeet vanaf die nasionale padreserwegrens, onderneem word nie.
- e) Geen direkte ingang tot of uitgang uit die nasionale pad word toegelaat nie. Ingang of uitgang moet gereël word in ooreenstemming met die betrokke provinsiale administrasie.
- f) Indien die grond of enige gedeelte daarvan met enige ander grond wat ook binne die boubepelingsgebied geleë is, gekonsolideer word, gaan bovermelde voorwaardes oor op die gekonsolideerde titel van die grond.

R. Kragtens Transportakte nr T16431/77 en T18868/87 is die restant van binnegemelde eiendom onderhewig aan 'n Notariale Akte no K871/87S waarkragtens 'n serwituut reg van weg 12 meters wyd, voorgestel deur die lyn d.e. op diagram LG no 2048/86 aangeheg by Transportakte T18867/88 ten gunste van Gedeelte 112 (ged van ged 47) van die plaas Vyf-Brakke-Fontein, groot 5,3754 ha daarby aangeheg. Soos meer volledig sal blyk uit gemelde Notariële Akte waarvan 'n afskrif hieraan geheg is.

S. Kragtens Transportakte nr T16431/77 en T18868/1987 is die binnegemelde eiendom onderhewig aan 'n Notariële Akte nr K 137197S waarkragtens 'n pyplynserwituut 6 meter wyd, wat voorgestel word deur die figure SPQRC, FGTU en KLMJ en die lyne ABC, DEF en GHJ die noordelike grense op serwituutkaart nr 2872/89 ten gunste van die Munisipaliteit van Mosselbaai, welke serwituutkaart aangeheg is by voormelde Notariële Akte. Soos meer volledig sal blyk uit gemelde Notariële Akte.

T. Kragtens Transportakte nr T16431/1977 en T18868/1987 is die binnegemelde eiendom onderhewig aan 'n Notariële Akte nr/K 138/97 S waarkragtens 'n pyplynserwituut 6 meter wyd, ten gunste van Moss gas (Eiendoms) Beperk, (reg nr 70/08130/07) die middellyn wat voorgestel word deur die lyn ABCDEFGHIJKLMNOPQRST op serwituutkaart nr 8413/91 welke serwituutkaart aangeheg is by voormelde Notariële Akte.

WESHALWE die Komparant afstand gedoen het van alle eiendoms- en ander regte wat die gesegde **TRANSPORTGEWER**

tot op hede op gemelde vaste eiendom gehad het en gevolglik ook erken het dat hul daarvan heeltemal onteien is, en geen eiendoms- en ander regte daarop besit nie; en dat, kragtens hierdie Akte, die gesegde

TRANSPORTNEMERS

Hul eksekuteurs, erfgename, administrateurs of gemagtigdes tans is en voortaan op die volle eiendomregte daarop geregtig sal wees, ooreenkomstig plaaslike gebruik, onder voorbehoud nogtans van die Regte van die Staat: en eindelijk erken het dat die koopsom R3 200 000,00 (Drie Miljoen Tweehonderdduisend Rand) bedra

TEN BEWYSE waarvan ek, die genoemde Registrateur van Aktes, tesame met die Komparant, q.q. hierdie Akte onderteken en met die Ampseël bekragtig het.

ALDUS GEDOEN en **GETEKEN** op die Kantoor van die Registrateur van Aktes, te Kaapstad op die 28 dag van die maand **JANUARIE** in die jaar van onse Heer Eenduisend Nege Honderd Sewe en Negentig (1997).



q.q. sy Prinsipaal/ale

IN MY TEENWOORDIGHEID,

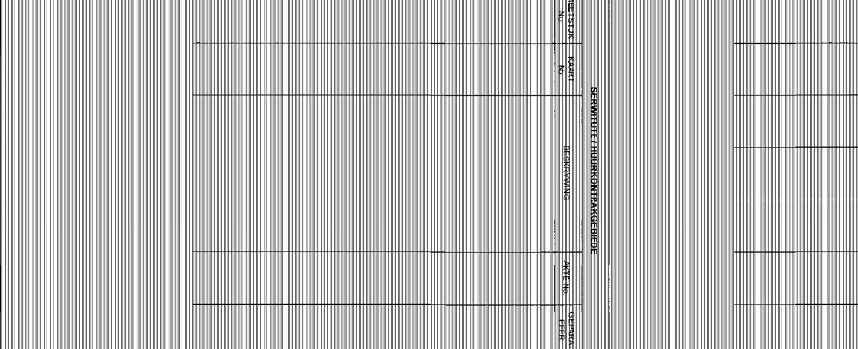


REGISTRATEUR VAN AKTES



ANNEXURE I:

*S.G. Diagram No. 2493/2014 (Portion 502 of
the Farm Vyf Brakke Fonteinen)*

[illegible][illegible]

ANNEXURE J:

S.G. Diagram (SG No 2864/2008)

SIDES Metres	ANGLES OF DIRECTION	CO-ORDINATES		SG No 2864/2008
		Y	System WG 23 ° X	
	Constants		+ 0.00	+ 3 700 000.00
A B	66.36	262 24 20	A + 82 760.90	+ 78 338.20
B C	45.71	17 35 10	B + 82 695.12	+ 78 329.43
C D	78.36	17 34 00	C + 82 708.93	+ 78 373.00
D E	59.73	14 35 00	D + 82 732.58	+ 78 447.71
E F	93.11	11 43 30	E + 82 747.62	+ 78 505.52
F G	301.16	9 58 10	F + 82 766.54	+ 78 596.69
G H	93.03	4 45 10	G + 82 818.68	+ 78 893.30
H J	31.31	4 43 40	H + 82 826.39	+ 78 986.01
J K	79.45	116 34 20	J + 82 828.97	+ 79 017.21
K L	40.92	188 27 40	K + 82 900.03	+ 78 981.67
L M	321.38	191 10 10	L + 82 894.01	+ 78 941.20
M N	88.72	190 10 50	M + 82 831.75	+ 78 625.91
N P	91.18	193 17 20	N + 82 816.07	+ 78 538.59
P A	116.77	197 02 10	P + 82 795.11	+ 78 449.85
Mos 33 (257) ▲			+ 84 300.56	+ 77 764.35
Harten Res (454) ▲			+ 84 300.56	+ 77 737.71

Approved

for Surveyor-General

Date: 22-8-2008

Sheet 1 of 3 Sheets

Approved in terms of
Act 7/1998

* Now

ERF 21282 Mossel Bay

The figure A B C D E F G H J K L M N P
represents 4.2345 Hectares of land, being

* PORTION 486 (a Portion of Portion 100) of the Farm Vyf-Brakke-Fonteinien No.220

Situate in the the Municipality and
Administrative District of Mossel Bay

Province of Western Cape

Surveyed in April - May 2008

by me

J.K. MUANDA (PLS 1165) Pr Land Surveyor

This diagram is annexed to

The original diagram is

SG File No: MosB 220. V.6

No

No.383/1863/2000

S.R. No: E.1330/2008

dated

annexed to Deed of Grant

Comps: ALNF-2341 (7061)

i.f.o.

Transfer No M.B.O. 2-37

ALNF-2311 (7088)

ALNF-2313 (7089)

Registrar of Deeds

Ded. Plan 383/1863 (Shts.1&3)

LPI 0510000

Farm 220/486 Mossel Bay

21282

S

EXEMPT FROM PROVISIONS OF ACT 70 OF 1970

SECTION 2(a)

EXEMPT FROM PROVISIONS OF CHAPTER III OF ORD. 15/1986

N256 Job No W4025 LAC No 00460

* Now

ERF 21282 Mossel Bay

Note

For Insets see sheet 3

SG No

2864/2008

Approved

[Signature]

for Surveyor-General

Date: 22-8-2008

Sheet 2 of 3 Sheets



General Plan 4418/1998
Wassenaar Way

Hartenbos Allotment Area
General Plan 5958/2002

Remainder

General Plan 1617/2004
Mossel Bay Allotment Area

Erf 16946 Mossel Bay
(Public Place)
GP No. 2061/2004

Farm Vyf-Brakke-Fontein No. 220

Scale 1/5000

Description of Beacons:

- A : Drill Hole in Concrete
- B, C, H, J : 12mm Round Iron Peg
- D, E, F, G : 25mm Round Iron Peg
- K, M, N, P : Iron Standard
- L : Wooden Fence Post

*

PORTION 486 (a Portion of Portion 109) of the Farm Vyf-Brakke-Fontein No.220

Administrative District of Mossel Bay

Province of Western Cape

Surveyed by me in April - May 2008

J.K. MUANDA (PLS 1165)
Pr Land Surveyor

Farm 220/486 Mossel Bay

21282

S

N256 Job No W4025 LAC No 00460

* NOW

ERF 21282 Mossel Bay

SG No

2864/2008

Approved

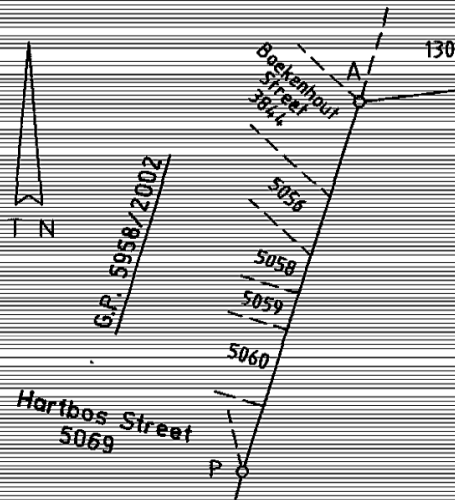
[Signature]

for Surveyor-General

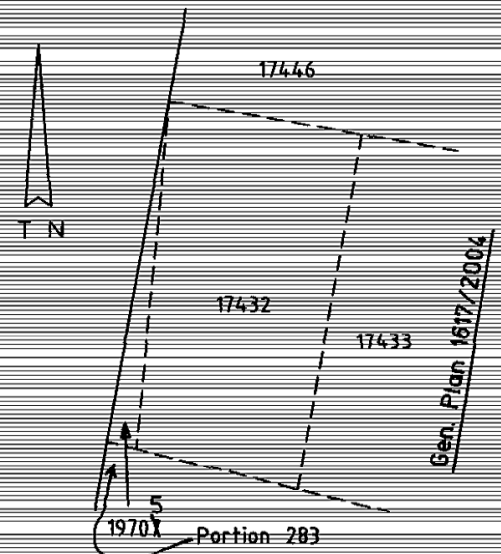
Date: 22-8-2008

Sheet 2 of 2 Sheets

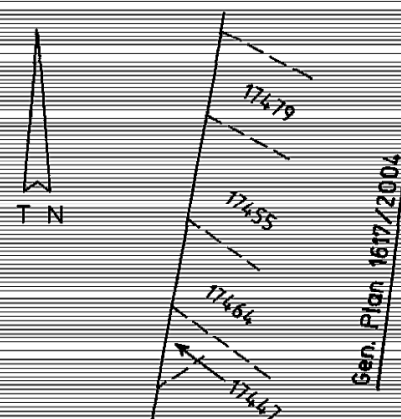
Inset 1 Not to Scale



Inset 3 Not to Scale



Inset 2 Not to Scale



PORTION 486 (a Portion of Portion 109) of the Farm Vyf-Brakke-Fontein No.220

Administrative District of Mossel Bay

Province of Western Cape

Surveyed by me in April - May 2008

J.K. MUANDA (PLS 1165)

Pr Land Surveyor

Farm 220/486 Mossel Bay

21282

S

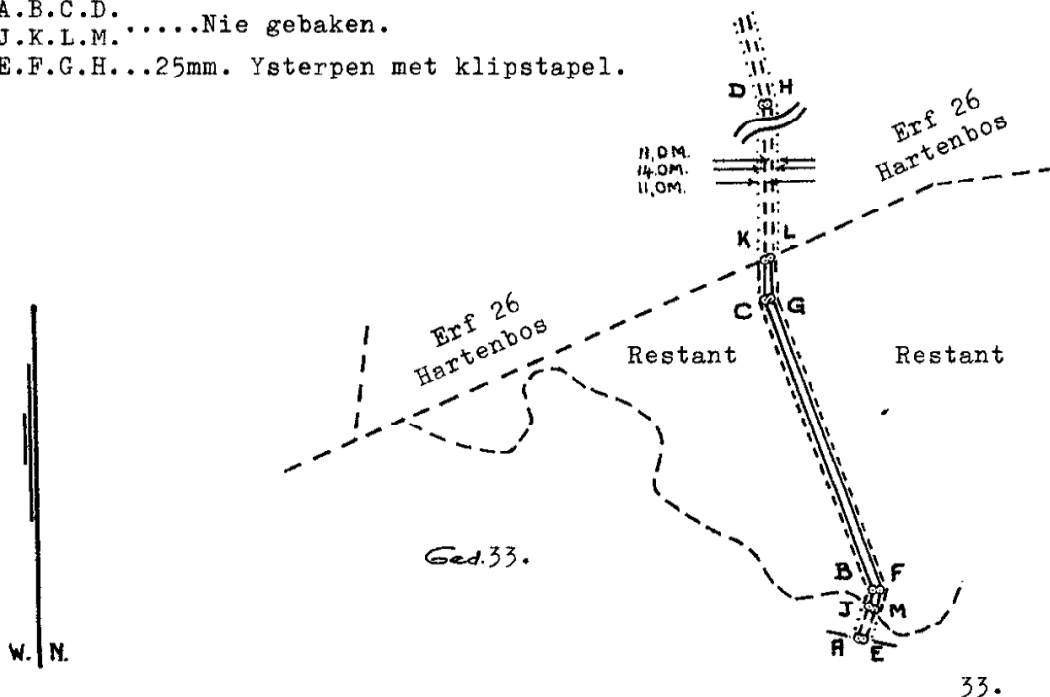
ANNEXURE K:

S.G. Diagram (L.G. No. 6726/1973)

SYE Meter		RIGTINGS -HOEKE	KOÖRDINATE Y Stelsel Lo 23° X			L.G. No.
		Konstante	0,0 + 5 700 000,0			1 672 673
AB	188,5	198.36.20"	A	+ 83 408,6	+ 79 754,9	Goedgekeur <i>W. P. van der Linde</i> Landmeter-generaal 20-9-1973
BC	1 149,0	160.55.20	B	+ 83 348,4	+ 79 576,3	
CD	2 653,1	180.15.18	C	+ 83 723,9	+ 78 490,4	
			D	+ 83 712,1	+ 75 837,3	
EF	191,2	198.36.20	E	+ 83 394,6	+ 79 757,4	
FG	1 151,3	160.55.20	F	+ 83 333,6	+ 79 576,2	
GH	2 651,9	180.15.18	G	+ 83 709,9	+ 78 488,1	
EA	14,2	100.02.00	H	+ 83 698,1	+ 75 836,2	
GC	14,2	80.35.20				
		Mos.33 (257)		+ 84 304,02	+ 77 468,40	
		Geo.26 (138)		+ 76 132,15	+ 64 801,94	

Bakens:

A.B.C.D.Nie gebaken.
J.K.L.M.Nie gebaken.
E.F.G.H...25mm. Ysterpen met klipstapel.



Skaal:1:25000

~~Die figuur lynes EF en FG~~ Die lynes JBCK en MFGL

stel ~~van~~ elk die hartlyn voor van 'n grond, synde

SERWITUUT VAN ELEKTRIESE KRAGLEIDING
oor Restant van die plaas VYFBRAKKEFONTEINEN 220.
geleë in

Mosselbaai.

Administratiewe Distrik
Provinsie Kaap die Goeie Hoop.

Opgemeet in Mei 1972.

deur my,

W. P. van der Linde
Landmeter

Hierdie kaart is geheg aan

A/S.
No. 1124/77
gedateer
t.g.v.

Die oorspronklike kaart is.

No. 383/1863 geheg aan
Transport/Grondbrief
No. M.B.Q. 2-37.

Lêer No. MOS.B. M.F.
M.S. No. E 2247/72

Komp. AL-ICAB (3590)
(M 277)

Registrateur van Aktes

B

S

ANNEXURE L:

S.G. Diagram (L.G. No. 1175/2000)

VAN DOORAE SKRIJF

Bakens :

Algemene Plan No. 4418/1998
← Erf 3845

Restant van

Nasionalepad Nr 220

Gedeelte 101

Serwituutgebied

VYF-BRAKKE-FONTEINEN No. 220

Serwituutnota:

Die krom lyn a b stel voor die middellyn van 'n Padsers wituut 7 meter wyd.
Sien Kaart 7815/1983.

Skaal 1: 4000.

Komp **ALNF-2341 (7061)**
 ALNF-2313 (7089)

GOEDGEKEUR KRAGTENS ART. 28

VAN ORD. 15/1988

VERWYSING TE/A220/7P(a)
HR 3845

2000-03-22

1175/00 SERVITUDE DGM.

ANNEXURE M:

Confirmation of Services



**MOSSSEL BAY MUNICIPALITY
MOSSELBAAI MUNISIPALITEIT
UMASIPALA MOSSSEL BAYI**

Tel, Imfonomfono: +27 (44) 606 5000
Fax, ifeksi: +27 (44) 606 5062
e-mail: admin@mosselbay.gov.za
web: www.mosselbay.gov.za

In antwoord verwys na nommer
In reply quote number
Xa Uphendula chaza Le Nombolo

15/4/19/4; 16/1/1; 16/4/1 E Louw
C 3252694

16 May 2018

V3 Consulting Engineers
PO Box 730
Mossel Bay
6500

**MOSSSEL BAY: PROPOSED HIGHLANDS RESIDENTIAL DEVELOPMENT: REMAINDER
OF FARM VYF BRAKKEFONTEIN NO. 220**

Your letter dated 26 October 2016, with reference number U18176, refers.

There is sufficient spare capacity at the Klein Brak river water treatment works to supply the proposed residential development of water.

The development will be allowed to connect to the proposed water connection points, subject to the following conditions:

- the proposed water connection points as indicated under paragraphs 3.2.1.1 and 3.2.1.2 of your letter must be analysed by GLS to determine if any upgrading of the existing water infrastructure would be required.
- The cost of the analysis and any possible upgrading of the water infrastructure will be for the developers account.

There is sufficient spare capacity at the Hartenbos waste water treatment works to receive the sewage that will be generated by the proposed residential development.

The development will be allowed to connect to the existing sewer pumpstation east of Wassenaar street, subject to the following conditions (see paragraph 3.3.2):

- The developer must appoint consulting engineers to determine if any upgrading of the sewer infrastructure would be required.
- The cost of any possible upgrading of the sewer infrastructure will be for the developers account.

Yours sincerely,

**S NAIDOO
DIRECTOR: TECHNICAL SERVICES**

ANNEXURE N:

*Civil Services: Bulk Water and Sewer Services
Report*



08 August 2018

V3 Consulting Engineers
PO Box 730
Mossel Bay
6500

Attention: Mr Danie Wessels

Dear Sir

**PROPOSED DEVELOPMENT ON REMAINDER OF VYF BRAKKENFONTEINEN NO 220:
BULK WATER AND SEWER SERVICES FOR HIGHLANDS ESTATE**

The request by Joa da Nova Investments (Pty) Ltd regarding comments on the existing water and sewer system and conceptual design of infrastructure required to accommodate the proposed development, refers.

This document should inter alia be read in conjunction with the following reports:

- "Mossel Bay Municipality Water Master Plan" dated April 2017.
- "Mossel Bay Municipality Sewer Master Plan" dated April 2017.

1. WATER DISTRIBUTION SYSTEM

1.1 Existing water distribution system

The proposed development is located at Vyf Brakkenfonteinen southeast of the Hartenboskop reservoir. The proposed development will be supplied from the existing 3500 kL Hartenboskop reservoir. The Hartenboskop reservoir (TWL = 137 m) is supplied via an existing booster pumping station located at the lower 9140 kL Hartenbos reservoir (TWL = 80 m). See Figure 1 attached.

1.2 Water demand

The annual average daily water demand (AADD) for the proposed development as well as the existing stands (fully occupied) in the Hartenboskop reservoir zone was calculated as follows:

• Hartenboskop zone fully occupied	=	499	kL/d
• Proposed development	=	140	kL/d
Total	=	639	kL/d

A fire flow criteria of 15 L/s is applicable.

GLS Consulting (Pty) Ltd

T +27 21 880 0388 | F +27 21 8800 389

13 Elektron Street, Techno Park, Stellenbosch, 7600 | PO Box 814, Stellenbosch, 7599, South Africa

Reg no: **2007/003039/07** | a member of the EOH Group of Companies

www.eoh.co.za | www.gls.co.za

Directors: A Bohbot, JW King, Z Mayet, BF Loubser, JJ Streicher and LC Geustyn

an **EOH** company

1.3 *Future water distribution system*

In the Water Master Plan it was proposed that the even for this development be supplied from the Hartenboskop reservoir via a gravity pipeline running through a higher lying development (see Figure 1 attached).

1.4 *Proposed water supply*

Reservoirs

The annual average daily water demand (AADD) for the Hartenboskop reservoir zone was calculated taking into consideration the existing stands (fully occupied), the proposed Highland Estate development and including all the proposed future developments in the reservoir supply area as listed in the 2017 Master plan.

The total future water demand, supplied as proposed from the Hartenboskop reservoir, was calculated as follows:

• Highland Estate development	=	140	kL/d
• Hartenboskop zone fully occupied	=	499	kL/d
• Other developments and rezoning	=	<u>830</u>	<u>kL/d</u>
Total	=	1469	kL/d

There is sufficient capacity in the existing 3 500 kℓ Hartenboskop reservoir to accommodate the proposed development including other future developments as stipulated in the Master Plan (Developments P01, P02, U04 and R05 in Brandwacht), to comply with a required 48 hours of AADD reservoir storage capacity.

Pumping stations

There is sufficient capacity at the existing Hartenbos Heuwels pumping station to meet the increased demand at the Hartenboskop reservoir, i.e. 50 L/s with two duty pumps and one standby. The pumping station duty point should however be verified?

Pipelines

If not yet implemented, a previously proposed parallel reinforcing 200 mm x 160 mm Ø supply pipeline at the Hartenbos Heuwels pumping station will be required.

Note: It should be noted that the route of the 250 mm Ø pipeline from Hartenboskop reservoir which runs through the proposed development (as indicated on Figure 1) could not be verified!

2. **SEWER SYSTEM**

2.1 *Existing sewer system*

The existing sewage at Seemeeu Park, south of the proposed development gravitates to the Seemeeu Park pump station from where it is pumped across the N2 freeway into the 500 mm Ø Voorbaai PS rising main. North of the proposed development at Minkenkop the sewage gravitates to the Minkenkop pump station from where it is pumped into the Cemetery pump station catchment. The Cemetery pumping station pumps the sewage into the 500 mm Ø Voorbaai PS rising main which pumps directly to the existing Hartenbos WWTP.

2.2 *Sewage flow*

The AADD for the future development was calculated as 140 kL/d. The peak day dry weather sewer flow (PDDWF) was calculated as 126 kL/d. The instantaneous peak dry weather flow (IPDWF) was calculated as 4 L/s and the instantaneous peak wet weather flow (IPWWF) was calculated as 5 L/s.

2.3 *Proposed sewer system*

Pipelines and pumping stations

A proposed new "Highlands" pumping station and rising main will be required to pump sewage from the development to the existing Minkenkop pumping station. The Minkenkop and subsequent Cemetery sewer pumping stations and rising mains have sufficient capacity to accommodate the additional sewage from the proposed development.

An alternative option is to discontinue the Minkenkop pumping station and gravitate the Minkenkop sewage to the proposed Highlands pumping station. A new gravity pipe from Minkenkop to the new Highlands pumping station will be required for this option. This option could reduce operational and maintenance requirements for the Municipality.

3. **COSTS IMPLICATIONS**

3.1 *Water*

The developer of the proposed development will be liable for the Bulk Service Levy (as calculated by the Mossel Bay Municipality) as a contribution towards water infrastructure.

3.2 *Sewerage*

The developer of the proposed development will be liable for the Bulk Service Levy (as calculated by the Mossel Bay Municipality) as a contribution towards sewer infrastructure.

3.3 *Total cost*

The cost of the internal water and sewer reticulation systems (not estimated in this study) will be for the developer's own account.

The cost of the required 200 m x 160 mm Ø pipeline could also (if not yet implemented) be for the developers own account.

We trust you find the above of value.

Yours sincerely

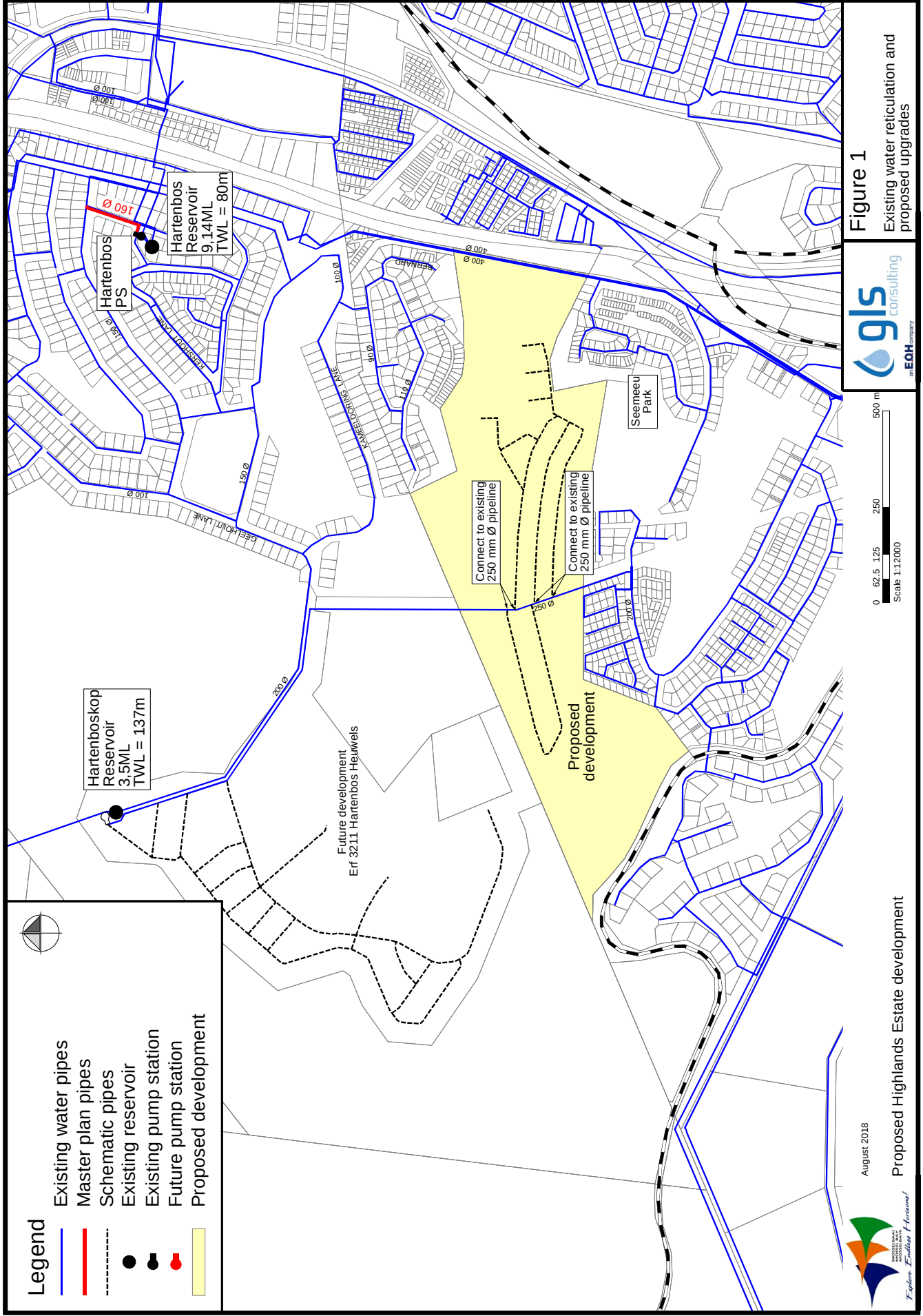
GLS Consulting (Pty) Ltd
REG. NO.: 2007/003039/07

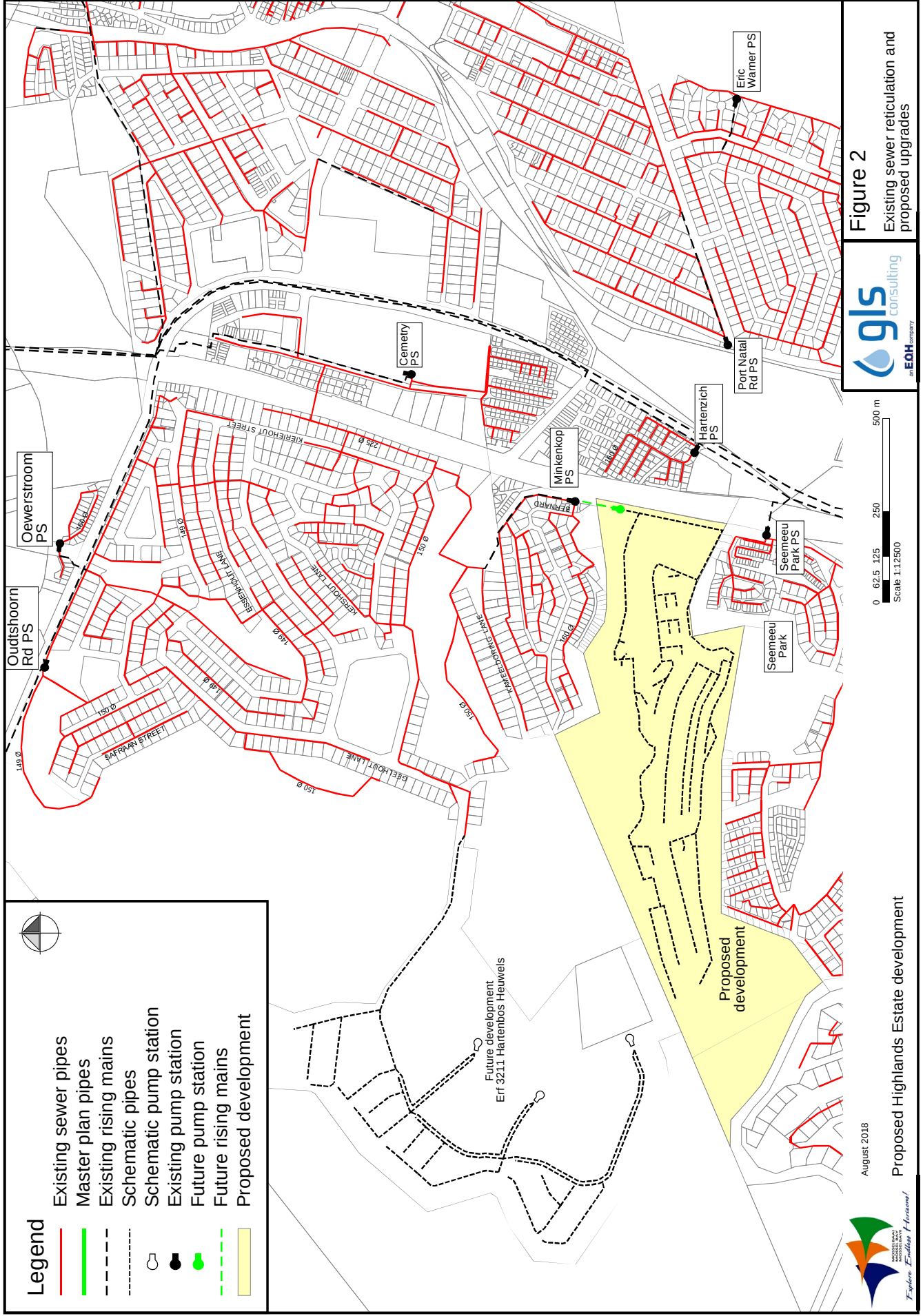


Per: JJ STREICHER

cc. The Manager: Civil Engineering Services
Mossel Bay Municipality
Private Bag X29
MOSSEL BAY
6500

Attention: Mr Eric Louw





ANNEXURE O:

Electrical Report

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**STELLENBOSCH
WOLHUTER ASSOCIATE**

TEL: (021) 880 2037
FAX: (021) 880 2530

PROPOSED NEW DEVELOPMENT:

**REMAINDER OF VYF BRAKKE FONTEINEN NO. 220
(RENOSTERBOS LANDGOED)**



ELECTRO TECHNICAL REPORT

Submitted by:
BDE Consulting Engineers

January 2018
Reference: GRG 164, Revision 0

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1. INTRODUCTION

This electrical engineering services report covers the external bulk electricity supply as well as the internal electrical distribution network to the proposed developments on Portion 220 of the remainder of the farm Vyf Brakke Fontein (Renosterbos Landgoed), Mossel Bay, Western Cape.

The proposed development consists of following, electrical units:

- Group housing units;
- Single residential unit (Red);
- Business unit (Blue);
- Pump station.

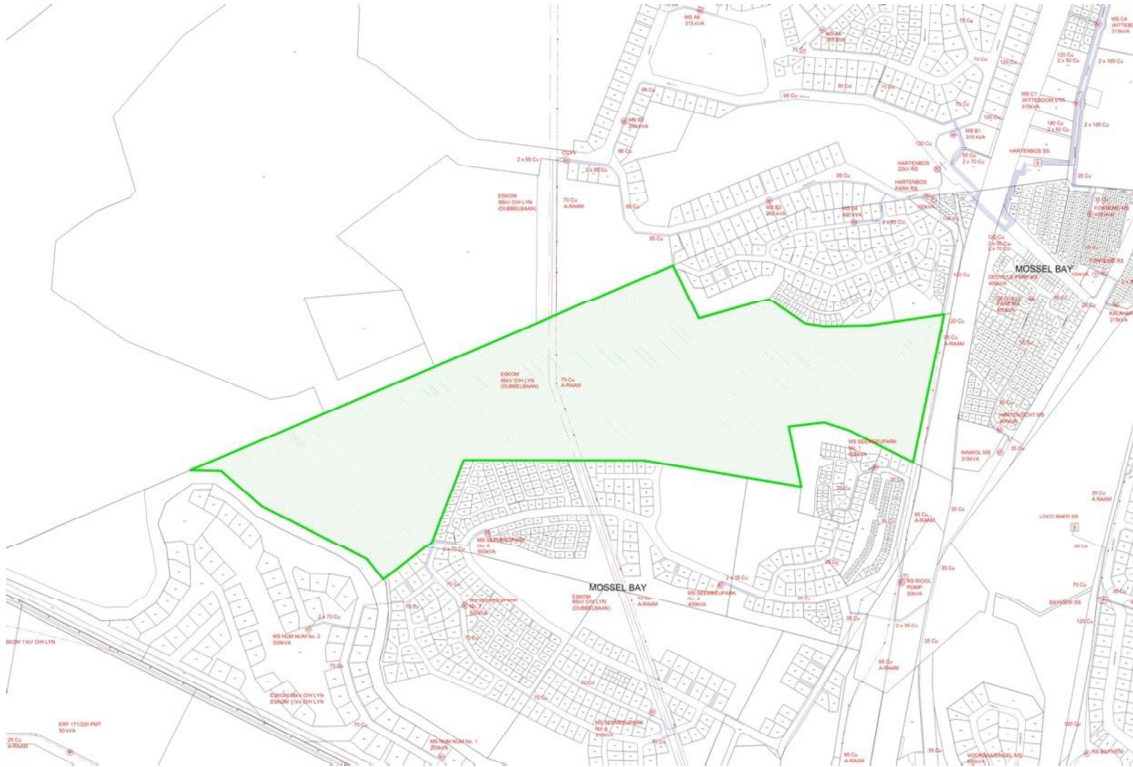


2. EXISTING INFRASTRUCTURE

The development is within the licensed electricity distribution area of Mossel Bay Municipality.

The property is crossed by an existing 11kV overhead power line with 70mm² Cu conductors.

The existing infrastructure is indicated in the electrical layout below:



3. AVAILABLE CAPACITY

Mossel Bay Municipality confirmed that adequate capacity is available for the development. Refer to the attached BDE information letter MOS 164 dated 1 August 2017 (Appendix A) and subsequent confirmation per email dated 22 Jan 2018 (Appendix B).

4. EXPECTED DEMAND

The expected load at substation level is summarised as follows:

DESCRIPTION	#	KVA/unit	KVA
Group Housing erven	223	2.5	557.5
General residential erf	1	3.5	3.5
Business erf	1	55	55
Pump station	1	10	10
Total KVA			626

5.3. Medium voltage network

The development will be supplied from a main 11kV power line crossing the unit via a standard 4-way ABB metering unit.

The medium voltage network will consist of an 11kV ring cable system through the development that supplies mini-substations.

The miniature substations will be strategically positioned within the development to optimise electrical distribution and to eliminate possible damage due to truck and other vehicle movement.

5.4. Low voltage network

The low voltage distribution system will be supplied from the 11/0.4 kV miniature substation via underground low voltage cables supplying strategically positioned distribution kiosks.

The supply cables to the distribution kiosks will be protected with optimally designed feeder circuit breakers housed inside the mini-substations.

Single phase service connections to individual stands will be done with underground cable from the mentioned distribution kiosks ending 1-meter x 1-meter inside each stand and/or at a connection box on an external of buildings, as applicable.

5.5. Street lighting

The installation, consumption, operation and maintenance of streetlights shall be the responsibility of the home owners' association.

Luminaires will be of the low level, low glare type.

Mercury vapour, high pressure sodium or incandescent lights shall not be considered. Energy efficient LED type luminaires will be utilised.

6. ENVIRONMENTAL IMPACT

6.1. Impact on existing electricity consumers

The development will have a minimal effect on the quality of supply to the existing customers due to the fact that the development will be supplied directly from an 11kV network, which will have adequate capacity.

6.2. Impact on the operating costs

The development will have no negative effect on the electrical operating costs of the Municipality, due to the fact that the complete electrical infrastructure required for the

development will be supplied and installed by the Developer. Maintenance on the proposed electrical network will be minimal due to the proposed underground distribution network that will be provided. Electricity sales to the development will in actual fact contribute to the profits made by the electricity service of the Municipality.

The entire internal electrical distribution network will be carefully designed to blend in with the development as well as the natural environment as a whole. All structures, equipment and switchgear will be low profile following natural contours.

The colours and shapes of all structures, equipment and switchgear, will be selected carefully to blend in with the environment.

Services will generally be located within the road reserves to prevent additional disturbance of vegetation.

The environmental management plan for the development will form an integral part of the specification and requirements for the electrical construction work.

7. ENERGY EFFICIENCY AND RENEWABLE ENERGY

The use of cost effective alternative energy sources, such as gas and solar will be considered as well as the installation of energy efficient installations as required by the National Building regulations.

8. CONCLUSION

Adequate capacity exists at the point of supply to accommodate the development.

The development will be included into the proposed masterplan extension of the distribution network in the area.

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Our Ref. / Ons verw: **MOS164**
From / Van: **Danie de Vries**

Date /Datum: **1 Aug 2017**
Cell/ Sel: **082 822 3389**

Appendix A

Attention: Mr Petrus Harmse [pharmse@mosselbay.gov.za]
Mr Charles Geldenhuys [cgeldenhuys@mosselbay.gov.za]

RE: VYF BRAKKEN FONTEINEN (HIGHLANDS ESTATE): BULK ELECTRICITY SUPPLY

With reference to our meeting held on 21 July 2017 in the office of Mr Naidoo.

Application to revise the attached layout will be done by Marike Vreken. Town Planners. However, the expected maximum demand will be less than the 1,1 MVA indicated. Formal bulk supply application will be done when the revised layout is approved by the Municipality.

The following decisions taken at the meeting are confirmed:

1. The development will be supplied from the existing 70mm² Cu Conductor A-frame overhead power line crossing the development;
2. A standard 4-way (2x circuit breakers and 2x isolators) will be installed as bulk metering unit. Refer to the attached brochure;
3. The internal consumption metering will be done by the HOA;
4. The internal design will be the responsibility of the Consulting Engineer.

It is proposed to connect the metering unit to the power line as depicted on the attached BDE drawing MOS164/RT/MV/01. More details of the combined dropout fuse/surge-arrester are attached.

Your commentary will be appreciated

Please contact us if more information or clarification is required.

Kind regards



D. de Vries Pr.Eng.
On behalf of: **BDE** CONSULTING ENGINEERS

Copy: Mr Leo-Heyns Nel [leo.h.nel@gmail.com]

Direkteure / Directors:

(Reg No. 2004/033886/07)
DJ de Vries Pr Eng, B Eng, GOV CERT, SAIEE; B Samson Pr. Eng



Danie de Vries

From: Harmse, Petrus <pharmse@mosselbay.gov.za>
Sent: Monday, January 22, 2018 9:28 AM
To: devries@bdeconsult.co.za
Cc: Kevin Grunewald; Geldenhuys, Charles; Van Zyl, Ryan
Subject: 3 -RE: MOS164: RE: HIGHLANDS ESTATE: ELEKTRISITEIT

Appendix B

Goeie more Danie.

Alles wat mooi is vir 2018.

Die aansluiting vanaf die oorhoofse lyn bly dieselfde en die ontwikkeling moet nog steeds in grootmaat gemeet word.

Groete



Petrus Harmse

Manager (Planning & Customer Services - Electrical)
Mossel Bay Municipality / Mosselbaai Munisipaliteit
101 Marsh Str, Mossel Bay / Marshstr 101, Mosselbaai
Email/E-pos: pharmse@mosselbay.gov.za
Web: www.mosselbay.gov.za
Tel: +27 44 606-5084

Print this email only if necessary. Go Green / Druk hierdie e-pos net as dit noodsaaklik is. Gaan Groen.

From: Danie de Vries [mailto:devries@bdeconsult.co.za]
Sent: 18 January 2018 10:04 AM
To: Harmse, Petrus <pharmse@mosselbay.gov.za>
Cc: Kevin Grunewald <kevin@bdeconsult.co.za>
Subject: MOS164: RE: HIGHLANDS ESTATE: ELEKTRISITEIT

Goeiemore Petrus, geseende 2018 vir jou en jou familie.

Die uitleg vir Highlands is intussen verander, sien aangeheg.
Die verwagte las is nou heelwat kleiner:

Load at switching sub level			
DESCRIPTION	#	KVA/unit	KVA
Group Housing erven	223	2.5	557.5
General residential erf	1	3.5	3.5

Business erf	1	55	55
Pump station	1	10	10
Total KVA			626

BDE is besig met die tegniese verslag, maar wil graag die volgende bevestig.

1. Neem aan die aansluiting by die oorhoofse lyn bly dieselfde?
2. Gaan die ontwikkeling steeds in grootmaat gemeet word?

Ek stuur die tegniese verslag sodra dit voltooi is.

Regards / Groete

Danie de Vries Pr.Eng. (ECSA 870447)

BDE Consulting Engineers / Raadgewende Ingenieurs

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From: Harmse, Petrus [<mailto:pharmse@mosselbay.gov.za>]

Sent: Tuesday, July 25, 2017 12:58 PM

To: devries@bdeconsult.co.za

Subject: 2 -RE: HIGHLANDS ESTATE: ELEKTRISITEIT

Hallo Danie

Dit is wel 'n 11kV lyn. Ek is tevrede met die ABB eenheid.

Groete



Petrus Harmse

Manager (Planning & Customer Services - Electrical)

Mossel Bay Municipality / Mosselbaai Munisipaliteit

101 Marsh Str, Mossel Bay / Marshstr 101, Mosselbaai

Email/E-pos: pharmse@mosselbay.gov.za

Web: www.mosselbay.gov.za

Tel: +27 44 606-5084

Print this email only if necessary. Go Green / Druk hierdie e-pos net as dit noodsaaklik is. Gaan Groen.

From: Danie de Vries [<mailto:devries@bdeconsult.co.za>]

Sent: 25 July 2017 09:06 AM

To: Harmse, Petrus <pharmse@mosselbay.gov.za>

Cc: Kevin Grunewald <kevin@bdeconsult.co.za>; Wicus Smit <wicus.smit@bdeconsult.co.za>

Subject: RE: HIGHLANDS ESTATE: ELEKTRISITEIT

Hi Petrus,

Ek wil net seker maak, die oorhoofse lyn waar ons gaan koppel met die grootmaatmeterings eenheid, is dit 11kV? Ek hou van die aangehegte meteringseenheid, dit kan ook 2x stroombrekers en 2x isolators huisves, sal jul tevrede wees daarmee?

Regards / Groete

Danie de Vries Pr.Eng. (ECSA 870447)

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From: Danie de Vries [<mailto:devries@bdeconsult.co.za>]

Sent: Friday, July 14, 2017 8:49 AM

To: Petrus Harmse (pharmse@mosselbay.gov.za) <pharmse@mosselbay.gov.za>

Cc: Kevin Grunewald (kevin@bdeconsult.co.za) <kevin@bdeconsult.co.za>

Subject: RE: HIGHLANDS ESTATE: ELEKTRISITEIT

Goeiemore Petrus, vertrou dit gaan goed,

BDE is in die proses om die tegniese items vir die aangehegte voorgestelde ontwikkeling af te handel.

Sien die voorgestelde hoogspanning uitleg.

Daar word nagenoeg 1000kVA benodig vir die ontwikkeling:

Augmentation Calculation	QTY units	kVA/unit	kVA total
Single Residential units	155.00	4.50	697.50
Appartments	26.00	4.50	117.00
Frail Care - residential	55.00	4.50	247.50
Frail Care - Centre			40.00
Total Load Requirement (kVA)			1 102.00
Augmentation Cost (R/kVA)			5 409.65
Total Augmentation Payable			5 961 433.33

Die kapitaalbydrae het seker intussen verander.

Petrus, sal jy asb kan bevestig of ons steeds so kan voortgaan met die uitleg?

Ons is besig om 'n vergadering met Mr Naidoo te reël vir volgende week om die Energie loodsprojek te bespreek.

Ons kan die aangehegte ook daar bespreek, as jy dit so nodig vind?

Regards / Groete

Danie de Vries Pr.Eng. (ECSA 870447)

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ANNEXURE P:

Stormwater Masterplan

Enquiries : D.V. WESSELS
Our ref. : 10301000
Your ref. :
File ref. : U20925
Date : 08 MAY 2018

SHARLPES
Att: John Sharples

HIGHLANDS ESTATE: FARM VYF BRAKKE FONTEINEN 220: STORMWATER MASTERPLAN

1. The following drawings have reference and are attached.

<u>Drawing no.</u>	<u>Description</u>
10301000-400(B)	Roads and Stormwater
10301000-403	Stormwater Catchment areas and run-off data
Typical Drawing	Gabion outlets / stormwater inlets

2. Stormwater Plan

- 2.1) As is standard practice, a stormwater masterplan will be handed in to the controlling bodies for approval **before any construction work will be allowed**. This is part of the conditions of the existing Municipal approval of the project.

It should be noted that for this development the 1:50 year and 1:100 year flood is not applicable and all development falls outside.

- 2.2) The stormwater plan will be based on the following (See drawing 10301000-400B attached):

- 2.2.1) Detailed run-off calculations based on catchment areas to be indicated on a drawing. Up to 1:5 year flood to be handled in channels and/or underground pipes. Stormwater runoff from the roads will be channeled along road kerbs to catch pits from where it will be piped to the outlet structures as indicated in a controlled manner through energy dissipating structures. Final positions of the outlet structures will be confirmed on site.

The dimensions of the typical outlet structure will be adjusted according to the run-off.

See typical detail attached.

Bigger floods to run on the surface as is standard.

- 2.2.2) Due to the nature of the development it is not expected that screening and/or treatment of the run-off will be necessary.

- 2.2.3) The stormwater network will consist of 450 mm concrete pipes. Pipe trench widths required by SANS 1200 is 900 mm. Trench depths will be determined by the topography but will be between 1,0 to 3,0 m deep.



The pre-development and post-development stormwater run-offs for the 1:5 year flood are indicated on the attached preliminary drawing 10301000-403.

The design philosophy is based on the principle to keep the post-development volumes as close as possible to the pre-development run-offs.

2.2.4) Other management systems that will be considered in the final design stage are as follows:

2.2.4.1) Rainwater harvesting from roofwater to supplement water use on site.

2.2.4.2) The use of small detention ponds at the outlet structure. This will slow down the stormwater before subsequent release downstream.

2.2.4.3) Where possible swales can be utilized to manage run-off, specifically in road reserves.

2.2.4.4) Soakaways where ground conditions permit. This can only be determined when the geotechnical study is done in the future.

3) **Construction stage**

To prevent soil erosion and possible pollution as a result of storm water runoff during the construction stage, erosion control methods such as silt fences and silt traps, energy breakers in the form of logs secured with stakes, brush-packing and mulching and re-seeding need to be considered. It will be the responsibility of the Developer to ensure Contractors apply erosion control measures throughout the period of risk and that the works are protected from damage that may be caused through runoff of rainwater.





V3 CONSULTING
ENGINEERS



Example of soil erosion protection by means of silt fences and logs

Detail of such requirements as well as demarcating of sensitive areas, environmental awareness training of construction personnel, possible restrictions of certain construction activities, accommodation of staff on site, access to the site, site camps and offices, fire prevention measures, dust control, noise control and alien vegetation clearing, etc. will be addressed in the Construction Environmental Management Plan after the project has been approved.

Yours faithfully

D.V. Wessels Pr.Eng
Technical Director-Infrastructure
V3 Consulting Engineers (Pty)Ltd.

ANNEXURE Q:

Geotechnical Report

GEOTECHNICAL REPORT

PROPOSED NEW RESIDENTIAL DEVELOPMENT ON PORTION 502 OF VYF BRAKKE FONTEIN 220, MOSSEL BAY

8 October 2018

Revision 0



Prepared by:

**OUTENIQUA GEOTECHNICAL SERVICES
18 CLYDE ST
KNYSNA
6570**



Prepared for:

**JOA DA NOVA (PTY) LTD
C/O MARIKE VREKEN TOWN PLANNERS
21 TROTTER ST
KNYSNA**

Ref No: 2018\Marike Vreken\Ptn 502 Vyf Brakke Fontien 220 Mossel Bay\Report\Geotechnical
Report 8.10.2018 Rev0

Report review history:

Revision No	Date	Prepared by:	Reviewed by:
0	8.10.2018	I.Paton Pr.Sci.Nat BSc Hons MEng	S Ngema BSc Geology
			

Authors qualifications and affiliations:

Iain Paton holds a Bachelor's degree with Honours in Geology and a Master's degree in Geotechnical Engineering and is a professionally registered engineering geologist with over 20 years' experience in the mining, energy and construction industries. Iain Paton is a registered with the South African Council for Natural and Scientific Professions (Pr Sci Nat # 400236/07), the South African Institute of Engineering and Environmental Geologists (SAIEG), the Geotechnical Division of the South African Institute of Civil Engineering (SAICE) and the Institute of Municipal Engineering of South Africa (IMESA).

Declaration of independence:

The author of this report is independent professional consultant with no vested interest in the project, other than remuneration for work associated with the compilation of this report.

General limitations:

1. The investigation has been conducted in accordance with generally accepted engineering practice, and the opinions and conclusions expressed in the report are made in good faith based on the information at hand at the time of the investigation.
2. The contents of this report are valid as of the date of preparation. However, changes in the condition of the site can occur over time as a result of either natural processes or human activity. In addition, advancements in the practice of geotechnical engineering and changes in applicable practice codes may affect the validity of this report. Consequently, this report should not be relied upon after an elapsed period of one year without a review by this firm for verification of validity. This warranty is in lieu of all other warranties, either expressed or implied.
3. Unless otherwise stated, the investigation did not include any specialist studies, including but not limited to the evaluation or assessment of any potential environmental hazards or groundwater contamination that may be present.
4. The investigation is conducted within the constraints of the budget and time and therefore limited information was available. Although the confidence in the information is reasonably high, some variation in the geotechnical conditions should be expected during and after construction. The nature and extent of variations across the site may not become evident until construction. If variations then become apparent this could affect the proposed project, and it may be necessary to re-evaluate recommendations in this report. Therefore, it is recommended that Outeniqua Geotechnical Services is retained to provide specialist geotechnical engineering services during construction in order to observe compliance with the design concepts, specifications and recommendations and to allow design changes in the event that subsurface conditions differ from those anticipated prior to the start of construction. Any significant deviation from the expected geotechnical conditions should be brought to the author's attention for further investigation.
5. The assessment and interpretation of the geotechnical information and the design of structures and services and the management of risk is the responsibility of the appointed engineer.

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List of Appendices

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Appendix 2 – Soil profiles

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Appendix 4 – DCP test results

1. Introduction

1.1 Background information

A new residential development is proposed on Portion 502 of Vyf Brakke Fontein 220, in the Mossel Bay District of the Western Cape (see **Figure 1** for locality map). The proposed development includes single and group residential structures, access roads and civil services.

The developers appointed Outeniqua Geotechnical Services through the town planner, Marike Vreken, to conduct a broad-scope geotechnical investigation of the site for the engineering design of structures and services.



Figure 1: Locality map

1.2 Scope of work

The proposed scope of work for the investigation was accepted as follows:

- Review all available geotechnical information on the area;
- Conduct a walk-over survey of the area to assess the terrain and any apparent geotechnical risks;
- Conduct subsurface investigations at 15 positions across the development footprint (the site), by way of shallow test pits excavated with a TLB to max 2.5m deep, to determine the geology and soil conditions;

- Profile and photograph test pits by a qualified engineering geologist and sample soil types for testing;
- Conduct insitu and lab tests as per the schedule below;
- Analyse the geotechnical data and prepare a detailed report containing all relevant information gained from the investigation with recommendations for the design of foundations for structures and civil services.

1.3 Available information

The following maps & plans were available for consultation:

- 1:250 000 Geological map of the area, obtained from the Council for Geoscience;
- 1:50 000 Geological map of the area, obtained from the Council for Geoscience;
- 1:1000000 Seismic Hazard map of South Africa, obtained from the Council for Geoscience;
- Topo-cadastral data for the area, obtained from the National Geospatial Institute (NGI).
- Aerial photos of the area, obtained from the NGI and Google Earth.
- No architectural concept plans of the proposed structures was available at the time of the investigation.

2. Site description

The site is located adjacent and to the west of the suburban residential area of Hartenbos, north of Mossel Bay, and is easily accessible from the tarred road along the eastern boundary (Wassenaar St). The topography of the site is characterised by a gently sloping ridge with moderate to steep side slopes, which drain to the south, west and north into the surrounding natural watercourses (see **Figures 2-3**). The proposed development footprint is concentrated along the gently sloping ridgeline and there are several gravel access tracks across this part of the site. An Eskom powerline servitude bisects the site into a western and eastern half. The vegetation cover consists of Groot Brak Dune Strandveld which is dominated by small spiny shrubs. The site is also infested with alien Acacia species (see **Figures 4-5**).

3. Methods of investigation

An initial site walk-over of the site was conducted to assess the site terrain, topographic features and any obvious geotechnical issues. This was followed by a subsurface investigation consisting of fifteen test pits, that were concentrated over the proposed development footprint area, using a TLB/Backactor in order to gather geotechnical information regarding the nature of the soil conditions (soil types, moisture levels, etc.). The soil profiles and photographs of the test pits are included in **Appendix 2** of this report.

Representative samples of different soil types were collected from test pits for Foundation Indicator tests and Mod/CBR/Indicator tests. The tests were performed at a SANAS-Accredited laboratory (Outeniqua Lab), in accordance with the TMH1 and ASTM methods. Details of the tests are included in **Appendix 3** of this report.

In situ dynamic cone penetrometer (DCP) tests were conducted at each test pit position from NGL to a depth of ~2m or shallower refusal. Details of the tests are included in **Appendix 4** of this report.

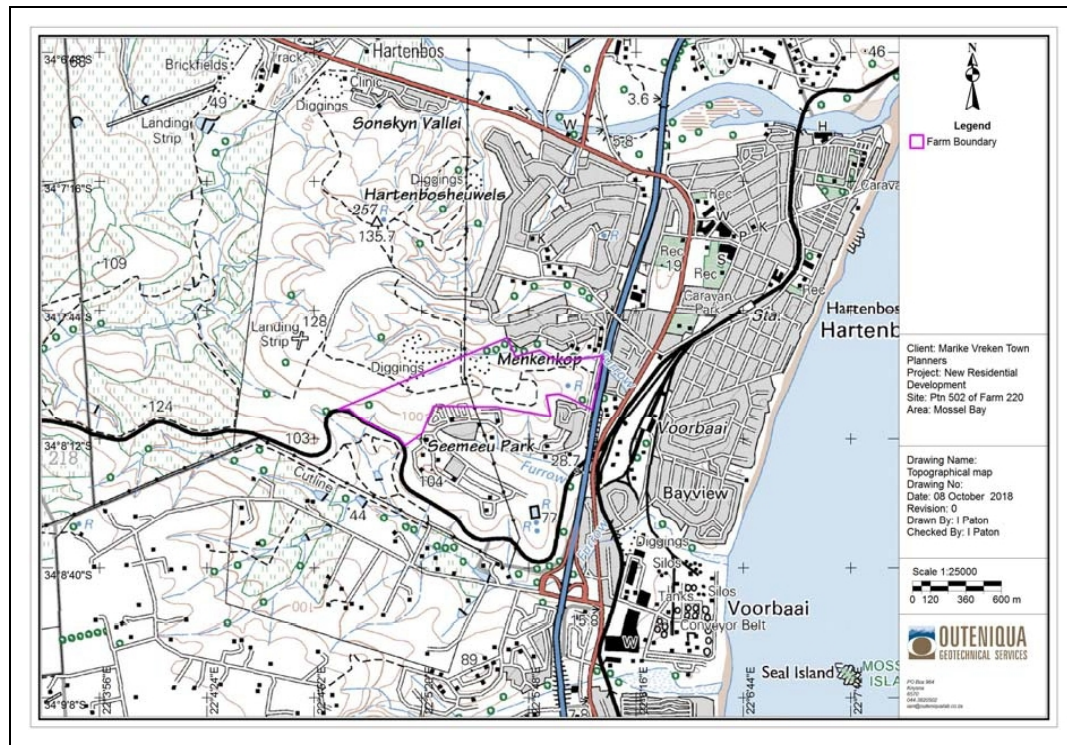


Figure 2: Topographic map

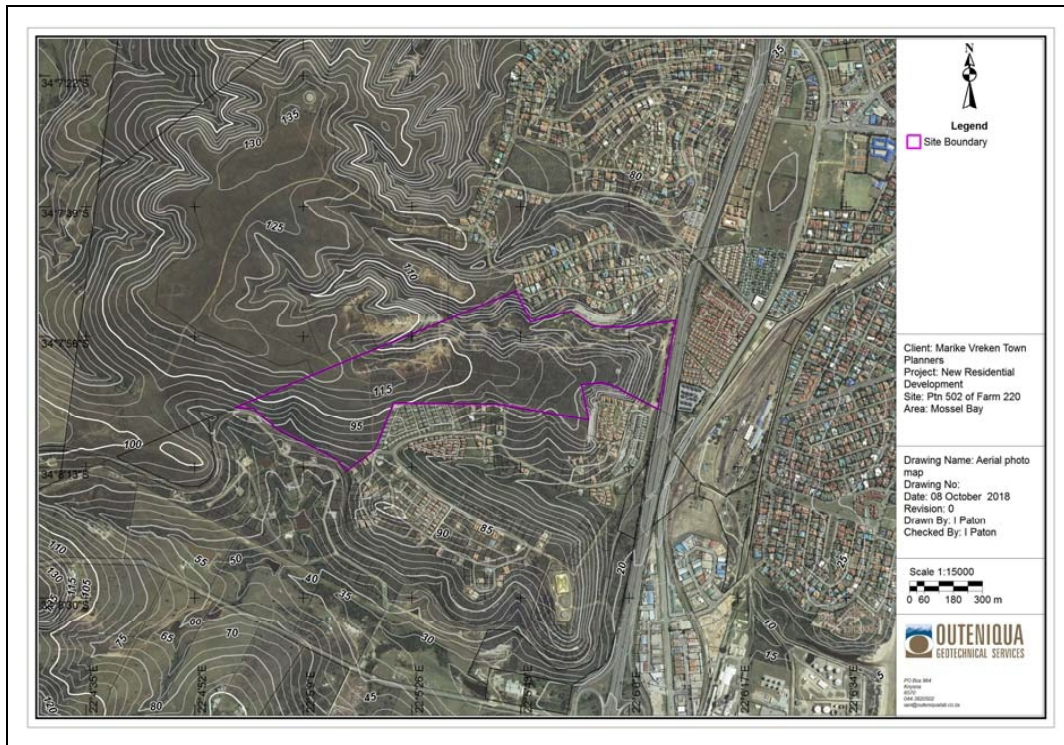


Figure 3: Aerial photo map



Figure 4: View along the ridge to the west



Figure 5: View of the slopes along the northern side of the site

4. Results of the site investigation

4.1 Regional geology

The 1:50000 geological map indicates that the site is underlain by conglomerate of the Buffelskloof Formation which overlies mudstone of the Kirkwood Formation (see **Figures 6&7**). These Cretaceous-age formations rest unconformably on significantly older, quartzite and sandstone bedrock of the Table Mountain Group, which occurs to the south of the site, near the town of Mossel Bay. The risk of seismic activity in the area is very low and the geology is generally suitable for urban development, although the Kirkwood Formation is known to present significant geotechnical challenges.

4.2 Local soil and rock types

The soil profiles recorded in test pits (refer to **Fig 8**) are dominated by residual slightly clayey or silty sandy gravel with rounded pebbles, cobbles and small boulders, which is derived from the insitu weathering of conglomerate of the Buffelskloof Formation. A summary of the soil types and thicknesses is given in **Table 1**. No hard bedrock formation was encountered in any test pits, but several of the test pits refused at shallow depth on very dense conglomerate or on medium sized boulders (up to 0.5m diameter). The general soil profile is quite consistent between test positions, but some variation was noted in the texture and thickness of individual horizons, and some silty/sandy lenses were noted between conglomerate gravel horizons. The soil is typically dense to very dense, but the upper 0.6m of the profile (i.e. the colluvial topsoil horizon) is typically loose and highly compressible. Visual observations indicate negligible clay activity in the profile. None of the test positions encountered the underlying mudrock of the Kirkwood Formation, and this does not occur near surface anywhere on the proposed development area. The soil types will generally be classified under the Unified Soil Classification (USC) system as:

- SM or SC – Silty or clayey sands;
- ML or CL – Silts and/or clays of low plasticity;
- GM, GC or GP – Silty, clayey or poorly graded gravels.

Table 1: Soil types and thicknesses (in mm)

Test pos. No.	Imported (fill) soil	Transported soil	Residual soil	Rock	Total depth of test pit	Refusal
TP1	400	-	4500	-	5000	None
TP2	-	500	3000	-	3500	None
TP3	-	2000	1000	-	3000	None
TP4	-	700	800	-	1500	Partial/Boulders
TP5	-	500	1500	-	2000	Partial/Boulders
TP6	-	500	1800	-	2300	None
TP7	-	700	1300	-	2000	Partial/Boulders
TP8	-	500	1100	-	1600	Partial/Boulders
TP9	-	700	1400	-	2100	Partial/Boulders
TP10	-	800	2000	-	2800	Partial/Boulders
TP11	-	700	2000	-	2700	None
TP12	-	700	2500	-	3200	None
TP13	-	-	1500	-	1500	Partial/Boulders
TP14	-	600	100	-	700	Partial/Boulders
TP15	-	150	850	-	1000	Partial/Boulders

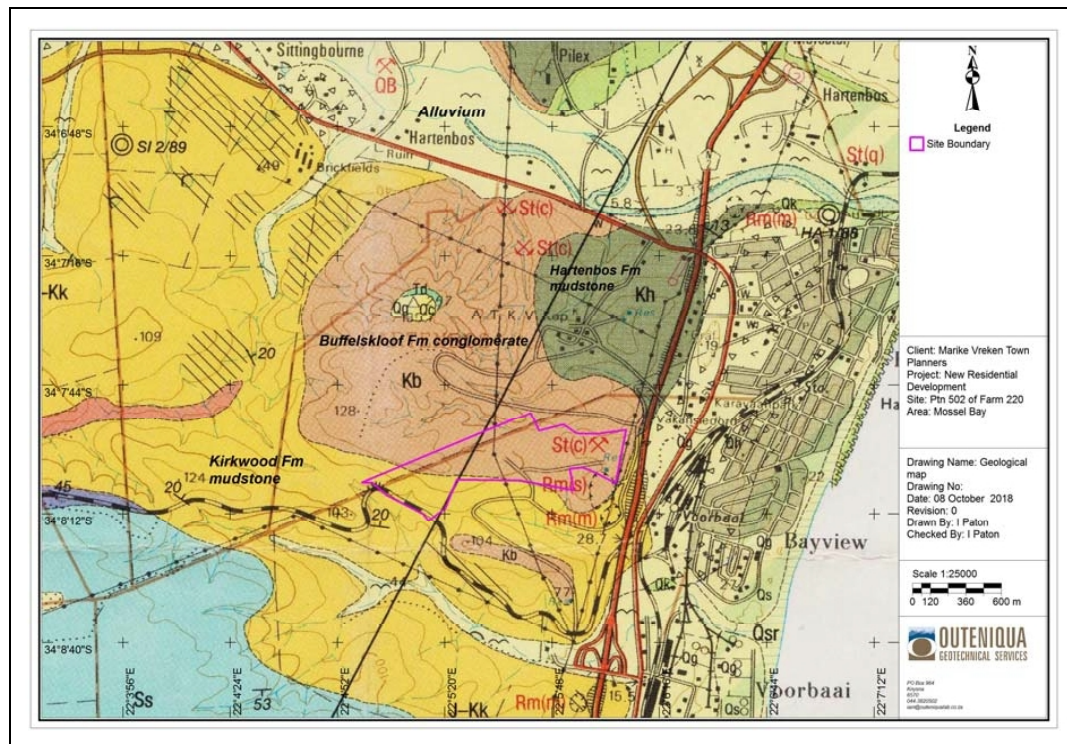


Figure 6: Geological map of site



Figure 7: Exposure near the site of the Buffelskloof Formation conglomerate with channelised sandstone lenses

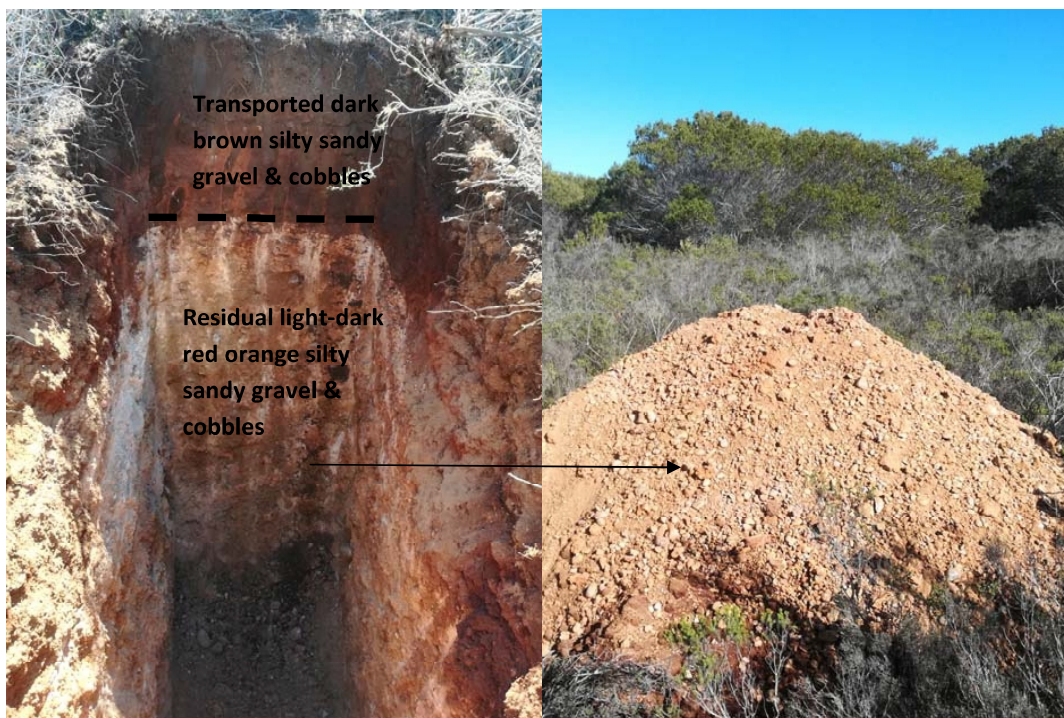


Figure 8: Photo of the general soil profile exposed in test pits

4.3 Laboratory tests

Representative samples of various insitu soil types were collected for Foundation

Indicator tests to determine the particle size distribution (grading) and Atterberg limits. The results of the Foundation Indicator tests are shown in **Table 2**.

Table 2: Summary of Foundation Indicator test results

Test Pit No	Sample Depth (mm)	Atterberg Limits			Particle Analysis (%)				MC*	PE**	USC***
		PI	LL	LS	Clay	Silt	Sand	Gravel			
TP1	400-5000	6	19	3	5	3	18	74	4,6	LOW	GP
TP3	2000-3000	NP	NP	0	13	16	32	39	2,7	LOW	GM
TP5	500-2000	14	36	7	6	10	26	58	4,9	LOW	GC
TP9	700-2100	16	34	3,8	2	3	12	83	3,8	LOW	GP-GC
TP10	800-2800	17	38	8,5	3	2	10	85	4,5	LOW	GP
TP11	700-2200	11	36	6	37	8	53	2	13,4	LOW	SM
TP12	0-700	13	30	6,5	12	6	27	55	9,9	LOW	GC
TP13	0-1500	4	17	2	5	3	25	67	2,6	LOW	GP
TP14	0-600	13	27	6,5	6	2	16	76	4,8	LOW	GP-GC
TP15	150-600	16	29	8	10	4	13	73	4,8	LOW	GC

* Insitu Moisture Content ** Potential Expansiveness *** Unified Soil Classification

The lab results confirm the dominance of gravel-sized particles and generally low PI, indicating a low potential expansiveness. Low moisture contents were also noted in most of the tests.

Representative samples of soil were also collected for Mod/CBR/Indicator tests to determine the subgrade potential for pavement design and as selected material for filling under floors. The results of the tests are summarised in **Table 3**.

Table 3: Summary of Mod/CBR/Indicator test results

Test Pit No	Sample Depth (mm)	CBR at					Swell %	PI %	GM	MDD / OMC	TRH14 Class
		100	98	95	93	90					
TP2	500-4000	119	62	23	12	5	0,0	SP	2,08	2190/4,8	G6
TP5	500-2000	38	22	10	6	3	0,4	14	2,45	1980/12,1	G9
TP11	700-2200	3	2	1	1	1	3,4	11	1,80	1860/13,0	G10
TP14	0-600	22	20	18	16	15	0,0	12	2,63	2243/5,7	G7

The test results indicate that the gravelly soils are quite variable from G6 to G9 quality natural construction materials in terms of TRH14 (assume G9) and may serve as lower selected subgrade materials in road design. Gravel material may also be used as general bulk fill material on platforms and under concrete surface beds (not final selected layer). Some contamination from silty lenses (as depicted in test results from TP11 – G10) may dilute the potential of the dominant gravel material, but this is likely to be very localised

and not a major problem. Further recommendations are given in **Chapter 6**.

No oedometer or shear-box tests were conducted, mainly due to the friable and coarse-grained granular nature of the soil.

4.4 Insitu tests

Most DCP tests refused on dense gravel/cobbles and the tests indicate that the soil consistency below a depth of 0.8m is dense to very dense with penetration rate not exceeding 15mm/blow. Good bearing capacity is expected from the soils on this site.

5. Geotechnical assessment

5.1 Terrain mapping

The site is broadly mapped into different geotechnical terrains according to the expected soil movements and other dominant geotechnical characteristics and constraints. An assessment of the constraints is discussed in the following chapters. The mapping is presented in **Figure 9** and the characteristics of each terrain is given in **Table 4**.



Figure 9: Geotechnical map of site

Table 4: Characteristics of geotechnical terrains

<i>Terrain unit</i>	<i>Geotechnical Constraint</i>	<i>Soil Class</i>	<i>Total expected heave (mm)</i>	<i>Total expected settlement (mm)</i>
Terrain 1*	Compressible and/or collapsible soils	C1		<10
	Steep slopes			
Terrain 2	Compressible and/or collapsible soils	C1		<10
	Gentle to moderate slopes			
Terrain 3	Compressible and/or collapsible soils	C1		<10
	Uncontrolled fill	P		
	Seepage/marshy areas	P		
Terrain 4	Dam	P		

*unexplored – not included in proposed development area

5.2 Bearing capacity and settlement

Observations made during the test pitting and analysis of DCP tests indicates that the consistency of the insitu soil over most of the site at normal shallow founding levels of ~0.8m is typically dense with good bearing capacity, which will improve with depth (i.e. a stiffening profile). The insitu soil will have adequate bearing capacity at normal soil moisture contents for the intended single/double storey structures and settlement is unlikely to be a problem if the trenches are well compacted and site drainage is adequate to prevent excessive ingress into foundation soils, which can cause softening and settlement under high moisture conditions. Heaps of uncontrolled fill (mainly soil ex-insitu, but some localised rubble, max 2m high) were noted in Terrain 3 (see **Figure 10**), which will have no safe bearing capacity. Other potential bearing capacity or settlement issues in Terrain 3 include localised seasonal shallow soil seepage, which may affect stability of foundations. The constraints in Terrains 3 and 4 may not preclude the development of this area, but rather mitigating steps need to be taken, and recommendations are given in **Chapter 6**.

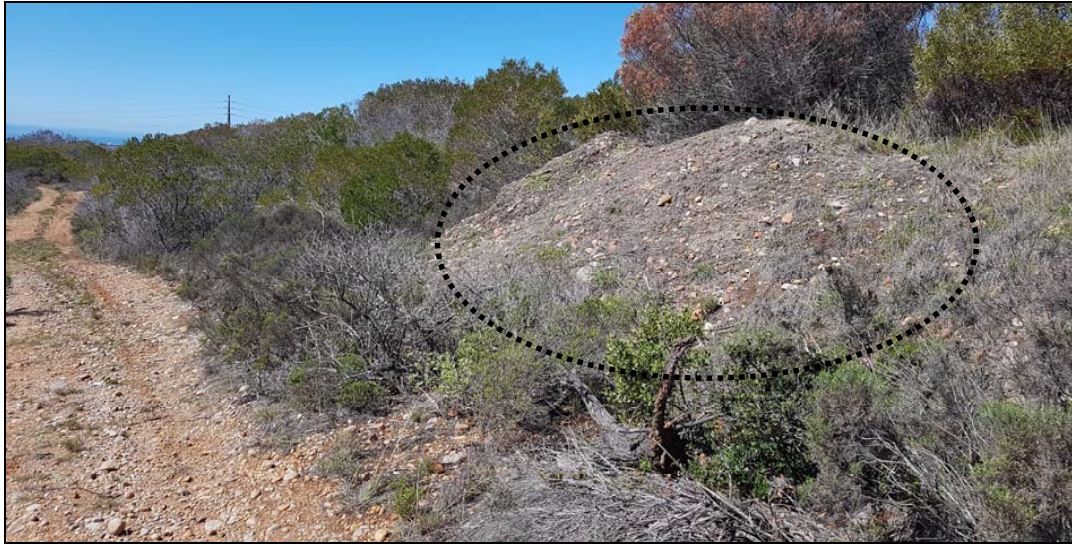


Figure 10: Heaps of uncontrolled fill in Terrain 3

5.3 Heave

Observations in test pits, knowledge of the local geology and examination of laboratory results indicate that no significant heave is expected from the conglomeratic soils of the Buffelskloof Formation, which underlies the entire proposed development area.

5.4 Groundwater and site drainage

No groundwater was encountered in test pits, but shallow soil seepage was noted in Terrain 3 at the interface between surficial colluvial soils and the underlying residual very dense conglomerate, due to reduction in vertical permeability. The seepage emanates from the gentle slopes in this area (see **Figure 11**) during periods of wet weather. The seepage in this area may be a result of the historical diggings, which have removed most of the loose soil cover, exposing the underlying very dense/cemented conglomerate, which will tend to act as an aquiclude. Elsewhere, the soil cover generally has a medium to low permeability and will accept a small amount of stormwater before run-off occurs.

Stormwater will tend to collect in excavations and localised depressions, such as the small dam in Terrain 4 (see **Figure 12**).



Figure 11: Seepage from slopes in Terrain 3



Figure 12: Small dam in Terrain 4

5.5 Slopes

The proposed development footprint has been planned according to the site contours and the areas of steep slopes (generally steeper than 1:4) have been purposefully avoided.

These areas are mapped as Terrain 1 and were excluded from the subsurface investigations but are most likely underlain by the same conglomerate as the rest of the site, as this material is visible on surface of the slopes all over the site. Slopes underlain by residual gravel/ conglomerate are generally stable, even at fairly steep angles, as the gravel has a fairly high friction angle (estimated at 38-45°). Refer to **Figure 7**. No global slope instability is anticipated on natural slopes, as there is no sign of any previous slope failures in this formation. Significant slope failures have occurred in the nearby area in the underlying mudstone of the Kirkwood Formation, but has always occurred where the natural slopes have been tampered with, causing an unfavourable imbalance in internal forces. However, this formation is not expected within the influence zone of the proposed development area. The steep cliffs on the southeastern edge of the site (overlooking Tuscan Village – See **Figures 13a & 13b**) have remained in a state of global stability since the old quarry was abandoned in the 1990's, and there have been no reported incidents of large scale failures from these slopes, so the risk of future problems is considered low, even with the surcharge load of a double storey house near the crest. The main reason for this stability is the well cemented nature of the conglomerate which was mined in the old quarry below the site (now the site of Tuscan Village). This lithification of the individual particles provides a significant cohesive shear strength to the rock mass, allowing it to remain stable at vertical angles. A similar example occurring in nature are the conglomerate cliffs that overlook the N2 road in Knysna along the lagoon's edge.



Figure 13a: Steep slopes on the SE side of the site (overlooking Tuscan Village) – south facing perspective



Figure 13b: Steep cliffs on the SE side of the site (overlooking Tuscan Village) – north-facing perspective

5.6 Excavations

Intermediate/boulder excavations in terms of SABS1200D may be encountered in localised areas of the site, and the excavation classification is presented in **Table 5**. Excavation sidewalls are expected to be marginally stable at steep angles but should be battered to a safe temporary slope angle of 45°.

Table 5: Excavation classifications

<i>Class</i>	<i>Average depth zone m</i>	<i>Plant required</i>
Soft	0-1.5m	TLB/D6 dozer
Intermediate/boulders	>1.5m	30t excavator/D9 dozer
Hard	Not expected	

5.7 Risk assessment

A summary of geotechnical constraints that potentially may affect the development of the site is tabulated in **Table 6**.

Table 6: Assessment of potential geotechnical risks

Geotechnical Constraint	Effect on the proposed development	Risk level	Comment
Collapsible and/or compressible soil	Soil horizons with a potentially collapsible and/or compressible fabric which may affect stability of foundations	Low-Medium	Gravelly soils are potentially compressible and/or collapsible and will require compaction to mitigate settlement.
Differential settlement	Foundations placed in different soil types or rock may settle differentially.	Low-Medium	Horizontal and vertical variation in soil type/density is expected. Uniform compaction is important.
Bearing capacity	Foundations placed on soils with low bearing capacity will display unsuitable settlement.	Low	Bearing capacity should not pose a problem if soils are adequately compacted
Groundwater	Seepage, permanent or perched water tables affecting excavations.	Low-medium	Localised shallow seepage will only occur during wet weather periods.
Active soil	Heaving clays affecting foundation stability	Low	No active clay expected with 5m of surface
Excavations	Boulders or rock affecting excavations	Low-medium	Intermediate/boulder excavations expected at average depth of 1.5m
	Unstable excavations requiring shoring	Low	Temp. excavations are generally stable at $\leq 45^\circ$. Precautions must be taken for excavations deeper than 1.5m for safety reasons.
Slope stability	Geological instability causing damage to structures founded on slopes	Low	Steep natural slopes only in Terrain 1, which is not included in proposed development area. Man-made slopes above Tuscan Village are generally stable and are unlikely to affect the proposed development of the site.
	Soil creep or erosion by storm water	Low	Erosion unlikely to pose a significant threat but contractors should monitor erosion from site.
Flood potential	Low lying areas affected by poor drainage.	Low-medium	Site is generally well drained, but there are some localised small areas where site drainage is poor (e.g. Terrain 4)
Unconsolidated fill	Uncontrolled fill material affecting foundations	Low-medium	Significant uncontrolled fill encountered in Terrain 3, which requires removal/treatment
Sources of construction material	Distance to sources of construction material affecting costs	Low	Nothing better than G7 consistently expected from site, but commercial sources of better material are readily available in the area.

6. Recommendations

The design of foundations and services lies within the consulting engineer's responsibility and the following recommendations are based on limited information gained from the site investigation and although the confidence in the information is high, some variations can occur between information points. All geotechnical information must be confirmed during the design and construction process and any significant variations are to be brought to the attention of the authors for comment or further recommendations. It is recommended that the structural engineer discuss his/her conceptual design with the geotechnical specialist to ensure that any calculations and recommendations are in line with current information.

6.1 Earthworks and civils

The site investigation indicates that the proposed development area is gently to

moderately sloping and some earthworks or terracing may be required to access roads and level construction platforms for houses. The design of any internal access roads and stormwater drainage services should take into account the natural contours of the site. Bulk earthworks and cut-to-fill platforms should be designed and supervised by the civil engineer. Any unsuitable material exposed during earthworks, such as rubbish, rubble or organic matter, should be cut from the footprint of structures and carted to spoil or used for landscaping, if suitable. All bulk fill material should be adequately benched into the insitu to prevent sliding. Permanent cut/fill slopes exceeding 1v:2h should be retained with adequate measures, such as gravity walls, which should be designed and supervised by the civil engineer. The presence of uncontrolled fill material, mainly in Terrain 3, requires attention from the civil engineer and should ideally be removed or treated on site (selected for recompaction). Similarly, the presence of shallow groundwater seepage and a localised small dam in this area will require attention in the design and construction of access roads, platforms and services.

The insitu soils are dominated by gravels and cobbles which will be unsuitable for bedding and blanket materials for pipe cradles, as per SABS1200LB, and this material should be imported crusher run or river sand and meet the specifications for selected granular materials. The pipe designer can assume a soil bearing capacity of 150kPa at a depth of 1m for thrust blocks.

In terms of pavement design, the designer should assume that the insitu subgrade is suitable as a lower selected subgrade layer (assume G9), but this can be modified by the engineer if better materials are encountered at the time of construction. The recommended preliminary road layerworks are given in **Table 7**. The design of roads should be done in accordance with TRH4.

Table 7: Pavement design recommendations

Layer	Material	Thickness	Required Compaction
Pavers*	Cement interlock paving on 25mm sand bedding	60 / 80 mm	25 / 35 MPa
Subbase	Imported G5/C4	150mm	95% Mod AASHTO
USSG	Imported G7 gravel	150mm	93% Mod AASHTO
LSSG	Insitu G9	300mm	90% Mod AASHTO
OR			
Seal	13.2mm Cape Seal or HMA	40mm – tbd by engineer	
Base course	Imported G2/G4	150mm	98% Mod AASHTO
Subbase	Imported G5/C4	150mm	95% Mod AASHTO
USSG	Imported G7 gravel	150mm	93% Mod AASHTO
LSSG	Insitu G9	300mm	90% Mod AASHTO

6.2 Structural foundations

The site is underlain by potentially compressible and collapsible soils, although bearing capacity is generally good, and the expected settlements are unlikely to be excessive (max 10mm) and should not have a major impact on the design of foundations, and therefore conventional modified foundation systems are anticipated. The recommended foundation type for the proposed single and/or double storey structures is reinforced concrete strip foundations on dense insitu gravel soils at a nominal depth of 0.8m below

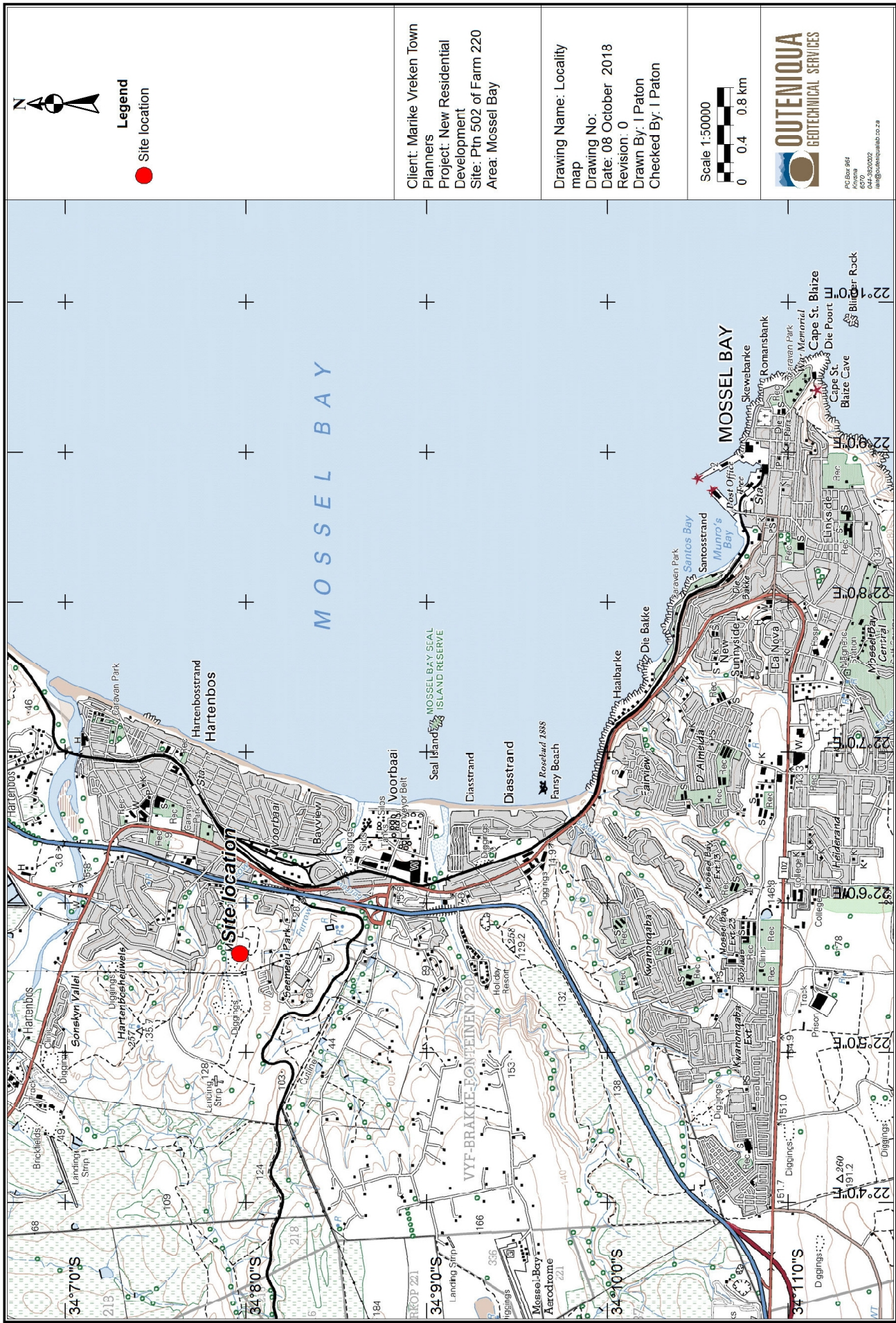
ground level (NGL or final platform level). Bearing pressures should be limited to max 150kPa to minimise settlement. Heavier structures will require deeper strip/pad foundations, or light raft foundations with lower bearing pressures. Compaction of foundation trenches with trench rammers is recommended as a precaution to identify soft spots and reduce settlement potential. Raft foundations can also be considered on engineered platforms on sloping sites, which will negate the need to take foundations through excessively deep fill material onto the insitu. Filled platforms must obviously be controlled by the engineer, i.e. placement and compaction of fill must be supervised and approved. It is recommended that structures are not placed within 20m of the crest of very steep slopes on the SE side of the site (refer to **Figure 13**).

7. Conclusions

The proposed development area of site is generally suitable as intended in terms of the geology and soil conditions, but there are some moderate geotechnical constraints which will require consideration by the civil and structural engineers. Some precautionary measures are recommended for the design of earthworks and foundations in order to cater for the expected soil conditions and potential soil movements. The recommendations are generally considered standard practice and should not significantly affect project feasibility. Quality control testing and site supervision by the engineer is essential to ensure that the engineer's specifications are adhered to by the contractor.

Appendix 1

Maps





Legend

● Site location

Client: Marike Vreken Town
Planners
Project: New Residential
Development
Site: Ptn 502 of Farm 220
Area: Mossel Bay

Drawing Name: Locality
map
Drawing No:
Date: 08 October 2018
Revision: 0
Drawn By: I Paton
Checked By: I Paton

Scale 1:50000



0 0.4 0.8 km



OUTENIQUA
GEOTECHNICAL SERVICES

PO Box 946
Kroonstad
3140
Tel: 056 431 2323
Email: info@outeniqua.co.za



Legend
□ Site Boundary

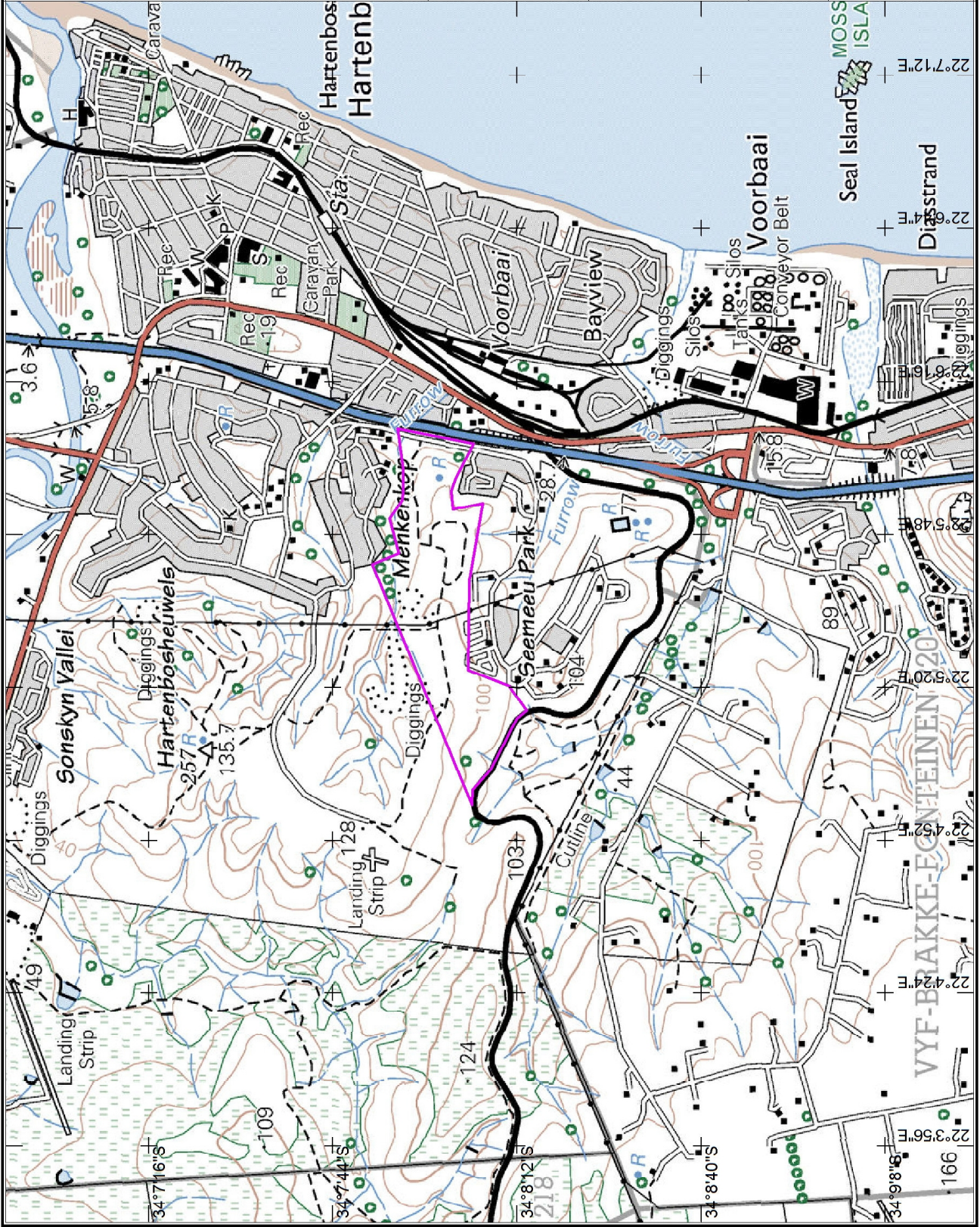
Client: Marike Vreken Town
Planners
Project: New Residential
Development
Site: Ptn 502 of Farm 220
Area: Mossel Bay

Drawing Name:
Topographical map
Drawing No:
Date: 08 October 2018
Revision: 0
Drawn By: I Paton
Checked By: I Paton

Scale 1:25000
0 120 360 600 m



PO Box 948
Kroonstad
6070
South Africa
info@outeniqua.co.za





Legend

Topo vector

River

Site Boundary



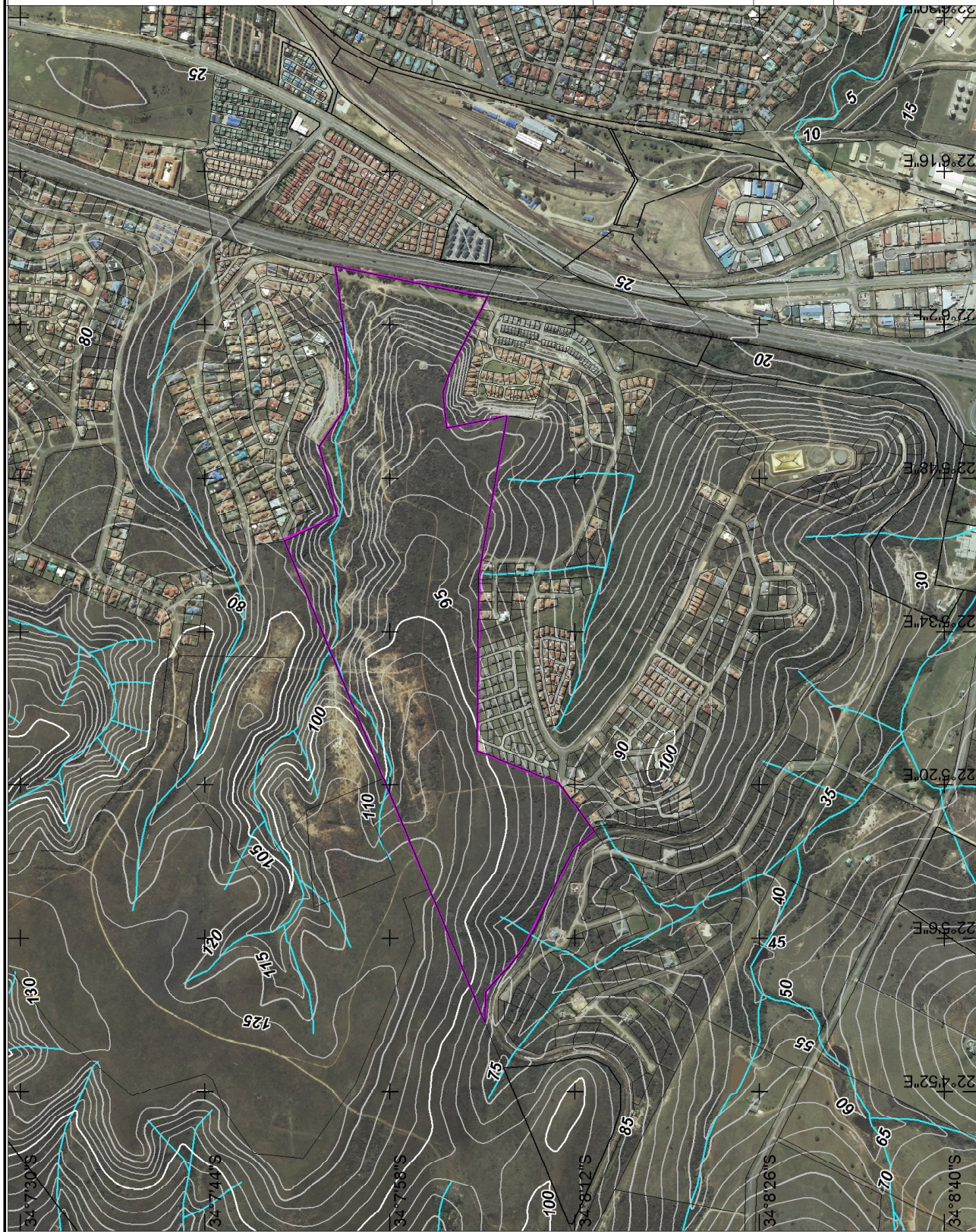
Client: Marike Vreken Town
Planners
Project: New Residential
Development
Site: Ptn 502 of Farm 220
Area: Mossel Bay

Drawing Name: Aerial photo
map
Drawing No:
Date: 08 October 2018
Revision: 0
Drawn By: I Paton
Checked By: I Paton

Scale 1:12500



Pt 502 of Farm 220
Kroonstad
6070
South Africa
info@outeniqua.co.za





Legend
□ Site Boundary

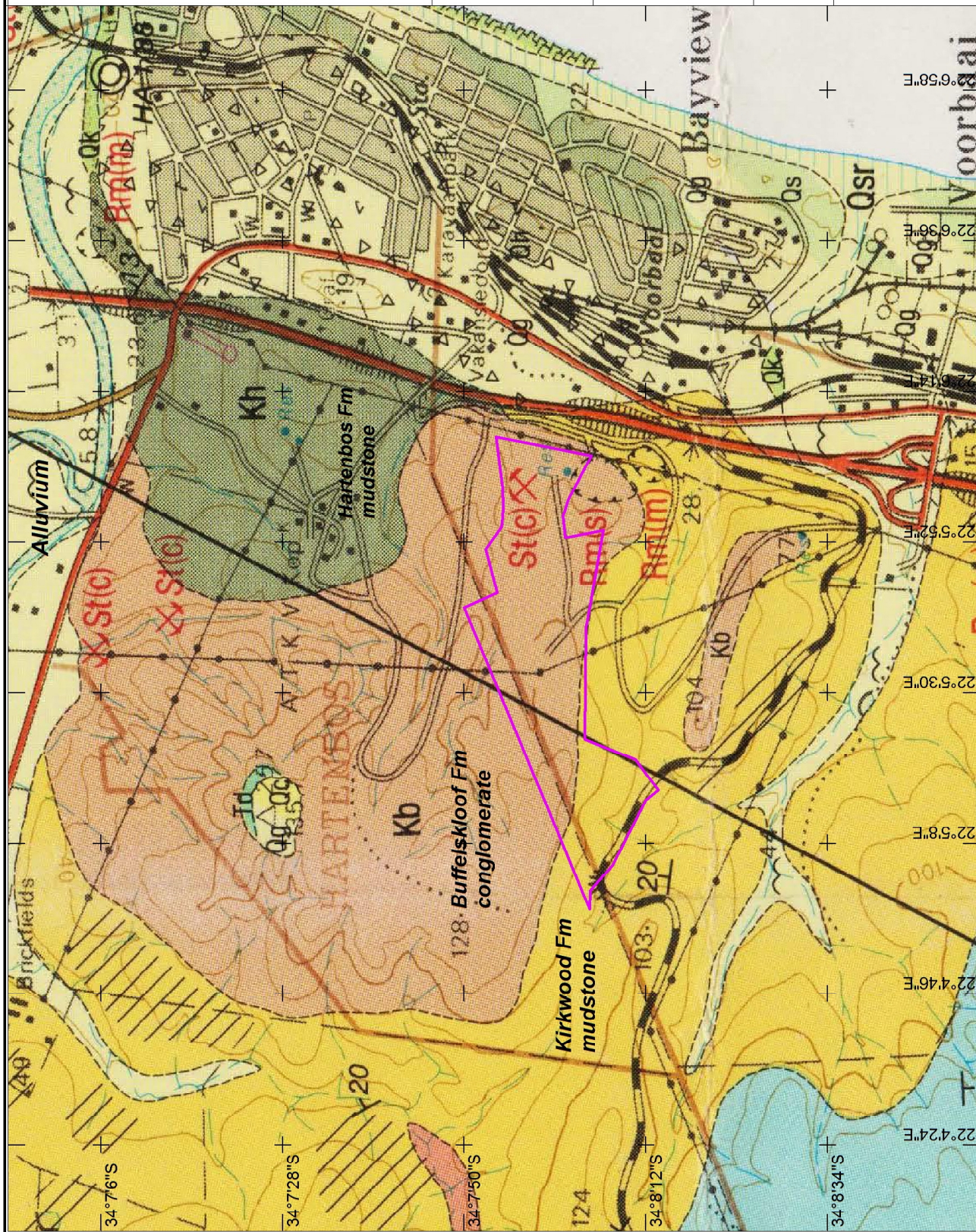
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Planners
Project: New Residential
Development
Site: Ptn 502 of Farm 220
Area: Mossel Bay

Drawing Name: Geological
map
Drawing No:
Date: 08 October 2018
Revision: 0
Drawn By: I Paton
Checked By: I Paton

Scale 1:20000
0 100 300 500 m



PG 000 001
Krynene
6070
08 23 2018
outeniqua@outeniqua.co.za





Legend

Site Boundary

Test Positions

Geotechnical terrains

Terrain 1 -

Unexplored/steep slopes

Terrain 2 -

Gentle/moderate slopes

Compressible/collapsible soils (C1)

Terrain 3 - Diggings, uncontrolled fill,

shallow seepage (P)

Terrain 4 - Dam

Client: Marike Vreken Town

Planners

Project: New Residential

Development

Site: Ptn 502 of Farm 220

Area: Mossel Bay

Drawing Name:

Geotechnical map

Drawing No:

Date: 08 October 2018

Revision: 0

Drawn By: I Paton

Checked By: I Paton

Scale 1:7500



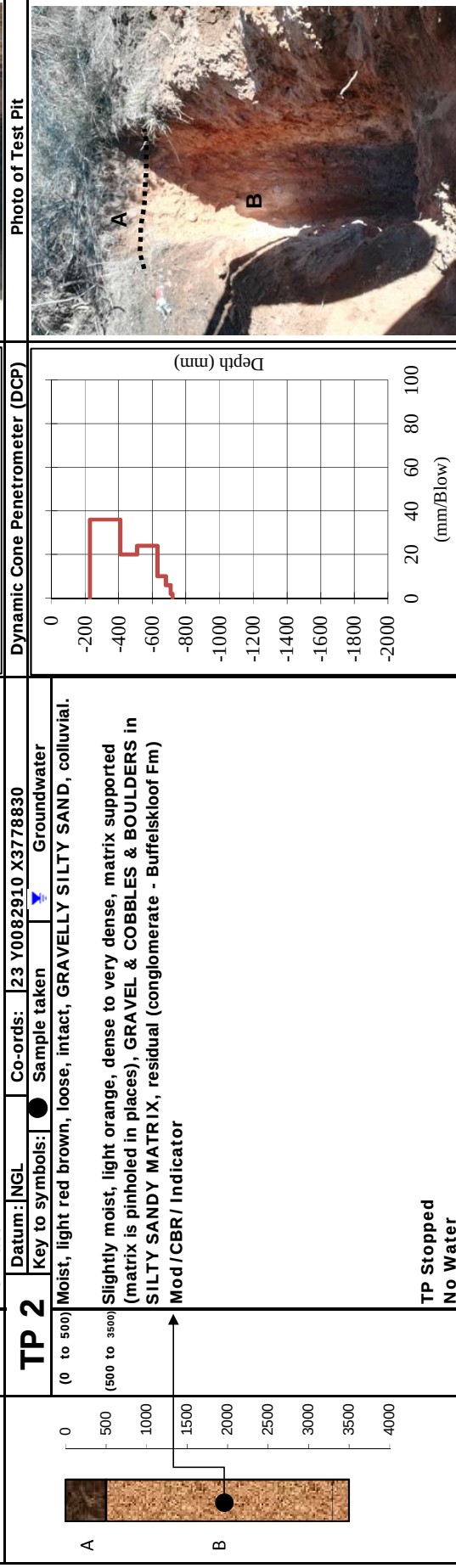
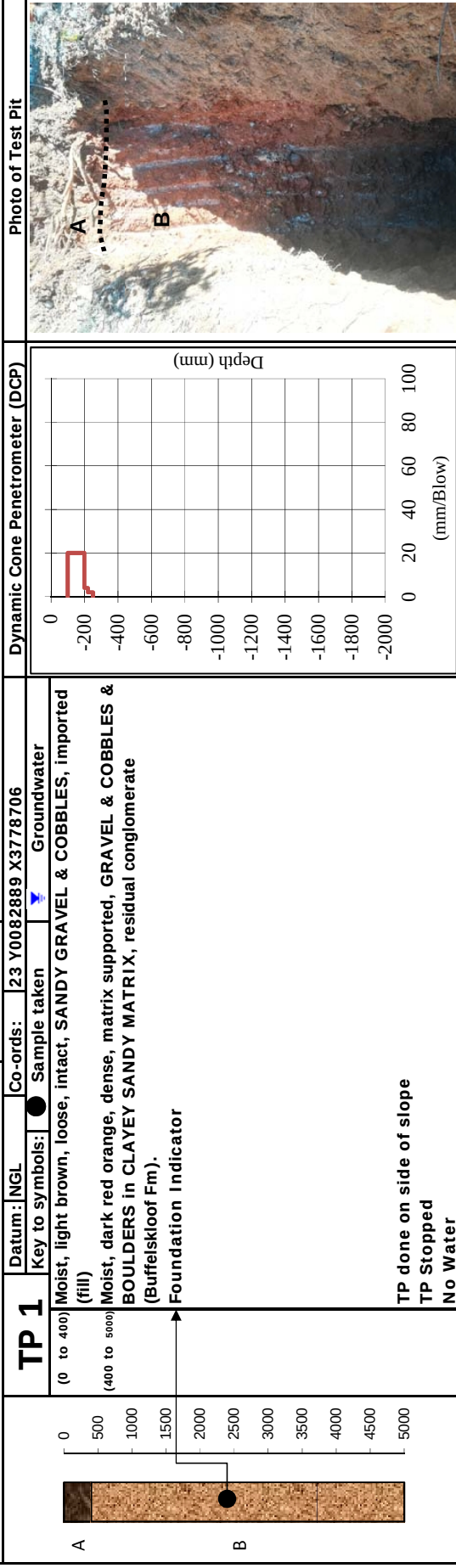
PO Box 944
Kroonstad
6070
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Appendix 2
Test pit profiles

Geotechnical Soil Profile

Client:	Marike Vreken Town Planners
Project:	Portion 502 of Vyf Brakke-Fontein 220
Area:	Mossel Bay
Date:	10.09.18
Excavator:	CAT TLB

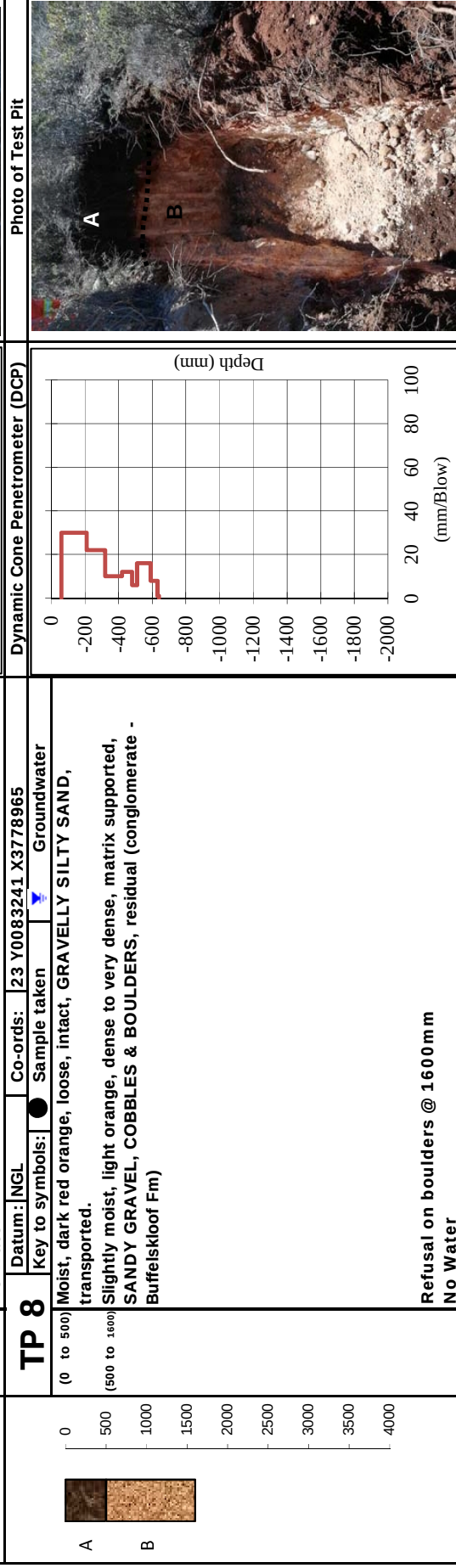
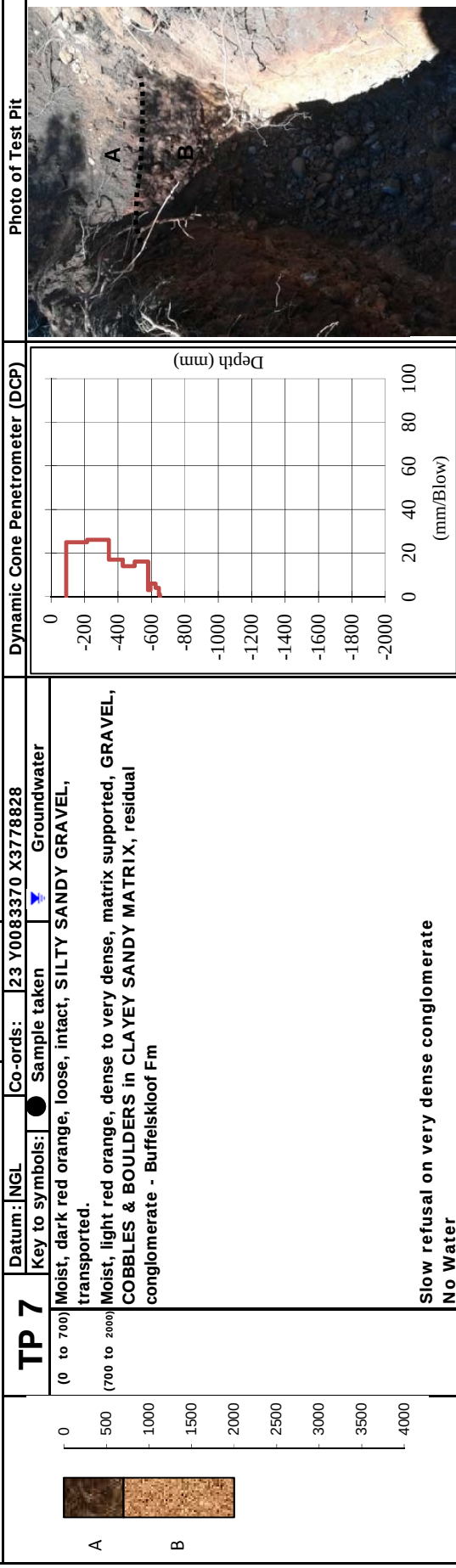


OUTENIQUA GEOTECHNICAL SERVICES			Geotechnical Soil Profile		
Client: Marike Vreken Town Planners Project: Portion 502 of Vyf Brakke-Fontein 220 Area: Mossel Bay Date: 10.09.18 Excavator: CAT TLB					
Datum: NGL Key to symbols: ☒ Sample taken ☐ Groundwater			Co-ords: 23 Y0082938 X3778894 Datum: NGL Key to symbols: ☒ Sample taken ☐ Groundwater		
TP 3 (0 to 700) Moist, dark red brown, loose, intact, GRAVELLY SILTY SAND, colluvial.			TP 4 (0 to 700) Very moist, light red brown, medium dense, intact, GRAVELLY SAND, transported.		
(700 to 2000) Moist, light red orange, dense, intact, SILTY SANDY GRAVEL & COBBLES & BOULDERS, colluvial/reworked residual?			(700 to 1500) Moist, light brown, dense to very dense, matrix supported, GRAVEL & COBBLES in a SANDY MATRIX, residual conglomerate (Buffelskloof Fm).		
(2000 to 3000) Moist, light brown, very dense, matrix supported & pinholed, GRAVEL & COBBLES & BOULDERS IN A SILTY SANDY MATRIX, residual conglomerate (Buffelskloof Fm). Foundation Indicator			Slow refusal on very dense conglomerate No Water		
TP Stopped No Water					

OUTENIQUA GEOTECHNICAL SERVICES			Geotechnical Soil Profile		
Client: Project: Area: Date: Marike Vreken Town Planners Portion 502 of Vyf Brakke-Fontein 220 Mossel Bay 10.09.18 Excavator: CAT TLB					
Datum: NGL Co-ords: 23 Y0083041 X3778790 Key to symbols: ● Sample taken ▼ Groundwater Moist, dark red brown, loose, intact, GRAVELLY SILTY SAND, colluvial. (0 to 500) (500 to 2000) Moist, light red orange, very dense, intact, SILTY SANDY GRAVEL, COBBLES & BOULDERS, residual conglomerate - Buffelskloof Fm. Foundation Indicator MOD / CBR / Indicator			TP 5 Dynamic Cone Penetrometer (DCP) Depth (mm) (mm/Blow) Photo of Test Pit A B		
Refusal on very dense conglomerate No Water					
TP 6 Dynamic Cone Penetrometer (DCP) Depth (mm) (mm/Blow) Photo of Test Pit A B			Datum: NGL Co-ords: 23 Y0083167 X3778832 Key to symbols: ● Sample taken ▼ Groundwater Very moist, light red brown, medium dense, intact, GRAVELLY SAND, colluvial (0 to 500) (500 to 2300) Slightly moist, light orange, dense to very dense, matrix supported (matrix is pinholed in places), GRAVEL, COBBLES & small BOULDERS in SILTY SANDY MATRIX, residual (conglomerate - Buffelskloof Fm)		
TP Stopped No Water					

Geotechnical Soil Profile

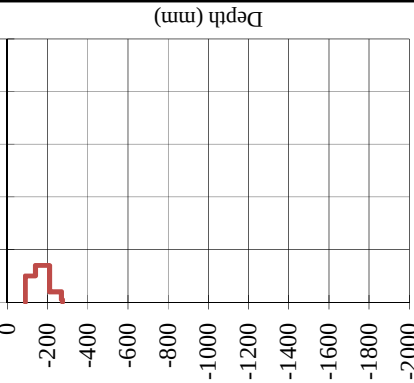
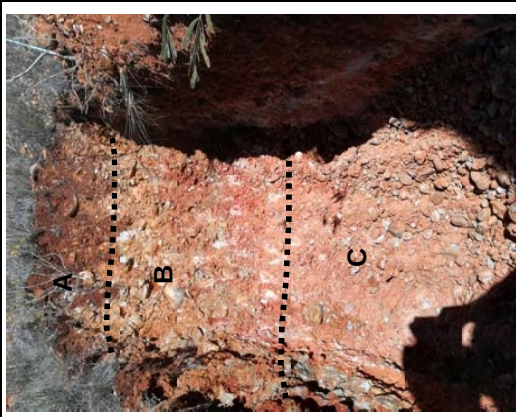
Client:	Marike Vreken Town Planners
Project:	Portion 502 of Vyf Brakke-Fontein 220
Area:	Mossel Bay
Date:	10.09.18
Excavator:	CAT TLB



OUTENIQUA GEOTECHNICAL SERVICES			Geotechnical Soil Profile		
Client: Marike Vreken Town Planners Project: Portion 502 of Vyf Brakke-Fontein 220 Area: Mossel Bay Date: 10.09.18 Excavator: CAT TLB					
Datum: NGL Co-ords: 23 Y0083466 X3778883 Key to symbols: ● Sample taken ▼ Groundwater			Dynamic Cone Penetrometer (DCP) Photo of Test Pit		
TP 9 (0 to 700) (700 to 2100) Moist, dark red orange, loose, intact, SILTY SANDY GRAVEL, transported. Moist, light red orange, dense to very dense, matrix supported, SILTY SANDY GRAVEL & COBBLES & BOULDERS, residual completely weathered conglomerate - Buffelskloof Fm). Foundation Indicator Refusal @ 2100 mm Slow seepage @ 650 mm 0 500 1000 1500 2000 2500 3000 3500 4000 A B			Dynamic Cone Penetrometer (DCP) Photo of Test Pit		
Datum: NGL Co-ords: 23 Y0083574 X3778820 Key to symbols: ● Sample taken ▼ Groundwater			Dynamic Cone Penetrometer (DCP) Photo of Test Pit		
TP 10 (0 to 800) (800 to 2800) Moist, dark red orange, loose to medium dense, intact, GRAVELLY SILTY SAND, transported. Moist, light yellow orange, dense to very dense, matrix supported, SILTY SANDY GRAVEL, residual (completely weathered conglomerate) Foundation Indicator Slow refusal No Water 0 500 1000 1500 2000 2500 3000 3500 4000 A B			Dynamic Cone Penetrometer (DCP) Photo of Test Pit		

OUTENIQUA GEOTECHNICAL SERVICES				Geotechnical Soil Profile			
Client:		Marike Vreken Town Planners					
Project:		Portion 502 of Vyf Brakke-Fontein 220					
Area:		Mossel Bay					
Date:		10.09.18					
Excavator:		CAT TLB					
Datum: [NGL]		Co-ords: [23 Y0083686 X3778795]		Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
Key to symbols: [● Sample taken]		Groundwater		Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
Moist, dark red brown, medium dense, intact, GRAVELLY SILTY SAND & COBBLES, transported.				Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
Moist, light red to dark red, dense/stiff, fissured, CLAYEY SANDY SILT, residual siltstone lense.				Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
Foundation Indicator				Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
MOD/CBR / Indicator				Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
Moist, dark red orange, dense, intact, CLAYEY SANDY GRAVEL & COBBLES, residual conglomerate (Buffelskloof Fm)				Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
TP stopped				Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
No water				Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
TP 11		TP 12		Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
Key to symbols: [● Sample taken]		Groundwater		Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
Moist, dark red brown, medium dense, intact, SLIGHTLY CLAYEY GRAVELLY SILTY SAND, transported.				Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
Foundation Indicator				Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
Moist, light yellow orange, dense to very dense, intact, CLAYEY SANDY SILT, residual siltstone lense.				Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
Moist, dark brown, dense, matrix supported, CLAYEY SANDY GRAVEL, COBBLES & BOULDERS, residual conglomerate (Buffelskloof Fm)				Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
TP stopped				Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
No water				Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	

OUTENIQUA GEOTECHNICAL SERVICES				Geotechnical Soil Profile			
Client:		Marike Vreken Town Planners					
Project:		Portion 502 of Vyf Brakke-Fontein 220					
Area:		Mossel Bay					
Date:		10.09.18					
Excavator:		CAT TLB					
TP 13 Datum: NGL Key to symbols: Sample taken Moist, dark to light red orange, dense to very dense, matrix supported, GRAVEL, COBBLES & BOULDERS in a SILTY SANDY MATRIX, residual weathered conglomerate Foundation Indicator 	Co-ords: 23 Y0083821 X3778784		Dynamic Cone Penetrometer (DCP)		Photo of Test Pit		
	Groundwater						
	Refusal @ 1500 mm No Water						
TP 14 Datum: NGL Key to symbols: Sample taken Very moist, dark red orange, medium dense to dense, intact, CLAYEY SANDY GRAVEL & COBBLES, colluvial. Foundation Indicator MOD / CBR / Indicator Moist, light brown, very dense, matrix supported, GRAVEL, COBBLES & BOULDERS, residual conglomerate. 	Co-ords: 23 Y0084083 X3778851		Dynamic Cone Penetrometer (DCP)		Photo of Test Pit		
	Groundwater						
	Refusal @ 700 mm No Water						

		Geotechnical Soil Profile					
Client:		Marike Vreken Town Planners					
Project:		Portion 502 of Vyf Brakke-Fontein 220					
Area:		Mossel Bay					
Date:		10.09.18					
Excavator:		CAT TLB					
Datum: NGL		Co-ords: 23 Y083886 X3778816		Dynamic Cone Penetrometer (DCP)		Photo of Test Pit	
TP 15		Key to symbols:  Groundwater					
(0 to 150)		Sample taken					
(150 to 600)		Moist, dark red orange, loose, intact, SILTY SANDY GRAVEL & COBBLES, colluvial.					
600 to 1000		Moist, dark yellow orange, dense to very dense, matrix supported, GRAVEL, COBBLES in a SILTY SANDY MATRIX, residual.					
Foundation Indicator		Moist, light red orange, very dense, matrix supported, GRAVEL, COBBLES & BOULDERS in a SANDY MATRIX, residual conglomerate					
Refusal @ 1000 mm		No water					

Appendix 3

Lab test data



OUTENIQUA LAB (Pty) Ltd

Materials Testing Laboratory

Registration No. 95/07742/07

6 Mirrorball Street, George : PO Box 3186, George Industria, 6536

Tel: 044 8743274 : Fax: 044 8745779 : e-mail: llewelyn@outeniqualab.co.za

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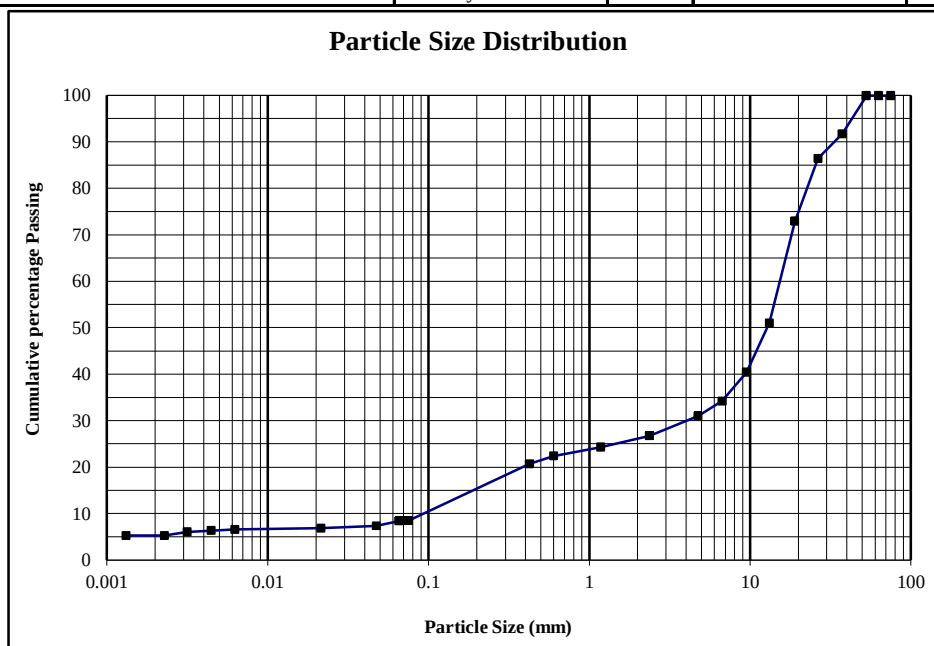
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	PO Box 964	Date Received :	11/09/18
	Knysna	Date Reported :	01/10/18
Attention :	6570	Req. Number :	4047/18
	Iain Paton	No. of Pages :	1/12

TEST REPORT

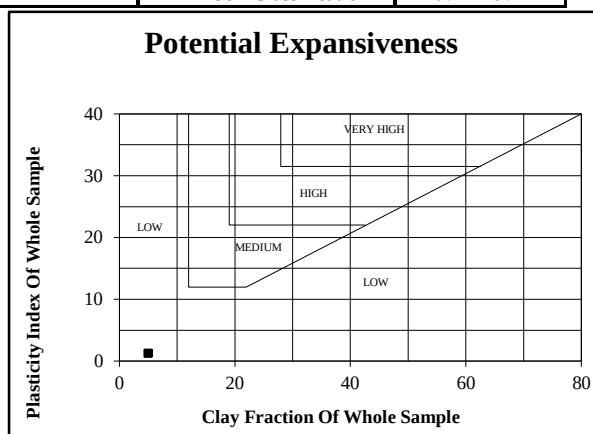
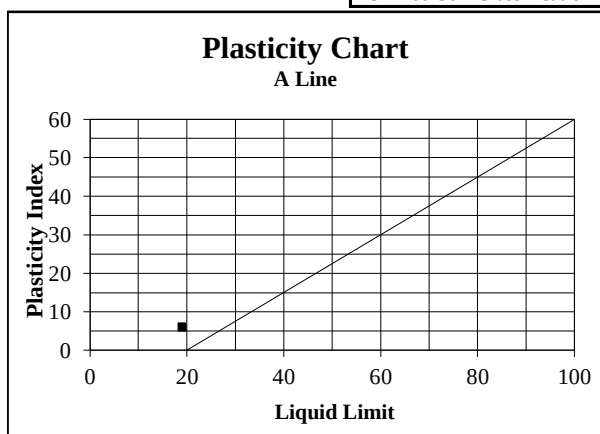
FOUNDATION INDICATOR - (TMH 1 Method A1(a),A2,A3,A4,A5) & (ASTM Method D422)

Material Description:	Dark Reddish Orange Sandy Gravel	Sample Number:	72735		
Position:	TP1 - Layer 2	Liquid Limit	19	Linear Shrinkage	3
Depth:	400-5000	Plasticity Index	6	Insitu M/C%	4.6

Sieve Size(mm)	% Passing
75.0	100
63.0	100
53.0	100
37.5	92
26.5	86
19.0	73
13.2	51
9.5	40
6.7	34
4.75	31
2.36	27
1.18	24
0.600	22
0.425	21
0.075	9
0.0653	8
0.0474	7
0.0215	7
0.0062	7
0.0045	6
0.0032	6
0.0023	5
0.0013	5



% Clay	5	% Silt	3	% Sand	18	% Gravel	74
Unified Soil Classification				PRA Soil Classification			
				A-1-a / A-1-b / A-2-4			



Notes:

- Specimens delivered to Outeniqua Lab in good order.

L Heathcote (Director)
For Outeniqua Lab (Pty) Ltd.

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Directors/Direkteure: D McDonald Reg. Eng. Tech (Managing/Bestuurende) L Heathcote B-Tech. Civil Miss A Govender



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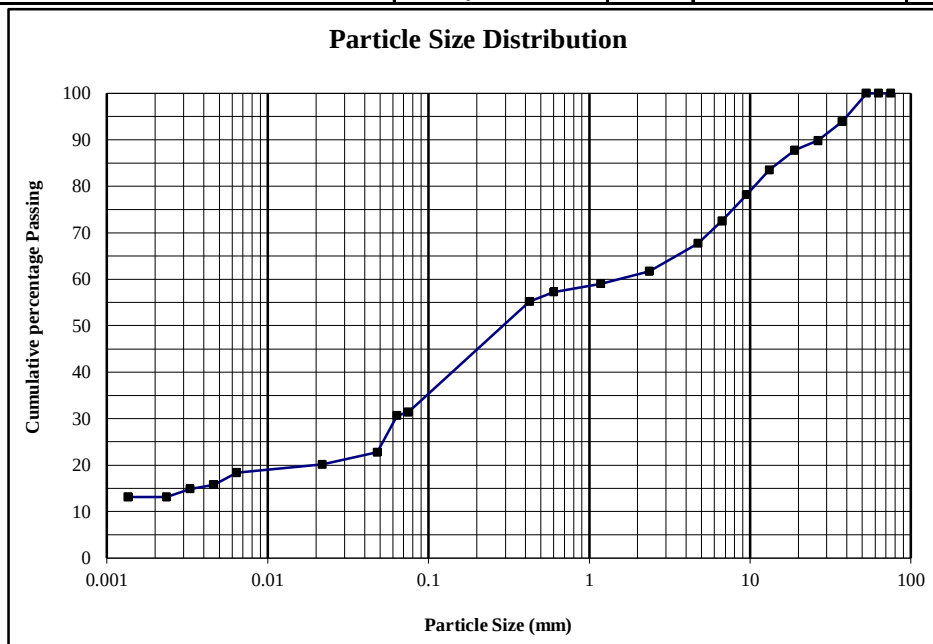
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	PO Box 964	Date Received :	11/09/18
	Knysna	Date Reported :	01/10/18
Attention :	6570	Req. Number :	4047/18
	Iain Paton	No. of Pages :	2/12

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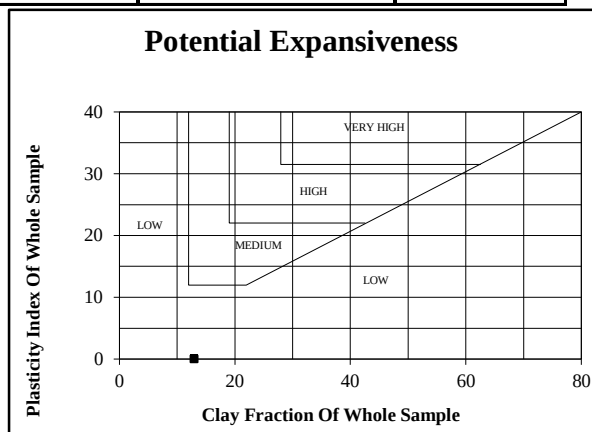
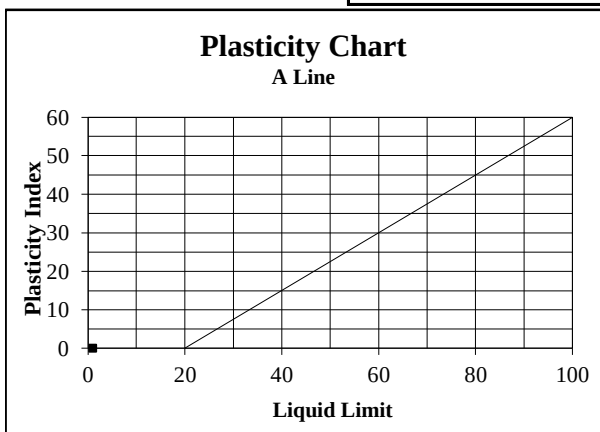
FOUNDATION INDICATOR - (TMH 1 Method A1(a),A2,A3,A4,A5) & (ASTM Method D422)

Material Description:	Light Brown Clayey Silty Sandy Gravel	Sample Number:	72737		
Position:	TP3 - Layer 3	Liquid Limit	NP	Linear Shrinkage	0
Depth:	2000-3000	Plasticity Index	NP	Insitu M/C%	2.7

Sieve Size(mm)	% Passing
75.0	100
63.0	100
53.0	100
37.5	94
26.5	90
19.0	88
13.2	84
9.5	78
6.7	73
4.75	68
2.36	62
1.18	59
0.600	57
0.425	55
0.075	31
0.0638	31
0.0480	23
0.0219	20
0.0064	18
0.0046	16
0.0033	15
0.0024	13
0.0014	13



% Clay	13	% Silt	16	% Sand	32	% Gravel	39
Unified Soil Classification	GM		PRA Soil Classification	A-2-4			



Notes:

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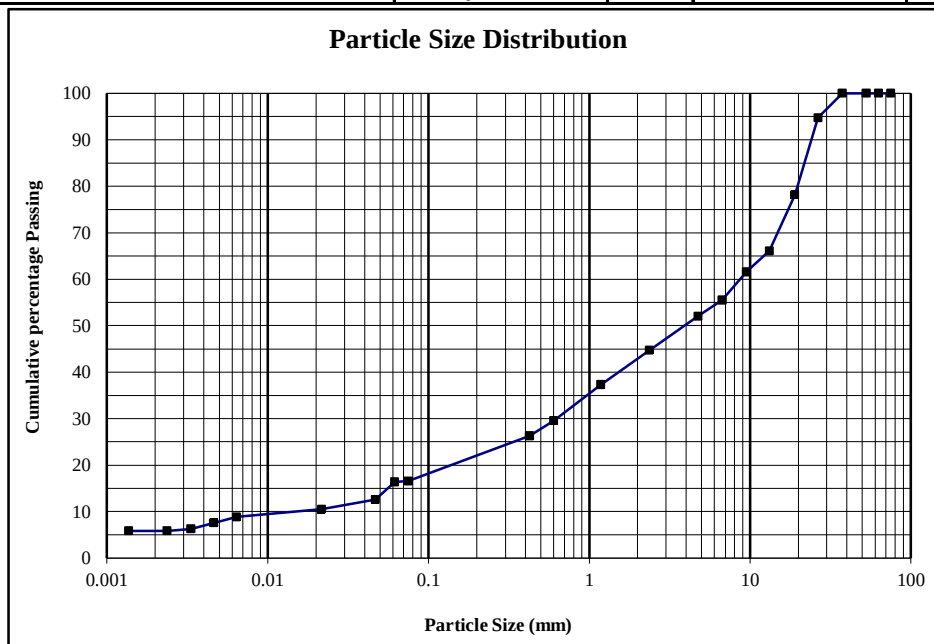
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	Knysna	Date Reported :	01/10/18
Attention :	6570	Req. Number :	4047/18
	Iain Paton	No. of Pages :	3/12

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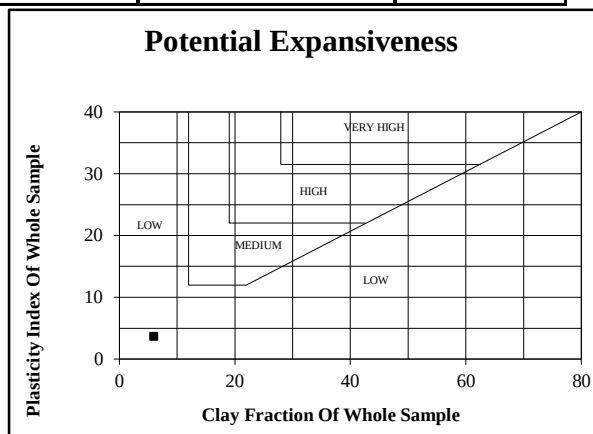
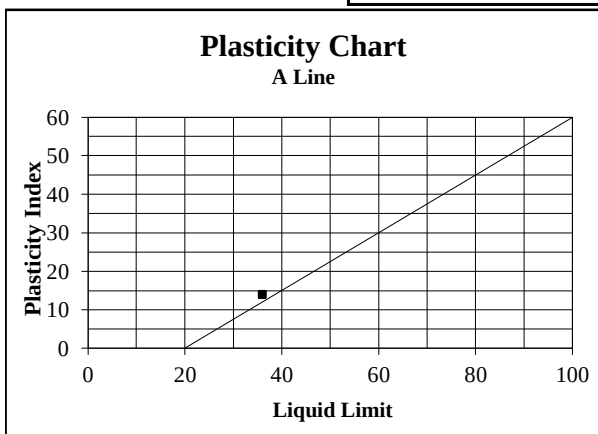
FOUNDATION INDICATOR - (TMH 1 Method A1(a),A2,A3,A4,A5) & (ASTM Method D422)

Material Description:	Light Brown Silty Sandy Gravel	Sample Number:	72738		
Position:	TP5 - Layer 2	Liquid Limit	36	Linear Shrinkage	7
Depth:	500-2000	Plasticity Index	14	Insitu M/C%	4.9

Sieve Size(mm)	% Passing
75.0	100
63.0	100
53.0	100
37.5	100
26.5	95
19.0	78
13.2	66
9.5	62
6.7	56
4.75	52
2.36	45
1.18	37
0.600	30
0.425	26
0.075	17
0.0617	16
0.0468	13
0.0217	11
0.0064	9
0.0046	8
0.0033	6
0.0024	6
0.0014	6



% Clay	6	% Silt	10	% Sand	26	% Gravel	58
Unified Soil Classification		GC		PRA Soil Classification		A-2-6	



Notes:

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For Outeniqua Lab (Pty) Ltd.

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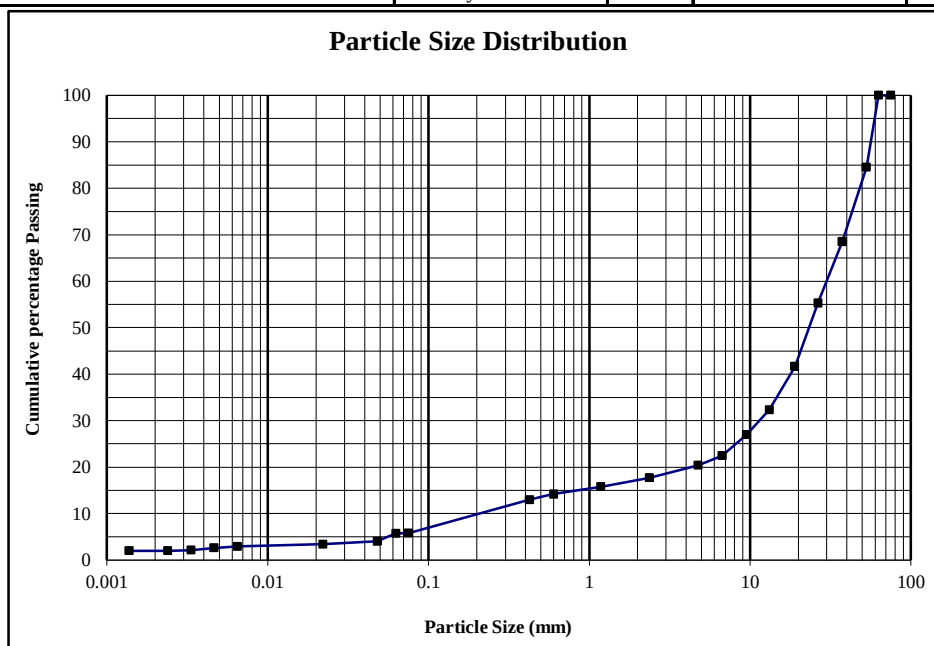
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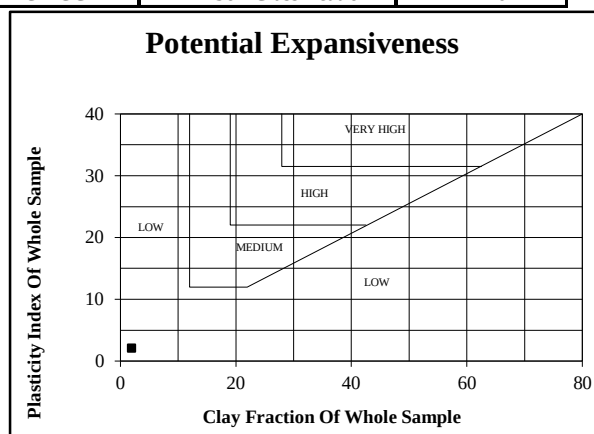
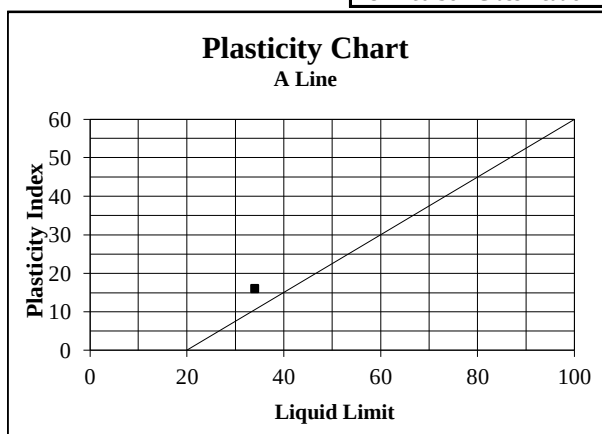
FOUNDATION INDICATOR - (TMH 1 Method A1(a), A2, A3, A4, A5) & (ASTM Method D422)

Material Description:	Light Reddish Orange Sandy Gravel	Sample Number:	72740		
Position:	TP9 - Layer 2	Liquid Limit	34	Linear Shrinkage	8
Depth:	700-2100	Plasticity Index	16	Insitu M/C%	3.8

Sieve Size(mm)	% Passing
75.0	100
63.0	100
53.0	85
37.5	69
26.5	55
19.0	42
13.2	32
9.5	27
6.7	23
4.75	20
2.36	18
1.18	16
0.600	14
0.425	13
0.075	6
0.0625	6
0.0480	4
0.0221	3
0.0065	3
0.0046	3
0.0033	2
0.0024	2
0.0014	2



% Clay	2	% Silt	3	% Sand	12	% Gravel	83
Unified Soil Classification		GP-GC		PRA Soil Classification		A-2-6	



Notes:

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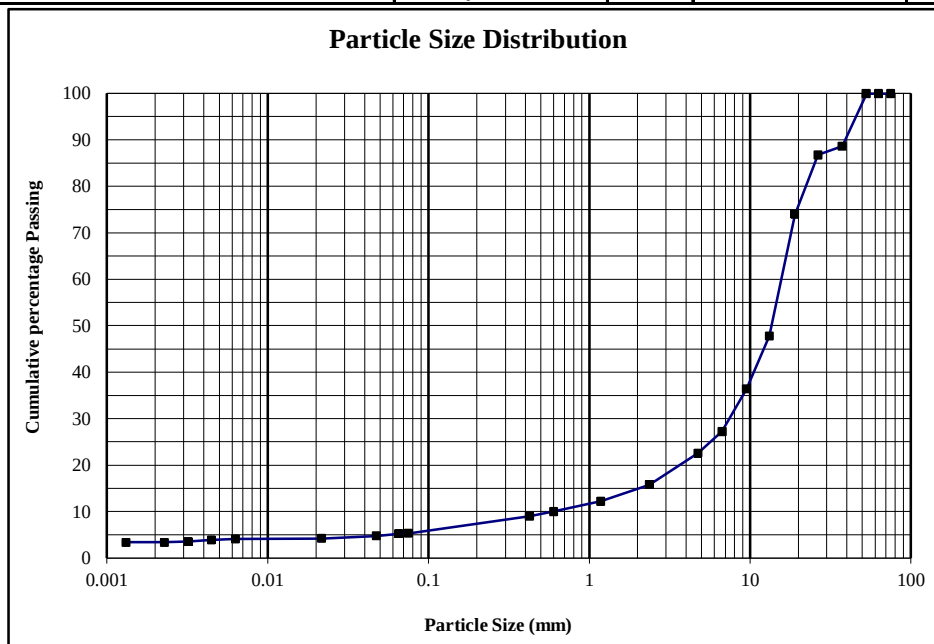
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	PO Box 964	Date Received :	11/09/18
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	Iain Paton	No. of Pages :	6/12

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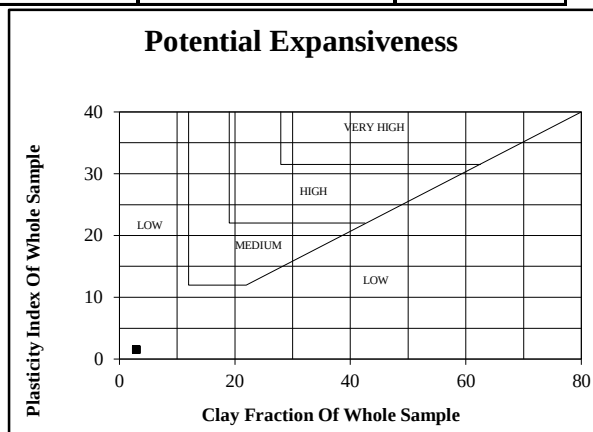
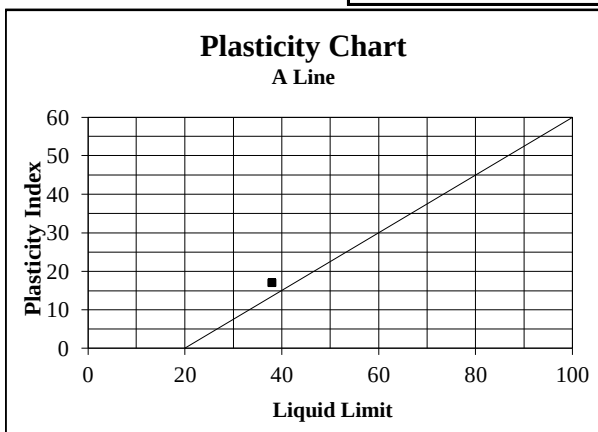
FOUNDATION INDICATOR - (TMH 1 Method A1(a),A2,A3,A4,A5) & (ASTM Method D422)

Material Description:	Light Yellowish Orange Sandy Gravel	Sample Number:	72741		
Position:	TP10 - Layer 2	Liquid Limit	38	Linear Shrinkage	8.5
Depth:	800-2800	Plasticity Index	17	Insitu M/C%	4.5

Sieve Size(mm)	% Passing
75.0	100
63.0	100
53.0	100
37.5	89
26.5	87
19.0	74
13.2	48
9.5	36
6.7	27
4.75	23
2.36	16
1.18	12
0.600	10
0.425	9
0.075	5
0.0656	5
0.0474	5
0.0217	4
0.0063	4
0.0045	4
0.0032	4
0.0023	3
0.0013	3



% Clay	3	% Silt	2	% Sand	10	% Gravel	85
Unified Soil Classification		GP		PRA Soil Classification		A-2-6	



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Directors/Direkteure: D McDonald Reg. Eng. Tech (Managing/Bestuurende) L Heathcote B-Tech. Civil Miss A Govender



OUTENIQUA LAB (Pty) Ltd

Materials Testing Laboratory

Registration No. 95/07742/07

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Tel: 044 8743274 : Fax: 044 8745779 : e-mail: llewelyn@outeniqualab.co.za

R-FIND-1-5

Dec-14

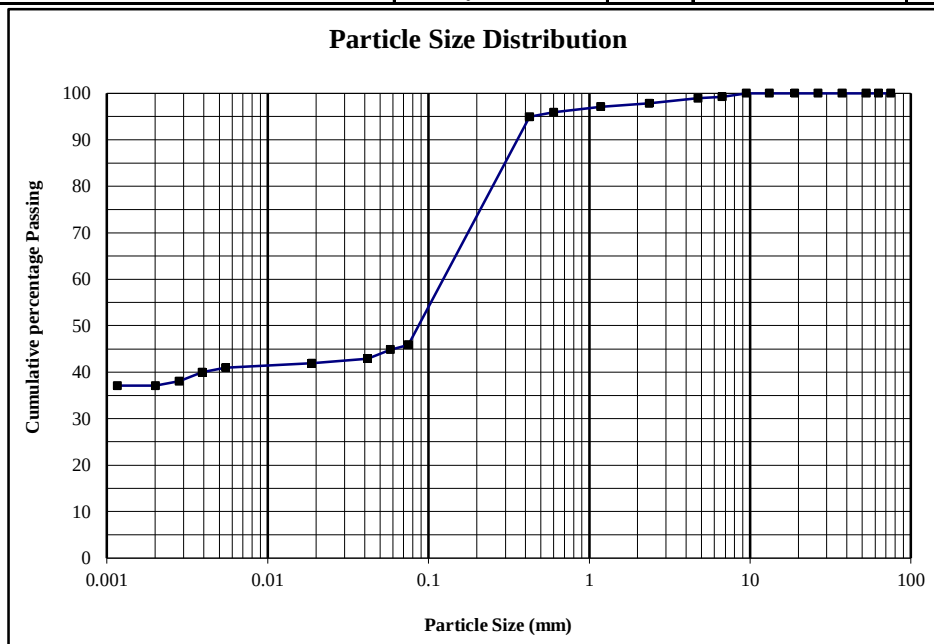
Customer :	Outeniqua Geotechnical Services	Project :	Proposed Residential Development on PTN 502 of VYF Brakkefontein 220
	PO Box 964	Date Received :	11/09/18
	Knysna	Date Reported :	01/10/18
Attention :	6570	Req. Number :	4047/18
	Iain Paton	No. of Pages :	7/12

TEST REPORT

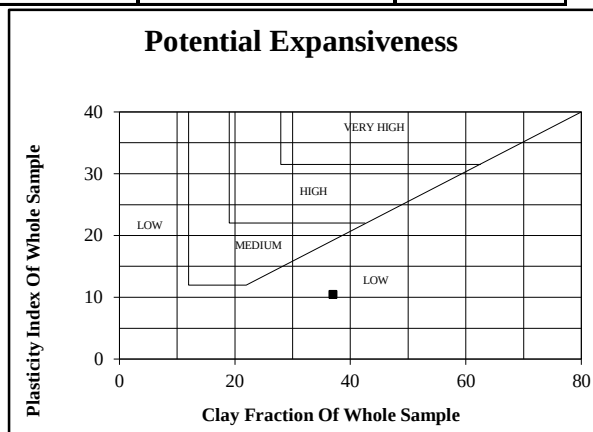
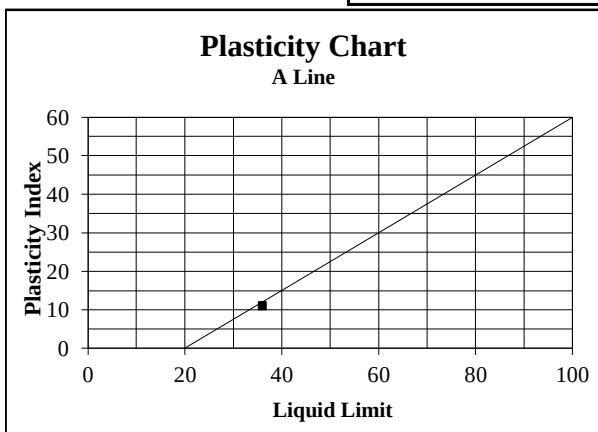
FOUNDATION INDICATOR - (TMH 1 Method A1(a),A2,A3,A4,A5) & (ASTM Method D422)

Material Description:	Light Red - Dark Red Clayey Sand	Sample Number:	72742		
Position:	TP11 - Layer 2	Liquid Limit	36	Linear Shrinkage	6
Depth:	700-2200	Plasticity Index	11	Insitu M/C%	13.4

Sieve Size(mm)	% Passing
75.0	100
63.0	100
53.0	100
37.5	100
26.5	100
19.0	100
13.2	100
9.5	100
6.7	99
4.75	99
2.36	98
1.18	97
0.600	96
0.425	95
0.075	46
0.0581	45
0.0418	43
0.0188	42
0.0055	41
0.0039	40
0.0028	38
0.0020	37
0.0012	37



% Clay	37	% Silt	8	% Sand	53	% Gravel	2
Unified Soil Classification		SM		PRA Soil Classification		A-6	



Notes:

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For Outeniqua Lab (Pty) Ltd.

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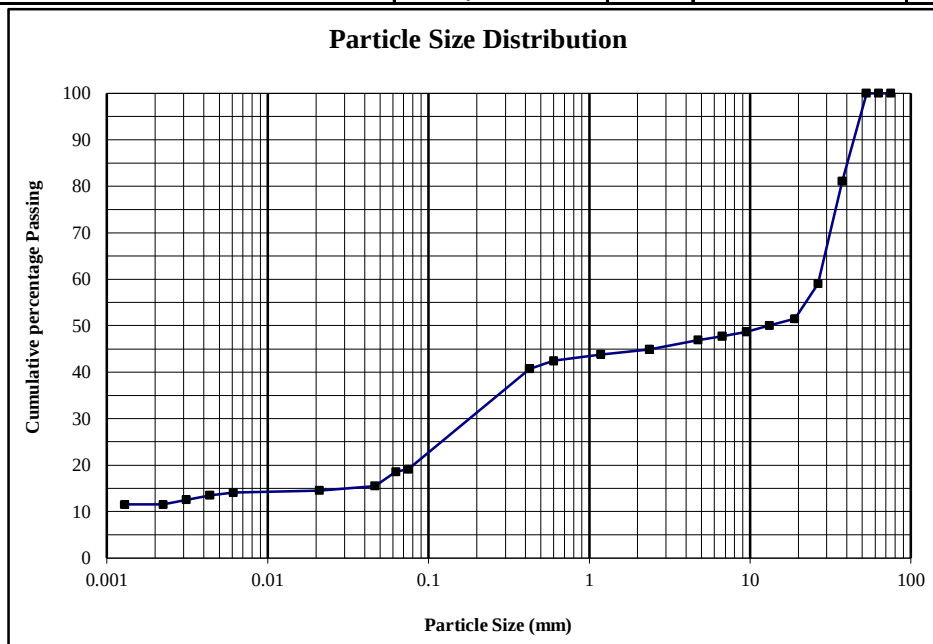
Customer :	Outeniqua Geotechnical Services	Project :	Proposed Residential Development on PTN 502 of VYF Brakkefontein 220
	PO Box 964	Date Received :	11/09/18
	Knysna	Date Reported :	01/10/18
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	Iain Paton	No. of Pages :	8/12

TEST REPORT

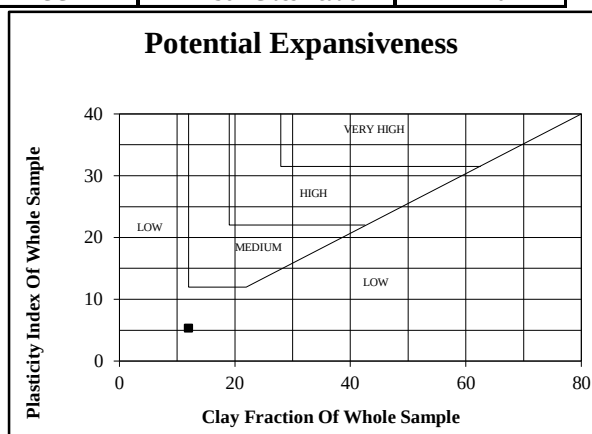
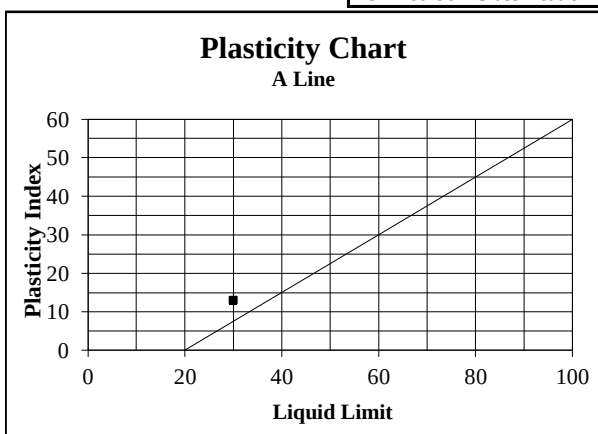
FOUNDATION INDICATOR - (TMH 1 Method A1(a), A2, A3, A4, A5) & (ASTM Method D422)

Material Description:	Dark Reddish Brown Clayey Sandy Gravel	Sample Number:	72744		
Position:	TP12 - Layer 1	Liquid Limit	30	Linear Shrinkage	6.5
Depth:	0-700	Plasticity Index	13	Insitu M/C%	9.9

Sieve Size(mm)	% Passing
75.0	100
63.0	100
53.0	100
37.5	81
26.5	59
19.0	52
13.2	50
9.5	49
6.7	48
4.75	47
2.36	45
1.18	44
0.600	42
0.425	41
0.075	19
0.0625	19
0.0464	16
0.0210	15
0.0061	14
0.0044	14
0.0031	13
0.0022	12
0.0013	12



% Clay	12	% Silt	6	% Sand	27	% Gravel	55
Unified Soil Classification		GC		PRA Soil Classification		A-2-6	



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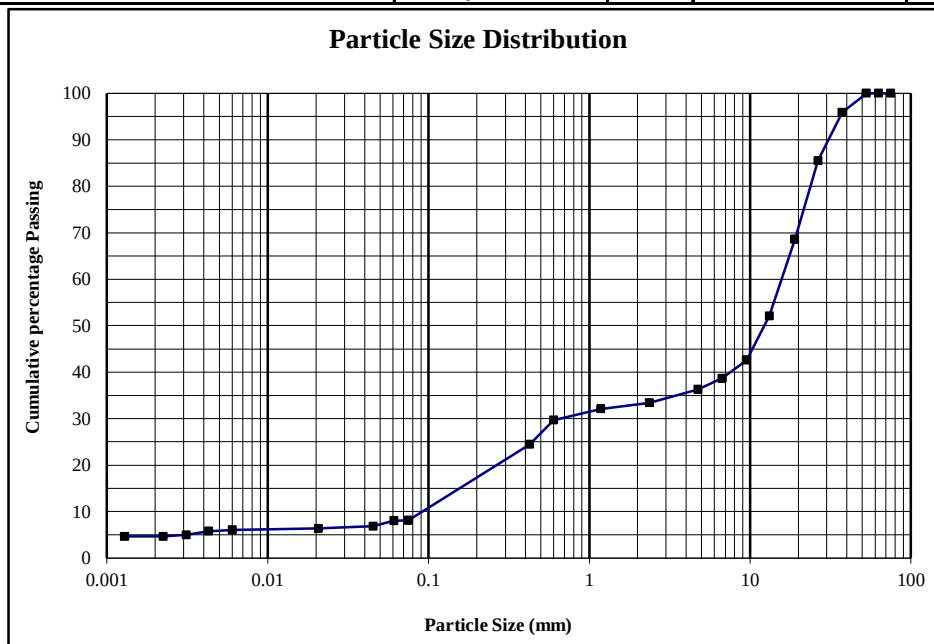
Customer :	Outeniqua Geotechnical Services	Project :	Proposed Residential Development on PTN 502 of VYF Brakkefontein 220
	PO Box 964	Date Received :	11/09/18
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Attention :	6570	Req. Number :	4047/18
	Iain Paton	No. of Pages :	9/12

TEST REPORT

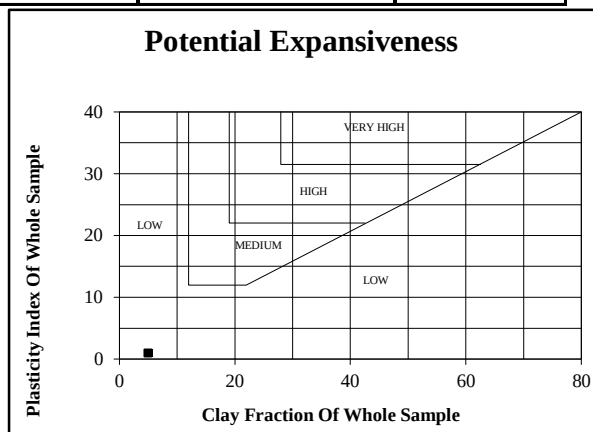
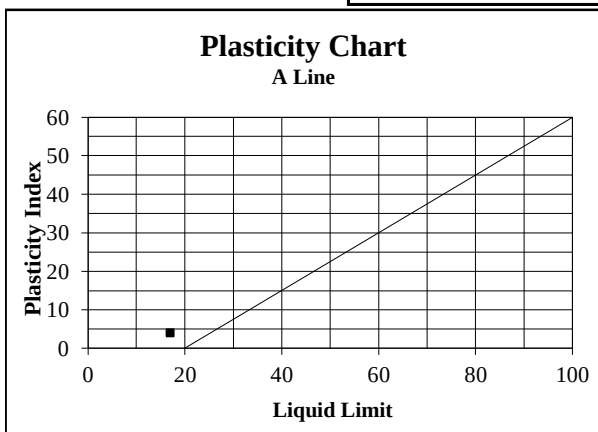
FOUNDATION INDICATOR - (TMH 1 Method A1(a),A2,A3,A4,A5) & (ASTM Method D422)

Material Description:	Dark - Light Reddish Orange Sandy Gravel	Sample Number:	72745		
Position:	TP13 - Layer 1	Liquid Limit	17	Linear Shrinkage	2
Depth:	0-1500	Plasticity Index	4	Insitu M/C%	2.6

Sieve Size(mm)	% Passing
75.0	100
63.0	100
53.0	100
37.5	96
26.5	86
19.0	69
13.2	52
9.5	43
6.7	39
4.75	36
2.36	33
1.18	32
0.600	30
0.425	25
0.075	8
0.0610	8
0.0453	7
0.0207	6
0.0060	6
0.0043	6
0.0031	5
0.0022	5
0.0013	5



% Clay	5	% Silt	3	% Sand	25	% Gravel	67
Unified Soil Classification				PRA Soil Classification			
				A-1-a / A-1-b / A-2-4			



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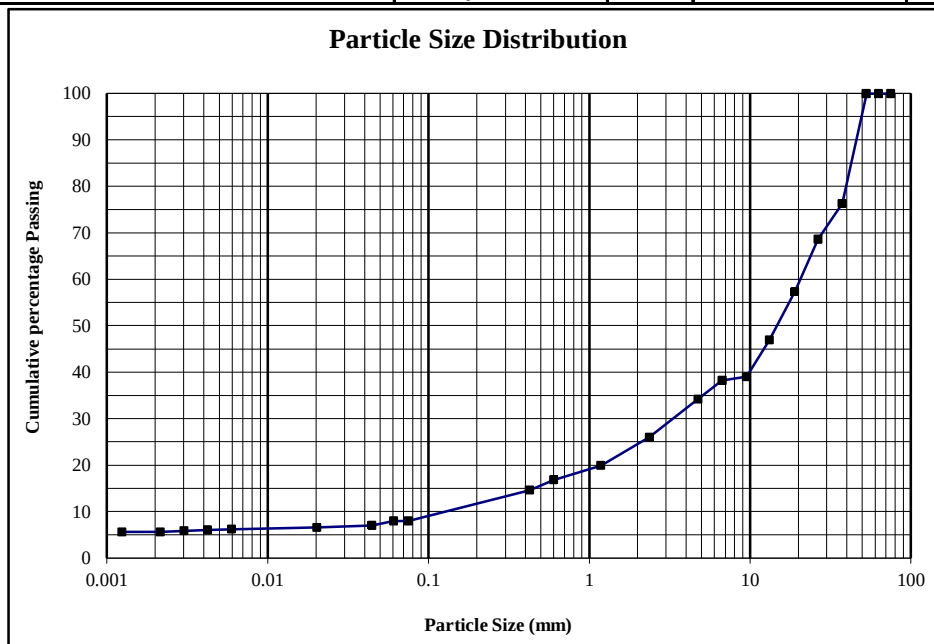
Customer :	Outeniqua Geotechnical Services	Project :	Proposed Residential Development on PTN 502 of VYF Brakkefontein 220
	PO Box 964	Date Received :	11/09/18
	Knysna	Date Reported :	01/10/18
Attention :	6570	Req. Number :	4047/18
	Iain Paton	No. of Pages :	10/12

TEST REPORT

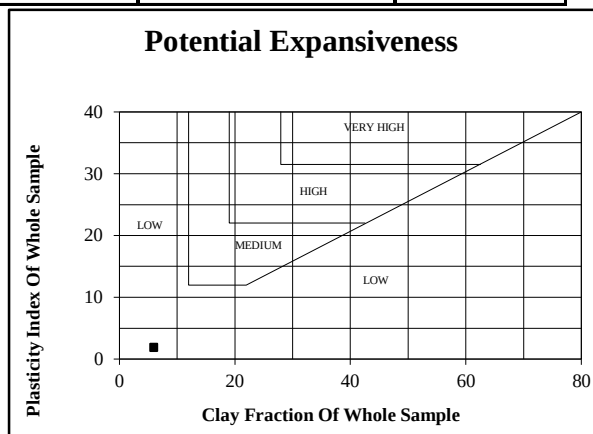
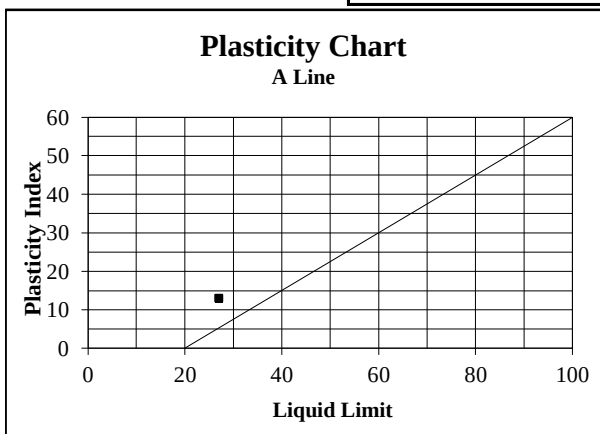
FOUNDATION INDICATOR - (TMH 1 Method A1(a), A2, A3, A4, A5) & (ASTM Method D422)

Material Description:	Dark Reddish Orange Sandy Gravel	Sample Number:	72746		
Position:	TP14 - Layer 2	Liquid Limit	27	Linear Shrinkage	6.5
Depth:	0-600	Plasticity Index	13	Insitu M/C%	4.8

Sieve Size(mm)	% Passing
75.0	100
63.0	100
53.0	100
37.5	76
26.5	69
19.0	57
13.2	47
9.5	39
6.7	38
4.75	34
2.36	26
1.18	20
0.600	17
0.425	15
0.075	8
0.0607	8
0.0447	7
0.0203	7
0.0060	6
0.0042	6
0.0030	6
0.0021	6
0.0012	6



% Clay	6	% Silt	2	% Sand	16	% Gravel	76
Unified Soil Classification	GP-GC		PRA Soil Classification	A-2-6			



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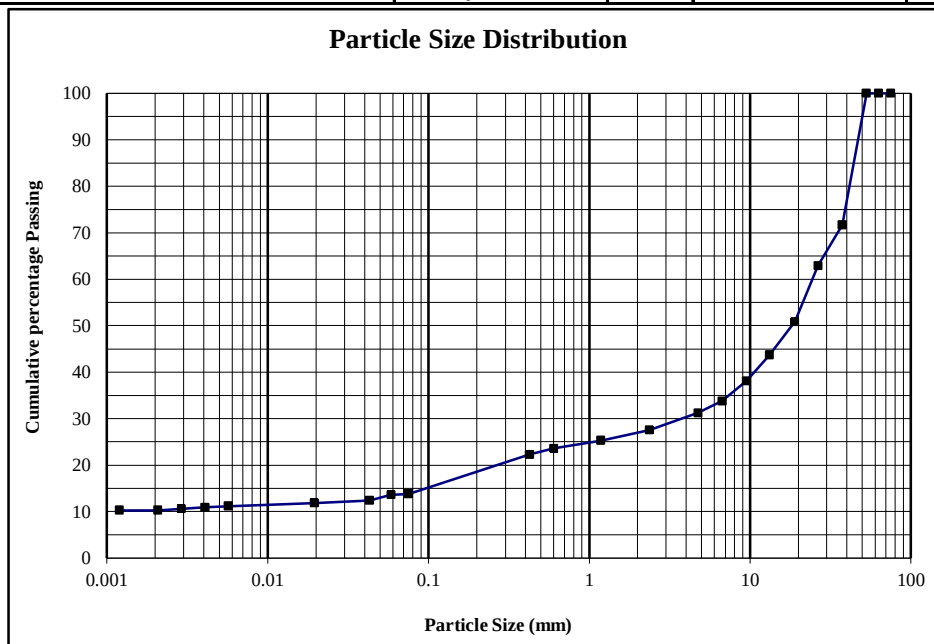
Customer :	Outeniqua Geotechnical Services	Project :	Proposed Residential Development on PTN 502 of VYF Brakkefontein 220
	PO Box 964	Date Received :	11/09/18
	Knysna	Date Reported :	01/10/18
Attention :	6570	Req. Number :	4047/18
	Iain Paton	No. of Pages :	11/12

TEST REPORT

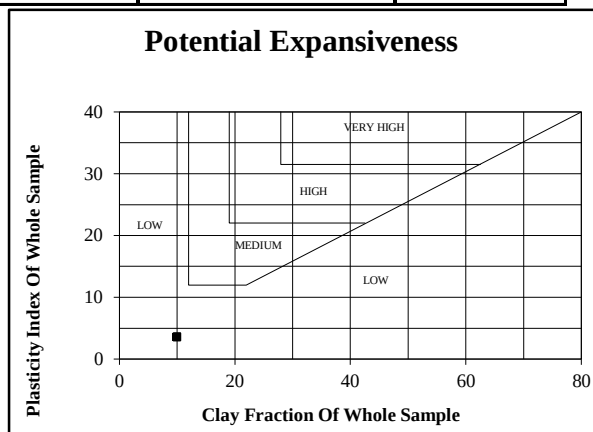
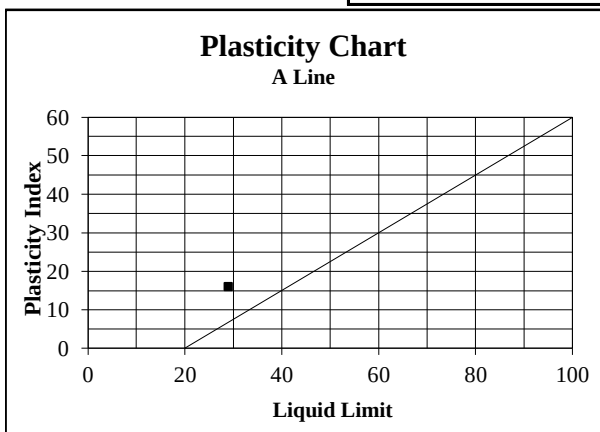
FOUNDATION INDICATOR - (TMH 1 Method A1(a),A2,A3,A4,A5) & (ASTM Method D422)

Material Description:	Dark Yellowish Orange Clayey Sandy Gravel	Sample Number:	72748		
Position:	TP15 - Layer 2	Liquid Limit	29	Linear Shrinkage	8
Depth:	150-600	Plasticity Index	16	Insitu M/C%	4.8

Sieve Size(mm)	% Passing
75.0	100
63.0	100
53.0	100
37.5	72
26.5	63
19.0	51
13.2	44
9.5	38
6.7	34
4.75	31
2.36	28
1.18	25
0.600	24
0.425	22
0.075	14
0.0585	14
0.0429	12
0.0195	12
0.0057	11
0.0041	11
0.0029	11
0.0021	10
0.0012	10



% Clay	10	% Silt	4	% Sand	13	% Gravel	73
Unified Soil Classification		GC		PRA Soil Classification		A-2-6	



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R-CBR-1-7

Nov-16



T0347

Customer :	Outeniqua Geotechnical Services PO Box 964 Knysna 6570	Project :	Proposed Residential Development on PTN 502 of VYF Brakkefontein 220
		Date Received :	11/09/18
		Date Reported :	27/09/18
		Req. Number :	4047/18
Attention :	Iain Paton	No. of Pages :	4/12

TEST REPORT CALIFORNIA BEARING RATIO

Sample Position (SV)		TP 2 - Layer 2		COLTO:		TP 5 - Layer 2		COLTO:	
Depth (mm)		500-4000		G6 Subbase		500-2000		G9	
Sample No		72736				72739		Subgrade	
Materials Description	Source	In-Situ			In-Situ				
	Colour	Light Olive			Light Brown				
	Soil Type	Gravel with Cobbels & Boulders in Sand Matrix			Gravel with Cobbels & Boulders in Silty Sand Matrix				
	Classification	Existing			Existing				
Material Indicators - (SANS 3001 Method AG1,GR20)									
Percentage Passing	75 mm	100		Opinion	100		Opinion		
	63 mm	100			100				
	50 mm	89			92				
	37.5 mm	87			75				
	28 mm	78			59				
	20 mm	67			55				
	14 mm	54			45				
	5 mm	42			35				
	2 mm	39			28				
	0.425 mm	35			18				
0.075 mm	19.2		9.7						
Material Indicators - (SANS 3001 Method PR5)									
Grading Modulus		2.08	1.20 - 2.60	✓	2.45	0.75 - 2.70	✓		
Coarse Sand Soil-Mortar (%)		10			38				
Atterberg Limits - (SANS 3001 Method GR10)									
Liquid Limit (%)		Undetermined			36				
Plasticity Index (%)		SP	≤ 12	✓	14	≤ 12	✓		
Linear Shrinkage (%)		22.5	≤ 5	✓	7.0				
Material Strength - (SANS 3001 Method GR30,GR40)									
MOD	Max Dry Density (kg/m ³)	2190			1980				
	Optimum Moisture Content (%)	4.8			12.1				
	Mould Moisture Content (%)	4.5			12.3				
	@100% Mod AASHTO	100.0			100.0				
NRB	Swell (%)	0.0	≤ 1.0	✓	0.4	≤ 0.2	×		
	100% NRB	94.9			95.3				
	Swell (%)	0.0			0.6				
	100% Proctor	92.9			93.2				
CBR	Swell (%)	0.1			0.8				
	@ 100% Mod AASHTO	119			38				
	@ 98% Mod AASHTO	62			22				
	@ 95% Mod AASHTO	23	≥ 25	*	10				
	@ 93% Mod AASHTO	12			6	≥ 7	*		
	@ 90% Mod AASHTO	5			3				
Material Condition - (SANS 3001 Method GR20)									
Insitu Moisture Content (%)									
Soil Classification Achieved By The Material									
COLTO:		G6 Subbase			G9 Subgrade				
AASHTO System		A-1-b / A-2-4			A-2-6				
Unified System		GM			GP-GC				

Sieve Analysis

CBR Chart

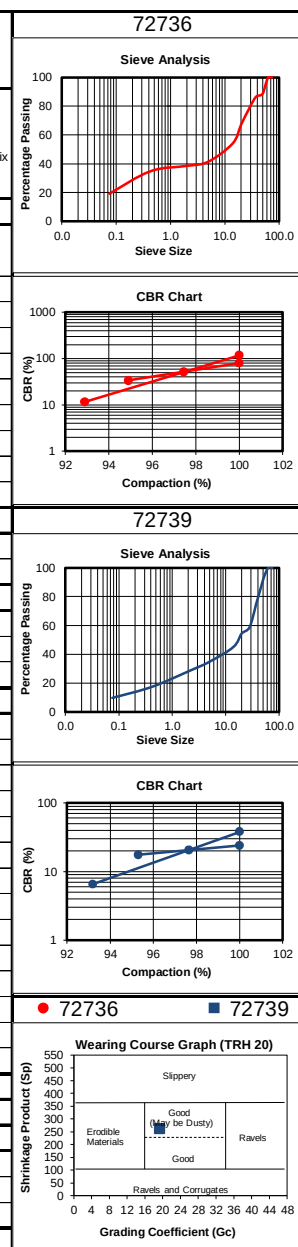
72739

Sieve Analysis

CBR Chart

72736 72739

Wearing Course Graph (TRH 20)



- Specimens delivered to Outeniqua Lab in good order.

Llewelyn Heathcote

Llewelyn Heathcote
Technical Signatory
For Outeniqua Lab (Pty) Ltd.

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- The opinion column is an interpretation of the direct comparison between the quoted specification and the single test sample results obtained. The compliant (P), non compliant (I) and uncertain (U) opinion indicators are based on an approximate 95% level of confidence with reference to SAMM GUIDANCE 1, Issue 2 : 20 June 2007 Section 2.
- The uncertain (U) indicates that the test result is either equal to or is above / below the specified limit by a margin less than the measurement uncertainty; it is therefore not possible to state compliant (P) or non compliant (I) based on a 95% level of confidence with reference to SAMM GUIDANCE 1, Issue 2 : 20 June 2007 Section 2.
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R-CBR-1-7

Nov-16



T0347

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		Date Received :	11/09/18
		Date Reported :	27/09/18
		Req. Number :	4047/18
Attention :	Iain Paton	No. of Pages :	12/12

TEST REPORT CALIFORNIA BEARING RATIO

Sample Position (SV)		TP 11 - Layer 2	COLTO:	TP 14 - Layer 1	COLTO:	72743
Depth (mm)		700-2200	Not	0-600	G7 SSG	
Sample No		72743	Classified	72747		
Materials Description	Source	In-Situ		In-Situ		
	Colour	Light Red - Dark Brown		Dark Reddish Orange		
	Soil Type	Clayey Sandy Silt		Clayey Sandy Gravel with Cobbles		
	Classification	Existing		Existing		
Material Indicators - (SANS 3001 Method AG1,GR20)						
Percentage Passing	75 mm	100		Opinion	100	
	63 mm	100			100	
	50 mm	100			92	
	37.5 mm	100			84	
	28 mm	100			73	
	20 mm	100			60	
	14 mm	93			45	
	5 mm	73			25	
	2 mm	60			18	
	0.425 mm	43			13	
	0.075 mm	16.9			6.4	
Material Indicators - (SANS 3001 Method PR5)						
Grading Modulus		1.80			2.63	0.75 - 2.70 ✓
Coarse Sand Soil-Mortar (%)		28			31	
Atterberg Limits - (SANS 3001 Method GR10)						
Liquid Limit (%)		24			28	
Plasticity Index (%)		11			12	≤ 12 ✓
Linear Shrinkage (%)		5.5			6.0	
Material Strength - (SANS 3001 Method GR30,GR40)						
MOD	Max Dry Density (kg/m ³)	1860			2243	
	Optimum Moisture Content (%)	13.0			5.7	
	Mould Moisture Content (%)	13.2			5.5	
	@100% Mod AASHTO	100.0			100.0	
Proc NRB	Swell (%)	3.4			0.0	≤ 0.2 ✓
	100% NRB	95.0			95.1	
	Swell (%)	3.9			0.0	
Proc Proctor	100% Proctor	93.0			91.1	
	Swell (%)	4.4			0.0	
	@ 100% Mod AASHTO	3			22	
CBR	@ 98% Mod AASHTO	2			20	
	@ 95% Mod AASHTO	1			18	
	@ 93% Mod AASHTO	1			16	≥ 15 *
	@ 90% Mod AASHTO	1			15	
	Material Condition - (SANS 3001 Method GR20)					
Insitu Moisture Content (%)						
Soil Classification Achieved By The Material						
COLTO:		Not Classified			G7 SSG	
AASHTO System		A-2-6			A-2-6	
Unified System		SC			GP-GC	

Sieve Analysis

Percentage Passing

Sieve Size

CBR Chart

CBR (%)

Compaction (%)

72747

Sieve Analysis

Percentage Passing

Sieve Size

CBR Chart

CBR (%)

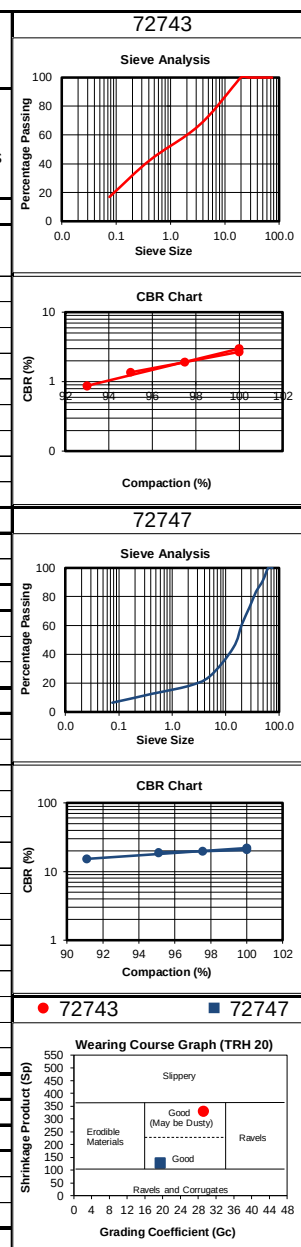
Compaction (%)

72743 72747

Wearing Course Graph (TRH 20)

Shrinkage Product (Sp)

Grading Coefficient (Gc)



- Specimens delivered to Outeniqua Lab in good order.

Llewelyn Heathcote

Llewelyn Heathcote
Technical Signatory
For Outeniqua Lab (Pty) Ltd.

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- The opinion column is an interpretation of the direct comparison between the quoted specification and the single test sample results obtained. The compliant (P), non compliant (I) and uncertain (U) opinion indicators are based on an approximate 95% level of confidence with reference to SAMM GUIDANCE 1, Issue 2 : 20 June 2007 Section 2.
- The uncertain (U) indicates that the test result is either equal to or is above / below the specified limit by a margin less than the measurement uncertainty; it is therefore not possible to state compliant (P) or non compliant (I) based on a 95% level of confidence with reference to SAMM GUIDANCE 1, Issue 2 : 20 June 2007 Section 2.
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Director: L Heathcote B-Tech. (Civil Eng.) & BSc Hons (Transport)

Appendix 4

DCP test data



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Registration No. 1999/062743/23

18 Clyde Street, Knysna : PO Box 964, Knysna, 6570

Tel: 044 3820502 : Fax: 044 3820503 : e-mail: iain@outeniqua.co.za

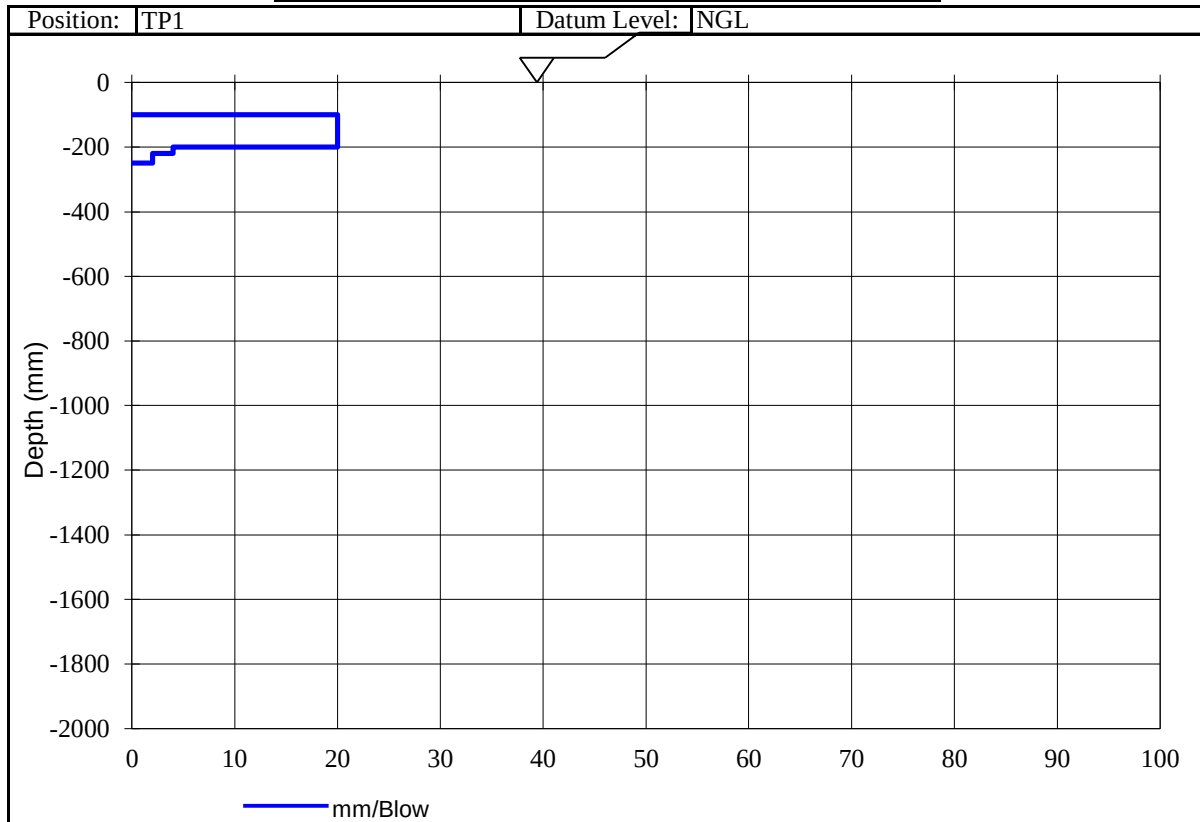
R-DCP-1-5

Dec-14

Customer :	Marike Vreken Town Planners 21 Trotter St Knysna 6570	Project :	Portion 502 of Vyf Brakke-Fontein 220, Mossel Bay
		Date Received :	29.08.18
		Date Reported :	10.09.18
		Req. Number :	
Attention :	Marike Vreken	No. of Pages :	1 of 15

TEST REPORT

Dynamic Cone Penetrometer (DCP) - (TMH 6 Method ST6)



I Paton (Member)
For Outeniqua Geotech. Services cc.
Technical Signatory

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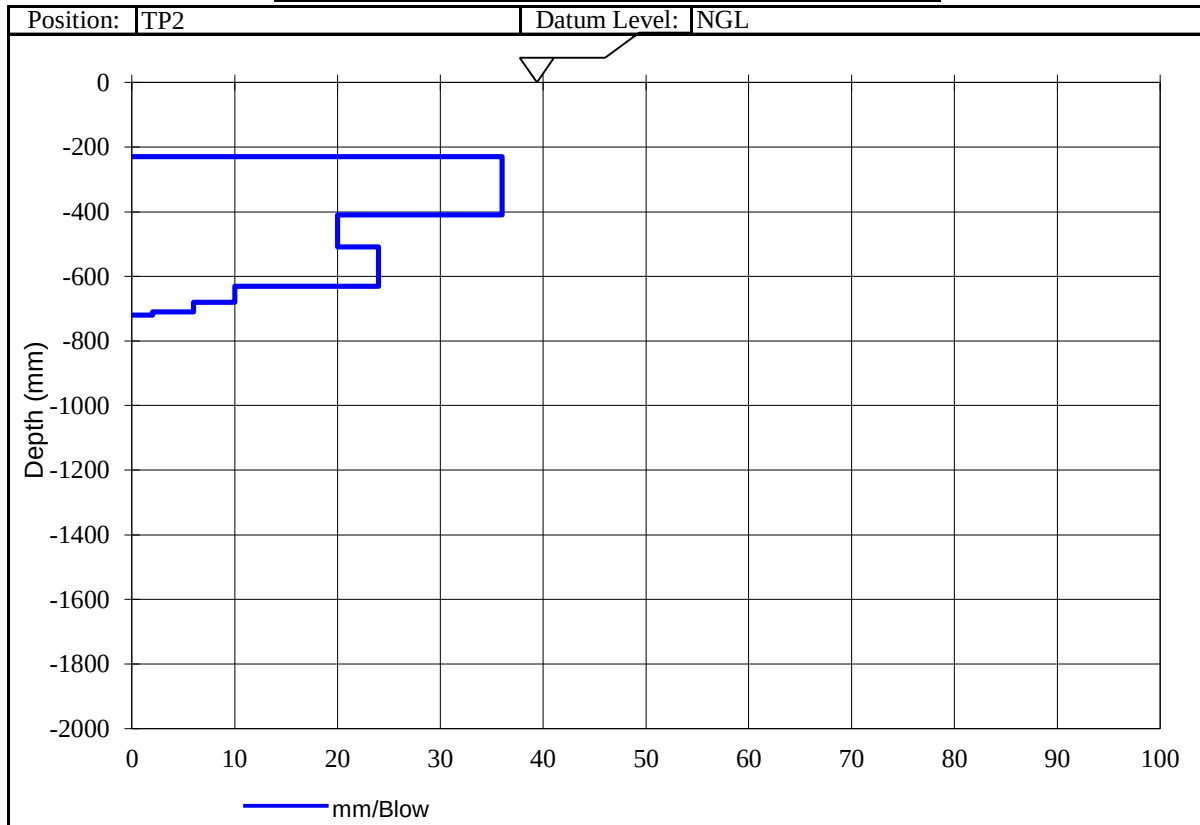
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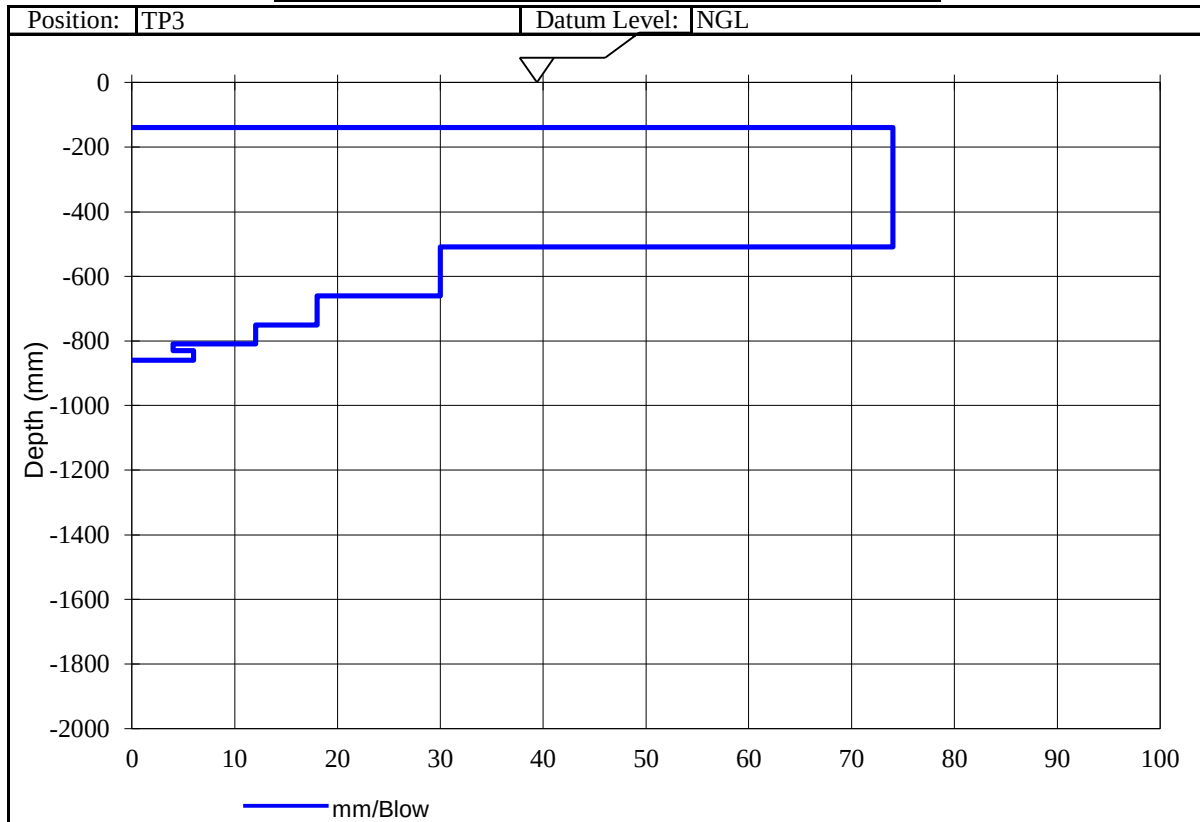
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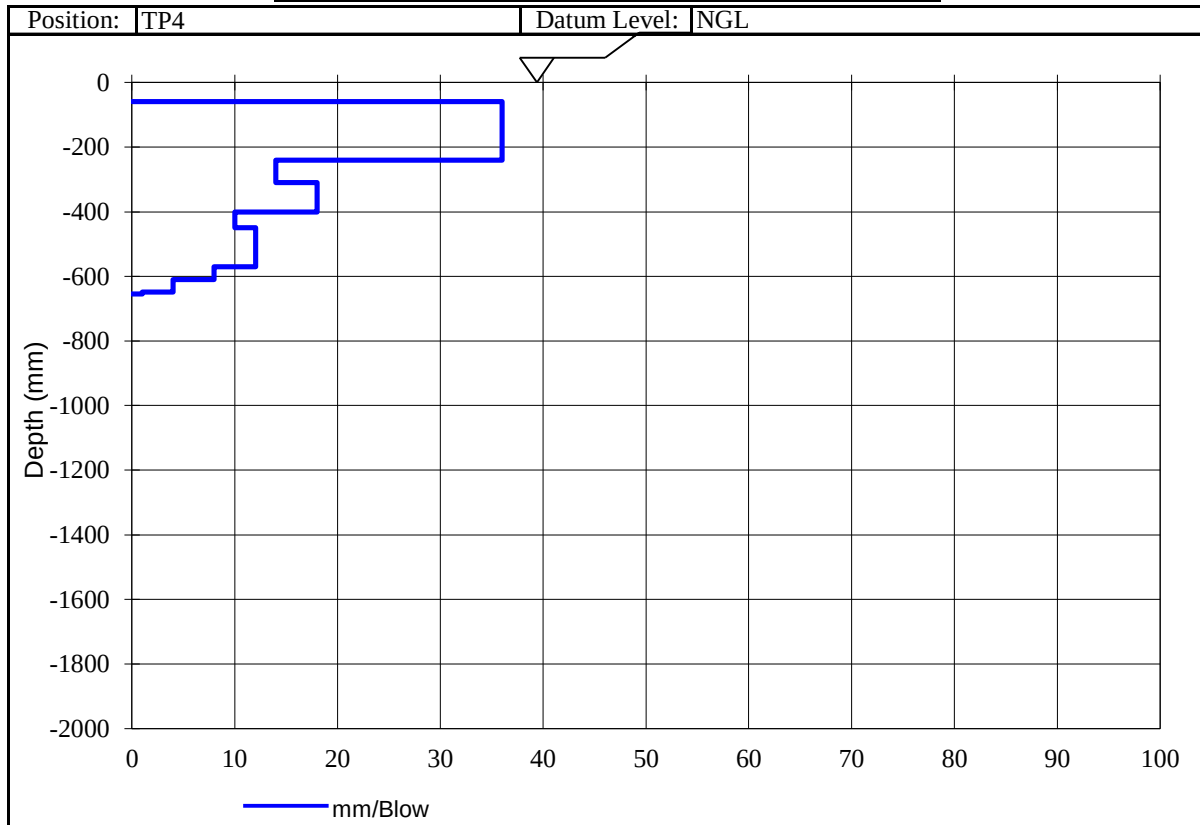
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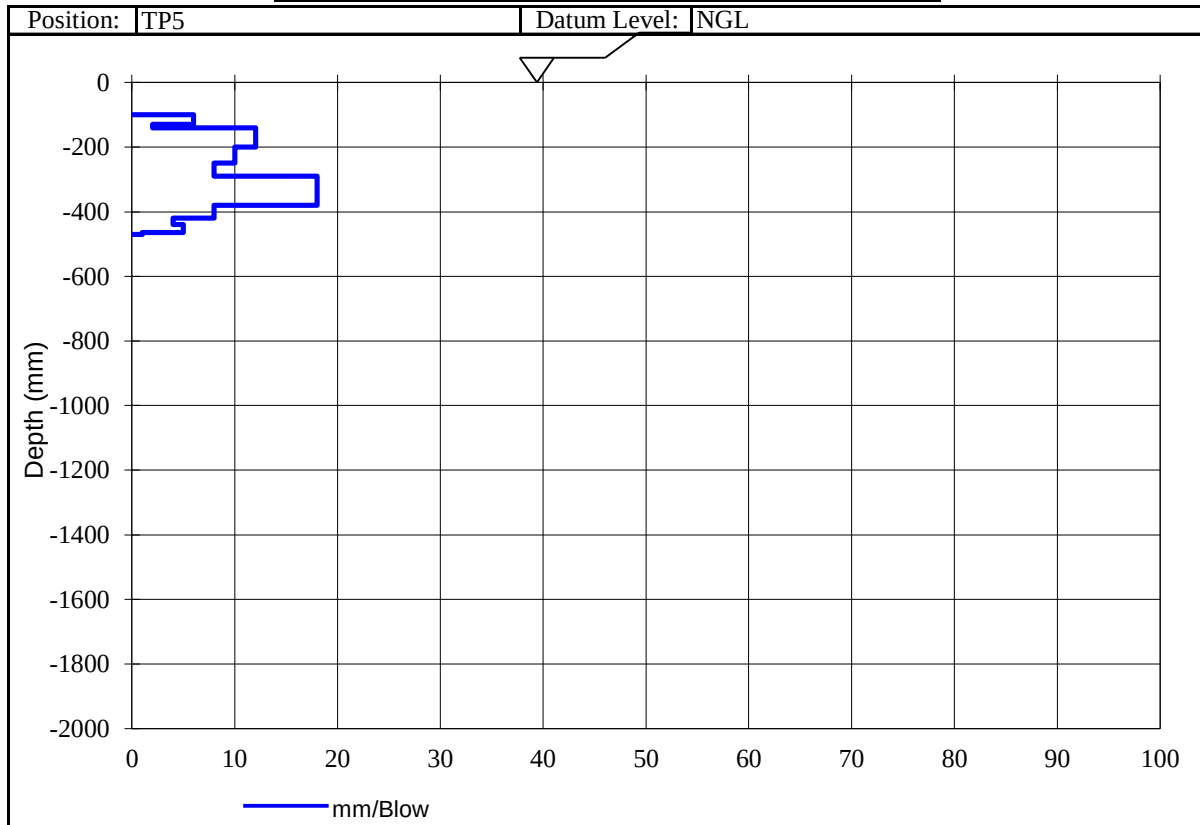
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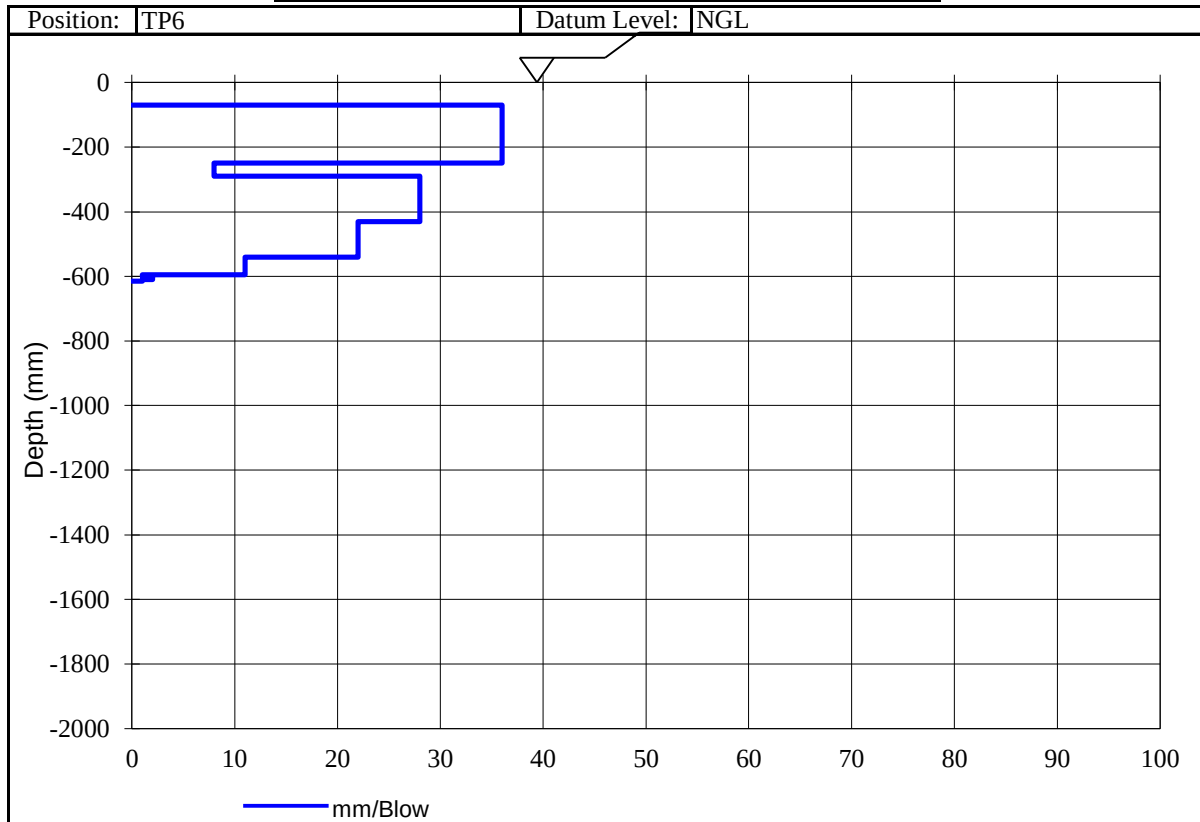
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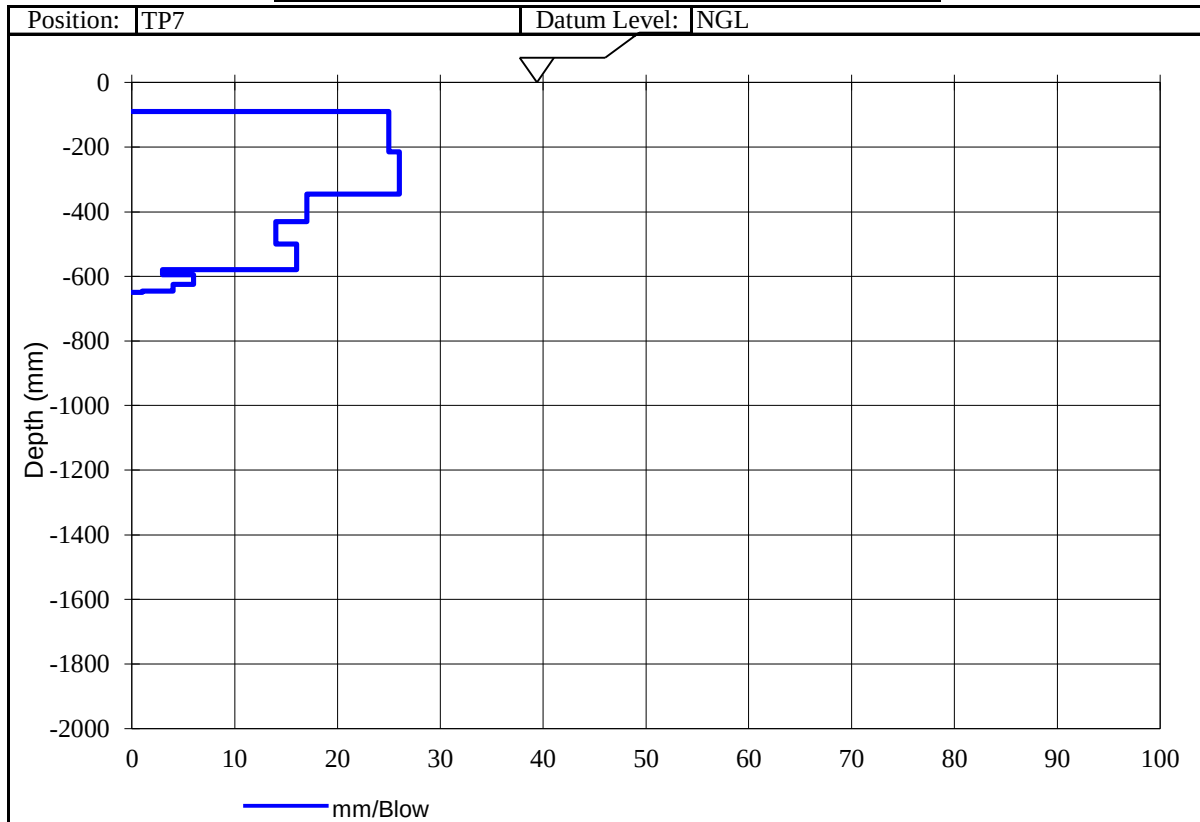
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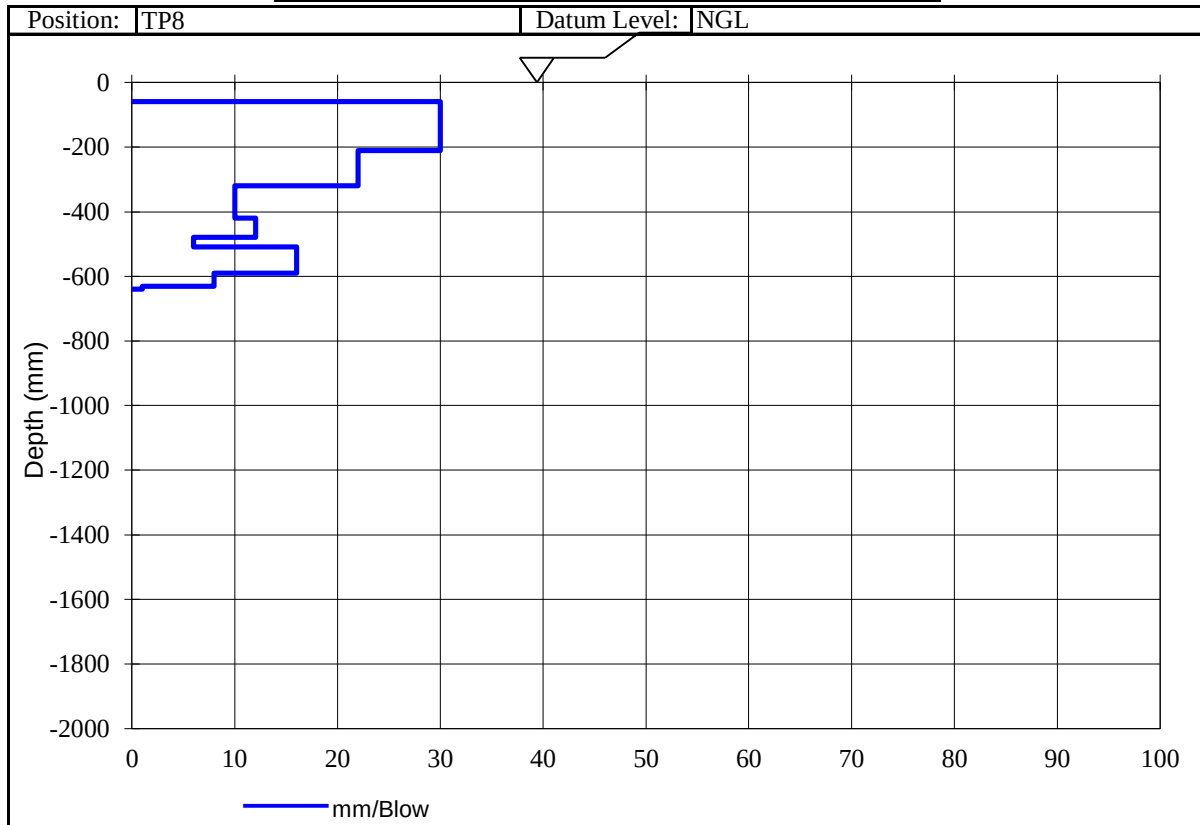
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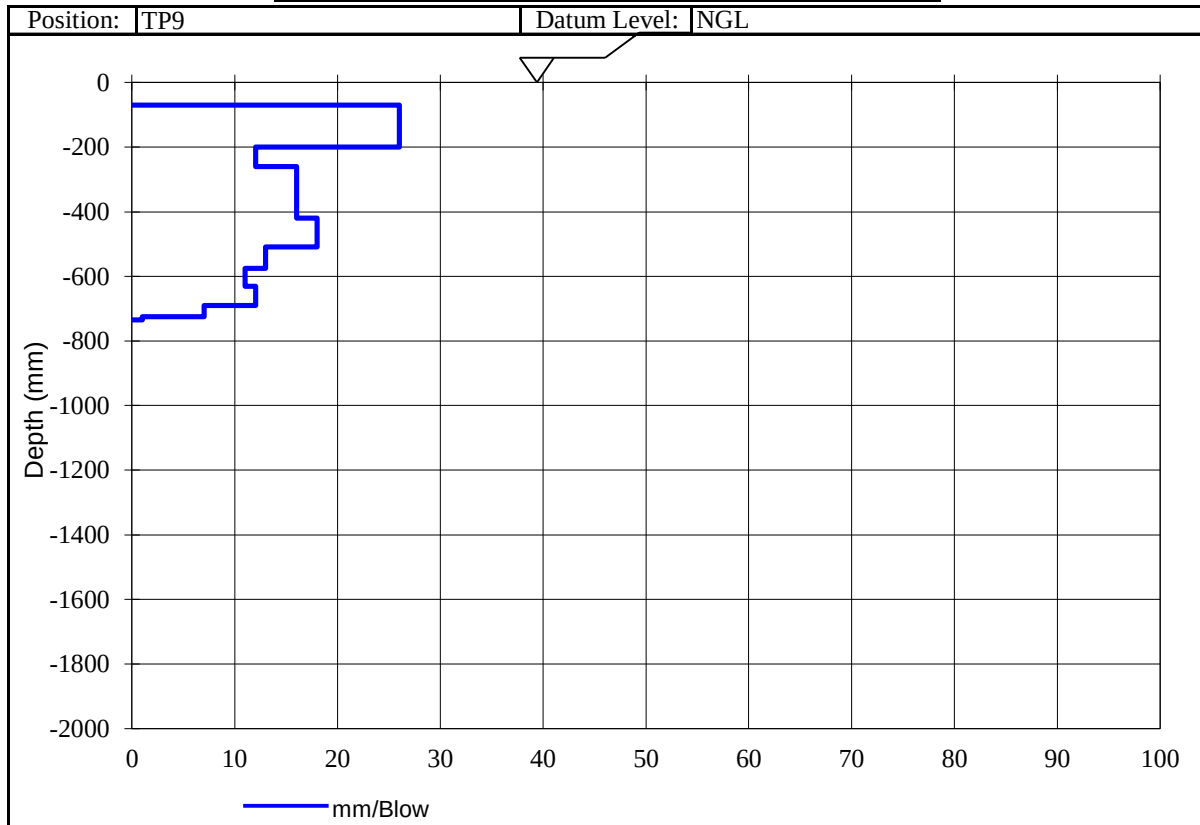
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Attention :	Marike Vreken	No. of Pages :	9 of 15

TEST REPORT

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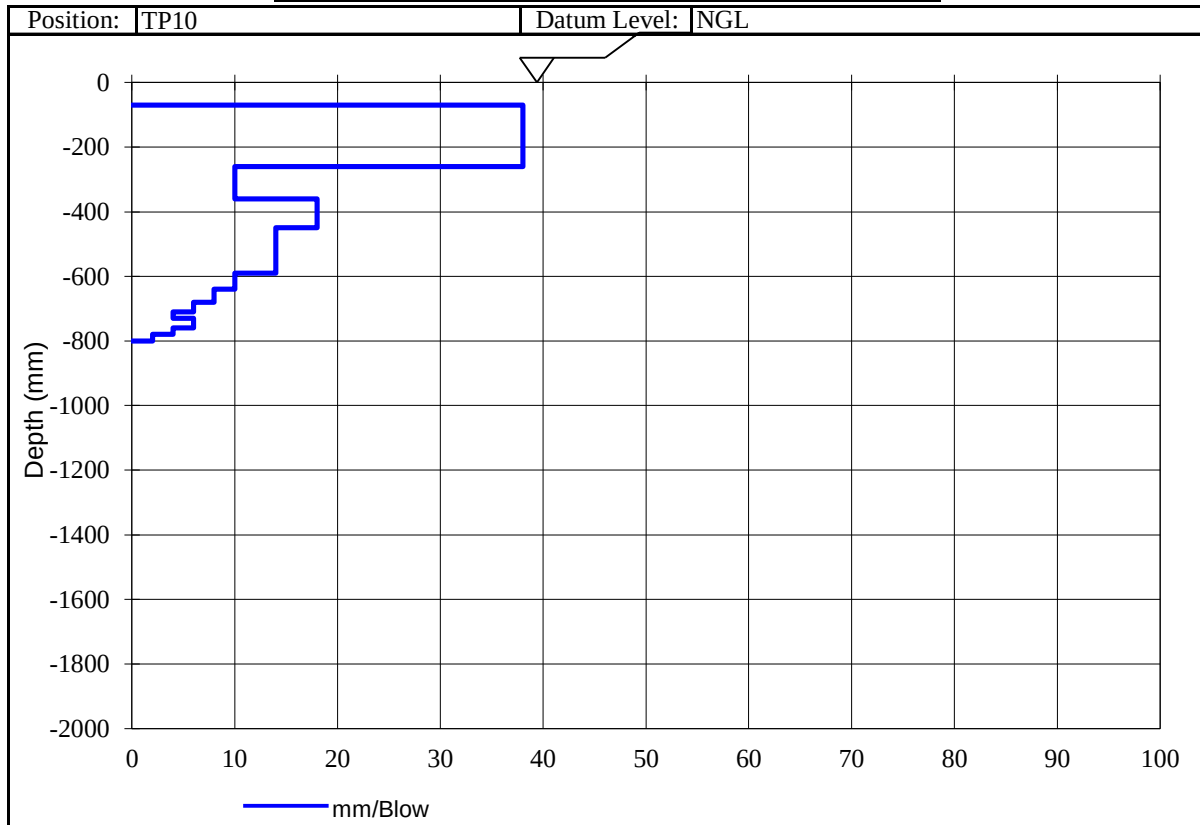
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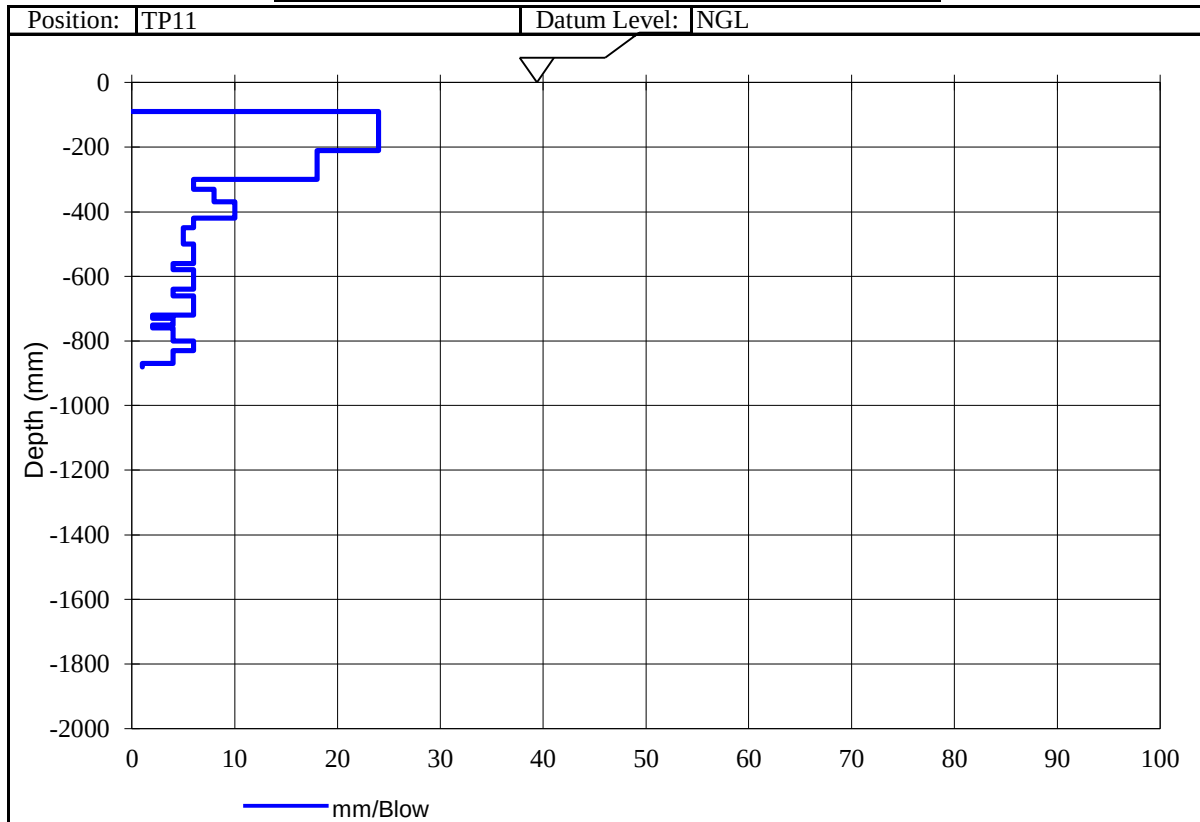
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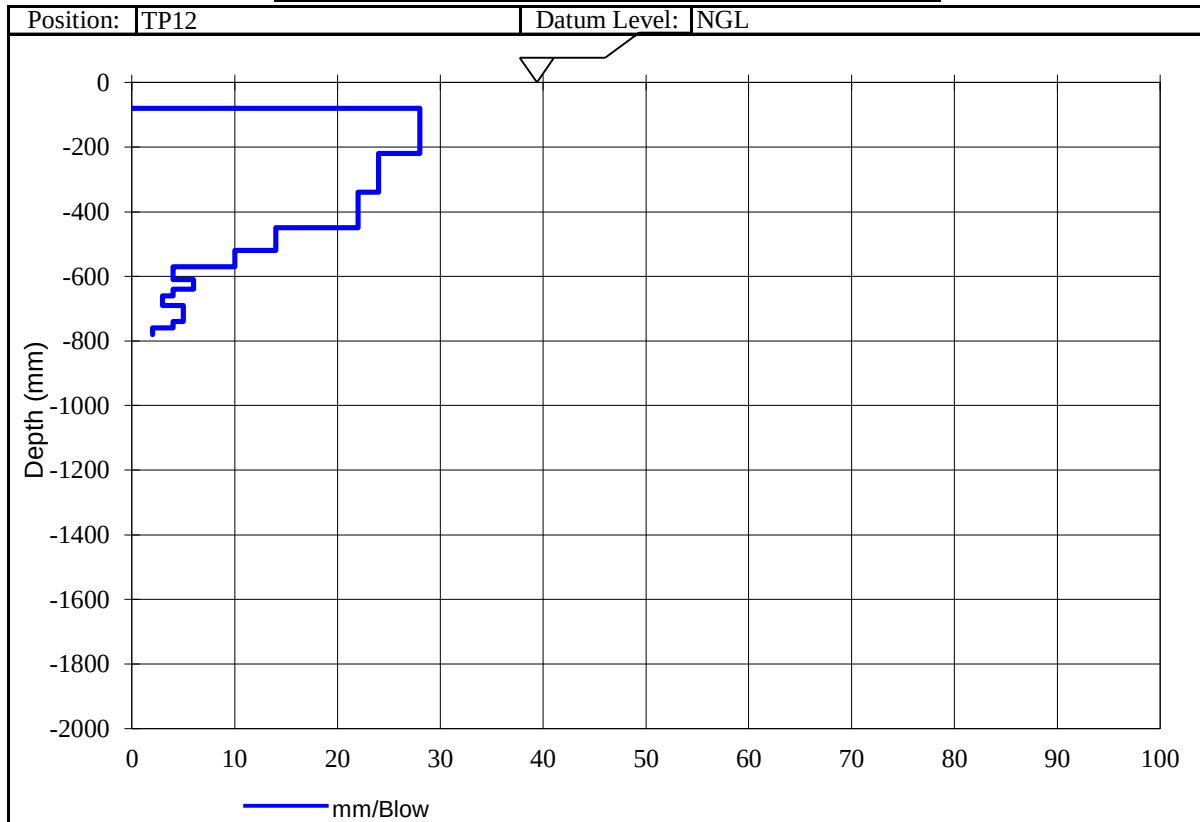
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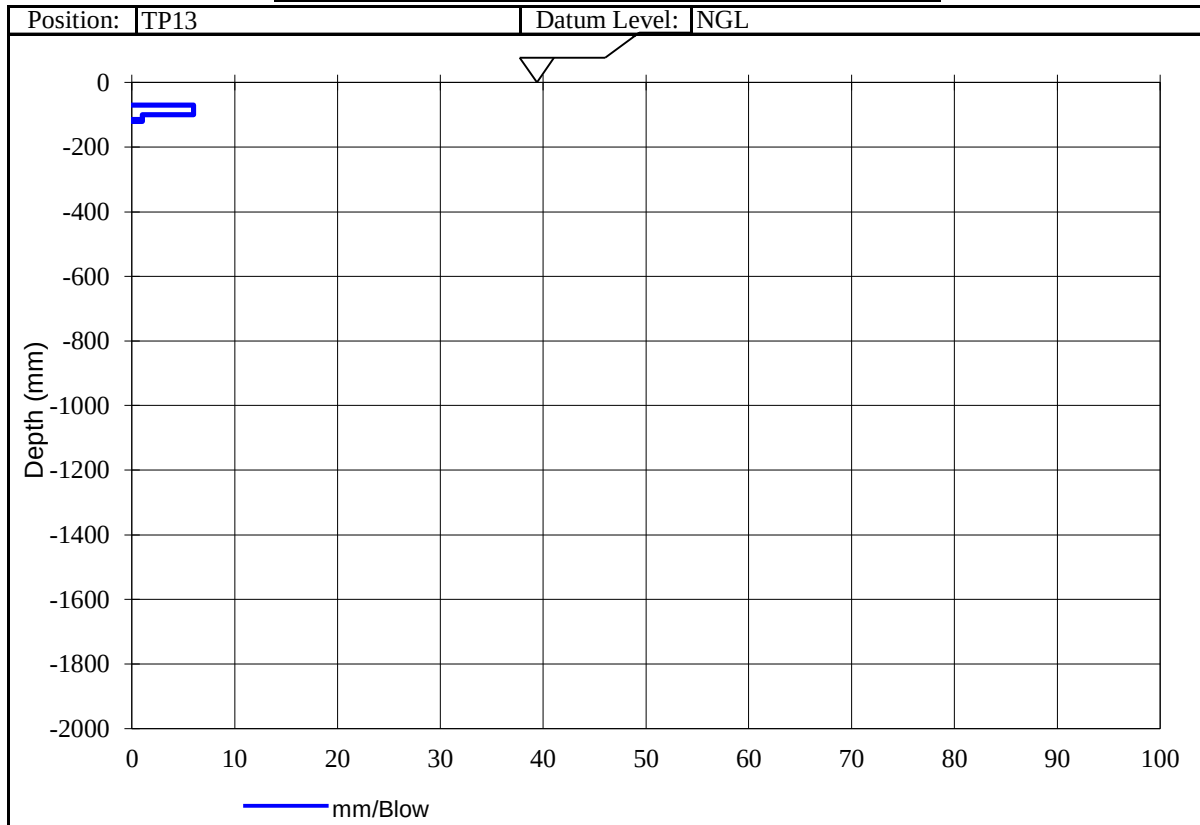
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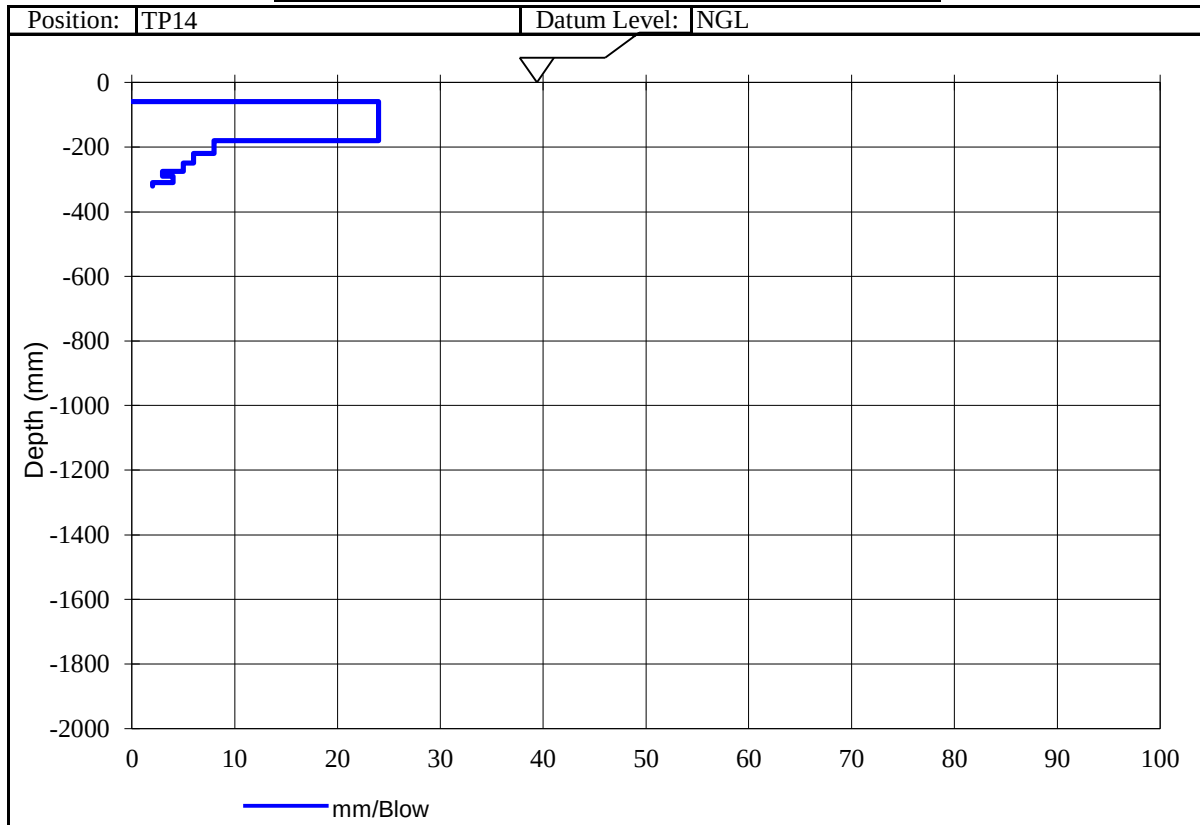
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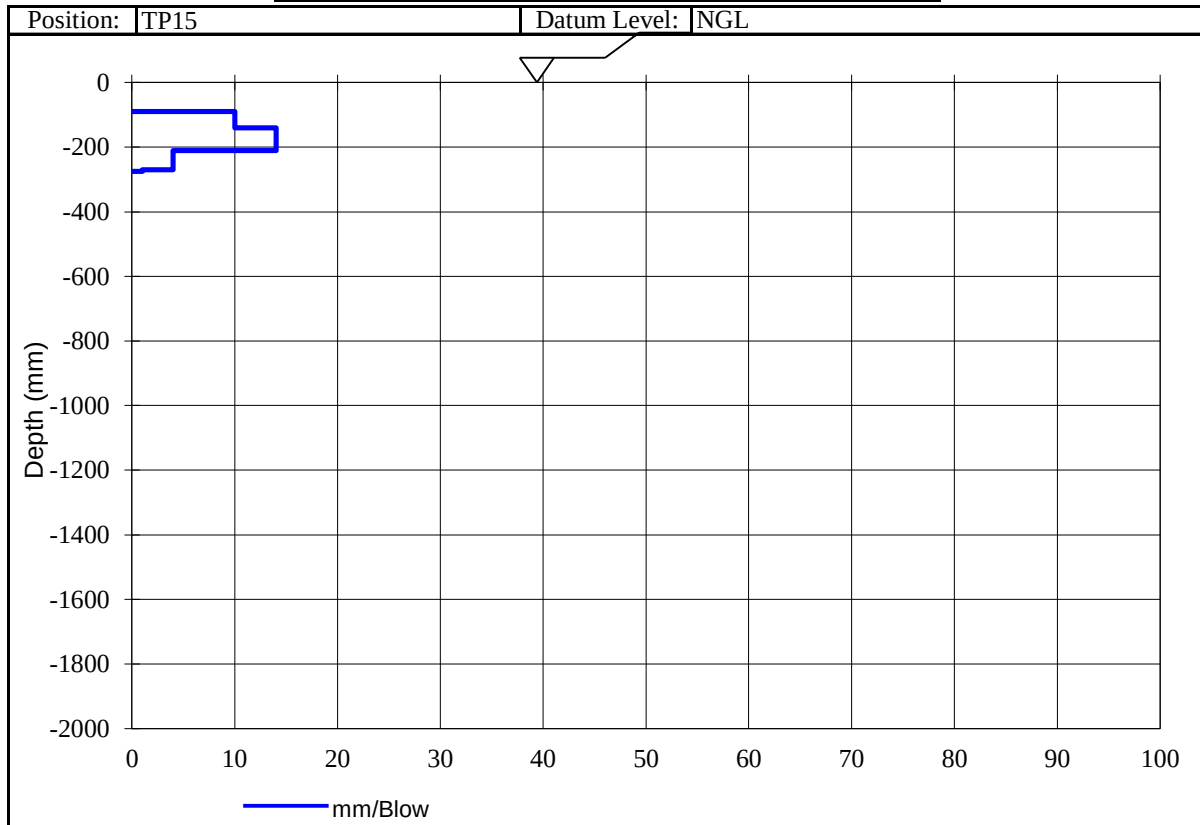
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Members: Iain Paton BSc Hons MEng Pr Sci Nat MSAIEG MSAICE

ANNEXURE R:

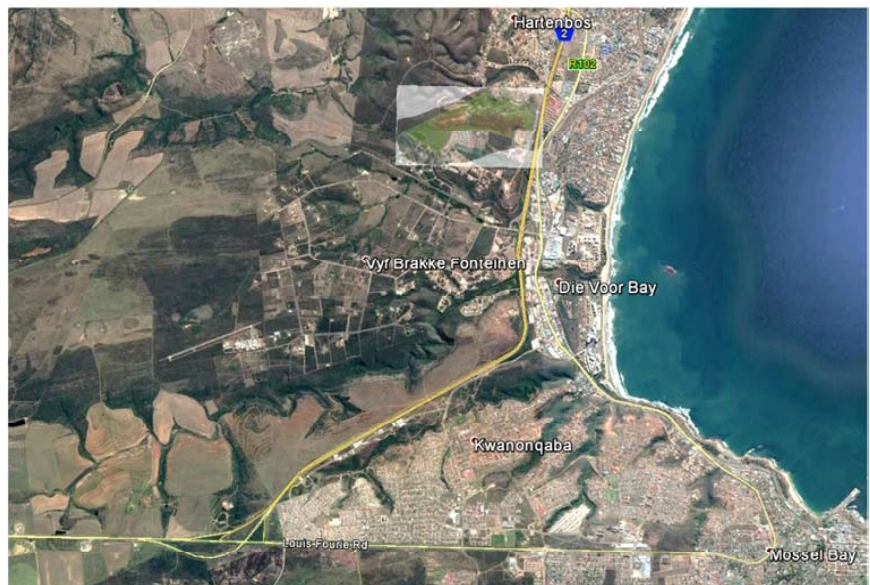
Transport Impact Assessment

Transport Impact Assessment

Renosterbos Estate , Mossel Bay

Western Cape

January 2018



5th Floor

Imperial Terraces

Carl Cronje Drive

Tyger Waterfront

Bellville, 7530

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SUMMARY SHEET

Report Type	Transport Impact Assessment
Title	Renosterbos Estate , Mossel Bay
Location	Western Cape
Client	Joa Da Nova Beleggings Pty (Ltd)
Reference Number	ITS 3784
Project Team	Christoff Krogscheepers Pieter Arangie
Contact Details	Tel: 021 914 6211
Date	January 2018
Report Status	Revision 1
File Name	G:\3784 Highlands Estate Residential Development, Mossel Bay\12 Reports\Issued\3784 Renosterbos Estate_TIA_Revision1_PA_2018-01-30.docx

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Report - Summary Table

This transport impact assessment is reported only in a summary table instead of a lengthy report to assist review and interpretation of the results. This summary table includes all the relevant information that is normally contained in a report. It should be sufficient for review and interpretation of the expected transport impacts as well as the comprehension of the required measures to mitigate the transport impact. If any more detail is required please contact the authors.

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Abbreviations

AMP	Access Management Plan
CM	Critical Movement
DR	Divisional Road
GLA	Gross Leasable Floor Area
HCM	Highway Capacity Manual
LOS	Level of Service
MOE	Measures of Efficiency
MR	Provincial Main Road
N2	National Route 002
OP	Minor Road (Ondergeskikte Pad)
RAP&G	Road Access Policy and Guidelines
SATGR	South African Trip Generation Rates
SDF	Spatial Development Framework
SDP	Sight Development Plan
SSD	Shoulder Sight Distance
STSD	Stopping Sight Distance
TIA	Traffic Impact Assessment
TIS	Traffic Impact Statement
V/C	Volume to Capacity Ratio

Transport Impact Assessment Renosterbos Estate , Mossel Bay, Western Cape	
1. Purpose of Assessment	The purpose of the study is to evaluate the expected transport impact associated with the proposed Renosterbos Estate development on the remainder of Farm VYF Brakke Fontein en no 220 in Mossel bay. The purpose of the study is to identify constraints within the surrounding road network and to recommend appropriate mitigation measures where applicable.
2. Locality <i>References:</i> (Figure 1)	Erf Number: Remainder of Farm VYF Brakke Fontein en no 220 in Mossel Bay, Western Cape. Description: The site is located in the hills of Hartenbos, approximately 1 km south of the town of Hartenbos and 5km north of Mossel Bay. The site is situated north and to the west of Wassenaar Street. Refer to Figure 1 for a Locality Plan
3. Land Use <i>References:</i> (Figure 2)	Existing Land Use: Undeveloped Property Proposed Land Use: Two alternatives were developed as part of the EIA process. Alternative 1 is the preferred layout and will be evaluated in this report. The total extent of this property is 53.6ha and the planned land uses will include the following: • Alternative 1 (Preferred): - o Group Housing 223 Units - o Apartments (Frail Care) 12 Units - o Local Business (Convenience Store) 900m² GLA • Alternative 2: - o Group Housing 180 Units - o Single Residential 283 erven Refer to Figure 2 for the Site Development Plan.
4. Existing Access	Access to the site is possible off Wassenaar Street along the eastern boundary of the property. The proposed access are discussed in more detail in Section 14 of this report.

5. Existing Roadways in Site Vicinity	<u>National Highway (N2)</u> is a Class 1 road with two lanes per direction and posted speed limit of 120 km/h, with shoulders and a median. <u>Louis Fourie Road (R102)</u> is a Provincial Trunk Road (TR33/01) with one lane per direction, with dedicated turning lanes. The posted speed limit along this road is 60 km/h in the site vicinity, with shoulders both sides of the road, no sidewalks and no kerbed median. <u>Boekenhout Avenue</u> is a Residential street with one lane per direction and posted speed limit of 60 km/h, gravel shoulders, no parking and no sidewalks. <u>Kameeldoring Avenue</u> is a municipal street with one lane per direction and posted speed limit of 60 km/h, with gravel shoulders, parking allowed and no sidewalks. <u>Wassenaar Street</u> is a municipal street with one lane per direction, with gravel shoulders, parking allowed and no sidewalks. Photos 1 to 4 in Annexure B shows the typical cross sections of these roads.
6. Analyses Hours	The proposed land uses mostly generate vehicle trips during weekday a.m. and p.m. peak hours. Hence, the following peak periods were included in the analyses: • Weekday AM Peak Hour (Surveyed peak hour 06:45 – 07:45) • Weekday PM Peak Hour (Surveyed peak hour 16:30 – 17:30)
7. Study Intersection	The following study intersections were included in this analyses: Int. 1: Louis Fourie Road (R102) / Boekenhout Avenue (Traffic Signal Controlled) Int. 2: Boekenhout Avenue / Doelen Drive (Two-Way Stop Controlled) Int. 3: Boekenhout Avenue / Kameeldoring Avenue (Priority Stop Controlled) Int. 4: Kameeldoring Avenue / Wassenaar Street (Priority Stop Controlled) Int. 5: Wassenaar Street / Access (Priority Stop Controlled)
8. Scenarios Analysed	2016 Existing Traffic Conditions (<i>Based on counted traffic volumes</i>) 2021 Background Traffic Conditions (<i>Traffic volumes were escalated by 3% per annum over 5 years</i>). 2021 Total Traffic Conditions (<i>Background Traffic volumes plus expected development trips</i>) Intersection analyses are based on the Highway Capacity Manual.

9. Existing Traffic Conditions (Figure 3 & 4)	Peak period traffic counts of the study intersections were undertaken on Thursday, 29 September 2016. The total two-way link volumes along the roads in the site vicinity, are as follows:		
	Road Name	AM Peak Hour	PM Peak Hour
	Louis Fourie Road – R102	1 285 vehicles	1 175 vehicles
	Boekenhout Avenue	492 vehicles	788 vehicles
	Kameeldoring Avenue	265 vehicles	289 vehicles
	Wassenaar Street	153 vehicles	176 vehicles
	Based on the summary above, it is evident that the peak hour traffic volumes along Louis Fourie Road are relatively high. The demand along Wassenaar Street is relatively low.		
The Existing Traffic operations are based on existing intersection geometries and controls shown on Figure 3 . The analysis results were confirmed with on-site observations. The existing capacity analyses results are illustrated in Figure 4 .			
Based on the results of the capacity analyses, the following are concluded:			
All study intersections currently operate at acceptable Levels-Of-Service (LOS) during average weekday a.m. and p.m. peak hours. The current transport network can accommodate the existing traffic demand, pedestrian movements and public transport demand. Hence, no upgrades are required for the Existing Traffic conditions, from an intersection capacity point-of-view.			
10. 2021 Background Traffic Conditions (Figure 5)	The 2021 Background Traffic volumes were calculated by adjusting the existing counted traffic volumes with a three (3) percent growth rate per annum over a five year period. The existing intersection geometries were used for the background Traffic analyses.		
	All the study intersections are expected to continue operating at acceptable levels-of-service at all study peak hours. The current transport network can accommodate the background traffic demand, pedestrian movement and public transport demand. Hence, no upgrades are required for the Background Traffic conditions, from an intersection capacity point-of-view. See Figure 5 for the 2021 Background Traffic conditions.		

11. Trip Generation (Figure 6)	The expected trip generation rates and expected development trips for this development were obtained from the South African Traffic Impact and Site Traffic Assessment Manual prepared by the Committee of Transport Officials (COTO), 2013 and the Institute of Transportation Engineers Trip Generation Rates. The following trip generation rates are recommended for the proposed development. <table><thead><tr><th>Land Use (Code)</th><th>a.m. peak</th><th>p.m. peak</th></tr></thead><tbody><tr><td>Group Housing (COTO231)</td><td>0.85 / Unit</td><td>0.85 / Unit</td></tr><tr><td>Apartments and Flats (COTO220)</td><td>0.65 / Unit</td><td>0.65 / Unit</td></tr><tr><td>Retail/Convenience Store (ITE820)</td><td>1.0/100m² GLA</td><td>3.7/100m²GLA</td></tr></tbody></table> See Figure 6 for the Trip Generation.	Land Use (Code)	a.m. peak	p.m. peak	Group Housing (COTO231)	0.85 / Unit	0.85 / Unit	Apartments and Flats (COTO220)	0.65 / Unit	0.65 / Unit	Retail/Convenience Store (ITE820)	1.0/100m ² GLA	3.7/100m ² GLA
Land Use (Code)	a.m. peak	p.m. peak											
Group Housing (COTO231)	0.85 / Unit	0.85 / Unit											
Apartments and Flats (COTO220)	0.65 / Unit	0.65 / Unit											
Retail/Convenience Store (ITE820)	1.0/100m ² GLA	3.7/100m ² GLA											
12. Development Trips (Figure 6)	Based on the trip rates in Section 11 above, the land uses for Alternative 1 shown in Section 3 of this report can generate the following trips during the typical weekday peak hours: The expected development trips are also illustrated graphically in Figure 6. <table><thead><tr><th>Peak Hour</th><th>In</th><th>Out</th><th>Total</th></tr></thead><tbody><tr><td>Weekday a.m.</td><td>55</td><td>151</td><td>206</td></tr><tr><td>Weekday p.m.</td><td>154</td><td>76</td><td>230</td></tr></tbody></table> Based on the trip rates in Section 11 above, the land uses for Alternative 2 shown in Section 3 of this report can generate approximately 400 vehicular trips during the typical weekday peak hours. This is almost 40 percent more than the estimated trips for the preferred Alternative 1 and it is expected that the transport impact for Alternative 2 will be higher than that of Alternative 1. For the purposes of determining the expected transport impact for the proposed development in this report, only Alternative 1 was evaluated. See Figure 6 for the Trip Distribution and Development Trips.	Peak Hour	In	Out	Total	Weekday a.m.	55	151	206	Weekday p.m.	154	76	230
Peak Hour	In	Out	Total										
Weekday a.m.	55	151	206										
Weekday p.m.	154	76	230										
13. Trip Distribution (Figure 7)	The following trip distribution was assumed: 35% of trips to/from the north along Louis Fourie Road (R102) 60% of trips to/from the south along Louis Fourie Road (R102) 5% of trips to/from the west along Boekenhout Avenue See Figure 6 for the Trip Distribution and Development Trips.												

14. Access to Site	Access is proposed via the existing access off Wassenaar Street along the eastern boundary of the property as illustrated on the SDP in Figure 2 in Annexure A.
15. 2021 Total Traffic Conditions (Figure 7)	The 2021 Total Traffic volumes were calculated by adding the expected trips to the Background Traffic volumes. The existing and future intersection geometries were used for the Total Traffic analyses. Based on these capacity analyses results, all study intersections will continue to operate at acceptable Levels-Of-Service (LOS) during both peak periods. The current transport network can accommodate the total traffic demand, pedestrian movements and public transport demand. Hence, no upgrades are required for the Total Traffic conditions, from an intersection capacity point-of-view. See Figure 7 for the 2021 Total Traffic conditions.
16. Parking	Based on The Department of Transport's Road Access Guideline the following parking ratios are typically applied by local authorities: • Group Housing - 2 bays per unit • Apartments - 1.5 bay per unit • Retail - 4 bays per 100m² GLA Based on these rates a total of 500 parking bays are required. However, the specific parking ratios need to be confirmed with the local authority in accordance with the local zoning scheme requirements.
17. Non-Motorised Transport and Public Transport	Existing: There are currently no existing sidewalk/walkways along any of the roads in the site vicinity. Future: No NMT facilities are recommended, because there are no existing facilities to connect to in the site vicinity. No public transport activity was observed along the roads in the site vicinity and it is not expected that the proposed development will generate a significant demand for public transport. Public transport activity was observed along the Louis Fourie Road, which is a major link road running north-south between Mossel Bay and Hartenbos. No dedicated public transport facilities are recommended for this development.

18. Conclusions
and
Recommendations

This report summarises an investigation of the transport impacts of the Renosterbos Estate development planned on the remainder of Vyf Brakke Fonteinen no 22 in Mossel Bay. The development includes group housing units, frail care units and a convenience store. Based on the findings in this investigation, the following are concluded and recommended:

Existing Traffic: All study intersections currently operate acceptably and no road upgrades are proposed.

Background Traffic: All study intersections will continue to operate acceptably with existing intersection geometries and no road upgrades are proposed.

Development Trips: 206 weekday a.m. peak hour trips (55 inbound/151 outbound) and 230 weekday p.m. peak hour trips (154 inbound/76 outbound).

Total Traffic: All study intersections will continue to operate acceptably with existing intersection geometry. The current transport network can accommodate the total traffic demand, pedestrian movement and public transport demand and no upgrades are required from an intersection capacity point-of-view.

Site Access: The proposed development will gain access to/from the larger road network via the existing access off Wassenaar Street along the eastern boundary of the property.

Parking: Based on the parking rates suggested in the RAG a total of 500 parking bays are required. However, it is recommended that the parking provision should be confirmed with the local authority in accordance with the local zoning scheme requirements.

Pedestrians and Public Transport: No NMT or public transport facilities are recommended for the proposed development.

Based on the above investigation, it is evident that the expected transport impacts from the planned development will be low and the existing road network and intersection geometries and controls can accommodate the proposed development, without any road improvements.

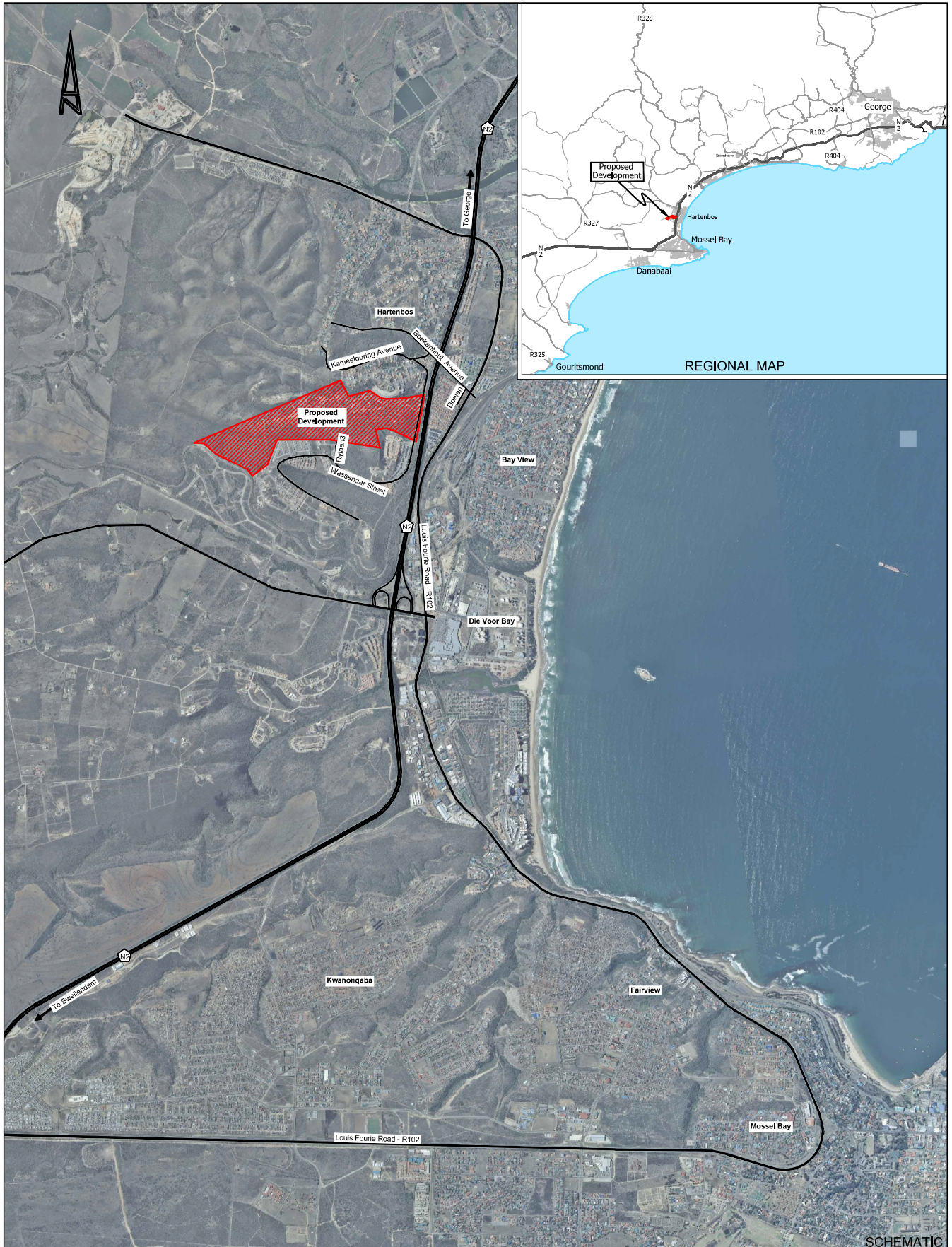
It is recommended that this development be approved, from a transport engineering point of view.

REFERENCES

- Provincial Administration: Western Cape, Department of Economic Affairs, Agriculture and Tourism: Transport Branch, Road Access Guidelines and Policies, 2002.
- Western Cape Government, Department of Transport and Public Works, Access Management Guidelines, July 2016
- Committee of Transport Officials, South African Traffic Impact Study Manual, TMH16, Version 1, 2012.
- Committee of Transport Officials, South African Trip Data Manual, TMH17, Version 1.01, 2013
- Institute of Transportation Engineers. Trip Generation Rates, 9th Edition. 2012
- Transportation Research Board. Highway Capacity Manual, Special Report No. 209. 2000

Annexure A

Figures

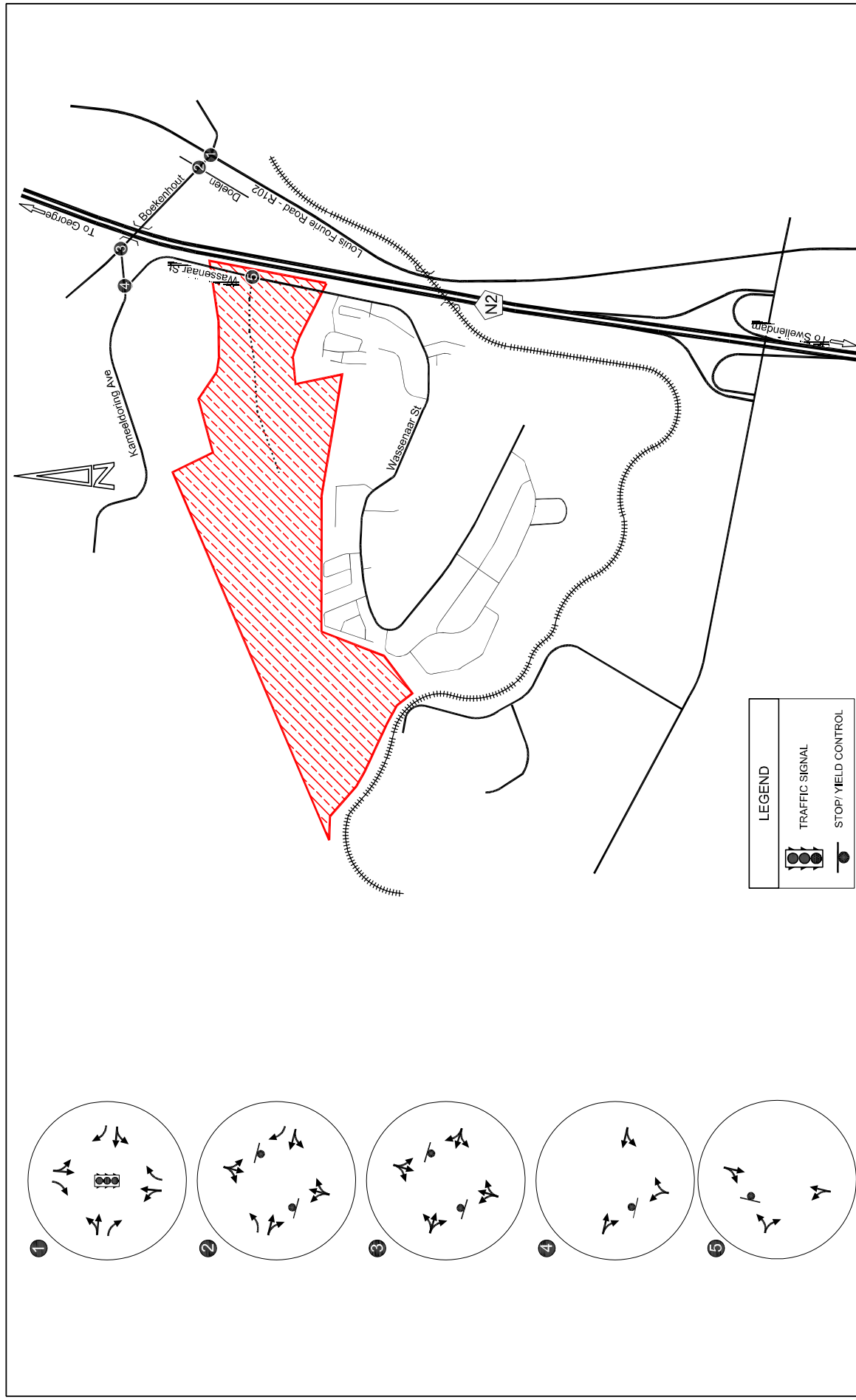


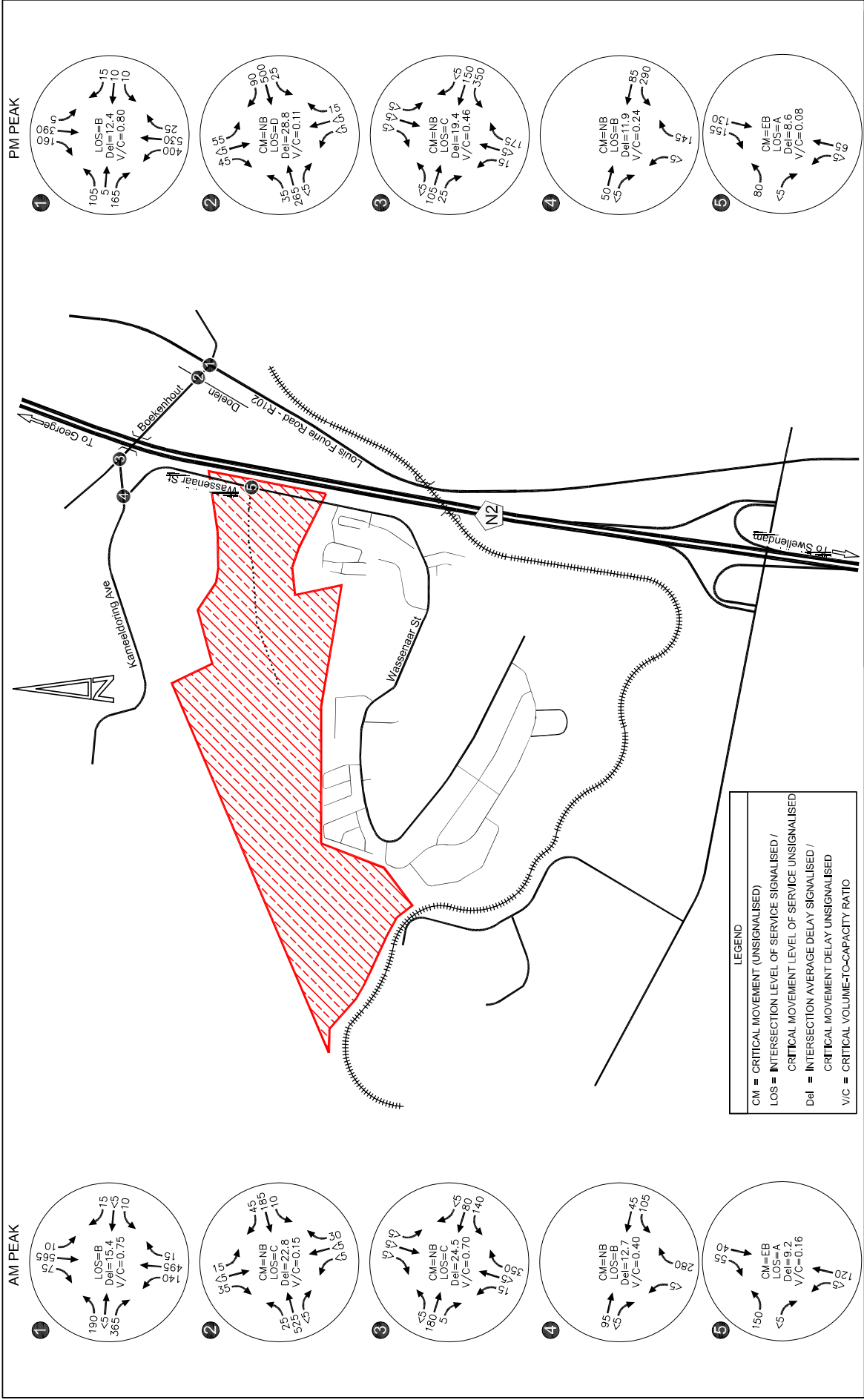
SCHEMATIC



PROJECT: HIGHLANDS LIFESTLYE VILLAGE, MOSSSEL BAY	FIGURE: LOCALITY PLAN	NUMBER: 1
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HIGHLANDS LIFESTYLE VILLAGE, MOSSEL BAY

2021 TOTAL TRAFFIC CONDITIONS
A.M. AND P.M. PEAK HOUR

NUMBER:
7

Annexure B

Tables

Table 1: 2016 Existing and 2021 Background Peak Hour Traffic Conditions Comparison

Intersection	2016 Existing Weekday						2021 Background Weekday					
	AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
R102 / Boekenhout Ave	B	11.2	0.55	A	7.1	0.48	B	15.1	0.50	B	11.1	0.58
Boekenhout Ave / Doelen Dr	B	14.9	0.08	C	17.4	0.05	C	16.2	0.10	C	19.2	0.07
Boekenhout Ave / Kameeldoring Ave	B	12.9	0.32	B	12.5	0.19	B	13.9	0.36	B	13.2	0.22
Kameeldoring Ave / Wassenaar St	A	10.0	0.15	A	9.9	0.08	B	10.2	0.17	B	10.1	0.09
Wassenaar St / Access Road	A	8.6	0.01	A	3.5	0.01	A	8.7	0.01	A	8.6	0.01

LOS – Level-of-Service, Delay in seconds per vehicle, V/C – Volume-to-capacity Ratio.

Data for Two-way Stop is for Critical Movement

Data for Signals & All-Way Stop is average of all approaches

Table 2: Proposed Trip Generation Rates

Land Use	Units	Source	Size/ Volume	Weekday AM Peak Hour		
				Rate	In	Out
Group Housing Units	Units	COTO231	223	0.85	25%	75%
Apartments/ Frail Care	Units	COTO220	12	0.65	25%	75%
Retail/Convenience Store	100m ²	ITE820	900m ²	1.00	62%	38%
				Weekday PM Peak Hour		
Group Housing Units	Units	COTO231	223	0.85	70%	30%
Apartments/ Frail Care	Units	COTO220	12	0.65	70%	30%
Retail/Convenience Store	100m ²	ITE820	900m ²	3.7	48%	52%

Table 3: Estimated Peak Hour Trips

Total Driveway Trips						
Land Use	Weekday AM Peak Hour			Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total
Group Housing Units	47	142	189	133	57	190
Apartments/ Frail Care	2	6	8	5	2	7
Retail/Convenience Store	6	3	9	16	17	33
Total Driveway Trips	55	151	206	154	76	230

Table 4: 2021 Background and Total Peak Hour Traffic Conditions Comparison

Intersection	2021 Background Weekday						2021 Total Weekday					
	AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
R102 / Boekenhout Ave	B	12.4	0.64	A	8.3	0.69	B	15.4	0.75	B	12.4	0.80
Boekenhout Ave / Doelen Dr	C	17.0	0.11	C	20.6	0.08	C	22.8	0.15	D	28.8	0.11
Boekenhout Ave / Kameeldoring Ave	B	14.6	0.39	B	13.7	0.24	C	24.5	0.70	C	19.4	0.46
Kameeldoring Ave / Wassenaar St	B	10.4	0.18	B	10.2	0.10	B	12.7	0.40	B	11.9	0.24
Wassenaar St / Access Road	A	8.7	0.01	A	8.6	0.01	A	9.2	0.16	A	8.6	0.08

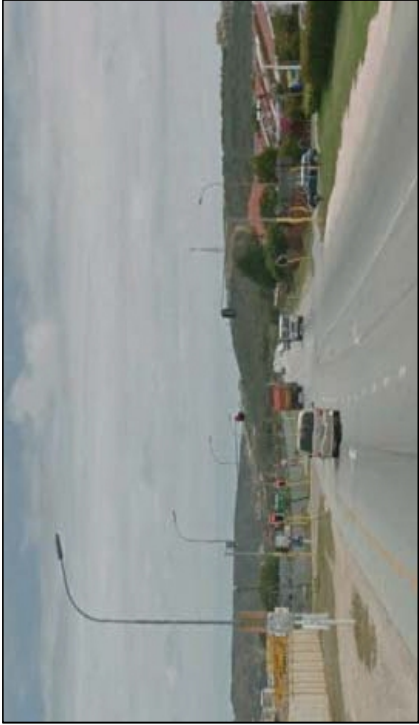
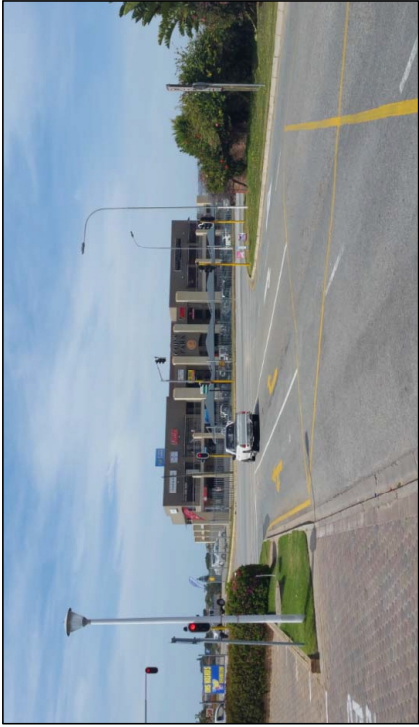
LOS – Level-of-Service, Delay in seconds per vehicle, V/C – Volume-to-capacity Ratio.

Data for Two-way Stop is for Critical Movement

Data for Signals & All-Way Stop is average of all approaches

Annexure C

Photographs

	
Photo 1: Southbound View along Louis Fourie Rd towards Boekenhout Ave	Photo 2: Eastbound View along Boekenhout Ave towards Louis Fourie Rd
	
Photo 3: Northbound Eastbound View along Kameeldoring Ave towards Boekenhout Avenue	Photo 4: Eastbound View along Kameeldoring Avenue towards Wassenaar Street

Annexure D

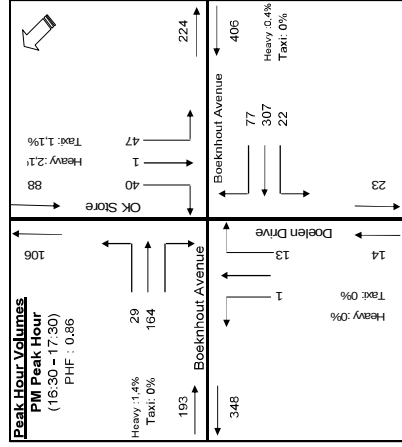
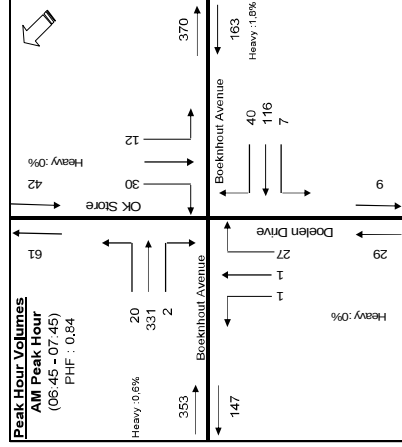
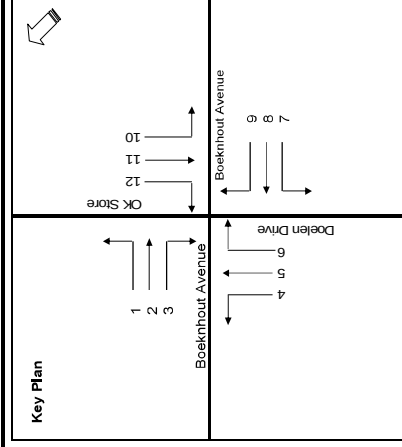
Traffic Information

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Boekenhout Avenue/Doelen Drive/OK Store

INTERSECTION:
 PERIOD: 2 hours 30 min AM; 2 hours PM
 DATE: 29-Sep-16

Area: Mossel Bay

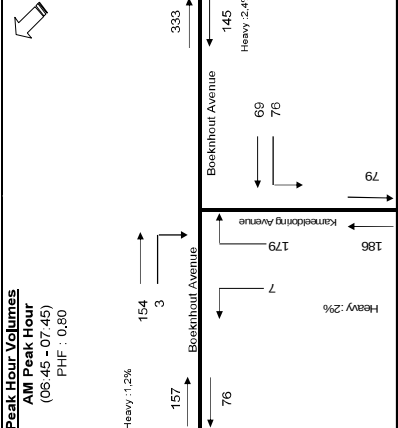
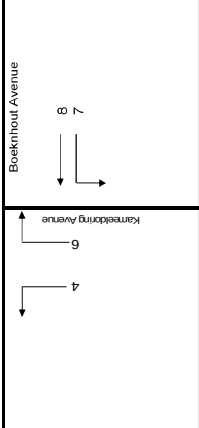
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		Traffic Movements												
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06:15	06:30													
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06:45	07:00	5	83				10	2	23	9			4	136
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07:45	08:00	3	74				5	5	14	6	11		2	150
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18:30	18:45													414
18:45	19:00													250
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EST. 24 HR														



TRAFFIC COUNT

INTERSECTION: Boekenhout Avenue/Kameeldoring Avenue/
 PERIOD: 2 hours 30 min AM; 2 hours PM
 DATE: 29-Sep-16
 Area: Mossel Bay

TIME		Total Traffic												Hourly Totals		
		Traffic Movements														
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06:15	06:30															
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15:15	15:30															
15:30	15:45															
15:45	16:00															
16:00	16:15		17	3	4				22	16	38				100	100
16:15	16:30		32	7	1				33	51	26				150	250
16:30	16:45		19	1	3				18	46	28				115	365
16:45	17:00		24	3	3				24	48	36				138	503
17:00	17:15		14	2	1				15	33	40				105	508
17:15	17:30		17	6	1				22	37	39				122	480
17:30	17:45		21	2	2				27	31	33				114	479
17:45	18:00		18	2	1				12	23	31				87	428
18:00	18:15															323
18:15	18:30															201
18:30	18:45															87
18:45	19:00															
TOTAL			467	37	32				546	435	421					1938
EST. 24 HR																



TRAFFIC COUNT

Boekenhout Avenue/Louis Fourie Road
2 hours 30 min AM; 2 hours PM
29-Sep-16

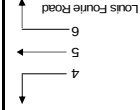
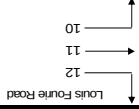
Area: Mossel Bay

INTERSECTION:
PERIOD:
DATE:

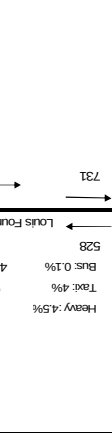
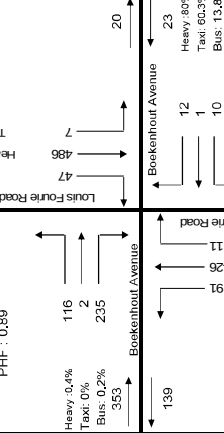
TIME		Total Traffic												Hourly Totals
		Traffic Movements												
Start	End	1	2	3	4	5	6	7	8	9	10	11	12	Total
06:00	06:15													
06:15	06:30													
06:30	06:45	25		59	4	85	1	1		2	1	86	7	271
06:45	07:00	30		49	17	108	5	2		4	3	119	16	353
07:00	07:15	39		48	17	102	1	2		4	2	139	15	369
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07:45	08:00	27	2	63	15	100	6	4		2	2	91	7	319
08:00	08:15	22	3	45	24	99	2	4	2			71	12	284
08:15	08:30	23	1	47	23	91	1	1			4	78	13	282
08:30	08:45	24	2	46	25	59	4	1	2	1	3	82	7	256
08:45	09:00	24	1	45	22	62	2	3		2	4	74	9	248
09:00	09:15													
09:15	09:30													
09:30	09:45													
09:45	10:00													
10:00	10:15													
10:15	10:30													
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18:00	18:15													
18:15	18:30													
18:30	18:45													
18:45	19:00													
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EST. 24 HR														



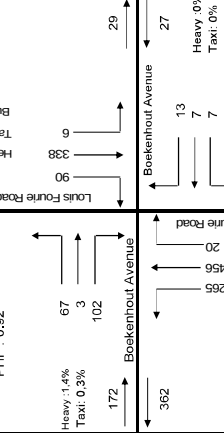
Key Plan



Peak Hour Volumes
AM Peak Hour
(06:45 - 07:45)
PHF : 0.89



Peak Hour Volumes
PM Peak Hour
(16:30 - 17:30)
PHF : 0.92

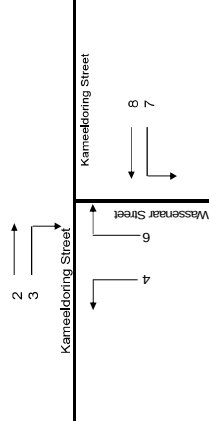


TRAFFIC COUNT

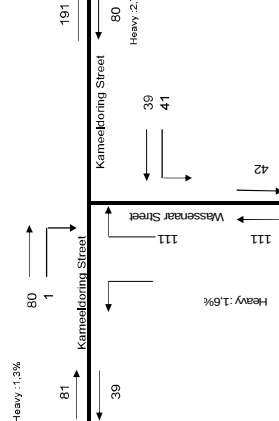
INTERSECTION: Kameeldoring Street/Wassenaar Street/
 PERIOD: 2 hours 30 min AM; 2 hours PM
 DATE: 29-Sep-16
 Area: Mossel Bay

TIME		Total Traffic												Hourly Totals	
		Traffic Movements												Total	
Start	End	1	2	3	4	5	6	7	8	9	10	11	12	Total	
06:00	06:15														
06:15	06:30														
06:30	06:45		17												52
06:45	07:00		23					29	4	2					68
07:00	07:15		14	1				30	7	8					120
07:15	07:30		18					31	10	12					188
07:30	07:45		25					21	12	7					88
07:45	08:00		20					29	12	12					246
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08:30	08:45		20		1			11	8	7					238
08:45	09:00		18	1				24	9	2					39
09:00	09:15							14	8	8					219
09:15	09:30														186
09:30	09:45														144
09:45	10:00														105
10:00	10:15														49
10:15	10:30														
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15:45	16:00														
16:00	16:15		10	2	1			13	13	8					47
16:15	16:30		14	1	1			22	36	22					96
16:30	16:45		11		1			10	27	20					69
16:45	17:00		6					16	29	18					69
17:00	17:15		13					9	24	13					59
17:15	17:30		11		1			14	31	16					293
17:30	17:45		17		1			14	22	11					73
17:45	18:00		3					8	14	8					65
18:00	18:15														33
18:15	18:30														230
18:30	18:45														171
18:45	19:00														98
TOTAL			265	5	8			329	290	184					33
EST. 24 HR															
														</	

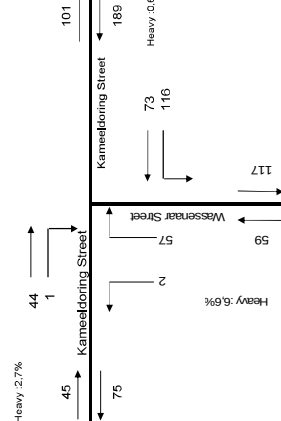
Key Plan



Peak Hour Volumes AM Peak Hour (06:45 - 07:45) PHF : 0.87



Peak Hour Volumes PM Peak Hour (16:15 - 17:15) PHF : 0.76



Mossel Bay Municipality
101 March Street
Mossel Bay
7701

Tel: 044 606 5252
Email: pmyburgh@mosselbay.gov.za
13 July 2018

Our Reference: 3784

Attention: Mr Pieter Myburgh

HIGHLANDS ESTATE RESIDENTIAL DEVELOPMENT (Farm No 220), MOSSEL BAY

We refer to your comments regarding the recommendations in our Transport Impact Assessment (TIA) dated January 2018. Highlands Estate was also previously referred to as Renosterbos Estate in Mossel Bay and is located on Farm no 220. Your comments were also discussed during a meeting on 29 June 2018 in your offices in Mossel Bay. Herewith we would like to confirm the outcomes of the discussion:

1. Wasseenaar Street is too narrow. Should be widened to 2 x 3.4m lanes

It was agreed that Wasseenaar Street should be widened and a sidewalk should be added and that this be done as follows:

- Widen Wasseenaar Street to the south (lower side) between 800mm and 1m to effect a total surfaced width of 6.8m. The road has a cross fall over its total width from the higher side on the north to the lower side on the south. The widening will not require any changes due to stormwater accommodation.
- Reseal the entire width of the road between Kameeldoring Street and the proposed access position of the access to the development. This section of approximately 440m is illustrated in Figure 1.
- Construct a 1.2m sidewalk on the northern side of the road including a barrier kerb separating the travel way from the pedestrians.
- The approximate costs of these improvements are as follows:

THINKING GLOBAL, ACTING LOCAL

Directors: MC Ntuli (Chairman), JL Coetzee Pr Eng (Managing), Dr P Pretorius Pr Eng,
Dr JC Krogscheepers Pr Eng, Mrs LC Pretorius Pr Eng
Registration No: 2001/027 205/07

Elements	Cost
Sidewalk	R 290 000
Kerb	R 110 000
Widening	R 330 000
Seal	R 110 000
Fees and Contingencies	R 160 000
Total	R 1 000 000



Figure 1: Section of Wassenaar Street to be upgraded

The current traffic volumes along Wassenaar Street are in the order of 1 500 to 1 600 vehicles per day. Based on the trip generation rates in the TIA which reflects a conservative scenario, i.e. maximum number of trips for testing the capacity of road network, the development will be generating approximately 200 trips per hour or 2 000 vehicles per day. Most of these vehicles will be travelling along Wassenaar Street. However, the development will most probably be a mix between group housing and retirement housing which would indicate a lower trip generation rate than what was used in the TIA. Also when comparing the proposed 220 units with the number of units currently getting access via Wassenaar Street, it is evident that the proposed development will generate fewer trips along Wassenaar Street than the existing developments.

The areas served by Wassenaar Street is also not fully built-out which means that the 1 600 trips per day as a result of other development will be much higher. For these reasons it is estimated that the proposed Highlands Estate will not generate more than 40% of the daily trips along Wassenaar Street. Therefore it is our opinion that the development needs to contribute 40% towards the costs of the widening and upgrading of Wassenaar Street. Therefore, the developers of Highlands Estate should contribute 40%, i.e. R 400 000 towards the upgrade of Wassenaar street.

Based on the municipality's Development Contribution Model, the proposed development will need to contribute approximately R 370 000 as a contribution for bulk services related to roads and stormwater. These funds should be used towards the upgrade of Wassenaar Street and setting off the cost of R400 000.

2. NMT of public transport facilities should be provided

A sidewalk of 1.2m as stated above in item 1 will be provided along Wassenaar Street and should also be extended along the access to the development, i.e. between Wassenaar Street and the security access point. The portion of the sidewalk along the access road should be funded by the developer.

3. Alternative access via Aalwyndal Road should be considered

The area in which the proposed development is located is constrained with only one access road linking the area to the wider road network, i.e. via Boekenhout Avenue which links across the N2 to Louis Fourie Road. To improve access to the area, both for current and future connectivity and mobility it is recommended that alternative access options be investigated and that the most feasible option be taken forward by the municipality for eventual construction. Three alternative alignments for access were identified and are possible and these are (Refer to Figure 1 in Appendix A):

- Alternative A: Links Wassenaar Street to Aalwyndal Road.
- Alternative B: Wassenaar Street will be extended to Aalwyndal Road.
- Alternative C: Links Kameeldoring Avenue to Aalwyndal Road.

4. Incorporate Taxi/Bus embayments to both sides of the road

The location of the access to the proposed development could be as much as 200m from Wassenaar Street. Providing public transport facilities along Wassenaar Street may not serve the purpose of the employees and visitors to the development making use of public transport. Therefore, it is recommended that parking for public transport is provided at or near the entrance to the Estate. This parking should specifically be allocated as pick up and drop off zones for minibus taxis.

We hope the above adequately addresses your comments and is a true reflection of our discussion in our last meeting. Please do not hesitate to contact us should you have any queries in this regard.

Yours sincerely,



J. Christoff Krogscheepers, Pr. Eng, Ph.D. (UND), MITE

Director for ITS

Appendix A



SCHEMATIC

PROJECT:	Highlands Estate TIA	FIGURE:	Alternative Routes	NUMBER:	1
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ANNEXURE S:

Pre-application Form



PRE-APPLICATION FORM FOR LAND DEVELOPMENT

Mossel Bay Municipality
Tel No: +27(44) 606 5000

Directorate: Planning & Integrated Services
Email: admin@mosselbay.gov.za and
dtruter@mosselbay.gov.za

KINDLY NOTE:

- This Pre-Application form **must** be submitted prior to the submission of a Land Use Application in terms of Section 15 of the Mossel Bay Municipality: By-Law on Municipal Land Use Planning, 2015.
- The applicant will be informed if a pre-application consultation will be required in terms of Section 37 of the said By-Law after receipt of this application form.

PART A: APPLICANT DETAILS

NAME: Marike Vreken Town & Regional Planners

EMAIL: info@vreken.co.za / marike@vreken.co.za

TEL/CELL: 0443820420 / 0829275310

PART B: PROPERTY DETAILS

Erf Number(s): REMAINDER OF THE FARM VYF BRAKKE FONTEINEN NO 220

Suburb & Town: Hartenbos, Mossel Bay Municipality

Current Zoning: Subdivisional Area

Name of Registered owner(s): JOAO DA NOVA BELEGGINGS PTY LTD

Are there existing buildings on the subject property(ies)?		No
Are there any existing unauthorized buildings and/or land use on the subject property(ies)?		No
If yes, is this application to legalize the building/ land use?		No
Are there any pending court case(s)/ order(s) relating to the subject property(ies)?		No
Are there any land claim(s) registered on the subject property(ies)?		No

PART C: WHAT LAND USE PLANNING APPLICATIONS ARE REQUIRED IN TERMS OF SECTION 15 OF THE MOSSEL BAY BY-LAW ON MUNICIPAL LAND USE PLANNING, 2015?

Rezoning	Subdivision	Removal of restrictive conditions	Consent use
Permanent Departure	Consolidation	Closure of public place	Rectification/ disestablishment of HOA
Temporary Departure	Amendment of condition(s) of approval	Extension of validity period of approval	X Amendment/cancellation of approved subdivision plan

	Determination of a zoning		Occasional use	X	Permission in terms of zoning scheme		Permission in terms of condition of approval
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PART D: DETAILS OF PROPOSAL

Brief description of proposal **only** (A detailed written motivation will only be required with the submission of the Land Use Planning Application):

The application area is located between Hartenbos Heuwels and Mossel Bay, west of the Bay View residential area and west of the N2 National Road. Menkenkop is located to the north of the application area and Seemeeupark is located to the south of the application area. The application area is situated in the hills of Hartenbos, approximately 2km west of the Indian Ocean and approximately 1km west of the town of Hartenbos. The application area borders the N2 National Road, which runs approximately 200m from the eastern boundary of the property. The coordinates for the centre of the property is 34° 7'59.35"S and 22° 5'35.16"E. The Langeberg Mall is situated south-east of the subject property. Voorbaai Train Station is directly east of the subject property.

Mossel Bay Municipality granted approval for the rezoning of Remainder of the Farm Vyf Brakke Fonteinen No. 220 to 'Subdivisional Area' and the subdivision of the farm into (86) x Single Residential Erven; (7) x Group Housing Erven; (4) x Private Open Space Erven and (1) x Public Road, refer to a copy of the land use approval. Mossel Bay Municipality then confirmed during August 2015, that the approved rights are valid until 13 December 2018.

During May 2019, Mossel Bay Municipality granted extension of the validity period in respect of the rezoning and subdivision of Remainder of the Farm Vyf Brakke Fonteinen No. 220 until **21 August 2020**.

The property owners applied for the extension of the approval as they wished to amend the approved layout, but the amendment also entailed an application to amend the environmental authorisation. The owners were concerned that there won't be a decision on the environmental application, before the lapsing of the planning approval. In order to prevent the lapsing of the subdivision the owners applied to extend the validity period of the approval.

That being said, during March 2019 Department Environmental Affairs & Development Planning (DEA&DP) granted the addendum to the Environmental Authorisation for the proposed rezoning and development of the Remainder of the Farm Vyf Brakke Fonteinen No. 220.

Remainder of the Farm Vyf Brakke Fonteinen No. 220 has a valid Environmental Authorisation - Record of Decision issued by the Department of Environmental Affairs and Development Planning during March 2019. The amended Environmental Authorisation is valid until **6 October 2019** (an extension has been applied for; a decision is pending).

With the new amended Environmental Authorisation, a new planning application for the amendment of the current approved subdivision plan has to be submitted. Given a change in market circumstances and a need for more affordable, middle income housing in Mossel Bay, the owners of the land decided to amend the development proposal, to allow for more affordable and a higher density residential development. Since the application area is already zoned as 'Subdivisional Area' it will be necessary to apply for the amendment of the approved subdivision plan on the Remainder of the Farm Vyf Brakke Fonteinen No. 220.

The amended development proposal consists of the following uses:

- Development of (224) General Residential Zone I Erven (Group Housing);

- One (1) of the General Residential Zone I Erven will have a consent use (Retirement Resort) to accommodate a frail care / assisted living facility;
- (1) Business Zone III Erf to accommodate a neighbourhood shop.
- Provision of large private open spaces (approximately 34,76ha): the large green belt along the southern boundary and along the northern-eastern boundary will provide the residents with ample open spaces.
- A private road with a road reserve of 16m and 10m wide.
- Access to the proposed development will be via the existing public road, Wassenaar Street, which runs along the eastern boundary of the property.

As for the amendment to the approved subdivision plan (layout); the actual change is an increase of (13) additional erven with the inclusion of the frail care / assisted living unit (a maximum of 12 single bedrooms) and the neighbourhood shop.

It should be noted that during the application for extension (which was granted in May 2019) the following information was requested by the municipality:

- Confirmation should be obtained from all Technical Departments that the relevant Bulk Services area still available.
- That a full Geological Technical Study should accompany the application.
- Ensure that the Environment approval is still valid.

The necessary information was obtained and provided to the municipality, as they used the information to consider the application for extension, which they granted.

PART E: ATTACHMENTS AND SUPPORTING INFORMATION AND DOCUMENTATION FOR LAND USE PLANNING PRE-APPLICATION FOR LAND DEVELOPMENT

- The following documentation **must** be attached to this application form.
- The Municipality may request any other information deemed necessary for the purpose of this application.
- Incomplete applications will not be accepted by the Municipality.

INFORMATION AND DOCUMENTATION REQUIRED:

1. **Locality plan**
2. **Layout Plan of proposal** (eg copy of existing building plan, indicating proposal on site plan)
3. **Full copy of the title deed**
4. **Extension approval**
5. **Amended Environmental Authorisation**

DECLARATION: I hereby confirm that the information contained in this pre-application form and accompanying documentation is complete and correct.

Applicant's signature: _____

H. C. C. C.

_____ Date: ____02/08/2019_____

FOR OFFICE USE ONLY:

Municipal Stamp

Received by: _____