

***M.van Wieringen & Associates***  
**CONSULTING GEOTECHNICAL ENGINEERS**  
**AND ENGINEERING GEOLOGISTS**

P.O. BOX 32224  
CAMPS BAY  
SOUTH AFRICA  
8040

M.van Wieringen  
MSc.(CIV.ENG.),BSc.(CIV.ENG.),BSc.(GEOL.),Pr.Eng.,Pr.Sci.Nat.

Phone 27 (021) 4383001  
E-mail mvwgeo@iafrica.com

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**GEOTECHNICAL EVALUATION OF ERVEN 549, 550 AND 551,**  
**CHAPMANS PEAK ESTATE, NOORDHOEK.**

**1. TERMS OF REFERENCE AND BRIEF**

It was requested by Mr. D. Jeffery of Doug Jeffery Environmental Consultants by way of an e-mail dated 31/10/17, that geotechnical comment be passed on the proposed changes to the site development plan for Chapmans Peak Estate, Noordhoek.

A geotechnical report reference no. 2/56/93 was prepared in 2008 for the initial submission of the SDP report. The proposed changes apply to erven 549, 550 and 551 only and include omitting one residential erf and the function venue and adding new offices and to the existing restaurant. The earlier report dealt in part with these areas and still applies in respect thereof. The comments below are confined to the areas under consideration which are shown on the appended CNdV drawing CS01.

**2. GEOTECHNICAL CONSIDERATIONS**

The proposals call for the creation of a number of cut and fill terraces to accommodate structures and mainly parking. These all occur in areas not previously mined and are therefore not expected to yield any undue or unusual conditions in terms of excavation, founding or fill material. Standard building practices are likely to suffice subject to the usual site specific geotechnical investigations being undertaken at structural design stage. Existing structures and roads in the area have performed well.

However the platform for the restaurant on erf 551 is shown as cutting into the slope below the dam or detention pond, and into the toe of its wall. This is likely to result in:-

- A reduction in the factor of safety of the stability of the dam wall to an unacceptably low level or to the point of possible collapse with devastating consequences to the restaurant and its patrons.
- Significant groundwater flows as leakage from the dam, egressing in the cut faces and floors below. These could cause collapse of cut faces and retaining walls and pose problems in terms of movements of foundations to structures and paved areas.

It is suggested that the dam be relocated to the west so as not to lie above the restaurant area or that it be investigated and analyzed in detail and lined so as to eliminate sub-surface leakage. Such an investigation might lead to the conclusion that the wall needs rebuilding prior to the dam being lined.

### **3. CONCLUSION**

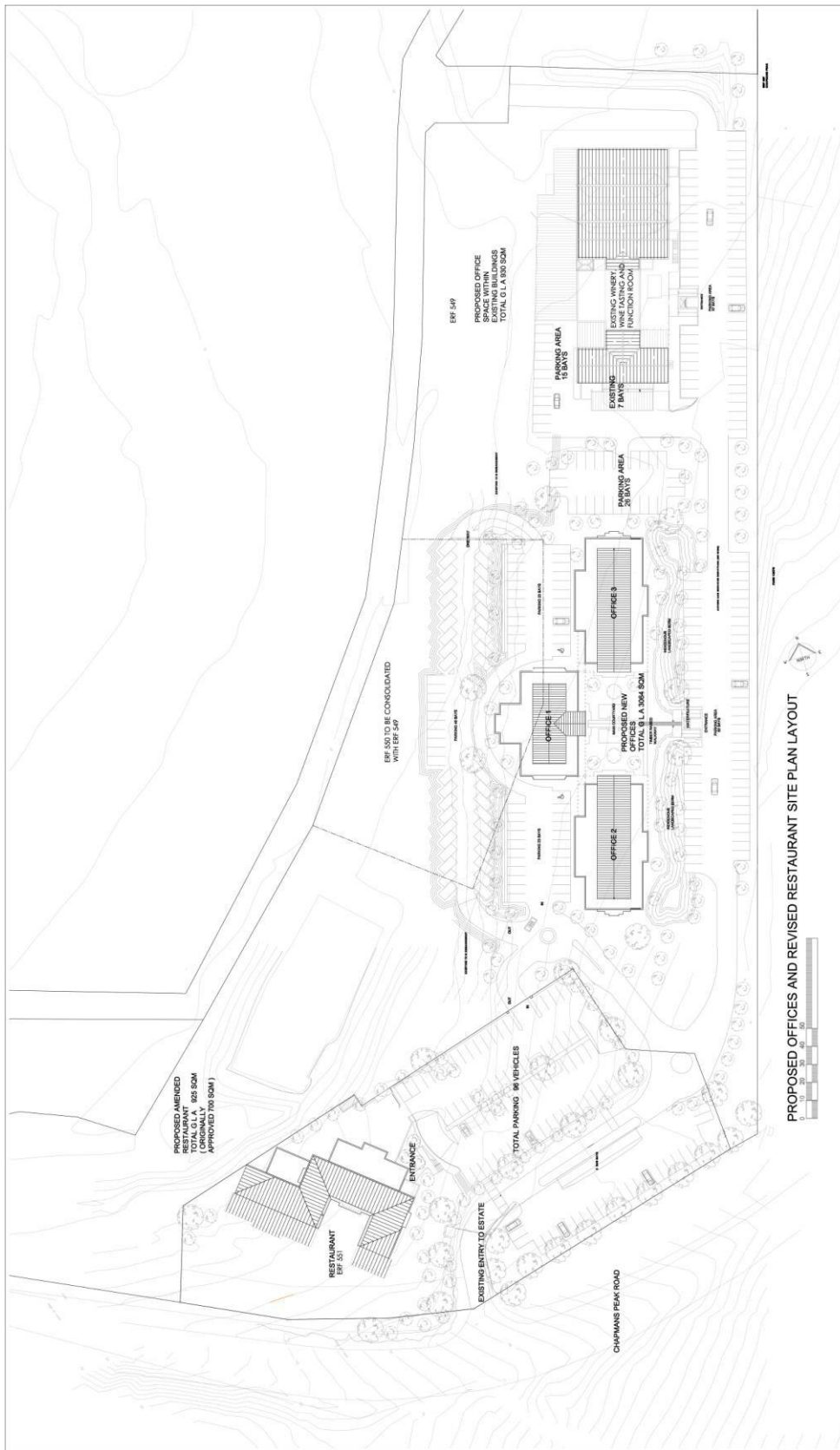
Other than the concerns relating to the dam and which it is understood are to be addressed by conducting a detailed stability analysis of its wall and if proved necessary, lining it and or modifying the wall, there are no other significant geotechnical issues apparent which oppose the proposed changes to the SDP.

A handwritten signature in black ink, reading "M. van Wieringen", written over a horizontal line.

M.van Wieringen  
Pr.Eng.,Pr.Sci.Nat.

Dated 1/11/17

Ref. No. 3/56/93



**PROPOSED NEW OFFICES AND REVISED RESTAURANT SITE PLAN LAYOUT**

DATE: 17/10/16  
 DRAWN BY: PFB  
 CHECKED BY: MS

**PROPOSED AMENED RESTAURANT**

GROSS LETTABLE AREA	925 SQM
PARKING FOR PHYSICALLY CHALLENGED	19 BAYS
PARKING FOR BUSES	2 BAYS
RESTAURANT	173 BAYS
COVERED TRACE SAVING	48 BAYS

**PROPOSED NEW OFFICES CALCULATIONS :**

OFFICE GROSS LETTABLE AREA	18,136 SQM
OFFICE GROSS LETTABLE AREA ABOVE EXISTING ADMINISTRATION	30 SQM
OFFICE GROSS LETTABLE AREA	18,166 SQM
TOTAL GROSS LETTABLE AREA	36,302 SQM
AREA FOR PHYSICALLY CHALLENGED	19 BAYS
AREA FOR BUSES	2 BAYS

**PROPOSED ADDITIONAL OFFICE SPACE WITHIN EXISTING BUILDINGS**

OFFICE GROSS LETTABLE AREA	14,850 SQM
OFFICE GROSS LETTABLE AREA ABOVE EXISTING ADMINISTRATION	30 SQM
OFFICE GROSS LETTABLE AREA	14,880 SQM
TOTAL GROSS LETTABLE AREA	31,242 SQM
AREA FOR PHYSICALLY CHALLENGED	10 BAYS
AREA FOR BUSES	2 BAYS

**PROPOSED OFFICES AND REVISED RESTAURANT SITE PLAN LAYOUT**

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