(LAND STABILITY MATERIAL)

Rob Holmes BA 44639

From: David Norman Irrelevant / Sensitive
Sent: Wednesday, 26 April 2017 9:11 AM
To: Rob Holmes
Subject: Fw: 14-16 View Point Rd, McCrae - Submitted Form B Now Generally Satisfactory

RECEIVED
26 APR 2017
BY:

Hi Rob, For your records, Tony P's response below, stating that Form B now ok

Cheers

David Norman
Irrelevant / Sensitive

David Norman Design & Construction P/L

From: Tony A. Pingiaro
Sent: Monday, April 24, 2017 2:09 PM
To: 'David Norman'
Subject: 14-16 View Point Rd, McCrae - Submitted Form B Now Generally Satisfactory

24.4.17

David Norman Design and Construction Pty Ltd

Hi David,

RE: FORM B
14-16 VIEW POINT ROAD, McCRAE

I wish to advise that the Revised Form B submitted to Council on Friday 24th April, 2017, is now generally satisfactory from a Development Engineering perspective.

Regards,
Tony Pingiaro

MORNINGTON PENINSULA SHIRE

TONY A. PINGIARO | Development Engineer | MORNINGTON PENINSULA SHIRE
Irrelevant / Sensitive
E: tony.pingiaro@mornpen.vic.gov.au
, Rosebud VIC 3939 | 2 Queen Street, Mornington VIC 3931
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PRACTICE NOTE GUIDELINES FOR LANDSLIDE RISK MANAGEMENT 2007

FORM B

Structural/Civil/Geotechnical Engineering Declaration – <*Construction Certificate*> Application

Office Use Only		Regulator: <*Add in or change to appropriate name*>

To be submitted with the structural design forming part of an application for a <*construction certificate*>.
This form must be attached with the submission of the structural documentation required for the determination of a <*construction certificate*> or combined development application and <*construction certificate*> submission.
This form is essential, as it provides evidence to the <*PCA*> determining the <*construction certificate*>, that the structural design has been prepared or verified by a structural engineer or civil engineer as defined by <*Regulator's geotechnical DCP*> and that the structural design has been prepared in accordance with the recommendations given in the geotechnical report for the same development. This form also covers additional design documents required to cover other works not shown on the main structural/civil design drawings. This form is also essential to establish that the recommendations given in the geotechnical report have been interpreted and incorporated into the structural design as originally intended by the geotechnical engineer in preparing the geotechnical report.

Section 1 Related Application

Reference	What is the <*Regulator's*> development application number?
DA Site Address	
DA Applicant	

Section 2 Structural/Civil Design Documents

List of Structural/Civil Design Documents (More space on page two if required)

Description	Plan or Document No.	Revision or Version No.	Date	Author
PROPOSED NEW RESIDENCE	S1	A	NOV'14	JG
14-16 VIEW POINT RD	S2-S4	C	NOV'14	JG
McCRAE	S5-S10	A	NOV'14	JG
	C1	6	AUG'14	JG
	C2	C	NOV'16	AP
	C3	B	NOV'16	AP

Section 3 Geotechnical Report

Details

Title: LAND STABILITY AT 14-16 VIEW POINT ROAD McCRAE

Author: JINKE YU & PATRICK OAI Dated: 11/01/2017

Author's Company/ Organisation Name: CIVILTEST PTY LTD Report Reference No: 11402.0E

Section 4 Declaration by Structural/Civil Engineer or Designer of Additional Design Documents in Relation to a Geotechnical Report

Declaration (Tick all that apply) Yes	No	
☑	☐	I am a structural or civil engineer as defined by the <*Regulator's geotechnical DCP*> and on behalf of the company below.
☑	☐	I have prepared the structural designs listed in Section 2 above and/or Section 6 below, in accordance with the recommendations given in the above geotechnical report.
☐	☑	I am a design engineer and have prepared Additional Design documents listed in Section 7 below in accordance with the recommendations given in the above geotechnical report.
☑	☐	I am aware that the <*PCA*> will rely on this declaration in granting a <*construction certificate*> for works to which the above structural design documents and geotechnical report relate.
☑	☐	I certify that any residential structure designed or erected in accordance with the structural design prepared by the structural engineer or civil engineer achieves the performance requirements of Clause 1.3 of the current version of AS 2870 (this must be ticked when accompanied by minimal impact certification).
☑	☐	I have professional indemnity insurance in accordance with <*Regulator's geotechnical DCP*> of not less than $ 5 million, being in force for the year in which the report is dated, with retroactive cover under this insurance policy extending back to the engineer's first submission to <*the Regulator*>.

FORM B

Structural/Civil/Geotechnical Engineering Declaration – <*Construction Certificate*> Application

Section 5 Structural/Civil/Design Engineer Details

Company/ Organisation Name	CHADWICK GRIMMOND CONSULTING ENGINEERS PTY LTD
Name (Company Representative)	Surname: GRIMMOND Mr /Mrs /Other: MR
	Given: JOEL
	Chartered Professional Status: DIRECTOR Registration No: 127508623
Signature	Irrelevant / Sensitive Dated: 5 / 4 / 2017.

Section 6 Ancillary Structural/Civil Design Required Prior to Completion of Geotechnical Declaration

List of Structural Design Documents Required	Description	Company Responsible	Plan or Document No.	Revision or Version No.	Date of Additional Form B *	Author
	RETAINING WALL	CGCE	53-55	C	19.4.17	JG
	RETAINING WALL	CGCE	56	A	19.4.17	JG

Section 7 Additional Design Documents Required Prior to Completion of Geotechnical Declaration

List of Design Documents Required	Description	Company	Plan or Document No.	Revision or Version No.	Date of Additional Form B *	Author
	eg. Surface & subsoil drainage design					
	eg. Infiltration or effluent disposal					

Section 8 and 9 are not to be completed until each relevant ancillary and additional Form B has been completed and forwarded to the geotechnical engineer/engineering geologist

Section 8 Declaration in Relation to Structural/Civil Designs and Additional Design Drawings

Declaration (Tick all that apply) Yes	No	
☑	☐	I am a geotechnical engineer or engineering geologist as defined by the <*Regulator's geotechnical DCP*> and on behalf of the company below:
☑	☐	I prepared and/or technically verified the above geotechnical report and now declare that I have viewed the above listed design documents prepared for the same development.
☑	☐	I am satisfied that the recommendations given in the above geotechnical report have been incorporated into the design documents as intended.
☐	☐	I consider no additional drawings are required to show all the required works listed in the Geotechnical Report.

Section 9 Geotechnical Engineer or Engineering Geologist Details

Company/ Organisation Name	CIVILTEST PTY LTD
Name (Company Representative)	Surname: OAI Mr /Mrs /Other:
	Given Names: PATRICK
	Chartered Professional Status: Pending Registration No: ———
Signature	Irrelevant / Sensitive Dated: 20/04/2017

Note: * A separate Form B is required to be completed by the design engineer for those works listed in each of Sections 6 and 7 of this Form B.

CIVIL TEST PTY LTD
ABN 91 006 855 689 SOIL TESTING & GEOTECHNICAL CONSULTANTS ACN 006 855 689

ENDORSED PLAN
MORNINGTON PENINSULA PLANNING SCHEME
PLANNING PERMIT NO: P13/2073
SHEET: 5/5 (Geotech)
DATE: 24/01/2017
Signed: Irrelevant / Sensitive
STATUTORY PLANNER

LAND STABILITY ASSESSMENT

AT

14-16 VIEW POINT ROAD

McCRAE

HAS BEEN PEER REVIEWED BY 2 GEO'S

OK

Report No: 1140220E

10 Latham Street (P O Box 537) MORNINGTON Tel: (03) 5975 6644 Fax: (03) 5975 9589
Also at: Mitcham (03) 9874 5844 Wonthaggi (03) 5672 3900 and Mildura Tel: (03) 5023 2870

Intrax
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INTRAX JOB NUMBER : 61924.1

24 February 2015

David Norman Design and Construction
PO Box 321
MOUNT MARTHA VICTORIA 3934

Dear Mr Norman

RE: Peer Review of Civiltest Pty Ltd Landslide Stability Assessment (Report No:1140220B dated 19 December 2014)

– 14-16 View Point Road McCrae

As required by the Mornington Peninsula Shires Planning Scheme and the Erosion Management Overlay 1 (EMO1) a peer review is required for all landslide risk assessments carried out in the area defined under the planning scheme. As such this letter provides a review of the following documents.

- ***The proposed drawings as submitted by the client***
  - ***Viewpoint TP Sheets 1 to 3, Client J & P D'Helin, No 14-16 View Point Road McCrae. Dated Feb 2013***
- ***Civiltest Report Pty Ltd – Report Number 1140220A Land Stability Assessment – 14-16 View Point Road McCrae – Dated 15 September 2014***
- ***Intrax Peer Review 61924.***
- ***Civiltest Report Pty Ltd – Report Number 1140220B Land Stability Assessment – 14-16 View Point Road McCrae – Dated 19 December 2014***

- ***A subsidiary review of GEOAUST Report – Proposed Residential Dwelling 14 View Point Road McCRAE (Prepared for Fasham Johnson Pty Ltd) – Job No: 1624-9-R dated 14 September 2011***

GeoAust Report – Discussion

1. This report discusses the proposed development of a structure at the high point of the slope which is contrary to the current proposal.
2. GeoAust conducted three boreholes at the top of the site with borehole 1 extending to a depth of 25 metres. Granodiorite is recorded at a depth of 20 metres from washbored cuttings. SPT values are relatively high throughout the borehole. Boreholes 2 and 3 are shallow and describe Very Dense SANDS to a depth of 3.4metres
3. Slope stability modelling by GeoAust indicates FOS in the range of 0.98 and 1.17, and 1.51 for a deep seated failure surface.
4. The risk assessment indicates a number of the perceived hazards have an intolerable risk unless the structure is designed to accommodate the potential landslide hazards.
5. GeoAust makes recommendations that address the landslide risk assessment for the site which incorporates a laterally restrained piles

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The GeoAust report quantifies a design approach that can accommodate Fasham Johnson's proposed development. Whilst this report is now outdated the findings in the now updated Civiltest report have similar outcomes with respect to landslide risk, which are further discussed below.

David Norman Design Drawings – Discussion

1. The proposed development is located at the base of the slope below the line of the current development. It is proposed to demolish the existing development.
2. The proposed development incorporate a number of cuts into the slope to accommodate the three level structure.

Civiltest Report – 1140220B

a. The Civiltest report is carried out for David Norman Design & Construction 'the client'

b. The field work was carried out on the 24 March 2014. Note the current report was amended from the original report on 19 May 2014, 15 September and 19 December 2014 (refer note on page 20).

c. Civiltest presents one slope stability model through Section A-A' on site.

i. Note that this section represents the absolute worst case across the site. Shallower slopes are recorded on the western and eastern boundaries parallel to the site

a. The model assumes the soil profile from Borehole 1 and indicates the slope has a FOS 1.025 in its current state
b. Models 6.3 and 6.4 assess the construction process of installing piers along the mid slope for the construction of the dwelling. These indicate an increase in the FOS to 1.082
c. Slope stability modelling discussion concludes that potential slope surfaces could extend to a depth of 5.0m based on model 6.2 however interception of granite may occur at shallow depths downslope and therefore recommend any foundations extend a minimum of 2000mm into granitic rock.

i. It is recommended that bored pier retaining wall be constructed with a capping beam and measures for stabilization against shallow surface raveling and erosion be undertaken immediately after the retention systems construction.

d. Landslide Risk Assessment

a. The comments raised in Intrax's previous review as to the modes of failure have been addressed
b. Risk Management and treatment
   i. Civiltest recommend a number of risk management items that must be addressed in the structural design, and drainage design for the structure.
   ii. A geotextile mesh is recommended for the upper portion of the slope which is to be nailed in to place with star pickets or similar.

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iii. Intrax agrees with the recommendation made in this section in lieu of the hazards and events defined.

e. Recommendations
   i. The recommendations address Intrax's previous comments and provide adequate information for the structural design of the structure to take place.

f. The report is signed by Mr Jinke Yu, reviewed by Patrick Oai and dated 19 December 2014.

Conclusions:
Intrax finds that the Land Stability Assessment by Civiltest has now addressed the concerns raised in the previous peer review of the site.

Further the two reports a) GeoAust and b) Civiltest largely agree on the stability analyses which increase confidence in the assessment.

Based on a review of all the current documentation Intrax considers that the landslide risk can be tolerated by incorporation of the Risk Management and Treatment options offered by Civiltest and that the recommendations provide sufficient information for the structural design of the building.

Note: Civiltest will be required to assess both the final structural design with reference to the recommendations in the Civiltest Report, the drainage design and the proposed landscaping details. All of these items need to be assessed on-site at the time of construction to ensure the builder has carried out and constructed the proposed structure in accordance with the requirements of the Civiltest Report.

Please do not hesitate to contact me directly on 03 8371 0188 or scott.emmett@intrax.com.au if you have any questions or queries regarding this or any other matter.

Kindest Regards,

Irrelevant / Sensitive

Scott Emmett
National Manager Geotechnical Engineering
BSc (Earth Science) Hons MAIG
Intrax Consulting Engineers Pty Ltd
CC: Mr Jinke Yu (admin@civiltest.com.au)
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