Memo - Statutory Planning Assessment Process for Landslide Susceptible Areas

MORNINGTON PENINSULA Shire

Background

The intent of this memo is to document the process taken by Statutory Planning when determining the requirements for a Geotechnical Report for a proposed development that takes place in a potentially unstable area. If it is found a Geotechnical Report is required by this process, the application is referred to Development Engineering for assessment and creating of site-specific conditions.

The process described has been informally occurring between the two team for several years - at least since the implementation of the current GIS Mapping of 'Landslip Susceptibility' (circa 2012), although probably a long time before that.

The informal process was somewhat formalised during late 2023 and 2024, and developed into the table shown in Appendix 1.

The steps described below related to the process the Statutory Planner shall take with any application for a development where works are to occur in a or near an Erosion Management Overlay (EMO) 2, EMO3 EMO 4, EMO 5, or a red (high landslide risk) area.

The information for the planner to determine if a relevant EMO exists on the site, or if the landslide risk level of the site is high are both available in a layers in Council's internal GIS.

The entire process is detailed below, and is shown in table form in Appendix 1.

Step 1:

Is the site in an EMO2, EMO3, EMO4 or EMO5?

An application for a development is received.

If the application relates to works (i.e. not a pure subdivision), the planner is to first access the EMO layer in GIS. The EMO layers are turned on be either:

- Through the 'Planning' module → Planning Overlays → EMO → EMO2, EMO3, EMO4, EMO5; or
- Through the 'Investigations' module → EMO → EMO3, EMO4, EMO5.

If the work take place within an EM02, EMO3, EMO4, or EMO5, or the works are likely to impact land in one of these EMOS the Statutory Planner is to refer the application to Development Engineering.

If the works do not take place in and EMO 3, 4, or 5, go to Step 2.

*EMO 1's mapping is dated as mapping regularly does not accord with more recent landslip mapping – in this regard best to unpack risk further through the matrix. EMO 6 relates to erosion hazard from coastal processes. Applicants require the submission of Coastal Hazard Vulnerability Risk Assessment (CHVRA) and will identify if risk will require further geotechnical assessment.

Step 2:

Is the site in an area of high (red) landslide risk?

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This layer is accessed one of two ways:

- Through the 'Planning' module – 'Landslip Susceptibility' layer; or
- Through the 'Investigations' module – 'Landslip Susceptibility' layer.

Both methods for accessing the layer above produce the same mapping.

If the work take place within, or the works are likely to impact the land shows as red in the Landslip Susceptibility layer, the Statutory Planner continues to Step 3.

If the work do not take place within, or the works are not likely to impact land shown as red in the Landslip Susceptibility layer, the application is not required to be referred to Development Engineering for slope stability reasons.

Step 3

Is the area of high landslide risk isolated or contiguous?

This question relates to how large the area of red is, and attempts to help determine whether the area is both 'naturally' red, and of significant size to warrant further geotechnical investigation and assessment beyond what would be involved in the Building Permit process.

If the area of red:

- Is not associated with artificial cut and fill works, and
- Extends to other properties or the road reserve, and
- Occupies a significant portion of the property or the proposed works footprint.

It should be taken that the high landslide risk area is contiguous, and the planner proceeds to Step 4.

If the above cases do not apply, the area might be considered isolated and treated as a lower risk and is not required to be referred to Development Engineering for slope stability reasons.

This step is the most subjective in the process. If there is any uncertainty in determining either a high landslide risk area is isolate or contiguous, please discuss with Development Engineering.

Step 4

Is the geology type Quaternary or Baxter Sandstone?

Using 'Planning' module in GIS, with the property in question selected, the geology type will be displayed at the bottom of the 'Property' tab on the right side of the screen:

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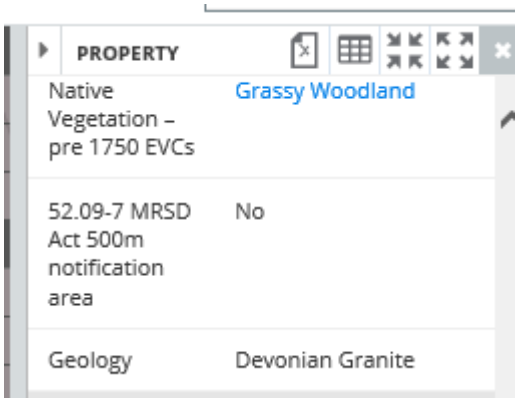

If the geology is shown as either Quaternary or Baxter Sandstone, the Statutory Planner is to proceed to Step 5.

If the development is not within one of these two geology types, the application shall be referred to Development Engineering.

Step 5

Is the proposal near to a waterway, escarpment / cliff, significant past cut?

If the proposed development is taking place on or near any of the areas described above, or if the development is likely to have an impact on these areas (such as directing drainage, or vehicle access), then the application shall be referred to Development Engineering.

If the works are not near to any of these types of areas, it is not required to be referred to Development Engineering for slope stability reasons. These features are best identified via a site visit.

If there is any doubt, please discuss with Development Engineering

Referral to Development Engineering

If an application is referred to Development Engineering, the engineer will assess the proposal and provide site-specific conditions. These conditions will be based on an assessment of both the proposed works and the risks those works present to the stability of the nearby area.

Conditions that may be used by a development engineer are shown in Appendix 2.

These conditions are recommendations and Statutory Planning is the ultimate decision maker and will apply discretion as to their application on a planning permit. The conditions as shown in Appendix 2 are often changed and refined and will quickly become out of date.

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Appendix 1 - Decision Matrix

Step		Response / Action
S1	Is the site in an EMO2, EMO3, EMO4 or EMO5?	Yes – refer to Development Engineering No – Go to S2
S2	Is the site in an area of high (red) risk slope instability?	Yes – Go to S3 No – No referral to Development Engineering
S3	Is the patch of slope instability isolated/insignificant in scale or contiguous?	Contiguous – Go to S4. Isolated / insignificant – no referral to Development Engineering
S4	Is the geologyl type Quaternary or Baxter Sandstone?	Yes – Go to S5. No – Refer to Development Engineering
S5	Is the proposal near to a waterway, escarpment / cliff, significant past cut?	Yes – refer to Development Engineering No – no referral required.

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Appendix 2 – Example Engineering Conditions

Conditions

1. Before any works associated with the development starts, a geotechnical investigation of the property is to be undertaken by a geotechnical consultant with expertise in slope stability, and a copy of the geotechnical report lodged with the Responsible Authority. The geotechnical investigation undertaken for the slope stability assessment must be in accordance with the Australian Geomechanics Society's (AGS) 'Practice Note Guidelines for Landslide Risk Management 2007'.

2. Before any works associated with the development starts, a peer review of the slope stability investigation report must be undertaken by an independent geotechnical consultant with expertise in slope stability, and a copy of the peer review report lodged with the Responsible Authority.

3. Before any works associated with the development starts, the geotechnical report must be amended, if requested, to the written satisfaction of the peer reviewer, and a copy of the amended geotechnical report and written confirmation from the peer reviewer lodged with the Responsible Authority.

4. The dwelling, swimming pool, and retaining walls must be designed and constructed in accordance with the planning permit conditions, endorsed plans, and recommendations of the geotechnical report (specify the report by Reference, Consultant and date).

5. Any proposed changes to the building footprint or modifications to the building after the date of the report must include a written response from the geotechnical consultant and be submitted to the Responsible Authority to be endorsed.

6. All retaining walls must be designed by a qualified structural engineer in accordance with the recommendations of the geotechnical report.

7. All site cut and fill batter slopes must be in accordance with the recommendations of the geotechnical report.

8. All subsoil drainage from the swimming pool must be in accordance with the recommendations of the geotechnical report.

9. All stormwater and subsoil drainage must be directed to a legal point of discharge in accordance with the recommendations of the geotechnical report and to the satisfaction of the Responsible Authority.

10. Prior to the commencement of any works for the development, a Form A 'Geotechnical Declaration and Verification Development Application' in accordance with the AGS 'Practice Note Guidelines for Landslide Risk Management 2007' must be completed by a Specialist Geotechnical Engineer or a Specialist Engineering Geologist as defined in

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the AGS 'Practice Note Guidelines for Landslide Risk Management 2007', and a copy lodged with the Responsible Authority.

11. Prior to the commencement of any works for the development, a Form B 'Structural/Civil/Geotechnical Engineering Declaration' in accordance with the AGS 'Practice Note Guidelines for Landslide Risk Management 2007' must be completed by a Structural Engineer Registered as a Civil or Structural Endorsed Building Engineer with the Victorian Business Licencing Authority and also a Specialist Geotechnical Engineer or a Specialist Engineering Geologist as defined in the AGS 'Practice Note Guidelines for Landslide Risk Management 2007', and a copy lodged with the Responsible Authority.

12. If site excavation and/or site filling is undertaken prior to the construction of retaining structures, a site inspection/s must be conducted by the Specialist Geotechnical Engineer or Specialist Engineering Geologist who prepared the peer-reviewed geotechnical report, and a written report must confirm that the site excavation and/or site filling complies with the requirements of the peer-reviewed geotechnical report, and that it is safe for construction works to commence or continue. A copy of this report must be lodged with the Responsible Authority.

13. Prior to the occupation of the development, a Form F 'Geotechnical Declaration Final Structural / Civil Certificate', along with 'as constructed' documents in accordance with the AGS 'Practice Note Guidelines for Landslide Risk Management 2007' must be completed by a Structural Engineer Registered as a Civil or Structural Endorsed Building Engineer with the Victorian Business Licencing Authority, and a copy lodged with the Responsible Authority.

14. Prior to the occupation of the development, a Form G 'Final Geotechnical Certificate' in accordance with the AGS 'Practice Note Guidelines for Landslide Risk Management 2007' must be completed by a Specialist Geotechnical Engineer or Specialist Engineering Geologist as defined in the AGS 'Practice Note Guidelines for Landslide Risk Management 2007', and a copy lodged with the Responsible Authority.