

--/--/---  
CXX

## SCHEDULE 4 TO ~~THE~~CLAUSE 44.01 EROSION MANAGEMENT OVERLAY

Shown on the planning scheme map as **EMO4**.

### LANDSLIDE SUSCEPTIBILITY AREA A [22.20]

#### 1.0

--/--/---  
CXX

#### Erosion management objectives to be achieved

To ensure ~~that~~ land in areas ~~that are~~ susceptible to landslide is ~~only~~ developed with proper regard to geotechnical hazard and risk assessment, including appropriate risk mitigation. [22.20-2 O]

#### 2.0

--/--/---  
CXX

#### Statement of risk

~~The Mornington Peninsula contains places that are~~Areas susceptible to landslide ~~and these especially have been identified to~~ occur along the coastline, ~~and creeks as well as in the~~and steeper sloped inland ~~areas~~parts of the Mornington Peninsula. ~~These places have been identified by the studies cited in the references to this Policy.~~ Inappropriate use and development, including vegetation removal, can exacerbate the risks of landslide to life, property and environment associated with these areas. Problems may include restricted usability; structural stability, cracking and rising damp. Changes in drainage patterns or the water table could also contribute to further instability with associated risks to water quality and the protection of indigenous flora and fauna. [22.20-1]

#### 43.0

--/--/---  
CXX

#### Permit requirement

A permit is not required to construct a building or construct or carry out works if ~~there is~~all the following requirements are met:

- ~~no~~No increase in building height.
- ~~no~~No ground disturbance.
- ~~and no~~No change to stormwater runoff.

#### 4.0

--/--/---  
CXX

#### Application requirements

~~An application must be accompanied by~~The following application requirements apply to an application for a permit under Clause 44.01, in addition to those specified in Clause 44.01 and elsewhere in the scheme and must accompany an application, as appropriate, to the satisfaction of the responsible authority:

- A site specific geotechnical hazard and risk assessment report prepared by a suitably qualified geotechnical engineer or engineering geologist with experience in landslide risk assessment. This report must contain:
  - A record of the plans for the proposed development that have been examined.
  - The results of a geotechnical investigation including:
    - A site history of land use and development, including any signs of movement, which is informed by consultation with land owners or residents.
    - Geological and topographic information including references to relevant maps.
    - Findings from a detailed inspection of the site in the context of its surrounds, including geomorphologic features, details of any development or earthworks and any signs of movement. The likelihood of any pre-existing slope failures on the site needs to be assessed, even if disguised by onsite developments and erosion.

- Analysis of an historical sequence of aerial photographs.
  - An inventory of the location, nature and extent of individual landslides in the area sourced from the Shire’s landslide inventory or other relevant historical documents.
  - An assessment of the likely groundwater levels including responses to rainfall events.
  - At least three boreholes to a minimum depth of five metres.
  - Appropriate undisturbed sampling, Standard Penetrometer testing or coring of rock, whichever is appropriate.
  - Appropriate geotechnical testing in an ISO/IEC 170125 accredited soil laboratory to confirm the geotechnical shear strength design parameters, or at least sufficient testing to determine the shear strength by established correlations.
  - A geotechnical model including identification of geomorphic processes, with associated ~~cross-sections~~ cross-sections.
  - A computer slope stability assessment of the site including the proposed development and any cuts or filled areas.
  - A geotechnical hazard assessment including:
    - A description of any landslide hazard including the location, volume (or area), classification and velocity of any potential landslide, any resultant detached material and the probability of occurrence within a given period of time.
    - The elements that may be potentially affected by any landslide hazard including population, buildings, engineering works, economic activities, utilities, infrastructure or environmental features in the area.
  - If any of the land is also affected by ~~EMO-5~~ EMO5, a quantitative risk assessment of the site in accordance with the ~~Australian Geomechanics Society, (2007c)~~ ‘Practice Note Guidelines for Landslide Risk Management’, Vol. 42, No. 1, Australian Geomechanics Journal, Vol. 42, No. 1 (B. Walker, W. Davies & G. Wilson, March 2007) procedures for loss of life and either quantitative or qualitative for property loss.
  - A discussion and recommendation about whether the site is suitable for the proposed development; including whether or not conditions should be imposed about the following matters:
    - The design methodology for any buildings or works.
    - Site restrictions.
    - On-going site management, during and post construction, conducted by a suitably qualified geotechnical engineer or engineering geologist with experience in landslide risk assessment.
    - A monitoring, inspection and maintenance regime conducted by a suitably qualified geotechnical engineer or engineering geologist who is experienced in slope stability assessments; including whether any such regime should apply for the life of a development.
    - Other risk mitigation measures.
- If conditions are recommended, specific details must be provided.
- A review of the above report by an independent and suitably qualified geotechnical engineer or engineering geologist with experience in landslide risk assessment.
  - Details of the qualifications, professional recognition, level of professional indemnity and relevant experience of the authors of both the report and the peer review.

- If a site specific geotechnical hazard and risk assessment report or peer report is submitted; an accompanying Geotechnical Declaration and Verification Development Application that is generally consistent with Form A of Appendix D of the ~~Australian Geomechanics Society, (2007e)~~ 'Practice Note Guidelines for Landslide Risk Management', ~~Vol. 42, No. 1, Australian Geomechanics Journal, Vol. 42, No. 1~~ (B. Walker, W. Davies & G. Wilson, March 2007).

~~If any of these requirements are unnecessary given the circumstances of the application, they may be waived to the satisfaction of the responsible authority.~~

In deciding whether or not to waive any of the above application requirements, the responsible authority will consider, as appropriate:

- Whether the proposed building or works generally presents a very low or low risk to life and property.
- Whether the proposed building or works are a minor extension or alteration of an existing development.
- Whether any earthworks have a depth of one metre or less from natural ground level.
- Whether a geotechnical practitioner has submitted a Declaration of Minor Impact that is generally consistent with Form D of Appendix D of the ~~Australian Geomechanics Society, (2007e)~~ 'Practice Note Guidelines for Landslide Risk Management', ~~Vol. 42, No. 1, Australian Geomechanics Journal, Vol. 42, No. 1~~ (B. Walker, W. Davies & G. Wilson, March 2007).
- Whether the lot is also affected by Erosion Management Overlay Schedule 5 (EMO5). ~~(If so, it may be inappropriate to waive the risk assessment, peer review or Declaration requirement as these are generally necessary in the EMO5.~~
- The qualifications, depth and relevance of experience and professional recognition of any geotechnical practitioner who has made a declaration or report.

## 5.0

### Decision guidelines

--/--/---  
CXX

The following decision guidelines apply to an application for a permit under Clause 44.01, in addition to those specified in Clause 44.01 and elsewhere in the scheme which must be considered, as appropriate, by the responsible authority:

- ~~To ensure that~~ Whether pedestrian access to any accommodation and a reasonable amount of associated private open space ~~is~~ are secured to the extent that loss of functionality is unlikely. [22.20-3]
- ~~To encourage all~~ Whether building and pavement stormwater runoff together with surface water and sub-surface groundwater, ~~is~~ is to be collected into flexible pipes, designed to prevent blockage, and connected to a stormwater pipe system. [22.20-3]