

OPTIONS FOR THE INTRODUCTION OF EROSION MANAGEMENT TOOLS INTO THE GREATER GEELONG PLANNING SCHEME

1. Erosion and Landslide Issues in Greater Geelong.

The City of Greater Geelong covers a wide range of landscapes and landform systems. Some of these are susceptible to mass movement or **landslides** with mapped occurrences of ancient, stabilised, dormant and active landslides and instability noted throughout the area. Some areas of the City are also susceptible to various forms of **erosion** with mapped occurrences of sheet and rill, gully, wind, streambank and coastal erosion noted throughout the area.

Land degradation maps including ratings of “very high”, “high”, “moderate”, “low” and “very low” susceptibility to landslide, sheet and rill erosion, gully erosion, tunnel erosion and wind erosion were developed for the Corangamite Catchment Area in 2003 by the Department of Primary Industries which includes part of the City of Greater Geelong. The City then commissioned a refinement of this regional study in 2004 which included compilation and mapping of known occurrences of landslide and erosion within the city’s boundaries and a refinement of the susceptibility ratings.

The City of Greater Geelong in conjunction with the Corangamite Catchment Management Authority has developed a uniform classification of the susceptibility to landslide and erosion together with a development control process based on the guidelines on risk management developed by the CCMA.

It is now proposed that the appropriate management of landslide risk and effective erosion control be included within the Greater Geelong Planning Scheme on affected land.

2. Strategic VPP Tools to address erosion and landslide

2.1 State Planning Policy Framework (SPPF).

When the Victoria Planning Provisions (VPP's) were introduced in 1996 they contained a State Planning Policy Framework (SPPF) which is a series of state level policy positions around the themes of settlement; housing; environment; economic development and infrastructure. The environment theme includes state level policies dealing with flooding, heritage, salinity, vegetation removal and air quality (among others).

The SPPF does not include any policy position on erosion (or landslide) and it is acknowledged that this is one of the shortcomings of the SPPF. Given the different characteristics of erosion and landslide, it is considered that separate state policy positions on these two forms of land degradation may ultimately be required.

2.2 Local Planning Policy Framework (LPPF)

In the absence of a state level position on erosion or landslide in the VPP's, it is essential that the LPPF articulates a very strong local basis for dealing with land degradation and for the introduction of subsequent planning controls.

To be most effective and transparent, a brief but strong MSS statement is needed which will ideally reflect the outcomes of any strategic research which has been undertaken. It is noted that such research has been done in the CCMA area including:

- Inventory and bibliography of relevant information and databases relating to the occurrence of erosion and landslide in the City of Greater Geelong. 2005.

- Erosion and Landslide Risk Assessment Guidelines and Procedures for the City of Greater Geelong. Prepared by CoGG 2005.
- **Final Report of the Erosion Management Overlay** for the City of Greater Geelong dated **June 2006**.
- Erosion Risk Management. Prepared for the Corangamite Catchment Management Authority by A. S. Miner Geotechnical Report No 263/02 and all subsequent revisions and updates as published by the Corangamite Catchment Management Authority

These documents include mapping of various areas of the municipality as being of “very high”, “high”, “moderate”, “low” or “very low” susceptibility to either landslide or erosion. These documents will need to become “Reference Documents” in the MSS.

The preferred strategic position is for there to be a very strong MSS statement about erosion/landslide and what Council is trying to achieve. Specifically, what are the land degradation objectives; what are the strategies to achieve these objectives; and how will these strategies be implemented by way of overlay or zone? It is unlikely that a local planning policy (LPP) will be required if the zoning and/or overlay regime can adequately implement the strategies and objectives of the MSS.

3. Statutory VPP Tools to address erosion and landslide

3.1 Erosion Management Overlay

The most logical implementation tool for land degradation is the Erosion Management Overlay (EMO). When the VPP’s were introduced they were accompanied by a “Manual” which (among other things) briefly explained the role of the respective suite of new zones and overlays. The Manual noted the following with respect to the **Erosion Management Overlay**:

This overlay identifies land subject to significant erosion hazard. Generally, there should be appropriate technical justification available to support the application of this overlay.

The Erosion Management Overlay is to be found at Clause 44.01 of all those planning schemes which wish to implement erosion controls. The Overlay has two explicit purposes, the first of which is to implement the state and local planning policy framework. This includes the Municipal Strategic Statement and any local planning policies. The second purpose of the overlay is:

To protect areas prone to erosion, landslip or other land degradation processes, by minimizing land disturbance and inappropriate development.

The overlay requires permission for buildings and works; for vegetation removal and for subdivision. The overlay contains a schedule which enables permit exemptions to be specified for buildings and works; and for vegetation removal. There are no permit exemptions for subdivision. Clause 44.01 also specifies application requirements; exemptions from notice and review; and decision guidelines.

The decision guidelines (at 44.01-6) require that before deciding on an application, the Responsible Authority must consider, as appropriate, (and among other things);

- *Any proposed measures to manage concentrated run-off and site drainage.*
- *Any proposed measures to minimize the extent of soil disturbance.*
- *The need to stabilize disturbed areas by engineering works or revegetation.*
- *Whether buildings or works are likely to cause erosion or landslip.*
- *Land Capability report as developed by DSE Centre for Land Protection Resource.*

- *Any technical information or reports required to be provided by a schedule to this overlay.*

The erosion management overlay and schedule are an effective instrument in dealing with land degradation in that it demands a permit application (unless exempted) and its detailed consideration can rely on technical information specified in the schedule. If a Council were to have an EMO requiring submission of technical support documentation then this information will provide a reference point for an assessment of the impact of a proposal on the matters which the overlay requires.

3.2 Erosion Management Mapping

The issue of the EMO mapping is critical and it should be as precise as possible distinguishing between the various risk categories. Thereafter, the schedule can be tailored to provide different obligations on the applicant depending on the level of risk.

It is appreciated that there are complexities when it comes to mapping, especially of erosion areas (as opposed to landslide areas). As noted above, land degradation maps including ratings of “very high”, “high”, “moderate”, “low” and “very low” susceptibility to landslide, sheet and rill, gully and tunnel and wind erosion were developed in 2003 by the Department of Primary Industries.

The mapping for **landslide areas** has been more straightforward and it is only areas of ‘very high’, ‘high’ and ‘moderate’ which need to be mapped and included in the overlay. These have tentatively been assigned as **EMO1** and the different categories of risk are to be identified on a map attached to the EMO1 schedule.

The mapping for **erosion areas** is more problematic with at least four categories of erosion (sheet and rill; gully; tunnel; wind) and up to five risk levels. The risk levels can vary widely with (for instance) a low level risk for

gully and a high level risk for wind on the same parcel of land. The different erosion areas could be separated into different EMO schedules (ie EMO2; EMO3; EMO4 etc) although this becomes very confusing. For the Greater Geelong area, all erosion prone areas have tentatively been assigned as **EMO2** and, once again, the different categories of risk are to be identified on a map attached to the schedule.

3.3 Other Overlays

There are numerous other overlays within the VPP's although none of them are as specific to erosion. One option is the **Environmental Significance Overlay** which, (according to the VPP manual) is:

...to be interpreted widely and may include issues ...related to the natural environment. The nature of the issue and the intended effects or outcomes of the requirements being imposed must be clearly stated.

It is noted that the Greater Geelong Planning Scheme already includes a number of other overlays (ie **Design and Development Overlay**) all of which have (as their first purpose) the implementation of the SPPF and the LPPF. In the absence of an EMO, a Council is still capable of considering erosion issues under another overlay so long as there is a strong MSS position on this issue. However, while technically available, it is preferable if the specific VPP tool of the EMO is employed to address the issue rather than "hook it on" via another less transparent overlay.

3.4 Rural Conservation Zone

The Rural Conservation Zone is to be found at Clause 35.06 of the planning scheme. The zone was introduced in 2004 and it has seven explicit purposes, and, once again, the first is to implement the state and local planning policy framework. This includes the Municipal Strategic Statement and any local planning policies. The other purposes of the zone are:

- *To conserve the values specified in the schedule to this zone.*
- *To protect and enhance the natural environment and natural processes for their historic, archaeological and scientific interest, landscape faunal habitat and cultural values.*
- *To protect and enhance natural resources and the biodiversity of the area.*
- ***To encourage development and use of land which is consistent with sustainable land management and land capability practices, and which takes into account the conservation values and environmental sensitivity of the locality.***
- *To provide for agricultural use consistent with the conservation of environmental and landscape values of the area.*
- *To conserve and enhance the cultural significance and character of open rural and scenic non urban landscapes.*

The zone requires permission for various uses, some buildings and works and for subdivision. The decision guidelines for the zone (at 35.06-5) require that before deciding on an application, the Responsible Authority must consider, as appropriate, (and among other things) an array of general issues, rural issues, environmental issues and design and siting issues including;

- *How the use and development relates to sustainable land management and the need to prepare an integrated land management plan which addresses the protection and enhancement of native vegetation and waterways, **stabilization of soil** and pest plant and animal control.*

Importantly, the zone contains a schedule which enables the conservation values of the land to be identified and specified. The schedule also enables a Council to specify a minimum subdivision size, and whether or not a permit is required for earthworks which change the rate of flow across land or which increase the discharge of saline groundwater.

It may well be appropriate for a Council to apply the Rural Conservation Zone to identified erosion prone areas given the breadth of considerations able to be taken into account. It will only be appropriate however to apply this zone in “rural type” settings as clearly within urban areas the use of this zone is inappropriate and so resort to an overlay will be required.

4. Summary

In summary, any Council which has identified either landslide or erosion as an important land use and development issue should articulate a strong MSS position on it based on completed strategic research.

The most appropriate and transparent tool to implement this policy position with respect to **landslide** is via the EMO which will be mapped and accompanied by a schedule identifying local requirements and exemptions.

In the case of **erosion** where the mapping is more complex, the use of the Rural Conservation Zone in rural areas with a specific reference to erosion in the schedule may provide a Council with an appropriate degree of protection and management. In developed areas the use of another EMO schedule would be required.

5. Recommendation

That EMO1 be applied to those areas identified as having a ‘very high’ ‘high’ and ‘moderate’ susceptibility to landslide and that the accompanying schedule be included.

That consideration be given to applying either EMO2 or the Rural Conservation Zone to those areas identified as having a ‘very high’ or ‘high’ susceptibility to erosion and that appropriate schedules be included.