

Yarra Ranges Planning Scheme Amendment C225yan
Erosion Management Overlay mapping review

Panel Report

Planning and Environment Act 1987

13 July 2026

How will this report be used?

This is a brief description of how this report will be used for the benefit of people unfamiliar with the planning system. If you have concerns about a specific issue you should seek independent advice.

The planning authority must consider this report before deciding whether to adopt the Amendment.

[section 27(1) of the *Planning and Environment Act 1987* (the PE Act)]

For the Amendment to proceed, it must be adopted by the planning authority and then sent to the Minister for Planning for approval.

The planning authority is not obliged to follow the recommendations of the Panel, but it must give its reasons if it does not follow the recommendations. [section 31 (1) of the PE Act, and section 9 of the *Planning and Environment Regulations 2015*]

If approved by the Minister for Planning a formal change will be made to the Planning Scheme. Notice of approval of the Amendment will be published in the Government Gazette. [section 37 of the PE Act]

Planning Panels Victoria acknowledges the Wurundjeri Woi Wurrung People as the traditional custodians of the land on which our office is located. We pay our respects to their Elders past and present.

Planning and Environment Act 1987

Panel Report pursuant to section 25 of the PE Act

Yarra Ranges Planning Scheme Amendment C225yan

Erosion Management Overlay mapping review

13 July 2026



William O'Neil, Chair



Colin McIntosh, Member

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Glossary and abbreviations

AGS Guidelines	<i>Australian Geomechanics Society, Practice Note Guidelines for Landslide Risk Management, 2007</i>
Amendment	Yarra Ranges Planning Scheme Amendment C225yan
Council	Yarra Ranges Shire Council
DEECA	Department of Energy, Environment and Climate Action
DTP	Department of Transport and Planning
EMO	Erosion Management Overlay
EMO1	Erosion Management Overlay Schedule 1
EMO2	Erosion Management Overlay Schedule 2
LiDAR	airborne laser imaging, detection, and ranging
PE Act	<i>Planning and Environment Act 1987</i>
Planning Scheme	Yarra Ranges Planning Scheme

Overview

Amendment summary

The Amendment	Yarra Ranges Planning Scheme Amendment C225yan
Common name	Erosion Management Overlay mapping review
Brief description	Updating the Erosion Management Overlay following a municipal-wide landslide risk assessment review
Subject land	Approximately 117 square kilometres of land within the Yarra Ranges Shire (under revised mapping) (See Figure 1)
Planning Authority	Yarra Ranges Shire Council
Authorisation	27 June 2025, with conditions
Exhibition	21 August to 26 October 2025
Submissions	Number of Submissions: 88

Panel process

The Panel	William O'Neil (Chair) and Colin McIntosh
Supported by	Gabrielle Trowse, Project Officer, Planning Panels Victoria
Directions Hearing	Yarra Ranges Council Civic Centre and online via video conference, 13 April 2026
Panel Hearing	Planning Panels Victoria and online by video conference, 25 May 2026
Site inspections	Unaccompanied, 13 April and 24 May 2026
Parties to the Hearing	See Appendix A
Citation	Yarra Ranges PSA C225yan 2026 PPV
Date of this report	13 July 2026

Executive summary

Yarra Ranges Planning Scheme Amendment C225yran (the Amendment) seeks to update Erosion Management Overlay (EMO) mapping in the Yarra Ranges Shire following a municipal-wide review. It proposes to replace the current Schedule to the EMO with a new Schedule 1 (EMO1) to manage landslip susceptibility and introduce a new EMO Schedule 2 (EMO2) to manage debris flow susceptibility.

Key issues raised in submissions included:

- mapping extent and methodology
- impacts on future development
- stormwater and drainage
- property values and insurance premiums.

The Panel is satisfied that the proposed Amendment has had appropriate regard to, and addresses key policy objectives pertaining to erosion and landslip. The EMO mapping (reflected in Hearing Document 9f) reflects industry best practice and appropriately identifies land which is prone to erosion, landslip and/or debris flow. The application of EMO1 and EMO2 to land identified in Mapping is strategically justified and will inform future use and development of the land. Accordingly, the Panel is satisfied the Amendment delivers net community benefit and sustainable development as required by Clause 71.02-3.

The Panel concludes:

- The mapping methodology is robust and appropriate, with LiDAR providing the best available elevation data and mapping prepared in accordance with relevant technical and geotechnical guidelines.
- The EMO boundaries are justified, with appropriate inclusion thresholds and susceptibility mapping supporting the extent of the overlays.
- The mapping is sufficiently accurate, with all reasonable measures taken to ensure reliability across the municipality.
- The proposed EMO controls are reasonable and will not unreasonably constrain future development.
- Issues relating to specific local drainage problems, and the Warburton Mountain Bike Park, are outside the scope of the Amendment and should be addressed through other processes.

Recommendations

Based on the reasons set out in this Report, the Panel recommends that Council:

- 1. Adopt Yarra Ranges Planning Scheme Amendment C225yran as exhibited, subject to the specific recommendations in this Report.**
- 2. Replace exhibited Erosion Management Overlay Maps with new maps to be prepared by the Department of Transport and Planning based on Day 1 Mapping in Hearing Document 9f (Appendix 8 of Council's Part A Submission)**
- 3. Replace the following exhibited versions of Amendment Documents with the following Final Day versions reproduced in Appendix 3:**

- a) Final Day version - C225yran Instruction Sheet (Document 34)**
- b) Final Day version - C225yran Explanatory Report (Document 35)**
- c) Final Day version - Clause 44.01 Schedule 1 Erosion Management Overlay (Document 36)**
- d) Final Day version - Clause 44.01 Schedule 2 Erosion Management Overlay (Document 37)**
- e) Final Day version - Clause 72_04-s (Document 38).**

1 Introduction

1.1 The Amendment

(i) Amendment description

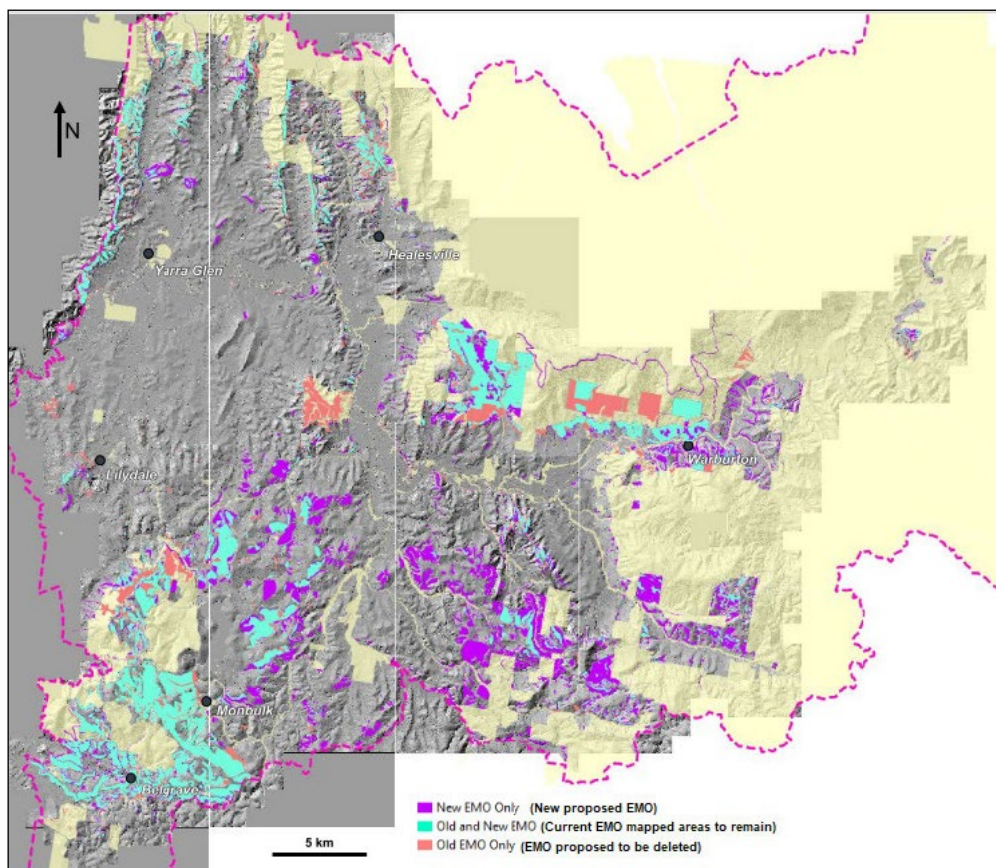
Yarra Ranges Planning Scheme Amendment C225yran (the Amendment) seeks to update the Erosion Management Overlay (EMO) in the Yarra Ranges Planning Scheme following a municipal-wide landslide risk assessment review.

Specifically, the draft Amendment proposes to:

- update the EMO mapping throughout the municipality
- replace the Schedule to the EMO with a new Schedule 1 (EMO1) to the EMO to manage landslip susceptibility
- introduce a new Schedule 2 (EMO2) to the EMO to manage debris flow susceptibility
- update the incorporated document *Requirements for a Geotechnical Assessment, Landslide Risk Assessment or Landslide Hazard Assessment prepared in support of a planning permit application under the Erosion Management Overlay* (Yarra Ranges Shire Council, June 2025) to include references to Schedules 1 and 2 of the EMO and update the application requirements.

(ii) The subject land

The Amendment applies to land shown in Figure 1. Areas in pink indicate where the new EMO is proposed to be applied, blue areas where the EMO currently applies and is proposed to be retained, and orange areas where the EMO is proposed to be deleted.

Figure 1 Land affected by the draft Amendment

Source: Council Part A submission (D9)

1.2 Background

Following receipt of grant funding from the Federal Government post a severe storm in June 2021, Yarra Ranges Council (Council) undertook a comprehensive review of landslip risks throughout the municipality. Geotechnical consultant WSP Australia Pty Ltd undertook the review and advised on changes required to the mapping and provisions of the EMO in the Yarra Ranges Planning Scheme (Planning Scheme).

The funding enabled the acquisition of high-resolution LiDAR data from the State Government, which formed a key data set underpinning the geotechnical review. The findings from the review, on the advice from the Department of Transport and Planning (DTP) informed by the recommendations of the review report, were progressed in two separate planning scheme amendments:

- C217yran – amended the schedule to the EMO (gazetted on 1 March 2024); and
- C225yran – (this Amendment) that seeks to update to the EMO mapping and associated controls.

On 27 June 2025 authorisation was granted by the Minister for Planning (under delegation) for Council to prepare the Amendment.

1.3 Procedural issues

(i) Re-notification

The Amendment was formally exhibited for nine weeks from 21 August to 26 October 2025. The initial exhibition period of six weeks was extended until 26 October 2025 to allow for further notification on 19 September 2025 which was required to address two errors in the initial mail out:

- properties with alphanumeric street numbers (e.g. 2A) that were inadvertently omitted; and
- properties for which the EMO is proposed to be deleted were not included, due to one of the four mailing lists being omitted in error.

These errors were identified in the first few weeks of exhibition. After discussion with DTP, it was agreed to notify landowners excluded from the initial mail out and extend the exhibition date until 26 October 2025. A second notice was published in the Government Gazette with the revised exhibition closing date. The Panel is satisfied with the re-notification process implemented by Council.

(ii) Deletion of interim EMO

Planning Scheme Amendment C230yran introduced the EMO on an interim basis (until 7 October 2027 or until the Amendment is finalised). As the Amendment will be finalised with the adoption of this report, in response to matters raised by the Panel, Council's Final Day version of the Amendment documents incorporates the deletion of the interim overlays. The Panel supports this outcome.

(iii) Revised mapping and notification

A large number of submissions raised matters relating to the mapping methodology or the proposed EMO mapping extent. These submissions were referred by Council to WPS Australia Pty Ltd for review and comment. In response, WSP undertook a desktop review which was augmented by site assessments on particular sites. Based on the findings of the review 29 submitter properties were recommended for refinement. These refinements were included in revised mapping with the extent of EMO1 being reduced in relation to 13 properties and a further 16 properties being removed from EMO1.

Submitters affected by the changes were notified on 12 February 2026. Submitters were given the opportunity to amend their submission by 27 February 2026 if they wished to do so. Seven amended submissions were received which were supplied to the Panel for consideration.

Post exhibition revised mapping for submitter properties was circulated in accordance with the Panel's Direction 7 on 22 April 2026 (Documents 5 & 6).

The Panel supports the mapping review process undertaken by Council. Further discussion is provided in Chapter 3.3.

(iv) Notice of the Directions Hearing

At the Directions Hearing Submitter 64 (Ms Day) expressed a concern that some submitters may not have received notice of the Directions Hearing. Upon review it became apparent that an 'older' version of a distribution list was used. Planning Panels followed up with a handful of submitters that were not notified and provided an opportunity for them to complete a Request to Be Heard form. The Panel is satisfied that the error has been corrected and no party has been materially disadvantaged. The Panel advised parties of this course of action at the commencement of the Hearing and provided opportunity for questions or comment. None were raised.

(v) Peer Review by Davin Slade of Santec

Council circulated a Peer Review document provided by Davin Slade of Stantec with its Part A submission together with the Expert Evidence of Darren Paul of WSP Australia Pty Ltd. At the commencement of the Hearing, the Panel noted Mr Paul's expert evidence statement provides commentary on the critique of Mr Slade, which it found useful. The Panel advised that it had no questions for Mr Slade however if during the course of the hearing it became evident that clarification of matters raised by Mr Slade was required, the Panel would document questions, circulate same to all parties and Mr Slade, and request a written response within seven days. No party advised that they had issue with the tendering of Mr Slade's Peer Review, nor of the proposed course of action. No questions were required to be put to Mr Slade.

1.4 The Panel's approach

Key issues raised in submissions were:

- basis of Environmental Significance Overlay (ESO) mapping
- appropriateness of susceptibility mapping
- request for mapping changes
- impacts on future development
- impacts from Stormwater and Drainage
- Mount Little Joe.

The Panel has assessed the Amendment against the principles of net community benefit and sustainable development, as set out in Clause 71.02-3 (Integrated decision making) of the Planning Scheme.

The Panel considered all written submissions made in response to the exhibition of the Amendment, observations from site visits, and submissions, evidence and other material presented to it during the Hearing. All submissions and materials have been considered even though not all material is specifically referred to in this in this Report.

This Report deals with the issues under the following headings:

- Strategic issues
- Mapping methodology
- Other submissions
- Final drafting of Amendment Documents.

1.5 Versions of the Amendment

The Panel directed Council to circulate a 'Day 1' version of the Amendment documentation before the commencement of the Hearing, and a Final Day version with its closing submissions. The Panel has based its recommendations on the Final Day version documents. Refer Chapter 5.

2 Strategic issues

2.1 Planning context

This chapter identifies planning context relevant to the Amendment.

Table 1 Planning context

	Relevant references
Victorian planning objectives	- Section 4 of the <i>Planning and Environment Act</i> 1987 (PE Act)
Municipal Planning Strategy	- Clause 02.02-3 (Environmental risks and amenity)
Planning Policy Framework	- Clauses 13.01-1S (Natural hazards and climate change) and 13.04-2S (Erosion and landslip)
Other planning strategies and policies	- Upper Yarra and Dandenong Ranges Regional Strategy Plan - Yarra Ranges Council Plan 2025-2029
Planning scheme provisions	- Erosion Management Overlay (EMO)
Ministerial directions	- Ministerial Direction on the Form and Content of Planning Schemes - Ministerial Direction 11 (Strategic Assessment of Amendments) - Ministerial Direction 17 (Localised Planning Statements) - Ministerial Direction 22 (Climate Change Considerations)
Planning practice notes	- Planning Practice Note 46: Strategic Assessment Guidelines, September 2022

2.2 Strategic justification

(i) Evidence and submissions

The Amendment aims to minimise risks associated with landslip and debris flow by updating mapping to the EMO to identify susceptible areas, and so that approvals for future development will be guided by site-specific geotechnical assessment and advice as appropriate.

Council noted the Amendment was informed by:

- expert geotechnical advice from Mr Paul of WSP Australia Pty Ltd and an expert peer review by Mr Slade of Santec
- in relation to EMO1, recent mapping based on digital terrain model based on airborne laser imaging, detection, and ranging (LiDAR)
- In relation to EMO2 the statewide debris flow study undertaken by the University of Melbourne in 2019.

The geotechnical expert evidence of Mr Paul provides:

- an explanation of landslips and landslide mapping

- an explanation of the difference between susceptibility, hazard and risk
- the basis of EMO1 and EMO2 mapping and the methodology supporting the mapping
- a response to Panel questions in relation to the Background Reports
- a thematic response to submissions
- individual responses to the submission of parties to this proceeding
- a response to the comments raised in the peer review.

Mr Paul concluded:

Over the course of my 25 years experience of assisting YRC (Yarra Ranges Council) to manage landslide risks, the effective application of the EMO and ongoing improvements have resulted in fewer examples of inappropriate ground disturbance, limited the introduction of landslide triggers and landslide occurrences and therefore enhanced community safety and resilience. I am of the opinion that the proposed mapping amendment represents a further improvement based on the new data and modern assessment techniques.

The peer reviewer concluded that:

..the methodologies adopted by WSP in their reports are robust and consistent with good engineering practice when considering landslide susceptibility and development of planning level landslide susceptibility maps to support Erosion Management Overlays.

...

the WSP methods are sound and in line with industry practice such that they provide a strong basis for the EMO and the Amendment.

Council submitted the proposed Amendment is consistent with:

- Clause 02.02-3 Environmental risks and amenity which notes that the municipality is exposed to environmental hazards including bushfire, landslip, flooding and soil contamination.
- Clause 13.01-1S (Natural hazards and climate change) the objective which is to minimise the impacts of natural hazards and adapt to impacts of climate change through risk-based planning. Relevant strategies include identifying risk area using the best available data.
- Clause 13.04-2S (Erosion and landslip) the objective which is to protect areas prone to erosion, landslip or other land degradation processes. Relevant strategies include identify areas subject to erosion or instability in planning schemes and when considering the use and development of land.
- The Upper Yarra and Dandenong Ranges Regional Strategy Plan which includes policies that promote safe building guidelines in areas subject to land instability and policies to minimise soil erosion.
- The Yarra Ranges Council Plan 2025-2029 which outlines landslides as a significant ongoing risk to the community that requires Council leadership to manage.
- The EMO which purposes include to protect areas prone to erosion, landslip, other land degradation processes by minimising land disturbance and inappropriate development. The EMO triggers a planning permit for building and works, vegetation removal and subdivision and provides an extensive suite of exemptions at CI 44.01-4. It includes two separate schedules to the EMO to clearly differentiate the type of susceptibility (landslip vs debris flow) to provide greater transparency and more specificity in controls. The EMO triggers a requirement for site-specific geotechnical assessment and advice to ensure new

development will be located and designed to minimise exposure to avoidable risks.

- Ministerial Direction 11 (Strategic Assessment of Amendments) which ensures a comprehensive strategic evaluation of a planning scheme amendment and the outcome it produces.
- Ministerial Direction 17 (Localised Planning Statements) which includes Community Safety Strategies and Landslip Strategies.
- Ministerial Direction 22 (Climate Change Considerations) which recognises more intense rainfall can elevate landslide risk. To respond to the increased risks planning authorities are required to demonstrate how future land use and development will be resilient to climate change affected natural hazards including land slip and landslides. The Amendment seeks to respond by updating mapping and controls to more accurately identify land susceptible to landslip.

The main themes of submissions included mapping methodology and extent, and impact on future development. Few submissions were received that challenged the strategic intent of the Amendment.

(ii) Discussion

The Panel is satisfied that the proposed Amendment has had appropriate regard to, and addresses key policy objectives pertaining to erosion and landslip. The Final Day version of ESO mapping (reflected in Hearing Document 9f) reflects industry best practice and appropriately identifies land which is prone to erosion, landslip and/or debris flow. The application of EMO1 and EMO2 to land identified in Mapping is strategically justified and will inform future use and development of the land. Accordingly, the Panel is satisfied the Amendment delivers net community benefit and sustainable development as required by Clause 71.02-3.

(iii) Conclusions and recommendation

For the reasons set out in this report, the Panel concludes that the Amendment is well founded and strategically justified and should be supported. It is supported by, and implements the relevant sections of the Planning Policy Framework, and is consistent with the relevant Ministerial Directions and Practice Notes.

The Panel recommends:

- 1. Adopt Yarra Ranges Planning Scheme Amendment C225yran as exhibited, subject to the specific recommendations in this Report.**

3 Mapping methodology

3.1 Use of LiDAR and modelling assumptions

(i) The issue

The issue is whether the basis of ESO mapping appropriate.

(ii) Background

The existing EMO mapping in Yarra Ranges is based on criteria relating to:

- underlying geology
- slope angle; and
- known history of instability (e.g. documented landslides).

A digital terrain model developed using LiDAR¹ data was used to determine slope angles of the terrain.

A number of submitters questioned the use of LiDAR technology as the basis of mapping of ESO1 and ESO2 and questioned the relevance and accuracy of modelling assumptions. Council summarised these submissions as follows:

- LiDAR and modelling are too broad-scale and do not reflect site-specific conditions;
- Digital mapping can misrepresent slope gradients (e.g., roof tiles, driveways, retaining walls being misread as slope);
- Lack of on-site and geotechnical inspections to determine if land is susceptible to landslip or debris flow;
- Mapping perceived as inconsistent with nearby properties of similar topography;
- The mapping lacks transparency about thresholds and uncertainty margins; and
- Geological or soil conditions (e.g., shallow rock) are stable and shouldn't trigger EMO inclusion.

(iii) Evidence and submissions

Several submitters raised concerns about the accuracy and appropriateness of using LiDAR data for densely vegetated and steep terrain.

Council's Part B submission stated that "*LiDAR is not affected by dense canopy or rugged terrain.*"

Mr Paul's evidence was that LiDAR data provides the most accurate terrain model available across Yarra Ranges. In oral evidence he stated that LiDAR data filters out trees and provides "very precise and accurate" data.

Submitter 15 reported that the affected property had retaining walls and queried whether the land should be included within EMO1.

Mr Paul's evidence was that even though LiDAR provided point data every metre, the calculation of slope angles was done over a 10 metre point spacing. He noted that retaining walls and cuttings may affect slope calculations but consideration is given to

¹ Light Detection and Ranging

the portion of the area that exceeds the threshold and an isolated 10 metre grid by itself would not be mapped as being included in the EMO1.

Submission 29 expressed concern about the lack of on-site verification to confirm the accuracy of the susceptibility mapping.

Mr Paul's evidence was that scale of mapping used to develop EMO1 is consistent with the Australian Geomechanics Society, *Practice Note Guidelines for Landslide Risk Management*, 2007 (AGS guidelines). He provided an extract of the AGS guidelines in his statement showing the recommended mapping scales in the AGS guidelines.

Table 2 Landslide zoning mapping scales and their application

Scale Description	Indicative Range of Scales	Examples of Zoning Application	Typical Area of Zoning
Small	< 1:100,000	Landslide inventory and susceptibility to inform policy makers and the general public	10,000 square kilometres
Medium	1:100,000 to 1:25,000	Landslide inventory and susceptibility zoning for regional and local development or very large scale engineering projects. Preliminary level hazard mapping for local areas	1000 – 10,000 square kilometres
Large	1:25,000 to 1:5,000	Landslide inventory, susceptibility and hazard zoning for local areas Preliminary level risk zoning for local areas and the advanced stages of planning for large engineering structures, roads and railways	10-1000 square kilometres
Detailed	>5,000	Intermediate and advanced level hazard and risk zoning for local and site specific areas and for the design phase of large engineering structures, roads and railways	Several hectares to tens of square kilometres

Source: Australian Geomechanics, Guidelines for Landslide Susceptibility, Hazard and Risk Zoning for Land Use Planning (AGS 2007a)

He noted that EMO1 as exhibited was based on a 1:5,000 scale and was at the larger or more detailed mapping level recommended in the AGS guidelines. His opinion was that using increasingly detailed mapping methods for the whole area would require significantly more time and cost with diminishing returns on improved accuracy compared to the method used.

Submission 35 submitted that landslide susceptibility mapping is inappropriate as the site is underlain by shallow rock.

Mr Paul's statement acknowledged that sites with shallow rock can be less susceptible to landslide compared to sites with deep rock. He noted that there are no practical means to identify the depth to rock across the whole Yarra Ranges Shire. His evidence was that the depth to rock would be considered as part of an on-site geotechnical assessment for any proposed development and would be factored into that assessment accordingly.

In regard to the thresholds for inclusion in EMO1, Mr Paul's evidence was that landslides occurring after 1999 were identified and field visits confirmed that the LiDAR derived terrain model accurately reflected the terrain. He reported that this study confirmed that the existing criteria for inclusion in the EMO was still appropriate.

Table 3 Criteria for inclusion in EMO1

Geology	Slope Angle (Medium and High Susceptibility is recommended for inclusion in the EMO).					
	0° to 3° (0% to 5%)	>3° to 9° (>5% to 15%)	>9° to 11° (>15% to 20%)	>11° to 22° (>20% to 40%)	>22° to 26° (>40% to 50%)	>26° (>50%)
Landslide (EMO1)						
Silurian and Devonian Sedimentary Rock	Not susceptible	Low	Low	Low	Medium EMO1	Medium EMO1
Devonian Granite/Granodiorite	Not susceptible	Low	Low	Low	Medium EMO1	Medium EMO1
Devonian Volcanic Rock (Dvc, Dvm, Dcl, Dvt)	Not susceptible	Low	Low	Low	Medium EMO1	Medium EMO1
Devonian Volcanic Rock (Dcd, Dvk, Dvf, Ddh, Ddr, Dcw)	Not susceptible	Low	Low	Medium EMO1	Medium EMO1	High EMO1
Oligocene Older Volcanics	Not susceptible	Low	Medium EMO1	Medium EMO1	Medium EMO1	Medium EMO1
Quaternary Colluvium/Alluvium	Not susceptible	Low	Low	Medium EMO1	Medium EMO1	Medium EMO1
Past Landslide (any geology)	High EMO1	High EMO1	High EMO1	High EMO1	High EMO1	High EMO1

Source: Expert witness statement of Darren Paul, Table 3.1

The peer review found that refined methodology that split the slope angle ranges in the above table into smaller ranges may result in some minor changes to the boundary of the EMO1 but concluded that "adjustments to the boundaries are not warranted."

In regard to EMO2, Council submitted that the debris flow susceptibility mapping was informed by a statewide debris flow study undertaken by the University of Melbourne in 2019 and a previous 1991 study of the Montrose area. The methodology in the 2019 University of Melbourne statewide debris flow study, used in conjunction with the LiDAR mapping, identified further areas of debris flow susceptibility within Yarra Ranges, which are recommended for inclusion in EMO2 as part of the Amendment.

The peer review found that:

Considering the minimal data on actual debris flows within the Yarra Ranges Shire, it is considered that the methods outlined in the papers that have then been used by WSP to determine the likely extent of debris flow provide an appropriate proxy for delineation of the EMO2 boundaries the methodology used to define the extent of the EMO2 were appropriate.

(iv) Discussion

The Panel accepts that LiDAR data provides the most accurate terrain model that could practically be developed across the Yarra Ranges. With the potential EMO's applying to 13,724 properties across the Yarra Ranges, the Panel accepts the view of Council and Mr

Paul that it is not practical to undertake individual site-specific assessments as a basis for the application of the EMO.

The Panel accepts the evidence of Mr Paul that the methodology used to determine the areas where the EMO's would apply accord with appropriate technical standards.

The Panel accepts that all reasonable efforts have been made to minimise the inclusion of areas that may not meet the inclusion criteria. We are satisfied that if those circumstances arise, there is a provision in the incorporated document to the EMO for the requirements of a geotechnical assessment to be waived if a qualified geotechnical engineer shows the criteria for inclusion are not met.

(v) Conclusions

The Panel concludes:

- LiDAR technology provides the best available data for determining natural ground level elevations across the municipality.
- The scale of maps used accord with the recommendations of appropriate geotechnical guidelines.
- The thresholds for inclusion in the EMO's are appropriate with improved digital mapping allowing a consistent application of the inclusion criteria across the municipality.

3.2 Is susceptibility mapping an appropriate basis for the EMO controls?

(i) The issue

The issue is whether susceptibility mapping is valid.

(ii) Background

A number of submitters questioned the appropriateness of using susceptibility mapping as the basis for EMO1 and EMO2. Council responded that there is a difference between susceptibility, hazard and risk and that the mapping methodology is robust and defensible.

(iii) Evidence and submissions

Submitter 65 submitted that the EMO should be based on a risk assessment approach where the likelihood of undesirable consequences is taken into account rather than a susceptibility assessment.

Mr Paul's evidence was that the EMO is a forward looking planning tool that can only consider susceptibility as at it is not possible to anticipate the type of development that may be proposed. He explained that landslide "triggers" are usually some human activity, inappropriate construction or drainage works, and the actual risk assessment can be calculated once details of a proposed development are known. The EMO is to ensure that the risk assessment is performed.

Mr Paul considered that the approach and scale of mapping used to develop EMO1 was consistent with the *Australian Geomechanics Society, Practice Note Guidelines for Landslide Risk Management*, 2007 (AGS Guidelines). In oral evidence, Mr Paul stated that to his knowledge every landslide EMO in Victoria is based on susceptibility mapping.

Council commissioned a peer review of the Mr Paul's evidence. The peer reviewer noted that the methodology adopted as the basis of EMO1 is robust and is consistent with methods that have been used for other local government areas in developing landslide susceptibility maps over the past 20 years.

(iv) Discussion

The Panel is aware that the Practitioner's Guide to Victoria's Planning Schemes² states in regard to EMOs that:

There should be appropriate technical justification to support the application of this overlay.

The Panel accepts the submission from the Council and the expert evidence of Mr Paul and the advice of the peer reviewer that the EMO's have been prepared in accordance with the technical advice provided in the AGS Guidelines. As described in that publication, the first stage of managing the risks and the impacts of landslides is to identify those areas that are susceptible or at risk from landfills (that includes debris fields (EMO2). A Landslide Risk Management report can then be prepared for proposed developments in the landside susceptible area when details of the proposed development can be properly assessed.

(v) Conclusions

The Panel concludes:

- Susceptibility mapping is appropriate for determining the extent of the Erosion Management Overlays.
- Mapping has been conducted in accordance with applicable technical guidelines.

3.3 Post exhibition mapping changes

(i) The issues

The issues are:

- What was the basis of Council's proposed post exhibition mapping changes?
- Was adequate notice given to submitters regarding the proposed changes?
- Are the proposed changes appropriate?

(ii) Background

In response to submissions received to the exhibition of the Amendment, Council undertook an extensive review of mapping post exhibition. The review resulted in Council recommending that boundaries of the EMO be modified based on individual site assessments or the use of more detailed mapping around the boundaries of EMO1.

² Published by Department of Transport and Planning, version 8 August 2025

(iii) Evidence and submissions

Council submitted that the extent of change to EMO1 boundary was not due to any errors in applying the methodology but arose due to the differences between a regional scale analysis that is required under the AGS Guidelines with the expectation of submitters that the analysis ought to have been undertaken at a property level.

Mr Paul's evidence was that he had reviewed submissions in regard to the need or extent of the EMO on 65 properties. Of those properties, 56 had the exhibited EMO1 boundary passing through or within 50 metres of the property. He explained that 34 properties were identified where there could be a basis to make adjustments to the EMO1 boundary by assessing landslide susceptibility at a detailed scale.

Mr Paul explained that site visits were undertaken by engineering geologists to these properties to obtain slope angle measurements on the ground using hand held inclinometers and to assess the influence of earthworks on the susceptibility mapping. Of the 34 properties visited, at 30 properties the natural slope angle on or in the vicinity of the property was close to or very slightly below the criteria for inclusion and it was observed that susceptibility indications were influenced by earthworks.

Mr Paul's evidence was that the revised mapping also used more detailed maps with a scale of 1:1,500, which is more detailed than the 1:5,000 scale recommended in the AGS Guidelines.

To aid in identifying the transition zones, an algorithm was developed that highlighted and delineated all susceptible grid squares that have less than four adjacent susceptible squares. The revised boundary based on these criteria was then manually adjusted and the boundary smoothed across the whole Shire.

Mr Paul concluded:

I consider the accuracy to be consistent with national guidelines and appropriate given the available information on which it is based and practical limitations on attempting to increase the accuracy.

Council submitted the revised mapping, as depicted in Hearing Document 9f (Appendix 8 to Council's Part A Submission) resulted in a reduction in the overall area identified as susceptible to landslide from 137 square kilometres (at exhibition), to 117 square kilometres (Day 1), and reduced the extent of the mapped EMO and the number of properties affected by EMO1. The revised mapping in Document 9f which covers the whole municipality is reflective of Council's recommended changes to mapping extent on submitter properties as shown in Document 9g (Appendix 9 to Council's Part A Submission - Day 1 Mapping: Submitter Properties).

Council advised that it notified those submitters affected by the revised mapping and gave them two weeks to make a further submission.

Revised submissions were received from seven submitters with two indicating they were happy with the revised mapping, one largely happy with the clarification the EMO only applies to the area covered by the overlay, and four unresolved. The four unresolved submissions did not seek to be heard at the Panel Hearing.

The Peer reviewed concluded that the refinement of the boundaries *"has produced more robust, readily definable boundaries for the EMO"*.

No change to EMO2 (debris flow) mapping was recommended.

(iv) Discussion

The refinements to the boundaries of EMO1 are based on better information provided by on the ground site assessments of those areas close to the proposed boundary of the susceptible area. The Panel considers this a reasonable approach to ensure the maximum accuracy that can be practically obtained.

The Panel accepts that two weeks may be viewed as too short of a time for the affected submitters to respond to the revised mapping but as the revised mapping resulted in fewer properties impacted or less of an impact, we do not consider that the two-week period is inadequate in these circumstances.

No changes were made to the EMO2 boundary.

(v) Conclusions and recommendations

The Panel concludes:

- All reasonable measures have been taken to ensure the accuracy of the areas where the EMOs apply.
- There has been adequate time for submissions to be received.

The Panel recommends:

- 2. Replace the exhibited Erosion Management Overlay Maps with new maps to be prepared by the Department of Transport and Planning based on Day 1 Mapping in Hearing Document 9f (Appendix 8 of Council's Part A Submission).**

4 Other submissions

4.1 Impacts on future development potential

(i) The issues

A number of submitters opposed the Amendment due to concerns that the application of the EMO on their property would limit future development potential, or make development more difficult including the need to secure additional approvals.

Submissions were also received that expressed concerns that the application of the EMO controls will result in:

- the need to undertake costly geotechnical assessments
- increased insurance costs
- decrease in property values
- longer application assessment timelines.

(ii) Evidence and submissions

Council submitted the Planning Scheme consists of requirements and guidelines for the use and development of land and the purpose of the EMOs is to apply provisions to ensure development is safe and appropriately assessed.

Any resultant limitations to development are appropriate given the risk identified.

...

In many cases the proposed EMO does not apply to an entire property. In these situations, the requirements of the EMO only applies to the area covered by the overlay. If proposed buildings and works are located completely outside of the overlay, the overlay does not apply.

Council further noted that some types of lower risk development under EMO1 are exempt, which represents an appropriate improvement to the controls achieved through previous Amendment C217.

While acknowledging that financial aspects such as impact on property values and insurance costs are common concerns associated with proposed application of planning controls such the EMO, Council submitted that private financial impacts for property owners are not relevant planning considerations for the purpose for the purpose of the EMO, and fall beyond the scope of the Amendment.

Mr Paul's evidence was that a geotechnical practitioner would need to be engaged by an applicant to undertake a site classification or 'soil test' for the purposes of informing foundation design and to meet building code requirements. A geotechnical assessment would usually be undertaken at the same time as an add on to the soil test, incurring an additional charge. He further noted that if there are significant landslide hazards on the site, a landside risk assessment would be required.

Submitter 8 submitted that the proposed EMO controls impose new and burdensome requirements for a planning permit for any new development, including extensions, outbuildings, earthworks and tree removal and the amendment is in direct conflict with

state government policies to increase housing supply and affordability. The concerns expressed were reflected in a number of submissions.

Submitter 66 submitted that the EMO application to their land introduces significant uncertainty and restriction regarding future land use and questioned if the EMO will affect the whole property or only what's mapped.

(iii) Discussion

The proposed EMO controls seek to ensure that development can be undertaken at a tolerable risk to human life and property from landslip (EMO1) and from debris flow (EMO2). Importantly, the controls do include a number of exemptions from requiring a permit which are aimed at, in-part, reducing the burden on landowners from the need to apply for permits for developments considered to not pose a risk. The exemptions are listed in Clause 3.0 as follows:

3.0 Permit Requirement

A permit is required for all subdivision and new buildings and works **except for** (Panel **Emphasis**):

- Impervious water holding structures engineer designed or manufactured to an Australian Standard such as domestic rainwater tanks and spas, ponds and rainwater gardens with a capacity not exceeding 5000 litres.
- A masonry fence, if the height of the fence does not exceed one metre and the fence does not alter surface water drainage.
- A fence of lightweight construction including timber, wire or aluminium and where the fence is permeable, or where the base of the fence is at least 50 millimetres above the ground surface and does not obstruct surface water flow.
- Earthworks that result in a modified ground surface that is less than 1 metre above or below the natural ground level and does not allow water ponding.
- Repair or maintenance works to existing assets undertaken by, or on behalf of a municipality, public authority or utility service provider relating to watercourse management, environmental improvements or infrastructure services.
- Alteration or extension to an existing building provided all of the following are met:
 - the floor area of the alteration or extension is not more than 20 square metres;
 - the alteration is connected to a legal point of discharge;
 - there are no existing earthworks higher than 1 metre within 5 metres of the alteration or addition.
- An outbuilding ancillary to a dwelling, provided all the following are met:
 - the building is not used for accommodation;
 - the building is constructed with aluminium, steel or timber;
 - the total area of outbuildings on the lot is 40 square metres or less;
 - the building is connected to a legal point of discharge;
 - there are no existing earthworks higher than 1 metre within 5 metres of the building.
- A building used for agriculture, provided all of the following are met:
 - the building is constructed with aluminium, steel or timber;
 - there are no more than two agricultural buildings on the lot;
 - the building is connected to a legal point of discharge;

- there are no existing earthworks higher than 1 metre within 5 metres of the building.
- A retaining wall or slope retention to support existing earthworks provided the earthworks were undertaken prior to 2001.
- Remove, destroy or lop vegetation, either separately or as part of building works if any of the following apply:
 - A tree with a trunk circumference of 0.5 metres or less measured 1.3 metres above ground level.
 - Vegetation within 2 metres of a building.
 - Dead vegetation where the ground surface is reinstated.
 - Lopping necessary to improve the health or structural stability of a tree.

The Panel supports the list of exemptions.

The Panel agrees with Council's observation that property owners will not be required to undertake a Geotechnical Assessment or Landslide Risk Assessment, in support of a planning permit application, if the specific location of the proposed development within the property is not affected by the EMO. This will aid in encouraging development to occur in areas where there is less risk.

The Panel further agrees with Council that financial impacts such as property values and insurance costs are not relevant considerations in this matter.

The opinion expressed by Submitter 8 that the application of EMO controls are in direct conflict with broader State and Local Housing policies is not shared by the Panel. The Amendment is seeking to ensure life and property are not compromised or put at risk from inappropriate development. State Housing Policy (16.01-1L) specifically discourages additional housing in areas with significant vegetation or infrastructure constraints or on land with steep slopes.

(iv) Conclusion

The Panel concludes:

- The proposed Erosion Management Overlay controls will not unreasonably impact future development.

4.2 Stormwater and drainage

(i) The issues

A number of submissions were received that expressed concerns regarding a range of stormwater and drainage matters including: passage of water across their property from open drains, maintenance of stormwater assets, road run off. The majority of this group of submissions posed questions regarding drainage issues specifically, including requests for drainage upgrades and improvements, as opposed to raising specific concerns about the extent of EMO mapping.

(ii) Evidence and submissions

Council submitted that comments regarding stormwater infrastructure were referred to Council's Infrastructure Services team for their consideration. It advised Council has a

Stormwater Management Plan, which aims to identify water flow paths, infrastructure vulnerabilities that may contribute to slope instability. Council concluded:

While drainage of land can contribute to the risk of a landslide, it does not change the underlying geology or slope assessment which informs the EMO mapping.

The proposed EMO has been applied to land irrespective of the drainage issues that may have occurred on a property, as drainage is not one of the three criteria that is used to inform the EMO mapping.

Numerous submitters (including for example (s4), (s5), (s7), (s26), (s38), (s48) and (s82) questioned Council's stormwater management practices and either stated or inferred that landslide susceptibility was due to Council's mismanagement of stormwater.

(iii) Discussion

The Panel accepts Council's response to submissions. Specific and isolated drainage issues raised in submissions are beyond the scope of matters relevant to the Amendment.

(iv) Conclusion

The Panel concludes:

- Specific and isolated drainage issues raised in submissions are beyond the scope of matters relevant to the Amendment.

4.3 Mount Little Joe

(i) The issues

Concerns regarding the basis of EMO2 as well as the management of Mount Little Joe, and in particular illegal trail making and riding activities that are believed to be exacerbating potential landslip including debris flow.

(ii) Evidence and submissions

Submitter 80 expressed concern that Amendment did not adequately consider Ash Wednesday bushfires. The submission also included observations of poor and potentially illegal land clearing activities on Mount Little Joe. The submitter listed six outcomes that hopefully would come from the hearing process that could assist achieve improved land management outcomes for Mount Little Joe including but not limited to:

- undertaking inspections to identify illegal trails
- undertake mitigation including revegetation and erosion control works
- biker education; plant vouchers and mapping review.

Council submitted that EMO2 had been prepared based on the "Post-fire debris flow in southeast Australia" thesis report, that expressly identifies post bush fire debris flows and considerations. Council noted the Warburton Mountain Bike Park on Mount Little Joe is on land is owned by Parks Victoria and is not within the scope of the Amendment. The Part B submission of Council noted:

This submission has been provided to Council's Warburton Mountain Bike Team. The Warburton Bike Park is being delivered in accordance with approvals provided under the Specific Controls Overlay 16 – *Warburton Mountain Bike Destination Project (Southern Network)*

Incorporated Document (Department of Transport and Planning, October 2023) in the Planning Scheme for this project. Regular audits have been completed by external environmental auditor and appropriate native vegetation offsets have been secured as required by SCO16.

Mr Paul gave evidence that:

The footslopes of Mount Little Joe immediately upslope of Hearse Road are not identified by the UoM (University of Melbourne) studies as susceptible to debris flow hazard. I consider it likely they are not identified as susceptible because the length of the gully between the source area and the base of the slope is limited and the slope angle is relatively gentle which reduces the potential severity of a debris flow event.

Councils Part C submission clarified that the Warburton Mountain Bike Destination is predominantly within Yarra State Forest, is outside the EMO and responsibility for landslide management lies with the regulator for State Forests, Department of Energy, Environment and Climate Action (DEECA).

(iii) Discussion

The Panel accepts Council's response to this submission and agrees that matters raised in relation to the Warburton Mountain Bike Park, on land owned by Parks Victoria are outside the scope of the Amendment. That said, the Panel thanks the submitter for the comprehensive submission and suggests that matters raised be pursued via Council's Mountain Bike Team, DEECA and Parks Victoria.

(iv) Conclusion

The Panel concludes:

- Matters in relation to Warburton Mountain Bike Park, on land owned by Parks Victoria, are beyond the scope the Amendment.

5 Final drafting of Amendment Documents

5.1 The issue

The issue is whether the final form and content of the Amendment Documents are appropriate.

5.2 Submissions

Council submitted a revised suite of Amendment Documents at the commencement of the hearing.

A slightly amended version of these documents were circulated as “Final Day” Versions at the close of the Hearing (Refer Documents 34–38). The Final day Amendment Documents are listed below:

- Final day version - C225yran Instruction Sheet (Document 34)
- Final day version - C225yran Explanatory Report (Document 35)
- Final day version - Clause 44.01 Schedule 1 Erosion Management Overlay (Document 36)
- Final day version - Clause 44.01 Schedule 2 Erosion Management Overlay (Document 37)
- Final day version - Clause 72_04-s (Document 38).

The changes (if any) to the various documents from the exhibited version is noted in the following table.

Table 4 Changes to Final Day documents from exhibited versions

Final Day Amendment Document	Change from exhibited version
Explanatory Report	Updates the number of properties affected and includes deletion of interim EMO controls
Instruction Sheet	Deletion of interim controls EMO3 & EMO4
Schedule to Clause 72.04 Documents Incorporated in this Planning Scheme	Deletion of interim EMO Incorporated Document
Clause 44.01 Schedule 1 Erosion Management Overlay	No changes
Clause 44.01 Schedule 2 Erosion Management Overlay	No changes
Schedule to Clause 72.08 Background Documents	No changes
Incorporated Document – Requirements for a Geotechnical Assessment, Landslide Risk Assessment or Landslide Hazard Assessment (Yarra Ranges Shire Council, June 2025)	No changes

Final Day Amendment Document	Change from exhibited version
Background Document – Basis for Mapping Amendment (WSP Australia, April 2025)	No changes
Clause 72.03 Schedule What Does This Planning Scheme Consist Of?	To be confirmed once maps are requested from DTP at approval stage (may change which maps are included in the scheme)
EMO Maps	To be confirmed once maps are requested from DTP at approval stage

In relation to the EMO Maps, the Panel notes the required maps to be provided by DTP at approval is to reflect Day 1 Mapping supplied by Council (Hearing Document 9f), being Appendix 8 to Council's Part A submission.

Via email on the 26 May 2026 parties were advised:

Any party seeking to provide drafting comments on the Council Part C (closing) version of the Amendment documentation must circulate them to all parties on the distribution list by 12 noon on Thursday 4 June.

No party availed themselves of the opportunity.

5.3 Discussion

The Panel has considered the changes proposed by Council in the Day 1 and Final Day Version of Amendment Documents. The changes proposed are supported.

For completeness, the Panel endorsed Final Day versions of the Amendment Documents (and the basis of final mapping to be provided by DTP) are provided in Appendix C.

5.4 Conclusions and recommendations

The Panel concludes:

- The Final Day Versions of the Amendment Documents are appropriate.

The Panel recommends:

- 3. Replace the following exhibited versions of Amendment Documents with the following Final Versions reproduced in Appendix 3:**
 - a) Final day version - C225yran Instruction Sheet (Document 34)**
 - b) Final day version - C225yran Explanatory Report (Document 35)**
 - c) Final day version - Clause 44.01 Schedule 1 Erosion Management Overlay (Document 36)**
 - d) Final day version - Clause 44.01 Schedule 2 Erosion Management Overlay (Document 37)**
 - e) Final day version - Clause 72_04-s (Document 38).**

Appendix A Parties to the Panel Hearing

Submitter	Represented by
Yarra Ranges Shire Council (Council)	David Vorchheimer of Russell Kennedy Lawyers, who called the following expert evidence: - Darren Paul of WSP in erosion
Lyn Branton and Janine Brierley	
Ronen Yona	
Michael Edyvane	
Charles Leyland	
Darren Dew	
Ellena Biggs	
Michael Buxton	
Meridith Day	
Jan Pike	
Philomina Jansen (written submission only)	

Appendix B Document list

No.	Date	Description	Provided by
1	16 Apr 26	Panel Directions and Hearing Timetable (version 1)	Planning Panels Victoria (PPV)
2	17 Apr 26	Site inspection location requests	Mellisse Oakes (Submitter 66)
3	21 Apr 26	Site inspection location requests	Ronen Yona
4	21 Apr 26	Submitter map (provided to the Panel only)	Yarra Ranges Shire Council (Council)
5	22 Apr 26	Email to submitters affected by revised mapping (12 February 2026)	Council
6	22 Apr 26	Revised mapping attachments (separate files and combined PDF)	Council
7	23 Apr 26	Site inspection location requests	Philomina Jansen
8	4 May 26	Version 2 Hearing timetable	PPV
9	15 May 26	Part A submission, with appendices: 1. Appendix 1. - Chronology of Events 2. Appendix 2 - History of EMO in Yarra Ranges 3. Appendix 3. Authorisation letter 4. Appendix 4. Submitter map 5. Appendix 5. Council Report & Attachments (9 Dec 2025) 6. Appendix 6. Late submissions 7. Appendix 7. Revised mapping methodology (5 Feb 2026) 8. Appendix 8. Day 1 mapping 9. Appendix 9. Day 1 mapping - Submitter Properties 10. Appendix 10. Revised mapping notification email (12 Feb 2026)	Council
10	15 May 26	Stantec peer review of WSP reports (12 May 2026)	Council
11	15 May 26	Expert witness statement of Darren Paul	Council
12	21 May 26	Written submission	Philomina and Willem Jansen
13	21 May 26	Geotechnical site classification	Philomina and Willem Jansen

No.	Date	Description	Provided by
14	21 May 26	Land capability assessment	Philomina and Willem Jansen
15	21 May 26	Version 3 Hearing Timetable	PPV
16	21 May 26	Town Planning Assessment	Ellena Biggs
17	21 May 26	Map - Warburton Mountain Bike Trail - Width Breach Locations	Ellena Biggs
18	21 May 26	Warburton Mountain Bike Trail - Width of Track data	Ellena Biggs
19	22 May 26	Erosion and nutrient loss resulting from Ash Wednesday wildfires - A case study	Ellena Biggs
20	21 May 26	Photographs	Ronen Yona
21	22 May 26	Part B submission	Council
22	22 May 26	Response to submissions table	Council
23	22 May 26	Day 1 version - C225yran Instruction Sheet	Council
24	22 May 26	Day 1 version - C225yran Explanatory Report	Council
25	22 May 26	Day 1 version - 44.01 Schedule 1 Erosion Management Overlay	Council
26	22 May 26	Day 1 version - 44.01 Schedule 2 Erosion Management Overlay	Council
27	22 May 26	Day 1 version - Clause 72.04-s	Council
28	22 May 26	Summary of Day 1 versions	Council
29	22 May 26	Written submission	Meridith and Russell Day
30	25 May 26	Written submission	Michael Buxton
31	25 May 26	Additional supporting documents	Ellena Biggs
32	25 May 26	Videos	Ellena Biggs
33	28 May 26	Part C (closing) submission	Council
34	28 May 26	Final Day version - C225yran Instruction Sheet	Council
35	28 May 26	Final Day version - C225yran Explanatory Report	Council
36	28 May 26	Final Day version - Clause 44.01 Schedule 1 Erosion Management Overlay	Council
37	28 May 26	Final Day version - Clause 44.01 Schedule 2 Erosion Management Overlay	Council
38	28 May 26	Final Day version - Clause 72_04-s	Council

Appendix C Panel recommended version of Amendment Documentation

Council filed its final preferred (Final day) versions of the Amendment documentation following the Hearing on 28 May 2026:

- Final Day version - C225yran Instruction Sheet (Document 34)
- Final Day version - C225yran Explanatory Report (Document 35)
- Final Day version - Clause 44.01 Schedule 1 Erosion Management Overlay (Document 36)
- Final Day version - Clause 44.01 Schedule 2 Erosion Management Overlay (Document 37)
- Final Day version - Clause 72_04-s (Document 38).

The Panel adopts Council's Final Day documentation and does not recommend any further changes.

Council also filed updated mapping ahead of the hearing (Document 9f – Appendix 8 to Council's Part A Submission), which constitutes Council's Final Day version of the mapping. The Panel adopts this mapping and does not propose any further changes.

The documents above are replicated in this appendix for ease of reference. Any tracked changes made by Council to show changes between the exhibited and Final Day versions have been accepted for clarity.

Yarra Ranges Planning Scheme

Amendment C225

Instruction sheet

The planning authority for this amendment is Yarra Ranges Shire Council.

The Yarra Ranges Planning Scheme is amended as follows:

Planning Scheme Maps

The Planning Scheme Maps are amended by a total of 133 attached map sheets.

Overlay Maps

1. Amend Planning Scheme Map Nos. 1EMO, 2EMO, 3EMO, 8EMO, 9EMO, 10EMO, 11EMO, 12EMO, 13EMO, 15EMO, 17EMO, 18EMO, 20EMO, 21EMO, 22EMO, 23EMO, 25EMO, 26EMO, 27EMO, 28EMO, 29EMO, 30EMO, 31EMO, 32EMO, 33EMO, 34EMO, 35EMO, 37EMO, 39EMO, 40EMO, 41EMO, 42EMO, 43EMO, 44EMO, 45EMO, 46EMO, 47EMO, 48EMO, 49EMO, 52EMO, 53EMO, 54EMO, 55EMO, 56EMO, 57EMO, 58EMO, 59EMO, 60EMO, 61EMO, 66EMO, 67EMO, 68EMO, 69EMO, 70EMO, 71EMO, 72EMO, 73EMO, 75EMO, 76EMO, 77EMO, 78EMO, 79EMO, 83EMO, 84EMO in the manner shown on the 128 attached maps marked "Yarra Ranges Planning Scheme, Amendment C225yan".
2. Insert new Planning Scheme Map Nos. 14EMO, 16EMO and 65EMO in the manner shown on the 3 attached maps marked "Yarra Ranges Planning Scheme, Amendment C225yan".
3. Delete Planning Scheme Map Nos. 36EMO and 82EMO in the manner shown on the 2 attached maps marked "Yarra Ranges Planning Scheme, Amendment C225yan".

Planning Scheme Ordinance

The Planning Scheme Ordinance is amended as follows:

4. In **Overlays** – Clause 44.01, delete Schedule and insert a new Schedule 1 in the form of the attached document.
5. In **Overlays** – Clause 44.01, insert a new Schedule 2 in the form of the attached document.

6. In **Overlays** – Clause 44.01, delete Schedule 3 and Schedule 4
7. In **Operational Provisions** – Clause 72.03, replace the Schedule with a new Schedule in the form of the attached document.
8. In **Operational Provisions** – Clause 72.04, replace the Schedule with a new Schedule in the form of the attached document.
9. In **Operational Provisions** – Clause 72.08, replace the Schedule with a new Schedule in the form of the attached document.

End of document

Yarra Ranges Planning Scheme

Amendment C225yran

Explanatory Report

Overview

The amendment updates the Erosion Management Overlay (EMO) mapping following a municipal-wide landslide risk assessment review, replaces Schedule to the EMO with a new Schedule 1 to the EMO to manage landslip susceptibility, and introduces a new Schedule 2 to the EMO to manage debris flow susceptibility. The amendment also makes consequential changes to the Yarra Ranges Planning Scheme.

The Incorporated Document *“Requirements for a Geotechnical Assessment, Landslide Risk Assessment or Landslide Hazard Assessment prepared in support of a planning permit application under the Erosion Management Overlay (Yarra Ranges Shire Council, June 2025)”* is amended to include references to Schedules 1 and 2 of the EMO and updates the application requirements.

Where you may inspect this amendment

The amendment can be inspected free of charge at the Yarra Ranges Shire Council website at www.yarraranges.vic.gov.au/C225.

The amendment is available for public inspection, free of charge, during office hours at the following Yarra Ranges Community Link Centres:

- Lilydale – 15 Anderson Street, Lilydale
- Monbulk – 21 Main Road, Monbulk
- Healesville – 110 River Street, Healesville
- Upwey – 40 Main Street, Upwey
- Yarra Junction – 2442-2444 Warburton Hwy, Yarra Junction

The amendment can also be inspected free of charge at the Department of Transport and Planning website at <http://www.planning.vic.gov.au/public-inspection> or by contacting the office on 1800 789 386 to arrange a time to view the amendment documentation.

Details of the amendment

Who is the planning authority?

This amendment has been prepared by Yarra Ranges Shire Council, which is the planning authority for this amendment.

Land affected by the amendment

The amendment affects a total of 13,432 properties across the Yarra Ranges municipality, which is shown on the map at Attachment 1 to this Explanatory Report.

The EMO is removed from 1,702 properties. The EMO1 is applied to 1,869 additional properties. The EMO1 applies to 11,391 properties in total.

The EMO2 is applied to 499 properties in total. Both EMO1 and EMO2 apply to 160 properties.

What the amendment does

The amendment updates the Erosion Management Overlay (EMO) mapping by:

- Deleting the EMO where it is no longer required (1,702 properties).
- Replacing the EMO with EMO1 to existing properties affected by landslip susceptibility (9,362 properties).
- Introducing the EMO1 to new properties impacted by landslip susceptibility (1,869 properties).
- Replacing the EMO with EMO2 to existing properties affected by debris flow susceptibility (254 properties), which carries a higher risk than other landslide hazards.
- Introducing the EMO2 to new properties impacted by debris flow susceptibility (245 properties).
- Replacing the EMO with EMO1 & EMO2 to existing properties affected by landslip susceptibility and debris flow susceptibility (114 properties)

Schedule 1 is amended to correct grammatical errors and introduce a new planning permit exemption for repair and maintenance works to existing assets by public authorities or utility service providers.

The Incorporated Document “*Requirements for a Geotechnical Assessment, Landslide Risk Assessment or Landslide Hazard Assessment prepared in support of a planning permit application under the Erosion Management Overlay* (Yarra Ranges Shire Council, March 2023)” is updated to include references to Schedules 1 and 2 to the EMO.

The Amendment also deletes the interim EMO controls that were applied by Amendment C230Yran.

Specifically, the amendment will:

Ordinance changes

- Replace the Schedule to Clause 44.01 (Erosion Management Overlay) with a new Schedule 1 to Clause 44.01 (Erosion Management Overlay) (EMO1), makes grammatical corrections and introduces a new planning permit exemption.
- Introduce Schedule 2 to Clause 44.01 (Erosion Management Overlay) (EMO2).
- Delete Schedule 3 to Clause 44.01 (Erosion Management Overlay) (EMO3)
- Deletes Schedule 4 to Clause 44.01 (Erosion Management Overlay) (EMO4)
- Amend the Schedule to Clause 72.03 (What does this Planning Scheme consist of) to amend the EMO maps comprised in the planning scheme.
- Amend the Schedule to Clause 72.04 (Documents Incorporated in the Planning Scheme) to replace the Incorporated Document with a new document titled *“Requirements for a Geotechnical Assessment, Landslide Risk Assessment or Landslide Hazard Assessment prepared in support of a planning permit application under the Erosion Management Overlay (Yarra Ranges Shire Council, June 2025).*
- Amend the Schedule to Clause 72.04 (Documents Incorporated in the Planning Scheme) to remove the Incorporated Document titled: *“Requirements for a Geotechnical Assessment, Landslide Risk Assessment or Landslide Hazard Assessment prepared in support of a planning permit application under the Erosion Management Overlay – Interim Incorporated Document (Yarra Ranges Shire Council, October 2025*
- Amend the Schedule to Clause 72.08 (Background Documents) to add reference to *“Erosion Management Overlay – Basis for Mapping Amendment (WSP Australia, April 2025)”* as a background document in the Planning Scheme.

Mapping changes – to be confirmed once planning scheme maps are produced

- Amend Planning Scheme Map No's 1EMO, 2EMO, 3EMO, 8EMO, 9EMO, 10EMO, 11EMO, 12EMO, 13EMO, 15EMO, 17EMO, 18EMO, 20EMO, 21EMO, 22EMO, 23EMO, 25EMO, 26EMO, 27EMO, 28EMO, 29EMO, 30EMO, 31EMO, 32EMO, 33EMO, 34EMO, 35EMO, 37EMO, 39EMO, 40EMO, 41EMO, 42EMO, 43EMO, 44EMO, 45EMO, 46EMO, 47EMO, 48EMO, 49EMO, 52EMO, 53EMO, 54EMO, 55EMO, 56EMO, 57EMO, 58EMO, 59EMO, 60EMO, 61EMO, 66EMO, 67EMO, 68EMO, 69EMO, 70EMO, 71EMO, 72EMO, 73EMO, 75 EMO, 76EMO, 77EMO, 78EMO, 79EMO, 83EMO, 84EMO to delete the Erosion Management Overlay.
- Amend Planning Scheme Map No's 1EMO, 2EMO, 3EMO, 8EMO, 9EMO, 10EMO, 11EMO, 12EMO, 13EMO, 15EMO, 17EMO, 18EMO, 20EMO, 21EMO, 22EMO, 23EMO, 25EMO, 26EMO, 27EMO, 28EMO, 29EMO, 30EMO, 31EMO, 32EMO, 33EMO, 34EMO, 35EMO, 37EMO, 39EMO, 40EMO, 41EMO, 42EMO, 43EMO, 44EMO, 45EMO, 46EMO, 47EMO, 48EMO, 49EMO, 52EMO, 53EMO, 54EMO, 55EMO, 56EMO, 57EMO, 58EMO, 59EMO, 60EMO, 61EMO, 66EMO, 67EMO, 68EMO, 69EMO, 70EMO, 71EMO, 72EMO, 73EMO, 75EMO, 76EMO, 77EMO, 78EMO, 79EMO, 83EMO, 84EMO to introduce Schedule 1 and 2 to the Erosion Management Overlay.
- Introduce Planning Scheme Map No's 14EMO, 16EMO and 65EMO to the Yarra Ranges Planning Scheme.

- Delete Planning Scheme Maps No's 36EMO and 82EMO from the Yarra Ranges Planning Scheme.

Strategic assessment of the amendment

Why is the amendment required?

Yarra Ranges Shire is one of the most affected areas by landslide hazard in Victoria. The council has an obligation under the *Planning and Environment Act 1987* (the Act) to identify natural hazards and keep planning controls up to date.

Landslide management was first implemented by the former Shire of Lillydale in the early 1990's through changes to the planning scheme in response to property destruction caused by landslides through the 1980's and early 1990's. The forerunner to the current EMO in the Yarra Ranges Planning Scheme was implemented in 2000 and was based on historic mapping undertaken using topographic information available at the time, mostly 1960's Melbourne Metropolitan Board of Works (MMBW) hand drawn contour plans and through viewing aerial photography.

The council engaged a geotechnical practitioner to review the EMO provisions and associated mapping to identify areas where updates are required to align the overlay mapping with technology advances and methodology of landslide risk assessment in Australia.

The geotechnical practitioner's initial report was split into two, which enabled the first planning scheme amendment (C217yran) to be completed more promptly. Amendment C217yran implemented the recommendations of the report *Erosion Management Overlay - Basis for Schedule Amendment* (May 2023), which made changes to the provisions of the Schedule to the EMO, including changes to the exemptions and application requirements for proposed developments and the addition of an incorporated document. The amendment updated the tolerable risk criteria from Low to Moderate in particular circumstances, to bring the risk provisions in the Planning Scheme into line with contemporary guidance provided in the Australian Geomechanics Society Practice Note *Guidelines for Landslide Risk Management* (AGS 2007). Amendment C217yran to the Yarra Ranges Planning Scheme was approved by the Minister for Planning on 1 March 2024.

The findings and recommendations of the EMO mapping review are detailed in the report titled *Yarra Ranges Erosion Management Overlay, Basis for Mapping Amendment* (WSP, April 2025). Amendment C225yran implements the recommendations from this report.

Notably the development of the *Australian Geomechanics Society Practice Note Guidelines for Landslide Risk Management 2007* (AGS 2007) has updated the assessment and management of landslip risk and three-dimensional Light Detection and Ranging (LiDAR) digital mapping information has greatly improved the accuracy of identifying landslip prone areas.

Schedule 2 to the EMO will identify debris flow susceptibility areas, as distinct from landslide hazards, that carry a higher risk to human life than landslides. The report *Yarra Ranges Erosion Management Overlay, Basis for Mapping Amendment* (WSP, April 2025) and associated debris flow susceptibility mapping is based on the findings from a statewide debris flow study undertaken by the University of Melbourne in 2017. The planning permit requirements for buildings and works in Schedule 2 to the EMO are more stringent than Schedule 1 to the EMO, which contains more planning permit exemptions for buildings and works.

The amendment deletes the interim EMO controls that were applied by Amendment C230yrn while permanent controls were being progressed via Amendment C225yrn. Amendment C230yrn introduced Schedule 3 to the EMO to land identified with landslip susceptibility and Schedule 4 to the EMO to land identified with debris flow susceptibility on an interim basis until 27 October 2027. Amendment C225yrn applies these interim controls, with changes, on a permanent basis. Schedule 3 and 4 to the EMO and the associated incorporated document are no longer required and are deleted.

How does the amendment implement the objectives of planning in Victoria?

The amendment implements the objectives of planning in Victoria, as per section 4(1) of the Act:

- (a) to provide for the fair, orderly, economic and sustainable use and development of land;*
- (b) to provide for the protection of natural and man-made resources and the maintenance of ecological processes and genetic diversity;*
- (c) to secure a pleasant, efficient, and safe working, living and recreational environment for all Victorians and visitors to Victoria;*
- (d) to provide for explicit consideration of the policies and obligations of the State relating to climate change, including but not limited to greenhouse gas emissions reduction targets and the need to increase resilience to climate change, when decisions are made about the use and development of land;*
- (e) to protect public utilities and other assets and enable the orderly provision and co-ordination of public utilities and other facilities for the benefit of the community;*
- (g) to balance the present and future interests of all Victorians.*

The amendment implements these objectives by applying appropriate planning controls to areas which are at risk of landslip in order to protect life and property and enabling appropriate development where required.

How does the amendment address any environmental, social and economic effects?

Environmental

The primary environmental effect of the amendment is to manage the risk of landslip and debris flow in the affected areas that currently lack planning controls. Applying Schedules 1 and 2 to the EMO to properties will more accurately identify areas susceptible to landslip or debris flow (or both).

Climate change forecasts suggest that whilst rainfall totals in Victoria might reduce due to climate change, the severity and frequency of extreme weather and climate events is likely to increase. Landslide frequency is expected to increase in response to the predicted climate trends.

Social

The amendment will apply appropriate development controls in areas that are at risk of landslip or debris flow, and to mitigate against risk to human life and property.

Revised EMO mapping creates a safer living and working environment for the occupants of the properties concerned and neighbouring properties. The EMO allows for appropriate development where the risk is tolerable.

The council has an obligation to act on recommended EMO mapping updates and identify potential hazards through land hazard management overlays.

Economic

Inclusion of a site within the EMO generally does not prohibit changes to that site or buildings, rather it requires a planning permit application for buildings and works (unless exempt) whereby landslip can be considered and responded to appropriately. In most cases an applicant would need to engage a geotechnical practitioner to conduct a geotechnical assessment and landslip risk assessment, unless deemed not required by the council (the responsible authority). The proposed buildings or works would need to be engineered to reduce risk levels within a tolerable limit.

The economic impacts on future development will be offset by protection of landslide and debris flow hazard areas by minimising land disturbance from inappropriate development for the protection of all of the community.

In a small number of cases some properties where the EMO is to be applied may not be able to rebuild if the landslip risk is too great. Properties currently in the EMO which are also in a debris flow susceptibility area may not be able to rebuild if a tolerable risk to human life and property cannot be achieved. The introduction of Schedule 2 to the EMO would not alter this, as geotechnical practitioners can already identify if a property is within a debris flow area and assess whether or not the development can be undertaken at a tolerable risk to human life and property from debris flow.

The introduction of new mapped areas of debris flow susceptibility potentially increases the number of properties that cannot be developed (including a dwelling if it is damaged and needs to be rebuilt) if a tolerable risk to human life and property cannot be achieved. However, the council has an obligation to accurately identify hazards through planning controls.

Landslides across Yarra Ranges have caused damage to the road network, buildings and infrastructure, which results in a significant cost to undertake repairs, as well as having other indirect costs to the community. This can include full or partial road closures, which also has implications on emergency services and businesses.

The economic impacts on future development will be offset by protection of landslide and debris flow hazard areas by minimising land disturbance from inappropriate development for the protection of all of the community.

Does the amendment address relevant bushfire risk?

The amendment will not result in any significant risk to life, property, community infrastructure or the natural environment from bushfire. There is no additional bushfire risk that will be caused as a result of the amendment.

Does the amendment comply with the requirements of any other Minister's Direction applicable to the amendment?

The amendment complies with the requirements of the *Ministerial Direction – The Form and Content of Planning Schemes* (section 7(5) of the Act).

The amendment complies with Ministerial Direction No. 9 *Metropolitan Planning Strategy* under Section 12 of the Act. The amendment supports Principle 4 (Environmental resilience and sustainability) and is consistent with Direction 6.2 (Reduce the likelihood and consequences of natural hazard events and adapt to climate change). The updates to the EMO mapping identify land that is susceptible to landslip and not currently within this overlay. Climate change is predicted to increase the severity and frequency of extreme weather events, which increases the expected landslide frequency. The amendments to the EMO mapping and ordinance ensure that new development in landslip and/or debris flow susceptibility areas meets the tolerable risk criteria and is appropriately designed and constructed.

The amendment complies with the requirements of *Ministerial Direction No. 11 Strategic Assessment of Amendments* under section 12 of the Act. The amendment is consistent with this direction which ensures a comprehensive strategic evaluation of a planning scheme amendment and the outcomes it produces. This explanatory report provides a comprehensive strategic evaluation of the amendment and the outcomes it produces. The amendment complies with *Ministerial Direction No. 17 Localised Planning Statements* under Section 12 of the Act.

The amendment implements the adopted *Yarra Ranges Localised Planning Statement* (27 June 2017) and is consistent with 'The Vision' through the updates to the EMO

mapping and ordinance for the ongoing safety of residents and visitors by building resilience to landslip hazards, which is identified in the Localise Planning Statement as a significant environmental hazard. The amendment implements the strategies of ensuring the planning scheme identifies environmental constraints, including landslip, and making the community aware of potential environmental hazards. In addition, the amendment implements the 'Landslip Strategies' by identifying all sites of landslip through the updates to the EMO mapping. This will ensure that all proposals for development on sites that are potentially subject to identified landslip are assessed by a suitably qualified person.

How does the amendment support or implement the Planning Policy Framework and any adopted State policy?

The objective of Clause 13.04-2S (Erosion and landslip) of the Planning Policy Framework is to protect areas prone to erosion, landslip or other land degradation processes. The strategies identified under this objective are to:

- Identify areas subject to erosion or instability in planning schemes and when considering the use and development of land.
- Prevent inappropriate development in unstable areas or areas prone to erosion.
- Promote vegetation retention, planting and rehabilitation in areas prone to erosion and land instability.

The amendment supports the implementation of these objectives and strategies for landslip by revising the EMO mapping based on technological advancements and providing appropriate controls on areas subject to landslip.

How does the amendment implement the *Upper Yarra Valley and Dandenong Ranges Regional Strategy Plan*?

The role of the *Upper Yarra Valley and Dandenong Ranges Regional Strategy Plan* (Regional Strategy Plan) is to ensure that planning in the Region continues to protect the special character and features of the Region in accordance with the Principles of Statement of Planning Policy No 3. It is administered under Section 46F of the Act, which prohibits the Minister for Planning from approving any amendment to the Yarra Ranges Planning Scheme that is inconsistent with the Regional Strategy Plan and its key policy directions.

The Regional Strategy Plan applies to all land within the Shire of Yarra Ranges and affects properties within the EMO. The Regional Strategy Plan was prepared to have regard to matters to enable increased protection for the special features and character of the Region. Areas prone to landslip risk and other erosion processes include many sensitive and characteristic areas of the Region.

The amendment complies with the Regional Strategy Plan by carefully considering land use and potential land use within the Region, including redevelopment and renewal of areas and other matters which should be considered to ensure that the

planning of the Region proceeds in the best interests of the Region's residents and the community generally. The amendment is consistent with the intent of the Regional Strategy Plan which seeks to implement more restrictive controls associated with its natural environments and significant landscapes, while balancing social and economic outcomes in Yarra Ranges.

Specifically, the amendment is consistent with policies for ensuring the construction of buildings in areas subject to land instability can be reasonably and safely developed. Also, the amendment is consistent with policies that require the construction of buildings in areas of excessive slopes (greater than 20%) to implement appropriate measures to ensure that soil erosion does not occur.

The amendment is specifically consistent with:

- Section 1: Preface to the Regional Strategy Plan
- Section 2: The Region and its Future
- Section 4: Landscape Living Policy Areas
- Section 5: Rural Policy Areas
- Section 7: Management of Sites of Natural Significance
- Section 8: Management of Sites of Cultural Significance
- Section 10: Floodplain Management
- Section 11: Special Study Areas

How does the amendment support or implement the Municipal Planning Strategy?

The amendment is consistent with and supports the Municipal Planning Strategy, particularly Clause 02.03-3 (Environmental risks and amenity) by updating appropriate land management measures in known landslip and debris flow risk areas. This clause identifies priority should be given to the protection of human life in the management of areas that are affected by environmental hazards

The purpose of the updated EMO mapping and introduction of Schedules 1 and 2 to the EMO is to manage areas that are at risk of landslip or debris flow to protect human life and property from the impact of landslip. Clause 02.03-3 states that by recognising and planning for the risks associated with projected climate changes, the adverse effects of water scarcity, bushfire, flood and landslip events will be minimised.

The council's strategic direction is to locate and design development within areas of landslip risk to minimise the potential risk to life and property. The controls assist the council in appropriately responding to the environmental risk and create a safer living and working environment for the occupants of the properties concerned and

neighbouring properties.

Does the amendment make proper use of the Victoria Planning Provisions?

The Victoria Planning Provisions include land management overlays in its suite of controls. The purpose of the EMO is to protect areas prone to erosion, landslip or other land degradation processes, by minimising land disturbance and inappropriate development.

The amendment will implement updated landslip and debris flow susceptibility areas through revised EMO mapping. The amendment makes appropriate use of the Victoria Planning Provisions through the implementation of Schedules 1 and 2 to the EMO to appropriately guide use and development of the relevant land according to landslip or debris flow hazards.

New EMO maps are referenced in the Schedule to Clause 72.03 (What does this Planning Scheme consist of).

In the Schedule to Clause 72.04 (Documents Incorporated in the Planning Scheme), a new document titled "*Requirements for a Geotechnical Assessment, Landslide Risk Assessment or Landslide Hazard Assessment prepared in support of a planning permit application under the Erosion Management Overlay* (Yarra Ranges Shire Council, June 2025) replaces the current Incorporated Document.

In the Schedule to Clause 72.08 (Background Documents), a new background document titled "*Erosion Management Overlay – Basis for Mapping Amendment* (WSP Australia, April 2025)" is added.

How does the amendment address the views of any relevant agency?

The prescribed government agencies were notified of the amendment and given an opportunity to make a submission. Submissions were received from South-East Water, Melbourne Water, Head, Transport for Victoria and the Wurundjeri Woiwurrung Cultural Heritage Aboriginal Corporation.

Does the amendment address relevant requirements of the *Transport Integration Act 2010*?

The amendment does not result in any negative impact on the transport system as defined by Section 3 of the *Transport Integration Act 2010*. As the amendment reduces the risk of landslip hazards, it is consistent with Section 13 of the *Transport Integration Act 2010* which seeks to improve the safety of the transport system.

How does the amendment have regard to the principles set out in the *Yarra River Protection (Wilip-gin Birrarung murrn) Act 2017* in

relation to Yarra River land and other land, the use or development of which may affect Yarra River land?

The amendment does not result in any negative impact on the Yarra River land as defined by Section 3 of the *Yarra River Protection (Wilip-gin Birrarung murrn) Act 2017*. As the amendment reduces the risk of landslip hazards, it is consistent with Part 2 of the *Yarra River Protection (Wilip-gin Birrarung murrn) Act 2017* which sets out the principles for protecting the Yarra River.

Resource and administrative costs

What impact will the new planning provisions have on the resource and administrative costs of the responsible authority?

The amendment is expected to improve the administration of the Yarra Ranges Planning Scheme by providing greater certainty for the council, landowners, developers and the community by using Schedules 1 and 2 to the EMO to more specifically identify the type of hazard that applies to land.

The council received \$300,000 in grant funding under the *National Emergency Management Agency's Preparing Australian Communities Program – Local (PAC)* which was partly used to fund a review of the EMO by a geotechnical practitioner and prepare mapping.

The updated EMO mapping is unlikely to increase the number of planning permit applications, as the majority of development applications would likely require a planning permit under another planning control that already applies to the land. If landowners are proposing to only carry out works that require a planning permit, there may be an increase in the number of planning permit applications. However, this is unlikely to be significant and it is important for these types of works to be assessed by a qualified geotechnical practitioner.

The capacity to assess new applications within the prescribed time should not be affected. There is likely to be an increased cost to the council associated with referring applications (when applicable) within the new mapped areas of EMO to a geotechnical practitioner, as the council does not have geotechnical expertise to undertake these assessments.

In most cases an applicant would need to engage a geotechnical practitioner to conduct a geotechnical assessment and/or landslip risk assessment, unless deemed not required by the council (the responsible authority). This is an additional cost to landowners in new EMO mapped areas, however the benefit of appropriately assessing the landslip risk of a proposal is considered to outweigh the cost.

Attachment 1 – Mapping to be updated

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Proposed C225yran

SCHEDULE 1 TO CLAUSE 44.01 EROSION MANAGEMENT OVERLAY

Shown on the planning scheme map as **EMO1**

LANDSLIP SUSCEPTIBILITY

1.0

01/03/2024
C217yran

Erosion management objectives to be achieved

To ensure that development can be undertaken at a tolerable risk to human life and property from landslide.

2.0

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Proposed C225yran

Statement of risk

Areas subject to landslide across the Yarra Ranges include the hillsides along the Yarra River valley, the mountains of the Dandenong Ranges and agricultural areas of Silvan, Monbulk and Seville.

The occurrence of landslips within the Yarra Ranges has historically caused damage to property and the environment and presents an ongoing risk to human life. Geotechnical studies have documented historical landslide occurrences and sought to identify areas susceptible to future landslide occurrence.

The control of environmental factors and development relating to vegetation cover, drainage, rock, earthworks, soil disturbance and effluent and stormwater disposal are all important in managing the risk from landslide.

Risk from landslide needs to achieve a Tolerable Risk level to be considered suitable for new development.

Tolerable Risk is a risk within a range that society can live with so as to secure certain net benefits. It is a range of risk that is regarded as non-negligible and requires ongoing review and reduction if possible. The maximum tolerable risk is defined as:

- For loss of life of the individual most at risk, it is taken as having a probability of no greater than 10^{-5} (1 in 100,000) per annum calculated in accordance with the *Australian Geomechanics Society Practice Note Guidelines for Landslide Risk Management 2007*.
- For property loss is assessed qualitatively using the *Australian Geomechanics Society Practice Note Guidelines for Landslide Risk Management 2007*, specifically Appendix C to that document with the maximum tolerable risk level selected based on the type of new development in accordance with Table 1.

Table 1 - Maximum tolerable risk to property

New Development Type	Maximum Qualitative Tolerable Risk
Essential facilities including Hospitals, Medical centres and Emergency services facilities. Land uses capable of causing hazardous conditions including Earth and energy resources industry, Freezing and cool storage and Fuel depots.	Low
All other land uses	Moderate

3.0

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Proposed C225yran

Permit requirement

A permit is required for all subdivision and new buildings and works except for:

- Impervious water holding structures engineer designed or manufactured to an Australian Standard such as domestic rainwater tanks and spas, ponds and rainwater gardens with a capacity not exceeding 5000 litres.

- Landscaping water features or other non-engineer designed or manufactured water retaining structures that do not entail ponding of more than 500 litres.
- A masonry fence, if the height of the fence does not exceed one metre and the fence does not alter surface water drainage.
- A fence of lightweight construction including timber, wire or aluminium and where the fence is permeable, or where the base of the fence is at least 50 millimetres above the ground surface and does not obstruct surface water flow.
- Earthworks that result in a modified ground surface that is less than 1 metre above or below the natural ground level and does not allow water ponding.
- Repair or maintenance works to existing assets undertaken by, or on behalf of a municipality, public authority or utility service provider relating to watercourse management, environmental improvements or infrastructure services.
- Alteration or extension to an existing building provided all of the following are met:
 - the floor area of the alteration or extension is not more than 20 square metres;
 - the alteration is connected to a legal point of discharge;
 - there are no existing earthworks higher than 1 metre within 5 metres of the alteration or addition.
- An outbuilding ancillary to a dwelling, provided all the following are met:
 - the building is not used for accommodation;
 - the building is constructed with aluminium, steel or timber;
 - the total area of outbuildings on the lot is 40 square metres or less;
 - the building is connected to a legal point of discharge;
 - there are no existing earthworks higher than 1 metre within 5 metres of the building.
- A building used for agriculture, provided all of the following are met:
 - the building is constructed with aluminium, steel or timber;
 - there are no more than two agricultural buildings on the lot;
 - the building is connected to a legal point of discharge;
 - there are no existing earthworks higher than 1 metre within 5 metres of the building.
- A temporary shed or temporary structure for construction purposes with a floor area of 20 square metres or less.
- A retaining wall associated with new excavation or fill provided all of the following are met:
 - the retaining wall and associated earthworks result in a modified ground surface that is less than 1 metre above or below the natural ground level;
 - the retaining wall is less than 1 metre high;
 - the retaining wall is not attached to or part of a building or structure;
 - the retaining wall does not provide landslip protection for any adjoining land.
- A retaining wall or slope retention to support existing earthworks provided the earthworks were undertaken prior to 2001.
- Remove, destroy or lop vegetation, either separately or as part of building works if any of the following apply:

- A tree with a trunk circumference of 0.5 metres or less measured 1.3 metres above ground level.
- Vegetation within 2 metres of a building.
- Dead vegetation where the ground surface is reinstated.
- Lopping necessary to improve the health or structural stability of a tree.

4.0

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Proposed C225yran

Application requirements

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

For an application to construct a building or construct or carry out works:

- Plans drawn to scale and dimensioned, showing as appropriate;
 - The proposed new development, including as appropriate a site plan, land contours, building elevations, access, cut and fill, retaining walls and effluent disposal system.
 - Any existing development, including buildings, water tanks and pools or dams on both the subject lot(s) and adjacent land.
 - Any existing earthworks and water infrastructure on the subject lot(s), including cut and fill, stormwater drainage, subsurface drainage, water supply pipelines, sewerage pipelines or effluent disposal installations and pipelines and any otherwise identified geotechnical hazard.
 - Details and locations of existing vegetation, including any vegetation to be removed.
- A Geotechnical Assessment or Landslide Risk Assessment prepared in accordance with the Incorporated Document 'Requirements for a Geotechnical Assessment, Landslide Risk Assessment or Landslide Hazard Assessment prepared in support of a planning permit application under the Erosion Management Overlay (Yarra Ranges Shire Council, June 2025).'

For an application to subdivide land:

- Plans drawn to scale and dimensioned, showing as appropriate;
 - The proposed subdivision layout and land contours.
 - Any existing development, including buildings, water tanks and pools or dams on both the subject lot(s) and adjacent land.
 - Any existing earthworks or water infrastructure on the subject lot(s), including cut and fill, stormwater drainage, subsurface drainage, water supply pipelines, sewerage pipelines or effluent disposal installations and pipelines and any otherwise identified geotechnical hazard.
 - Details and location of existing vegetation, including any vegetation to be removed.
- Landslide Hazard Assessment in accordance with the Incorporated Document 'Requirements for a Geotechnical Assessment, Landslide Risk Assessment or Landslide Hazard Assessment prepared in support of a planning permit application under the Erosion Management Overlay (Yarra Ranges Shire Council, June 2025).'

If in the opinion of the responsible authority an application requirement is not relevant to the evaluation of an application, the responsible authority may waive or reduce the application requirements.

5.0

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Proposed C225yran

Decision guidelines

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

- The statement of risk and whether the risk to human life and property is tolerable.
- The recommendations of the Geotechnical Assessment, Geotechnical Hazard Assessment or any Landslide Risk Assessment.
- The need for any ongoing monitoring and maintenance for mitigation measures.

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Proposed C225yran

SCHEDULE 2 TO CLAUSE 44.01 EROSION MANAGEMENT OVERLAY

Shown on the planning scheme map as **EMO2**.

DEBRIS FLOW SUSCEPTIBILITY

1.0 Erosion management objectives to be achieved

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Proposed C225yran

To ensure that development can be undertaken at a tolerable risk to human life and property from debris flow.

2.0 Statement of risk

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Proposed C225yran

Debris flow refers to the rapid flow of water saturated debris or earth down a slope, usually channelled within drainage lines and gullies. There are areas within Yarra Ranges subject to debris flow, including the northwest face of Mount Dandenong in the Kalorama and Montrose areas, and north facing slopes south of Warburton and to the south east of The Basin.

The occurrence of debris flows within the Yarra Ranges has historically caused damage to property and threatened life. Geotechnical studies have documented historical debris flow occurrences and sought to identify areas susceptible to impact from future debris flow. Debris flow can travel up to several kilometres downslope from its landslip source, impacting areas that are not otherwise prone to landslide initiation.

All land included in the EMO2 has been identified as having a sufficiently high risk of potential impact from debris flow to warrant specific review of these risks prior to the issue of a planning permit. Development should be avoided in areas susceptible to debris flow.

Risk from debris flow needs to achieve a Tolerable Risk level to be considered suitable for new development.

Tolerable Risk is a risk within a range that society can live with so as to secure certain net benefits. It is a range of risk that is regarded as non-negligible and requires ongoing review and reduction if possible. The maximum tolerable risk is defined as:

- For loss of life of the individual most at risk, it is taken as having a probability of no greater than 10^{-5} (1 in 100,000) per annum calculated in accordance with the *Australian Geomechanics Society Practice Note Guidelines for Landslide Risk Management 2007*.
- For property loss it is assessed qualitatively using the *Australian Geomechanics Society Practice Note Guidelines for Landslide Risk Management 2007*, specifically Appendix C to that document and the tolerable risk level is selected depending on the type of new development in accordance with Table 1.

Table 1 - Maximum tolerable risk to property

New Development Type	Maximum Qualitative Tolerable Risk
Essential facilities including Hospitals, Medical centres and Emergency services facilities. Land uses capable of causing hazardous conditions including Earth and energy resources industry, Freezing and cool storage and Fuel depots.	Low
All other land uses	Moderate

3.0 Permit requirement

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Proposed C225yran

A permit is required for all subdivision and new buildings and works except for:

- Earthworks that result in a modified ground surface that is less than 600 millimetres above or below the natural ground level.

- A retaining wall less than 600 millimetres high.
- Construct a non-habitable structure ancillary to a dwelling, including carports and sheds, provided the ground surface area occupied by all such structures on the property does not exceed 20 square metres.
- Construct or carry out repair or maintenance works undertaken by, or on behalf of a municipality, public authority or utility service provider relating to watercourse management, environmental improvements or infrastructure services.
- Construct a fence.
- Remove, destroy or lop vegetation.

4.0

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Proposed C225yran

Application requirements

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

For an application to construct a building or construct or carry out works:

- Plans drawn to scale and dimensioned, showing as appropriate:
 - The proposed new development, including as appropriate a site plan, land contours, building elevations, access, cut and fill and retaining walls.
 - Any existing development, including buildings, ancillary structures, outbuildings and pools on both the subject lot(s) and adjacent land.
- A Geotechnical Assessment and Landslide Risk Assessment prepared in accordance with the Incorporated Document 'Requirements for a Geotechnical Assessment, Landslide Risk Assessment or Landslide Hazard Assessment prepared in support of a planning permit application under the Erosion Management Overlay (Yarra Ranges Shire Council, June 2025)'.

For an application to subdivide land:

- Plans drawn to scale and dimensioned, showing as appropriate:
 - The proposed subdivision layout and land contours.
 - Any existing development, including buildings, ancillary structures and outbuildings on both the subject lot(s) and adjacent land.
- A landslide hazard assessment as required by and prepared in accordance with the Incorporated Document titled 'Requirements for a Geotechnical Assessment, Landslide Risk Assessment or Landslide Hazard Assessment prepared in support of a planning permit application under the Erosion Management Overlay (Yarra Ranges Shire Council, June 2025)' and to the satisfaction of the responsible authority.

If in the opinion of the responsible authority an application requirement is not relevant to the evaluation of an application, the responsible authority may waive or reduce the application requirements.

5.0

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Proposed C225yran

Decision guidelines

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:

- The statement of risk and whether the risk to human life and property is tolerable.

YARRA RANGES PLANNING SCHEME

- The recommendations of the Geotechnical Assessment, Landslide Risk Assessment or Geotechnical Hazard Assessment.
- The need for any ongoing monitoring and maintenance for mitigation measures.

SCHEDULE TO CLAUSE 72.04 DOCUMENTS INCORPORATED IN THIS PLANNING SCHEME**1.0**1.1
Proposed C225yran**Incorporated documents**

Name of Document	Introduced by
13 Green Street, Healesville Incorporated Document, December 2020	c187yran
25 Madeley Drive (CA 236 Parish of Warburton), Wesburn (Yarra Ranges Shire Council, March 2025)	C223yran
72A Milners Road, Yarra Junction (Yarra Ranges Shire Council, March 2025)	C223yran
100 Mt Dandenong Tourist Road, Tremont (Yarra Ranges Shire Council, March 2025)	C223yran
115 and 121 Old Emerald Road, Monbulk (Yarra Ranges Shire Council, March 2025)	C223yran
261 Mount Dandenong Tourist Road, Ferny Creek, Development and Use of Land for a Food and Drink Premise and a Caretaker's House (Yarra Ranges Shire Council, May 2025)	C223yran
361-365 Mt Dandenong Tourist Road, Sassafras, Specific Controls Incorporated Document, June 2023	C186yran
Alta Dena, 1 Montrose Road, Montrose Statement of Significance May 2023	C210yran
Amendment L145 to the former Lillydale Planning Scheme (Heritage Golf Course, Hughes Road, Chirnside Park)	NPS1
Amendment L3 to the former Healesville Planning Scheme (15 Healesville-Kooweerup Rd and 16 Airley Rd, Healesville)	NPS1
Amendment L33 to the former Upper Yarra Planning Scheme (Warburton Mountain Resort, Martyr Road, Warburton)	NPS1
Amendment L4 to the former Upper Yarra Planning Scheme (Warburton Chalet, Scotchmans Creek Road, Warburton)	NPS1
Artis Building, 284 Main Street, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yran
Beresford Buildings, 279-281 Main Street, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yran
Billanook College Master Plan October 2011	C123
Cement Creek Plantation, Cement Creek Road, East Warburton - Statement of Significance, October 2022	C197yranPt2
Chirnside Park Major Activity Centre Development Contributions Plan (Urban Enterprise, December 2023)	VC249

YARRA RANGES PLANNING SCHEME

Name of Document	Introduced by
Concept Plan – Healesville Mandarin by G Burgess & K Taylor dated February 1989 (Pt CAs 163 & 163A, Maroondah Hwy and Mt Riddell Rd, Healesville)	NPS1
Concept Plan Nos CP-3-5 by Mark Burns, dated June 1996 (140 Yarra Glen Road, Healesville)	NPS1
Crown Hotel, 267 Main Street, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yan
Eastern Golf Club Yering, February 2013	C130
Former Deschamps Olive Tree, 2-4 Albert Hill Road, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yan
Former Hutchinson's Store, 251 Main Street, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yan
Former Lilydale Quarry Comprehensive Development Plan, October 2021 (Amended August 2022)	C213yan
Former W Johnstone Bootmakers Shop/Residence, 335 Main Street, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yan
Healesville Commercial Precinct – February 2015	C131
Heatherlie, 57 Warburton Highway, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yan
Kaufland Supermarket and complementary uses, 266-268 Maroondah Highway, Chirnside Park, Incorporated Document, March 2019	GC123
Lilydale Cemetery Incorporated Management Plan (August 2006)	C16(Part 2)
Lilydale First World War Memorial, Main Street, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yan
Lilydale Heritage Railway Station Goods Shed, Maroondah Highway, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yan
Lilydale Historic Street Trees Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yan
Lilydale Primary School No. 876, 63-65 Castella Street, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yan
Lilydale Street Trees Incorporated Management Plan (Yarra Ranges Shire Council, October 2022)	C207yan
Lilydale ('White Dog') Hotel, 292 Main Street, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yan

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Name of Document	Introduced by
Little Yarra Steiner School Special Use Zone 8 Master Plan Mar 2009	C82
Manchester Road, Mooroolbark Level Crossing Removal Project Incorporated Document, February 2020	GC152
Maroondah Highway, Lilydale Level Crossing Removal Project Incorporated Document, February 2020	GC152
Montrose Intersection Upgrade Project Incorporated Document, February 2022	C200yran
Olinda Hotel, 161 Main Street, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yran
Oliver's Grocery Store/Lilydale Rural Supplies Shop (former), 148 Main Street, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yran
Overall Development Plan by Fulcrum Town Planners dated October 1996 ("The Country Place", 180 Olinda Creek Road, Kalorama)	NPS1
Permit PS/5416 dated 30 January 1979 and Plan 865AP dated 13 September 1978 by Paul Millar & Associates, modified by Permit PS/8024 and PS/8209 Coldstream Airfield)	NPS1
Plan No C6007 by Plan Printing & Drafting, dated September 1985 (Lilydale Airfield)	NPS1
Poon Kee's Store (former), 172 Main Street, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yran
Powerline Bushfire Safety Program - Native Vegetation Removal Code of Practice, August 2016	GC57
Proposed 10 Year Development Plan 1991-2001, prepared by Michol Design and dated 25 July 1990 (Life Ministry Centre, Old Melbourne Road, Chirnside Park)	NPS1
Queen's Jubilee Trees, Maroondah Highway, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yran
Requirements for a Geotechnical Assessment, Landslide Risk Assessment or Landslide Hazard Assessment prepared in support of a planning permit application under the Erosion Management Overlay (Yarra Ranges Shire Council, June 2025)	C225yran
<i>Restructure Plan for Old and Inappropriate Subdivisions in the Yarra Ranges Council</i> (Yarra Ranges Council, May 2023)	C211yran
Section 1A of Schedule 2 – Restricted Uses in Chapter 5 (Upper Yarra District) of the former Yarra Ranges Planning Scheme (Little Yarra Road, Gilderoy)	NPS1
Name of Document	Introduced by
Single Storey Shop, 295 Main Street, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yran

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St Hubert's Stables and Wine Cellar (Ruins) Incorporated Plan June 2007	C60
Small Lot Housing Code (Victorian Planning Authority, November 2019)	C203yran
Symons Street Healesville Residential Precinct – February 2015	C131
Towri, 1/33-61 Edinburgh Road, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yran
Warburton Mountain Bike Destination Project (Southern Network) Incorporated Document (Department of Transport and Planning, October 2023)	C222yran
Willowbank, 16 Crestway, Lilydale Statement of Significance (Yarra Ranges Shire Council, October 2023)	C207yran
Yarra Glen Cemetery Incorporated Management Plan (April 2005)	C51
Yarra Ranges Council – List of Environmental Weeds 2019	C148yran

