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BESTHOOPER
LAWYERS

2 November 2015

Sarah Salem
Metropolitan Planning Authority
Level 2, 35 Collins Street
MELBOURNE VIC 3000

BY URGENT COURIER

Also by email: sarah.salem@mpa.vic.gov.au

Dear Madam,


Whittlesea Planning Scheme Amendment C188: Quarry Hills PSP

We act on behalf of Property Subdivision Corporation Pty Ltd, a submitter in relation to this matter.

We enclose, for filing, two copies of the following expert witness statements that our client intends to rely upon at the forthcoming Panel Hearing:

- (a) Jonathan Ladson - JCA Land Consultants;
- (b) Oona Nicolson - Ecology & Heritage Partners Pty Ltd; and
- (c) Aaron Organ - Ecology & Heritage Partners Pty Ltd.

Yours faithfully
BEST HOOPER



Teresa Bisucci
Principal

enc:

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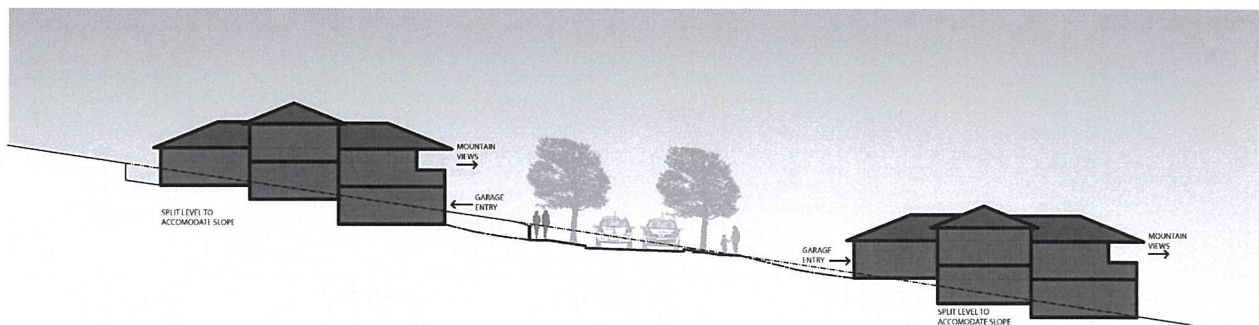
PLANNING PANEL SUBMISSION

**AMENDMENT C188 TO THE
WHITTLESEA PLANNING SCHEME**

Quarry Hills PSP

Specifically relating to

**130 & 150 Bindts Road,
Wollert**



Expert Evidence By: Jonathan Ladson
JCA Land Consultants

For: PSCA Pty Ltd



JCA Ref: 19724
Date: 27/10/15

CONTENTS

1. THE PERSON PRESENTING THIS REPORT
2. STATEMENT OF FACTS RELIED UPON.
3. REPORT SUMMARY
4. QUARRY HILLS PSP AIMS AND ASPERATIONS
5. SITE ANALYSIS
 - 5.1 Precinct Topographical Features and impacts of slope
6. “EARTHWORKS, EMBANKMENTS AND RETAINING STRUCTURES” AND “HOUSING”
7. MODIFICATIONS TO THE PSP
8. SUMMARY
9. APPENDICES

1. THE PERSON PRESENTING THIS REPORT

The report has been compiled by:

Name: Jonathan Ladson

Company: JCA Land Consultants.

Address: Level 1/260 Main Street, Lilydale Vic 3140 PH. (03) 9735 4888

Email: jonl@jcalc.com.au

Current Position: Director

Qualifications: B.app.sci (survey), M.app.sci

Experience:

27 year's experience in Land Development.

14 year's experience as Town Planning Manager

10 year's experience as Company Director.

Experience relating to this project:

JCA Land consultants were engaged by PSCA in April 2015 to review the proposed PSP and prepare a proposed subdivision layout for the land at 130 and 150 Bindts Road. JCA Land consultants subsequently prepared the site level and feature plans, and draft subdivision plans and reviewed the PSP in relation to lot density expectations and site constraints.

2. STATEMENT OF FACTS RELIED UPON

The current PSP is the Quarry Hills Precinct Structure Plan dated April 2015.

3. REPORT SUMMARY

This report reviews the following items in relation to the proposed Quarry Hills PSP (The PSP):

- The impacts of the site topography (sloping land) on road network and servicing design;
- The impacts of the site topography (sloping land) on future dwelling density and design;
- The guidance provided within the PSP for development on sloping land.
- The guidance provided for front setbacks where the lot maintains an interface with the Quarry Hills regional Parkland.
- Suggested amendments to the PSP to provide clearer guidance on the steeper sloping land.

Based on the review of the above information I suggest some modification of the guidance and requirements listed in the PSP under section 3.0 Implementation. Specifically, the sections under "Earthworks, Embankments and Retaining Structures requirements", "Earthworks, Embankments and Retaining Structures guidelines", and "Housing requirements". These sections are found on pages 12, 13 and 16 of the PSP. My recommendations are found in section 7 of this report.

RESPONSE RELATING TO SLOPING LAND**4. QUARRY HILLS PSP AIMS AND ASPIRATIONS**

The section 1 and 2 of the PSP provide a description of the PSP and its vision and objectives. The key objectives as they relate to site topography can be summarized as follows:

- The PSP will be ...”A site responsive development that compliments the topographical features and instills a strong sense of place.”
- The PSP....”sets the vision for how the land should be developed and the outcomes achieved.”
- O2 – Promote a diverse range of universally accessible, well-designed housing in order to respond to the environmental and topographical features of the precinct and meet the needs of the future community.
- O6 – Ensure the development protects and enhances the historical, landscape and environmental characteristics of the site including the hills and ridgelines associated with the Quarry Hills and Darebin Creek environs.

The Section 3 of the PSP contains the “Requirements” of the PSP, those things that “...must be adhered to when developing the land”, and the “Guidelines” of the PSP that “...express how discretion will be exercised by the responsible authority in certain matters..”

This section is divided into Statements numbered with either “R” for requirements, or “G” for guidelines.

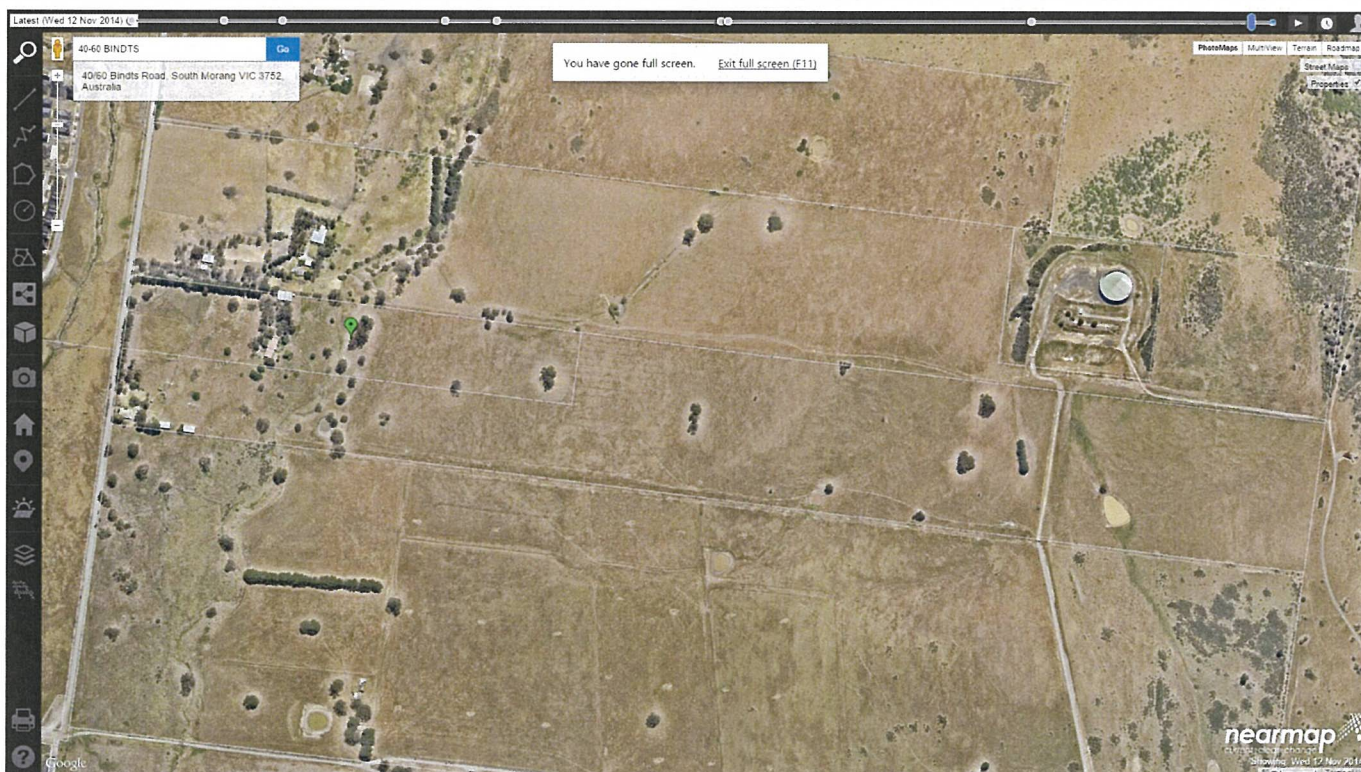
5. SITE ANALYSIS**5.1 Precinct Topographical Features and impacts of slope**

Image 1: Nearmap image of the central portion of the site.

RESPONSE RELATING TO SLOPING LAND

Plan 1 on page 2 of the PSP indicates some of the features of the precinct and in relation to this report indicates areas of percentage slope via colour code. This plan is reproduced for convenience in image 2, below. From a review of this plan, it can be seen that the majority of the site has a slope of less than 10%. This percentage rate of slope, which equates to 1:10 or 5 degrees, is not considered a constraint on development.

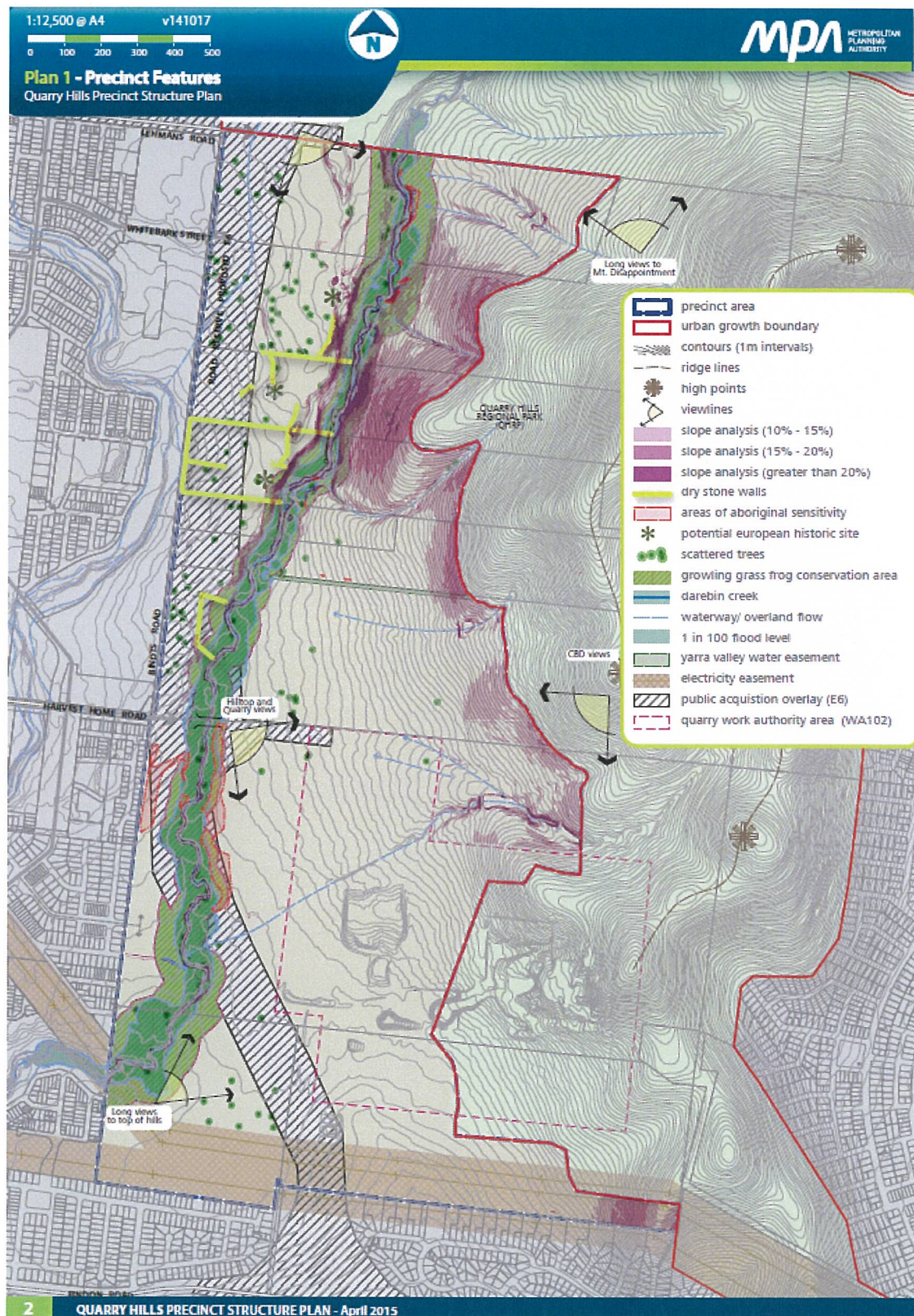


Image 2: PSP Plan 1 showing precinct features including colour coded slope analysis.

RESPONSE RELATING TO SLOPING LAND

Approximately 10% of the site, particularly at the rear of 90, 100 and 130 Bindts Road, has slopes that range from 10% up to 20%. It is these areas that provide a constraint to development and the PSP attempts to address design responses to this slope in later sections.

JCA Land Consultants has undertaken a survey feature and level survey of the properties at 130 and 150 Bindts Road. This survey has confirmed the slope percentages that are indicated on map 1 of the PSP. A copy of this survey plan is included in Appendix A for reference.

By way of illustration of the impacts of slope to the construction of roads, on a slope of 20% (or 1:5), a 16m wide road would require a combination of cut and fill totalling 2.6m in order for the road cross grades to be acceptable. This amount can be reduced using cross steeper falls within the nature strip as indicated in the diagrams in Appendix C.

6. “EARTHWORKS, EMBANKMENTS AND RETAINING STRUCTURES” AND “HOUSING”

The following section provides a critique of the Requirements and Guidelines within the PSP that respond to the issues around “earthworks, embankments, and retaining structures” and “housing”. As these works are more associated with steeper slopes, it is within these sections that the techniques and design criteria are established for development on sloping land. The relevant sections of the PSP (pages 13 and 16) are reproduced below:

- *R9 – Subdivision, engineering, landscape design and buildings and works must provide a sensitive response to current landforms and minimize the need for excavation and cut and fill.*
- *R10 – Retaining walls over 1 metre must be avoided along the street edge.*
- *R11 – Earthworks, retaining structures and embankments must be carefully and sensitively designed to transition gradually into natural contours.*
- *R12 – Where lawns are utilized for embankments in public areas, the gradient must be in accordance with Council standards.*
- *G14 – Subdivision applications which include land identified as being in excess of 10% slope should refer to the preferred outcomes identified within figures 1, 2 and 3 of (the PSP).*
- *R22 In areas which contain slope in excess of 10% as identified on plan 1, (of the PSP) development must minimize landscape scaring and large amounts of cut and fill. Specific guidance relating to this can be found at figure 1-3 (of the PSP).*
- *R23 An application for subdivision which includes lots to be located on slopes greater than 10% must be accompanied by design guidelines which demonstrate how the proposal responds to and achieves the objectives, requirements and guidelines within the “Housing” and “Earthworks, embankments and retaining structures” sections of the Quarry Hills PSP incorporated into this scheme.*

Each of these statements is discussed in detail in the following section of this report.

In addition the requirement under “Housing” the following requirement is further assessed.

- *R28 – Front setbacks of dwellings where the lot maintains an interface with the Quarry Hills Regional Parkland, Darebin Creek or conservation areas must be in accordance with the relevant CFA guidelines and requirements set out in Figure 7 of this document. (The PSP)*

7. MODIFICATIONS TO THE PSP

- *R9 – Subdivision, engineering, landscape design and buildings and works must provide a sensitive response to current landforms and minimize the need for excavation and cut and fill.*

Whilst this statement reads more like a guideline or design principle, it is a suitable requirement to be included in the PSP.

- *R10 – Retaining walls over 1 metre must be avoided along the street edge.*

It is suggested that this requirement is unsuitable and should not be included in the PSP. Given there are steep (15%-20% slope) sections of the site that are earmarked as residential development densities, it is not hard to imagine areas where retaining walls over 1m in height may be advantageous along the street edge. These are likely to be isolated cases but the requirement as it reads currently is too restrictive under the circumstances of the site. The requirement as stipulated in R11 should be sufficient to achieve the aims of the PSP.

- *R11 – Earthworks, retaining structures and embankments must be carefully and sensitively designed to transition gradually into natural contours.*

This requirement is appropriate and is considered sufficient to highlight that slope must be dealt with sensitively.

- *R12 – Where lawns are utilized for embankments in public areas, the gradient must be in accordance with Council standards.*

I suggest a more appropriate wording would be as follows:

R12 - Where lawns are utilized for embankments in public areas, the gradient must be in accordance with the requirements of the responsible authority.

This will allow for circumstances where embankments maybe required by other authorities to achieve functionality for services, drainage treatments and the like.

- *G14 – Subdivision applications which include land identified as being in excess of 10% slope should refer to the preferred outcomes identified within figures 1, 2 and 3 of (the PSP).*

The reference to figures 1, 2 and 3 to provide guidance is somewhat problematic. The emphasis of the guideline is for “subdivision applications” whereas the figures referenced provide little guidance for subdivision design and what can be inferred from the figures is shown incorrectly (or at least inaccurately). These figures are reproduced in Appendix B and more accurate figures are included in Appendix C for comparison purposes.

It is suggested that the figures be deleted as in the current form they are misleading and do not provide adequate guidance for subdivision applications. Adequate guidance could be achieved by inserting the following guidance statements.

- *Subdivision applications which include land identified as being in excess of 10% slope should consider street levels and orientations during the design phase to reduce the magnitude of earthworks.*

RESPONSE RELATING TO SLOPING LAND

- *Subdivision applications which include land identified as being in excess of 10% slope should consider lot orientations with respect to slope during the design phase to consider the likely built form of future dwellings.*
- *Subdivision applications which include land identified as being in excess of 10% slope should include building design guidelines to guide and assist the design of buildings in a manner that reduces the magnitude of earthworks.*
- *R22 In areas which contain slope in excess of 10% as identified on plan 1, (of the PSP) development must minimize landscape scaring and large amounts of cut and fill. Specific guidance relating to this can be found at figure 1-3 (of the PSP).*

The reference to figures 1, 2 and 3 to provide guidance is somewhat problematic. This is listed a "requirement" rather than a "guideline" and yet the figures 1 – 3 are inaccurate and provide non-specific requirements. They are poorly conceived if they are intended to provide the "requirements" for housing or house siting.

It is suggested that the figures be deleted as in the current form they are misleading and do not provide adequate guidance for house siting. Adequate guidance could be achieved by relying on R23.

- *R23 An application for subdivision which includes lots to be located on slopes greater than 10% must be accompanied by design guidelines which demonstrate how the proposal responds to and achieves the objectives, requirements and guidelines within the "Housing" and "Earthworks, embankments and retaining structures" sections of the Quarry Hills PSP incorporated into this scheme.*

This requirement is appropriate and is considered sufficient to provide the responsible authority with the control necessary to achieve the appropriate outcomes on land that has a slope steeper than 10% (1:10).

- *R28 – Front setbacks of dwellings where the lot maintains an interface with the Quarry Hills Regional Parkland, Darebin Creek or conservation areas must be in accordance with the relevant CFA guidelines and requirements set out in Figure 7 of this document. (The PSP)*

The Diagrams relating to Bushfire Management are shown on plan 34 and 35 of the PSP. The "requirement" R28, refers to lots with an interface with the Quarry Hills Parkland, Darebin Creek or Conservation areas. The Bushfire Management (Plan 10) on page 34 shows lines that indicate grassland defendable space and BAL construction standards, however these lines only refer to the land with an interface with the Quarry Hills Parkland, there is no indication of Bushfire Management requirements on the land with an interface with the Darebin Creek or any other conservation area. See Image 3 below. This is also the case for figure 7 in the PSP, see image 4.

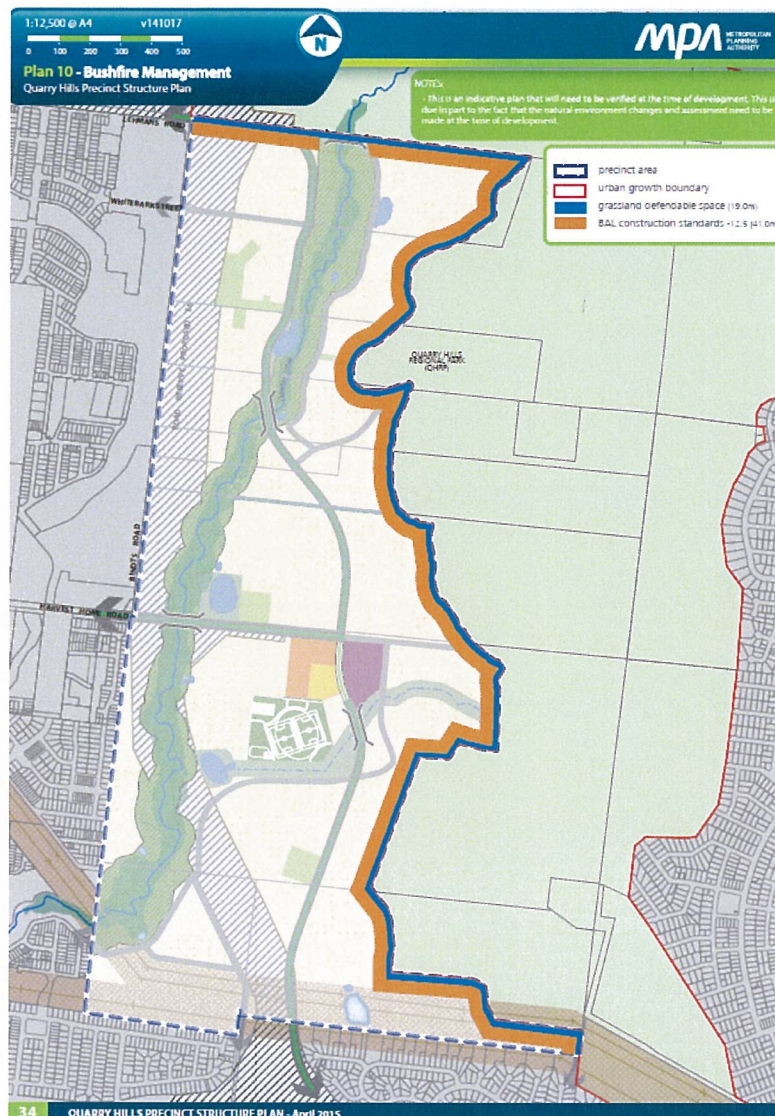


Image 3: reproduction of Plan 10 showing bushfire prone area on land interfacing the Quarry Hills Regional Park.

In this perspective the R28 appears to overstate the scope of the bushfire management diagrams and in particular figure 7. Figures 5 and 6 of the PSP appear to contradict the current wording of R28 as no setback requirements to dwellings are shown on these diagrams.

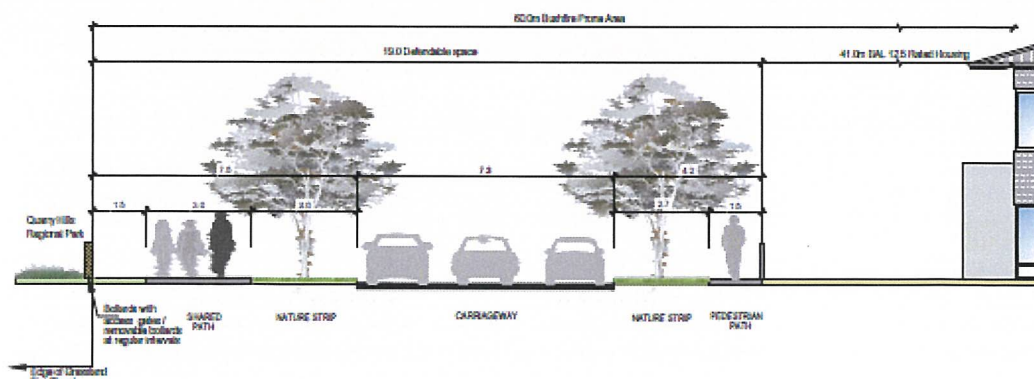


Figure 7: Bushfire Prone Area Interface

Image 4: Reproduction of Figure 7 from the PSP.

RESPONSE RELATING TO SLOPING LAND

Additionally, Figure 7 shows a 60 metre setback to the Quarry Hills Regional Park for a 12.5 BAL rated dwelling. This is misleading and confusing. Both diagrams are indicating that any land within 60m of the unmanaged grasslands with the Quarry Hills Regional Park is to be considered "Fire Prone". Any construction within the fire prone area must then accord with the CFA requirements for defendable space and the corresponding BAL rating. The setback for any building can then be determined by the BAL rating of the proposed building, and could conceivably be less than 60m. The diagrams within the PSP fail to convey this appropriately and figure 7 should be deleted.

Plan 10 should include clear reference to the fire prone nature of the interface and that future dwellings must be designed to the appropriate BAL rating. R28 could then be reworded as follows:

R28 – Any dwellings within 60 of the Quarry Hills Regional Park, as shown in Plan 10 of this PSP, are considered to be within a fire prone area and must be appropriately sited and constructed to a BAL rating that complies with the relevant CFA and Australian standards for buildings in a fire prone area.

The Road format of Figure 7 could be included in section 4.2 of the PSP without the reference to building setback requirements.

8. SUMMARY

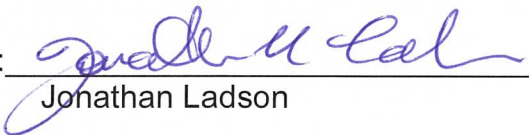
The following "Guidelines" and "Requirements" of the current PSP have been reviewed; R9, R10, R11, R12, G14, R22, R23 and R28.

It has been recommended that these "Guidelines" and "Requirements" be re worded or deleted, that the figures 1, 2, 3 and 7 be deleted and that Map 10 be altered.

Declaration:

I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel.

Signed: _____


Jonathan Ladson

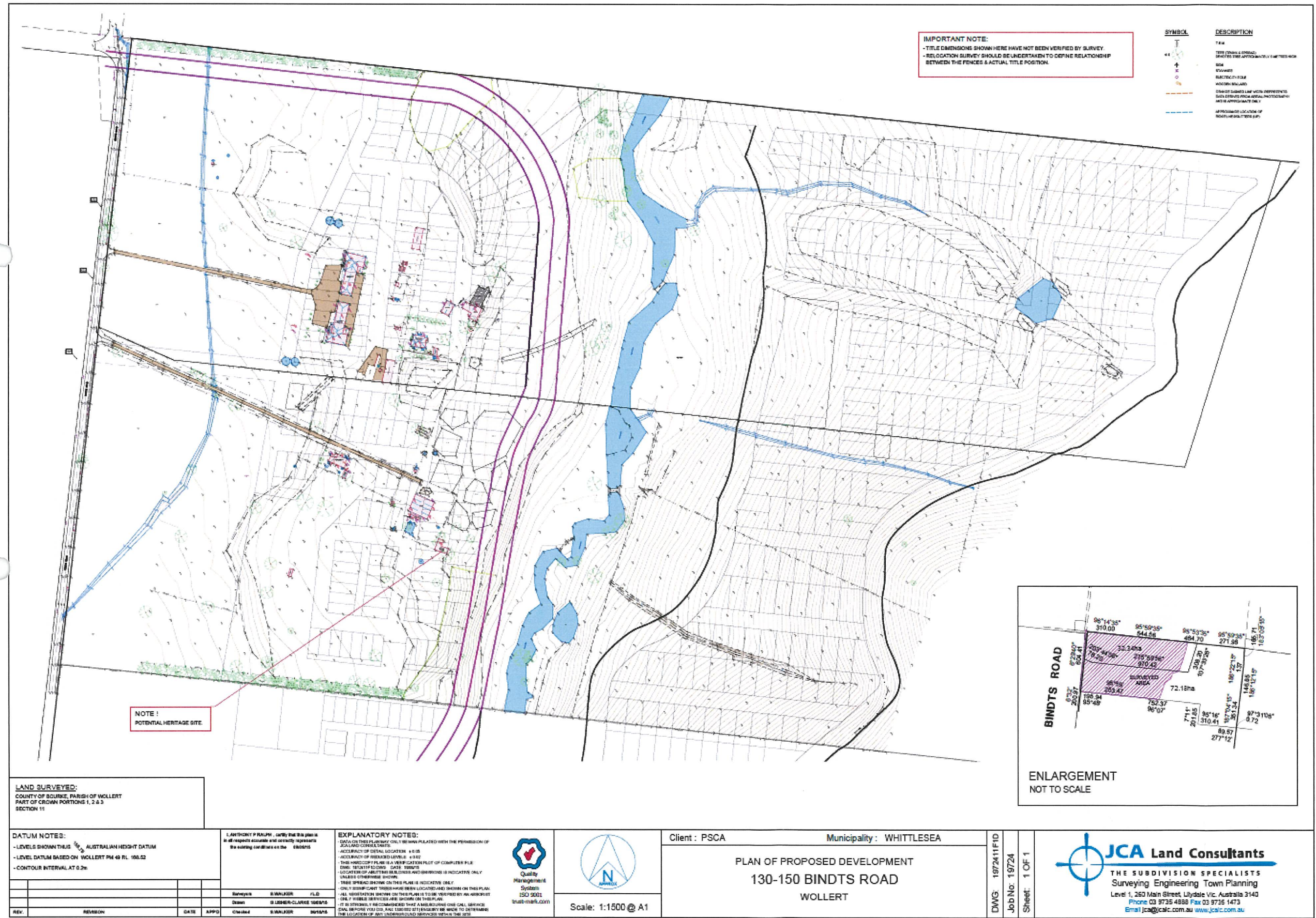
9. APPENDICES

Appendix A: Site Feature Survey – 130 and 150 Bindts Road Wollert

Appendix B: Reproduction of Figures 1, 2 and 3 from the PSP

Appendix C: Accurate slope analysis figures indicating design guidance for dwelling construction.

Appendix A: Site Feature Survey – 130 and 150 Bindts Road Wollert.



Appendix B: Figure 1, 2, 3 from the PSP

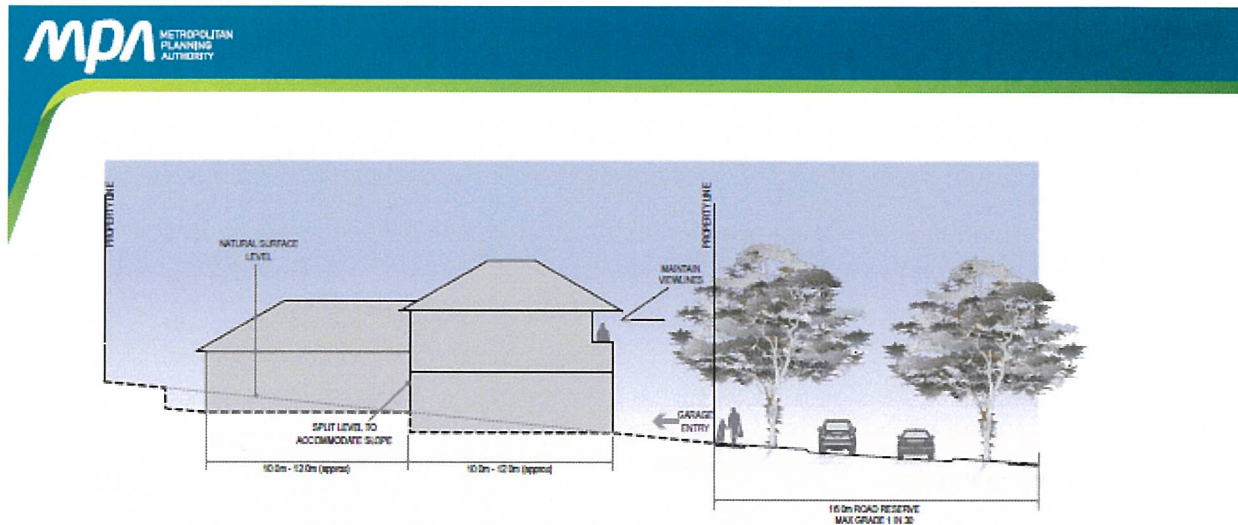


Figure 1: Dwelling constructed on 10-15% Slope

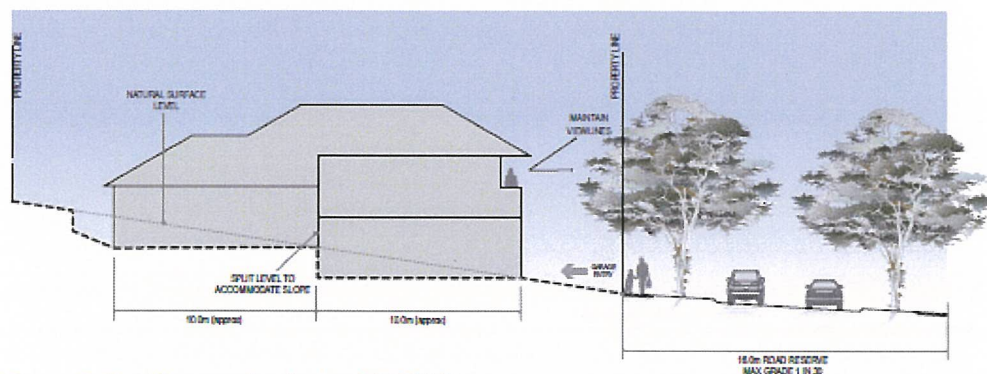


Figure 2: Dwelling constructed on 15-20% Slope

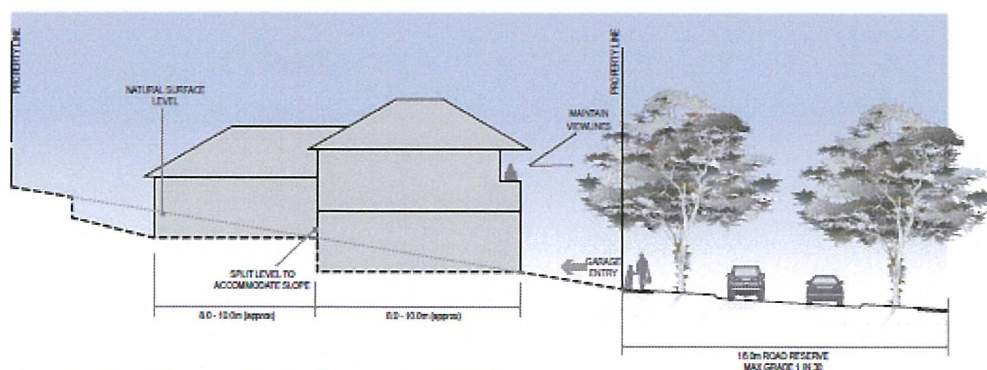


Figure 3: Dwelling constructed on greater 20% Slope

Appendix C: Development Guide Slope Analysis

LONGITUDINAL & TRANSVERSE SLOPING LOT FORMAT **REAR OF 130 & 150 BINDTS ROAD, WOLLERT**

- 1** Transverse sloping lots 5% slope
- 2** Transverse sloping lots 11% slope
- 3** Longitudinal sloping lots 14% slope



INDICATIVE LOT LAYOUT

LONGITUDINAL SLOPING LOT FORMAT

STREET FACING SECTION

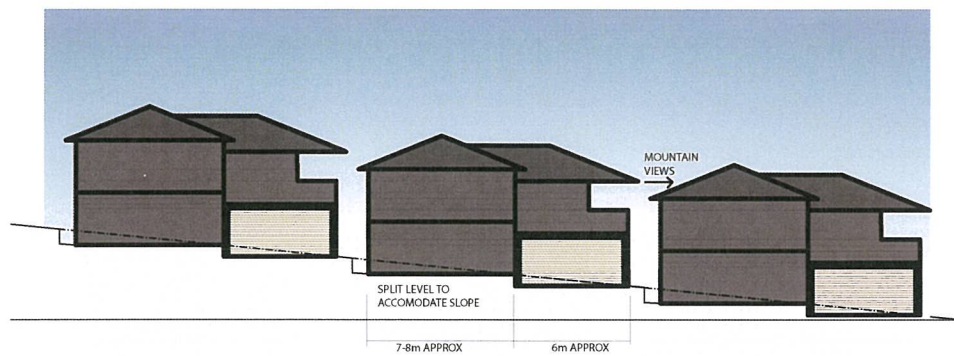


figure 1: Dwelling constructed on 10-15% slope

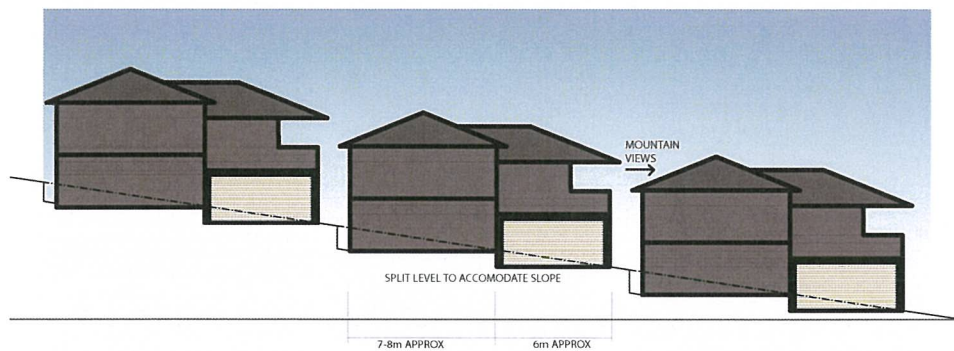


figure 2: Dwelling constructed on 15-20% slope

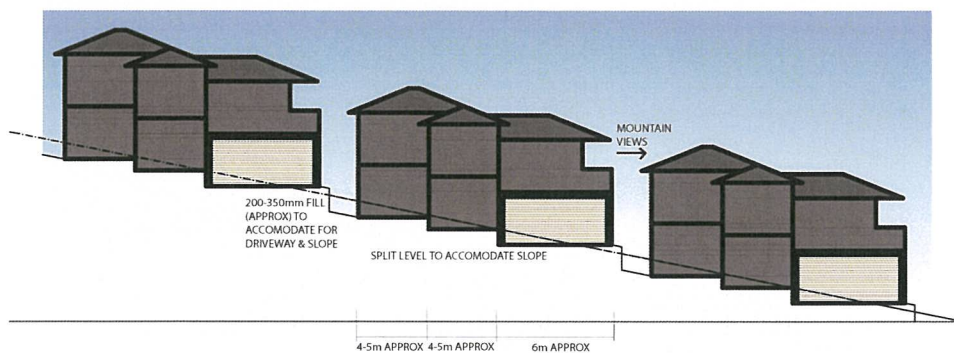


figure 3: Dwelling constructed on greater than 20% slope

TRANSVERSE SLOPING LOT FORMAT CROSS SECTION TO STREET

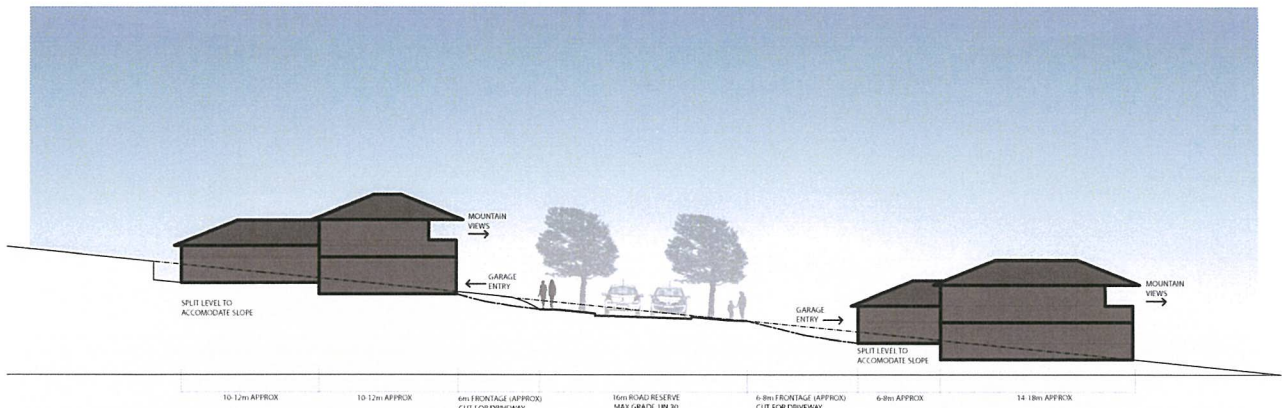


figure 4: Dwelling constructed on 10-15% slope

TRANSVERSE SLOPING LOT FORMAT CROSS SECTION TO STREET

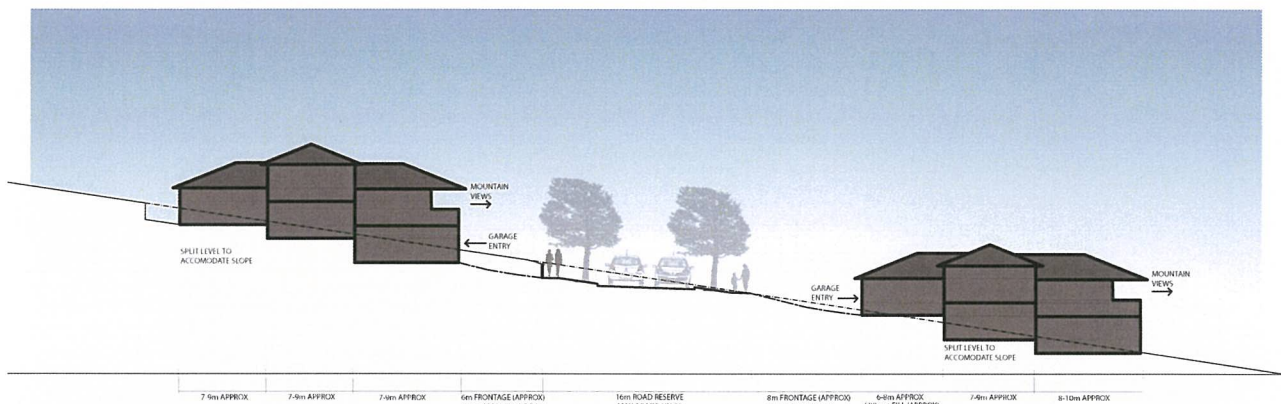


figure 5: Dwelling constructed on 15-20% slope

TRANSVERSE SLOPING LOT FORMAT CROSS SECTION TO STREET

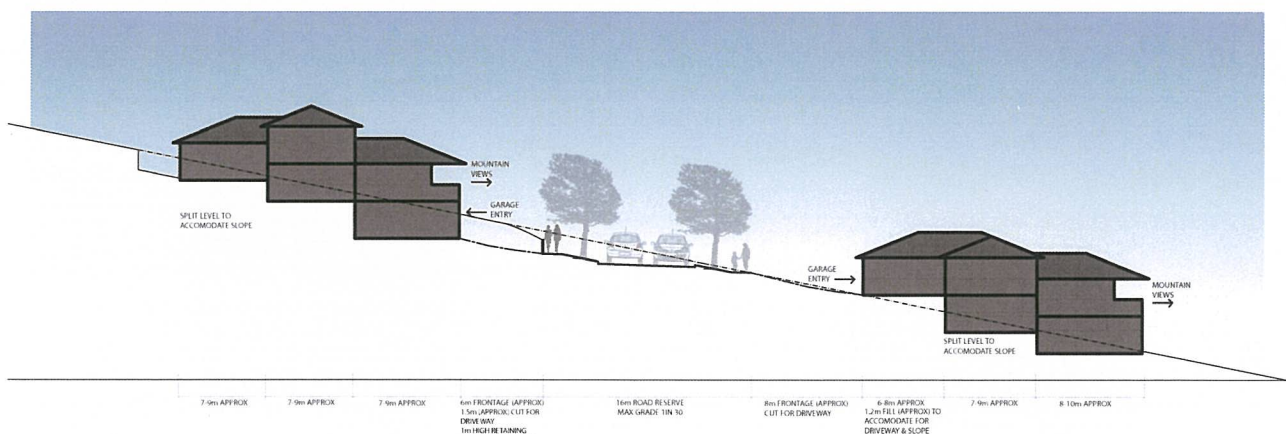


figure 6: Dwelling constructed on greater than a 20% slope