

CAP MEETING 11 August 2021  
DA 21009955 – 39 Emmett Road Crafers West

<b>DEVELOPMENT NO.:</b>	21009955
<b>APPLICANT:</b>	Ulrich Schade Mang Chun Alfred Teng
<b>ADDRESS:</b>	39 EMMETT RD CRAFTERS WEST SA 5152 <b>Title ref.:</b> CT 5545/209 <b>Plan Parcel:</b> F150979 AL24
<b>NATURE OF DEVELOPMENT:</b>	Variation to existing Development Approval 19/580/473 - Changes to retaining wall
<b>ZONING INFORMATION:</b>	<b>Zones:</b> <ul style="list-style-type: none"><li>• Hills Face</li></ul> <b>Overlays:</b> <ul style="list-style-type: none"><li>• Environment and Food Production Area</li><li>• Hazards (Bushfire - High Risk)</li><li>• Hazards (Flooding - Evidence Required)</li><li>• Native Vegetation</li><li>• Prescribed Wells Area</li><li>• Regulated and Significant Tree</li></ul>
<b>LODGEMENT DATE:</b>	25 May 2021
<b>RELEVANT AUTHORITY:</b>	Council Assessment Panel
<b>PLANNING &amp; DESIGN CODE VERSION:</b>	2021.6
<b>CATEGORY OF DEVELOPMENT:</b>	Code Assessed - Performance Assessed
<b>NOTIFICATION:</b>	6 Representations 4 Representations to be heard
<b>RECOMMENDING OFFICER:</b>	Melanie Scott <i>Senior Statutory Planner</i>
<b>REFERRALS STATUTORY:</b>	Nil
<b>REFERRALS NON-STATUTORY:</b>	Nil

**CONTENTS:**

<b>ATTACHMENT 1:</b> Relevant P&D Code Policies	<b>ATTACHMENT 4:</b> Zoning Map
<b>ATTACHMENT 2:</b> Application Documents	<b>ATTACHMENT 5:</b> Representations
<b>ATTACHMENT 3:</b> Subject Land/Representation Map	<b>ATTACHMENT 6:</b> Response to Representations

## DETAILED DESCRIPTION OF PROPOSAL:

Variation to existing Development Approval 19/580/473 - Changes to retaining wall

The toe of the entire retaining wall is varied to now be on the southern and eastern boundaries. Previously the approved wall had only small sections on the boundary. The changes proposed result in a steeper rock wall and larger level areas adjacent the dwelling.

The bench level remains at 109 AHD and, the dwelling remains as approved in Development Application 19/580/473.

The proposed retaining wall variation does result in the retaining wall presenting a steeper face to the southern neighbours. The varied retaining wall is proposed to sit above and inside the southern boundary at varying heights for 43 metres of its 60 metre length. Whilst the wall ranges in height from under 1 metre to 6 metres the foot of the wall is only located on the boundary. The slope of the proposed wall is at a grade of 1 in 2.

The varied retaining wall is proposed to sit below and inside the eastern (rear) boundary for its full length (21 metres).

The varied retaining wall is proposed to sit below, at varying heights inside the northern boundary for some 28 metres of its 60 metre length.

The application documents are provided in **Attachment 2**.

## BACKGROUND:

### BACKGROUND AND HISTORY

APPROVAL DATE	APPLICATION NUMBER	DESCRIPTION OF PROPOSAL
Planning Consent 13 February 2019 Lapsed	18/353/473	Single storey pole frame detached dwelling, including attached decks (maximum height 4.8m), with undercroft parking, water storage tank (22,500L) & associated earthworks (non-complying)
29 May 2020	19/580/473	Single storey detached dwelling, retaining walls (maximum height 3.6m), water storage tank (1 x 46400l), removal of native vegetation & associated earthworks (non-complying)

The first Development Application 18/353/473 on the land was for a pole home. That application was non-complying development in accordance with the Hills Face Zone provisions of development control with regards to height. (Refer Figure 1) There were no representations regarding this application. Of note the finished level of the proposed dwelling in Development Application 18/353/473 was 110 AHD, 3 metres below the highest point of land which ensured the application would minimise any potential visual impact from the Adelaide Plains. Also of note was the CFS bushfire attack level for this site of Flame Zone. It was the Flame Zone bushfire attack level which lead to the applicant approaching Council about amendments in June 2019. The applicant was advised to lodge a new application as the proposed changes were not considered minor.

**WESTERN ELEVATION**

**COLOR SCHEDULE**

ROOF GLACING	COLORBOND MONUMENT
GUTTER/BARGE	COLORBOND MONUMENT
DOWNPIPES	COLORBOND DUNE
EXTERNAL RENDER	COLORBOND DUNE
WALL/RAIL POSTS	COLORBOND MONUMENT
BALCONY	TRAIL
WINDOWS	COLORBOND MONUMENT

**WESTERN ELEVATION**

**WESTERN ELEVATION**

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In July 2019 Development Application 19/580/473 was lodged. The proposed dwelling was no longer a pole design home and the finished floor level for the dwelling was 109 AHD. Rock retaining walls were proposed to obtain the level and the dwelling was sited on a bench achieved from a combination of fill and excavation, with a maximum of 4 metres of fill and 2 metres of cut. Given the general slope of the land the proposed rock wall was a series of terraces with the toe of the wall at 103 AHD extending to the bench level 109 AHD, so technically a 6 metre wall. No representations were made and planning approval was granted November 2019. A minor variation was made in May 2020 with some changes to windows and doors and Development Approval granted May 2020 (Building Rules Consent was issued by a private certifier).

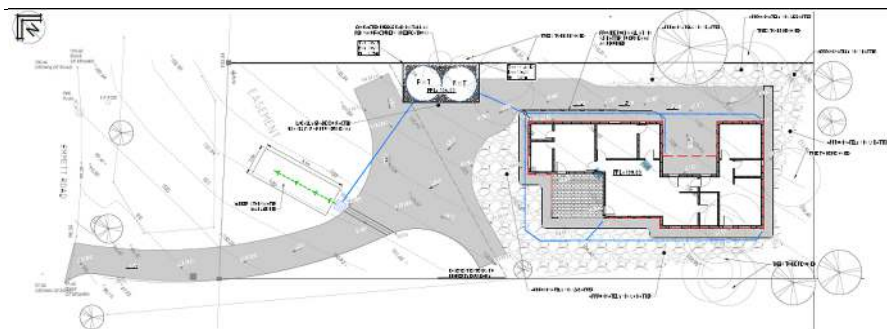


Figure 3: Dwelling site approved in DA 19/580/473

Works commenced on site February 2021 and following receipt of a complaint about the retaining wall being constructed. Council requested an engineering report in March 2021 to ascertain if the works were being undertaken in accordance with the plans. The proposed retaining has been subject to a third party assessment by a qualified person engaged by the owner and the site had an inspection by Safework SA. The applicant advised the design as approved did not offer enough clearance from the building to the edge of the retaining to ensure structural stability for the approved dwelling. From the information provided, Council determined the rock wall plans had been varied and a stop work notice was issued 27 April 2021.

An application to vary the previous approval was submitted in the Plan SA Portal on 14 May 2021 and lodged on 25 May 2021.

The new application is a variation to the retaining wall only, with the toe of the entire wall now on the boundary along the southern (30 metres) and eastern boundaries (20 metres). Previously the approved wall had only touched the boundary in small sections. The changes proposed result in a steeper rock wall and larger level areas adjacent the dwelling.

## SUBJECT LAND & LOCALITY:

### Site Description

The subject land is a vacant allotment of approximately 1200m<sup>2</sup> on the southern side of Emmett Road with a fall from 113 AHD in the north eastern (rear left) to 100 AHD at the point of entry in the south western corner. In addition to this fall of 13 metres from the north eastern corner to the south eastern corner, and there is also a cross fall of 7.5 metres from the north west corner to south western corner. Note the level at the bitumen crossover is 98 AHD. There was some vegetation around the eastern (rear) boundary which was authorised for removal for bushfire protection under the regulations with regard to the CFS and the Native Vegetation Council. None of the vegetation on site was identified as regulated or significant trees. The original approval includes onsite waste and a stormwater disposal system. There is a large power line easement diagonally bisecting the land roughly on a north-south alignment which is not impacted by the proposal.

### Locality

The subject land is one of the smaller allotments in the area. Allotments to the north are similar in size and are all developed with dwellings. Allotments to the south and east are larger and contain dwellings and vegetation. The northern side of Emmett Road has a large allotment of 59 ha. All allotments are in the Hills Face Zone. The subject land and that relating to neighbouring representations is provided on the map in **Attachment 3**. The subject land and zoning is provided in **Attachment 4**.

**CONSENT TYPE REQUIRED:**

Planning Consent

**CATEGORY OF DEVELOPMENT:**

- Retaining wall: Code Assessed - Performance Assessed
- **OVERALL APPLICATION CATEGORY:**  
Code Assessed - Performance Assessed
- **REASON**  
The P&D Code does not classify retaining walls in the Accepted, Deemed to Satisfy or Restricted Development Tables for the Zone and therefore the development is categorised as Code Assessed Development and classified as “performance assessed development” under sections 105(b) and 107 of the Act, requiring the development to be assessed on its merits against the Code.

**PUBLIC NOTIFICATION**

- **REASON**  
A Retaining wall is not listed in Table 5 of the Hills Face Zone as an exemption from public notification and in this instance, the development is not considered minor development by Council staff.

Public notification was undertaken from 8 to 30 June 2021.

- **LIST OF REPRESENTATIONS**  
Six (6) representations were received. Of these, five (5) representations are opposing the proposal and one (1) is in support of the proposal. All were from adjacent and nearby properties.

The following representors wish to be heard:

Name of Representor	Representor's Property Address	Nominated Speaker
Richard and Julie Arbery	37 Emmett Road Crafers West	Richard Arbery
Scott Hochwald	43 Emmett Road Crafers West	Scott Hochwald
David Shaw	3 Myrtle Avenue Myrtle Bank (Lot 4 Emmett Road)	David and Anthony Shaw
Jarred and Sarah Sutton	27 Emmett Road Crafers West	Jarred Sutton

The applicants or their representative may be in attendance.

**The following is a summary of the issues in the representations:**

- The site looks unsafe
- The works are not in accordance with the plans
- The works are not in accordance with the zone performance outcomes

- Ongoing stability
- Tree damaging activity
- Harbour for snakes and vermin
- Loss of amenity
- Inaccuracies in the plans

The subject land/representation map is provided as **Attachment 3**. A copy of representations is provided in **Attachment 5** and the applicant's response is provided in **Attachment 6**.

## **AGENCY REFERRALS**

Nil mandatory referrals

## **INTERNAL REFERRALS**

Nil required

## **PLANNING ASSESSMENT**

### **Desired outcomes**

Desired outcomes are policies designed to aid the interpretation of performance outcomes by setting a general policy agenda for a zone, subzone, overlay or general development policies module. Where a relevant authority is uncertain as to whether or how a performance outcome applies to a development, the desired outcome(s) may inform its consideration of the relevance and application of a performance outcome, or assist in assessing the merits of the development against the applicable performance outcomes collectively.

### **Performance outcomes**

Performance outcomes are policies designed to facilitate assessment according to specified factors, including land use, site dimensions and land division, built form, character and hazard risk minimisation.

### **Designated performance features**

In order to assist a relevant authority to interpret the performance outcomes, in some cases the policy includes a standard outcome which will generally meet the corresponding performance outcome (a *designated performance feature* or DPF). A DPF provides a guide to a relevant authority as to what is generally considered to satisfy the corresponding performance outcome but does not need to necessarily be satisfied to meet the performance outcome, and does not derogate from the discretion to determine that the outcome is met in another way, or from the need to assess development on its merits against all relevant policies.

The application has been assessed against the relevant provisions of the Planning & Design Code, which are contained in **Attachment 1**.

## **Land Use - Zone**

### **Desired Outcomes**

HF Zone DO 1	To maintain the western slopes of the South Mount Lofty Ranges as an important natural asset of Greater Adelaide by limiting development to low-intensity agricultural activities and public and private open space. The natural character of the zone will be preserved, enhanced and re-established to: 'Natural character' refers to the natural topography,
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	native vegetation and colours, such as greens and browns of non-reflective earthen tones, normally associated with a natural landscape. Additionally, natural character refers to the open character of the land in those areas of the zone where open grazing currently predominates.
HF Zone DO 2	Development ensures that the community is not required to bear the cost of providing services to and within the Zone
Hazard Overlay DO 1	Development, including land division is sited and designed to minimise the threat and impact of bushfires on life and property with regard to the following risks: potential for uncontrolled bushfire events taking into account the increased frequency and intensity of bushfires as a result of climate change high levels and exposure to ember attack impact from burning debris radiant heat likelihood and direct exposure to flames from a fire front.
Hazard Overlay DO 3	To facilitate access for emergency service vehicles to aid the protection of lives and assets from bushfire danger.
Regulated and Significant Tree Overlay DO 1.	Conservation of regulated and significant trees to provide aesthetic and environmental benefits and mitigate tree loss

<b>Relevant Performance Outcomes/ Designated Performance Features</b>	
Hill Face Zone	<p>Land use &amp; intensity: PO 1.1, PO 1.4 &amp; DPF 1.4</p> <p>Built Form and Character: PO 2.1 a &amp; b, PO 2.2 &amp; DPF 2.2, PO 2.4, PO 2.5, PO 2.6, PO 2.8, PO 2.9</p> <p>Excavation and Filling: PO 3.1 &amp; DPF 3.1 a &amp; b, PO 3.2</p> <p>Driveways, Access Tracks and Car parking: PO 8.1 &amp; DPF 8.2 a &amp; b</p> <p>Environment and Amenity: PO 10.2 a, b &amp; c, PO 10.4 a, PO 10.5</p> <p>Native Vegetation: PO 11.1, PO 11.2, and</p> <p>Fencing and Retaining Walls: PO 12.1</p>
Hazards (Bushfire - High Risk) Overlay	Built Form: PO 3.1
Native Vegetation Overlay	Environmental Protection: PO 1.1 & DPF 1.1
Regulated and Significant Tree Overlay	<p>Tree Retention and Health PO1.1</p> <p>Ground work affecting trees: PO 2.1</p>
General Development Policies	<p>Landscaping: PO 3.1</p> <p>Earthworks and sloping land: PO 8.1 &amp; DPF 8.1</p> <p>Fences and Walls: PO 9.1</p>

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Land Use and Intensity & Built Form and Character

The use of local stone which is of a low reflective nature has been selected to preserve and assist in the re-establishment of natural character as sought by PO1.1. The retaining wall is set back from the road and is some 70 metres from the dwelling of the nearest down slope representor to the south west. The proposed wall is not finished and it is considered the proposed landscaping and finished wall will meet the expectations of the Planning and Design Code with regards to visual amenity, stability and not be a vermin trap, none of which would not be in the interests of the owners. It is expected the stone will weather with time.

Contrary to representor opinion the dwelling approved in previous applications is single storey in accordance with DPF 1.4.

The proposed dwelling and the retaining wall are not visible against the skyline when viewed from roads within the zone or from the Adelaide Plains.

Excavation and Filling & Environment and Amenity

There is 2 metres of cut and 4 metres of fill which is at odds with PO 3.1 and DPF 3.1. Whilst the level of cut is consistent with DPF 3.1, the fill exceeds the level of 1 metre. This level of cut and fill was previously approved by Council and SCAP concurred with Council... In the context of the site the amount of cut and fill is considered appropriate for this site for all the amenity reasons already mentioned in this report. As detailed in the Planning and Design Code rules of interpretation, DPFs are considered as a guide and do not necessarily need to be satisfied.

The representors had access to the previous applications during public notification and no issues were raised with regards to the amount of cut and fill. The steeper angle of the proposed retaining, the relocation of the proposed retaining closer to property boundaries and the construction method have led to representor concerns.

The stability of the proposed structure has been certified by the applicant's engineer and their private certifier. The professional advice would indicate the proposed retaining wall should be considered in accordance with PO 3.2 with regard to stability of the slope and the finished product with landscaping and natural weathering will assist in re-establishing the natural character of the area.

It is important to consider the construction details were designed by an engineer – "OB Geotechnics Consulting and Geotechnical Engineering Services" and approved by a private certifier in the original Building Rules Consent.

Amended details have been sought and a second engineering opinion provided confirming that the "as-built" wall is structurally sound. – Edge Consulting Engineers reviewed the approved details and "as constructed" wall and confirm water and soil erosion have been key considerations in the design.

The applicant advised some changes to the location of the wall or the house were required to prevent the proposed house footings imposing a load on the originally approved retaining structures.

The amended proposal will also require Building Consent from the private certifier (including the additional engineering reports received from Edge Consulting engineers. This assessment and approval process is to ensure that the minimum Building Code of Australian Standards (structurally) have been met and this is not within the scope of planning.

Stormwater and waste water management was engineered and approved as part of previous approvals. No changes are made to these.

On balance the proposal is considered to be in accordance with the desired outcomes of the Hills Face Zone given the complex nature of the site with slope and CFS concerns being of major consideration.

#### Native Vegetation

Replanting, as part of the future landscaping of the land and the retention of a multi-trunked tree on southern boundary is designed to maximise the retention of existing native vegetation in the variation application. This aspect is discussed further in the native vegetation overlay paragraph below.

#### Fencing and Retaining Walls

PO 12.1 suggests retaining walls are constructed as a stepped series of low walls constructed of dark, natural coloured materials and screened by landscaping using locally indigenous plant species if possible. The proposal addresses two of the three suggestions by using natural local stone which will weather to a darker finish than that currently evident on site and native landscaping, being mindful of bushfire risk, is proposed on the wall.

#### Hazards Overlay

The site was assessed as by the CFS in the original application as Bushfire Attack Level (BAL) Flame zone. This is the highest BAL in terms of risk. The proposed retaining works ensure both CFS access to the site and water supply for the CFS by enabling CFS vehicle access to the site along with the legislated turn around, with the concept design being assessed as part of the dwelling application on the site. The proposed variation works do no change the CFS access to the site.

#### Native Vegetation Overlay

Native vegetation on the subject land was assessed as part of the previous application for the dwelling, no change is presented by this variation application. There is limited vegetation adjacent the boundary on neighbouring properties to the rear and the north. The earthworks and retaining required for this proposal also considers the CFS clearance requirements for vegetation management within 20 metres of the proposed building and the relationship of those requirements to the Native Vegetation Act. It is considered the works don't involve any further clearance of native vegetation over what has been previously approved.

#### Regulated and Significant Tree Overlay

It appears there is one regulated tree which straddles the southern boundary with the neighbours at 43 Emmett Road. The tree is a multi-trunked *Eucalyptus Obliqua* (stringybark). The tree will be within 5 metres of the approved dwelling and as such will not attract any legislative protection (PO 1.3iv). However there are no excavation works proposed in the vicinity of the tree and the rock wall is offset from the tree.

### **General Development Policies**

#### Design/Soft Landscaping & Earthworks and Sloping Land

POs 8.4 and 8.5 mirror the zone outcomes. The comments regarding the amount of cut and fill in the zone provision also apply here. The amount of cut and fill was previously approved. This application is for a change in the way in which those works are retained.

#### Design in Urban Areas

The bulk of this section of the Code is more relevant to the dwelling assessment which is not part of this application. I have included it in this report as representors reference this section of the code. Council does not consider the Hills Face zone an urban area. However the proposed landscaping for the retaining, the expectation the stone will weather and the general concept of the cut and fill is considered a contextual solution to a challenging site as envisaged by the desired outcome.

## **CONCLUSION**

The proposed retaining wall variation does not change the bench level proposed in the previous application 19/580/473. The proposed retaining wall variation does result in the retaining presenting a steeper face to the southern neighbours. The varied retaining wall is proposed to sit above and inside the southern boundary at varying heights for 43 metres of its 60 metre length with the slope of the proposed wall being at a grade of 1 in 2. The varied retaining wall sits below the eastern boundary for its full length (21 metres). The proposed retaining wall sits below the northern boundary at varying heights for some 28 metres of its 60 metre length. The proposed retaining wall does sit above the southern boundary at varying heights for 43 metres of its 60 metre length. The proposed retaining has been partially constructed and is incomplete. Both these matters and the engineering for the final development approval for the amended retaining will be considered and determined by the applicant's private certifier in the necessary Building Code of Australia assessment.

Council staff are satisfied the proposed variation is sufficiently in accord with the Planning and Design Code to warrant consent.

## **RECOMMENDATION**

**It is recommended that the Council Assessment Panel resolve that:**

- 1) Pursuant to Section 107(2)(c) of the Planning, Development and Infrastructure Act 2016, and having undertaken an assessment of the application against the Planning and Design Code, the application is NOT seriously at variance with the provisions of the Planning and Design Code; and**
- 2) Development Application Number 21009955, by Ulrich Schade and Mang Chun Alfred Teng for Variation to existing Development Approval 19/580/473 - Changes to retaining wall at 39 Emmett Road Crafers West is GRANTED Planning Consent subject to the following conditions:**

### **Planning Consent**

**1) Development in Accordance with Stamped Plans**

The development granted shall be undertaken and completed in accordance with the stamped plans and documentation, except where varied by conditions below (if any).

**2) Previous Plans & Details Still Apply**

Except where varied by this authorisation, all other conditions, plans and details relating to the original Development Authorisation continue to apply to this amended authorisation.

## **ADVISORY NOTES**

### **General Notes**

- 1) No work can commence on this development unless a Development Approval has been obtained. If one or more consents have been granted on this Decision Notification Form, you must not start any site works or building work or change of use of the land until you have received notification that Development Approval has been granted.**

- 2) Appeal rights – General rights of review and appeal exist in relation to any assessment, request, direction or act of a relevant authority in relation to the determination of this application, including conditions.

Planning Consent Expiry

This Planning Consent is valid for a period of twenty four (24) months commencing from the date of the decision.

Building Consent must be applied for prior to the expiry of the Planning Consent.

**OFFICER MAKING RECOMMENDATION**

**Name:** Melanie Scott  
**Title:** Senior Statutory Planner  
**Date:** 29 July 2021

**PLANNING & DESIGN CODE POLICIES**

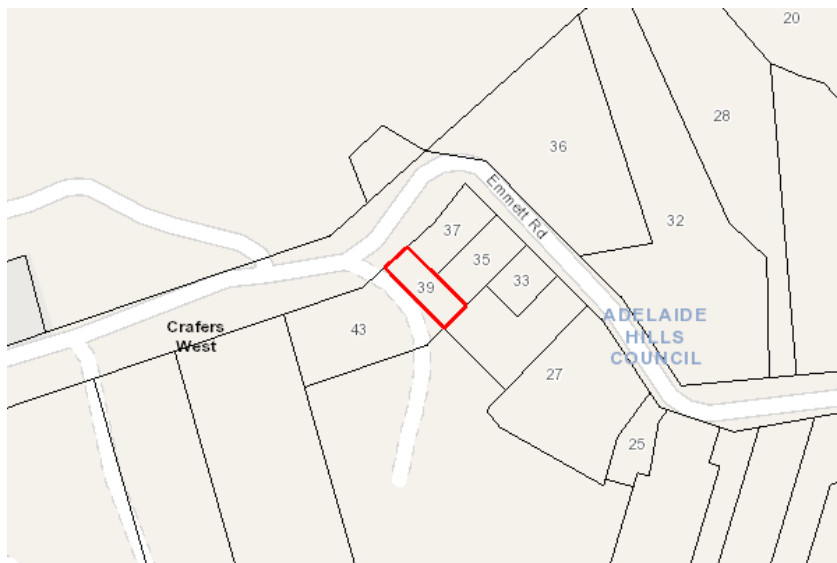
As referenced in the report and attached at **Attachment 1**.

**39 EMMETT RD CRAFTERS WEST SA 5152**

**Address:**

Click to view a detailed interactive [SAILIS](#) in [SAILIS](#)

To view a detailed interactive property map in SAPPA click on the map below



**Property Zoning Details**

**Overlay**

Environment and Food Production Area  
Hazards (Bushfire - High Risk)  
Hazards (Flooding - Evidence Required)  
Native Vegetation  
Prescribed Wells Area  
Regulated and Significant Tree

**Zone**

Hills Face

**Development Pathways**

■ Hills Face

1. Accepted Development

Means that the development type does not require planning consent (planning approval). Please ensure compliance with relevant land use and development controls in the Code.

- Internal building work
- Partial demolition of a building or structure
- Private bushfire shelter
- Protective tree netting structure
- Solar photovoltaic panels (roof mounted)
- Water tank (underground)

2. Code Assessed - Deemed to Satisfy

Means that the development type requires consent (planning approval). Please ensure compliance with relevant land use and development controls in the Code.

- Farming
- Temporary accommodation in an area affected by bushfire

3. Code Assessed - Performance Assessed

Performance Assessed development types listed below are those for which the Code identifies relevant policies. Additional development types that are not listed as Accepted, Deemed to Satisfy or Restricted default to a Performance assessed Pathway. Please contact your local council for more information.

- Carport
- Demolition
- Detached dwelling
- Dwelling addition
- Farming
- Outbuilding
- Tree-damaging activity
- Verandah

4. Impact Assessed - Restricted

Means that the development type requires approval. Classes of development that are classified as Restricted are listed in Table 4 of the relevant Zones.

Property Policy Information for above selection

## Part 2 - Zones and Sub Zones

### Hills Face Zone

#### Assessment Provisions (AP)

Desired Outcome	
DO 1	<p>To maintain the western slopes of the South Mount Lofty Ranges as an important natural asset of Greater Adelaide by limiting development to low-intensity agricultural activities and public and private open space. The natural character of the zone will be preserved, enhanced and re-established to:</p> <ul style="list-style-type: none"> <li>(a) provide a natural backdrop to the Adelaide Plain and a contrast to the urban area</li> <li>(b) preserve biodiversity and restore locally indigenous vegetation and fauna habitats close to metropolitan Adelaide</li> <li>(c) provide for passive recreation in an area of natural character close to the metropolitan area</li> <li>(d) provide a part of the buffer area between metropolitan districts and prevent the urban area extending into the western slopes of the Mount Lofty Ranges.</li> </ul> <p>'Natural character' refers to the natural topography, native vegetation and colours, such as greens and browns of non-reflective earthen tones, normally associated with a natural landscape. Additionally, natural character refers to the open character of the land in those areas of the zone where open grazing currently predominates.</p>
DO 2	<p>Development ensures that the community is not required to bear the cost of providing services to and within the Zone.</p>

Performance Outcomes (PO) and Deemed to Satisfy (DTS) / Designated Performance Feature (DPF) Criteria

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Land Use and Intensity	

PO 1.1 Low-intensity, low-scale activities that complement the natural, rural and scenic qualities of the hills face landscape.	DTS/DPF 1.1 None are applicable.
PO 1.2 Low-intensity farming activities minimise their visual and environmental impact.	DTS/DPF 1.2 Farming does not involve:  (a) excavation or filling of land (b) the construction of roads, tracks and thoroughfares (c) the erection, construction or alteration of, or addition to, any building or structure (d) the clearing of native vegetation.
PO 1.3 Development does not in itself, or in association with other development, create a potential demand for the provision of services at a cost to the community.	DTS/DPF 1.3 None are applicable.
PO 1.4 Residential development limited to maintain a pleasant natural and rural character and amenity.	DTS/DPF 1.4 Detached dwellings of not more than one building level and comprising no more than one dwelling on an allotment.
Built Form and Character	
PO 2.1 Buildings are unobtrusive and sited and designed in such a way as to:  (a) preserve and enhance or assist in the re-establishment of the natural character of the zone (b) limit the visual intrusion of development in the Zone particularly when viewed from roads within the zone or from the Adelaide Plain.	DTS/DPF 2.1 None are applicable.
PO 2.2 Buildings are limited in height and scale to minimise the amount of building mass visible from the Adelaide Plains.	DTS/DPF 2.2 Buildings meet the following:  (a) are of single building level (b) building height does not exceed 5m (c) wall height does not exceed 3m (not including gable ends).
PO 2.3 Where possible and without compromising the desired outcomes of the Zone, buildings are grouped together (but not attached) to limit the spread of built development that can be viewed from the Adelaide Plains.	DTS/DPF 2.3 None are applicable.
PO 2.4 Buildings are located within valleys or behind spurs or positioned well below the ridge line so that they are not visible against the skyline when viewed from roads within the zone or from the Adelaide Plains.	DTS/DPF 2.4 None are applicable.

PO 2.5 Buildings are sited in unobtrusive locations and utilise existing vegetation and natural features of the land to assist in obscuring them from sight when viewed from roads within the zone and from the Adelaide Plains.	PO 2.6 Buildings are well set back from public roads, particularly where the allotment of the development is on the high side of the road.
PO 2.7 Buildings are designed and sited to keep roof lines below the lowest point of the abutting road when the allotment is on the low side of the road.	DTS/DPF 2.7 None are applicable.
PO 2.8 Buildings are sited and designed to reduce the vertical profile of the building.	DTS/DPF 2.8 None are applicable.
PO 2.9 Buildings comprise materials that are of a low light reflective nature and use colours that are unobtrusive and blend with a natural and rural landscape.	DTS/DPF 2.9 None are applicable.
PO 2.10 Buildings have a safe, clean, tidy and unobtrusive area for the storage and disposal of refuse so that the natural character of the zone is not adversely affected.	DTS/DPF 2.10 None are applicable.
Excavation and Filling	
PO 3.1 Excavation and/or filling of land outside townships and urban areas is:  (a) kept to a minimum so as to preserve the natural form of the land and native vegetation (b) only undertaken in order to reduce the visual impact of buildings, including structures, or in order to construct water storage facilities for use on the allotment.	DTS/DPF 3.1 The depth of earthworks does not exceed:  (a) in the case of excavation, 2m. (b) in the case of filling of land, 1m.
PO 3.2 Excavation and/or filling of land is only undertaken if the resultant slope can be stabilised to prevent erosion, and results in stable scree slopes which are covered with top soil and landscaped so as to preserve and enhance the natural character or assist in the re-establishment of the natural character of the area.	DTS/DPF 3.2 None are applicable.
Mining	
PO 4.1 New mines and quarries not developed within the zone.	DTS/DPF 4.1 Development does not involve the construction of a new mine or quarry.
PO 4.2 Extensions to existing mines and quarries is only undertaken if:  (a) the overall benefit to the community from the minerals produced together with the planned after-use of the site	DTS/DPF 4.2 None are applicable.

<p>outweighs any loss of amenity or other resources resulting from the extractive operations</p> <p>(b) the site contains minerals of the necessary quality and, for reasons of location, quality or other factors, no practical alternative source is available</p> <p>(c) the proposed operation would maximise the utilisation of the resource but minimise the adverse impacts of extraction</p> <p>(d) the proposed workings cannot be seen from any part of the Adelaide Plain nor from any arterial road, scenic road or other substantial traffic route</p> <p>(e) an effective buffer of land and native trees exists around the site to protect adjoining land users from effects of the operation</p> <p>(f) the operation is to be conducted in accordance with a staged development and rehabilitation scheme which:</p> <ul style="list-style-type: none"> <li>(i) ensures that danger and unreasonable damage or nuisance does not arise from workings or any operations associated with them</li> <li>(ii) provides for progressive rehabilitation of disturbed areas and for landscaping with locally indigenous plant species in order to produce a site which assists in the re-establishment of a natural character</li> <li>(iii) provides for the removal of buildings, plant, equipment and rubbish when operations are completed</li> <li>(iv) provides scope for suitable after-uses.</li> </ul>	
Landfill and Waste Transfer Stations	
<p>PO 5.1</p> <p>Landfill operations only developed if the site of the proposed development:</p> <ul style="list-style-type: none"> <li>(a) is located outside the Mount Lofty Ranges Catchment (Area 1) Overlay and</li> <li>(b) is a disused quarry or</li> <li>(c) has ground slopes no greater than 10% and has adequate separation distances from any above ground and underground water resource and from any potentially incompatible land uses and activities.</li> </ul>	<p>DTS/DPF 5.1</p> <p>None are applicable.</p>
<p>PO 5.2</p> <p>Small-scale waste transfer stations may be appropriate if located:</p> <ul style="list-style-type: none"> <li>(a) outside of the Mount Lofty Ranges Catchment (Area 1) Overlay</li> <li>(b) in unobtrusive locations.</li> </ul>	<p>DTS/DPF 5.2</p> <p>None are applicable.</p>
Horticulture	
<p>PO 6.1</p> <p>Horticultural activities are appropriately located to minimise impacts on native vegetation.</p>	<p>DTS/DPF 6.1</p> <p>Horticulture, other than where it involves the growing of olives, is located no closer than 50m to stands of significant native vegetation, including native grasses.</p>

PO 6.2  Horticulture involving the growing of olives is avoided or is progressively replaced where it exists to maintain and improve native vegetation and conservation values within the zone.	DTS/DPF 6.2  The replacement of olive groves with another form of horticulture or native vegetation.
PO 6.3  Horticultural activities are appropriately located to minimise impacts on lakes, watercourses and wetlands.	DTS/DPF 6.3  Horticulture is located no closer than 50m to a lake, watercourse or wetland.
PO 6.4  Horticultural activities incorporate a suitably sized vegetated buffer area/strip to mitigate any adverse impacts from the horticultural activity (including noise, chemical spray drift and run-off) on nearby dwellings, tourist accommodation or other sensitive receivers in other ownership.	DTS/DPF 6.4  Horticultural activities are greater than 300m from a dwelling, tourist accommodation or other sensitive receiver in other ownership.
Tourist Development	
PO 7.1  Tourist facilities are of a low intensity and low-scale and are sited unobtrusively.	DTS/DPF 7.1  None are applicable.
Driveways, Access Tracks and Car parking	
PO 8.1  Driveways, access tracks and car parking areas constructed in a manner which preserves landscape character and are:  (a) sited and constructed to follow contours of the land to reduce their visual impact and potential for erosion from water runoff (b) surfaced with dark materials.	DTS/DPF 8.1  None are applicable.
PO 8.2  Driveways and access tracks are limited in length and avoid steep slopes.	DTS/DPF 8.2  Driveways and access tracks:  (a) are not more than 30m in length (b) have a gradient of less than 16 degrees (1-in-3.5) at any point along the driveway or access track.
Infrastructure	
PO 9.1  Telecommunication facilities, communication towers and masts:  (a) are sited and designed to minimise their visual impact (b) contain the number of aerials and masts by shared use of facilities	DTS/DPF 9.1  None are applicable.
PO 9.2  Telephone lines and electricity mains and services of less than 33kV are located underground.	DTS/DPF 9.2  None are applicable.
PO 9.3  New telephone lines, mains and services are located and designed in such a way as to minimise their visual intrusion and	DTS/DPF 9.3  None are applicable.

any adverse effect on the natural character of the zone.	
Environment and Amenity	
<p>PO 10.1</p> <p>Development is not undertaken if it is likely to result in:</p> <ul style="list-style-type: none"> <li>(a) pollution of underground or surface water resources</li> <li>(b) over exploitation of underground or surface water resources</li> <li>(c) adverse impact on underground or surface water resources, including any environmental flows required to sustain the natural environment.</li> </ul>	<p>DTS/DPF 10.1</p> <p>None are applicable.</p>
<p>PO 10.2</p> <p>Development not undertaken if it is likely to result in:</p> <ul style="list-style-type: none"> <li>(a) unnecessary loss or damage to native vegetation including the full range of tree, understorey and groundcover species/ native grasses so as to maintain and enhance environmental values and functions, including conservation, biodiversity and habitat</li> <li>(b) denudation of pastures</li> <li>(c) the introduction of or an increase in the number of pest plants or vermin.</li> </ul>	<p>DTS/DPF 10.2</p> <p>None are applicable.</p>
<p>PO 10.3</p> <p>Development is not undertaken if it is likely to result in adverse impacts from chemical spray drift, chemical run-off or chemical residue in soils.</p>	<p>DTS/DPF 10.3</p> <p>None are applicable.</p>
<p>PO 10.4</p> <p>Development is not undertaken if it is likely to result in loss of amenity to adjoining land or surrounding localities from:</p> <ul style="list-style-type: none"> <li>(a) the visual impact of buildings, structures or earthworks</li> <li>(b) the intensity of activity associated with any such use, including significant adverse impacts arising from: <ul style="list-style-type: none"> <li>(i) chemical spray drift</li> <li>(ii) use of audible bird or animal deterrent devices</li> <li>(iii) the use of associated vehicles and machinery.</li> </ul> </li> </ul>	<p>DTS/DPF 10.4</p> <p>None are applicable.</p>
<p>PO 10.5</p> <p>Development does not occur on land if the slope poses an unacceptable risk of soil movement, landslip or erosion.</p>	<p>DTS/DPF 10.5</p> <p>None are applicable.</p>
<p>PO 10.6</p> <p>Buildings, structures are not located in areas subject to inundation by a 1% AEP flood event.</p>	<p>DTS/DPF 10.6</p> <p>Development is located outside of the 1% AEP flood event.</p>
<p>PO 10.7</p> <p>Buildings, structures and associated fill do not interfere with the flow of flood waters.</p>	<p>DTS/DPF 10.7</p> <p>None are applicable</p>
Native Vegetation	

PO 11.1 Development is only undertaken if it can be located and designed to maximise the retention of existing native vegetation and, if possible, increase the extent of locally indigenous plant species.	DTS/DPF 11.1 None are applicable.
PO 11.2 Development is screened by locally indigenous plant species or use of screening mounds, including scree slopes created as a result of excavation and/or filling of land, in such a way that the bushfire hazard is not increased.	DTS/DPF 11.2 None are applicable.
PO 11.3 Any essential clearance of native vegetation is accompanied by conservation initiatives, including replanting with indigenous native vegetation, to ensure the overall result is a biodiversity gain.	DTS/DPF 11.3 None are applicable.
Fencing and Retaining Walls	
PO 12.1 Retaining walls are constructed as a stepped series of low walls constructed of dark, natural coloured materials and screened by landscaping using locally indigenous plant species if possible.	DTS/DPF 12.1 None are applicable.
PO 12.2 Fences:  (a) are sited to minimise their visual impact (b) are constructed of post and wire or other materials which can be seen through (c) avoid construction of obtrusive gateways, particularly of brick or masonry.	DTS/DPF 12.2 None are applicable.
PO 12.3 When solid fences are essential, particularly rear and side fences in closely divided areas, they:  (a) are constructed of materials which are of a low-light reflective nature and of dark natural colours to blend with the natural landscape and minimise any visual intrusion (b) do not increase the fire risk near buildings.	DTS/DPF 12.3 None are applicable.
Advertisements	
PO 13.1 Advertisements identify the associated business activity, and do not detract from the residential character of the locality.	DTS/DPF 13.1 Advertisements relating to a lawful business activity associated with a residential use do not exceed 0.3m2 and mounted flush with a wall or fence.

**Table 5 - Procedural Matters (PM) - Notification**

The following table identifies, pursuant to section 107(6) of the *Planning, Development and Infrastructure Act 2016*, classes of performance assessed development that are excluded from notification. The table also identifies any exemptions to the placement of notices when notification is required.

**Interpretation**

A class of development listed in Column A is excluded from notification provided that it does not fall within a corresponding exclusion prescribed in Column B. In instances where development falls within multiple classes within Column A, each clause is to be read independently such that if a development is excluded from notification by any clause, it is, for the purposes of notification excluded irrespective of any other clause.

Class of Development (Column A)	Exceptions (Column B)
1. A kind of development which, in the opinion of the relevant authority, is of a minor nature only and will not unreasonably impact on the owners or occupiers of land in the locality of the site of the development.	None specified.
2. Any development involving any of the following (or of any combination of any of the following): (a) carport (b) deck (c) dwelling (d) dwelling addition (e) farming (f) fence (g) outbuilding (h) pergola (i) private bushfire shelter (j) solar photovoltaic panels (roof mounted) (k) swimming pool or spa pool (l) temporary public transport depot (m) water tank (n) verandah	Except any of the following: 1. any building that is not a dwelling or ancillary to a dwelling 2. building exceeding 5m in height 3. building having a wall or post height exceeding 3m 4. fence having a height exceeding 2.1m.
3. Any development involving any of the following (or of any combination of any of the following): (a) internal building works (b) replacement building (c) temporary accommodation in an area affected by bushfire (d) tree damaging activity.	None specified.
4. Demolition.	Except any of the following: 1. the demolition of a State or Local Heritage Place 2. the demolition of a building (except an ancillary building) in a Historic Area Overlay.
<b>Placement of Notices - Exemptions for Performance Assessed Development</b>	
None specified.	
<b>Placement of Notices - Exemptions for Restricted Development</b>	
None specified.	

## Part 3 - Overlays

### Environment and Food Production Areas Overlay

#### Assessment Provisions (AP)

Desired Outcome	
DO 1	Protection of valuable rural, landscape, environmental and food production areas from urban encroachment.

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
PO 1.1 Land division undertaken in accordance with Section 7 of the <i>Planning, Development and Infrastructure Act 2016</i> .	DTS/DPF 1.1 None are applicable.

#### Procedural Matters (PM)

The following table identifies classes of development / activities that require referral in this Overlay and the applicable referral body. It sets out the purpose of the referral as well as the relevant statutory reference from Schedule 9 of the Planning, Development and Infrastructure (General) Regulations 2017.

Class of Development / Activity	Referral Body	Purpose of Referral	Statutory Reference
None	None	None	None

### Hazards (Bushfire - High Risk) Overlay

#### Assessment Provisions (AP)

Desired Outcome	
DO 1	<p>Development, including land division is sited and designed to minimise the threat and impact of bushfires on life and property with regard to the following risks:</p> <ul style="list-style-type: none"> <li>(a) potential for uncontrolled bushfire events taking into account the increased frequency and intensity of bushfires as a result of climate change</li> <li>(b) high levels and exposure to ember attack</li> <li>(c) impact from burning debris</li> <li>(d) radiant heat</li> <li>(e) likelihood and direct exposure to flames from a fire front.</li> </ul>

DO 2	Activities that increase the number of people living and working in the area or where evacuation would be difficult is sited away from areas of unacceptable bushfire risk.
DO 3	To facilitate access for emergency service vehicles to aid the protection of lives and assets from bushfire danger.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Land Use	
PO 1.1 Development that significantly increases the potential for fire outbreak as a result of the spontaneous combustion of materials, spark generation or through the magnification and reflection of light is not located in areas of unacceptable bushfire risk.	DTS/DPF 1.1 None are applicable.
PO 1.2 Pre-schools, educational establishments, hospitals, retirement and supported accommodation are sited away from areas of unacceptable bushfire risk and locations that:  (a) are remote from or require extended periods of travel to reach safer locations (b) don't have a safe path of travel to safer locations.	DTS/DPF 1.2 None are applicable.
Siting	
PO 2.1 Buildings and structures are located away from areas that pose an unacceptable bushfire risk as a result of vegetation cover and type, and terrain.	DTS/DPF 2.1 None are applicable.
Built Form	
PO 3.1 Buildings and structures are designed and configured to reduce the impact of bushfire through using designs that reduce the potential for trapping burning debris against or underneath the building or structure, or between the ground and building floor level in the case of transportable buildings and buildings on stilts.	DTS/DPF 3.1 None are applicable.
PO 3.2 Extensions to buildings, outbuildings and other ancillary structures are sited and constructed using materials to minimise the threat of fire spread to residential and tourist accommodation (including boarding houses, hostels, dormitory style accommodation, student accommodation and Workers'	DTS/DPF 3.2 Outbuildings and other ancillary structures are sited no closer than 6m from the habitable building.

accommodation) in the event of bushfire.	
Habitable Buildings	
<p>PO 4.1</p> <p>To minimise the threat, impact and potential exposure to bushfires on life and property, residential and tourist accommodation and habitable buildings for vulnerable communities (including boarding houses, hostels, dormitory style accommodation, student accommodation and workers' accommodation) is sited on the flatter portion of allotments away from steep slopes.</p>	<p>DTS/DPF 4.1</p> <p>None are applicable.</p>
<p>PO 4.2</p> <p>Residential and tourist accommodation and habitable buildings for vulnerable communities (including boarding houses, hostels, dormitory style accommodation, student accommodation and workers' accommodation) is sited away from vegetated areas that pose an unacceptable bushfire risk.</p>	<p>DTS/DPF 4.2</p> <p>Residential and tourist accommodation and habitable buildings for vulnerable communities are provided with asset protection zone(s) in accordance with (a) and (b):</p> <ul style="list-style-type: none"> <li>(a) the asset protection zone has a minimum width of at least: <ul style="list-style-type: none"> <li>(i) 50 metres to unmanaged grasslands</li> <li>(ii) 100 metres to hazardous bushland vegetation</li> </ul> </li> <li>(b) the asset protection zone is contained wholly within the allotment of the development.</li> </ul>
<p>PO 4.3</p> <p>Residential and tourist accommodation and habitable buildings for vulnerable communities (including boarding houses, hostels, dormitory style accommodation, student accommodation and workers' accommodation) has a dedicated area available that:</p> <ul style="list-style-type: none"> <li>(a) is capable of accommodating a bushfire protection system comprising firefighting equipment and water supply in accordance with <i>Ministerial Building Standard MBS 008 - Designated bushfire prone areas - additional requirements</i></li> <li>(b) includes the provision of an all-weather hardstand area in a location that: <ul style="list-style-type: none"> <li>(i) allows fire-fighting vehicles to safely access the dedicated water supply and exit the site in a forward direction</li> <li>(ii) is no further than 6 metres from the dedicated water supply outlet(s) where required.</li> </ul> </li> </ul>	<p>DTS/DPF 4.3</p> <p>None are applicable.</p>
Land Division	
<p>PO 5.1</p> <p>Land division for residential and tourist accommodation and habitable buildings for vulnerable communities (including boarding houses, hostels, dormitory style accommodation, student accommodation and workers' accommodation) is limited to those areas specifically set aside for these uses.</p>	<p>DTS/DPF 5.1</p> <p>None are applicable.</p>
<p>PO 5.2</p> <p>Land division is designed and incorporates measures to minimise the danger of fire hazard to residents and occupants of</p>	<p>DTS/DPF 5.2</p> <p>None are applicable.</p>

buildings, and to protect buildings and property from physical damage in the event of a bushfire.	
<p>PO 5.3</p> <p>Land division is designed to provide a continuous street pattern (avoiding the use of dead end roads/cul-de-sac road design) to facilitate the safe movement and evacuation of emergency vehicles, residents, occupants and visitors. Where cul-de-sac / dead end roads are proposed, an alternative emergency evacuation route is provided.</p>	<p>DTS/DPF 5.3</p> <p>None are applicable.</p>
<p>PO 5.4</p> <p>Where 10 or more new allotments are proposed, land division includes at least two separate and safe exit points to enable multiple avenues of evacuation in the event of a bushfire.</p>	<p>DTS/DPF 5.4</p> <p>None are applicable.</p>
<p>PO 5.5</p> <p>Land division provides sufficient space for future asset protection zones and incorporates perimeter roads of adequate design in conjunction with bushfire buffer zones to achieve adequate separation between residential allotments and areas of unacceptable bushfire risk and to support safe access for the purposes of fire-fighting.</p>	<p>DTS/DPF 5.5</p> <p>None are applicable.</p>
Vehicle Access – Roads, Driveways and Fire Tracks	
<p>PO 6.1</p> <p>Roads are designed and constructed to facilitate the safe and effective:</p> <ul style="list-style-type: none"> <li>(a) access, operation and evacuation of fire-fighting vehicles and emergency personnel</li> <li>(b) evacuation of residents, occupants and visitors.</li> </ul>	<p>DTS/DPF 6.1</p> <p>Roads:</p> <ul style="list-style-type: none"> <li>(a) are constructed with a formed, all-weather surface</li> <li>(b) have a gradient of not more than 16 degrees (1-in-3.5) at any point along the road</li> <li>(c) have a cross fall of not more than 6 degrees (1-in-9.5) at any point along the road</li> <li>(d) have a minimum formed road width of 6m</li> <li>(e) provide overhead clearance of not less than 4.0m between the road surface and overhanging branches or other obstructions including buildings and/or structures (Figure 1)</li> <li>(f) allow fire-fighting services (personnel and vehicles) to travel in a continuous forward movement around road curves by constructing the curves with a minimum external radius of 12.5m (Figure 2)</li> <li>(g) incorporating cul-de-sac endings or dead end roads are provided within an alternative evacuation route and do not exceed 200m in length and the end of the road has either: <ul style="list-style-type: none"> <li>(i) a turning area with a minimum formed surface radius of 12.5m (Figure 3)</li> <li>or</li> <li>(ii) a 'T' or 'Y' shaped turning area with a minimum formed surface length of 11m and minimum internal radii of 9.5m (Figure 4)</li> </ul> </li> <li>(h) incorporate solid, all-weather crossings over any watercourse that support fire-fighting vehicles with a gross vehicle mass (GVM) of 21 tonnes.</li> </ul>

<p>PO 6.2</p> <p>Access to habitable buildings is designed and constructed to facilitate the safe and effective:</p> <ul style="list-style-type: none"> <li>(a) use, operation and evacuation of fire-fighting and emergency personnel</li> <li>(b) evacuation of residents, occupants and visitors.</li> </ul>	<p>DTS/DPF 6.2</p> <p>Access is in accordance with (a) or (b):</p> <ul style="list-style-type: none"> <li>(a) a clear and unobstructed vehicle or pedestrian pathway of not greater than 60 metres in length is available between the most distant part of the habitable building and the nearest part of a formed public access road</li> <li>(b) driveways: <ul style="list-style-type: none"> <li>(i) do not exceed 600m in length</li> <li>(ii) are constructed with a formed, all-weather surface</li> <li>(iii) are connected to a formed, all-weather public road with the transition area between the road and driveway having a gradient of not more than 7 degrees (1-in-8)</li> <li>(iv) have a gradient of not more than 16 degrees (1-in-3.5) at any point along the driveway</li> <li>(v) have a crossfall of not more than 6 degrees (1-in-9.5) at any point along the driveway</li> <li>(vi) have a minimum formed width of 3m (4m where the gradient of the driveway is steeper than 12 degrees (1-in-4.5)) plus 0.5 metres clearance either side of the driveway from overhanging branches or other obstructions, including buildings and/or structures (Figure 1)</li> <li>(vii) incorporate passing bays with a minimum width of 6m and length of 17m every 200m (Figure 5)</li> <li>(viii) provide overhead clearance of not less than 4.0m between the driveway surface and overhanging branches or other obstructions, including buildings and/or structures (Figure 1)</li> <li>(ix) allow fire-fighting services (personnel and vehicles) to travel in a continuous forward movement around driveway curves by constructing the curves with a minimum external radius of 12.5m (Figure 2)</li> <li>(x) allow fire-fighting vehicles to safely enter and exit an allotment in a forward direction by using a 'U' shaped drive through design or by incorporating at the end of the driveway either: <ul style="list-style-type: none"> <li>A. a loop road around the building or</li> <li>B. a turning area with a minimum radius of 12.5m (Figure 3) or</li> <li>C. a 'T' or 'Y' shaped turning area with a minimum formed length of 11m and minimum internal radii of 9.5m (Figure 4)</li> </ul> </li> <li>(xi) incorporate solid, all-weather crossings over any watercourse that support fire-fighting vehicles with a gross vehicle mass (GVM) of 21 tonnes.</li> </ul> </li> </ul>
<p>PO 6.3</p> <p>Development does not rely on fire tracks as means of evacuation or access for fire-fighting purposes unless there are no safe alternatives available.</p>	<p>DTS/DPF 6.3</p> <p>None are applicable.</p>

## Procedural Matters (PM) - Referrals

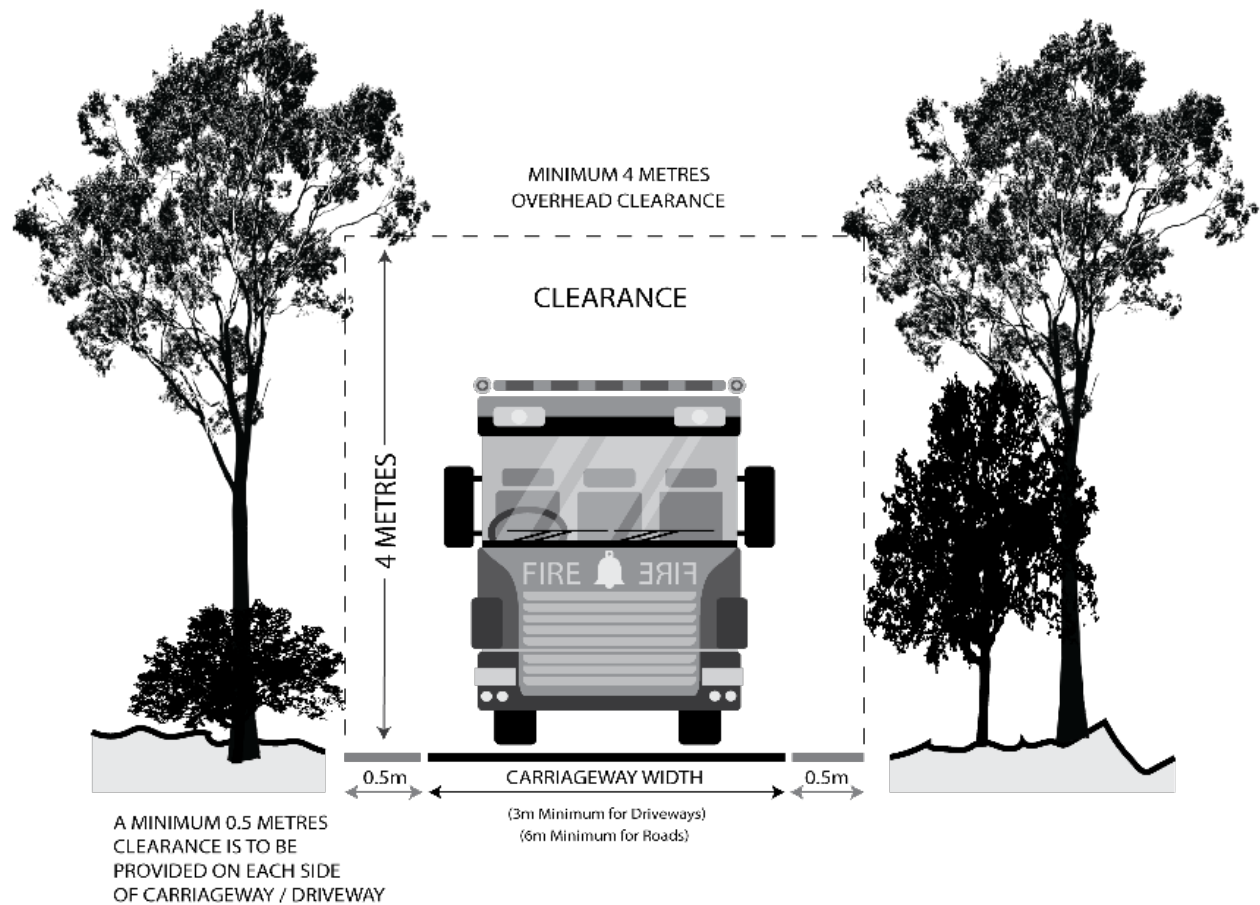
The following table identifies classes of development / activities that require referral in this Overlay and the applicable referral body. It sets out the purpose of the referral as well as the relevant statutory reference from Schedule 9 of the Planning, Development and Infrastructure (General) Regulations 2017.

Class of Development / Activity	Referral Body	Purpose of Referral	Statutory Reference
<p>Except if a <b>relevant certificate</b> accompanies the application for planning consent in respect of the development, any of the following classes of development (including alterations and additions which increase the floor area of such buildings by 10% or more):</p> <ul style="list-style-type: none"> <li>(a) land division creating one or more additional allotments</li> <li>(b) dwelling</li> <li>(c) ancillary accommodation</li> <li>(d) residential flat building</li> <li>(e) tourist accommodation</li> <li>(f) boarding home</li> <li>(g) dormitory style accommodation</li> <li>(h) workers' accommodation</li> <li>(i) student accommodation</li> <li>(j) pre-school</li> <li>(k) educational establishment</li> <li>(l) retirement village</li> <li>(m) supported accommodation</li> <li>(n) residential park</li> <li>(o) hospital</li> <li>(p) camp ground.</li> </ul>	South Australian Country Fire Service.	To provide expert assessment and direction to the relevant authority on the potential impacts of bushfire on the development.	Development of a class to which Schedule 9 clause 3 item 2 of the Planning, Development and Infrastructure (General) Regulations 2017 applies.

## Figures and Diagrams

### Fire Appliance Clearances

Figure 1 - Overhead and Side Clearances



Roads and Driveway Design

Figure 2 - Road and Driveway Curves

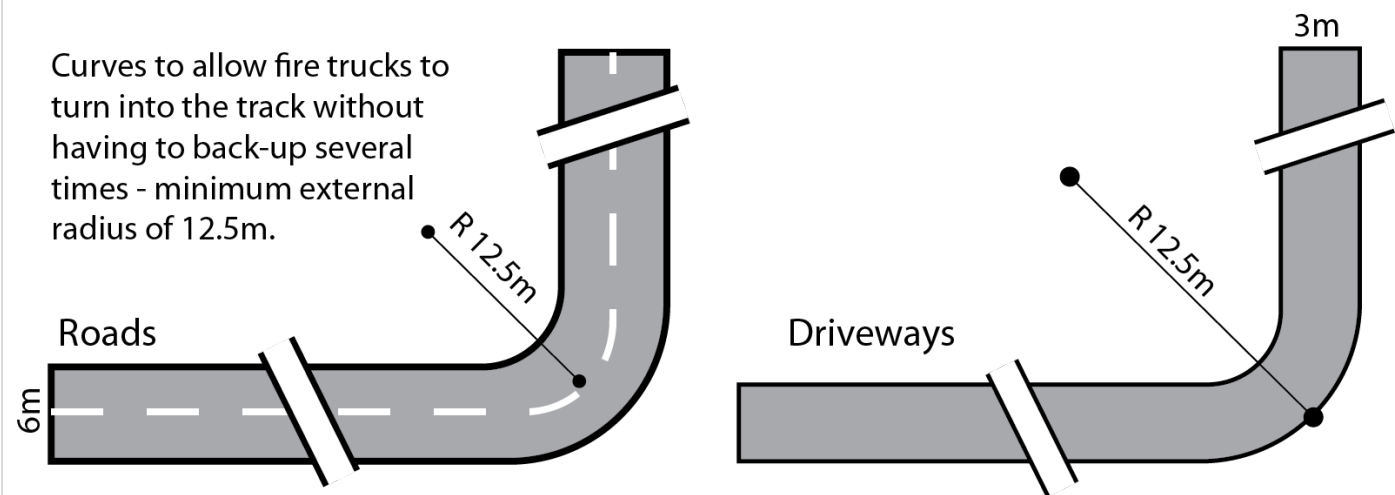


Figure 3 - Full Circle Turning Area

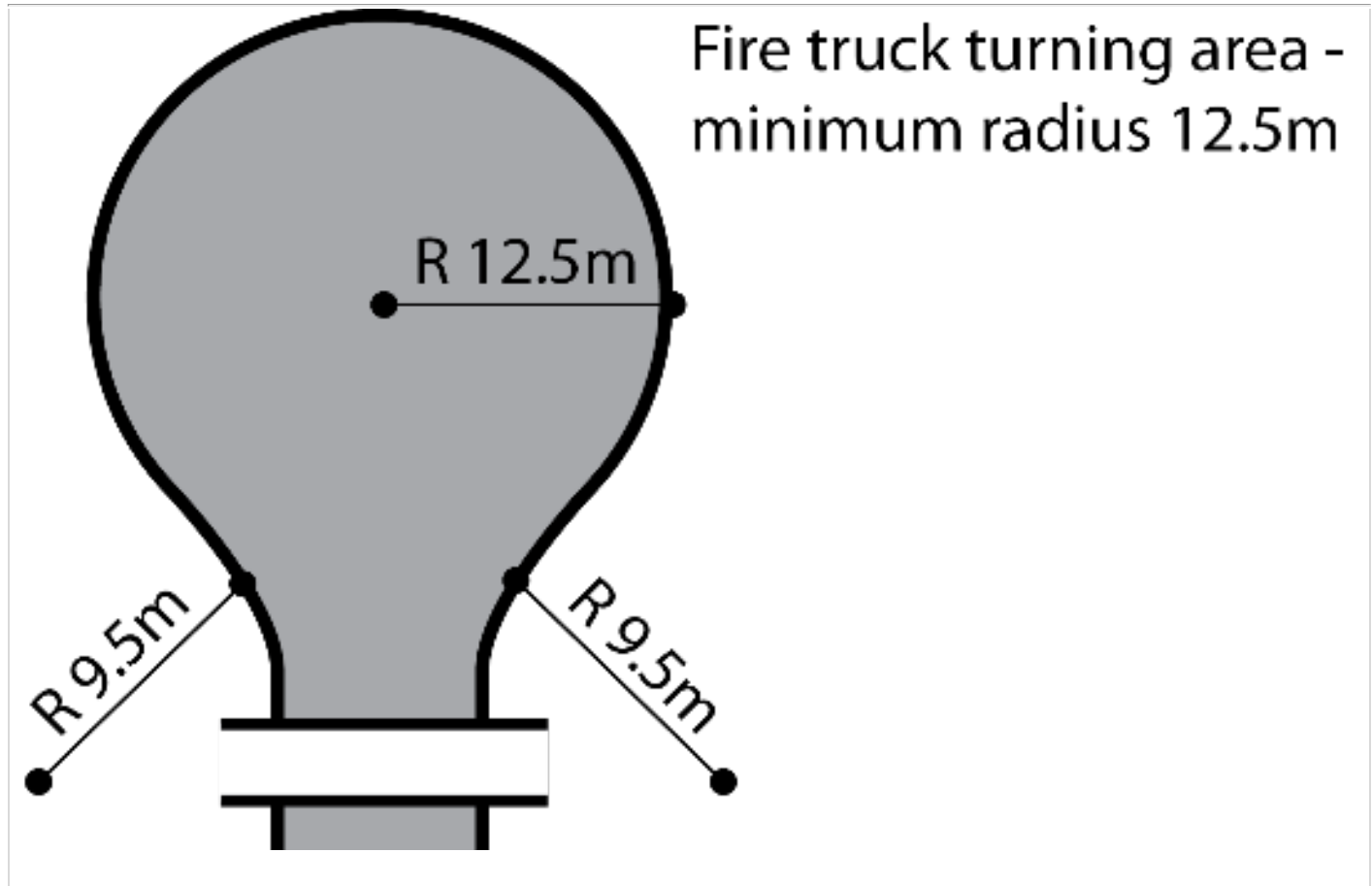
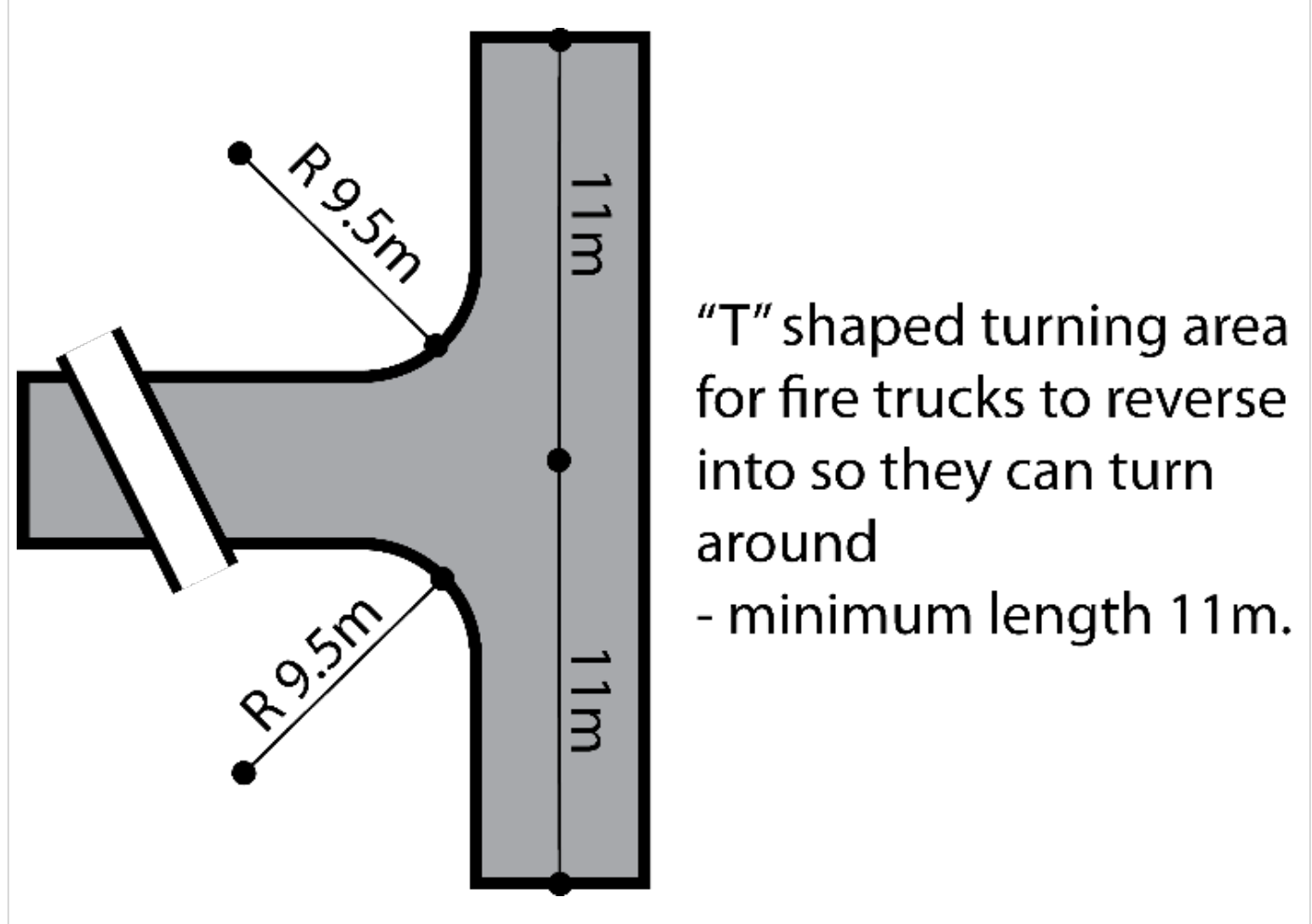


Figure 4 - 'T' or 'Y' Shaped Turning Head



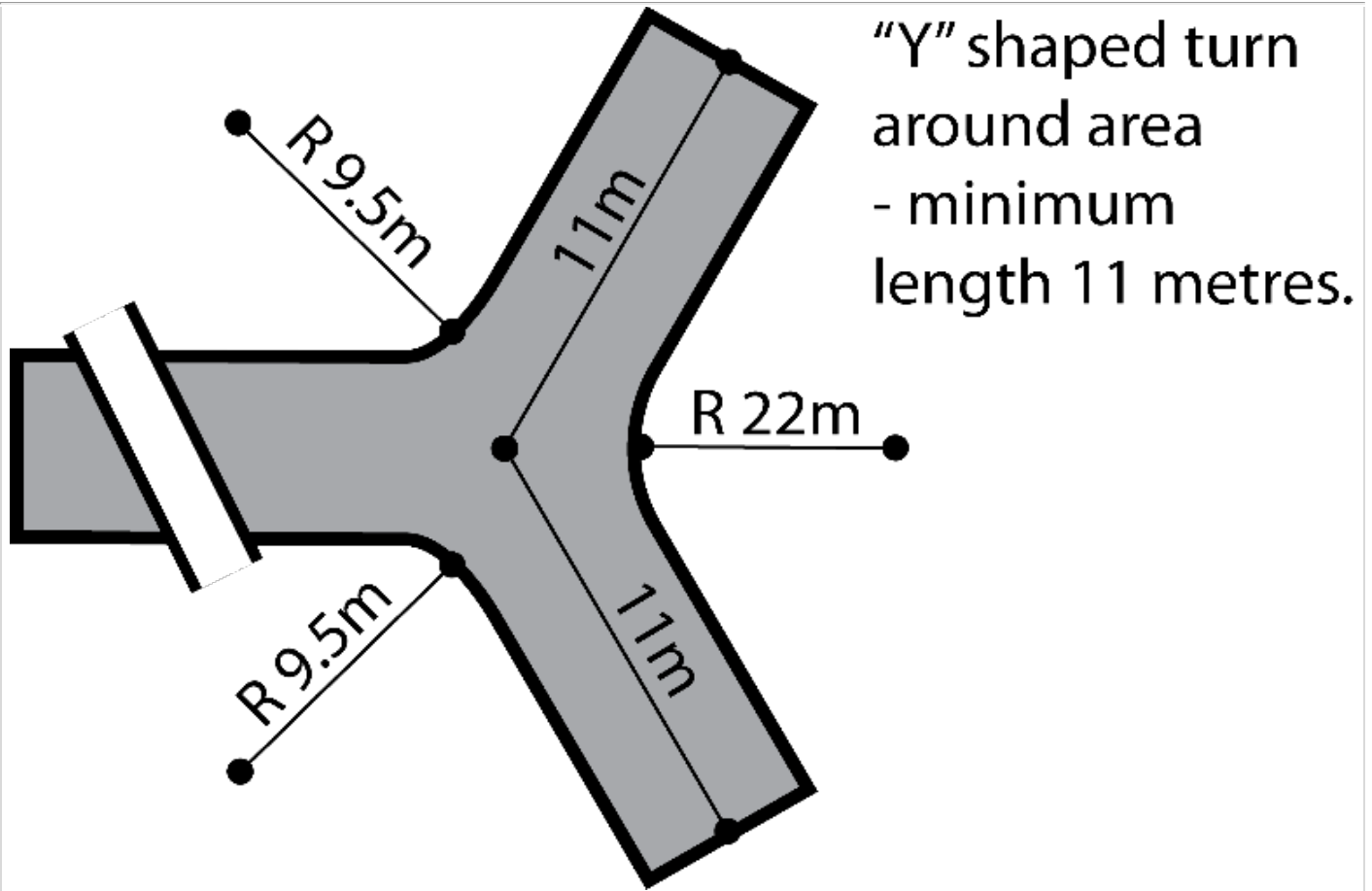
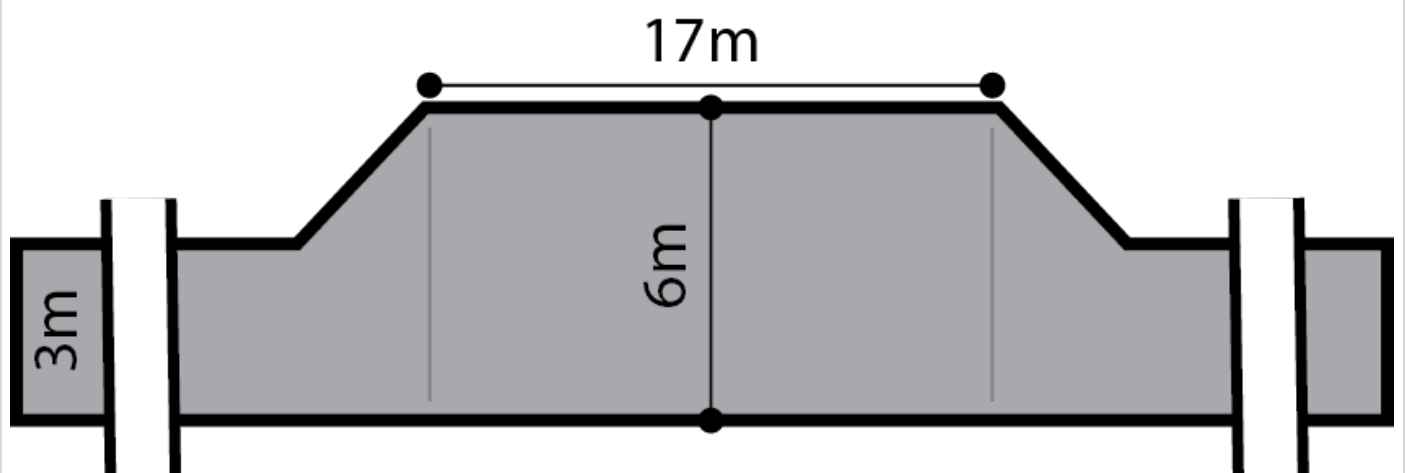


Figure 5 - Driveway Passing Bays

Passing bay for fire trucks - minimum width 6 metres, minimum length 17 metres.



Hazards (Flooding - Evidence Required) Overlay

Assessment Provisions (AP)

**Desired Outcome**

DO 1	Development adopts a precautionary approach to mitigate potential impacts on people, property, infrastructure and the environment from potential flood risk through the appropriate siting and design of development.
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Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Flood Resilience	
PO 1.1 Development is sited, designed and constructed to minimise the risk of entry of potential floodwaters where the entry of flood waters is likely to result in undue damage to or compromise ongoing activities within buildings.	DTS/DPF 1.1 Habitable buildings, commercial and industrial buildings, and buildings used for animal keeping incorporate a finished floor level at least 300mm above: <ul style="list-style-type: none"> <li>(a) the highest point of top of kerb of the primary street or</li> <li>(b) the highest point of natural ground level at the primary street boundary where there is no kerb</li> </ul>
Environmental Protection	
PO 2.1 Buildings and structures used either partly or wholly to contain or store hazardous materials are designed to prevent spills or leaks leaving the confines of the building.	DTS/DPF 2.1 Development does not involve the storage of hazardous materials.

### Procedural Matters (PM) - Referrals

The following table identifies classes of development / activities that require referral in this Overlay and the applicable referral body. It sets out the purpose of the referral as well as the relevant statutory reference from Schedule 9 of the Planning, Development and Infrastructure (General) Regulations 2017.

Class of Development / Activity	Referral Body	Purpose of Referral	Statutory Reference
None	None	None	None

### Native Vegetation Overlay

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Areas of native vegetation are protected, retained and restored in order to sustain biodiversity, threatened species and vegetation communities, fauna habitat, ecosystem services, carbon storage and amenity values.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Environmental Protection	
<p>PO 1.1</p> <p>Development avoids, or where it cannot be practically avoided, minimises the clearance of native vegetation taking into account the siting of buildings, access points, bushfire protection measures and building maintenance.</p>	<p>DTS/DPF 1.1</p> <p>An application is accompanied by:</p> <ul style="list-style-type: none"> <li>(a) a declaration stating that the proposal will not, or would not, involve clearance of native vegetation under the Native Vegetation Act 1991, including any clearance that may occur: <ul style="list-style-type: none"> <li>(i) in connection with a relevant access point and / or driveway</li> <li>(ii) within 10m of a building (other than a residential building or tourist accommodation)</li> <li>(iii) within 20m of a dwelling or addition to an existing dwelling for fire prevention and control</li> <li>(iv) within 50m of residential or tourist accommodation in connection with a requirement under a relevant overlay to establish an asset protection zone in a bushfire prone area</li> </ul> </li> <li>or</li> <li>(b) a report prepared in accordance with Regulation 18(2) (a) of the Native Vegetation Regulations 2017 that establishes that the clearance is categorised as 'Level 1 clearance'.</li> </ul>
<p>PO 1.2</p> <p>Native vegetation clearance in association with development avoids the following:</p> <ul style="list-style-type: none"> <li>(a) significant wildlife habitat and movement corridors</li> <li>(b) rare, vulnerable or endangered plants species</li> <li>(c) native vegetation that is significant because it is located in an area which has been extensively cleared</li> <li>(d) native vegetation that is growing in, or in association with, a wetland environment.</li> </ul>	<p>DTS/DPF 1.2</p> <p>None are applicable.</p>
<p>PO 1.3</p> <p>Intensive animal husbandry and agricultural activities are sited, set back and designed to minimise impacts on native vegetation, including impacts on native vegetation in an adjacent State Significant Native Vegetation Area, from:</p> <ul style="list-style-type: none"> <li>(a) the spread of pest plants and phytophthora</li> <li>(b) the spread of non-indigenous plants species</li> <li>(c) excessive nutrient loading of the soil or loading arising from surface water runoff</li> <li>(d) soil compaction</li> <li>(e) chemical spray drift.</li> </ul>	<p>DTS/DPF 1.3</p> <p>Development within 500 metres of a boundary of a State Significant Native Vegetation Area does not involve any of the following:</p> <ul style="list-style-type: none"> <li>(a) horticulture</li> <li>(b) intensive animal husbandry</li> <li>(c) dairy</li> <li>(d) commercial forestry</li> <li>(e) aquaculture.</li> </ul>
<p>PO 1.4</p> <p>Development restores and enhances biodiversity and habitat</p>	<p>DTS/DPF 1.4</p> <p>None are applicable.</p>

values through revegetation using locally indigenous plant species.	
Land division	
<p>PO 2.1</p> <p>Land division does not result in the fragmentation of land containing native vegetation, or necessitate the clearance of native vegetation, unless such clearance is considered minor, taking into account the location of allotment boundaries, access ways, fire breaks, boundary fencing and potential building siting or the like.</p>	<p>DTS/DPF 2.1</p> <p>Land division where:</p> <ul style="list-style-type: none"> <li>(a) an application is accompanied by one of the following: <ul style="list-style-type: none"> <li>(i) a declaration stating that none of the allotments in the proposed plan of division contain native vegetation under the <i>Native Vegetation Act 1991</i></li> <li>(ii) a declaration stating that no native vegetation clearance under the <i>Native Vegetation Act 1991</i> will be required as a result of the division of land</li> <li>(iii) a report prepared in accordance with Regulation 18(2)(a) of the <i>Native Vegetation Regulations 2017</i> that establishes that the vegetation to be cleared is categorised as 'Level 1 clearance'</li> </ul> </li> <li>or</li> <li>(b) an application for land division which is being considered concurrently with a proposal to develop each allotment which will satisfy, or would satisfy, the requirements of DTS/DPF 1.1, including any clearance that may occur</li> <li>or</li> <li>(c) the division is to support a Heritage Agreement under the <i>Native Vegetation Act 1991</i> or the <i>Heritage Places Act 1993</i>.</li> </ul>

### Procedural Matters (PM) - Referrals

The following table identifies classes of development / activities that require referral in this Overlay and the applicable referral body. It sets out the purpose of the referral as well as the relevant statutory reference from Schedule 9 of the Planning, Development and Infrastructure (General) Regulations 2017.

Class of Development / Activity	Referral Body	Purpose of Referral	Statutory Reference
Development that is the subject of a report prepared in accordance with Regulation 18(2)(a) of the <i>Native Vegetation Regulations 2017</i> that categorises the clearance, or potential clearance, as 'Level 3 clearance' or 'Level 4 clearance'.	Native Vegetation Council	To provide expert assessment and direction to the relevant authority on the potential impacts of development on native vegetation.	Development of a class to which Schedule 9 clause 3 item 11 of the Planning, Development and Infrastructure (General) Regulations 2017 applies.

### Prescribed Wells Area Overlay

## Assessment Provisions (AP)

Desired Outcome	
DO 1	Sustainable water use in prescribed wells areas.

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
<p>PO 1.1</p> <p>All development, but in particular involving any of the following:</p> <ul style="list-style-type: none"> <li>(a) horticulture</li> <li>(b) activities requiring irrigation</li> <li>(c) aquaculture</li> <li>(d) industry</li> <li>(e) intensive animal husbandry</li> <li>(f) commercial forestry</li> </ul> <p>has a lawful, sustainable and reliable water supply that does not place undue strain on water resources in prescribed wells areas.</p>	<p>DTS/DPF 1.1</p> <p>Development satisfies either of the following:</p> <ul style="list-style-type: none"> <li>(a) the applicant has a current water licence in which sufficient spare capacity exists to accommodate the water needs of the proposed use or</li> <li>(b) the proposal does not involve the taking of water for which a licence would be required under the <i>Landscape South Australia Act 2019</i>.</li> </ul>

## Procedural Matters (PM) - Referrals

The following table identifies classes of development / activities that require referral in this Overlay and the applicable referral body. It sets out the purpose of the referral as well as the relevant statutory reference from Schedule 9 of the Planning, Development and Infrastructure (General) Regulations 2017.

Class of Development / Activity	Referral Body	Purpose of Referral	Statutory Reference
<p>Any of the following classes of development that require or may require water to be taken in addition to any allocation that has already been granted under the <i>Landscape South Australia Act 2019</i>:</p> <ul style="list-style-type: none"> <li>(a) horticulture</li> <li>(b) activities requiring irrigation</li> <li>(c) aquaculture</li> <li>(d) industry</li> <li>(e) intensive animal husbandry</li> <li>(f) commercial forestry.</li> </ul>	<p>The Chief Executive of the Department of the Minister responsible for the administration of the <i>Landscape South Australia Act 2019</i>.</p>	<p>To provide expert technical assessment and direction to the relevant authority on the taking of water to ensure development is undertaken sustainably.</p>	<p>Development of a class to which Schedule 9 clause 3 item 13 of the Planning, Development and Infrastructure (General) Regulations 2017 applies.</p>
<p>Commercial forestry that requires a forest water licence under Part 8 Division 6 of the <i>Landscape South Australia Act 2019</i>.</p>			

## Regulated and Significant Tree Overlay

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Conservation of regulated and significant trees to provide aesthetic and environmental benefits and mitigate tree loss.

Performance Outcomes (PO) and Deemed to Satisfy (DTS) / Designated Performance Feature (DPF) Criteria

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Tree Retention and Health	
<p>PO 1.1</p> <p>Regulated trees are retained where they:</p> <ul style="list-style-type: none"> <li>(a) make an important visual contribution to local character and amenity</li> <li>(b) are indigenous to the local area and listed under the <i>National Parks and Wildlife Act 1972</i> as a rare or endangered native species and / or</li> <li>(c) provide an important habitat for native fauna.</li> </ul>	<p>DTS/DPF 1.1</p> <p>None are applicable.</p>
<p>PO 1.2</p> <p>Significant trees are retained where they:</p> <ul style="list-style-type: none"> <li>(a) make an important contribution to the character or amenity of the local area</li> <li>(b) are indigenous to the local area and are listed under the <i>National Parks and Wildlife Act 1972</i> as a rare or endangered native species</li> <li>(c) represent an important habitat for native fauna</li> <li>(d) are part of a wildlife corridor of a remnant area of native vegetation</li> <li>(e) are important to the maintenance of biodiversity in the local environment and / or</li> <li>(f) form a notable visual element to the landscape of the local area.</li> </ul>	<p>DTS/DPF 1.2</p> <p>None are applicable.</p>
<p>PO 1.3</p> <p>A tree damaging activity not in connection with other development satisfies (a) and (b):</p> <ul style="list-style-type: none"> <li>(a) tree damaging activity is only undertaken to: <ul style="list-style-type: none"> <li>(i) remove a diseased tree where its life expectancy is short</li> <li>(ii) mitigate an unacceptable risk to public or</li> </ul> </li> </ul>	<p>DTS/DPF 1.3</p> <p>None are applicable.</p>

<p>(iii) private safety due to limb drop or the like rectify or prevent extensive damage to a building of value as comprising any of the following:</p> <ul style="list-style-type: none"> <li>A. a Local Heritage Place</li> <li>B. a State Heritage Place</li> <li>C. a substantial building of value</li> </ul> <p>and there is no reasonable alternative to rectify or prevent such damage other than to undertake a tree damaging activity</p> <p>(iv) reduce an unacceptable hazard associated with a tree within 20m of an existing residential, tourist accommodation or other habitable building from bushfire</p> <p>(v) treat disease or otherwise in the general interests of the health of the tree and / or</p> <p>(vi) maintain the aesthetic appearance and structural integrity of the tree</p> <p>(b) in relation to a significant tree, tree-damaging activity is avoided unless all reasonable remedial treatments and measures have been determined to be ineffective.</p>	
<p>PO 1.4</p> <p>A tree-damaging activity in connection with other development satisfies all the following:</p> <ul style="list-style-type: none"> <li>(a) it accommodates the reasonable development of land in accordance with the relevant zone or subzone where such development might not otherwise be possible</li> <li>(b) in the case of a significant tree, all reasonable development options and design solutions have been considered to prevent substantial tree-damaging activity occurring.</li> </ul>	<p>DTS/DPF 1.4</p> <p>None are applicable.</p>
Ground work affecting trees	
<p>PO 2.1</p> <p>Regulated and significant trees, including their root systems, are not unduly compromised by excavation and / or filling of land, or the sealing of surfaces within the vicinity of the tree to support their retention and health.</p>	<p>DTS/DPF 2.1</p> <p>None are applicable.</p>
Land Division	
<p>PO 3.1</p> <p>Land division results in an allotment configuration that enables its subsequent development and the retention of regulated and significant trees as far as is reasonably practicable.</p>	<p>DTS/DPF 3.1</p> <p>Land division where:</p> <ul style="list-style-type: none"> <li>(a) there are no regulated or significant trees located within or adjacent to the plan of division</li> <li>or</li> <li>(b) the application demonstrates that an area exists to accommodate subsequent development of proposed allotments after an allowance has been made for a tree protection zone around any regulated tree within and adjacent to the plan of division.</li> </ul>

**Procedural Matters (PM) - Referrals**

The following table identifies classes of development / activities that require referral in this Overlay and the applicable referral body. It sets out the purpose of the referral as well as the relevant statutory reference from Schedule 9 of the Planning, Development and Infrastructure (General) Regulations 2017.

Class of Development / Activity	Referral Body	Purpose of Referral	Statutory Reference
None	None	None	None

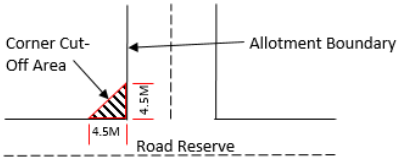
**Part 4 - General Development Policies****Advertisements****Assessment Provisions (AP)**

Desired Outcome	
DO 1	Advertisements and advertising hoardings are appropriate to context, efficient and effective in communicating with the public, limited in number to avoid clutter, and do not create hazard.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Appearance	
PO 1.1  Advertisements are compatible and integrated with the design of the building and/or land they are located on.	DTS/DPF 1.1  Advertisements attached to a building satisfy all of the following: <ul style="list-style-type: none"> <li>(a) are not located in a Neighbourhood-type zone</li> <li>(b) where they are flush with a wall:               <ul style="list-style-type: none"> <li>(i) if located at canopy level, are in the form of a fascia sign</li> <li>(ii) if located above canopy level:                   <ul style="list-style-type: none"> <li>A. do not have any part rising above parapet height</li> <li>B. are not attached to the roof of the building</li> </ul> </li> </ul> </li> <li>(c) where they are not flush with a wall:               <ul style="list-style-type: none"> <li>(i) if attached to a verandah, no part of the advertisement protrudes beyond the outer limits of the verandah structure</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>(ii) if attached to a two-storey building: <ul style="list-style-type: none"> <li>A. has no part located above the finished floor level of the second storey of the building</li> <li>B. does not protrude beyond the outer limits of any verandah structure below</li> <li>C. does not have a sign face that exceeds 1m<sup>2</sup> per side.</li> </ul> </li> <li>(d) if located below canopy level, are flush with a wall</li> <li>(e) if located at canopy level, are in the form of a fascia sign</li> <li>(f) if located above a canopy: <ul style="list-style-type: none"> <li>(i) are flush with a wall</li> <li>(ii) do not have any part rising above parapet height</li> <li>(iii) are not attached to the roof of the building.</li> </ul> </li> <li>(g) if attached to a verandah, no part of the advertisement protrudes beyond the outer limits of the verandah structure</li> <li>(h) if attached to a two-storey building, have no part located above the finished floor level of the second storey of the building</li> <li>(i) where they are flush with a wall, do not, in combination with any other existing sign, cover more than 15% of the building facade to which they are attached.</li> </ul>
<p>PO 1.2</p> <p>Advertising hoardings do not disfigure the appearance of the land upon which they are situated or the character of the locality.</p>	<p>DTS/DPF 1.2</p> <p>Where development comprises an advertising hoarding, the supporting structure is:</p> <ul style="list-style-type: none"> <li>(a) concealed by the associated advertisement and decorative detailing</li> <li>or</li> <li>(b) not visible from an adjacent public street or thoroughfare, other than a support structure in the form of a single or dual post design.</li> </ul>
<p>PO 1.3</p> <p>Advertising does not encroach on public land or the land of an adjacent allotment.</p>	<p>DTS/DPF 1.3</p> <p>Advertisements and/or advertising hoardings are contained within the boundaries of the site.</p>
<p>PO 1.4</p> <p>Where possible, advertisements on public land are integrated with existing structures and infrastructure.</p>	<p>DTS/DPF 1.4</p> <p>Advertisements on public land that meet at least one of the following:</p> <ul style="list-style-type: none"> <li>(a) achieves Advertisements DTS/DPF 1.1</li> <li>(b) are integrated with a bus shelter.</li> </ul>
<p>PO 1.5</p> <p>Advertisements and/or advertising hoardings are of a scale and size appropriate to the character of the locality.</p>	<p>DTS/DPF 1.5</p> <p>None are applicable.</p>
Proliferation of Advertisements	
<p>PO 2.1</p> <p>Proliferation of advertisements is minimised to avoid visual</p>	<p>DTS/DPF 2.1</p> <p>No more than one freestanding advertisement is displayed per</p>

clutter and untidiness.	occupancy.
PO 2.2 Multiple business or activity advertisements are co-located and coordinated to avoid visual clutter and untidiness.	DTS/DPF 2.2 Advertising of a multiple business or activity complex is located on a single advertisement fixture or structure.
PO 2.3 Proliferation of advertisements attached to buildings is minimised to avoid visual clutter and untidiness.	DTS/DPF 2.3 Advertisements satisfy all of the following: <ul style="list-style-type: none"> <li>(a) are attached to a building</li> <li>(b) other than in a Neighbourhood-type zone, where they are flush with a wall, cover no more than 15% of the building facade to which they are attached</li> <li>(c) do not result in more than one sign per occupancy that is not flush with a wall.</li> </ul>
Advertising Content	
PO 3.1 Advertisements are limited to information relating to the lawful use of land they are located on to assist is the ready identification of the activity or activities on the land and avoids unrelated content that contributes to visual clutter and untidiness.	DTS/DPF 3.1 Advertisements contain information limited to a lawful existing or proposed activity or activities on the same site as the advertisement.
Amenity Impacts	
PO 4.1 Light spill from advertisement illumination does not unreasonably compromise the amenity of sensitive receivers.	DTS/DPF 4.1 Advertisements do not incorporate any illumination.
Safety	
PO 5.1 Advertisements and/or advertising hoardings erected on a verandah or projecting from a building wall are designed and located to allow for safe and convenient pedestrian access.	DTS/DPF 5.1 Advertisements have a minimum clearance of 2.5m between the top of the footpath and base of the underside of the sign.
PO 5.2 Advertisements and/or advertising hoardings do not distract or create a hazard to drivers through excessive illumination.	DTS/DPF 5.2 No advertisement illumination is proposed.
PO 5.3 Advertisements and/or advertising hoardings do not create a hazard to drivers by: <ul style="list-style-type: none"> <li>(a) being liable to interpretation by drivers as an official traffic sign or signal</li> <li>(b) obscuring or impairing drivers' view of official traffic signs or signals</li> <li>(c) obscuring or impairing drivers' view of features of a road that are potentially hazardous (such as junctions, bends, changes in width and traffic control devices) or other road or rail vehicles at/or approaching level crossings.</li> </ul>	DTS/DPF 5.3 Advertisements satisfy all of the following: <ul style="list-style-type: none"> <li>(a) are not located in a public road or rail reserve</li> <li>(b) are located wholly outside the land shown as 'Corner Cut-Off Area' in the following diagram</li> </ul> 
PO 5.4	DTS/DPF 5.4

Advertisements and/or advertising hoardings do not create a hazard by distracting drivers from the primary driving task at a location where the demands on driver concentration are high.	Advertisements and/or advertising hoardings are not located along or adjacent to a road having a speed limit of 80km/h or more.
<p>PO 5.5</p> <p>Advertisements and/or advertising hoardings provide sufficient clearance from the road carriageway to allow for safe and convenient movement by all road users.</p>	<p>DTS/DPF 5.5</p> <p>Where the advertisement or advertising hoarding is:</p> <ul style="list-style-type: none"> <li>(a) on a kerbed road with a speed zone of 60km/h or less, the advertisement or advertising hoarding is located at least 0.6m from the roadside edge of the kerb</li> <li>(b) on an unkerbed road with a speed zone of 60km/h or less, the advertisement or advertising hoarding is located at least 5.5m from the edge of the seal</li> <li>(c) on any other kerbed or unkerbed road, the advertisement or advertising hoarding is located a minimum of the following distance from the roadside edge of the kerb or the seal: <ul style="list-style-type: none"> <li>(a) 110 km/h road - 14m</li> <li>(b) 100 km/h road - 13m</li> <li>(c) 90 km/h road - 10m</li> <li>(d) 70 or 80 km/h road - 8.5m.</li> </ul> </li> </ul>
<p>PO 5.6</p> <p>Advertising near signalised intersections does not cause unreasonable distraction to road users through illumination, flashing lights, or moving or changing displays or messages.</p>	<p>DTS/DPF 5.6</p> <p>Advertising:</p> <ul style="list-style-type: none"> <li>(a) is not illuminated</li> <li>(b) does not incorporate a moving or changing display or message</li> <li>(c) does not incorporate a flashing light(s).</li> </ul>

## Animal Keeping and Horse Keeping

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Animals are kept at a density that is not beyond the carrying capacity of the land and in a manner that minimises their adverse effects on the environment, local amenity and surrounding development.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Siting and Design	
PO 1.1	DTS/DPF 1.1

Animal keeping, horse keeping and associated activities do not create adverse impacts on the environment or the amenity of the locality.	None are applicable.
PO 1.2  Animal keeping and horse keeping is located and managed to minimise the potential transmission of disease to other operations where animals are kept.	DTS/DPF 1.2  None are applicable.
Horse Keeping	
PO 2.1  Water from stable wash-down areas is directed to appropriate absorption areas and/or drainage pits to minimise pollution of land and water.	DTS/DPF 2.1  None are applicable.
PO 2.2  Stables, horse shelters or associated yards are sited appropriate distances away from sensitive receivers and/or allotments in other ownership to avoid adverse impacts from dust, erosion and odour.	DTS/DPF 2.2  Stables, horse shelters and associated yards are sited in accordance with all of the following:  (a) 30m or more from any sensitive receivers (existing or approved) on land in other ownership (b) where an adjacent allotment is vacant and in other ownership, 30m or more from the boundary of that allotment.
PO 2.3  All areas accessible to horses are separated from septic tank effluent disposal areas to protect the integrity of that system. Stable flooring is constructed with an impervious material to facilitate regular cleaning.	DTS/DPF 2.3  Septic tank effluent disposal areas are enclosed with a horse-proof barrier such as a fence to exclude horses from this area.
PO 2.4  To minimise environmental harm and adverse impacts on water resources, stables, horse shelters and associated yards are appropriately set back from a watercourse.	DTS/DPF 2.4  Stables, horse shelters and associated yards are set back 50m or more from a watercourse.
PO 2.5  Stables, horse shelters and associated yards are located on slopes that are stable to minimise the risk of soil erosion and water runoff.	DTS/DPF 2.5  Stables, horse shelters and associated yards are not located on land with a slope greater than 10% (1-in-10).
Kennels	
PO 3.1  Kennel flooring is constructed with an impervious material to facilitate regular cleaning.	DTS/DPF 3.1  The floors of kennels satisfy all of the following:  (a) are constructed of impervious concrete (b) are designed to be self-draining when washed down.
PO 3.2  Kennels and exercise yards are designed and sited to minimise noise nuisance to neighbours through measures such as:  (a) adopting appropriate separation distances	DTS/DPF 3.2  Kennels are sited 500m or more from the nearest sensitive receiver on land in other ownership.

(b) orientating openings away from sensitive receivers.	
PO 3.3 Dogs are regularly observed and managed to minimise nuisance impact on adjoining sensitive receivers from animal behaviour.	DTS/DPF 3.3 Kennels are sited in association with a permanent dwelling on the land.
Wastes	
PO 4.1 Storage of manure, used litter and other wastes (other than wastewater lagoons) is designed, constructed and managed to minimise attracting and harbouring vermin.	DTS/DPF 4.1 None are applicable.
PO 4.2 Facilities for the storage of manure, used litter and other wastes (other than wastewater lagoons) are located to minimise the potential for polluting water resources.	DTS/DPF 4.2 Waste storage facilities (other than wastewater lagoons) are located outside the 1% AEP flood event areas.

## Aquaculture

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Aquaculture facilities are developed in an ecologically, economically and socially sustainable manner to support an equitable sharing of marine, coastal and inland resources and mitigate conflict with other water-based and land-based uses.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Land-based Aquaculture	
PO 1.1 Land-based aquaculture and associated components are sited and designed to mitigate adverse impacts on nearby sensitive receivers.	DTS/DPF 1.1 Land-based aquaculture and associated components are located to satisfy all of the following:  (a) 200m or more from a sensitive receiver in other ownership (b) 500m or more from the boundary of a zone primarily intended to accommodate sensitive receivers.
PO 1.2 Land-based aquaculture and associated components are sited and designed to prevent surface flows from entering ponds in a 1% AEP sea flood level event.	DTS/DPF 1.2 None are applicable.

PO 1.3 Land-based aquaculture and associated components are sited and designed to prevent pond leakage that would pollute groundwater.	DTS/DPF 1.3 None are applicable.
PO 1.4 Land-based aquaculture and associated components are sited and designed to prevent farmed species escaping and entering into any waters.	DTS/DPF 1.4 None are applicable.
PO 1.5 Land-based aquaculture and associated components, including intake and discharge pipes, are designed to minimise the need to traverse sensitive areas to minimise impact on the natural environment.	DTS/DPF 1.5 None are applicable.
PO 1.6 Pipe inlets and outlets associated with land-based aquaculture are sited and designed to minimise the risk of disease transmission.	DTS/DPF 1.6 None are applicable.
PO 1.7 Storage areas associated with aquaculture activity are integrated with the use of the land and sited and designed to minimise their visual impact on the surrounding environment.	DTS/DPF 1.7 None are applicable.
Marine Based Aquaculture	
PO 2.1 Marine aquaculture is sited and designed to minimise its adverse impacts on sensitive ecological areas including:  (a) creeks and estuaries (b) wetlands (c) significant seagrass and mangrove communities (d) marine habitats and ecosystems.	DTS/DPF 2.1 None are applicable.
PO 2.2 Marine aquaculture is sited in areas with adequate water current to disperse sediments and dissolve particulate wastes to prevent the build-up of waste that may cause environmental harm.	DTS/DPF 2.2 None are applicable.
PO 2.3 Marine aquaculture is designed to not involve discharge of human waste on the site, on any adjacent land or into nearby waters.	DTS/DPF 2.3 None are applicable.
PO 2.4 Marine aquaculture (other than inter-tidal aquaculture) is located an appropriate distance seaward of the high water mark.	DTS/DPF 2.4 Marine aquaculture development is located 100m or more seaward of the high water mark.
PO 2.5	DTS/DPF 2.5

<p>Marine aquaculture is sited and designed to not obstruct or interfere with:</p> <ul style="list-style-type: none"> <li>(a) areas of high public use</li> <li>(b) areas, including beaches, used for recreational activities such as swimming, fishing, skiing, sailing and other water sports</li> <li>(c) areas of outstanding visual or environmental value</li> <li>(d) areas of high tourism value</li> <li>(e) areas of important regional or state economic activity, including commercial ports, wharfs and jetties</li> <li>(f) the operation of infrastructure facilities including inlet and outlet pipes associated with the desalination of sea water.</li> </ul>	None are applicable.
<p>PO 2.6</p> <p>Marine aquaculture is sited and designed to minimise interference and obstruction to the natural processes of the coastal and marine environment.</p>	<p>DTS/DPF 2.6</p> <p>None are applicable.</p>
<p>PO 2.7</p> <p>Marine aquaculture is designed to be as unobtrusive as practicable by incorporating measures such as:</p> <ul style="list-style-type: none"> <li>(a) using feed hoppers painted in subdued colours and suspending them as close as possible to the surface of the water</li> <li>(b) positioning structures to protrude the minimum distance practicable above the surface of the water</li> <li>(c) avoiding the use of shelters and structures above cages and platforms unless necessary to exclude predators and protected species from interacting with the farming structures and/or stock inside the cages, or for safety reasons</li> <li>(d) positioning racks, floats and other farm structures in unobtrusive locations landward from the shoreline.</li> </ul>	<p>DTS/DPF 2.7</p> <p>None are applicable.</p>
<p>PO 2.8</p> <p>Access, launching and maintenance facilities utilise existing established roads, tracks, ramps and paths to or from the sea where possible to minimise environmental and amenity impacts.</p>	<p>DTS/DPF 2.8</p> <p>None are applicable.</p>
<p>PO 2.9</p> <p>Access, launching and maintenance facilities are developed as common user facilities and are co-located where practicable to mitigate adverse impacts on coastal areas.</p>	<p>DTS/DPF 2.9</p> <p>None are applicable.</p>
<p>PO 2.10</p> <p>Marine aquaculture is sited to minimise potential impacts on, and to protect the integrity of, reserves under the <i>National Parks and Wildlife Act 1972</i>.</p>	<p>DTS/DPF 2.10</p> <p>Marine aquaculture is located 1000m or more seaward of the boundary of any reserve under the <i>National Parks and Wildlife Act 1972</i>.</p>
<p>PO 2.11</p> <p>Onshore storage, cooling and processing facilities do not impair the coastline and its visual amenity by:</p>	<p>DTS/DPF 2.11</p> <p>None are applicable.</p>

<p>(a) being sited, designed, landscaped and of a scale to reduce the overall bulk and appearance of buildings and complement the coastal landscape</p> <p>(b) making provision for appropriately sited and designed vehicular access arrangements, including using existing vehicular access arrangements as far as practicable</p> <p>(c) incorporating appropriate waste treatment and disposal.</p>	
Navigation and Safety	
<p>PO 3.1</p> <p>Marine aquaculture sites are suitably marked to maintain navigational safety.</p>	<p>DTS/DPF 3.1</p> <p>None are applicable.</p>
<p>PO 3.2</p> <p>Marine aquaculture is sited to provide adequate separation between farms for safe navigation.</p>	<p>DTS/DPF 3.2</p> <p>None are applicable.</p>
Environmental Management	
<p>PO 4.1</p> <p>Marine aquaculture is maintained to prevent hazards to people and wildlife, including breeding grounds and habitats of native marine mammals and terrestrial fauna, especially migratory species.</p>	<p>DTS/DPF 4.1</p> <p>None are applicable.</p>
<p>PO 4.2</p> <p>Marine aquaculture is designed to facilitate the relocation or removal of structures in the case of emergency such as oil spills, algal blooms and altered water flows.</p>	<p>DTS/DPF 4.2</p> <p>None are applicable.</p>
<p>PO 4.3</p> <p>Marine aquaculture provides for progressive or future reclamation of disturbed areas ahead of, or upon, decommissioning.</p>	<p>DTS/DPF 4.3</p> <p>None are applicable.</p>
<p>PO 4.4</p> <p>Aquaculture operations incorporate measures for the removal and disposal of litter, disused material, shells, debris, detritus, dead animals and animal waste to prevent pollution of waters, wetlands, or the nearby coastline.</p>	<p>DTS/DPF 4.4</p> <p>None are applicable.</p>

## Beverage Production in Rural Areas

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Mitigation of potential amenity and environmental impacts of value-adding beverage production facilities such as wineries, distilleries, cideries and breweries.

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Odour and Noise	
PO 1.1 Beverage production activities are designed and sited to minimise odour impacts on rural amenity.	DTS/DPF 1.1 None are applicable.
PO 1.2 Beverage production activities are designed and sited to minimise noise impacts on sensitive receivers.	DTS/DPF 1.2 None are applicable.
PO 1.3 Fermentation, distillation, manufacturing, storage, packaging and bottling activities occur within enclosed buildings to improve the visual appearance within a locality and manage noise associated with these activities.	DTS/DPF 1.3 None are applicable.
PO 1.4 Breweries are designed to minimise odours emitted during boiling and fermentation stages of production.	DTS/DPF 1.4 Brew kettles are fitted with a vapour condenser.
PO 1.5 Beverage production solid wastes are stored in a manner that minimises odour impacts on sensitive receivers in other ownership.	DTS/DPF 1.5 Solid waste from beverage production is collected and stored in sealed containers and removed from the site within 48 hours.
Water Quality	
PO 2.1 Beverage production wastewater management systems (including wastewater irrigation) are set back from watercourses to minimise adverse impacts on water resources.	DTS/DPF 2.1 Wastewater management systems are set back 50m or more from the banks of watercourses and bores.
PO 2.2 The storage or disposal of chemicals or hazardous substances is undertaken in a manner to prevent pollution of water resources.	DTS/DPF 2.2 None are applicable.
PO 2.3 Stormwater runoff from areas that may cause contamination due to beverage production activities (including vehicle movements and machinery operations) is drained to an onsite stormwater treatment system to manage potential environmental impacts.	DTS/DPF 2.3 None are applicable.
PO 2.4 Stormwater runoff from areas unlikely to cause contamination by	DTS/DPF 2.4 None are applicable.

beverage production and associated activities (such as roof catchments and clean hard-paved surfaces) is diverted away from beverage production areas and wastewater management systems.	
Wastewater Irrigation	
PO 3.1 Beverage production wastewater irrigation systems are designed and located to not contaminate soil and surface and ground water resources or damage crops.	DTS/DPF 3.1 None are applicable.
PO 3.2 Beverage production wastewater irrigation systems are designed and located to minimise impact on amenity and avoid spray drift onto adjoining land.	DTS/DPF 3.2 Beverage production wastewater is not irrigated within 50m of any dwelling in other ownership.
PO 3.3 Beverage production wastewater is not irrigated onto areas that pose an undue risk to the environment or amenity such as:  (a) waterlogged areas (b) land within 50m of a creek, swamp or domestic or stock water bore (c) land subject to flooding (d) steeply sloping land (e) rocky or highly permeable soil overlaying an unconfined aquifer.	DTS/DPF 3.3 None are applicable.

## Bulk Handling and Storage Facilities

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Facilities for the bulk handling and storage of agricultural, mineral, petroleum, rock, ore or other similar commodities are designed to minimise adverse impacts on transport networks, the landscape and surrounding land uses.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Siting and Design	
PO 1.1 Bulk handling and storage facilities are sited and designed to	DTS/DPF 1.1 Facilities for the handling, storage and dispatch of commodities

minimise risks of adverse air quality and noise impacts on sensitive receivers.	<p>in bulk (excluding processing) meet the following minimum separation distances from sensitive receivers:</p> <ul style="list-style-type: none"> <li>(a) bulk handling of agricultural crop products, rock, ores, minerals, petroleum products or chemicals at a wharf or wharf side facility (including sea-port grain terminals), where the handling of these materials into or from vessels does not exceed 100 tonnes per day: 300m or more from residential premises not associated with the facility</li> <li>(b) bulk handling of agricultural crop products, rock, ores, minerals, petroleum products or chemicals to or from any commercial storage facility: 300m or more from residential premises not associated with the facility</li> <li>(c) bulk petroleum storage involving individual containers with a capacity up to 200 litres and a total on-site storage capacity not exceeding 1,000 cubic metres: 500m or more</li> <li>(d) coal handling with: <ul style="list-style-type: none"> <li>a. capacity up to 1 tonne per day or a storage capacity up to 50 tonnes: 500m or more</li> <li>b. capacity exceeding 1 tonne per day but not exceeding 100 tonnes per day or a storage capacity exceeding 50 tonnes but not exceeding 5000 tonnes: 1000m or more.</li> </ul> </li> </ul>
Buffers and Landscaping	
PO 2.1  Bulk handling and storage facilities incorporate a buffer area for the establishment of dense landscaping adjacent road frontages to enhance the appearance of land and buildings from public thoroughfares.	DTS/DPF 2.1  None are applicable.
PO 2.2  Bulk handling and storage facilities incorporate landscaping to assist with screening and dust filtration.	DTS/DPF 2.2  None are applicable.
Access and Parking	
PO 3.1  Roadways and vehicle parking areas associated with bulk handling and storage facilities are designed and surfaced to control dust emissions and prevent drag out of material from the site.	DTS/DPF 3.1  Roadways and vehicle parking areas are sealed with an all-weather surface.
Slipways, Wharves and Pontoons	
PO 4.1  Slipways, wharves and pontoons used for the handling of bulk materials (such as fuel, oil, catch, bait and the like) incorporate catchment devices to avoid the release of materials into adjacent waters.	DTS/DPF 4.1  None are applicable.

## Clearance from Overhead Powerlines

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Protection of human health and safety when undertaking development in the vicinity of overhead transmission powerlines.

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
PO 1.1  Buildings are adequately separated from aboveground powerlines to minimise potential hazard to people and property.	DTS/DPF 1.1  One of the following is satisfied: <ul style="list-style-type: none"> <li>(a) a declaration is provided by or on behalf of the applicant to the effect that the proposal would not be contrary to the regulations prescribed for the purposes of section 86 of the <i>Electricity Act 1996</i></li> <li>(b) there are no aboveground powerlines adjoining the site that are the subject of the proposed development.</li> </ul>

## Design

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Development is: <ul style="list-style-type: none"> <li>(a) contextual - by considering, recognising and carefully responding to its natural surroundings or built environment and positively contributes to the character of the immediate area</li> <li>(b) durable - fit for purpose, adaptable and long lasting</li> <li>(c) inclusive - by integrating landscape design to optimise pedestrian and cyclist usability, privacy and equitable access, and promoting the provision of quality spaces integrated with the public realm that can be used for access and recreation and help optimise security and safety both internally and within the public realm, for occupants and visitors</li> <li>(d) sustainable - by integrating sustainable techniques into the design and siting of development and landscaping to improve community health, urban heat, water management, environmental performance, biodiversity and local amenity and to minimise energy consumption.</li> </ul>

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
All development	
External Appearance	
PO 1.1	DTS/DPF 1.1

Buildings reinforce corners through changes in setback, articulation, materials, colour and massing (including height, width, bulk, roof form and slope).	None are applicable.
<p>PO 1.2</p> <p>Where zero or minor setbacks are desirable, development provides shelter over footpaths (<u>in the form of verandahs, awnings, canopies and the like, with adequate lighting</u>) to positively contribute to the walkability, comfort and safety of the public realm.</p>	<p>DTS/DPF 1.2</p> <p>None are applicable.</p>
<p>PO 1.3</p> <p>Building elevations facing the primary street (other than ancillary buildings) are designed and detailed to convey purpose, identify main access points and complement the streetscape.</p>	<p>DTS/DPF 1.3</p> <p>None are applicable.</p>
<p>PO 1.4</p> <p>Plant, exhaust and intake vents and other technical equipment is integrated into the building design to minimise visibility from the public realm and negative impacts on residential amenity by:</p> <ul style="list-style-type: none"> <li>(a) positioning plant and equipment in unobtrusive locations viewed from public roads and spaces</li> <li>(b) screening rooftop plant and equipment from view</li> <li>(c) when located on the roof of non-residential development, locating the plant and equipment as far as practicable from adjacent sensitive land uses.</li> </ul>	<p>DTS/DPF 1.4</p> <p>Development does not incorporate any structures that protrude beyond the roofline.</p>
<p>PO 1.5</p> <p>The negative visual impact of outdoor storage, waste management, loading and service areas is minimised by integrating them into the building design and screening them from public view (such as fencing, landscaping and built form) taking into account the form of development contemplated in the relevant zone.</p>	<p>DTS/DPF 1.5</p> <p>None are applicable.</p>
Safety	
<p>PO 2.1</p> <p>Development maximises opportunities for passive surveillance of the public realm by providing clear lines of sight, appropriate lighting and the use of visually permeable screening wherever practicable.</p>	<p>DTS/DPF 2.1</p> <p>None are applicable.</p>
<p>PO 2.2</p> <p>Development is designed to differentiate public, communal and private areas.</p>	<p>DTS/DPF 2.2</p> <p>None are applicable.</p>
<p>PO 2.3</p> <p>Buildings are designed with safe, perceptible and direct access from public street frontages and vehicle parking areas.</p>	<p>DTS/DPF 2.3</p> <p>None are applicable.</p>
<p>PO 2.4</p> <p>Development at street level is designed to maximise opportunities for passive surveillance of the adjacent public</p>	<p>DTS/DPF 2.4</p> <p>None are applicable.</p>

realm.	
PO 2.5  Common areas and entry points of buildings (such as the foyer areas of residential buildings), and non-residential land uses at street level, maximise passive surveillance from the public realm to the inside of the building at night.	DTS/DPF 2.5  None are applicable.
Landscaping	
PO 3.1  Soft landscaping and tree planting is incorporated to:  (a) minimise heat absorption and reflection (b) maximise shade and shelter (c) maximise stormwater infiltration (d) enhance the appearance of land and streetscapes (e) contribute to biodiversity.	DTS/DPF 3.1  None are applicable.
PO 3.2  Soft landscaping and tree planting maximises the use of locally indigenous plant species, incorporates plant species best suited to current and future climate conditions and avoids pest plant and weed species.	DTS/DPF 3.2  None are applicable.
Environmental Performance	
PO 4.1  Buildings are sited, oriented and designed to maximise natural sunlight access and ventilation to main activity areas, habitable rooms, common areas and open spaces.	DTS/DPF 4.1  None are applicable.
PO 4.2  Buildings are sited and designed to maximise passive environmental performance and minimise energy consumption and reliance on mechanical systems, such as heating and cooling.	DTS/DPF 4.2  None are applicable.
PO 4.3  Buildings incorporate climate-responsive techniques and features such as building and window orientation, use of eaves, verandahs and shading structures, water harvesting, at ground landscaping, green walls, green roofs and photovoltaic cells.	DTS/DPF 4.3  None are applicable.
Water Sensitive Design	
PO 5.1  Development is sited and designed to maintain natural hydrological systems without negatively impacting:  (a) the quantity and quality of surface water and groundwater (b) the depth and directional flow of surface water and groundwater (c) the quality and function of natural springs.	DTS/DPF 5.1  None are applicable.

On-site Waste Treatment Systems	
<p>PO 6.1</p> <p>Dedicated on-site effluent disposal areas do not include any areas to be used for, or could be reasonably foreseen to be used for, private open space, driveways or car parking.</p>	<p>DTS/DPF 6.1</p> <p>Effluent disposal drainage areas do not:</p> <ul style="list-style-type: none"> <li>(a) encroach within an area used as private open space or result in less private open space than that specified in Design Table 1 - Private Open Space</li> <li>(b) use an area also used as a driveway</li> <li>(c) encroach within an area used for on-site car parking or result in less on-site car parking than that specified in Transport, Access and Parking Table 1 - General Off-Street Car Parking Requirements or Table 2 - Off-Street Car Parking Requirements in Designated Areas.</li> </ul>
Carparking Appearance	
<p>PO 7.1</p> <p>Development facing the street is designed to minimise the negative impacts of any semi-basement and undercroft car parking on the streetscapes through techniques such as:</p> <ul style="list-style-type: none"> <li>(a) limiting protrusion above finished ground level</li> <li>(b) screening through appropriate planting, fencing and mounding</li> <li>(c) limiting the width of openings and integrating them into the building structure.</li> </ul>	<p>DTS/DPF 7.1</p> <p>None are applicable.</p>
<p>PO 7.2</p> <p>Vehicle parking areas are appropriately located, designed and constructed to minimise impacts on adjacent sensitive receivers through measures such as ensuring they are attractively developed and landscaped, screen fenced and the like.</p>	<p>DTS/DPF 7.2</p> <p>None are applicable.</p>
<p>PO 7.3</p> <p>Safe, legible, direct and accessible pedestrian connections are provided between parking areas and the development.</p>	<p>DTS/DPF 7.3</p> <p>None are applicable.</p>
<p>PO 7.4</p> <p>Street level vehicle parking areas incorporate tree planting to provide shade and reduce solar heat absorption and reflection.</p>	<p>DTS/DPF 7.4</p> <p>None are applicable.</p>
<p>PO 7.5</p> <p>Street level parking areas incorporate soft landscaping to improve visual appearance when viewed from within the site and from public places.</p>	<p>DTS/DPF 7.5</p> <p>None are applicable.</p>
<p>PO 7.6</p> <p>Vehicle parking areas and associated driveways are landscaped to provide shade and positively contribute to amenity.</p>	<p>DTS/DPF 7.6</p> <p>None are applicable.</p>
<p>PO 7.7</p> <p>Vehicle parking areas and access ways incorporate integrated stormwater management techniques such as permeable or porous surfaces, infiltration systems, drainage swales or rain gardens that integrate with soft landscaping.</p>	<p>DTS/DPF 7.7</p> <p>None are applicable.</p>

Earthworks and sloping land	
PO 8.1  Development, including any associated driveways and access tracks, minimises the need for earthworks to limit disturbance to natural topography.	DTS/DPF 8.1  Development does not involve any of the following:  (a) excavation exceeding a vertical height of 1m  (b) filling exceeding a vertical height of 1m  (c) a total combined excavation and filling vertical height of 2m or more.
PO 8.2  Driveways and access tracks are designed and constructed to allow safe and convenient access on sloping land (with a gradient exceeding 1 in 8).	DTS/DPF 8.2  Driveways and access tracks on sloping land (with a gradient exceeding 1 in 8) satisfy (a) and (b):  (a) do not have a gradient exceeding 25% (1-in-4) at any point along the driveway  (b) are constructed with an all-weather trafficable surface.
PO 8.3  Driveways and access tracks on sloping land (with a gradient exceeding 1 in 8):  (a) do not contribute to the instability of embankments and cuttings (b) provide level transition areas for the safe movement of people and goods to and from the development (c) are designed to integrate with the natural topography of the land.	DTS/DPF 8.3  None are applicable.
PO 8.4  Development on sloping land (with a gradient exceeding 1 in 8) avoids the alteration of natural drainage lines and includes on-site drainage systems to minimise erosion.	DTS/DPF 8.4  None are applicable.
PO 8.5  Development does not occur on land at risk of landslip nor increases the potential for landslip or land surface instability.	DTS/DPF 8.5  None are applicable.
Fences and Walls	
PO 9.1  Fences, walls and retaining walls are of sufficient height to maintain privacy and security without unreasonably impacting the visual amenity and adjoining land's access to sunlight or the amenity of public places.	DTS/DPF 9.1  None are applicable.
PO 9.2  Landscaping incorporated on the low side of retaining walls is visible from public roads and public open space to minimise visual impacts.	DTS/DPF 9.2  A vegetated landscaped strip 1m wide or more is provided against the low side of a retaining wall.
Overlooking / Visual Privacy (in building 3 storeys or less)	
PO 10.1	DTS/DPF 10.1

Development mitigates direct overlooking from upper level windows to habitable rooms and private open spaces of adjoining residential uses.	Upper level windows facing side or rear boundaries shared with a residential allotment/site satisfy one of the following: <ul style="list-style-type: none"> <li>(a) are permanently obscured to a height of 1.5m above finished floor level and are fixed or not capable of being opened more than 200mm</li> <li>(b) have sill heights greater than or equal to 1.5m above finished floor level</li> <li>(c) incorporate screening with a maximum of 25% openings, permanently fixed no more than 500mm from the window surface and sited adjacent to any part of the window less than 1.5 m above the finished floor level.</li> </ul>
PO 10.2  Development mitigates direct overlooking from balconies, terraces and decks to habitable rooms and private open space of adjoining residential uses.	DTS/DPF 10.2  One of the following is satisfied: <ul style="list-style-type: none"> <li>(a) the longest side of the balcony or terrace will face a public road, public road reserve or public reserve that is at least 15m wide in all places faced by the balcony or terrace</li> <li>or</li> <li>(b) all sides of balconies or terraces on upper building levels are permanently obscured by screening with a maximum 25% transparency/openings fixed to a minimum height of: <ul style="list-style-type: none"> <li>(i) 1.5m above finished floor level where the balcony is located at least 15 metres from the nearest habitable window of a dwelling on adjacent land</li> <li>or</li> <li>(ii) 1.7m above finished floor level in all other cases</li> </ul> </li> </ul>
All Residential development	
Front elevations and passive surveillance	
PO 11.1  Dwellings incorporate windows along primary street frontages to encourage passive surveillance and make a positive contribution to the streetscape.	DTS/DPF 11.1  Each dwelling with a frontage to a public street: <ul style="list-style-type: none"> <li>(a) includes at least one window facing the primary street from a habitable room that has a minimum internal room dimension of 2.4m</li> <li>(b) has an aggregate window area of at least 2m<sup>2</sup> facing the primary street.</li> </ul>
PO 11.2  Dwellings incorporate entry doors within street frontages to address the street and provide a legible entry point for visitors.	DTS/DPF 11.2  Dwellings with a frontage to a public street have an entry door visible from the primary street boundary.
Outlook and amenity	
PO 12.1  Living rooms have an external outlook to provide a high standard of amenity for occupants.	DTS/DPF 12.1  A living room of a dwelling incorporates a window with an outlook towards the street frontage or private open space, public open space, or waterfront areas.
PO 12.2	DTS/DPF 12.2

Bedrooms are separated or shielded from active communal recreation areas, common access areas and vehicle parking areas and access ways to mitigate noise and artificial light intrusion.	None are applicable.
Ancillary Development	
<p>PO 13.1</p> <p>Residential ancillary buildings and structures are sited and designed to not detract from the streetscape or appearance of buildings on the site or neighbouring properties.</p>	<p>DTS/DPF 13.1</p> <p>Ancillary buildings:</p> <ul style="list-style-type: none"> <li>(a) are ancillary to a dwelling erected on the same site</li> <li>(b) have a floor area not exceeding 60m<sup>2</sup></li> <li>(c) are not constructed, added to or altered so that any part is situated: <ul style="list-style-type: none"> <li>(i) in front of any part of the building line of the dwelling to which it is ancillary</li> <li>or</li> <li>(ii) within 900mm of a boundary of the allotment with a secondary street (if the land has boundaries on two or more roads)</li> </ul> </li> <li>(d) in the case of a garage or carport, the garage or carport: <ul style="list-style-type: none"> <li>(i) is set back at least 5.5m from the boundary of the primary street</li> <li>(ii) when facing a primary street or secondary street, has a total door / opening not exceeding: <ul style="list-style-type: none"> <li>A. for dwellings of single building level - 7m in width or 50% of the site frontage, whichever is the lesser</li> <li>B. for dwellings comprising two or more building levels at the building line fronting the same public street - 7m in width</li> </ul> </li> </ul> </li> <li>(e) if situated on a boundary (not being a boundary with a primary street or secondary street), do not exceed a length of 11.5m unless: <ul style="list-style-type: none"> <li>(i) a longer wall or structure exists on the adjacent site and is situated on the same allotment boundary</li> <li>and</li> <li>(ii) the proposed wall or structure will be built along the same length of boundary as the existing adjacent wall or structure to the same or lesser extent</li> </ul> </li> <li>(f) if situated on a boundary of the allotment (not being a boundary with a primary street or secondary street), all walls or structures on the boundary will not exceed 45% of the length of that boundary</li> <li>(g) will not be located within 3m of any other wall along the same boundary unless on an adjacent site on that boundary there is an existing wall of a building that would be adjacent to or about the proposed wall or structure</li> <li>(h) have a wall height or post height not exceeding 3m above natural ground level</li> <li>(i) have a roof height where no part of the roof is more than 5m above the natural ground level</li> <li>(j) if clad in sheet metal, is pre-colour treated or painted in a non-reflective colour</li> </ul>

	<p>(k) retains a total area of soft landscaping in accordance with (i) or (ii), whichever is less:</p> <p>(i) a total area as determined by the following table:</p> <table border="1"> <thead> <tr> <th>Dwelling site area (or in the case of residential flat building or group dwelling(s), average site area) (m<sup>2</sup>)</th><th>Minimum percentage of site</th></tr> </thead> <tbody> <tr> <td>&lt;150</td><td>10%</td></tr> <tr> <td>150-200</td><td>15%</td></tr> <tr> <td>201-450</td><td>20%</td></tr> <tr> <td>&gt;450</td><td>25%</td></tr> </tbody> </table> <p>(ii) the amount of existing soft landscaping prior to the development occurring.</p>	Dwelling site area (or in the case of residential flat building or group dwelling(s), average site area) (m <sup>2</sup> )	Minimum percentage of site	<150	10%	150-200	15%	201-450	20%	>450	25%
Dwelling site area (or in the case of residential flat building or group dwelling(s), average site area) (m <sup>2</sup> )	Minimum percentage of site										
<150	10%										
150-200	15%										
201-450	20%										
>450	25%										
<p>PO 13.2</p> <p>Ancillary buildings and structures do not impede on-site functional requirements such as private open space provision or car parking requirements and do not result in over-development of the site.</p>	<p>DTS/DPF 13.2</p> <p>Ancillary buildings and structures do not result in:</p> <p>(a) less private open space than specified in Design in Urban Areas Table 1 - Private Open Space</p> <p>(b) less on-site car parking than specified in Transport, Access and Parking Table 1 - General Off-Street Car Parking Requirements or Table 2 - Off-Street Car Parking Requirements in Designated Areas.</p>										
<p>PO 13.3</p> <p>Fixed plant and equipment in the form of pumps and/or filtration systems for a swimming pool or spa is positioned and/or housed to not cause unreasonable noise nuisance to adjacent sensitive receivers.</p>	<p>DTS/DPF 13.3</p> <p>The pump and/or filtration system is ancillary to a dwelling erected on the same site and is:</p> <p>(a) enclosed in a solid acoustic structure that is located at least 5m from the nearest habitable room located on an adjoining allotment or</p> <p>(b) located at least 12m from the nearest habitable room located on an adjoining allotment.</p>										
Garage appearance											
<p>PO 14.1</p> <p>Garaging is designed to not detract from the streetscape or appearance of a dwelling.</p>	<p>DTS/DPF 14.1</p> <p>Garages and carports facing a street:</p> <p>(a) are situated so that no part of the garage or carport is in front of any part of the building line of the dwelling</p> <p>(b) are set back at least 5.5m from the boundary of the primary street</p> <p>(c) have a garage door / opening not exceeding 7m in width</p> <p>(d) have a garage door / opening width not exceeding 50% of the site frontage unless the dwelling has two or more building levels at the building line fronting the same public street.</p>										

Massing	
PO 15.1  The visual mass of larger buildings is reduced when viewed from adjoining allotments or public streets.	DTS/DPF 15.1  None are applicable
Dwelling additions	
PO 16.1  Dwelling additions are sited and designed to not detract from the streetscape or amenity of adjoining properties and do not impede on-site functional requirements.	DTS / DPF 16.1  Dwelling additions:  (a) are not constructed, added to or altered so that any part is situated closer to a public street  (b) do not result in: <ul style="list-style-type: none"> <li>(i) excavation exceeding a vertical height of 1m</li> <li>(ii) filling exceeding a vertical height of 1m</li> <li>(iii) a total combined excavation and filling vertical height of 2m or more</li> <li>(iv) less Private Open Space than specified in Design Table 1 - Private Open Space</li> <li>(v) less on-site parking than specified in Transport Access and Parking Table 1 - General Off-Street Car Parking Requirements or Table 2 - Off-Street Car Parking Requirements in Designated Areas</li> <li>(vi) upper level windows facing side or rear boundaries unless: <ul style="list-style-type: none"> <li>A. they are permanently obscured to a height of 1.5m above finished floor level that is fixed or not capable of being opened more than 200mm or</li> <li>B. have sill heights greater than or equal to 1.5m above finished floor level or</li> <li>C. incorporate screening to a height of 1.5m above finished floor level</li> </ul> </li> <li>(vii) all sides of balconies or terraces on upper building levels are permanently obscured by screening with a maximum 25% transparency/openings fixed to a minimum height of: <ul style="list-style-type: none"> <li>A. 1.5m above finished floor level where the balcony is located at least 15 metres from the nearest habitable window of a dwelling on adjacent land</li> <li>B. 1.7m above finished floor level in all other cases.</li> </ul> </li> </ul>
Private Open Space	
PO 17.1  Dwellings are provided with suitable sized areas of usable private open space to meet the needs of occupants.	DTS/DPF 17.1  Private open space is provided in accordance with Design Table 1 - Private Open Space.
Water Sensitive Design	
PO 18.1	DTS/DPF 18.1

Residential development creating a common driveway / access includes stormwater management systems that minimise the discharge of sediment, suspended solids, organic matter, nutrients, bacteria, litter and other contaminants to the stormwater system, watercourses or other water bodies.	Residential development creating a common driveway / access that services 5 or more dwellings achieves the following stormwater runoff outcomes: <ul style="list-style-type: none"> <li>(a) 80 per cent reduction in average annual total suspended solids</li> <li>(b) 60 per cent reduction in average annual total phosphorus</li> <li>(c) 45 per cent reduction in average annual total nitrogen.</li> </ul>
PO 18.2  Residential development creating a common driveway / access includes a stormwater management system designed to mitigate peak flows and manage the rate and duration of stormwater discharges from the site to ensure that the development does not increase the peak flows in downstream systems.	DTS/DPF 18.2  Development creating a common driveway / access that services 5 or more dwellings: <ul style="list-style-type: none"> <li>(a) maintains the pre-development peak flow rate from the site based upon a 0.35 runoff coefficient for the 18.1% AEP 30-minute storm and the stormwater runoff time to peak is not increased or captures and retains the difference in pre-development runoff volume (based upon a 0.35 runoff coefficient) vs post development runoff volume from the site for an 18.1% AEP 30-minute storm; and</li> <li>(b) manages site generated stormwater runoff up to and including the 1% AEP flood event to avoid flooding of buildings.</li> </ul>
Car parking, access and manoeuvrability	
PO 19.1  Enclosed parking spaces are of a size and dimensions to be functional, accessible and convenient.	DTS/DPF 19.1  Residential car parking spaces enclosed by fencing, walls or other structures have the following internal dimensions (separate from any waste storage area): <ul style="list-style-type: none"> <li>(a) single width car parking spaces: <ul style="list-style-type: none"> <li>(i) a minimum length of 5.4m per space</li> <li>(ii) a minimum width of 3.0m</li> <li>(iii) a minimum garage door width of 2.4m</li> </ul> </li> <li>(b) double width car parking spaces (side by side): <ul style="list-style-type: none"> <li>(i) a minimum length of 5.4m</li> <li>(ii) a minimum width of 5.4m</li> <li>(iii) minimum garage door width of 2.4m per space.</li> </ul> </li> </ul>
PO 19.2  Uncovered parking spaces are of a size and dimensions to be functional, accessible and convenient.	DTS/DPF 19.2  Uncovered car parking spaces have: <ul style="list-style-type: none"> <li>(a) a minimum length of 5.4m</li> <li>(b) a minimum width of 2.4m</li> <li>(c) a minimum width between the centre line of the space and any fence, wall or other obstruction of 1.5m</li> </ul>
PO 19.3  Driveways are located and designed to facilitate safe access and egress while maximising land available for street tree planting, landscaped street frontages, domestic waste collection and on-street parking.	DTS/DPF 19.3  Driveways and access points on sites with a frontage to a public road of 10m or less have a width between 3.0 and 3.2 metres measured at the property boundary and are the only access point provided on the site.

PO 19.4	DTS/DPF 19.4
Vehicle access is safe, convenient, minimises interruption to the operation of public roads and does not interfere with street infrastructure or street trees.	Vehicle access to designated car parking spaces satisfy (a) or (b): <ul style="list-style-type: none"> <li>(a) is provided via a lawfully existing or authorised access point or an access point for which consent has been granted as part of an application for the division of land</li> <li>(b) where newly proposed: <ul style="list-style-type: none"> <li>(i) is set back 6m or more from the tangent point of an intersection of 2 or more roads</li> <li>(ii) is set back outside of the marked lines or infrastructure dedicating a pedestrian crossing</li> <li>(iii) does not involve the removal, relocation or damage to of mature street trees, street furniture or utility infrastructure services.</li> </ul> </li> </ul>
PO 19.5	DTS/DPF 19.5
Driveways are designed to enable safe and convenient vehicle movements from the public road to on-site parking spaces.	Driveways are designed and sited so that: <ul style="list-style-type: none"> <li>(a) the gradient from the place of access on the boundary of the allotment to the finished floor level at the front of the garage or carport is not steeper than 1:4 on average</li> <li>(b) they are aligned relative to the street boundary so that there is no more than a 20 degree deviation from 90 degrees between the centreline of any dedicated car parking space to which it provides access (measured from the front of that space) and the street boundary</li> <li>(c) if located to provide access from an alley, lane or right of way - the alley, land or right of way is at least 6.2m wide along the boundary of the allotment / site</li> </ul>
PO 19.6	DTS/DPF 19.6
Driveways and access points are designed and distributed to optimise the provision of on-street visitor parking.	Where on-street parking is available abutting the site's street frontage, on-street parking is retained in accordance with the following requirements: <ul style="list-style-type: none"> <li>(a) minimum 0.33 on-street spaces per dwelling on the site (rounded up to the nearest whole number)</li> <li>(b) minimum car park length of 5.4m where a vehicle can enter or exit a space directly</li> <li>(c) minimum carpark length of 6m for an intermediate space located between two other parking spaces or to an end obstruction where the parking is indented.</li> </ul>
Waste storage	
PO 20.1	DTS/DPF 20.1
Provision is made for the adequate and convenient storage of waste bins in a location screened from public view.	None are applicable.
Design of Transportable Dwellings	
PO 21.1	DTS/DPF 21.1
The sub-floor space beneath transportable buildings is enclosed to give the appearance of a permanent structure.	Buildings satisfy (a) or (b): <ul style="list-style-type: none"> <li>(a) are not transportable</li> </ul>

	<p>or</p> <p>(b) the sub-floor space between the building and ground level is clad in a material and finish consistent with the building.</p>										
Group dwelling, residential flat buildings and battle-axe development											
Amenity											
<p>PO 22.1</p> <p>Dwellings are of a suitable size to accommodate a layout that is well organised and provides a high standard of amenity for occupants.</p>	<p>DTS/DPF 22.1</p> <p>Dwellings have a minimum internal floor area in accordance with the following table:</p> <table border="1"> <thead> <tr> <th>Number of bedrooms</th><th>Minimum internal floor area</th></tr> </thead> <tbody> <tr> <td>Studio</td><td>35m<sup>2</sup></td></tr> <tr> <td>1 bedroom</td><td>50m<sup>2</sup></td></tr> <tr> <td>2 bedroom</td><td>65m<sup>2</sup></td></tr> <tr> <td>3+ bedrooms</td><td>80m<sup>2</sup> and any dwelling over 3 bedrooms provides an additional 15m<sup>2</sup> for every additional bedroom</td></tr> </tbody> </table>	Number of bedrooms	Minimum internal floor area	Studio	35m <sup>2</sup>	1 bedroom	50m <sup>2</sup>	2 bedroom	65m <sup>2</sup>	3+ bedrooms	80m <sup>2</sup> and any dwelling over 3 bedrooms provides an additional 15m <sup>2</sup> for every additional bedroom
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<p>PO 22.2</p> <p>The orientation and siting of buildings minimises impacts on the amenity, outlook and privacy of occupants and neighbours.</p>	<p>DTS/DPF 22.2</p> <p>None are applicable.</p>										
<p>PO 22.3</p> <p>Development maximises the number of dwellings that face public open space and public streets and limits dwellings oriented towards adjoining properties.</p>	<p>DTS/DPF 22.3</p> <p>None are applicable.</p>										
<p>PO 22.4</p> <p>Battle-axe development is appropriately sited and designed to respond to the existing neighbourhood context.</p>	<p>DTS/DPF 22.4</p> <p>Dwelling sites/allotments are not in the form of a battle-axe arrangement.</p>										
Communal Open Space											
<p>PO 23.1</p> <p>Private open space provision may be substituted for communal open space which is designed and sited to meet the recreation and amenity needs of residents.</p>	<p>DTS/DPF 23.1</p> <p>None are applicable.</p>										
<p>PO 23.2</p> <p>Communal open space is of sufficient size and dimensions to cater for group recreation.</p>	<p>DTS/DPF 23.2</p> <p>Communal open space incorporates a minimum dimension of 5 metres.</p>										
<p>PO 23.3</p> <p>Communal open space is designed and sited to:</p>	<p>DTS/DPF 23.3</p> <p>None are applicable.</p>										

<p>(a) be conveniently accessed by the dwellings which it services</p> <p>(b) have regard to acoustic, safety, security and wind effects.</p>	
<p>PO 23.4</p> <p>Communal open space contains landscaping and facilities that are functional, attractive and encourage recreational use.</p>	<p>DTS/DPF 23.4</p> <p>None are applicable.</p>
<p>PO 23.5</p> <p>Communal open space is designed and sited to:</p> <p>(a) in relation to rooftop or elevated gardens, minimise overlooking into habitable room windows or onto the useable private open space of other dwellings</p> <p>(b) in relation to ground floor communal space, be overlooked by habitable rooms to facilitate passive surveillance.</p>	<p>DTS/DPF 23.5</p> <p>None are applicable.</p>
Carparking, access and manoeuvrability	
<p>PO 24.1</p> <p>Driveways and access points are designed and distributed to optimise the provision of on-street visitor parking.</p>	<p>DTS/DPF 24.1</p> <p>Where on-street parking is available directly adjacent the site, on-street parking is retained adjacent the subject site in accordance with the following requirements:</p> <p>(a) minimum 0.33 on-street car parks per proposed dwellings (rounded up to the nearest whole number)</p> <p>(b) minimum car park length of 5.4m where a vehicle can enter or exit a space directly</p> <p>(c) minimum carpark length of 6m for an intermediate space located between two other parking spaces or to an end obstruction where the parking is indented.</p>
<p>PO 24.2</p> <p>The number of vehicular access points onto public roads is minimised to reduce interruption of the footpath and positively contribute to public safety and walkability.</p>	<p>DTS/DPF 24.2</p> <p>Access to group dwellings or dwellings within a residential flat building is provided via a single common driveway.</p>
<p>PO 24.3</p> <p>Residential driveways that service more than one dwelling are designed to allow safe and convenient movement.</p>	<p>DTS/DPF 24.3</p> <p>Driveways that service more than 1 dwelling or a dwelling on a battle-axe site:</p> <p>(a) have a minimum width of 3m</p> <p>(b) for driveways servicing more than 3 dwellings:</p> <p>(i) have a width of 5.5m or more and a length of 6m or more at the kerb of the primary street</p> <p>(ii) where the driveway length exceeds 30m, incorporate a passing point at least every 30 metres with a minimum width of 5.5m and a minimum length of 6m.</p>
<p>PO 24.4</p> <p>Residential driveways in a battle-axe configuration are designed to allow safe and convenient movement.</p>	<p>DTS/DPF 24.4</p> <p>Where in a battle-axe configuration, a driveway servicing one dwelling has a minimum width of 3m.</p>

PO 24.5	DTS/DPF 24.5
Residential driveways that service more than one dwelling are designed to allow passenger vehicles to enter and exit the site and manoeuvre within the site in a safe and convenient manner.	Driveways providing access to more than one dwelling, or a dwelling on a battle-axe site, allow a B85 passenger vehicle to enter and exit the garages or parking spaces in no more than a three-point turn manoeuvre.
PO 24.6	DTS/DPF 24.6
Dwellings are adequately separated from common driveways and manoeuvring areas.	Dwelling walls with entry doors or ground level habitable room windows are set back at least 1.5m from any driveway or area designated for the movement and manoeuvring of vehicles.
Soft Landscaping	
PO 25.1	DTS/DPF 25.1
Soft landscaping is provided between dwellings and common driveways to improve the outlook for occupants and appearance of common areas.	Other than where located directly in front of a garage or a building entry, soft landscaping with a minimum dimension of 1m is provided between a dwelling and common driveway.
PO 25.2	DTS/DPF 25.2
Soft landscaping is provided that improves the appearance of common driveways.	Where a common driveway is located directly adjacent the side or rear boundary of the site, soft landscaping with a minimum dimension of 1m is provided between the driveway and site boundary (excluding along the perimeter of a passing point).
Site Facilities / Waste Storage	
PO 26.1	DTS/DPF 26.1
Provision is made for suitable mailbox facilities close to the major pedestrian entry to the site or conveniently located considering the nature of accommodation and mobility of occupants.	None are applicable.
PO 26.2	DTS/DPF 26.2
Provision is made for suitable external clothes drying facilities.	None are applicable.
PO 26.3	DTS/DPF 26.3
Provision is made for suitable household waste and recyclable material storage facilities which are:  (a) located away, or screened, from public view, and (b) conveniently located in proximity to dwellings and the waste collection point.	None are applicable.
PO 26.4	DTS/DPF 26.4
Waste and recyclable material storage areas are located away from dwellings.	Dedicated waste and recyclable material storage areas are located at least 3m from any habitable room window.
PO 26.5	DTS/DPF 26.5
Where waste bins cannot be conveniently collected from the street, provision is made for on-site waste collection, designed to accommodate the safe and convenient access, egress and movement of waste collection vehicles.	None are applicable.
PO 26.6	DTS/DPF 26.6
Services including gas and water meters are conveniently located	None are applicable.

and screened from public view.	
Supported accommodation and retirement facilities	
Siting and Configuration	
<p>PO 27.1</p> <p>Supported accommodation and housing for aged persons and people with disabilities is located where on-site movement of residents is not unduly restricted by the slope of the land.</p>	<p>DTS/DPF 27.1</p> <p>None are applicable.</p>
Movement and Access	
<p>PO 28.1</p> <p>Development is designed to support safe and convenient access and movement for residents by providing:</p> <ul style="list-style-type: none"> <li>(a) ground-level access or lifted access to all units</li> <li>(b) level entry porches, ramps, paths, driveways, passenger loading areas and areas adjacent to footpaths that allow for the passing of wheelchairs and resting places</li> <li>(c) car parks with gradients no steeper than 1-in-40 and of sufficient area to provide for wheelchair manoeuvrability</li> <li>(d) kerb ramps at pedestrian crossing points.</li> </ul>	<p>DTS/DPF 28.1</p> <p>None are applicable.</p>
Communal Open Space	
<p>PO 29.1</p> <p>Development is designed to provide attractive, convenient and comfortable indoor and outdoor communal areas to be used by residents and visitors.</p>	<p>DTS/DPF 29.1</p> <p>None are applicable.</p>
<p>PO 29.2</p> <p>Private open space provision may be substituted for communal open space which is designed and sited to meet the recreation and amenity needs of residents.</p>	<p>DTS/DPF 29.2</p> <p>None are applicable.</p>
<p>PO 29.3</p> <p>Communal open space is of sufficient size and dimensions to cater for group recreation.</p>	<p>DTS/DPF 29.3</p> <p>Communal open space incorporates a minimum dimension of 5 metres.</p>
<p>PO 29.4</p> <p>Communal open space is designed and sited to:</p> <ul style="list-style-type: none"> <li>(a) be conveniently accessed by the dwellings which it services</li> <li>(b) have regard to acoustic, safety, security and wind effects.</li> </ul>	<p>DTS/DPF 29.4</p> <p>None are applicable.</p>
<p>PO 29.5</p> <p>Communal open space contains landscaping and facilities that are functional, attractive and encourage recreational use.</p>	<p>DTS/DPF 29.5</p> <p>None are applicable.</p>
<p>PO 29.6</p> <p>Communal open space is designed and sited to:</p> <ul style="list-style-type: none"> <li>(a) in relation to rooftop or elevated gardens, minimise</li> </ul>	<p>DTS/DPF 29.6</p> <p>None are applicable.</p>

<p>overlooking into habitable room windows or onto the useable private open space of other dwellings</p> <p>(b) in relation to ground floor communal space, be overlooked by habitable rooms to facilitate passive surveillance.</p>	
Site Facilities / Waste Storage	
<p>PO 30.1</p> <p>Development is designed to provide storage areas for personal items and specialised equipment such as small electric powered vehicles, including facilities for the recharging of small electric powered vehicles.</p>	<p>DTS/DPF 30.1</p> <p>None are applicable.</p>
<p>PO 30.2</p> <p>Provision is made for suitable mailbox facilities close to the major pedestrian entry to the site or conveniently located considering the nature of accommodation and mobility of occupants.</p>	<p>DTS/DPF 30.2</p> <p>None are applicable.</p>
<p>PO 30.3</p> <p>Provision is made for suitable external clothes drying facilities.</p>	<p>DTS/DPF 28.3</p> <p>None are applicable.</p>
<p>PO 30.4</p> <p>Provision is made for suitable household waste and recyclable material storage facilities conveniently located and screened from public view.</p>	<p>DTS/DPF 30.4</p> <p>None are applicable.</p>
<p>PO 30.5</p> <p>Waste and recyclable material storage areas are located away from dwellings.</p>	<p>DTS/DPF 30.5</p> <p>Dedicated waste and recyclable material storage areas are located at least 3m from any habitable room window.</p>
<p>PO 30.6</p> <p>Provision is made for on-site waste collection where 10 or more bins are to be collected at any one time.</p>	<p>DTS/DPF 30.6</p> <p>None are applicable.</p>
<p>PO 30.7</p> <p>Services including gas and water meters are conveniently located and screened from public view.</p>	<p>DTS/DPF 30.7</p> <p>None are applicable.</p>
All non-residential development	
Water Sensitive Design	
<p>PO 31.1</p> <p>Development likely to result in significant risk of export of litter, oil or grease includes stormwater management systems designed to minimise pollutants entering stormwater.</p>	<p>DTS/DPF 31.1</p> <p>None are applicable.</p>
<p>PO 31.2</p> <p>Water discharged from a development site is of a physical, chemical and biological condition equivalent to or better than its pre-developed state.</p>	<p>DTS/DPF 31.2</p> <p>None are applicable.</p>
Wash-down and Waste Loading and Unloading	

<p>PO 32.1</p> <p>Areas for activities including loading and unloading, storage of waste refuse bins in commercial and industrial development or wash-down areas used for the cleaning of vehicles, vessels, plant or equipment are:</p> <ul style="list-style-type: none"> <li>(a) designed to contain all wastewater likely to pollute stormwater within a bunded and roofed area to exclude the entry of external surface stormwater run-off</li> <li>(b) paved with an impervious material to facilitate wastewater collection</li> <li>(c) of sufficient size to prevent 'splash-out' or 'over-spray' of wastewater from the wash-down area</li> <li>(d) designed to drain wastewater to either: <ul style="list-style-type: none"> <li>(i) a treatment device such as a sediment trap and coalescing plate oil separator with subsequent disposal to a sewer, private or Community Wastewater Management Scheme or</li> <li>(ii) a holding tank and its subsequent removal off-site on a regular basis.</li> </ul> </li> </ul>	<p>DTS/DPF 32.1</p> <p>None are applicable.</p>
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**Table 1 - Private Open Space**

Dwelling Type	Minimum Rate
Dwelling (at ground level)	<p>Total private open space area:</p> <ul style="list-style-type: none"> <li>(a) Site area &lt;301m<sup>2</sup>: 24m<sup>2</sup> located behind the building line.</li> <li>(b) Site area ≥ 301m<sup>2</sup>: 60m<sup>2</sup> located behind the building line.</li> </ul> <p>Minimum directly accessible from a living room: 16m<sup>2</sup> / with a minimum dimension 3m.</p>
Dwelling (above ground level)	<p>Studio (no separate bedroom): 4m<sup>2</sup> with a minimum dimension 1.8m</p> <p>One bedroom: 8m<sup>2</sup> with a minimum dimension 2.1m</p> <p>Two bedroom dwelling: 11m<sup>2</sup> with a minimum dimension 2.4m</p> <p>Three + bedroom dwelling: 15m<sup>2</sup> with a minimum dimension 2.6m</p>
Cabin or caravan (permanently fixed to the ground) in a residential park or a caravan and tourist park	<p>Total area: 16m<sup>2</sup>, which may be used as second car parking space, provided on each site intended for residential occupation.</p>

## Design in Urban Areas

### Assessment Provisions (AP)

## Desired Outcome

DO 1	<p>Development is:</p> <ul style="list-style-type: none"> <li>(a) contextual - by considering, recognising and carefully responding to its natural surroundings or built environment and positively contributing to the character of the locality</li> <li>(b) durable - fit for purpose, adaptable and long lasting</li> <li>(c) inclusive - by integrating landscape design to optimise pedestrian and cyclist usability, privacy and equitable access and promoting the provision of quality spaces integrated with the public realm that can be used for access and recreation and help optimise security and safety both internally and within the public realm, for occupants and visitors</li> <li>(d) sustainable - by integrating sustainable techniques into the design and siting of development and landscaping to improve community health, urban heat, water management, environmental performance, biodiversity and local amenity and to minimise energy consumption.</li> </ul>
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Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
All Development	
External Appearance	
<p>PO 1.1</p> <p>Buildings reinforce corners through changes in setback, articulation, materials, colour and massing (including height, width, bulk, roof form and slope).</p>	<p>DTS/DPF 1.1</p> <p>None are applicable.</p>
<p>PO 1.2</p> <p>Where zero or minor setbacks are desirable, development provides shelter over footpaths (in the form of verandahs, awnings, canopies and the like, with adequate lighting) to positively contribute to the walkability, comfort and safety of the public realm.</p>	<p>DTS/DPF 1.2</p> <p>None are applicable.</p>
<p>PO 1.3</p> <p>Building elevations facing the primary street (other than ancillary buildings) are designed and detailed to convey purpose, identify main access points and complement the streetscape.</p>	<p>DTS/DPF 1.3</p> <p>None are applicable.</p>
<p>PO 1.4</p> <p>Plant, exhaust and intake vents and other technical equipment are integrated into the building design to minimise visibility from the public realm and negative impacts on residential amenity by:</p> <ul style="list-style-type: none"> <li>(a) positioning plant and equipment discretely, in unobtrusive locations as viewed from public roads and spaces</li> <li>(b) screening rooftop plant and equipment from view</li> <li>(c) when located on the roof of non-residential development, locating the plant and equipment as far as practicable from adjacent sensitive land uses.</li> </ul>	<p>DTS/DPF 1.4</p> <p>Development does not incorporate any structures that protrude beyond the roofline.</p>
<p>PO 1.5</p> <p>The negative visual impact of outdoor storage, waste</p>	<p>DTS/DPF 1.5</p> <p>None are applicable.</p>

management, loading and service areas is minimised by integrating them into the building design and screening them from public view (such as fencing, landscaping and built form), taking into account the form of development contemplated in the relevant zone.	
Safety	
PO 2.1 Development maximises opportunities for passive surveillance of the public realm by providing clear lines of sight, appropriate lighting and the use of visually permeable screening wherever practicable.	DTS/DPF 2.1 None are applicable.
PO 2.2 Development is designed to differentiate public, communal and private areas.	DTS/DPF 2.2 None are applicable.
PO 2.3 Buildings are designed with safe, perceptible and direct access from public street frontages and vehicle parking areas.	DTS/DPF 2.3 None are applicable.
PO 2.4 Development at street level is designed to maximise opportunities for passive surveillance of the adjacent public realm.	DTS/DPF 2.4 None are applicable.
PO 2.5 Common areas and entry points of buildings (such as the foyer areas of residential buildings) and non-residential land uses at street level, maximise passive surveillance from the public realm to the inside of the building at night.	DTS/DPF 2.5 None are applicable.
Landscaping	
PO 3.1 Soft landscaping and tree planting are incorporated to:  (a) minimise heat absorption and reflection (b) maximise shade and shelter (c) maximise stormwater infiltration (d) enhance the appearance of land and streetscapes.	DTS/DPF 3.1 None are applicable.
Environmental Performance	
PO 4.1 Buildings are sited, oriented and designed to maximise natural sunlight access and ventilation to main activity areas, habitable rooms, common areas and open spaces.	DTS/DPF 4.1 None are applicable.
PO 4.2 Buildings are sited and designed to maximise passive environmental performance and minimise energy consumption and reliance on mechanical systems, such as heating and cooling.	DTS/DPF 4.2 None are applicable.

PO 4.3	DTS/DPF 4.3
Buildings incorporate climate responsive techniques and features such as building and window orientation, use of eaves, verandahs and shading structures, water harvesting, at ground landscaping, green walls, green roofs and photovoltaic cells.	None are applicable.
Water Sensitive Design	
PO 5.1	DTS/DPF 5.1
Development is sited and designed to maintain natural hydrological systems without negatively impacting:	None are applicable.
<ul style="list-style-type: none"> <li>(a) the quantity and quality of surface water and groundwater</li> <li>(b) the depth and directional flow of surface water and groundwater</li> <li>(c) the quality and function of natural springs.</li> </ul>	
On-site Waste Treatment Systems	
PO 6.1	DTS/DPF 6.1
Dedicated on-site effluent disposal areas do not include any areas to be used for, or could be reasonably foreseen to be used for, private open space, driveways or car parking.	<p>Effluent disposal drainage areas do not:</p> <ul style="list-style-type: none"> <li>(a) encroach within an area used as private open space or result in less private open space than that specified in Design in Urban Areas Table 1 - Private Open Space</li> <li>(b) use an area also used as a driveway</li> <li>(c) encroach within an area used for on-site car parking or result in less on-site car parking than that specified in Transport, Access and Parking Table 1 - General Off-Street Car Parking Requirements or Table 2 - Off-Street Car Parking Requirements in Designated Areas.</li> </ul>
Car parking appearance	
PO 7.1	DTS/DPF 7.1
Development facing the street is designed to minimise the negative impacts of any semi-basement and undercroft car parking on streetscapes through techniques such as:	None are applicable.
<ul style="list-style-type: none"> <li>(a) limiting protrusion above finished ground level</li> <li>(b) screening through appropriate planting, fencing and mounding</li> <li>(c) limiting the width of openings and integrating them into the building structure.</li> </ul>	
PO 7.2	DTS/DPF 7.2
Vehicle parking areas appropriately located, designed and constructed to minimise impacts on adjacent sensitive receivers through measures such as ensuring they are attractively developed and landscaped, screen fenced and the like.	None are applicable.
PO 7.3	DTS/DPF 7.3
Safe, legible, direct and accessible pedestrian connections are provided between parking areas and the development.	None are applicable.
PO 7.4	DTS/DPF 7.4
Street-level vehicle parking areas incorporate tree planting to	Vehicle parking areas that are open to the sky and comprise 10

provide shade, reduce solar heat absorption and reflection.	or more car parking spaces include a shade tree with a mature canopy of 4m diameter spaced for each 10 car parking spaces provided and a landscaped strip on any road frontage of a minimum dimension of 1m.
PO 7.5  Street level parking areas incorporate soft landscaping to improve visual appearance when viewed from within the site and from public places.	DTS/DPF 7.5  Vehicle parking areas comprising 10 or more car parking spaces include soft landscaping with a minimum dimension of:  (a) 1m along all public road frontages and allotment boundaries (b) 1m between double rows of car parking spaces.
PO 7.6  Vehicle parking areas and associated driveways are landscaped to provide shade and positively contribute to amenity.	DTS/DPF 7.6  None are applicable.
PO 7.7  Vehicle parking areas and access ways incorporate integrated stormwater management techniques such as permeable or porous surfaces, infiltration systems, drainage swales or rain gardens that integrate with soft landscaping.	DTS/DPF 7.7  None are applicable.
Earthworks and sloping land	
PO 8.1  Development, including any associated driveways and access tracks, minimises the need for earthworks to limit disturbance to natural topography.	DTS/DPF 8.1  Development does not involve any of the following:  (a) excavation exceeding a vertical height of 1m (b) filling exceeding a vertical height of 1m (c) a total combined excavation and filling vertical height of 2m or more.
PO 8.2  Driveways and access tracks designed and constructed to allow safe and convenient access on sloping land.	DTS/DPF 8.2  Driveways and access tracks on sloping land (with a gradient exceeding 1 in 8) satisfy (a) and (b):  (a) do not have a gradient exceeding 25% (1-in-4) at any point along the driveway (b) are constructed with an all-weather trafficable surface.
PO 8.3  Driveways and access tracks on sloping land (with a gradient exceeding 1 in 8):  (a) do not contribute to the instability of embankments and cuttings (b) provide level transition areas for the safe movement of people and goods to and from the development (c) are designed to integrate with the natural topography of the land.	DTS/DPF 8.3  None are applicable.
PO 8.4  Development on sloping land (with a gradient exceeding 1 in 8) avoids the alteration of natural drainage lines and includes on site drainage systems to minimise erosion.	DTS/DPF 8.4  None are applicable.

PO 8.5	DTS/DPF 8.5
Development does not occur on land at risk of landslip or increase the potential for landslip or land surface instability.	None are applicable.
Fences and walls	
PO 9.1	DTS/DPF 9.1
Fences, walls and retaining walls of sufficient height maintain privacy and security without unreasonably impacting visual amenity and adjoining land's access to sunlight or the amenity of public places.	None are applicable.
PO 9.2	DTS/DPF 9.2
Landscaping is incorporated on the low side of retaining walls that are visible from public roads and public open space to minimise visual impacts.	A vegetated landscaped strip 1m wide or more is provided against the low side of a retaining wall.
Overlooking / Visual Privacy (low rise buildings)	
PO 10.1	DTS/DPF 10.1
Development mitigates direct overlooking from upper level windows to habitable rooms and private open spaces of adjoining residential uses in neighbourhood-type zones.	Upper level windows facing side or rear boundaries shared with a residential use in a neighbourhood-type zone: <ul style="list-style-type: none"> <li>(a) are permanently obscured to a height of 1.5m above finished floor level and are fixed or not capable of being opened more than 125mm</li> <li>(b) have sill heights greater than or equal to 1.5m above finished floor level</li> <li>(c) incorporate screening with a maximum of 25% openings, permanently fixed no more than 500mm from the window surface and sited adjacent to any part of the window less than 1.5 m above the finished floor level.</li> </ul>
PO 10.2	DTS/DPF 10.2
Development mitigates direct overlooking from balconies to habitable rooms and private open space of adjoining residential uses in neighbourhood type zones.	One of the following is satisfied: <ul style="list-style-type: none"> <li>(a) the longest side of the balcony or terrace will face a public road, public road reserve or public reserve that is at least 15m wide in all places faced by the balcony or terrace</li> <li>or</li> <li>(b) all sides of balconies or terraces on upper building levels are permanently obscured by screening with a maximum 25% transparency/openings fixed to a minimum height of: <ul style="list-style-type: none"> <li>(i) 1.5m above finished floor level where the balcony is located at least 15 metres from the nearest habitable window of a dwelling on adjacent land</li> <li>or</li> <li>(ii) 1.7m above finished floor level in all other cases</li> </ul> </li> </ul>
Site Facilities / Waste Storage (excluding low rise residential development)	
PO 11.1	DTS/DPF 11.1
Development provides a dedicated area for on-site collection and sorting of recyclable materials and refuse, green organic waste and wash bay facilities for the ongoing maintenance of bins that	None are applicable.

is adequate in size considering the number and nature of the activities they will serve and the frequency of collection.	
PO 11.2 Communal waste storage and collection areas are located, enclosed and designed to be screened from view from the public domain, open space and dwellings.	DTS/DPF 11.2 None are applicable.
PO 11.3 Communal waste storage and collection areas are designed to be well ventilated and located away from habitable rooms.	DTS/DPF 11.3 None are applicable.
PO 11.4 Communal waste storage and collection areas are designed to allow waste and recycling collection vehicles to enter and leave the site without reversing.	DTS/DPF 11.4 None are applicable.
PO 11.5 For mixed use developments, non-residential waste and recycling storage areas and access provide opportunities for on-site management of food waste through composting or other waste recovery as appropriate.	DTS/DPF 11.5 None are applicable.
All Development - Medium and High Rise	
External Appearance	
PO 12.1 Buildings positively contribute to the character of the local area by responding to local context.	DTS/DPF 12.1 None are applicable.
PO 12.2 Architectural detail at street level and a mixture of materials at lower building levels near the public interface are provided to reinforce a human scale.	DTS/DPF 12.2 None are applicable.
PO 12.3 Buildings are designed to reduce visual mass by breaking up building elevations into distinct elements.	DTS/DPF 12.3 None are applicable.
PO 12.4 Boundary walls visible from public land include visually interesting treatments to break up large blank elevations.	DTS/DPF 12.4 None are applicable.
PO 12.5 External materials and finishes are durable and age well to minimise ongoing maintenance requirements.	DTS/DPF 12.5 Buildings utilise a combination of the following external materials and finishes:  (a) masonry (b) natural stone (c) pre-finished materials that minimise staining, discolouring or deterioration.
PO 12.6 Street-facing building elevations are designed to provide attractive, high quality and pedestrian-friendly street frontages.	DTS/DPF 12.6 Building street frontages incorporate:  (a) active uses such as shops or offices (b) prominent entry areas for multi-storey buildings (where it is a common entry) (c) habitable rooms of dwellings (d) areas of communal public realm with public art or the

	like, where consistent with the zone and/or subzone provisions.																				
<p>PO 12.7</p> <p>Entrances to multi-storey buildings are safe, attractive, welcoming, functional and contribute to streetscape character.</p>	<p>DTS/DPF 12.7</p> <p>Entrances to multi-storey buildings are:</p> <ul style="list-style-type: none"><li>(a) oriented towards the street</li><li>(b) clearly visible and easily identifiable from the street and vehicle parking areas</li><li>(c) designed to be prominent, accentuated and a welcoming feature if there are no active or occupied ground floor uses</li><li>(d) designed to provide shelter, a sense of personal address and transitional space around the entry</li><li>(e) located as close as practicable to the lift and / or lobby access to minimise the need for long access corridors</li><li>(f) designed to avoid the creation of potential areas of entrapment.</li></ul>																				
<p>PO 12.8</p> <p>Building services, plant and mechanical equipment are screened from the public realm.</p>	<p>DTS/DPF 12.8</p> <p>None are applicable.</p>																				
Landscaping																					
<p>PO 13.1</p> <p>Development facing a street provides a well landscaped area that contains a deep soil space to accommodate a tree of a species and size adequate to provide shade, contribute to tree canopy targets and soften the appearance of buildings.</p>	<p>DTS/DPF 13.1</p> <p>Buildings provide a 4m by 4m deep soil space in front of the building that accommodates a medium to large tree, except where no building setback from front property boundaries is desired.</p>																				
<p>PO 13.2</p> <p>Deep soil zones are provided to retain existing vegetation or provide areas that can accommodate new deep root vegetation, including tall trees with large canopies to provide shade and soften the appearance of multi-storey buildings.</p>	<p>DTS/DPF 13.2</p> <p>Multi-storey development provides deep soil zones and incorporates trees at not less than the following rates, except in a location or zone where full site coverage is desired.</p> <table><tr><th>Site area</th><th>Minimum deep soil area</th><th>Minimum dimension</th><th>Tree / deep soil zones</th></tr><tr><td>&lt;300 m<sup>2</sup></td><td>10 m<sup>2</sup></td><td>1.5m</td><td>1 small tree / 10 m<sup>2</sup></td></tr><tr><td>300-1500 m<sup>2</sup></td><td>7% site area</td><td>3m</td><td>1 medium tree / 30 m<sup>2</sup></td></tr><tr><td>&gt;1500 m<sup>2</sup></td><td>7% site area</td><td>6m</td><td>1 large or medium tree / 60 m<sup>2</sup></td></tr></table> <p>Tree size and site area definitions</p> <table><tr><td>Small tree</td><td>4-6m mature height and 2-4m canopy spread</td></tr><tr><td>Medium tree</td><td>6-12m mature height and 4-8m canopy spread</td></tr></table>	Site area	Minimum deep soil area	Minimum dimension	Tree / deep soil zones	<300 m <sup>2</sup>	10 m <sup>2</sup>	1.5m	1 small tree / 10 m <sup>2</sup>	300-1500 m <sup>2</sup>	7% site area	3m	1 medium tree / 30 m <sup>2</sup>	>1500 m <sup>2</sup>	7% site area	6m	1 large or medium tree / 60 m <sup>2</sup>	Small tree	4-6m mature height and 2-4m canopy spread	Medium tree	6-12m mature height and 4-8m canopy spread
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Small tree	4-6m mature height and 2-4m canopy spread																				
Medium tree	6-12m mature height and 4-8m canopy spread																				

	Large tree	12m mature height and >8m canopy spread
	Site area	The total area for development site, not average area per dwelling
PO 13.3  Deep soil zones with access to natural light are provided to assist in maintaining vegetation health.	DTS/DPF 13.3  None are applicable.	
PO 13.4  Unless separated by a public road or reserve, development sites adjacent to any zone that has a primary purpose of accommodating low-rise residential development incorporate a deep soil zone along the common boundary to enable medium to large trees to be retained or established to assist in screening new buildings of 3 or more building levels in height.	DTS/DPF 13.4  Building elements of 3 or more building levels in height are set back at least 6m from a zone boundary in which a deep soil zone area is incorporated.	
Environmental		
PO 14.1  Development minimises detrimental micro-climatic impacts on adjacent land and buildings.	DTS/DPF 14.1  None are applicable.	
PO 14.2  Development incorporates sustainable design techniques and features such as window orientation, eaves and shading structures, water harvesting and use, green walls and roof designs that enable the provision of rain water tanks (where they are not provided elsewhere on site), green roofs and photovoltaic cells.	DTS/DPF 14.2  None are applicable.	
PO 14.3  Development of 5 or more building levels, or 21m or more in height (as measured from natural ground level and excluding roof-mounted mechanical plant and equipment) is designed to minimise the impacts of wind through measures such as:  (a) a podium at the base of a tall tower and aligned with the street to deflect wind away from the street (b) substantial verandahs around a building to deflect downward travelling wind flows over pedestrian areas (c) the placement of buildings and use of setbacks to deflect the wind at ground level (d) avoiding tall shear elevations that create windy conditions at street level.	DTS/DPF 14.3  None are applicable.	
Car Parking		
PO 15.1  Multi-level vehicle parking structures are designed to contribute to active street frontages and complement neighbouring buildings.	DTS/DPF 15.1  Multi-level vehicle parking structures within buildings:  (a) provide land uses such as commercial, retail or other non-car parking uses along ground floor street frontages	

	(b) incorporate facade treatments in building elevations facing along major street frontages that are sufficiently enclosed and detailed to complement adjacent buildings.
PO 15.2 Multi-level vehicle parking structures within buildings complement the surrounding built form in terms of height, massing and scale.	DTS/DPF 15.2 None are applicable.
Overlooking/Visual Privacy	
PO 16.1 Development mitigates direct overlooking of habitable rooms and private open spaces of adjacent residential uses in neighbourhood-type zones through measures such as:  (a) appropriate site layout and building orientation (b) off-setting the location of balconies and windows of habitable rooms or areas with those of other buildings so that views are oblique rather than direct to avoid direct line of sight (c) building setbacks from boundaries (including building boundary to boundary where appropriate) that interrupt views or that provide a spatial separation between balconies or windows of habitable rooms (d) screening devices that are integrated into the building design and have minimal negative effect on residents' or neighbours' amenity.	DTS/DPF 16.1 None are applicable.
All residential development	
Front elevations and passive surveillance	
PO 17.1 Dwellings incorporate windows facing primary street frontages to encourage passive surveillance and make a positive contribution to the streetscape.	DTS/DPF 17.1 Each dwelling with a frontage to a public street:  (a) includes at least one window facing the primary street from a habitable room that has a minimum internal room dimension of 2.4m (b) has an aggregate window area of at least 2m <sup>2</sup> facing the primary street.
PO 17.2 Dwellings incorporate entry doors within street frontages to address the street and provide a legible entry point for visitors.	DTS/DPF 17.2 Dwellings with a frontage to a public street have an entry door visible from the primary street boundary.
Outlook and Amenity	
PO 18.1 Living rooms have an external outlook to provide a high standard of amenity for occupants.	DTS/DPF 18.1 A living room of a dwelling incorporates a window with an external outlook of the street frontage, private open space, public open space, or waterfront areas.
PO 18.2 Bedrooms are separated or shielded from active communal recreation areas, common access areas and vehicle parking areas and access ways to mitigate noise and artificial light intrusion.	DTS/DPF 18.2 None are applicable.

Ancillary Development	
<p>PO 19.1</p> <p>Residential ancillary buildings are sited and designed to not detract from the streetscape or appearance of primary residential buildings on the site or neighbouring properties.</p>	<p>DTS/DPF 19.1</p> <p>Ancillary buildings:</p> <ul style="list-style-type: none"> <li>(a) are ancillary to a dwelling erected on the same site</li> <li>(b) have a floor area not exceeding 60m<sup>2</sup></li> <li>(c) are not constructed, added to or altered so that any part is situated: <ul style="list-style-type: none"> <li>(i) in front of any part of the building line of the dwelling to which it is ancillary</li> <li>or</li> <li>(ii) within 900mm of a boundary of the allotment with a secondary street (if the land has boundaries on two or more roads)</li> </ul> </li> <li>(d) in the case of a garage or carport, the garage or carport: <ul style="list-style-type: none"> <li>(i) is set back at least 5.5m from the boundary of the primary street</li> <li>(ii) when facing a primary street or secondary street, has a total door / opening not exceeding: <ul style="list-style-type: none"> <li>A. for dwellings of single building level - 7m in width or 50% of the site frontage, whichever is the lesser</li> <li>B. for dwellings comprising two or more building levels at the building line fronting the same public street - 7m in width</li> </ul> </li> </ul> </li> <li>(e) if situated on a boundary (not being a boundary with a primary street or secondary street), do not exceed a length of 11.5m unless: <ul style="list-style-type: none"> <li>(i) a longer wall or structure exists on the adjacent site and is situated on the same allotment boundary</li> <li>and</li> <li>(ii) the proposed wall or structure will be built along the same length of boundary as the existing adjacent wall or structure to the same or lesser extent</li> </ul> </li> <li>(f) if situated on a boundary of the allotment (not being a boundary with a primary street or secondary street), all walls or structures on the boundary will not exceed 45% of the length of that boundary</li> <li>(g) will not be located within 3m of any other wall along the same boundary unless on an adjacent site on that boundary there is an existing wall of a building that would be adjacent to or about the proposed wall or structure</li> <li>(h) have a wall height or post height not exceeding 3m above natural ground level</li> <li>(i) have a roof height where no part of the roof is more than 5m above the natural ground level</li> <li>(j) if clad in sheet metal, is pre-colour treated or painted in a non-reflective colour</li> <li>(k) retains a total area of soft landscaping in accordance with (i) or (ii), whichever is less: <ul style="list-style-type: none"> <li>(i) a total area as determined by the following table:</li> </ul> </li> </ul>

	<table><tr><th>Dwelling site area (or in the case of residential flat building or group dwelling(s), average site area) (m<sup>2</sup>)</th><th>Minimum percentage of site</th></tr><tr><td>&lt;150</td><td>10%</td></tr><tr><td>150-200</td><td>15%</td></tr><tr><td>201-450</td><td>20%</td></tr><tr><td>&gt;450</td><td>25%</td></tr></table>	Dwelling site area (or in the case of residential flat building or group dwelling(s), average site area) (m <sup>2</sup> )	Minimum percentage of site	<150	10%	150-200	15%	201-450	20%	>450	25%
Dwelling site area (or in the case of residential flat building or group dwelling(s), average site area) (m <sup>2</sup> )	Minimum percentage of site										
<150	10%										
150-200	15%										
201-450	20%										
>450	25%										
	(ii) the amount of existing soft landscaping prior to the development occurring.										
PO 19.2  Ancillary buildings and structures do not impede on-site functional requirements such as private open space provision, car parking requirements or result in over-development of the site.	DTS/DPF 19.2  Ancillary buildings and structures do not result in:  (a) less private open space than specified in Design in Urban Areas Table 1 - Private Open Space (b) less on-site car parking than specified in Transport, Access and Parking Table 1 - General Off-Street Car Parking Requirements or Table 2 - Off-Street Car Parking Requirements in Designated Areas.										
PO 19.3  Fixed plant and equipment in the form of pumps and/or filtration systems for a swimming pool or spa positioned and/or housed to not cause unreasonable noise nuisance to adjacent sensitive receivers.	DTS/DPF 19.3  The pump and/or filtration system is ancillary to a dwelling erected on the same site and is:  (a) enclosed in a solid acoustic structure that is located at least 5m from the nearest habitable room located on an adjoining allotment or (b) located at least 12m from the nearest habitable room located on an adjoining allotment.										
Residential Development - Low Rise											
External appearance											
PO 20.1  Garaging is designed to not detract from the streetscape or appearance of a dwelling.	DTS/DPF 20.1  Garages and carports facing a street:  (a) are situated so that no part of the garage or carport will be in front of any part of the building line of the dwelling (b) are set back at least 5.5m from the boundary of the primary street (c) have a garage door / opening width not exceeding 7m (d) have a garage door / opening width not exceeding 50% of the site frontage unless the dwelling has two or more building levels at the building line fronting the same public street.										
PO 20.2	DTS/DPF 20.2										

<p>Dwelling elevations facing public streets and common driveways make a positive contribution to the streetscape and the appearance of common driveway areas.</p>	<p>Each dwelling includes at least 3 of the following design features within the building elevation facing a primary street, and at least 2 of the following design features within the building elevation facing any other public road (other than a laneway) or a common driveway:</p> <ul style="list-style-type: none"> <li>(a) a minimum of 30% of the building wall is set back an additional 300mm from the building line</li> <li>(b) a porch or portico projects at least 1m from the building wall</li> <li>(c) a balcony projects from the building wall</li> <li>(d) a verandah projects at least 1m from the building wall</li> <li>(e) eaves of a minimum 400mm width extend along the width of the front elevation</li> <li>(f) a minimum 30% of the width of the upper level projects forward from the lower level primary building line by at least 300mm</li> <li>(g) a minimum of two different materials or finishes are incorporated on the walls of the front building elevation, with a maximum of 80% of the building elevation in a single material or finish.</li> </ul>						
<p>PO 20.3</p> <p>The visual mass of larger buildings is reduced when viewed from adjoining allotments or public streets.</p>	<p>DTS/DPF 20.3</p> <p>None are applicable</p>						
Private Open Space							
<p>PO 21.1</p> <p>Dwellings are provided with suitable sized areas of usable private open space to meet the needs of occupants.</p>	<p>DTS/DPF 21.1</p> <p>Private open space is provided in accordance with Design in Urban Areas Table 1 - Private Open Space.</p>						
<p>PO 21.2</p> <p>Private open space is positioned to provide convenient access from internal living areas.</p>	<p>DTS/DPF 21.2</p> <p>Private open space is directly accessible from a habitable room.</p>						
Landscaping							
<p>PO 22.1</p> <p>Soft landscaping is incorporated into development to:</p> <ul style="list-style-type: none"> <li>(a) minimise heat absorption and reflection</li> <li>(b) contribute shade and shelter</li> <li>(c) provide for stormwater infiltration and biodiversity</li> <li>(d) enhance the appearance of land and streetscapes.</li> </ul>	<p>DTS/DPF 22.1</p> <p>Residential development incorporates soft landscaping with a minimum dimension of 700mm provided in accordance with (a) and (b):</p> <ul style="list-style-type: none"> <li>(a) a total area as determined by the following table:</li> </ul> <table border="1"> <thead> <tr> <th>Dwelling site area (or in the case of residential flat building or group dwelling(s), average site area) (m<sup>2</sup>)</th><th>Minimum percentage of site</th></tr> </thead> <tbody> <tr> <td>&lt;150</td><td>10%</td></tr> <tr> <td></td><td></td></tr> </tbody> </table>	Dwelling site area (or in the case of residential flat building or group dwelling(s), average site area) (m <sup>2</sup> )	Minimum percentage of site	<150	10%		
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<150	10%						

		150-200	15%
		>200-450	20%
		>450	25%
	(b)	at least 30% of any land between the primary street boundary and the primary building line.	
Car parking, access and manoeuvrability			
PO 23.1	DTS/DPF 23.1		
Enclosed car parking spaces are of dimensions to be functional, accessible and convenient.	Residential car parking spaces enclosed by fencing, walls or other structures have the following internal dimensions (separate from any waste storage area):		
	(a) single width car parking spaces:		
	(i) a minimum length of 5.4m per space		
	(ii) a minimum width of 3.0m		
	(iii) a minimum garage door width of 2.4m		
	(b) double width car parking spaces (side by side):		
	(i) a minimum length of 5.4m		
	(ii) a minimum width of 5.4m		
	(iii) minimum garage door width of 2.4m per space.		
PO 23.2	DTS/DPF 23.2		
Uncovered car parking space are of dimensions to be functional, accessible and convenient.	Uncovered car parking spaces have:		
	(a) a minimum length of 5.4m		
	(b) a minimum width of 2.4m		
	(c) a minimum width between the centre line of the space and any fence, wall or other obstruction of 1.5m.		
PO 23.3	DTS/DPF 23.3		
Driveways and access points are located and designed to facilitate safe access and egress while maximising land available for street tree planting, domestic waste collection, landscaped street frontages and on-street parking.	Driveways and access points satisfy (a) or (b):		
	(a) sites with a frontage to a public road of 10m or less, have a width between 3.0 and 3.2 metres measured at the property boundary and are the only access point provided on the site		
	(b) sites with a frontage to a public road greater than 10m:		
	(i) have a maximum width of 5m measured at the property boundary and are the only access point provided on the site;		
	(ii) have a width between 3.0 metres and 3.2 metres measured at the property boundary and no more than two access points are provided on site, separated by no less than 1m.		
PO 23.4	DTS/DPF 23.4		
Vehicle access is safe, convenient, minimises interruption to the operation of public roads and does not interfere with street infrastructure or street trees.	Vehicle access to designated car parking spaces satisfy (a) or (b):		
	(a) is provided via a lawfully existing or authorised access		

	<p>point or an access point for which consent has been granted as part of an application for the division of land</p> <p>(b) where newly proposed, is set back:</p> <ul style="list-style-type: none"> <li>(i) 0.5m or more from any street furniture, street pole, infrastructure services pit, or other stormwater or utility infrastructure unless consent is provided from the asset owner</li> <li>(ii) 2m or more from the base of the trunk of a street tree unless consent is provided from the tree owner for a lesser distance</li> <li>(iii) 6m or more from the tangent point of an intersection of 2 or more roads</li> <li>(iv) outside of the marked lines or infrastructure dedicating a pedestrian crossing.</li> </ul>
<p>PO 23.5</p> <p>Driveways are designed to enable safe and convenient vehicle movements from the public road to on-site parking spaces.</p>	<p>DTS/DPF 23.5</p> <p>Driveways are designed and sited so that:</p> <ul style="list-style-type: none"> <li>(a) the gradient from the place of access on the boundary of the allotment to the finished floor level at the front of the garage or carport is not steeper than 1-in-4 on average</li> <li>(b) they are aligned relative to the street so that there is no more than a 20 degree deviation from 90 degrees between the centreline of any dedicated car parking space to which it provides access (measured from the front of that space) and the road boundary.</li> <li>(c) if located so as to provide access from an alley, lane or right of way - the alley, lane or right of way is at least 6.2m wide along the boundary of the allotment / site</li> </ul>
<p>PO 23.6</p> <p>Driveways and access points are designed and distributed to optimise the provision of on-street visitor parking.</p>	<p>DTS/DPF 23.6</p> <p>Where on-street parking is available abutting the site's street frontage, on-street parking is retained in accordance with the following requirements:</p> <ul style="list-style-type: none"> <li>(a) minimum 0.33 on-street spaces per dwelling on the site (rounded up to the nearest whole number)</li> <li>(b) minimum car park length of 5.4m where a vehicle can enter or exit a space directly</li> <li>(c) minimum carpark length of 6m for an intermediate space located between two other parking spaces or to an end obstruction where the parking is indented.</li> </ul>
Waste storage	
<p>PO 24.1</p> <p>Provision is made for the convenient storage of waste bins in a location screened from public view.</p>	<p>DTS/DPF 24.1</p> <p>Where dwellings abut both side boundaries a waste bin storage area is provided behind the building line of each dwelling that:</p> <ul style="list-style-type: none"> <li>(a) has a minimum area of 2m<sup>2</sup> with a minimum dimension of 900mm (separate from any designated car parking spaces or private open space); and</li> <li>(b) has a continuous unobstructed path of travel (excluding moveable objects like gates, vehicles and roller doors) with a minimum width of 800mm between the waste bin storage area and the street.</li> </ul>
Design of Transportable Buildings	

PO 25.1	DTS/DPF 25.1
The sub-floor space beneath transportable buildings is enclosed to give the appearance of a permanent structure.	Buildings satisfy (a) or (b):  (a) are not transportable (b) the sub-floor space between the building and ground level is clad in a material and finish consistent with the building.
Residential Development - Medium and High Rise (including serviced apartments)	
Outlook and Visual Privacy	
PO 26.1	DTS/DPF 26.1
Ground level dwellings have a satisfactory short range visual outlook to public, communal or private open space.	Buildings:  (a) provide a habitable room at ground or first level with a window facing toward the street (b) limit the height / extent of solid walls or fences facing the street to 1.2m high above the footpath level or, where higher, to 50% of the site frontage.
PO 26.2	DTS/DPF 26.2
The visual privacy of ground level dwellings within multi-level buildings is protected.	The finished floor level of ground level dwellings in multi-storey developments is raised by up to 1.2m.
Private Open Space	
PO 27.1	DTS/DPF 27.1
Dwellings are provided with suitable sized areas of usable private open space to meet the needs of occupants.	Private open space provided in accordance with Design in Urban Areas Table 1 - Private Open Space.
Residential amenity in multi-level buildings	
PO 28.1	DTS/DPF 28.1
Residential accommodation within multi-level buildings have habitable rooms, windows and balconies designed and positioned to be separated from those of other dwellings and accommodation to provide visual and acoustic privacy and allow for natural ventilation and the infiltration of daylight into interior and outdoor spaces.	Habitable rooms and balconies of independent dwellings and accommodation are separated by at least 6m from one another where there is a direct line of sight between them and 3m or more from a side or rear property boundary.
PO 28.2	DTS/DPF 28.2
Balconies are designed, positioned and integrated into the overall architectural form and detail of the development to:  (a) respond to daylight, wind, and acoustic conditions to maximise comfort and provide visual privacy (b) allow views and casual surveillance of the street while providing for safety and visual privacy of nearby living spaces and private outdoor areas.	Balconies utilise one or a combination of the following design elements:  (a) sun screens (b) pergolas (c) louvres (d) green facades (e) openable walls.
PO 28.3	DTS/DPF 28.3
Balconies are of sufficient size and depth to accommodate outdoor seating and promote indoor / outdoor living.	Balconies open directly from a habitable room and incorporate a minimum dimension of 2m.
PO 28.4	DTS/DPF 28.4

Dwellings are provided with sufficient space for storage to meet likely occupant needs.	<p>Dwellings (not including student accommodation or serviced apartments) are provided with storage at the following rates with at least 50% or more of the storage volume to be provided within the dwelling:</p> <ul style="list-style-type: none"> <li>(a) studio: not less than 6m<sup>3</sup></li> <li>(b) 1 bedroom dwelling / apartment: not less than 8m<sup>3</sup></li> <li>(c) 2 bedroom dwelling / apartment: not less than 10m<sup>3</sup></li> <li>(d) 3+ bedroom dwelling / apartment: not less than 12m<sup>3</sup>.</li> </ul>
<p>PO 28.5</p> <p>Dwellings that use light wells for access to daylight, outlook and ventilation for habitable rooms, are designed to ensure a reasonable living amenity is provided.</p>	<p>DTS/DPF 28.5</p> <p>Light wells:</p> <ul style="list-style-type: none"> <li>(a) are not used as the primary source of outlook for living rooms</li> <li>(b) up to 18m in height have a minimum horizontal dimension of 3m, or 6m if overlooked by bedrooms</li> <li>(c) above 18m in height have a minimum horizontal dimension of 6m, or 9m if overlooked by bedrooms.</li> </ul>
<p>PO 28.6</p> <p>Attached or abutting dwellings are designed to minimise the transmission of sound between dwellings and, in particular, to protect bedrooms from possible noise intrusions.</p>	<p>DTS/DPF 28.6</p> <p>None are applicable.</p>
<p>PO 28.7</p> <p>Dwellings are designed so that internal structural columns correspond with the position of internal walls to ensure that the space within the dwelling/apartment is useable.</p>	<p>DTS/DPF 28.7</p> <p>None are applicable.</p>
Dwelling Configuration	
<p>PO 29.1</p> <p>Buildings containing in excess of 10 dwellings provide a variety of dwelling sizes and a range in the number of bedrooms per dwelling to contribute to housing diversity.</p>	<p>DTS/DPF 29.1</p> <p>Buildings containing in excess of 10 dwellings provide at least one of each of the following:</p> <ul style="list-style-type: none"> <li>(a) studio (where there is no separate bedroom)</li> <li>(b) 1 bedroom dwelling / apartment with a floor area of at least 50m<sup>2</sup></li> <li>(c) 2 bedroom dwelling / apartment with a floor area of at least 65m<sup>2</sup></li> <li>(d) 3+ bedroom dwelling / apartment with a floor area of at least 80m<sup>2</sup>, and any dwelling over 3 bedrooms provides an additional 15m<sup>2</sup> for every additional bedroom.</li> </ul>
<p>PO 29.2</p> <p>Dwellings located on the ground floor of multi-level buildings with 3 or more bedrooms have the windows of their habitable rooms overlooking internal courtyard space or other public space, where possible.</p>	<p>DTS/DPF 29.2</p> <p>None are applicable.</p>
Common Areas	
<p>PO 30.1</p> <p>The size of lifts, lobbies and corridors is sufficient to accommodate movement of bicycles, strollers, mobility aids and visitor waiting areas.</p>	<p>DTS/DPF 30.1</p> <p>Common corridor or circulation areas:</p> <ul style="list-style-type: none"> <li>(a) have a minimum ceiling height of 2.7m</li> </ul>

	<p>(b) provide access to no more than 8 dwellings</p> <p>(c) incorporate a wider section at apartment entries where the corridors exceed 12m in length from a core.</p>										
Group Dwellings, Residential Flat Buildings and Battle axe Development											
Amenity											
<p>PO 31.1</p> <p>Dwellings are of a suitable size to provide a high standard of amenity for occupants.</p>	<p>DTS/DPF 31.1</p> <p>Dwellings have a minimum internal floor area in accordance with the following table:</p> <table> <tr> <th>Number of bedrooms</th><th>Minimum internal floor area</th></tr> <tr> <td>Studio</td><td>35m<sup>2</sup></td></tr> <tr> <td>1 bedroom</td><td>50m<sup>2</sup></td></tr> <tr> <td>2 bedroom</td><td>65m<sup>2</sup></td></tr> <tr> <td>3+ bedrooms</td><td>80m<sup>2</sup> and any dwelling over 3 bedrooms provides an additional 15m<sup>2</sup> for every additional bedroom</td></tr> </table>	Number of bedrooms	Minimum internal floor area	Studio	35m <sup>2</sup>	1 bedroom	50m <sup>2</sup>	2 bedroom	65m <sup>2</sup>	3+ bedrooms	80m <sup>2</sup> and any dwelling over 3 bedrooms provides an additional 15m <sup>2</sup> for every additional bedroom
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Studio	35m <sup>2</sup>										
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2 bedroom	65m <sup>2</sup>										
3+ bedrooms	80m <sup>2</sup> and any dwelling over 3 bedrooms provides an additional 15m <sup>2</sup> for every additional bedroom										
<p>PO 31.2</p> <p>The orientation and siting of buildings minimises impacts on the amenity, outlook and privacy of occupants and neighbours.</p>	<p>DTS/DPF 31.2</p> <p>None are applicable.</p>										
<p>PO 31.3</p> <p>Development maximises the number of dwellings that face public open space and public streets and limits dwellings oriented towards adjoining properties.</p>	<p>DTS/DPF 31.3</p> <p>None are applicable.</p>										
<p>PO 31.4</p> <p>Battle-axe development is appropriately sited and designed to respond to the existing neighbourhood context.</p>	<p>DTS/DPF 31.4</p> <p>Dwelling sites/allotments are not in the form of a battle-axe arrangement.</p>										
Communal Open Space											
<p>PO 32.1</p> <p>Private open space provision may be substituted for communal open space which is designed and sited to meet the recreation and amenity needs of residents.</p>	<p>DTS/DPF 32.1</p> <p>None are applicable.</p>										
<p>PO 32.2</p> <p>Communal open space is of sufficient size and dimensions to cater for group recreation.</p>	<p>DTS/DPF 32.2</p> <p>Communal open space incorporates a minimum dimension of 5 metres.</p>										
<p>PO 32.3</p> <p>Communal open space is designed and sited to:</p> <p>(a) be conveniently accessed by the dwellings which it services</p> <p>(b) have regard to acoustic, safety, security and wind effects.</p>	<p>DTS/DPF 32.3</p> <p>None are applicable.</p>										

PO 32.4	DTS/DPF 32.4
Communal open space contains landscaping and facilities that are functional, attractive and encourage recreational use.	None are applicable.
PO 32.5	DTS/DPF 32.5
Communal open space is designed and sited to:	None are applicable.
<ul style="list-style-type: none"> <li>(a) in relation to rooftop or elevated gardens, minimise overlooking into habitable room windows or onto the useable private open space of other dwellings</li> <li>(b) in relation to ground floor communal space, be overlooked by habitable rooms to facilitate passive surveillance.</li> </ul>	
Car parking, access and manoeuvrability	
PO 33.1	DTS/DPF 33.1
Driveways and access points are designed and distributed to optimise the provision of on-street visitor parking.	<p>Where on-street parking is available directly adjacent the site, on-street parking is retained adjacent the subject site in accordance with the following requirements:</p> <ul style="list-style-type: none"> <li>(a) minimum 0.33 on-street car parks per proposed dwelling (rounded up to the nearest whole number)</li> <li>(b) minimum car park length of 5.4m where a vehicle can enter or exit a space directly</li> <li>(c) minimum carpark length of 6m for an intermediate space located between two other parking spaces or to an end obstruction where the parking is indented.</li> </ul>
PO 33.2	DTS/DPF 33.2
The number of vehicular access points onto public roads is minimised to reduce interruption of the footpath and positively contribute to public safety and walkability.	Access to group dwellings or dwellings within a residential flat building is provided via a single common driveway.
PO 33.3	DTS/DPF 33.3
Residential driveways that service more than one dwelling are designed to allow safe and convenient movement.	<p>Driveways that service more than 1 dwelling or a dwelling on a battle-axe site:</p> <ul style="list-style-type: none"> <li>(a) have a minimum width of 3m</li> <li>(b) for driveways servicing more than 3 dwellings: <ul style="list-style-type: none"> <li>(i) have a width of 5.5m or more and a length of 6m or more at the kerb of the primary street</li> <li>(ii) where the driveway length exceeds 30m, incorporate a passing point at least every 30 metres with a minimum width of 5.5m and a minimum length of 6m.</li> </ul> </li> </ul>
PO 33.4	DTS/DPF 33.4
Residential driveways that service more than one dwelling or a dwelling on a battle-axe site are designed to allow passenger vehicles to enter and exit and manoeuvre within the site in a safe and convenient manner.	Driveways providing access to more than one dwelling, or a dwelling on a battle-axe site, allow a B85 passenger vehicle to enter and exit the garages or parking spaces in no more than a three-point turn manoeuvre.
PO 33.5	DTS/DPF 33.5
Dwellings are adequately separated from common driveways and manoeuvring areas.	Dwelling walls with entry doors or ground level habitable room windows are set back at least 1.5m from any driveway or area

	designated for the movement and manoeuvring of vehicles.
Soft landscaping	
PO 34.1 Soft landscaping is provided between dwellings and common driveways to improve the outlook for occupants and appearance of common areas.	DTS/DPF 34.1 Other than where located directly in front of a garage or building entry, soft landscaping with a minimum dimension of 1m is provided between a dwelling and common driveway.
PO 34.2 Battle-axe or common driveways incorporate landscaping and permeability to improve appearance and assist in stormwater management.	DTS/DPF 34.2 Battle-axe or common driveways satisfy (a) and (b):  (a) are constructed of a minimum of 50% permeable or porous material (b) where the driveway is located directly adjacent the side or rear boundary of the site, soft landscaping with a minimum dimension of 1m is provided between the driveway and site boundary (excluding along the perimeter of a passing point).
Site Facilities / Waste Storage	
PO 35.1 Provision is made for suitable mailbox facilities close to the major pedestrian entry to the site or conveniently located considering the nature of accommodation and mobility of occupants.	DTS/DPF 35.1 None are applicable.
PO 35.2 Provision is made for suitable external clothes drying facilities.	DTS/DPF 35.2 None are applicable.
PO 35.3 Provision is made for suitable household waste and recyclable material storage facilities which are:  (a) located away, or screened, from public view, and (b) conveniently located in proximity to dwellings and the waste collection point.	DTS/DPF 35.3 None are applicable.
PO 35.4 Waste and recyclable material storage areas are located away from dwellings.	DTS/DPF 35.4 Dedicated waste and recyclable material storage areas are located at least 3m from any habitable room window.
PO 35.5 Where waste bins cannot be conveniently collected from the street, provision is made for on-site waste collection, designed to accommodate the safe and convenient access, egress and movement of waste collection vehicles.	DTS/DPF 35.5 None are applicable.
PO 35.6 Services including gas and water meters are conveniently located and screened from public view.	DTS/DPF 35.6 None are applicable.
Water sensitive urban design	
PO 36.1	DTS/DPF 36.1

Residential development creating a common driveway / access includes stormwater management systems that minimise the discharge of sediment, suspended solids, organic matter, nutrients, bacteria, litter and other contaminants to the stormwater system, watercourses or other water bodies.	None are applicable.
PO 36.2 Residential development creating a common driveway / access includes a stormwater management system designed to mitigate peak flows and manage the rate and duration of stormwater discharges from the site to ensure that the development does not increase the peak flows in downstream systems.	DTS/DPF 36.2 None are applicable.
Supported Accommodation and retirement facilities	
Siting, Configuration and Design	
PO 37.1 Supported accommodation and housing for aged persons and people with disabilities is located where on-site movement of residents is not unduly restricted by the slope of the land.	DTS/DPF 37.1 None are applicable.
PO 37.2 Universal design features are incorporated to provide options for people living with disabilities or limited mobility and / or to facilitate ageing in place.	DTS/DPF 37.2 None are applicable.
Movement and Access	
PO 38.1 Development is designed to support safe and convenient access and movement for residents by providing:  (a) ground-level access or lifted access to all units (b) level entry porches, ramps, paths, driveways, passenger loading areas and areas adjacent to footpaths that allow for the passing of wheelchairs and resting places (c) car parks with gradients no steeper than 1-in-40, and of sufficient area to provide for wheelchair manoeuvrability (d) kerb ramps at pedestrian crossing points.	DTS/DPF 38.1 None are applicable.
Communal Open Space	
PO 39.1 Development is designed to provide attractive, convenient and comfortable indoor and outdoor communal areas to be used by residents and visitors.	DTS/DPF 39.1 None are applicable.
PO 39.2 Private open space provision may be substituted for communal open space which is designed and sited to meet the recreation and amenity needs of residents.	DTS/DPF 39.2 None are applicable.
PO 39.3 Communal open space is of sufficient size and dimensions to cater for group recreation.	DTS/DPF 39.3 Communal open space incorporates a minimum dimension of 5 metres.

PO 39.4 Communal open space is designed and sited to:  (a) be conveniently accessed by the dwellings which it services (b) have regard to acoustic, safety, security and wind effects.	DTS/DPF 39.4  None are applicable.
PO 39.5 Communal open space contains landscaping and facilities that are functional, attractive and encourage recreational use.	DTS/DPF 39.5  None are applicable.
PO 39.6 Communal open space is designed and sited to:  (a) in relation to rooftop or elevated gardens, minimise overlooking into habitable room windows or onto the useable private open space of other dwellings (b) in relation to ground floor communal space, be overlooked by habitable rooms to facilitate passive surveillance.	DTS/DPF 39.6  None are applicable.
Site Facilities / Waste Storage	
PO 40.1 Development is designed to provide storage areas for personal items and specialised equipment such as small electric powered vehicles, including facilities for the recharging of small electric-powered vehicles.	DTS/DPF 40.1  None are applicable.
PO 40.2 Provision is made for suitable mailbox facilities close to the major pedestrian entry to the site or conveniently located considering the nature of accommodation and mobility of occupants.	DTS/DPF 40.2  None are applicable.
PO 40.3 Provision is made for suitable external clothes drying facilities.	DTS/DPF 40.3  None are applicable.
PO 40.4 Provision is made for suitable household waste and recyclable material storage facilities conveniently located away, or screened, from view.	DTS/DPF 40.4  None are applicable.
PO 40.5 Waste and recyclable material storage areas are located away from dwellings.	DTS/DPF 40.5  Dedicated waste and recyclable material storage areas are located at least 3m from any habitable room window.
PO 40.6 Provision is made for on-site waste collection where 10 or more bins are to be collected at any one time.	DTS/DPF 40.6  None are applicable.
PO 40.7 Services, including gas and water meters, are conveniently	DTS/DPF 40.7  None are applicable.

located and screened from public view.	
Student Accommodation	
<p>PO 41.1</p> <p>Student accommodation is designed to provide safe, secure, attractive, convenient and comfortable living conditions for residents, including an internal layout and facilities that are designed to provide sufficient space and amenity for the requirements of student life and promote social interaction.</p>	<p>DTS/DPF 41.1</p> <p>Student accommodation provides:</p> <ul style="list-style-type: none"> <li>(a) a range of living options to meet a variety of accommodation needs, such as one-bedroom, two-bedroom and disability access units</li> <li>(b) common or shared facilities to enable a more efficient use of space, including: <ul style="list-style-type: none"> <li>(i) shared cooking, laundry and external drying facilities</li> <li>(ii) internal and external communal and private open space provided in accordance with Design in Urban Areas Table 1 - Private Open Space</li> <li>(iii) common storage facilities at the rate of 8m<sup>3</sup> for every 2 dwellings or students</li> <li>(iv) common on-site parking in accordance with Transport, Access and Parking Table 1 - General Off-Street Car Parking Requirements or Table 2 - Off-Street Car Parking Requirements in Designated Areas</li> <li>(v) bicycle parking at the rate of one space for every 2 students.</li> </ul> </li> </ul>
<p>PO 41.2</p> <p>Student accommodation is designed to provide easy adaptation of the building to accommodate an alternative use of the building in the event it is no longer required for student housing.</p>	<p>DTS/DPF 41.2</p> <p>None are applicable.</p>
All non-residential development	
Water Sensitive Design	
<p>PO 42.1</p> <p>Development likely to result in risk of export of sediment, suspended solids, organic matter, nutrients, oil and grease include stormwater management systems designed to minimise pollutants entering stormwater.</p>	<p>DTS/DPF 42.1</p> <p>None are applicable.</p>
<p>PO 42.2</p> <p>Water discharged from a development site is of a physical, chemical and biological condition equivalent to or better than its pre-developed state.</p>	<p>DTS/DPF 42.2</p> <p>None are applicable.</p>
<p>PO 42.3</p> <p>Development includes stormwater management systems to mitigate peak flows and manage the rate and duration of stormwater discharges from the site to ensure that development does not increase peak flows in downstream systems.</p>	<p>DTS/DPF 42.3</p> <p>None are applicable.</p>
Wash-down and Waste Loading and Unloading	
<p>PO 43.1</p> <p>Areas for activities including loading and unloading, storage of</p>	<p>DTS/DPF 43.1</p> <p>None are applicable.</p>

<p>waste refuse bins in commercial and industrial development or wash-down areas used for the cleaning of vehicles, plant or equipment are:</p> <ul style="list-style-type: none"> <li>(a) designed to contain all wastewater likely to pollute stormwater within a bunded and roofed area to exclude the entry of external surface stormwater run-off</li> <li>(b) paved with an impervious material to facilitate wastewater collection</li> <li>(c) of sufficient size to prevent 'splash-out' or 'over-spray' of wastewater from the wash-down area</li> <li>(d) are designed to drain wastewater to either: <ul style="list-style-type: none"> <li>(i) a treatment device such as a sediment trap and coalescing plate oil separator with subsequent disposal to a sewer, private or Community Wastewater Management Scheme or</li> <li>(ii) a holding tank and its subsequent removal off-site on a regular basis.</li> </ul> </li> </ul>	
Laneway Development	
Infrastructure and Access	
<p>PO 44.1</p> <p>Development with a primary street comprising a laneway, alley, lane, right of way or similar minor thoroughfare only occurs where:</p> <ul style="list-style-type: none"> <li>(a) existing utility infrastructure and services are capable of accommodating the development</li> <li>(b) the primary street can support access by emergency and regular service vehicles (such as waste collection)</li> <li>(c) it does not require the provision or upgrading of infrastructure on public land (such as footpaths and stormwater management systems)</li> <li>(d) safety of pedestrians or vehicle movement is maintained</li> <li>(e) any necessary grade transition is accommodated within the site of the development to support an appropriate development intensity and orderly development of land fronting minor thoroughfares.</li> </ul>	<p>DTS/DPF 44.1</p> <p>Development with a primary street frontage that is not an alley, lane, right of way or similar public thoroughfare.</p>

Table 1 - Private Open Space

Dwelling Type	Dwelling / Site Configuration	Minimum Rate
Dwelling (at ground level, other than a residential flat building that includes above ground dwellings)		<p>Total private open space area:</p> <ul style="list-style-type: none"> <li>(a) Site area &lt;301m<sup>2</sup>: 24m<sup>2</sup> located behind the building line.</li> <li>(b) Site area ≥ 301m<sup>2</sup>: 60m<sup>2</sup> located behind the building line.</li> </ul> <p>Minimum directly accessible from a living room: 16m<sup>2</sup> / with a minimum dimension 3m.</p>

Cabin or caravan (permanently fixed to the ground) in a residential park or caravan and tourist park		Total area: 16m <sup>2</sup> , which may be used as second car parking space, provided on each site intended for residential occupation.
Dwelling in a residential flat building or mixed use building which incorporate above ground level dwellings	Dwellings at ground level:	15m <sup>2</sup> / minimum dimension 3m
	Dwellings above ground level:	
	Studio (no separate bedroom)	4m <sup>2</sup> / minimum dimension 1.8m
	One bedroom dwelling	8m <sup>2</sup> / minimum dimension 2.1m
	Two bedroom dwelling	11m <sup>2</sup> / minimum dimension 2.4m
	Three + bedroom dwelling	15 m <sup>2</sup> / minimum dimension 2.6m

## Forestry

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Commercial forestry is designed and sited to maximise economic benefits whilst managing potential negative impacts on the environment, transport networks, surrounding land uses and landscapes.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Siting	
PO 1.1 Commercial forestry plantations are established where there is no detrimental effect on the physical environment or scenic quality of the rural landscape.	DTS/DPF 1.1 None are applicable.
PO 1.2 Commercial forestry plantations are established on slopes that are stable to minimise the risk of soil erosion.	DTS/DPF 1.2 Commercial forestry plantations are not located on land with a slope exceeding 20% (1-in-5).
PO 1.3 Commercial forestry plantations and operations associated with their establishment, management and harvesting are	DTS/DPF 1.3 Commercial forestry plantations and operations associated with their establishment, management and harvesting are set back

appropriately set back from any sensitive receiver to minimise fire risk and noise disturbance.	50m or more from any sensitive receiver.
PO 1.4  Commercial forestry plantations are separated from reserves gazetted under the <i>National Parks and Wildlife Act 1972</i> and/or <i>Wilderness Protection Act 1992</i> to minimise fire risk and potential for weed infestation.	DTS/DPF 1.4  Commercial forestry plantations and operations associated with their establishment, management and harvesting are set back 50m or more from a reserve gazetted under the <i>National Parks and Wildlife Act 1972</i> and/or <i>Wilderness Protection Act 1992</i> .
Water Protection	
PO 2.1  Commercial forestry plantations incorporate artificial drainage lines (i.e. culverts, runoffs and constructed drains) integrated with natural drainage lines to minimise concentrated water flows onto or from plantation areas.	DTS/DPF 2.1  None are applicable.
PO 2.2  Appropriate siting, layout and design measures are adopted to minimise the impact of commercial forestry plantations on surface water resources.	DTS/DPF 2.2  Commercial forestry plantations:  (a) do not involve cultivation (excluding spot cultivation) in drainage lines (b) are set back 20m or more from the banks of any major watercourse (a third order or higher watercourse), lake, reservoir, wetland or sinkhole (with direct connection to an aquifer) (c) are set back 10m or more from the banks of any first or second order watercourse or sinkhole (with no direct connection to an aquifer).
Fire Management	
PO 3.1  Commercial forestry plantations incorporate appropriate firebreaks and fire management design elements.	DTS/DPF 3.1  Commercial forestry plantations provide:  (a) 7m or more wide external boundary firebreaks for plantations of 40ha or less (b) 10m or more wide external boundary firebreaks for plantations of between 40ha and 100ha (c) 20m or more wide external boundary firebreaks, or 10m with an additional 10m or more of fuel-reduced plantation, for plantations of 100ha or greater.
PO 3.2  Commercial forestry plantations incorporate appropriate fire management access tracks.	DTS/DPF 3.2  Commercial forestry plantation fire management access tracks:  (a) are incorporated within all firebreaks (b) are 7m or more wide with a vertical clearance of 4m or more (c) are aligned to provide straight through access at junctions, or if they are a no through access track are appropriately signposted and provide suitable turnaround areas for fire-fighting vehicles (d) partition the plantation into units of 40ha or less in area.
Power-line Clearances	
PO 4.1	DTS/DPF 4.1

Commercial forestry plantations achieve and maintain appropriate clearances from aboveground powerlines.

Commercial forestry plantations incorporating trees with an expected mature height of greater than 6m meet the clearance requirements listed in the following table:

Voltage of transmission line	Tower or Pole	Minimum horizontal clearance distance between plantings and transmission lines
500 kV	Tower	38m
275 kV	Tower	25m
132 kV	Tower	30m
132 kV	Pole	20m
66 kV	Pole	20m
Less than 66 kV	Pole	20m

## Housing Renewal

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Renewed residential environments replace older social housing and provide new social housing infrastructure and other housing options and tenures to enhance the residential amenity of the local area.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Land Use and Intensity	
PO 1.1 Residential development provides a range of housing choices.	DTS/DPF 1.1 Development comprises one or more of the following: <ul style="list-style-type: none"> <li>(a) detached dwellings</li> <li>(b) semi-detached dwellings</li> <li>(c) row dwellings</li> <li>(d) group dwellings</li> </ul>

	(e) residential flat buildings.
PO 1.2 Medium-density housing options or higher are located in close proximity to public transit, open space and/or activity centres.	DTS/DPF 1.2 None are applicable.
Building Height	
PO 2.1 Buildings generally do not exceed 3 building levels unless in locations close to public transport, centres and/or open space.	DTS/DPF 2.1 Building height (excluding garages, carports and outbuildings) does not exceed 3 building levels and 12m and wall height does not exceed 9m (not including a gable end).
PO 2.2 Medium or high rise residential flat buildings located within or at the interface with zones which restrict heights to a maximum of 2 building levels transition down in scale and height towards the boundary of that zone, other than where it is a street boundary.	DTS/DPF 2.2 None are applicable.
Primary Street Setback	
PO 3.1 Buildings are set back from the primary street boundary to contribute to an attractive streetscape character.	DTS/DPF 3.1 Buildings are no closer to the primary street (excluding any balcony, verandah, porch, awning or similar structure) than 3m.
Secondary Street Setback	
PO 4.1 Buildings are set back from secondary street boundaries to maintain separation between building walls and public streets and contribute to a suburban streetscape character.	DTS/DPF 4.1 Buildings are set back at least 900mm from the boundary of the allotment with a secondary street frontage.
Boundary Walls	
PO 5.1 Boundary walls are limited in height and length to manage visual impacts and access to natural light and ventilation.	DTS/DPF 5.1 Except where the dwelling is located on a central site within a row dwelling or terrace arrangement, dwellings with side boundary walls are sited on only one side boundary and satisfy (a) or (b):  (a) adjoin or abut a boundary wall of a building on adjoining land for the same length and height (b) do not: (i) exceed 3.2m in height from the lower of the natural or finished ground level (ii) exceed 11.5m in length (iii) when combined with other walls on the boundary of the subject development site, a maximum 45% of the length of the boundary (iv) encroach within 3 metres of any other existing or proposed boundary walls on the subject land.
PO 5.2 Dwellings in a semi-detached, row or terrace arrangement maintain space between buildings consistent with a suburban	DTS/DPF 5.2 Dwellings in a semi-detached or row arrangement are set back 900mm or more from side boundaries shared with allotments

streetscape character.	outside the development site, except for a carport or garage.
Side Boundary Setback	
<p>PO 6.1</p> <p>Buildings are set back from side boundaries to provide:</p> <ul style="list-style-type: none"> <li>(a) separation between dwellings in a way that contributes to a suburban character</li> <li>(b) access to natural light and ventilation for neighbours.</li> </ul>	<p>DTS/DPF 6.1</p> <p>Other than walls located on a side boundary, buildings are set back from side boundaries:</p> <ul style="list-style-type: none"> <li>(a) at least 900mm where the wall height is up to 3m</li> <li>(b) other than for a wall facing a southern side boundary, at least 900mm plus 1/3 of the wall height above 3m</li> <li>(c) at least 1.9m plus 1/3 of the wall height above 3m for walls facing a southern side boundary.</li> </ul>
Rear Boundary Setback	
<p>PO 7.1</p> <p>Buildings are set back from rear boundaries to provide:</p> <ul style="list-style-type: none"> <li>(a) separation between dwellings in a way that contributes to a suburban character</li> <li>(b) access to natural light and ventilation for neighbours</li> <li>(c) private open space</li> <li>(d) space for landscaping and vegetation.</li> </ul>	<p>DTS/DPF 7.1</p> <p>Dwellings are set back from the rear boundary:</p> <ul style="list-style-type: none"> <li>(a) 3m or more for the first building level</li> <li>(b) 5m or more for any subsequent building level.</li> </ul>
Buildings elevation design	
<p>PO 8.1</p> <p>Dwelling elevations facing public streets and common driveways make a positive contribution to the streetscape and common driveway areas.</p>	<p>DTS/DPF 8.1</p> <p>Each dwelling includes at least 3 of the following design features within the building elevation facing a primary street, and at least 2 of the following design features within the building elevation facing any other public road (other than a laneway) or a common driveway:</p> <ul style="list-style-type: none"> <li>(a) a minimum of 30% of the building elevation is set back an additional 300mm from the building line</li> <li>(b) a porch or portico projects at least 1m from the building elevation</li> <li>(c) a balcony projects from the building elevation</li> <li>(d) a verandah projects at least 1m from the building elevation</li> <li>(e) eaves of a minimum 400mm width extend along the width of the front elevation</li> <li>(f) a minimum 30% of the width of the upper level projects forward from the lower level primary building line by at least 300mm.</li> <li>(g) a minimum of two different materials or finishes are incorporated on the walls of the building elevation, with a maximum of 80% of the building elevation in a single material or finish.</li> </ul>
<p>PO 8.2</p> <p>Dwellings incorporate windows along primary street frontages to encourage passive surveillance and make a positive contribution to the streetscape.</p>	<p>DTS/DPF 8.2</p> <p>Each dwelling with a frontage to a public street:</p> <ul style="list-style-type: none"> <li>(a) includes at least one window facing the primary street from a habitable room that has a minimum internal room dimension of 2.4m</li> <li>(b) has an aggregate window area of at least 2m<sup>2</sup> facing the primary street</li> </ul>

PO 8.3	DTS/DPF 8.3											
The visual mass of larger buildings is reduced when viewed from adjoining allotments or public streets.	None are applicable.											
PO 8.4	DTS/DPF 8.4											
Built form considers local context and provides a quality design response through scale, massing, materials, colours and architectural expression.	None are applicable.											
PO 8.5	DTS/DPF 8.5											
Entrances to multi-storey buildings are:  (a) oriented towards the street (b) visible and easily identifiable from the street (c) designed to include a common mail box structure.	None are applicable.											
Outlook and amenity												
PO 9.1	DTS/DPF 9.1											
Living rooms have an external outlook to provide a high standard of amenity for occupants.	A living room of a dwelling incorporates a window with an external outlook towards the street frontage or private open space.											
PO 9.2	DTS/DPF 9.2											
Bedrooms are separated or shielded from active communal recreation areas, common access areas and vehicle parking areas and access ways to mitigate noise and artificial light intrusion.	None are applicable.											
Private Open Space												
PO 10.1	DTS/DPF 10.1											
Dwellings are provided with suitable sized areas of usable private open space to meet the needs of occupants.	Private open space is provided in accordance with the following table: <table><tr><th>Dwelling Type</th><th>Dwelling / Site Configuration</th><th>Minimum Rate</th></tr><tr><td>Dwelling (at ground level)</td><td></td><td>Total area: 24m<sup>2</sup> located behind the building line  Minimum adjacent to a living room: 16m<sup>2</sup> with a minimum dimension 3m</td></tr><tr><td rowspan="2">Dwelling (above ground level)</td><td>Studio</td><td>4m<sup>2</sup> / minimum dimension 1.8m</td></tr><tr><td>One bedroom dwelling</td><td>8m<sup>2</sup> / minimum dimension 2.1m</td></tr></table>	Dwelling Type	Dwelling / Site Configuration	Minimum Rate	Dwelling (at ground level)		Total area: 24m <sup>2</sup> located behind the building line  Minimum adjacent to a living room: 16m <sup>2</sup> with a minimum dimension 3m	Dwelling (above ground level)	Studio	4m <sup>2</sup> / minimum dimension 1.8m	One bedroom dwelling	8m <sup>2</sup> / minimum dimension 2.1m
Dwelling Type	Dwelling / Site Configuration	Minimum Rate										
Dwelling (at ground level)		Total area: 24m <sup>2</sup> located behind the building line  Minimum adjacent to a living room: 16m <sup>2</sup> with a minimum dimension 3m										
Dwelling (above ground level)	Studio	4m <sup>2</sup> / minimum dimension 1.8m										
	One bedroom dwelling	8m <sup>2</sup> / minimum dimension 2.1m										

		Two bedroom dwelling	11m <sup>2</sup> / minimum dimension 2.4m
		Three + bedroom dwelling	15 m <sup>2</sup> / minimum dimension 2.6m
PO 10.2  Private open space positioned to provide convenient access from internal living areas.	DTS/DPF 10.2  At least 50% of the required area of private open space is accessible from a habitable room.		
PO 10.3  Private open space is positioned and designed to:  (a) provide useable outdoor space that suits the needs of occupants; (b) take advantage of desirable orientation and vistas; and (c) adequately define public and private space.	DTS/DPF 10.3  None are applicable.		
Visual privacy			
PO 11.1  Development mitigates direct overlooking from upper level windows to habitable rooms and private open spaces of adjoining residential uses.	DTS/DPF 11.1  Upper level windows facing side or rear boundaries shared with another residential allotment/site satisfy one of the following:  (a) are permanently obscured to a height of 1.5m above finished floor level and are fixed or not capable of being opened more than 200mm (b) have sill heights greater than or equal to 1.5m above finished floor level (c) incorporate screening with a maximum of 25% openings, permanently fixed no more than 500mm from the window surface and sited adjacent to any part of the window less than 1.5m above the finished floor.		
PO 11.2  Development mitigates direct overlooking from upper level balconies and terraces to habitable rooms and private open space of adjoining residential uses.	DTS/DPF 11.2  One of the following is satisfied:  (a) the longest side of the balcony or terrace will face a public road, public road reserve or public reserve that is at least 15m wide in all places faced by the balcony or terrace or (b) all sides of balconies or terraces on upper building levels are permanently obscured by screening with a maximum 25% transparency/openings fixed to a minimum height of: (i) 1.5m above finished floor level where the balcony is located at least 15 metres from the nearest habitable window of a dwelling on adjacent land or (ii) 1.7m above finished floor level in all other cases		
Landscaping			

<p>PO 12.1</p> <p>Soft landscaping is incorporated into development to:</p> <ul style="list-style-type: none"> <li>(a) minimise heat absorption and reflection</li> <li>(b) maximise shade and shelter</li> <li>(c) maximise stormwater infiltration and biodiversity</li> <li>(d) enhance the appearance of land and streetscapes.</li> </ul>	<p>DTS/DPF 12.1</p> <p>Residential development incorporates pervious areas for soft landscaping with a minimum dimension of 700mm provided in accordance with (a) and (b):</p> <ul style="list-style-type: none"> <li>(a) a total area as determined by the following table:</li> </ul> <table border="1"> <tr> <th>Dwelling site area (or in the case of residential flat building or group dwelling(s), average site area) (m<sup>2</sup>)</th><th>Minimum percentage of site</th></tr> <tr> <td>&lt;150</td><td>10%</td></tr> <tr> <td>&lt;200</td><td>15%</td></tr> <tr> <td>200-450</td><td>20%</td></tr> <tr> <td>&gt;450</td><td>25%</td></tr> </table> <ul style="list-style-type: none"> <li>(b) at least 30% of land between the road boundary and the building line.</li> </ul>	Dwelling site area (or in the case of residential flat building or group dwelling(s), average site area) (m <sup>2</sup> )	Minimum percentage of site	<150	10%	<200	15%	200-450	20%	>450	25%
Dwelling site area (or in the case of residential flat building or group dwelling(s), average site area) (m <sup>2</sup> )	Minimum percentage of site										
<150	10%										
<200	15%										
200-450	20%										
>450	25%										
Water Sensitive Design											
<p>PO 13.1</p> <p>Residential development is designed to capture and use stormwater to:</p> <ul style="list-style-type: none"> <li>(a) maximise efficient use of water resources</li> <li>(b) manage peak stormwater runoff flows and volume to ensure the carrying capacities of downstream systems are not overloaded</li> <li>(c) manage runoff quality to maintain, as close as practical, pre-development conditions.</li> </ul>	<p>DTS/DPF 13.1</p> <p>None are applicable.</p>										
Car Parking											
<p>PO 14.1</p> <p>On-site car parking is provided to meet the anticipated demand of residents, with less on-site parking in areas in close proximity to public transport.</p>	<p>DTS/DPF 14.1</p> <p>On-site car parking is provided at the following rates per dwelling:</p> <ul style="list-style-type: none"> <li>(a) 2 or fewer bedrooms - 1 car parking space</li> <li>(b) 3 or more bedrooms - 2 car parking spaces.</li> </ul>										
<p>PO 14.2</p> <p>Enclosed car parking spaces are of dimensions to be functional, accessible and convenient.</p>	<p>DTS/DPF 14.2</p> <p>Residential parking spaces enclosed by fencing, walls or other obstructions with the following internal dimensions (separate from any waste storage area):</p> <ul style="list-style-type: none"> <li>(a) single parking spaces: <ul style="list-style-type: none"> <li>(i) a minimum length of 5.4m</li> <li>(ii) a minimum width of 3.0m</li> <li>(iii) a minimum garage door width of 2.4m</li> </ul> </li> <li>(b) double parking spaces (side by side): <ul style="list-style-type: none"> <li>(i) a minimum length of 5.4m</li> <li>(ii) a minimum width of 5.5m</li> <li>(iii) minimum garage door width of 2.4m per space.</li> </ul> </li> </ul>										
<p>PO 14.3</p> <p>Uncovered car parking spaces are of dimensions to be</p>	<p>DTS/DPF 14.3</p> <p>Uncovered car parking spaces have:</p>										

functional, accessible and convenient.	<ul style="list-style-type: none"> <li>(a) a minimum length of 5.4m</li> <li>(b) a minimum width of 2.4m</li> <li>(c) a minimum width between the centre line of the space and any fence, wall or other obstruction of 1.5m.</li> </ul>
PO 14.4 Residential flat buildings and group dwelling developments provide sufficient on-site visitor car parking to cater for anticipated demand.	DTS/DPF 14.4 Visitor car parking for group and residential flat buildings incorporating 4 or more dwellings is provided on-site at a minimum ratio of 0.25 car parking spaces per dwelling.
PO 14.5 Residential flat buildings provide dedicated areas for bicycle parking.	DTS/DPF 14.5 Residential flat buildings provide one bicycle parking space per dwelling.
Overshadowing	
PO 15.1 Development minimises overshadowing of the private open spaces of adjoining land by ensuring that ground level open space associated with residential buildings receive direct sunlight for a minimum of 2 hours between 9am and 3pm on 21 June.	DTS/DPF 15.1 None are applicable.
Waste	
PO 16.1 Provision is made for the convenient storage of waste bins in a location screened from public view.	DTS/DPF 16.1 A waste bin storage area is provided behind the primary building line that: <ul style="list-style-type: none"> <li>(a) has a minimum area of 2m<sup>2</sup> with a minimum dimension of 900mm (separate from any designated car parking spaces or private open space).; and</li> <li>(b) has a continuous unobstructed path of travel (excluding moveable objects like gates, vehicles and roller doors) with a minimum width of 800mm between the waste bin storage area and the street.</li> </ul>
PO 16.2 Residential flat buildings provide a dedicated area for the on-site storage of waste which is: <ul style="list-style-type: none"> <li>(a) easily and safely accessible for residents and for collection vehicles</li> <li>(b) screened from adjoining land and public roads</li> <li>(c) of sufficient dimensions to be able to accommodate the waste storage needs of the development considering the intensity and nature of the development and the frequency of collection.</li> </ul>	DTS/DPF 16.2 None are applicable.
Vehicle Access	
PO 17.1 Driveways are located and designed to facilitate safe access and egress while maximising land available for street tree planting, landscaped street frontages and on-street parking.	DTS/DPF 17.1 None are applicable.
PO 17.2	DTS/DPF 17.2

<p>Vehicle access is safe, convenient, minimises interruption to the operation of public roads and does not interfere with street infrastructure or street trees.</p>	<p>Vehicle access to designated car parking spaces satisfy (a) or (b):</p> <ul style="list-style-type: none"> <li>(a) is provided via a lawfully existing or authorised access point or an access point for which consent has been granted as part of an application for the division of land</li> <li>(b) where newly proposed, is set back: <ul style="list-style-type: none"> <li>(i) 0.5m or more from any street furniture, street pole, infrastructure services pit, or other stormwater or utility infrastructure unless consent is provided from the asset owner</li> <li>(ii) 2m or more from the base of the trunk of a street tree unless consent is provided from the tree owner for a lesser distance</li> <li>(iii) 6m or more from the tangent point of an intersection of 2 or more roads</li> <li>(iv) outside of the marked lines or infrastructure dedicating a pedestrian crossing.</li> </ul> </li> </ul>
<p>PO 17.3</p> <p>Driveways are designed to enable safe and convenient vehicle movements from the public road to on-site parking spaces.</p>	<p>DTS/DPF 17.3</p> <p>Driveways are designed and sited so that:</p> <ul style="list-style-type: none"> <li>(a) the gradient from the place of access on the boundary of the allotment to the finished floor level at the front of the garage or carport is not more than 1-in-4 on average</li> <li>(b) they are aligned relative to the street so that there is no more than a 20 degree deviation from 90 degrees between the centreline of any dedicated car parking space to which it provides access (measured from the front of that space) and the road boundary.</li> <li>(c) if located so as to provide access from an alley, lane or right of way - the alley, lane or right of way is at least 6.2m wide along the boundary of the allotment / site.</li> </ul>
<p>PO 17.4</p> <p>Driveways and access points are designed and distributed to optimise the provision of on-street parking.</p>	<p>DTS/DPF 17.4</p> <p>Where on-street parking is available abutting the site's street frontage, on-street parking is retained in accordance with the following requirements:</p> <ol style="list-style-type: none"> <li>1. minimum 0.33 on-street spaces per dwelling on the site (rounded up to the nearest whole number)</li> <li>2. Minimum car park length of 5.4m where a vehicle can enter or exit a space directly</li> <li>3. minimum car park length of 6m for an intermediate space located between two other parking spaces.</li> </ol>
<p>PO 17.5</p> <p>Residential driveways that service more than one dwelling of a dimension to allow safe and convenient movement.</p>	<p>DTS/DPF 17.5</p> <p>Where on-street parking is available abutting the site's street frontage, on-street parking is retained in accordance with the following requirements:</p> <ul style="list-style-type: none"> <li>(a) minimum 0.33 on-street spaces per dwelling on the site (rounded up to the nearest whole number)</li> <li>(b) minimum car park length of 5.4m where a vehicle can enter or exit a space directly</li> <li>(c) minimum carpark length of 6m for an intermediate space located between two other parking spaces or to</li> </ul>

	an end obstruction where the parking is indented.
PO 17.6 Residential driveways that service more than one dwelling are designed to allow passenger vehicles to enter and exit the site and manoeuvre within the site in a safe and convenient manner.	DTS/DPF 17.6 Driveways providing access to more than one dwelling, or a dwelling on a battle-axe site, allow a B85 passenger vehicle to enter and exit the garages or parking spaces in no more than a three-point turn manoeuvre
PO 17.7 Dwellings are adequately separated from common driveways and manoeuvring areas.	DTS/DPF 17.7 Dwelling walls with entry doors or ground level habitable room windows are set back at least 1.5m from any driveway or area designated for the movement and manoeuvring of vehicles.
Storage	
PO 18.1 Dwellings are provided with sufficient and accessible space for storage to meet likely occupant needs.	DTS/DPF 18.1 Dwellings are provided with storage at the following rates and 50% or more of the storage volume is provided within the dwelling:  (a) studio: not less than 6m <sup>3</sup> (b) 1 bedroom dwelling / apartment: not less than 8m <sup>3</sup> (c) 2 bedroom dwelling / apartment: not less than 10m <sup>3</sup> (d) 3+ bedroom dwelling / apartment: not less than 12m <sup>3</sup> .
Earthworks	
PO 19.1 Development, including any associated driveways and access tracks, minimises the need for earthworks to limit disturbance to natural topography.	DTS/DPF 19.1 The development does not involve:  (a) excavation exceeding a vertical height of 1m or (b) filling exceeding a vertical height of 1m or (c) a total combined excavation and filling vertical height exceeding 2m.
Service connections and infrastructure	
PO 20.1 Dwellings are provided with appropriate service connections and infrastructure.	DTS/DPF 20.1 The site and building:  (a) have the ability to be connected to a permanent potable water supply (b) have the ability to be connected to a sewerage system, or a wastewater system approved under the <i>South Australian Public Health Act 2011</i> (c) have the ability to be connected to electricity supply (d) have the ability to be connected to an adequate water supply (and pressure) for fire-fighting purposes (e) would not be contrary to the Regulations prescribed for the purposes of Section 86 of the <i>Electricity Act 1996</i> .
Site contamination	
PO 21.1 Land that is suitable for sensitive land uses to provide a safe environment.	DTS/DPF 21.1 Development satisfies (a), (b), (c) or (d):

	<p>(a) does not involve a change in the use of land</p> <p>(b) involves a change in the use of land that does not constitute a change to a <u>more sensitive use</u></p> <p>(c) involves a change in the use of land to a <u>more sensitive use</u> on land at which <u>site contamination</u> does not exist (as demonstrated in a <u>site contamination declaration form</u>)</p> <p>(d) involves a change in the use of land to a <u>more sensitive use</u> on land at which <u>site contamination</u> exists, or may exist (as demonstrated in a <u>site contamination declaration form</u>), and satisfies both of the following:</p> <p>(i) a <u>site contamination audit report</u> has been prepared under Part 10A of the <i>Environment Protection Act 1993</i> in relation to the land within the previous 5 years which states that</p> <p>A. <u>site contamination</u> does not exist (or no longer exists) at the land or</p> <p>B. the land is suitable for the proposed use or range of uses (without the need for any further <u>remediation</u>) or</p> <p>C. where <u>remediation</u> is, or remains, necessary for the proposed use (or range of uses), <u>remediation work</u> has been carried out or will be carried out (and the applicant has provided a written undertaking that the remediation works will be implemented in association with the development)</p> <p>and</p> <p>(ii) no other <u>class 1 activity</u> or <u>class 2 activity</u> has taken place at the land since the preparation of the site contamination audit report (as demonstrated in a <u>site contamination declaration form</u>).</p>
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## Infrastructure and Renewable Energy Facilities

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Efficient provision of infrastructure networks and services, renewable energy facilities and ancillary development in a manner that minimises hazard, is environmentally and culturally sensitive and manages adverse visual impacts on natural and rural landscapes and residential amenity.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria /
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Designated Performance Feature	
General	
PO 1.1 Development is located and designed to minimise hazard or nuisance to adjacent development and land uses.	DTS/DPF 1.1 None are applicable.
Visual Amenity	
PO 2.1 The visual impact of above-ground infrastructure networks and services (excluding high voltage transmission lines), renewable energy facilities (excluding wind farms), energy storage facilities and ancillary development is minimised from townships, scenic routes and public roads by:  <ul style="list-style-type: none"> <li>(a) utilising features of the natural landscape to obscure views where practicable</li> <li>(b) siting development below ridgelines where practicable</li> <li>(c) avoiding visually sensitive and significant landscapes</li> <li>(d) using materials and finishes with low-reflectivity and colours that complement the surroundings</li> <li>(e) using existing vegetation to screen buildings</li> <li>(f) incorporating landscaping or landscaped mounding around the perimeter of a site and between adjacent allotments accommodating or zoned to primarily accommodate sensitive receivers.</li> </ul>	DTS/DPF 2.1 None are applicable.
PO 2.2 Pumping stations, battery storage facilities, maintenance sheds and other ancillary structures incorporate vegetation buffers to reduce adverse visual impacts on adjacent land.	DTS/DPF 2.2 None are applicable.
PO 2.3 Surfaces exposed by earthworks associated with the installation of storage facilities, pipework, penstock, substations and other ancillary plant are reinstated and revegetated to reduce adverse visual impacts on adjacent land.	DTS/DPF 2.3 None are applicable.
Rehabilitation	
PO 3.1 Progressive rehabilitation (incorporating revegetation) of disturbed areas, ahead of or upon decommissioning of areas used for renewable energy facilities and transmission corridors.	DTS/DPF 3.1 None are applicable.
Hazard Management	

PO 4.1	DTs/DPF 4.1
Infrastructure and renewable energy facilities and ancillary development located and operated to not adversely impact maritime or air transport safety, including the operation of ports, airfields and landing strips.	None are applicable.
PO 4.2	DTs/DPF 4.2
Facilities for energy generation, power storage and transmission are separated as far as practicable from dwellings, tourist accommodation and frequently visited public places (such as viewing platforms / lookouts) to reduce risks to public safety from fire or equipment malfunction.	None are applicable.
PO 4.3	DTs/DPF 4.3
Bushfire hazard risk is minimised for renewable energy facilities by providing appropriate access tracks, safety equipment and water tanks and establishing cleared areas around substations, battery storage and operations compounds.	None are applicable.
Electricity Infrastructure and Battery Storage Facilities	
PO 5.1	DTs/DPF 5.1
Electricity infrastructure is located to minimise visual impacts through techniques including: <ul style="list-style-type: none"> <li>(a) siting utilities and services: <ul style="list-style-type: none"> <li>(i) on areas already cleared of native vegetation</li> <li>(ii) where there is minimal interference or disturbance to existing native vegetation or biodiversity</li> </ul> </li> <li>(b) grouping utility buildings and structures with non-residential development, where practicable.</li> </ul>	None are applicable.
PO 5.2	DTs/DPF 5.2
Electricity supply (excluding transmission lines) serving new development in urban areas and townships installed underground, excluding lines having a capacity exceeding or equal to 33kV.	None are applicable.
PO 5.3	DTs/DPF 5.3
Battery storage facilities are co-located with substation infrastructure where practicable to minimise the development footprint and reduce environmental impacts.	None are applicable.
Telecommunication Facilities	
PO 6.1	DTs/DPF 6.1
The proliferation of telecommunications facilities in the form of towers/monopoles in any one locality is	None are applicable.

managed, where technically feasible, by co-locating a facility with other communications facilities to mitigate impacts from clutter on visual amenity.	
<p>PO 6.2</p> <p>Telecommunications antennae are located as close as practicable to support structures to manage overall bulk and mitigate impacts on visual amenity.</p>	<p>DTS/DPF 6.2</p> <p>None are applicable.</p>
<p>PO 6.3</p> <p>Telecommunications facilities, particularly towers/monopoles, are located and sized to mitigate visual impacts by the following methods:</p> <p>(a) where technically feasible, incorporating the facility within an existing structure that may serve another purpose</p> <p>or all of the following:</p> <p>(b) using existing buildings and landscape features to obscure or interrupt views of a facility from nearby public roads, residential areas and places of high public amenity to the extent practical without unduly hindering the effective provision of telecommunications services</p> <p>(c) using materials and finishes that complement the environment</p> <p>(d) screening using landscaping and vegetation, particularly for equipment shelters and huts.</p>	<p>DTS/DPF 6.3</p> <p>None are applicable.</p>
Renewable Energy Facilities	
<p>PO 7.1</p> <p>Renewable energy facilities are located as close as practicable to existing transmission infrastructure to facilitate connections and minimise environmental impacts as a result of extending transmission infrastructure.</p>	<p>DTS/DPF 7.1</p> <p>None are applicable.</p>
Renewable Energy Facilities (Wind Farm)	
<p>PO 8.1</p> <p>Visual impact of wind turbine generators on the amenity of residential and tourist development is reduced through appropriate separation.</p>	<p>DTS/DPF 8.1</p> <p>Wind turbine generators are:</p> <p>(a) set back at least 2000m from the base of a turbine to any of the following zones:</p> <ul style="list-style-type: none"> <li>(i) Rural Settlement Zone</li> <li>(ii) Township Zone</li> <li>(iii) Rural Living Zone</li> <li>(iv) Rural Neighbourhood Zone</li> </ul> <p>with an additional 10m setback per additional metre over 150m overall turbine height (measured from the base of the turbine).</p> <p>(b) set back at least 1500m from the base of the turbine to non-associated (non-stakeholder) dwellings and tourist accommodation</p>

PO 8.2	DTS/DPF 8.2				
The visual impact of wind turbine generators on natural landscapes is managed by:  (a) designing wind turbine generators to be uniform in colour, size and shape (b) coordinating blade rotation and direction (c) mounting wind turbine generators on tubular towers as opposed to lattice towers.	None are applicable.				
PO 8.3	DTS/DPF 8.3				
Wind turbine generators and ancillary development minimise potential for bird and bat strike.	None are applicable.				
PO 8.4	DTS/DPF 8.4				
Wind turbine generators incorporate recognition systems or physical markers to minimise the risk to aircraft operations.	No Commonwealth air safety (CASA / ASA) or Defence requirement is applicable.				
PO 8.5	DTS/DPF 8.5				
Meteorological masts and guidewires are identifiable to aircraft through the use of colour bands, marker balls, high visibility sleeves or flashing strobes.	None are applicable.				
Renewable Energy Facilities (Solar Power)					
PO 9.1	DTS/DPF 9.1				
Ground mounted solar power facilities generating 5MW or more are not located on land requiring the clearance of areas of intact native vegetation or on land of high environmental, scenic or cultural value.	None are applicable.				
PO 9.2	DTS/DPF 9.2				
Ground mounted solar power facilities allow for movement of wildlife by:  (a) incorporating wildlife corridors and habitat refuges (b) avoiding the use of extensive security or perimeter fencing or incorporating fencing that enables the passage of small animals without unreasonably compromising the security of the facility.	None are applicable.				
PO 9.3	DTS/DPF 9.3				
Amenity impacts of solar power facilities are minimised through separation from conservation areas and sensitive receivers in other ownership.	Ground mounted solar power facilities are set back from land boundaries, conservation areas and relevant zones in accordance with the following criteria:				
	Generation Capacity	Approximate size of array	Setback from adjoining land boundary	Setback from conservation areas	Setback from Township, Rural Settlement, Rural Neighbourhood

					<b>and Rural Living Zones<sup>1</sup></b>
	50MW>	80ha+	30m	500m	2km
	10MW<50MW	16ha-<80ha	25m	500m	1.5km
	5MW<10MW	8ha to <16ha	20m	500m	1km
	1MW<5MW	1.6ha to <8ha	15m	500m	500m
	100kW<1MW	0.5ha<1.6ha	10m	500m	100m
	<100kW	<0.5ha	5m	500m	25m
Notes:  1. Does not apply when the site of the proposed ground mounted solar power facility is located within one of these zones.					
PO 9.4  Ground mounted solar power facilities incorporate landscaping within setbacks from adjacent road frontages and boundaries of adjacent allotments accommodating non-host dwellings, where balanced with infrastructure access and bushfire safety considerations.	DTS/DPF 9.4  None are applicable.				
Hydropower / Pumped Hydropower Facilities					
PO 10.1  Hydropower / pumped hydropower facility storage is designed and operated to minimise the risk of storage dam failure.	DTS/DPF 10.1  None are applicable.				
PO 10.2  Hydropower / pumped hydropower facility storage is designed and operated to minimise water loss through increased evaporation or system leakage, with the incorporation of appropriate liners, dam covers, operational measures or detection systems.	DTS/DPF 10.2  None are applicable.				
PO 10.3  Hydropower / pumped hydropower facilities on existing or former mine sites minimise environmental impacts from site contamination, including from mine operations or water sources subject to such processes, now or in the future.	DTS/DPF 10.3  None are applicable.				
Water Supply					
PO 11.1	DTS/DPF 11.1				

Development is connected to an appropriate water supply to meet the ongoing requirements of the intended use.	Development is connected, or will be connected, to a reticulated water scheme or mains water supply with the capacity to meet the on-going requirements of the development.
<p>PO 11.2</p> <p>Dwellings are connected to a reticulated water scheme or mains water supply with the capacity to meet the requirements of the intended use. Where this is not available an appropriate rainwater tank or storage system for domestic use is provided.</p>	<p>DTS/DPF 11.2</p> <p>A dwelling is connected, or will be connected, to a reticulated water scheme or mains water supply with the capacity to meet the requirements of the development. Where this is not available it is serviced by a rainwater tank or tanks capable of holding at least 50,000 litres of water which is:</p> <ul style="list-style-type: none"> <li>(a) exclusively for domestic use</li> <li>(b) connected to the roof drainage system of the dwelling.</li> </ul>
Wastewater Services	
<p>PO 12.1</p> <p>Development is connected to an approved common wastewater disposal service with the capacity to meet the requirements of the intended use. Where this is not available an appropriate on-site service is provided to meet the ongoing requirements of the intended use in accordance with the following:</p> <ul style="list-style-type: none"> <li>(a) it is wholly located and contained within the allotment of the development it will service</li> <li>(b) in areas where there is a high risk of contamination of surface, ground, or marine water resources from on-site disposal of liquid wastes, disposal systems are included to minimise the risk of pollution to those water resources</li> <li>(c) septic tank effluent drainage fields and other wastewater disposal areas are located away from watercourses and flood prone, sloping, saline or poorly drained land to minimise environmental harm.</li> </ul>	<p>DTS/DPF 12.1</p> <p>Development is connected, or will be connected, to an approved common wastewater disposal service with the capacity to meet the requirements of the development. Where this is not available it is instead capable of being serviced by an on-site waste water treatment system in accordance with the following:</p> <ul style="list-style-type: none"> <li>(a) the system is wholly located and contained within the allotment of development it will service; and</li> <li>(b) the system will comply with the requirements of the South Australian Public Health Act 2011.</li> </ul>
<p>PO 12.2</p> <p>Effluent drainage fields and other wastewater disposal areas are maintained to ensure the effective operation of waste systems and minimise risks to human health and the environment.</p>	<p>DTS/DPF 12.2</p> <p>Development is not built on, or encroaches within, an area that is, or will be, required for a sewerage system or waste control system.</p>
Temporary Facilities	
<p>PO 13.1</p> <p>In rural and remote locations, development that is likely to generate significant waste material during construction, including packaging waste, makes provision for a temporary on-site waste storage enclosure to minimise the incidence of wind-blown litter.</p>	<p>DTS/DPF 13.1</p> <p>A waste collection and disposal service is used to dispose of the volume of waste at the rate it is generated.</p>
<p>PO 13.2</p> <p>Temporary facilities to support the establishment of renewable energy facilities (including borrow pits, concrete batching plants, laydown, storage, access roads and worker amenity areas) are sited and</p>	<p>DTS/DPF 13.2</p> <p>None are applicable.</p>

operated to minimise environmental impact.	
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## Intensive Animal Husbandry and Dairies

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Development of intensive animal husbandry and dairies in locations that are protected from encroachment by sensitive receivers and in a manner that minimises their adverse effects on amenity and the environment.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Siting and Design	
PO 1.1 Intensive animal husbandry, dairies and associated activities are sited, designed, constructed and managed to not unreasonably impact on the environment or amenity of the locality.	DTS/DPF 1.1 None are applicable.
PO 1.2 Intensive animal husbandry, dairies and associated activities are sited, designed, constructed and managed to prevent the potential transmission of disease to other operations where animals are kept.	DTS/DPF 1.2 None are applicable.
PO 1.3 Intensive animal husbandry and associated activities such as wastewater lagoons and liquid/solid waste disposal areas are sited, designed, constructed and managed to not unreasonably impact on sensitive receivers in other ownership in terms of noise and air emissions.	DTS/DPF 1.3 None are applicable.
PO 1.4 Dairies and associated activities such as wastewater lagoons and liquid/solid waste disposal areas are sited, designed, constructed and managed to not unreasonably impact on sensitive receivers in other ownership in terms of noise and air emissions.	DTS/DPF 1.4 Dairies, associated wastewater lagoon(s) and liquid/solid waste storage and disposal facilities are located 500m or more from the nearest sensitive receiver in other ownership.
PO 1.5 Lagoons for the storage or treatment of milking shed effluent is adequately separated from roads to minimise impacts from	DTS/DPF 1.5 Lagoons for the storage or treatment of milking shed effluent are set back 20m or more from public roads.

odour on the general public.	
Waste	
<p>PO 2.1</p> <p>Storage of manure, used litter and other wastes (other than waste water lagoons) is sited, designed, constructed and managed to:</p> <ul style="list-style-type: none"> <li>(a) avoid attracting and harbouring vermin</li> <li>(b) avoid polluting water resources</li> <li>(c) be located outside 1% AEP flood event areas.</li> </ul>	<p>DTS/DPF 2.1</p> <p>None are applicable.</p>
Soil and Water Protection	
<p>PO 3.1</p> <p>To avoid environmental harm and adverse effects on water resources, intensive animal husbandry operations are appropriately set back from:</p> <ul style="list-style-type: none"> <li>(a) public water supply reservoirs</li> <li>(b) major watercourses (third order or higher stream)</li> <li>(c) any other watercourse, bore or well used for domestic or stock water supplies.</li> </ul>	<p>DTS/DPF 3.1</p> <p>Intensive animal husbandry operations are set back:</p> <ul style="list-style-type: none"> <li>(a) 800m or more from a public water supply reservoir</li> <li>(b) 200m or more from a major watercourse (third order or higher stream)</li> <li>(c) 100m or more from any other watercourse, bore or well used for domestic or stock water supplies.</li> </ul>
<p>PO 3.2</p> <p>Intensive animal husbandry operations and dairies incorporate appropriately designed effluent and run-off facilities that:</p> <ul style="list-style-type: none"> <li>(a) have sufficient capacity to hold effluent and runoff from the operations on site</li> <li>(b) ensure effluent does not infiltrate and pollute groundwater, soil or other water resources.</li> </ul>	<p>DTS/DPF 3.2</p> <p>None are applicable.</p>

## Interface between Land Uses

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Development is located and designed to mitigate adverse effects on or from neighbouring and proximate land uses.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
General Land Use Compatibility	

PO 1.1	DTS/DPF 1.1								
Sensitive receivers are designed and sited to protect residents and occupants from adverse impacts generated by lawfully existing land uses (or lawfully approved land uses) and land uses desired in the zone.	None are applicable.								
PO 1.2	DTS/DPF 1.2								
Development adjacent to a site containing a sensitive receiver (or lawfully approved sensitive receiver) or zone primarily intended to accommodate sensitive receivers is designed to minimise adverse impacts.	None are applicable.								
Hours of Operation									
PO 2.1	DTS/DPF 2.1								
Non-residential development does not unreasonably impact the amenity of sensitive receivers (or lawfully approved sensitive receivers) or an adjacent zone primarily for sensitive receivers through its hours of operation having regard to:	Development operating within the following hours:								
<ul style="list-style-type: none"> <li>(a) the nature of the development</li> <li>(b) measures to mitigate off-site impacts</li> <li>(c) the extent to which the development is desired in the zone</li> <li>(d) measures that might be taken in an adjacent zone primarily for sensitive receivers that mitigate adverse impacts without unreasonably compromising the intended use of that land.</li> </ul>	<table border="1"> <thead> <tr> <th>Class of Development</th><th>Hours of operation</th></tr> </thead> <tbody> <tr> <td>Consulting room</td><td>7am to 9pm, Monday to Friday 8am to 5pm, Saturday</td></tr> <tr> <td>Office</td><td>7am to 9pm, Monday to Friday 8am to 5pm, Saturday</td></tr> <tr> <td>Shop, other than any one or combination of the following:   <ul style="list-style-type: none"> <li>(a) restaurant</li> <li>(b) cellar door in the Productive Rural Landscape Zone, Rural Zone or Rural Horticulture Zone</li> </ul> </td><td>7am to 9pm, Monday to Friday 8am to 5pm, Saturday and Sunday</td></tr> </tbody> </table>	Class of Development	Hours of operation	Consulting room	7am to 9pm, Monday to Friday 8am to 5pm, Saturday	Office	7am to 9pm, Monday to Friday 8am to 5pm, Saturday	Shop, other than any one or combination of the following:  <ul style="list-style-type: none"> <li>(a) restaurant</li> <li>(b) cellar door in the Productive Rural Landscape Zone, Rural Zone or Rural Horticulture Zone</li> </ul>	7am to 9pm, Monday to Friday 8am to 5pm, Saturday and Sunday
Class of Development	Hours of operation								
Consulting room	7am to 9pm, Monday to Friday 8am to 5pm, Saturday								
Office	7am to 9pm, Monday to Friday 8am to 5pm, Saturday								
Shop, other than any one or combination of the following:  <ul style="list-style-type: none"> <li>(a) restaurant</li> <li>(b) cellar door in the Productive Rural Landscape Zone, Rural Zone or Rural Horticulture Zone</li> </ul>	7am to 9pm, Monday to Friday 8am to 5pm, Saturday and Sunday								
Overshadowing									
PO 3.1	DTS/DPF 3.1								
Overshadowing of habitable room windows of adjacent residential land uses in:	North-facing windows of habitable rooms of adjacent residential land uses in a neighbourhood-type zone receive at least 3 hours of direct sunlight between 9.00am and 3.00pm on 21 June.								
<ul style="list-style-type: none"> <li>a. a neighbourhood-type zone is minimised to maintain access to direct winter sunlight</li> <li>b. other zones is managed to enable access to direct winter sunlight.</li> </ul>									
PO 3.2	DTS/DPF 3.2								
Overshadowing of the primary area of private open space or communal open space of adjacent residential land uses in:	Development maintains 2 hours of direct sunlight between 9.00 am and 3.00 pm on 21 June to adjacent residential land uses in a								

<p>a. a neighbourhood type zone is minimised to maintain access to direct winter sunlight</p> <p>b. other zones is managed to enable access to direct winter sunlight.</p>	<p>neighbourhood-type zone in accordance with the following:</p> <p>a. for ground level private open space, the smaller of the following:</p> <p>i. half the existing ground level open space</p> <p>or</p> <p>ii. 35m<sup>2</sup> of the existing ground level open space (with at least one of the area's dimensions measuring 2.5m)</p> <p>b. for ground level communal open space, at least half of the existing ground level open space.</p>
<p>PO 3.3</p> <p>Development does not unduly reduce the generating capacity of adjacent rooftop solar energy facilities taking into account:</p> <p>(a) the form of development contemplated in the zone</p> <p>(b) the orientation of the solar energy facilities</p> <p>(c) the extent to which the solar energy facilities are already overshadowed.</p>	<p>DTS/DPF 3.3</p> <p>None are applicable.</p>
<p>PO 3.4</p> <p>Development that incorporates moving parts, including windmills and wind farms, are located and operated to not cause unreasonable nuisance to nearby dwellings and tourist accommodation caused by shadow flicker.</p>	<p>DTS/DPF 3.4</p> <p>None are applicable.</p>
Activities Generating Noise or Vibration	
<p>PO 4.1</p> <p>Development that emits noise (other than music) does not unreasonably impact the amenity of sensitive receivers (or lawfully approved sensitive receivers).</p>	<p>DTS/DPF 4.1</p> <p>Noise that affects sensitive receivers achieves the relevant Environment Protection (Noise) Policy criteria.</p>
<p>PO 4.2</p> <p>Areas for the on-site manoeuvring of service and delivery vehicles, plant and equipment, outdoor work spaces (and the like) are designed and sited to not unreasonably impact the amenity of adjacent sensitive receivers (or lawfully approved sensitive receivers) and zones primarily intended to accommodate sensitive receivers due to noise and vibration by adopting techniques including:</p> <p>(a) locating openings of buildings and associated services away from the interface with the adjacent sensitive receivers and zones primarily intended to accommodate sensitive receivers</p> <p>(b) when sited outdoors, locating such areas as far as practicable from adjacent sensitive receivers and zones primarily intended to accommodate sensitive receivers</p> <p>(c) housing plant and equipment within an enclosed structure or acoustic enclosure</p> <p>(d) providing a suitable acoustic barrier between the plant and / or equipment and the adjacent sensitive receiver boundary or zone.</p>	<p>DTS/DPF 4.2</p> <p>None are applicable.</p>
<p>PO 4.3</p>	<p>DTS/DPF 4.3</p>

Fixed plant and equipment in the form of pumps and/or filtration systems for a swimming pool or spa are positioned and/or housed to not cause unreasonable noise nuisance to adjacent sensitive receivers (or lawfully approved sensitive receivers).	The pump and/or filtration system ancillary to a dwelling erected on the same site is:  (a) enclosed in a solid acoustic structure located at least 5m from the nearest habitable room located on an adjoining allotment or (b) located at least 12m from the nearest habitable room located on an adjoining allotment.					
PO 4.4  External noise into bedrooms is minimised by separating or shielding these rooms from service equipment areas and fixed noise sources located on the same or an adjoining allotment.	DTS/DPF 4.4  Adjacent land is used for residential purposes.					
PO 4.5  Outdoor areas associated with licensed premises (such as beer gardens or dining areas) are designed and/or sited to not cause unreasonable noise impact on existing adjacent sensitive receivers (or lawfully approved sensitive receivers).	DTS/DPF 4.5  None are applicable.					
PO 4.6  Development incorporating music achieves suitable acoustic amenity when measured at the boundary of an adjacent sensitive receiver (or lawfully approved sensitive receiver) or zone primarily intended to accommodate sensitive receivers.	DTS/DPF 4.6  Development incorporating music includes noise attenuation measures that will achieve the following noise levels: <table><tr><th>Assessment location</th><th>Music noise level</th></tr><tr><td>Externally at the nearest existing or envisaged noise sensitive location</td><td>Less than 8dB above the level of background noise (L<sub>90,15min</sub>) in any octave band of the sound spectrum (LOCT<sub>10,15</sub> &lt; LOCT<sub>90,15</sub> + 8dB)</td></tr></table>		Assessment location	Music noise level	Externally at the nearest existing or envisaged noise sensitive location	Less than 8dB above the level of background noise (L <sub>90,15min</sub> ) in any octave band of the sound spectrum (LOCT <sub>10,15</sub> < LOCT <sub>90,15</sub> + 8dB)
Assessment location	Music noise level					
Externally at the nearest existing or envisaged noise sensitive location	Less than 8dB above the level of background noise (L <sub>90,15min</sub> ) in any octave band of the sound spectrum (LOCT <sub>10,15</sub> < LOCT <sub>90,15</sub> + 8dB)					
Air Quality						
PO 5.1  Development with the potential to emit harmful or nuisance-generating air pollution incorporates air pollution control measures to prevent harm to human health or unreasonably impact the amenity of sensitive receivers (or lawfully approved sensitive receivers) within the locality and zones primarily intended to accommodate sensitive receivers.	DTS/DPF 5.1  None are applicable.					
PO 5.2  Development that includes chimneys or exhaust flues (including cafes, restaurants and fast food outlets) is designed to minimise nuisance or adverse health impacts to sensitive receivers (or lawfully approved sensitive receivers) by:  (a) incorporating appropriate treatment technology before exhaust emissions are released  (b) locating and designing chimneys or exhaust flues to maximise the dispersion of exhaust emissions, taking into account the location of sensitive receivers.	DTS/DPF 5.2  None are applicable.					

Light Spill	
PO 6.1 External lighting is positioned and designed to not cause unreasonable light spill impact on adjacent sensitive receivers (or lawfully approved sensitive receivers).	DTS/DPF 6.1 None are applicable.
PO 6.2 External lighting is not hazardous to motorists and cyclists.	DTS/DPF 6.2 None are applicable.
Solar Reflectivity / Glare	
PO 7.1 Development is designed and comprised of materials and finishes that do not unreasonably cause a distraction to adjacent road users and pedestrian areas or unreasonably cause heat loading and micro-climatic impacts on adjacent buildings and land uses as a result of reflective solar glare.	DTS/DPF 7.1 None are applicable.
Electrical Interference	
PO 8.1 Development in rural and remote areas does not unreasonably diminish or result in the loss of existing communication services due to electrical interference.	DTS/DPF 8.1 The building or structure:  (a) is no greater than 10m in height, measured from existing ground level or (b) is not within a line of sight between a fixed transmitter and fixed receiver (antenna) other than where an alternative service is available via a different fixed transmitter or cable.
Interface with Rural Activities	
PO 9.1 Sensitive receivers are located and designed to mitigate impacts from lawfully existing horticultural and farming activities (or lawfully approved horticultural and farming activities), including spray drift and noise and do not prejudice the continued operation of these activities.	DTS/DPF 9.1 None are applicable.
PO 9.2 Sensitive receivers are located and designed to mitigate potential impacts from lawfully existing intensive animal husbandry activities and do not prejudice the continued operation of these activities.	DTS/DPF 9.2 None are applicable.
PO 9.3 Sensitive receivers are located and designed to mitigate potential impacts from lawfully existing land-based aquaculture activities and do not prejudice the continued operation of these activities.	DTS/DPF 9.3 Sensitive receivers are located at least 200m from the boundary of a site used for land-based aquaculture and associated components in other ownership.
PO 9.4 Sensitive receivers are located and designed to mitigate potential impacts from lawfully existing dairies including associated wastewater lagoons and liquid/solid waste storage	DTS/DPF 9.4 Sensitive receivers are sited at least 500m from the boundary of a site used for a dairy and associated wastewater lagoon(s) and liquid/solid waste storage and disposal facilities in other

and disposal facilities and do not prejudice the continued operation of these activities.	ownership.
<p>PO 9.5</p> <p>Sensitive receivers are located and designed to mitigate the potential impacts from lawfully existing facilities used for the handling, transportation and storage of bulk commodities (recognising the potential for extended hours of operation) and do not prejudice the continued operation of these activities.</p>	<p>DTS/DPF 9.5</p> <p>Sensitive receivers are located away from the boundary of a site used for the handling, transportation and/or storage of bulk commodities in other ownership in accordance with the following:</p> <ul style="list-style-type: none"> <li>(a) 300m or more, where it involves the handling of agricultural crop products, rock, ores, minerals, petroleum products or chemicals to or from any commercial storage facility</li> <li>(b) 300m or more, where it involves the handling of agricultural crop products, rock, ores, minerals, petroleum products or chemicals at a wharf or wharf side facility (including sea-port grain terminals) where the handling of these materials into or from vessels does not exceed 100 tonnes per day</li> <li>(c) 500m or more, where it involves the storage of bulk petroleum in individual containers with a capacity up to 200 litres and a total on-site storage capacity not exceeding 1000 cubic metres</li> <li>(d) 500m or more, where it involves the handling of coal with a capacity up to 1 tonne per day or a storage capacity up to 50 tonnes</li> <li>(e) 1000m or more, where it involves the handling of coal with a capacity exceeding 1 tonne per day but not exceeding 100 tonnes per day or a storage capacity exceeding 50 tonnes but not exceeding 5000 tonnes.</li> </ul>
<p>PO 9.6</p> <p>Setbacks and vegetation plantings along allotment boundaries should be incorporated to mitigate the potential impacts of spray drift and other impacts associated with agricultural and horticultural activities.</p>	<p>DTS/DPF 9.6</p> <p>None are applicable.</p>
<p>PO 9.7</p> <p>Urban development does not prejudice existing agricultural and horticultural activities through appropriate separation and design techniques.</p>	<p>DTS/DPF 9.7</p> <p>None are applicable.</p>
Interface with Mines and Quarries (Rural and Remote Areas)	
<p>PO 10.1</p> <p>Sensitive receivers are separated from existing mines to minimise the adverse impacts from noise, dust and vibration.</p>	<p>DTS/DPF 10.1</p> <p>Sensitive receivers are located no closer than 500m from the boundary of a Mining Production Tenement under the <i>Mining Act 1971</i>.</p>

## Land Division

### Assessment Provisions (AP)

Desired Outcome	
DO 1	<p>Land division:</p> <ul style="list-style-type: none"> <li>(a) creates allotments with the appropriate dimensions and shape for their intended use</li> <li>(b) allows efficient provision of new infrastructure and the optimum use of underutilised infrastructure</li> <li>(c) integrates and allocates adequate and suitable land for the preservation of site features of value, including significant vegetation, watercourses, water bodies and other environmental features</li> <li>(d) facilitates solar access through allotment orientation</li> <li>(e) creates a compact urban form that supports active travel, walkability and the use of public transport</li> <li>(f) avoids areas of high natural hazard risk.</li> </ul>

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
All land division	
Allotment configuration	
PO 1.1 Land division creates allotments suitable for their intended use.	DTS/DPF 1.1 Division of land satisfies (a) or (b): <ul style="list-style-type: none"> <li>(a) reflects the site boundaries illustrated and approved in an operative or existing development authorisation for residential development under the <i>Development Act 1993</i> or <i>Planning, Development and Infrastructure Act 2016</i> where the allotments are used or are proposed to be used solely for residential purposes</li> <li>(b) is proposed as part of a combined land division application with deemed-to-satisfy dwellings on the proposed allotments.</li> </ul>
PO 1.2 Land division considers the physical characteristics of the land, preservation of environmental and cultural features of value and the prevailing context of the locality.	DTS/DPF 1.2 None are applicable.
Design and Layout	
PO 2.1 Land division results in a pattern of development that minimises the likelihood of future earthworks and retaining walls.	DTS/DPF 2.1 None are applicable.
PO 2.2 Land division enables the appropriate management of interface impacts between potentially conflicting land uses and/or zones.	DTS/DPF 2.2 None are applicable.
PO 2.3 Land division maximises the number of allotments that face public open space and public streets.	DTS/DPF 2.3 None are applicable.
PO 2.4 Land division is integrated with site features, adjacent land uses,	DTS/DPF 2.4 None are applicable.

the existing transport network and available infrastructure.	
PO 2.5 Development and infrastructure is provided and staged in a manner that supports an orderly and economic provision of land, infrastructure and services.	DTS/DPF 2.5 None are applicable.
PO 2.6 Land division results in watercourses being retained within open space and development taking place on land not subject to flooding.	DTS/DPF 2.6 None are applicable.
PO 2.7 Land division results in legible street patterns connected to the surrounding street network.	DTS/DPF 2.7 None are applicable.
PO 2.8 Land division is designed to preserve existing vegetation of value including native vegetation and regulated and significant trees.	DTS/DPF 2.8 None are applicable.
Roads and Access	
PO 3.1 Land division provides allotments with access to an all-weather public road.	DTS/DPF 3.1 None are applicable.
PO 3.2 Street patterns and intersections are designed to enable the safe and efficient movement of pedestrian, cycle and vehicular traffic.	DTS/DPF 3.2 None are applicable.
PO 3.3 Land division does not impede access to publicly owned open space and/or recreation facilities.	DTS/DPF 3.3 None are applicable.
PO 3.4 Road reserves provide for safe and convenient movement and parking of projected volumes of vehicles and allow for the efficient movement of service and emergency vehicles.	DTS/DPF 3.4 None are applicable.
PO 3.5 Road reserves are designed to accommodate pedestrian and cycling infrastructure, street tree planting, landscaping and street furniture.	DTS/DPF 3.5 None are applicable.
PO 3.6 Road reserves accommodate stormwater drainage and public utilities.	DTS/DPF 3.6 None are applicable.
PO 3.7 Road reserves provide unobstructed vehicular access and egress to and from individual allotments and sites.	DTS/DPF 3.7 None are applicable.
PO 3.8	DTS/DPF 3.8

Street patterns and intersections are designed to enable the safe and efficient movement of pedestrian, cycle and vehicular traffic.	None are applicable.
PO 3.9 Roads, open space and thoroughfares provide safe and convenient linkages to the surrounding open space and transport network.	DTS/DPF 3.9 None are applicable.
PO 3.10 Public streets are designed to enable tree planting to provide shade and enhance the amenity of streetscapes.	DTS/DPF 3.10 None are applicable.
PO 3.11 Local streets are designed to create low-speed environments that are safe for cyclists and pedestrians.	DTS/DPF 3.11 None are applicable.
Infrastructure	
PO 4.1 Land division incorporates public utility services within road reserves or dedicated easements.	DTS/DPF 4.1 None are applicable.
PO 4.2 Waste water, sewage and other effluent is capable of being disposed of from each allotment without risk to public health or the environment.	DTS/DPF 4.2 Each allotment can be connected to:  (a) a waste water treatment plant that has the hydraulic volume and pollutant load treatment and disposal capacity for the maximum predicted wastewater volume generated by subsequent development of the proposed allotment or (b) a form of on-site waste water treatment and disposal that meets relevant public health and environmental standards.
PO 4.3 Septic tank effluent drainage fields and other waste water disposal areas are maintained to ensure the effective operation of waste systems and minimise risks to human health and the environment.	DTS/DPF 4.3 Development is not built on, or encroaches within, an area that is or will be, required for a sewerage system or waste control system.
PO 4.4 Constructed wetland systems, including associated detention and retention basins, are sited and designed to ensure public health and safety is protected, including by minimising potential public health risks arising from the breeding of mosquitoes.	DTS/DPF 4.4 None are applicable.
PO 4.5 Constructed wetland systems, including associated detention and retention basins, are sited and designed to allow sediments to settle prior to discharge into watercourses or the marine environment.	DTS/DPF 4.5 None are applicable.
PO 4.6	DTS/DPF 4.6

Constructed wetland systems, including associated detention and retention basins, are sited and designed to function as a landscape feature.	None are applicable.
Minor Land Division (Under 20 Allotments)	
Open Space	
PO 5.1 Land division proposing an additional allotment under 1 hectare provides or supports the provision of open space.	DTS/DPF 5.1  None are applicable.
Solar Orientation	
PO 6.1 Land division for residential purposes facilitates solar access through allotment orientation.	DTS/DPF 6.1  None are applicable.
Water Sensitive Design	
PO 7.1 Land division creating a new road or common driveway includes stormwater management systems that minimise the discharge of sediment, suspended solids, organic matter, nutrients, bacteria, litter and other contaminants to the stormwater system, watercourses or other water bodies.	DTS/DPF 7.1  None are applicable.
PO 7.2 Land division designed to mitigate peak flows and manage the rate and duration of stormwater discharges from the site to ensure that the development does not increase the peak flows in downstream systems.	DTS/DPF 7.2  None are applicable.
Battle-Axe Development	
PO 8.1 Battle-axe development appropriately responds to the existing neighbourhood context.	DTS/DPF 8.1 Allotments are not in the form of a battle-axe arrangement.
PO 8.2 Battle-axe development designed to allow safe and convenient movement.	DTS/DPF 8.2 The handle of a battle-axe development:  (a) has a minimum width of 4m or (b) where more than 3 allotments are proposed, a minimum width of 5.5m.
PO 8.3 Battle-axe allotments and/or common land are of a suitable size and dimension to allow passenger vehicles to enter and exit and manoeuvre within the site in a safe and convenient manner.	DTS/DPF 8.3 Battle-axe development allows a B85 passenger vehicle to enter and exit parking spaces in no more than a three-point turn manoeuvre.
PO 8.4 Battle-axe or common driveways incorporate landscaping and permeability to improve appearance and assist in stormwater management.	DTS/DPF 8.4 Battle-axe or common driveways satisfy (a) and (b):  (a) are constructed of a minimum of 50% permeable or porous material (b) where the driveway is located directly adjacent the side or rear boundary of the site, soft landscaping with a minimum dimension of 1m is provided between the

	driveway and site boundary (excluding along the perimeter of a passing point).
Major Land Division (20+ Allotments)	
Open Space	
PO 9.1 Land division allocates or retains evenly distributed, high quality areas of open space to improve residential amenity and provide urban heat amelioration.	DTS/DPF 9.1 None are applicable.
PO 9.2 Land allocated for open space is suitable for its intended active and passive recreational use considering gradient and potential for inundation.	DTS/DPF 9.2 None are applicable.
PO 9.3 Land allocated for active recreation has dimensions capable of accommodating a range of active recreational activities.	DTS/DPF 9.3 None are applicable.
Water Sensitive Design	
PO 10.1 Land division creating 20 or more residential allotments includes a stormwater management system designed to mitigate peak flows and manage the rate and duration of stormwater discharges from the site to ensure that the development does not increase the peak flows in downstream systems.	DTS/DPF 10.1 None are applicable.
PO 10.2 Land division creating 20 or more non-residential allotments includes a stormwater management system designed to mitigate peak flows and manage the rate and duration of stormwater discharges from the site to ensure that the development does not increase the peak flows in downstream systems.	DTS/DPF 10.2 None are applicable.
PO 10.3 Land division creating 20 or more allotments includes stormwater management systems that minimise the discharge of sediment, suspended solids, organic matter, nutrients, bacteria, litter and other contaminants to the stormwater system, watercourses or other water bodies.	DTS/DPF 10.3 None are applicable.
Solar Orientation	
PO 11.1 Land division creating 20 or more allotments for residential purposes facilitates solar access through allotment orientation and allotment dimensions.	DTS/DPF 11.1 None are applicable.

## Marinas and On-Water Structures

**Assessment Provisions (AP)**

<b>Desired Outcome</b>	
DO 1	Marinas and on-water structures are located and designed to minimise the impairment of commercial, recreational and navigational activities and adverse impacts on the environment.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

<b>Performance Outcome</b>	<b>Deemed-to-Satisfy Criteria / Designated Performance Feature</b>
Navigation and Safety	
PO 1.1 Safe public access is provided or maintained to the waterfront, public infrastructure and recreation areas.	DTS/DPF 1.1 None are applicable.
PO 1.2 The operation of wharves is not impaired by marinas and on-water structures.	DTS/DPF 1.2 None are applicable.
PO 1.3 Navigation and access channels are not impaired by marinas and on-water structures.	DTS/DPF 1.3 None are applicable.
PO 1.4 Commercial shipping lanes are not impaired by marinas and on-water structures.	DTS/DPF 1.4 Marinas and on-water structures are set back 250m or more from commercial shipping lanes.
PO 1.5 Marinas and on-water structures are located to avoid interfering with the operation or function of a water supply pumping station.	DTS/DPF 1.5 On-water structures are set back: (a) 3km or more from upstream water supply pumping station take-off points (b) 500m or more from downstream water supply pumping station take-off points.
PO 1.6 Maintenance of on-water infrastructure, including revetment walls, is not impaired by marinas and on-water structures.	DTS/DPF 1.6 None are applicable.
Environmental Protection	
PO 2.1 Development is sited and designed to facilitate water circulation and exchange.	DTS/DPF 2.1 None are applicable.

## Open Space and Recreation

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Pleasant, functional and accessible open space and recreation facilities are provided at State, regional, district, neighbourhood and local levels for active and passive recreation, biodiversity, community health, urban cooling, tree canopy cover, visual amenity, gathering spaces, wildlife and waterway corridors, and a range of other functions and at a range of sizes that reflect the purpose of that open space.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Land Use and Intensity	
PO 1.1 Recreation facilities are compatible with surrounding land uses and activities.	DTS/DPF 1.1 None are applicable.
PO 1.2 Open space areas include natural or landscaped areas using locally indigenous plant species and large trees.	DTS/DPF 1.2 None are applicable.
Design and Siting	
PO 2.1 Open space and recreation facilities address adjacent public roads to optimise pedestrian access and visibility.	DTS/DPF 2.1 None are applicable.
PO 2.2 Open space and recreation facilities incorporate park furniture, shaded areas and resting places.	DTS/DPF 2.2 None are applicable.
PO 2.3 Open space and recreation facilities link habitats, wildlife corridors and existing open spaces and recreation facilities.	DTS/DPF 2.3 None are applicable.
Pedestrians and Cyclists	
PO 3.1 Open space incorporates:  (a) pedestrian and cycle linkages to other open spaces, centres, schools and public transport nodes;	DTS/DPF 3.1 None are applicable.

<p>(b) safe crossing points where pedestrian routes intersect the road network;</p> <p>(c) easily identified access points.</p>	
Usability	
<p>PO 4.1</p> <p>Land allocated for open space is suitable for its intended active and passive recreational use taking into consideration its gradient and potential for inundation.</p>	<p>DTS/DPF 4.1</p> <p>None are applicable.</p>
Safety and Security	
<p>PO 5.1</p> <p>Open space is overlooked by housing, commercial or other development to provide casual surveillance where possible.</p>	<p>DTS/DPF 5.1</p> <p>None are applicable.</p>
<p>PO 5.2</p> <p>Play equipment is located to maximise opportunities for passive surveillance.</p>	<p>DTS/DPF 5.2</p> <p>None are applicable.</p>
<p>PO 5.3</p> <p>Landscaping provided in open space and recreation facilities maximises opportunities for casual surveillance throughout the park.</p>	<p>DTS/DPF 5.3</p> <p>None are applicable.</p>
<p>PO 5.4</p> <p>Fenced parks and playgrounds have more than one entrance or exit to minimise potential entrapment.</p>	<p>DTS/DPF 5.4</p> <p>None are applicable.</p>
<p>PO 5.5</p> <p>Adequate lighting is provided around toilets, telephones, seating, litter bins, bicycle storage, car parks and other such facilities.</p>	<p>DTS/DPF 5.5</p> <p>None are applicable.</p>
<p>PO 5.6</p> <p>Pedestrian and bicycle movement after dark is focused along clearly defined, adequately lit routes with observable entries and exits.</p>	<p>DTS/DPF 5.6</p> <p>None are applicable.</p>
Signage	
<p>PO 6.1</p> <p>Signage is provided at entrances to and within the open space and recreation facilities to provide clear orientation to major points of interest such as the location of public toilets, telephones, safe routes, park activities and the like.</p>	<p>DTS/DPF 6.1</p> <p>None are applicable.</p>
Buildings and Structures	
<p>PO 7.1</p> <p>Buildings and car parking areas in open space areas are designed, located and of a scale to be unobtrusive.</p>	<p>DTS/DPF 7.1</p> <p>None are applicable.</p>
<p>PO 7.2</p> <p>Buildings and structures in open space areas are clustered where practical to ensure that the majority of the site remains open.</p>	<p>DTS/DPF 7.2</p> <p>None are applicable.</p>

PO 7.3 Development in open space is constructed to minimise the extent of impervious surfaces.	DTS/DPF 7.3 None are applicable.
PO 7.4 Development that abuts or includes a coastal reserve or Crown land used for scenic, conservation or recreational purposes is located and designed to have regard to the purpose, management and amenity of the reserve.	DTS/DPF 7.4 None are applicable.
Landscaping	
PO 8.1 Open space and recreation facilities provide for the planting and retention of large trees and vegetation.	DTS/DPF 8.1 None are applicable.
PO 8.2 Landscaping in open space and recreation facilities provides shade and windbreaks:  (a) along cyclist and pedestrian routes; (b) around picnic and barbecue areas; (c) in car parking areas.	DTS/DPF 8.2 None are applicable.
PO 8.3 Landscaping in open space facilitates habitat for local fauna and facilitates biodiversity.	DTS/DPF 8.3 None are applicable.
PO 8.4 Landscaping including trees and other vegetation passively watered with local rainfall run-off, where practicable.	DTS/DPF 8.4 None are applicable.

## Out of Activity Centre Development

### Assessment Provisions (AP)

Desired Outcome	
DO1	The role of Activity Centres in contributing to the form and pattern of development and enabling equitable and convenient access to a range of shopping, administrative, cultural, entertainment and other facilities in a single trip is maintained and reinforced.

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
PO 1.1 Non-residential development outside Activity Centres of a scale and type that does not diminish the role of Activity Centres:  (a) as primary locations for shopping, administrative, cultural, entertainment and community services (b) as a focus for regular social and business gatherings	DTS/DPF 1.1 None are applicable.

(c) in contributing to or maintaining a pattern of development that supports equitable community access to services and facilities.	
<p>PO 1.2</p> <p>Out-of-activity centre non-residential development complements Activity Centres through the provision of services and facilities:</p> <p>(a) that support the needs of local residents and workers, particularly in underserved locations</p> <p>(b) at the edge of Activities Centres where they cannot readily be accommodated within an existing Activity Centre to expand the range of services on offer and support the role of the Activity Centre.</p>	<p>DTS/DPF 1.2</p> <p>None are applicable.</p>

## Resource Extraction

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Resource extraction activities are developed in a manner that minimises human and environmental impacts.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Land Use and Intensity	
<p>PO 1.1</p> <p>Resource extraction activities minimise landscape damage outside of those areas unavoidably disturbed to access and exploit a resource and provide for the progressive reclamation and betterment of disturbed areas.</p>	<p>DTS/DPF 1.1</p> <p>None are applicable.</p>
<p>PO 1.2</p> <p>Resource extraction activities avoid damage to cultural sites or artefacts.</p>	<p>DTS/DPF 1.2</p> <p>None are applicable.</p>
Water Quality	
<p>PO 2.1</p> <p>Stormwater and/or wastewater from resource extraction activities is diverted into appropriately sized treatment and retention systems to enable reuse on site.</p>	<p>DTS/DPF 2.1</p> <p>None are applicable.</p>

Separation Treatments, Buffers and Landscaping	
PO 3.1 Resource extraction activities minimise adverse impacts upon sensitive receivers through incorporation of separation distances and/or mounding/vegetation.	DTS/DPF 3.1 None are applicable.
PO 3.2 Resource extraction activities are screened from view from adjacent land by perimeter landscaping and/or mounding.	DTS/DPF 3.2 None are applicable.

## Site Contamination

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Ensure land is suitable for the proposed use in circumstances where it is, or may have been, subject to site contamination.

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
PO 1.1 Ensure land is suitable for use when land use changes to a more sensitive use.	<p>DTS/DPF 1.1</p> <p>Development satisfies (a), (b), (c) or (d):</p> <ul style="list-style-type: none"> <li>(a) does not involve a change in the use of land</li> <li>(b) involves a change in the use of land that does not constitute a change to a more sensitive use</li> <li>(c) involves a change in the use of land to a more sensitive use on land at which site contamination is unlikely to exist (as demonstrated in a site contamination declaration form)</li> <li>(d) involves a change in the use of land to a more sensitive use on land at which site contamination exists, or may exist (as demonstrated in a site contamination declaration form), and satisfies both of the following: <ul style="list-style-type: none"> <li>(i) a site contamination audit report has been prepared under Part 10A of the <i>Environment Protection Act 1993</i> in relation to the land within the previous 5 years which states that- <ul style="list-style-type: none"> <li>A. site contamination does not exist (or no longer exists) at the land</li> <li>or</li> <li>B. the land is suitable for the proposed use or range of uses (without the need for any further remediation)</li> <li>or</li> <li>C. where remediation is, or remains, necessary for the proposed use (or range of uses), remediation work has</li> </ul> </li> </ul> </li> </ul>

	<p>been carried out or will be carried out (and the applicant has provided a written undertaking that the remediation works will be implemented in association with the development)</p> <p>and</p> <p>(ii) no other class 1 activity or class 2 activity has taken place at the land since the preparation of the site contamination audit report (as demonstrated in a site contamination declaration form).</p>
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## Tourism Development

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Tourism development is built in locations that cater to the needs of visitors and positively contributes to South Australia's visitor economy.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
General	
PO 1.1 Tourism development complements and contributes to local, natural, cultural or historical context where: <ul style="list-style-type: none"> <li>(a) it supports immersive natural experiences</li> <li>(b) it showcases South Australia's landscapes and produce</li> <li>(c) its events and functions are connected to local food, wine and nature.</li> </ul>	DTS/DPF 1.1 None are applicable.
PO 1.2 Tourism development comprising multiple accommodation units (including any facilities and activities for use by guests and visitors) is clustered to minimise environmental and contextual impact.	DTS/DPF 1.2 None are applicable.
Caravan and Tourist Parks	
PO 2.1 Potential conflicts between long-term residents and short-term	DTS/DPF 2.1 None are applicable.

tourists are minimised through suitable siting and design measures.	
PO 2.2 Occupants are provided privacy and amenity through landscaping and fencing.	DTS/DPF 2.2 None are applicable.
PO 2.3 Communal open space and centrally located recreation facilities are provided for guests and visitors.	DTS/DPF 2.3 12.5% or more of a caravan park comprises clearly defined communal open space, landscaped areas and areas for recreation.
PO 2.4 Perimeter landscaping is used to enhance the amenity of the locality.	DTS/DPF 2.4 None are applicable.
PO 2.5 Amenity blocks (showers, toilets, laundry and kitchen facilities) are sufficient to serve the full occupancy of the development.	DTS/DPF 2.5 None are applicable.
PO 2.6 Long-term occupation does not displace tourist accommodation, particularly in important tourist destinations such as coastal and riverine locations.	DTS/DPF 2.6 None are applicable.
Tourist accommodation in areas constituted under the National Parks and Wildlife Act 1972	
PO 3.1 Tourist accommodation avoids delicate or environmentally sensitive areas such as sand dunes, cliff tops, estuaries, wetlands or substantially intact strata of native vegetation (including regenerated areas of native vegetation lost through bushfire).	DTS/DPF 3.1 None are applicable.
PO 3.2 Tourist accommodation is sited and designed in a manner that is subservient to the natural environment and where adverse impacts on natural features, landscapes, habitats and cultural assets are avoided.	DTS/DPF 3.2 None are applicable.
PO 3.3 Tourist accommodation and recreational facilities, including associated access ways and ancillary structures, are located on cleared (other than where cleared as a result of bushfire) or degraded areas or where environmental improvements can be achieved.	DTS/DPF 3.3 None are applicable.
PO 3.4 Tourist accommodation is designed to prevent conversion to private dwellings through:  (a) comprising a minimum of 10 accommodation units (b) clustering separated individual accommodation units (c) being of a size unsuitable for a private dwelling	DTS/DPF 3.4 None are applicable.

(d)	ensuring functional areas that are generally associated with a private dwelling such as kitchens and laundries are excluded from, or physically separated from individual accommodation units, or are of a size unsuitable for a private dwelling.	
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## Transport, Access and Parking

### Assessment Provisions (AP)

Desired Outcome	
DO 1	A comprehensive, integrated and connected transport system that is safe, sustainable, efficient, convenient and accessible to all users.

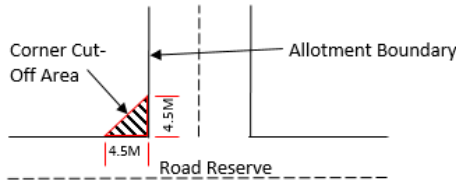
Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Movement Systems	
PO 1.1 Development is integrated with the existing transport system and designed to minimise its potential impact on the functional performance of the transport system.	DTS/DPF 1.1 None are applicable.
PO 1.2 Development is designed to discourage commercial and industrial vehicle movements through residential streets and adjacent other sensitive receivers.	DTS/DPF 1.2 None are applicable.
PO 1.3 Industrial, commercial and service vehicle movements, loading areas and designated parking spaces are separated from passenger vehicle car parking areas to ensure efficient and safe movement and minimise potential conflict.	DTS/DPF 1.3 None are applicable.
PO 1.4 Development is sited and designed so that loading, unloading and turning of all traffic avoids interrupting the operation of and queuing on public roads and pedestrian paths.	DTS/DPF 1.4 All vehicle manoeuvring occurs onsite.
Sightlines	
PO 2.1 Sightlines at intersections, pedestrian and cycle crossings, and	DTS/DPF 2.1 None are applicable.

crossovers to allotments for motorists, cyclists and pedestrians are maintained or enhanced to ensure safety for all road users and pedestrians.	
PO 2.2  Walls, fencing and landscaping adjacent to driveways and corner sites are designed to provide adequate sightlines between vehicles and pedestrians.	DTS/DPF 2.2  None are applicable.
Vehicle Access	
PO 3.1  Safe and convenient access minimises impact or interruption on the operation of public roads.	DTS/DPF 3.1  The access is:  (a) provided via a lawfully existing or authorised driveway or access point or an access point for which consent has been granted as part of an application for the division of land or (b) not located within 6m of an intersection of 2 or more roads or a pedestrian activated crossing.
PO 3.2  Development incorporating vehicular access ramps ensures vehicles can enter and exit a site safely and without creating a hazard to pedestrians and other vehicular traffic.	DTS/DPF 3.2  None are applicable.
PO 3.3  Access points are sited and designed to accommodate the type and volume of traffic likely to be generated by the development or land use.	DTS/DPF 3.3  None are applicable.
PO 3.4  Access points are sited and designed to minimise any adverse impacts on neighbouring properties.	DTS/DPF 3.4  None are applicable.
PO 3.5  Access points are located so as not to interfere with street trees, existing street furniture (including directional signs, lighting, seating and weather shelters) or infrastructure services to maintain the appearance of the streetscape, preserve local amenity and minimise disruption to utility infrastructure assets.	DTS/DPF 3.5  Vehicle access to designated car parking spaces satisfy (a) or (b): (a) is provided via a lawfully existing or authorised access point or an access point for which consent has been granted as part of an application for the division of land (b) where newly proposed, is set back: (i) 0.5m or more from any street furniture, street pole, infrastructure services pit, or other stormwater or utility infrastructure unless consent is provided from the asset owner (ii) 2m or more from the base of the trunk of a street tree unless consent is provided from the tree owner for a lesser distance (iii) 6m or more from the tangent point of an intersection of 2 or more roads (iv) outside of the marked lines or infrastructure dedicating a pedestrian crossing.
PO 3.6	DTS/DPF 3.6

Driveways and access points are separated and minimised in number to optimise the provision of on-street visitor parking (where on-street parking is appropriate).	<p>Driveways and access points:</p> <ul style="list-style-type: none"> <li>(a) for sites with a frontage to a public road of 20m or less, one access point no greater than 3.5m in width is provided</li> <li>(b) for sites with a frontage to a public road greater than 20m: <ul style="list-style-type: none"> <li>(i) a single access point no greater than 6m in width is provided or</li> <li>(ii) not more than two access points with a width of 3.5m each are provided.</li> </ul> </li> </ul>
<p>PO 3.7</p> <p>Access points are appropriately separated from level crossings to avoid interference and ensure their safe ongoing operation.</p>	<p>DTS/DPF 3.7</p> <p>Development does not involve a new or modified access or cause an increase in traffic through an existing access that is located within the following distance from a railway crossing:</p> <ul style="list-style-type: none"> <li>(a) 80 km/h road - 110m</li> <li>(b) 70 km/h road - 90m</li> <li>(c) 60 km/h road - 70m</li> <li>(d) 50km/h or less road - 50m.</li> </ul>
<p>PO 3.8</p> <p>Driveways, access points, access tracks and parking areas are designed and constructed to allow adequate movement and manoeuvrability having regard to the types of vehicles that are reasonably anticipated.</p>	<p>DTS/DPF 3.8</p> <p>None are applicable.</p>
<p>PO 3.9</p> <p>Development is designed to ensure vehicle circulation between activity areas occurs within the site without the need to use public roads.</p>	<p>DTS/DPF 3.9</p> <p>None are applicable.</p>
Access for People with Disabilities	
<p>PO 4.1</p> <p>Development is sited and designed to provide safe, dignified and convenient access for people with a disability.</p>	<p>DTS/DPF 4.1</p> <p>None are applicable.</p>
Vehicle Parking Rates	
<p>PO 5.1</p> <p>Sufficient on-site vehicle parking and specifically marked accessible car parking places are provided to meet the needs of the development or land use having regard to factors that may support a reduced on-site rate such as:</p> <ul style="list-style-type: none"> <li>(a) availability of on-street car parking</li> <li>(b) shared use of other parking areas</li> <li>(c) in relation to a mixed-use development, where the hours of operation of commercial activities complement the residential use of the site, the provision of vehicle parking may be shared</li> <li>(d) the adaptive reuse of a State or Local Heritage Place.</li> </ul>	<p>DTS/DPF 5.1</p> <p>Development provides a number of car parking spaces on-site at a rate no less than the amount calculated using one of the following, whichever is relevant:</p> <ul style="list-style-type: none"> <li>(a) Transport, Access and Parking Table 1 - General Off-Street Car Parking Requirements</li> <li>(b) Transport, Access and Parking Table 2 - Off-Street Vehicle Parking Requirements in Designated Areas</li> <li>(c) if located in an area where a lawfully established carparking fund operates, the number of spaces calculated under (a) or (b) less the number of spaces offset by contribution to the fund.</li> </ul>

Vehicle Parking Areas	
PO 6.1 Vehicle parking areas are sited and designed to minimise impact on the operation of public roads by avoiding the use of public roads when moving from one part of a parking area to another.	DTS/DPF 6.1 Movement between vehicle parking areas within the site can occur without the need to use a public road.
PO 6.2 Vehicle parking areas are appropriately located, designed and constructed to minimise impacts on adjacent sensitive receivers through measures such as ensuring they are attractively developed and landscaped, screen fenced, and the like.	DTS/DPF 6.2 None are applicable.
PO 6.3 Vehicle parking areas are designed to provide opportunity for integration and shared-use of adjacent car parking areas to reduce the total extent of vehicle parking areas and access points.	DTS/DPF 6.3 None are applicable.
PO 6.4 Pedestrian linkages between parking areas and the development are provided and are safe and convenient.	DTS/DPF 6.4 None are applicable.
PO 6.5 Vehicle parking areas that are likely to be used during non-daylight hours are provided with sufficient lighting to entry and exit points to ensure clear visibility to users.	DTS/DPF 6.5 None are applicable.
PO 6.6 Loading areas and designated parking spaces for service vehicles are provided within the boundary of the site.	DTS/DPF 6.6 Loading areas and designated parking spaces are wholly located within the site.
PO 6.7 On-site visitor parking spaces are sited and designed to be accessible to all visitors at all times.	DTS/DPF 6.7 None are applicable.
Undercroft and Below Ground Garaging and Parking of Vehicles	
PO 7.1 Undercroft and below ground garaging of vehicles is designed to enable safe entry and exit from the site without compromising pedestrian or cyclist safety or causing conflict with other vehicles.	DTS/DPF 7.1 None are applicable.
Internal Roads and Parking Areas in Residential Parks and Caravan and Tourist Parks	
PO 8.1 Internal road and vehicle parking areas are surfaced to prevent dust becoming a nuisance to park residents and occupants.	DTS/DPF 8.1 None are applicable.
PO 8.2 Traffic circulation and movement within the park is pedestrian friendly and promotes low speed vehicle movement.	DTS/DPF 8.2 None are applicable.
Bicycle Parking in Designated Areas	

PO 9.1 The provision of adequately sized on-site bicycle parking facilities encourages cycling as an active transport mode.	DTS/DPF 9.1 Areas and / or fixtures are provided for the parking and storage of bicycles at a rate not less than the amount calculated using Transport, Access and Parking Table 3 - Off Street Bicycle Parking Requirements.
PO 9.2 Bicycle parking facilities provide for the secure storage and tethering of bicycles in a place where casual surveillance is possible, is well lit and signed for the safety and convenience of cyclists and deters property theft.	DTS/DPF 9.2 None are applicable.
PO 9.3 Non-residential development incorporates end-of-journey facilities for employees such as showers, changing facilities and secure lockers, and signage indicating the location of the facilities to encourage cycling as a mode of journey-to-work transport.	DTS/DPF 9.3 None are applicable.
Corner Cut-Offs	
PO 10.1 Development is located and designed to ensure drivers can safely turn into and out of public road junctions.	DTS/DPF 10.1 Development does not involve building work, or building work is located wholly outside the land shown as Corner Cut-Off Area in the following diagram:  

**Table 1 - General Off-Street Car Parking Requirements**

The following parking rates apply and if located in an area where a lawfully established carparking fund operates, the number of spaces is reduced by an amount equal to the number of spaces offset by contribution to the fund.

Class of Development	Car Parking Rate (unless varied by Table 2 onwards)  Where a development comprises more than one development type, then the overall car parking rate will be taken to be the sum of the car parking rates for each development type.
<b>Residential Development</b>	
<b>Detached Dwelling</b>	Dwelling with 1 bedroom (including rooms capable of being used as a bedroom) - 1 space per dwelling.  Dwelling with 2 or more bedrooms (including rooms capable of being used as a bedroom) - 2 spaces per dwelling, 1 of which is to be covered.
<b>Group Dwelling</b>	Dwelling with 1 or 2 bedrooms (including rooms capable of being used as a bedroom) - 1 space per dwelling.

	<p>Dwelling with 3 or more bedrooms (including rooms capable of being used as a bedroom) - 2 spaces per dwelling, 1 of which is to be covered.</p> <p>0.33 spaces per dwelling for visitor parking where development involves 3 or more dwellings.</p>
<b>Residential Flat Building</b>	<p>Dwelling with 1 or 2 bedrooms (including rooms capable of being used as a bedroom) - 1 space per dwelling.</p> <p>Dwelling with 3 or more bedrooms (including rooms capable of being used as a bedroom) - 2 spaces per dwelling, 1 of which is to be covered.</p> <p>0.33 spaces per dwelling for visitor parking where development involves 3 or more dwellings.</p>
<b>Row Dwelling where vehicle access is from the primary street</b>	<p>Dwelling with 1 bedroom (including rooms capable of being used as a bedroom) - 1 space per dwelling.</p> <p>Dwelling with 2 or more bedrooms (including rooms capable of being used as a bedroom) - 2 spaces per dwelling, 1 of which is to be covered.</p>
<b>Row Dwelling where vehicle access is not from the primary street (i.e. rear-loaded)</b>	<p>Dwelling with 1 or 2 bedrooms (including rooms capable of being used as a bedroom) - 1 space per dwelling.</p> <p>Dwelling with 3 or more bedrooms (including rooms capable of being used as a bedroom) - 2 spaces per dwelling, 1 of which is to be covered.</p>
<b>Semi-Detached Dwelling</b>	<p>Dwelling with 1 bedroom (including rooms capable of being used as a bedroom) - 1 space per dwelling.</p> <p>Dwelling with 2 or more bedrooms (including rooms capable of being used as a bedroom) - 2 spaces per dwelling, 1 of which is to be covered.</p>
<b>Aged / Supported Accommodation</b>	
<b>Retirement village</b>	<p>Dwelling with 1 or 2 bedrooms (including rooms capable of being used as a bedroom) - 1 space per dwelling.</p> <p>Dwelling with 3 or more bedrooms (including rooms capable of being used as a bedroom) - 2 spaces per dwelling.</p> <p>0.2 spaces per dwelling for visitor parking.</p>
<b>Supported accommodation</b>	0.3 spaces per bed.
<b>Residential Development (Other)</b>	
<b>Ancillary accommodation</b>	No additional requirements beyond those associated with the main dwelling.
<b>Residential park</b>	<p>Dwelling with 1 or 2 bedrooms (including rooms capable of being used as a bedroom) - 1 space per dwelling.</p> <p>Dwelling with 3 or more bedrooms (including rooms capable of being used as a bedroom) - 2 spaces per dwelling.</p> <p>0.2 spaces per dwelling for visitor parking.</p>
<b>Student accommodation</b>	0.3 spaces per bed.
<b>Workers' accommodation</b>	0.5 spaces per bed plus 0.2 spaces per bed for visitor parking.
<b>Tourist</b>	

<b>Caravan park / tourist park</b>	<p>Parks with 100 sites or less - a minimum of 1 space per 10 sites to be used for accommodation.</p> <p>Parks with more than 100 sites - a minimum of 1 space per 15 sites used for accommodation.</p> <p>A minimum of 1 space for every caravan (permanently fixed to the ground) or cabin.</p>
<b>Tourist accommodation</b>	1 car parking space per accommodation unit / guest room.
<b>Commercial Uses</b>	
<b>Auction room/ depot</b>	1 space per 100m <sup>2</sup> of building floor area plus an additional 2 spaces.
<b>Automotive collision repair</b>	3 spaces per service bay.
<b>Call centre</b>	8 spaces per 100m <sup>2</sup> of gross leasable floor area.
<b>Motor repair station</b>	3 spaces per service bay.
<b>Office</b>	4 spaces per 100m <sup>2</sup> of gross leasable floor area.
<b>Retail fuel outlet</b>	3 spaces per 100m <sup>2</sup> gross leasable floor area.
<b>Service trade premises</b>	<p>2.5 spaces per 100m<sup>2</sup> of gross leasable floor area</p> <p>1 space per 100m<sup>2</sup> of outdoor area used for display purposes.</p>
<b>Shop (no commercial kitchen)</b>	<p>5.5 spaces per 100m<sup>2</sup> of gross leasable floor area where not located in an integrated complex containing two or more tenancies (and which may comprise more than one building) where facilities for off-street vehicle parking, vehicle loading and unloading, and the storage and collection of refuse are shared.</p> <p>5 spaces per 100m<sup>2</sup> of gross leasable floor area where located in an integrated complex containing two or more tenancies (and which may comprise more than one building) where facilities for off-street vehicle parking, vehicle loading and unloading, and the storage and collection of refuse are shared.</p>
<b>Shop (in the form of a bulky goods outlet)</b>	2.5 spaces per 100m <sup>2</sup> of gross leasable floor area.
<b>Shop (in the form of a restaurant or involving a commercial kitchen)</b>	<p>Premises with a dine-in service only (which may include a take-away component with no drive-through) - 0.4 spaces per seat.</p> <p>Premises with take-away service but with no seats - 12 spaces per 100m<sup>2</sup> of total floor area plus a drive-through queue capacity of ten vehicles measured from the pick-up point.</p> <p>Premises with a dine-in and drive-through take-away service - 0.3 spaces per seat plus a drive through queue capacity of 10 vehicles measured from the pick-</p>

	up point.
<b>Community and Civic Uses</b>	
<b>Childcare centre</b>	0.25 spaces per child
<b>Library</b>	4 spaces per 100m <sup>2</sup> of total floor area.
<b>Community facility</b>	10 spaces per 100m <sup>2</sup> of total floor area.
<b>Hall / meeting hall</b>	0.2 spaces per seat.
<b>Place of worship</b>	1 space for every 3 visitor seats.
<b>Pre-school</b>	1 per employee plus 0.25 per child (drop off/pick up bays)
<b>Educational establishment</b>	<p>For a primary school - 1.1 space per full time equivalent employee plus 0.25 spaces per student for a pickup/set down area either on-site or on the public realm within 300m of the site.</p> <p>For a secondary school - 1.1 per full time equivalent employee plus 0.1 spaces per student for a pickup/set down area either on-site or on the public realm within 300m of the site.</p> <p>For a tertiary institution - 0.4 per student based on the maximum number of students on the site at any time.</p>
<b>Health Related Uses</b>	
<b>Hospital</b>	<p>4.5 spaces per bed for a public hospital.</p> <p>1.5 spaces per bed for a private hospital.</p>
<b>Consulting room</b>	4 spaces per consulting room excluding ancillary facilities.
<b>Recreational and Entertainment Uses</b>	
<b>Cinema complex</b>	0.2 spaces per seat.
<b>Concert hall / theatre</b>	0.2 spaces per seat.
<b>Hotel</b>	1 space for every 2m <sup>2</sup> of total floor area in a public bar plus 1 space for every 6m <sup>2</sup> of total floor area available to the public in a lounge, beer garden plus 1 space per 2 gaming machines, plus 1 space per 3 seats in a restaurant.
<b>Indoor recreation facility</b>	<p>6.5 spaces per 100m<sup>2</sup> of total floor area for a Fitness Centre</p> <p>4.5 spaces per 100m<sup>2</sup> of total floor area for all other Indoor recreation facilities.</p>

Industry/Employment Uses	
<b>Fuel depot</b>	1.5 spaces per 100m <sup>2</sup> total floor area  1 spaces per 100m <sup>2</sup> of outdoor area used for fuel depot activity purposes.
<b>Industry</b>	1.5 spaces per 100m <sup>2</sup> of total floor area.
<b>Store</b>	0.5 spaces per 100m <sup>2</sup> of total floor area.
<b>Timber yard</b>	1.5 spaces per 100m <sup>2</sup> of total floor area  1 space per 100m <sup>2</sup> of outdoor area used for display purposes.
<b>Warehouse</b>	0.5 spaces per 100m <sup>2</sup> total floor area.
Other Uses	
<b>Funeral Parlour</b>	1 space per 5 seats in the chapel plus 1 space for each vehicle operated by the parlour.
<b>Radio or Television Station</b>	5 spaces per 100m <sup>2</sup> of total building floor area.

**Table 2 - Off-Street Car Parking Requirements in Designated Areas**

The following parking rates apply in any zone, subzone or other area described in the 'Designated Areas' column subject to the following:

- (a) the location of the development is unable to satisfy the requirements of Table 2 – Criteria (other than where a location is exempted from the application of those criteria)
- or
- (b) the development satisfies Table 2 – Criteria (or is exempt from those criteria) and is located in an area where a lawfully established carparking fund operates, in which case the number of spaces are reduced by an amount equal to the number of spaces offset by contribution to the fund.

Class of Development	Car Parking Rate		Designated Areas
	Where a development comprises more than one development type, then the overall car parking rate will be taken to be the sum of the car parking rates for each development type.		
	Minimum number of spaces	Maximum number of spaces	
Development generally			
All classes of development	No minimum.	No maximum except in the Primary Pedestrian Area identified in the Primary Pedestrian Area Concept Plan, where the maximum is:	Capital City Zone  City Main Street Zone  City Riverbank Zone

		<p>1 space for each dwelling with a total floor area less than 75 square metres</p> <p>2 spaces for each dwelling with a total floor area between 75 square metres and 150 square metres</p> <p>3 spaces for each dwelling with a total floor area greater than 150 square metres.</p> <p>Residential flat building or Residential component of a multi-storey building: 1 visitor space for each 6 dwellings.</p>	<p>Adelaide Park Lands Zone</p> <p>Business Neighbourhood Zone (within the City of Adelaide)</p> <p>The St Andrews Hospital Precinct Subzone and Women's and Children's Hospital Precinct Subzone of the Community Facilities Zone</p>
<b>Non-residential development</b>			
<b>Non-residential development</b> excluding tourist accommodation	3 spaces per 100m <sup>2</sup> of gross leasable floor area.	5 spaces per 100m <sup>2</sup> of gross leasable floor area.	<p>City Living Zone</p> <p>Urban Corridor (Boulevard) Zone</p> <p>Urban Corridor (Business) Zone</p> <p>Urban Corridor (Living) Zone</p> <p>Urban Corridor (Main Street ) Zone</p> <p>Urban Neighbourhood Zone</p>
<b>Non-residential development</b> excluding tourist accommodation	3 spaces per 100m <sup>2</sup> of gross leasable floor area.	6 spaces per 100m <sup>2</sup> of gross leasable floor area.	<p>Strategic Innovation Zone</p> <p>Suburban Activity Centre Zone</p> <p>Suburban Business Zone</p> <p>Business Neighbourhood Zone</p> <p>Suburban Main Street Zone</p> <p>Urban Activity Centre Zone</p>
<b>Tourist accommodation</b>	1 space for every 4 bedrooms up to 100 bedrooms plus 1 space for every 5 bedrooms over 100 bedrooms	1 space per 2 bedrooms up to 100 bedrooms and 1 space per 4 bedrooms over 100 bedrooms	<p>City Living Zone</p> <p>Urban Activity Centre Zone</p> <p>Urban Corridor (Boulevard) Zone</p> <p>Urban Corridor (Business) Zone</p> <p>Urban Corridor (Living) Zone</p> <p>Urban Corridor (Main Street ) Zone</p> <p>Urban Neighbourhood Zone</p>
<b>Residential development</b>			
<b>Residential component</b>	Dwelling with no separate	None specified.	City Living Zone

<b>of a multi-storey building</b>	bedroom -0.25 spaces per dwelling  1 bedroom dwelling - 0.75 spaces per dwelling  2 bedroom dwelling - 1 space per dwelling  3 or more bedroom dwelling - 1.25 spaces per dwelling  0.25 spaces per dwelling for visitor parking.		Strategic Innovation Zone  Urban Activity Centre Zone  Urban Corridor (Boulevard) Zone  Urban Corridor (Business) Zone  Urban Corridor (Living) Zone  Urban Corridor (Main Street ) Zone  Urban Neighbourhood Zone
<b>Residential flat building</b>	Dwelling with no separate bedroom -0.25 spaces per dwelling  1 bedroom dwelling - 0.75 spaces per dwelling  2 bedroom dwelling - 1 space per dwelling  3 or more bedroom dwelling - 1.25 spaces per dwelling  0.25 spaces per dwelling for visitor parking.	None specified.	City Living Zone  Urban Activity Centre Zone  Urban Corridor (Boulevard) Zone  Urban Corridor (Business) Zone  Urban Corridor (Living) Zone  Urban Corridor (Main Street ) Zone  Urban Neighbourhood Zone

Table 2 - Criteria:

The following criteria are used in conjunction with Table 2. The 'Exception' column identifies locations where the criteria do not apply and the car parking rates in Table 2 are applicable.

Criteria	Exceptions
<p><b>The designated area is wholly located within Metropolitan Adelaide and any part of the development site satisfies one or more of the following:</b></p> <p>(a) is within 200 metres of any section of road reserve along which a bus service operates as a high frequency public transit service<sup>(2)</sup></p> <p>(b) is within 400 metres of a bus interchange<sup>(1)</sup></p> <p>(c) is within 400 metres of an O-Bahn interchange<sup>(1)</sup></p> <p>(d) is within 400 metres of a passenger rail station<sup>(1)</sup></p> <p>(e) is within 400 metres of a passenger tram station<sup>(1)</sup></p> <p>(f) is within 400 metres of the Adelaide Parklands.</p>	<p>(a) All zones in the City of Adelaide</p> <p>(b) Strategic Innovation Zone in the following locations:</p> <p style="margin-left: 20px;">(i) City of Burnside</p> <p style="margin-left: 20px;">(ii) City of Marion</p> <p style="margin-left: 20px;">(iii) City of Mitcham</p> <p>(c) Urban Corridor (Boulevard) Zone</p> <p>(d) Urban Corridor (Business) Zone</p> <p>(e) Urban Corridor (Living) Zone</p> <p>(f) Urban Corridor (Main Street ) Zone</p> <p>(g) Urban Neighbourhood Zone</p>

[NOTE(S): (1) Measured from an area that contains any platform(s), shelter(s) or stop(s) where people congregate for the purpose waiting to board a bus, tram or train, but does not include areas used for the parking of vehicles. (2) A high frequency public transit service is a route serviced every 15 minutes between 7.30am and 6.30pm Monday to Friday and every 30 minutes at night, Saturday, Sunday and public holidays until 10pm.]

**Table 3 - Off-Street Bicycle Parking Requirements**

The bicycle parking rates apply within designated areas located within parts of the State identified in the Schedule to Table 3.

Class of Development	Bicycle Parking Rate  Where a development comprises more than one development type, then the overall bicycle parking rate will be taken to be the sum of the bicycle parking rates for each development type.
<b>Consulting Room</b>	1 space per 20 employees plus 1 space per 20 consulting rooms for customers.
<b>Educational establishment</b>	For a secondary school - 1 space per 20 full-time time employees plus 10 percent of the total number of employee spaces for visitors.  For tertiary education - 1 space per 20 employees plus 1 space per 10 full time students.
<b>Hospital</b>	1 space per 15 beds plus 1 space per 30 beds for visitors.
<b>Indoor recreation facility</b>	1 space per 4 employees plus 1 space per 200m <sup>2</sup> of gross leasable floor area for visitors.
<b>Licensed Premises</b>	1 per 20 employees, plus 1 per 60 square metres total floor area, plus 1 per 40 square metres of bar floor area, plus 1 per 120 square metres lounge and beer garden floor area, plus 1 per 60 square metres dining floor area, plus 1 per 40 square metres gaming room floor area.
<b>Office</b>	1 space for every 200m <sup>2</sup> of gross leasable floor area plus 2 spaces plus 1 space per 1000m <sup>2</sup> of gross leasable floor area for visitors.
<b>Pre-school</b>	1 space per 20 full time employees plus 1 space per 40 full time children.
<b>Recreation area</b>	1 per 1500 spectator seats for employees plus 1 per 250 visitor and customers.
<b>Residential flat building</b>	Within the City of Adelaide 1 for every dwelling for residents with a total floor area less than 150 square metres, 2 for every dwelling for residents with a total floor area greater than 150 square metres, plus 1 for every 10 dwellings for visitors, and in all other cases 1 space for every 4 dwellings for residents plus 1 for every 10 dwellings for visitors.
<b>Residential component of a multi-storey building</b>	Within the City of Adelaide 1 for every dwelling for residents with a total floor area less than 150 square metres, 2 for every dwelling for residents with a total floor area greater than 150 square metres, plus 1 for every 10 dwellings for visitors, and in all other cases 1 space for every 4 dwellings for residents plus 1 space for every 10 dwellings for visitors.
<b>Shop</b>	1 space for every 300m <sup>2</sup> of gross leasable floor area plus 1 space for every 600m <sup>2</sup> of gross leasable floor area for customers.

<b>Tourist accommodation</b>	1 space for every 20 employees plus 2 for the first 40 rooms and 1 for every additional 40 rooms for visitors.
<b>Schedule to Table 3</b>	
<b>Designated Area</b>	<b>Relevant part of the State</b>
	The bicycle parking rate applies to a designated area located in a relevant part of the State described below.
All zones	City of Adelaide
Business Neighbourhood Zone	Metropolitan Adelaide
Strategic Innovation Zone	
Suburban Activity Centre Zone	
Suburban Business Zone	
Suburban Main Street Zone	
Urban Activity Centre Zone	
Urban Corridor (Boulevard) Zone	
Urban Corridor (Business) Zone	
Urban Corridor (Living) Zone	
Urban Corridor (Main Street ) Zone	
Urban Neighbourhood Zone	

## Waste Treatment and Management Facilities

### Assessment Provisions (AP)

Desired Outcome	
DO 1	Mitigation of the potential environmental and amenity impacts of waste treatment and management facilities.

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
Siting	

PO 1.1	DTS/DPF 1.1
Waste treatment and management facilities incorporate separation distances and attenuation measures within the site between waste operations areas (including all closed, operating and future cells) and sensitive receivers and sensitive environmental features to mitigate off-site impacts from noise, air and dust emissions.	None are applicable.
Soil and Water Protection	
PO 2.1	DTS/DPF 2.1
Soil, groundwater and surface water are protected from contamination from waste treatment and management facilities through measures such as:	None are applicable.
<ul style="list-style-type: none"> <li>(a) containing potential groundwater and surface water contaminants within waste operations areas</li> <li>(b) diverting clean stormwater away from waste operations areas and potentially contaminated areas</li> <li>(c) providing a leachate barrier between waste operations areas and underlying soil and groundwater.</li> </ul>	
PO 2.2	DTS/DPF 2.2
Wastewater lagoons are set back from watercourses to minimise environmental harm and adverse effects on water resources.	Wastewater lagoons are set back 50m or more from watercourse banks.
PO 2.3	DTS/DPF 2.3
Wastewater lagoons are designed and sited to:	None are applicable.
<ul style="list-style-type: none"> <li>(a) avoid intersecting underground waters;</li> <li>(b) avoid inundation by flood waters;</li> <li>(c) ensure lagoon contents do not overflow;</li> <li>(d) include a liner designed to prevent leakage.</li> </ul>	
PO 2.4	DTS/DPF 2.4
Waste operations areas of landfills and organic waste processing facilities are set back from watercourses to minimise adverse impacts on water resources.	Waste operations areas are set back 100m or more from watercourse banks.
Amenity	
PO 3.1	DTS/DPF 3.1
Waste treatment and management facilities are screened, located and designed to minimise adverse visual impacts on amenity.	None are applicable.
PO 3.2	DTS/DPF 3.2
Access routes to waste treatment and management facilities via residential streets is avoided.	None are applicable.
PO 3.3	DTS/DPF 3.3
Litter control measures minimise the incidence of windblown litter.	None are applicable.

PO 3.4	DTS/DPF 3.4
Waste treatment and management facilities are designed to minimise adverse impacts on both the site and surrounding areas from weed and vermin infestation.	None are applicable.
Access	
PO 4.1	DTS/DPF 4.1
Traffic circulation movements within any waste treatment or management site are designed to enable vehicles to enter and exit the site in a forward direction.	None are applicable.
PO 4.2	DTS/DPF 4.2
Suitable access for emergency vehicles is provided to and within waste treatment or management sites.	None are applicable.
Fencing and Security	
PO 5.1	DTS/DPF 5.1
Security fencing provided around waste treatment and management facilities prevents unauthorised access to operations and potential hazard to the public.	Chain wire mesh or pre-coated painted metal fencing 2m or more in height is erected along the perimeter of the waste treatment or waste management facility site.
Landfill	
PO 6.1	DTS/DPF 6.1
Landfill gas emissions are managed in an environmentally acceptable manner.	None are applicable.
PO 6.2	DTS/DPF 6.2
Landfill facilities are separated from areas of environmental significance and land used for public recreation and enjoyment.	Landfill facilities are set back 250m or more from a public open space reserve, forest reserve, national park or Conservation Zone.
PO 6.3	DTS/DPF 6.3
Landfill facilities are located on land that is not subject to land slip.	None are applicable.
PO 6.4	DTS/DPF 6.4
Landfill facilities are separated from areas subject to flooding.	Landfill facilities are set back 500m or more from land inundated in a 1% AEP flood event.
Organic Waste Processing Facilities	
PO 7.1	DTS/DPF 7.1
Organic waste processing facilities are separated from the coast to avoid potential environment harm.	Organic waste processing facilities are set back 500m or more from the coastal high water mark.
PO 7.2	DTS/DPF 7.2
Organic waste processing facilities are located on land where the engineered liner and underlying seasonal water table cannot intersect.	None are applicable.
PO 7.3	DTS/DPF 7.3
Organic waste processing facilities are sited away from areas of environmental significance and land used for public recreation	Organic waste processing facilities are set back 250m or more from a public open space reserve, forest reserve, national park or

and enjoyment.	a Conservation Zone.
PO 7.4 Organic waste processing facilities are located on land that is not subject to land slip.	DTS/DPF 7.4 None are applicable.
PO 7.5 Organic waste processing facilities separated from areas subject to flooding.	DTS/DPF 7.5 Organic waste processing facilities are set back 500m or more from land inundated in a 1% AEP flood event.
Major Wastewater Treatment Facilities	
PO 8.1 Major wastewater treatment and disposal systems, including lagoons, are designed to minimise potential adverse odour impacts on sensitive receivers, minimise public and environmental health risks and protect water quality.	DTS/DPF 8.1 None are applicable.
PO 8.2 Artificial wetland systems for the storage of treated wastewater are designed and sited to minimise potential public health risks arising from the breeding of mosquitoes.	DTS/DPF 8.2 None are applicable.

## Workers' accommodation and Settlements

### Assessment Provisions (AP)

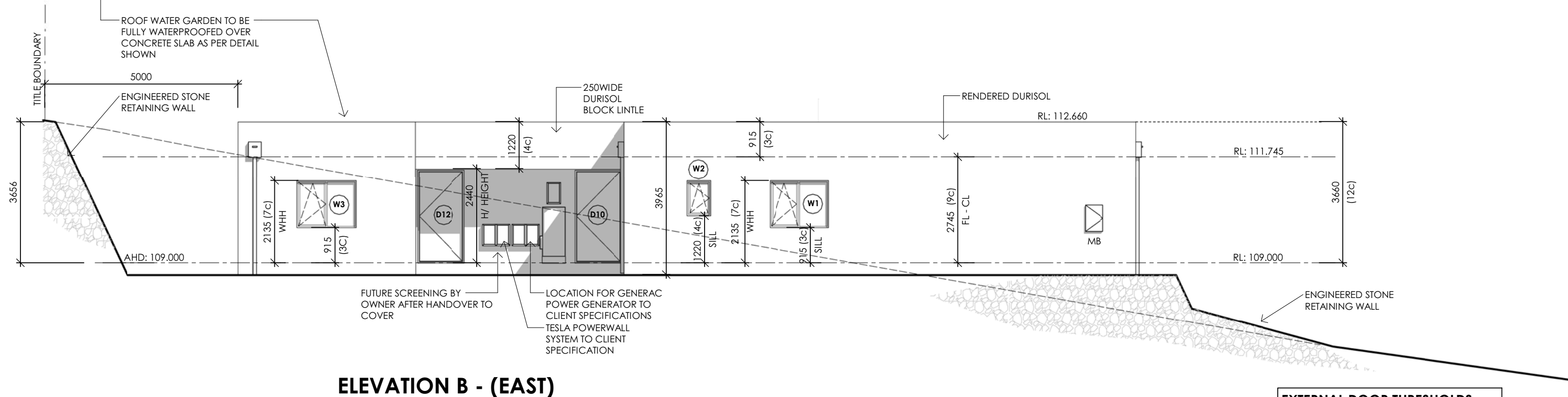
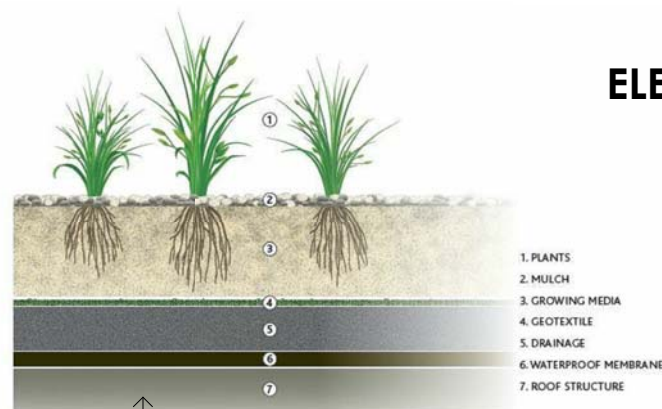
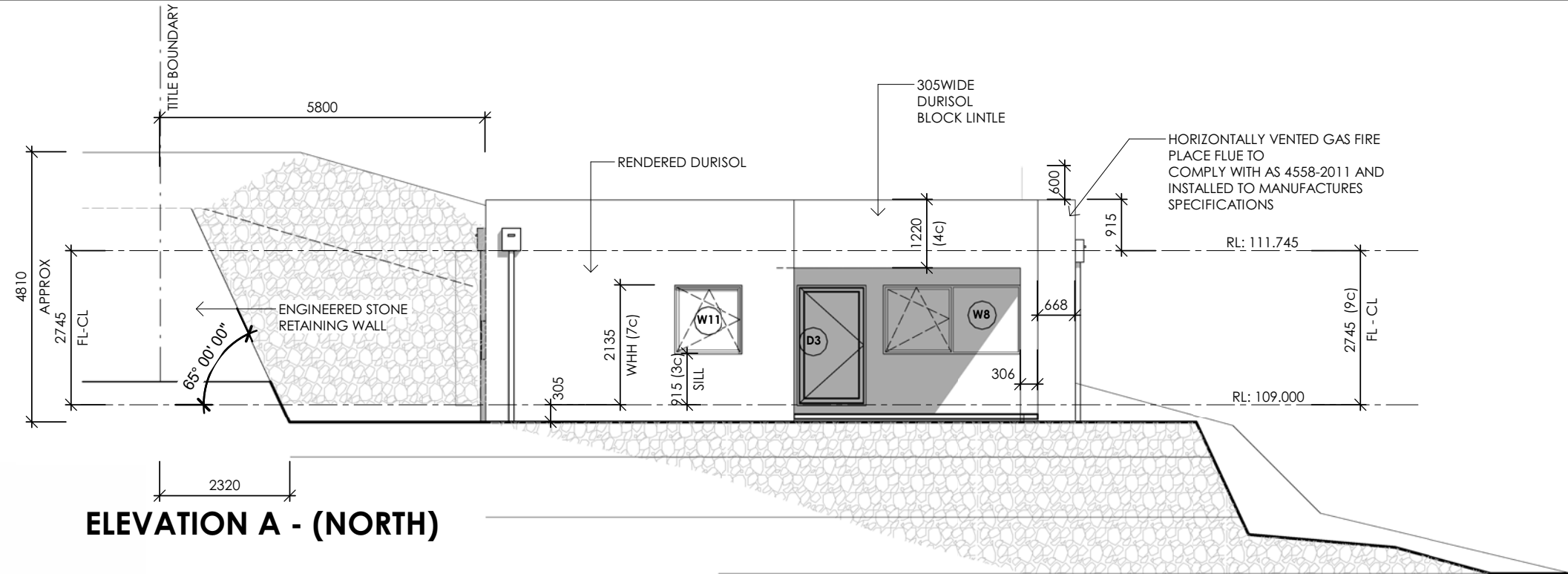
Desired Outcome	
DO 1	Appropriately designed and located accommodation for seasonal and short-term workers in rural areas that minimises environmental and social impacts.

Performance Outcome	Deemed-to-Satisfy Criteria / Designated Performance Feature
PO 1.1 Workers' accommodation and settlements are obscured from scenic routes, tourist destinations and areas of conservation significance or otherwise designed to complement the surrounding landscape.	DTS/DPF 1.1 None are applicable.
PO 1.2 Workers' accommodation and settlements are sited and designed to minimise nuisance impacts on the amenity of adjacent users of land.	DTS/DPF 1.2 None are applicable.
PO 1.3	DTS/DPF 1.3

Workers' accommodation and settlements are built with materials and colours that blend with the landscape.	None are applicable.
PO 1.4  Workers' accommodation and settlements are supplied with service infrastructure such as power, water and effluent disposal sufficient to satisfy the living requirements of workers.	DTS/DPF 1.4  None are applicable.

No criteria applies to this land use. Please check the definition of the land use for further detail.



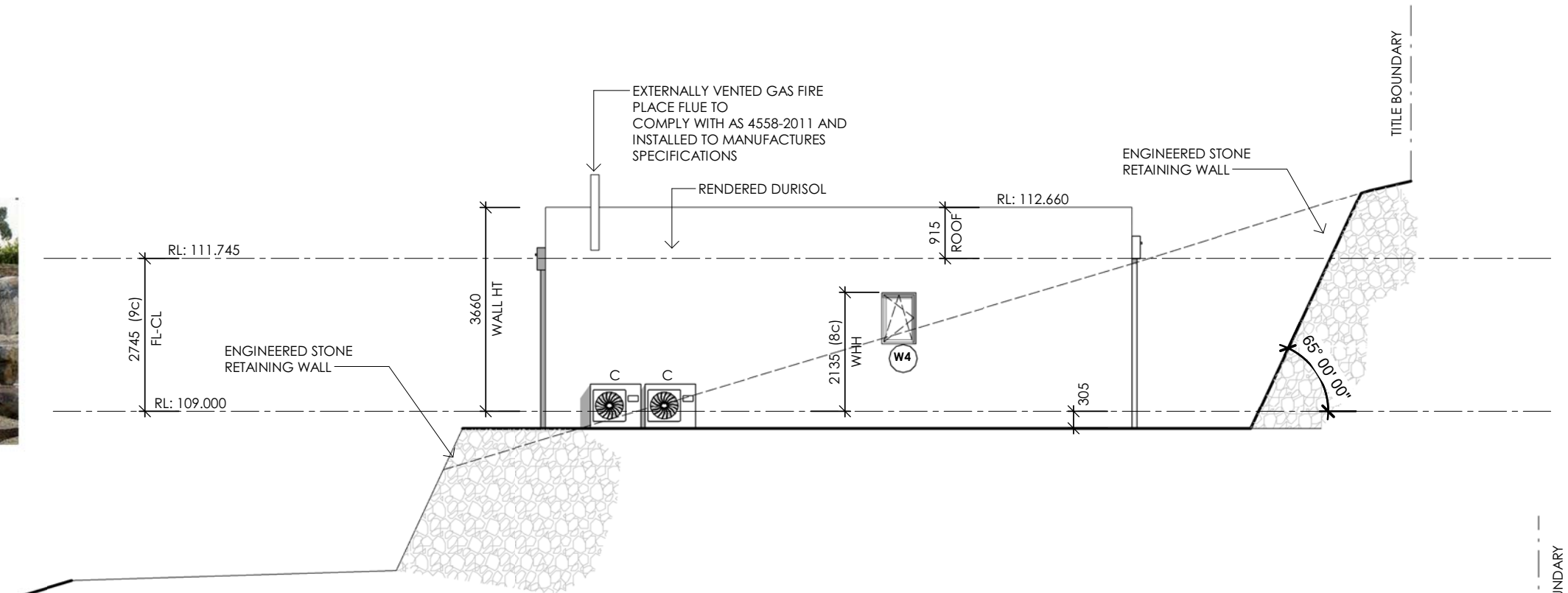


**EXTERNAL DOOR THRESHOLDS:**  
THRESHOLDS OF EXTERNAL DOORS TO BE NO GREATER THAN 230MM ABOVE THE ADJOINING SURFACE

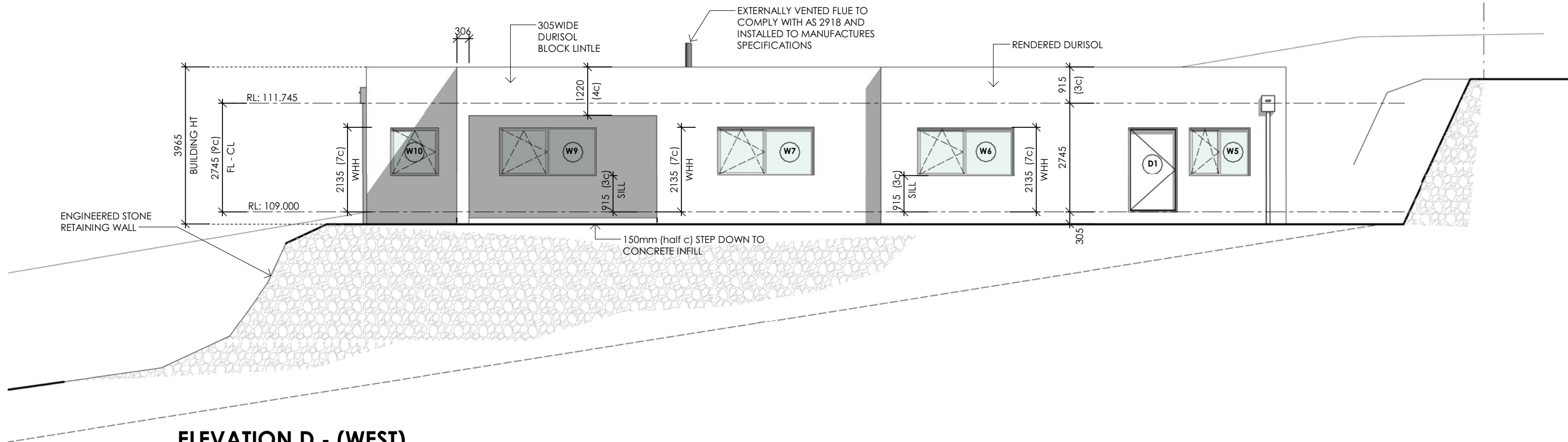




IMAGE OF INTERNDED STYLE OF  
ROCK RETAINING WALLS  
(TO ENGINEERS DESIGN)



ELEVATION C - (SOUTH)



ELEVATION D - (WEST)



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proposed: **HOUSE - SKETCH DESIGN**

for: **U. SCHADE & A. TENG**

address: **39 EMMETT ROAD**

**WORKING DRAWINGS**

**HARVANDSIGN**  
BUILDING DESIGNERS

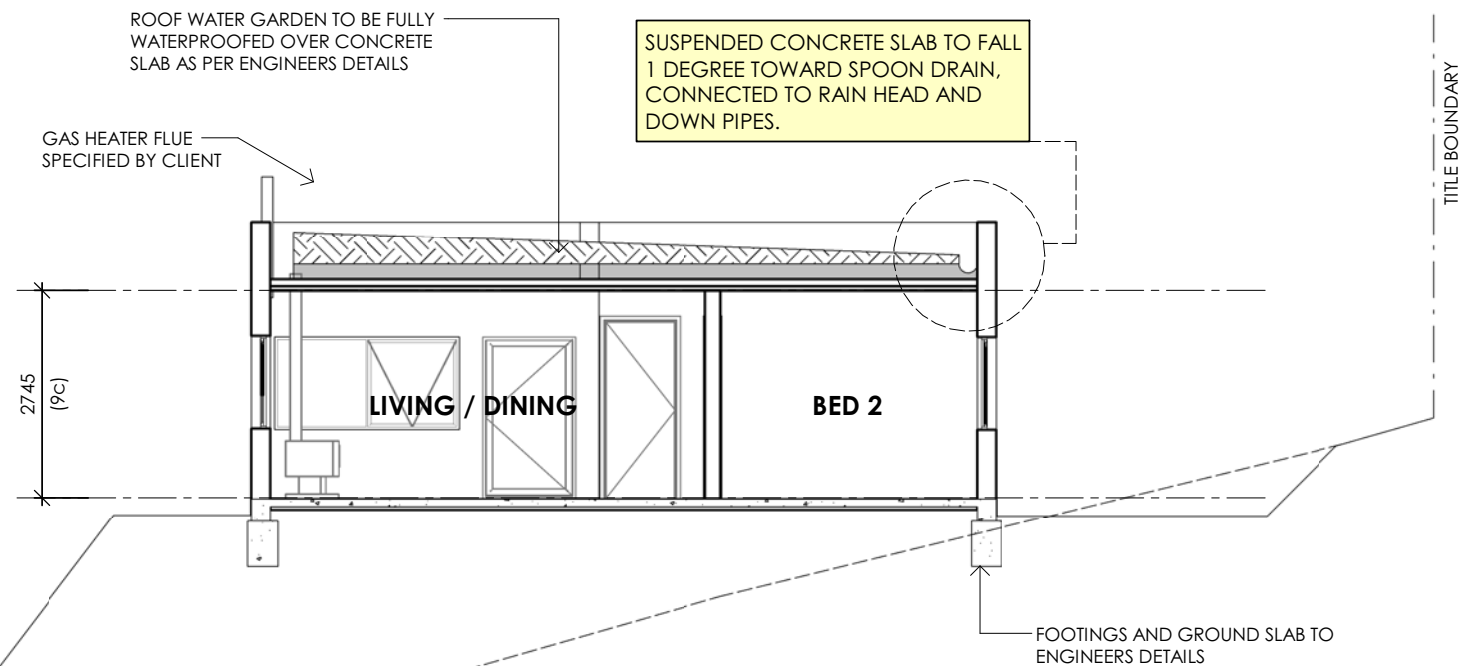
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drawn: **ACA** date: **18/07/19** scale: **1 : 100**

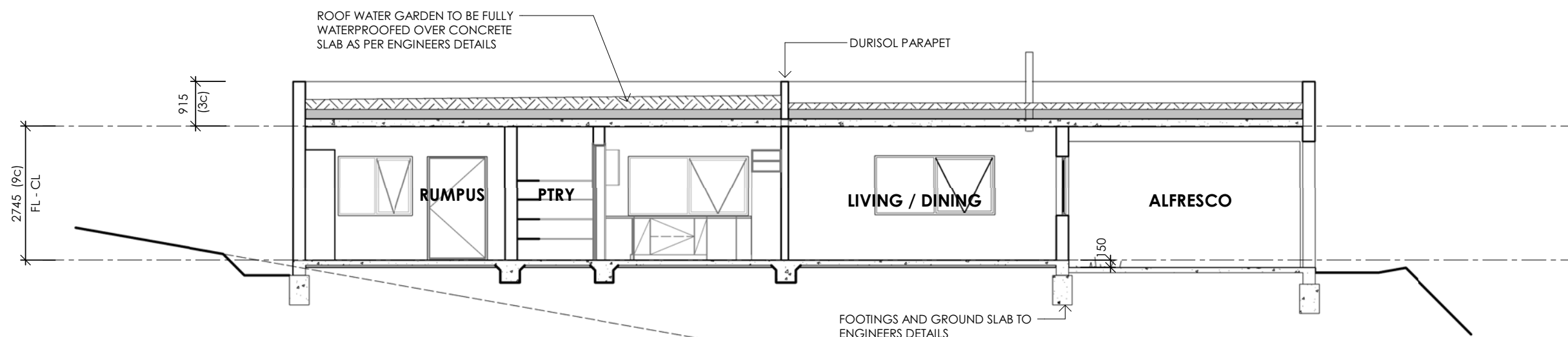
**CRAFTERS WEST, 5152**

sheet: **5 of 10** issue: **K** date: **11/05/21**

job no.: **19-02680**



SECTION XX



SECTION YY



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proposed: **HOUSE - SKETCH DESIGN**

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address: **39 EMMETT ROAD  
CRAFTERS WEST, 5152**

**WORKING DRAWINGS**

**HARVANDSIGN**  
BUILDING DESIGNERS

drawing: **SECTION**

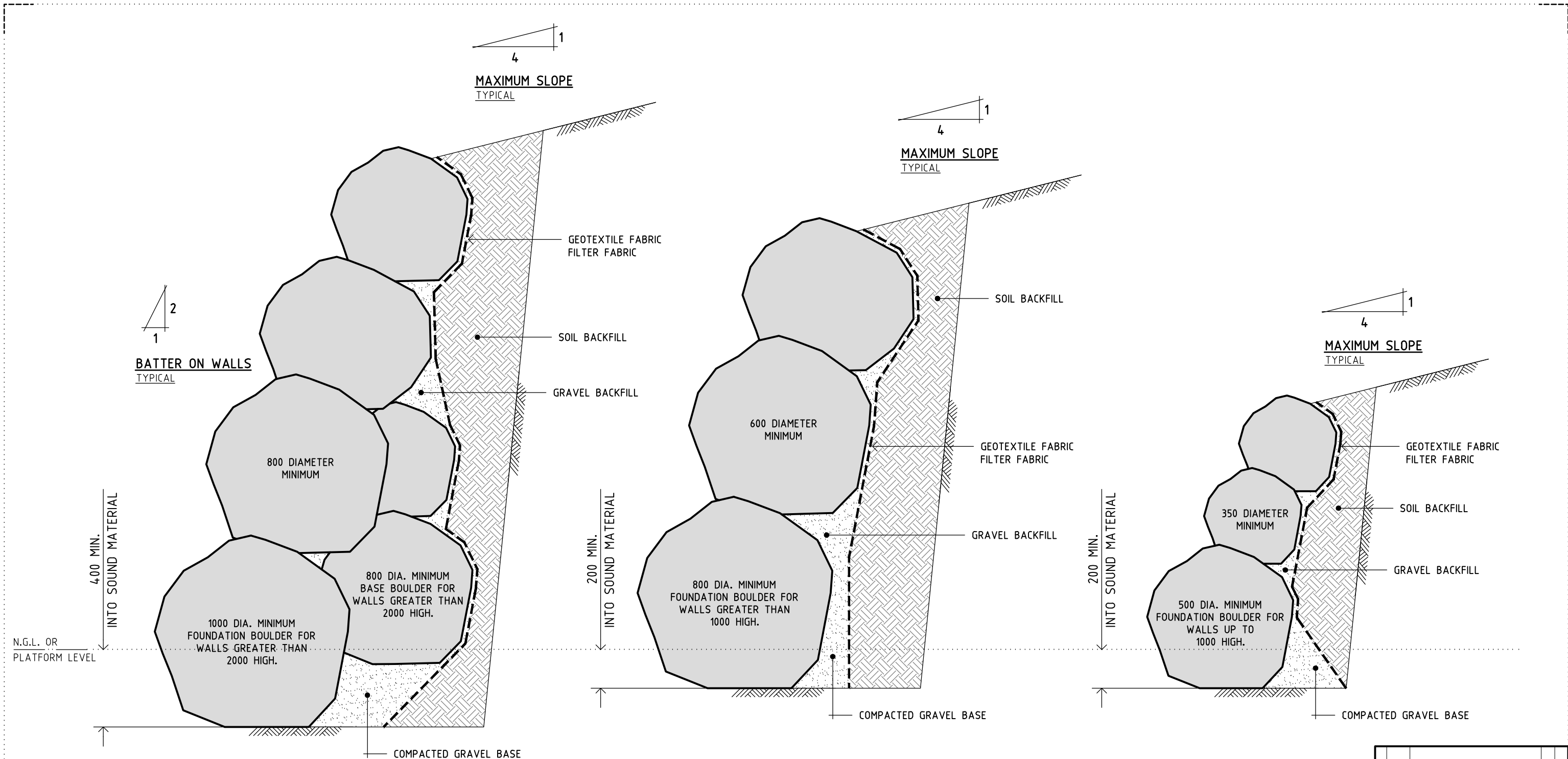
drawn: **ACA** date: **18/07/19** scale: **1 : 100**

sheet: **6** of **10**

issue: **K**

date: **11/05/21**

job no.: **19-02680**



**2000-3000 HIGH WALL**  
**SCALE 1:20**

**NOTE**  
CAN ACHIEVE MAXIMUM 6m HIGH WALL IF SECTION IS USED ON A 90 DEGREE INTERNAL CORNER WITH MINIMUM 4m RETURN IN EACH DIRECTION.

**CONSTRUCTION METHOD**

1. PLACE FOUNDATION BOULDER BELOW PLATFORM LEVEL TO RETAIN CUT OR BELOW NATURAL GROUND TO RETAIN FILL. (DEPTHS AS NOTED)
2. PLACE BASE BOULDER AS REQUIRED.
3. PLACE SOIL BEHIND FOUNDATION AND BASE BOULDERS AND COMPACT IN LAYERS.
4. CONTINUE PLACING BOULDERS AND COMPACTING SOIL IN LAYERS BEHIND UNTIL DESIGN PROFILE IS ACHIEVED

**1000-2000 HIGH WALL**  
**SCALE 1:20**

**1000 HIGH WALL**  
**SCALE 1:20**

Rev	Date	Description	By	CHK
C02	10.05.21	ISSUED FOR CONSTRUCTION	BC	TMP
C01	22.02.21	ISSUED FOR CONSTRUCTION	BC	TMP

**EDGE**  
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**DO NOT SCALE DRAWINGS. IF IN DOUBT, ASK!**

Project Name  
**39 EMMETT ROAD**  
**CRAFERS WEST**

Client  
**ULRICH SCHADE**

Designed  
**T.M.P.**

Drawn  
**B.C.**

Checked  
**T.M.P.**

Scale @ A3  
**1:20**

Drawing Title  
**ROCK RETAINING WALL**

Project No.  
**200650**

Drawing No.  
**S01**

Revision  
**C02**

**ISSUED FOR CONSTRUCTION**

PlanSA DPTI Level 5, 50 Flinders Street Adelaide SA 5000	Adelaide Hills Council Melanie Scott / Sarah Kimber Senior Statutory Planner 24 Onkaparinga Valley Road Woodside SA 5244
---	--

## Variation application to retaining wall design Development Number 19/580/473

Dear Melanie,  
Dear Sarah,  
Dear Madam/Sir,

The DEVELOPMENT APPROVAL, Development Number 19/580/473, was granted on 29 May 2020, to build a "Single storey detached dwelling, retaining walls, water storage tank, removal of native vegetation & associated earthworks (non-complying).

Construction commenced on 4 February 2021. When we started the retaining wall construction and finished the first step, at the end of March 2021, we realised that the 3 tiered retaining wall takes up too much space but we persist on with the construction.

We went further but it became clear that the the 3 tiered retaining wall design was flawed. As soon as the problem became apparent we contacted EDGE consulting for engineering advise. The engineering decision was that the only way to move forward was to change the design into a 1 tiered retaining wall.

Main reasons for the he change into 1 tiered retaining wall is the enhanced safety aspects during a bush fire, to build an elegant free draining retaining wall, to reach a safe setback of the home and the retaining wall looks as is if nature intended it.

A 3 tiered retaining wall would have taken up to much space. Where the fill is 4 metres, the retaining wall thickness would have to be 8.7 metres.

The building could not have been build direct on the edge of the 3 tiered retaining wall because the footings would have charged the retaining wall, making the retaining wall potentially unstable. In order to prevent the charging of the footings onto the retaining wall, the design from OB Geotechnics requests to have the building 3 metres setback from the 3 tiered retaining wall.

The 1 tiered retaining wall design assures a safe setback of the house from the edge of the retaining wall.

Building a 3 tiered retaining wall would have meant that there is no space for the home for which we have DEVELOPMENT APPROVAL, Development Number 19/580/473, 29 May 2020.

In total the house would have needed to be setback by 11.7 metres. Adding the additional setback required by CFS of 5 metres to each boundary, limits the space even more. At a give width of of the building site of approximately 21 metres, no space would have been left to build a house.

It was clear by end of March and with the council from Edge consulting, the only retaining wall solution to solve the matter was to build the 1 tiered engineered stone retaining wall.

The 1 tiered retaining wall provides excellent protection from erosion and is self draining.

The 1 tiered retaining wall is build considering design elements to blend the structure into the landscape. Pockets in the retaining wall allow to be filled with soil to plant native vegetation.

Furthermore the 1 tiered retaining wall solution prevents that the house footings charge the retaining wall.

With the 1 tiered retaining wall solution we are able to build our bushfire safe, passive house which reflects modern technologies in eco friendly and safe homes.

We kindly ask you to approve the changes to the retaining wall.

Best regards

Alfred Teng  
Ulrich Schade

This document show the intended landscaping and planting of native vegetation after the retaining wall is finished.





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www.edgece.com  
58 Kingston Street  
Helensvale  
QLD 4212  
Australia

7<sup>th</sup> May 2021

Adelaide Hills Council

Attention Ms Melanie Scott  
Senior Statutory Planner

**RE : 39 Emmett Road Crafter West SA – Revisions to Retaining Wall Design and Set Out.**

Dear Melanie,

The following refers to localised amendments made to the “as documented” design for the above. The amendments to the design were made under engineering supervision during the construction process. Please note that the original wall designs from DB Geotechnics were updated to the sections provided on the later EDGE Drawings/

These changes involved:-

1. Southeast Corner of the Site – 3-Tiered Wall – site constraints did not allow physical construction of the wall in 3 tiers. This required a redesign of this section of the wall into a single tier. The base of this wall has been reviewed on site by an engineer from EDGE Consulting Engineers.
2. Avoiding building surcharge to the walls in both the above location and at the western property boundary, the original tiered design and subsequent construction tolerances resulted in the house footings being too close to the zone of influence of the wall. The walls were redesigned to ensure that the wall alignment and top of the rock surface were sufficiently aligned to the away from the house foundations. EDGE have provided engineering guidance in this aspect.

Over and above the realignment requirements, the walls have been engineered and detailed with water and erosion control as prime consideration.

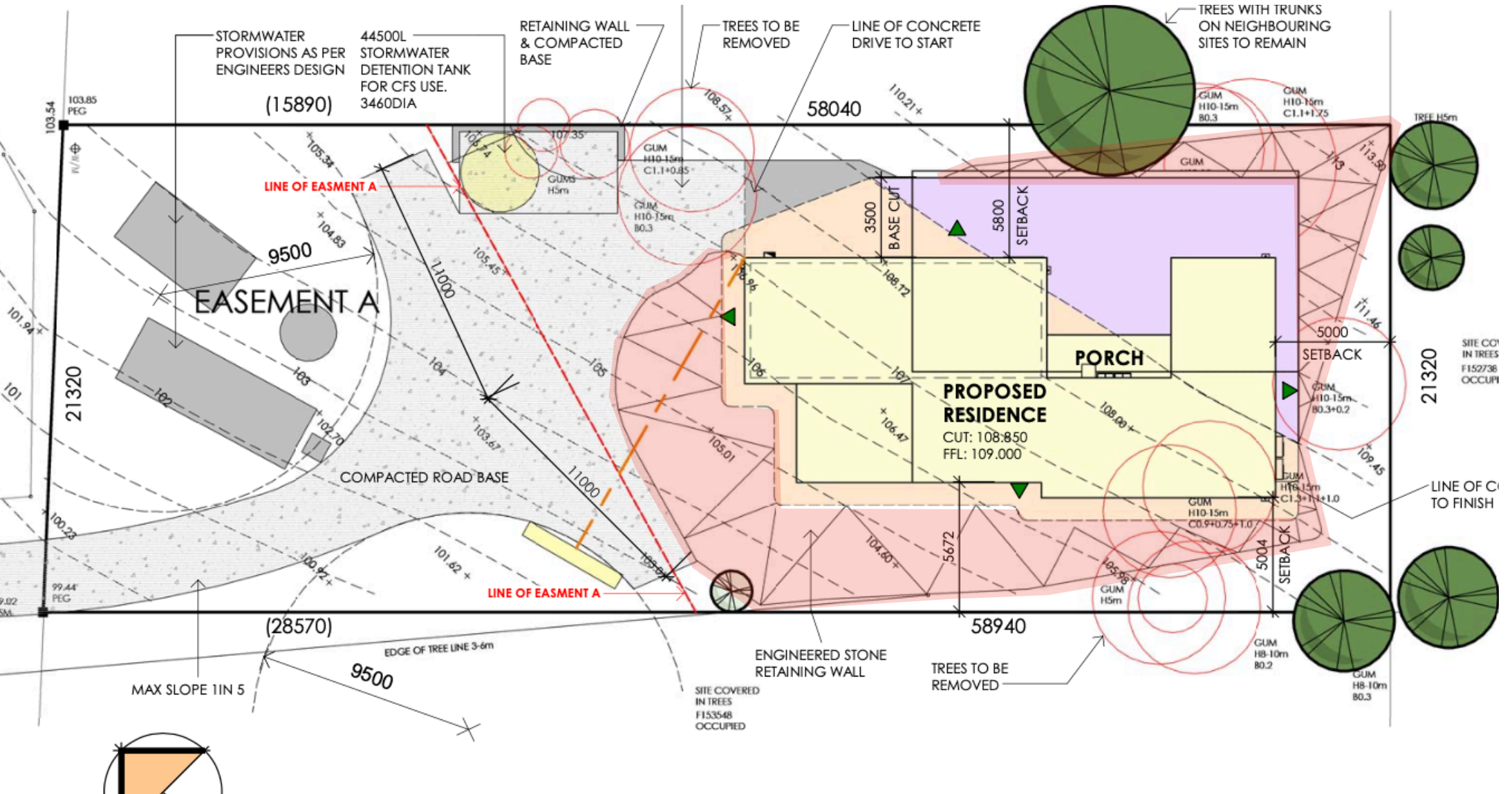
Any further queries can be addressed to the undersigned.

Yours faithfully,

A handwritten signature in black ink, appearing to read "J. M. Peters".

Tim Peters  
Managing Director  
B.Eng M.Eng CPEng Aust NER 27334

Approved Plans - 39 Emmett Road Crafers West, Area from Page 2 of 10 of the stamped plans by Adelaide Hills Council



[illegible]

GENERAL NOTES (NCC 2019 BCA Vol 2)

- ALL MATERIALS AND WORK PRACTICES SHALL COMPLY WITH, BUT NOT LIMITED TO THE BUILDING REGULATIONS 2018, NATIONAL CONSTRUCTION CODE SERIES 2019, THE BUILDING CODE OF AUSTRALIA VOL 2 AND ALL RELEVANT CURRENT AUSTRALIAN STANDARDS (AS AMENDED) REFERRED TO THEREIN.

- UNLESS OTHERWISE SPECIFIED THE TERM BCA SHALL REFER TO NATIONAL CONSTRUCTION CODE SERIES 2019 BUILDING CODE OF AUSTRALIA VOLUME 2

- ALL MATERIALS AND CONSTRUCTION PRACTICE SHALL MEET THE PERFORMANCE REQUIREMENTS OF THE BCA. WHERE A PERFORMANCE SOLUTION IS PROPOSED THEN, PRIOR TO IMPLEMENTATION OR INSTALLATION, IT FIRST MUST BE ASSESSED AND APPROVED BY THE RELEVANT BUILDING SURVEYOR AS MEETING THE PERFORMANCE REQUIREMENTS OF THE BCA.

- GLAZING INCLUDING SAFETY GLAZING SHALL BE INSTALLED TO A SIZE, TYPE & THICKNESS SO AS TO COMPLY WITH;

- BCA PART 3.6 FOR CLASS 1 AND 10 BUILDINGS WITHIN A DESIGN WIND SPEED OF NOT MORE THAN N3, AND
- BCA VOL 1 PART B1.4 FOR CLASS 2 TO 9 BUILDINGS

- WATERPROOFING OF WET AREAS, BEING BATHROOMS, SHOWERS, SHOWER ROOMS, LAUNDRIES, SANITARY COMPARTMENTS AND THE LIKE SHALL BE PROVIDED IN ACCORDANCE WITH AS 3740-2010: WATERPROOFING OF DOMESTIC WET AREAS.

SUSTAINABILITY MEASURES FOR NEW CLASS 1 BUILDINGS.

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ANY HOUSE ENERGY RATING (HERS) REPORT AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STAMPED PLANS ENDORSED BY THE ACCREDITED THERMAL PERFORMANCE ASSESSOR WITHOUT ALTERATION.

SITE BUSHFIRE ATTACK ASSESSMENT.

REFERENCE DOCUMENT AS 3959-2018 CONSTRUCTION OF BUILDINGS IN BUSHFIRE PRONE AREAS.

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL AND ALL OTHER CONSULTANTS DRAWINGS/ DETAILS AND WITH ANY OTHER WRITTEN INSTRUCTIONS ISSUED IN THE COURSE OF THE CONTRACT.

- SITE PLAN MEASUREMENTS IN MILLIMETRES - ALL OTHER MEASUREMENTS IN MILLIMETRES U.N.O.

- FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.

- THE BUILDER SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE STABILITY AND GENERAL WATER TIGHTNESS OF ALL NEW AND/OR EXISTING STRUCTURES DURING ALL WORKS.

- THE BUILDER AND SUBCONTRACTORS SHALL CHECK AND VERIFY ALL DIMENSIONS, SETBACKS, LEVELS AND SPECIFICATIONS AND ALL OTHER RELEVANT DOCUMENTATION PRIOR TO THE COMMENCEMENT OF ANY WORKS. REPORT ALL DISCREPANCIES TO THIS OFFICE FOR CLARIFICATION

SITE CLASSIFICATION

SITE CLASSIFICATION AS CLASS:	TBC
REFER TO SOIL REPORT NO:	TBC
BY:	TBC

STORMWATER

90mmØ (UPTO 250m2) OR 100mmØ (OVER 250m2) CLASS 6 UPVC STORMWATER LINE LAID TO A MINIMUM GRADE OF 1:100 AND CONNECTED TO THE LEGAL POINT OF STORMWATER DISCHARGE. PROVIDE INSPECTION OPENINGS AT 9000MM C/C AND AT EACH CHANGE OF DIRECTION. THE COVER TO UNDERGROUND STORMWATER DRAINS SHALL BE NOT LESS THAN

- 100MM UNDER SOIL
- 50MM UNDER PAVED OR CONCRETE AREAS
- 100MM UNDER UNREINFORCED CONCRETE OR PAVED DRIVEWAYS
- 75MM UNDER REINFORCED CONCRETE DRIVEWAYS

AUTHORITIES/CONSULTANTS

MUNICIPALITY NAME:	ADELAIDE HILLS COUNCIL
SEWAGE AUTHORITY:	TBC
CONSULTING STRUCTURAL ENGINEER:	TBC
GEOTECHNICAL ENGINEER:	TBC
THERMAL PERFORMANCE ASSESSOR:	TBC

- STEP SIZES (OTHER THAN FOR SPIRAL STAIRS) TO BE:

- RISERS (R) 190MM MAXIMUM AND 115MM MINIMUM

- GOING (G) 355MM MAXIMUM AND 240MM MINIMUM

- 2R + 1G = 700MM MAXIMUM AND 550MM MINIMUM

- WITH LESS THAN 125MM MAXIMUM GAP BETWEEN OPEN TREADS

- ALL TREADS, LANDINGS AND THE LIKE TO HAVE A SLIP-RESISTANCE CLASSIFICATION OF P3 OR R10 FOR DRY SURFACE CONDITIONS AND P4 OR R11 FOR WET SURFACE CONDITIONS, OR A NOSING STRIP WITH A SLIP-RESISTANCE CLASSIFICATION OF P3 FOR DRY SURFACE CONDITIONS AND P4 FOR WET SURFACE CONDITIONS.

- PROVIDE BARRIERS WHERE CHANGE IN LEVEL EXCEEDS 1000MM ABOVE THE SURFACE BENEATH LANDINGS, RAMPS AND/OR TREADS. BARRIERS (OTHER THAN TENSIONED WIRE BALUSTRADES) TO BE:

- 1000MM MIN. ABOVE FINISHED SURFACE LEVEL OF BALCONIES, LANDINGS OR THE LIKE, AND
- 865MM MIN. ABOVE FINISHED SURFACE LEVEL OF STAIR NOSING OR RAMP, AND

- VERTICAL WITH LESS THAN 125MM GAP BETWEEN, AND

- ANY HORIZONTAL ELEMENT WITHIN THE BALUSTRADE BETWEEN 150MM AND 760MM ABOVE THE FLOOR MUST NOT FACILITATE CLIMBING WHERE CHANGES IN LEVEL EXCEEDS 4000MM ABOVE THE SURFACE BENEATH LANDINGS, RAMPS AND/OR TREADS.

- WIRE BARRIER CONSTRUCTION TO COMPLY WITH NCC 2019 BCA PART 3.9.2.3 FOR CLASS 1 AND 10 BUILDINGS AND NCC 2019 BCA VOLUME 1 PART D2.16 FOR OTHER CLASSES OF BUILDINGS.

- TOP OF HAND RAILS TO BE 865MM MINIMUM ABOVE STAIR NOSING AND FLOOR SURFACE OF RAMPS.

- WINDOW SIZES NOMINATED ARE NOMINAL ONLY. ACTUAL SIZE MAY VARY ACCORDING TO MANUFACTURER. WINDOWS TO BE FLASHED ALL AROUND.

- WHERE THE BUILDING (EXCLUDES A DETACHED CLASS 10) IS LOCATED IN A TERMITE PRONE AREA THE AREA TO UNDERSIDE OF BUILDING AND PERIMETER IS TO BE PROVIDED WITH A TERMITE MANAGEMENT SYSTEM.

- CONCRETE STUMPS: UP TO 1400MM LONG TO BE 100MM X 100MM (1 NO. H.D. WIRE) 1401MM TO 1800MM LONG TO BE 100MM X 100MM (2 NO. H.D. WIRES) 1801MM TO 3000MM LONG TO BE 125MM X 125MM (2 NO. H.D. WIRES)

100MM X 100MM STUMPS EXCEEDING 1200MM ABOVE GROUND LEVEL TO BE BRACED WHERE NO PERIMETER BASE BRICKWORK PROVIDED.

- BUILDINGS IN MARINE OR OTHER EXPOSURE ENVIRONMENTS SHALL HAVE MASONRY UNITS, MORTAR AND ALL BUILT IN COMPONENTS AND THE LIKE COMPLYING WITH THE DURABILITY REQUIREMENTS OF TABLE 4.1 OF AS4773.1-2015 MASONRY IN SMALL BUILDINGS PART 1:DESIGN

- EXTERNAL WALL TO BE PROVIDED WITH AS 4200.1 COMPLIANT VAPOUR PERMEABLE MEMBRANES INSTALLED IN ACCORDANCE WITH AS 4200.2

- ALL STORMWATER TO BE TAKEN TO THE LEGAL POINT OF DISCHARGE TO THE RELEVANT AUTHORITIES APPROVAL.

- INSTALLATION OF ALL SERVICES SHALL COMPLY WITH THE RESPECTIVE SUPPLY AUTHORITY REQUIREMENTS.

EXHAUST SYSTEMS INSTALLED IN A KITCHEN, BATHROOM, SANITARY COMPARTMENT OR LAUNDRY MUST HAVE A MINIMUM FLOW RATE OF 25 L/S FOR A BATHROOM OR SANITARY COMPARTMENT AND 40 L/S FOR A KITCHEN OR LAUNDRY AND MUST BE DISCHARGED DIRECTLY OR VIA A SHAFT OR DUCT TO OUTDOOR AIR.

- THE BUILDER AND SUBCONTRACTOR SHALL ENSURE THAT ALL STORMWATER DRAINS, SEWER PIPES AND THE LIKE ARE LOCATED AT A SUFFICIENT DISTANCE FROM ANY BUILDINGS FOOTING AND/OR SLAB EDGE BEAMS SO AS TO PREVENT GENERAL MOISTURE PENETRATION, DAMPNES, WEAKENING AND UNDERMINING OF ANY BUILDING AND ITS FOOTING SYSTEM.

- THESE PLANS HAVE BEEN PREPARED FOR THE EXCLUSIVE USE BY THE CLIENT OF HARVAN DESIGN ('THE DESIGNER') FOR THE PURPOSE EXPRESSLY NOTIFIED TO THE DESIGNER. ANY OTHER PERSON WHO USES OR RELIES ON THESE PLANS WITHOUT THE DESIGNER'S WRITTEN CONSENT DOES SO AT THEIR OWN RISK AND NO RESPONSIBILITY IS ACCEPTED BY THE DESIGNER FOR SUCH USE AND/ OR RELIANCE.

- A BUILDING PERMIT IS REQUIRED PRIOR TO THE COMMENCEMENT OF THESE WORKS. THE RELEASE OF THESE DOCUMENTS IS CONDITIONAL TO THE OWNER OBTAINING THE REQUIRED BUILDING PERMIT.

- THE CLIENT AND/OR THE CLIENT'S BUILDER SHALL NOT MODIFY OR AMEND THE PLANS WITHOUT THE KNOWLEDGE AND CONSENT OF HARVAN DESIGN EXCEPT WHERE A REGISTERED BUILDING SURVEYOR MAKES MINOR NECESSARY CHANGES TO FACILITATE THE BUILDING PERMIT APPLICATION AND THAT SUCH CHANGES ARE PROMPTLY REPORTED BACK TO HARVAN DESIGN.

- THE APPROVAL BY THIS OFFICE OF A SUBSTITUTE MATERIAL, WORK PRACTICE, VARIATION OR THE LIKE IS NOT AN AUTHORISATION FOR ITS USE OR A CONTRACT VARIATION. ALL VARIATIONS MUST BE ACCEPTED BY ALL PARTIES TO THE AGREEMENT AND WHERE APPLICABLE THE RELEVANT BUILDING SURVEYOR PRIOR TO IMPLEMENTING ANY VARIATION.

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL AND ALL OTHER CONSULTANTS' DRAWINGS/DETAILS AND WITH ANY OTHER WRITTEN INSTRUCTIONS ISSUED IN THE COURSE OF THE CONTRACT. ALL MEASUREMENTS IN MILLIMETRES UNLESS NOTED OTHERWISE.

FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.

THE BUILDER SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE STABILITY AND GENERAL WATER TIGHTNESS OF ALL NEW AND/OR EXISTING STRUCTURES DURING ALL WORKS. THE BUILDER AND SUBCONTRACTORS SHALL CHECK AND VERIFY ALL DIMENSIONS, SETBACKS, LEVELS AND SPECIFICATIONS AND ALL OTHER RELEVANT DOCUMENTATION PRIOR TO THE COMMENCEMENT OF ANY WORKS. REPORT ALL DISCREPANCIES TO THIS OFFICE FOR CLARIFICATION.

INSTALLATION OF ALL SERVICES SHALL COMPLY WITH THE RESPECTIVE SUPPLY AUTHORITY REQUIREMENTS.

BUSHFIRE ATTACK LEVEL:- (BAL)

BAL-FZ - DIRECT EXPOSURE TO FLAMES FROM FIRE FRONT IN ADDITION TO HEAT FLUX AND EMBER ATTACK

ALL HOMES TO COMPLY WITH AS 3959-2018 (BAL)

WIND SPEED ASSESSMENT:

MAXIMUM DESIGN GUST WIND SPEED FOR THIS SITE IS: TBC

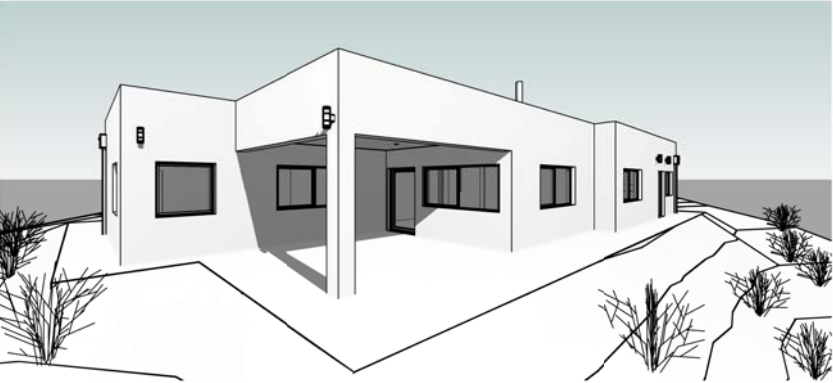
IMPORTANT NOTE:

THE WIND SPEED CALCULATION IS TAKEN FROM THE JOB SPECIFIC SOIL REPORT (FRONT PAGE)

STANDARD HOMES ARE DESIGNED TO SUIT A MINIMUM WIND GUST SPEED OF 33 m/s



ISSUE	AMENDMENT DETAILS
A	INITIAL SKETCH DESIGN ACA - 18/07/2019
B	SKETCH REVISION ACA - 19/07/2019
C	AMENDMET TO SKETCH ACA - 07/08/2019
D	INITIAL WORKING DRAWINGS - DURISOL REVIEW ACA - 28/11/2019
E	INITIAL WORKING DRAWINGS ACA - 06/12/2019
F	AMENDMENTS AS PER ENGINEERING ADVICE ACA - 12/02/2020
G	AMEND AS PER ULRICH REQUEST ACA - 14/02/2020
H	AMEND AS PER WERNER REQUEST - ENERGY VALUES ACA - 24/02/2020
I	AMEND FOR RFI ACA - 19/03/2020
J	MINOR WINDOW PLACEMENT AMMENDMENT ACA - 16/04/2021
K	AMEND AS PER CLIENT REQUEST - RETAINING WALLS AS CONSTRUCTED ACA - 11/05/2021
L	
M	
N	
O	
P	
Q	
R	
S	
T	
U	
V	



HARVANDESIGN  
BUILDING DESIGNERS

proposed: HOUSE - SKETCH DESIGN for: U. SCHADE & A. TENG address: 39 EMMETT ROAD

drawing: GENERAL NOTES

drawn: ACA date: 18/07/19 scale:

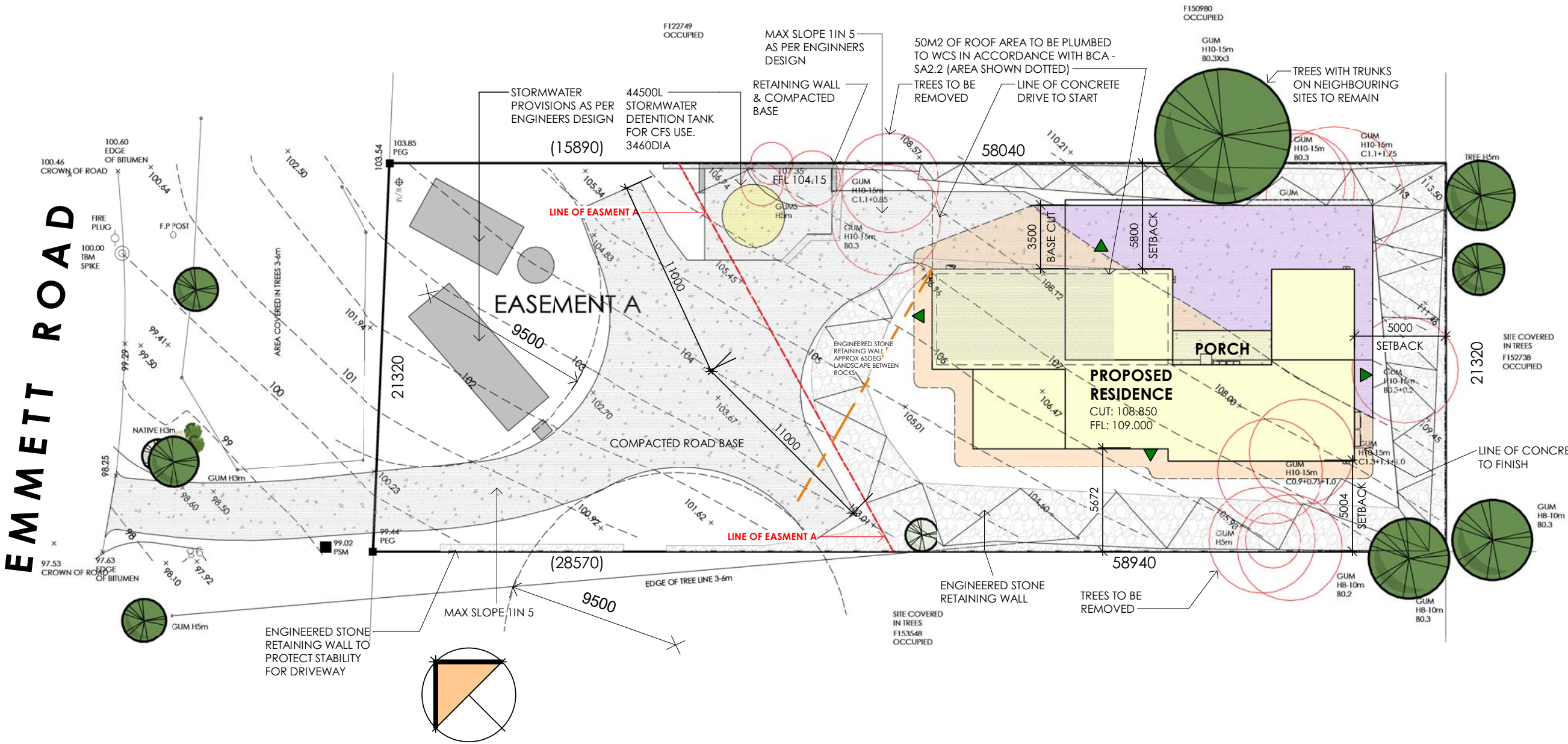
CRAFTERS WEST, 5152

sheet: 1 of 10 issue: K date: 11/05/21

WORKING DRAWINGS

job no.: 19-02680

EMMETT ROAD



SITE ANALYSIS		
GARDEN AREA REQ'D FOR GRZ & NRZ ZONES ONLY: 400 - 500m2 = 25%   501 - 650m2 = 30%   650m2+ = 35%		
GARDEN AREA	729.63 m <sup>2</sup>	58.51%
NON-COMPLIANT GARDEN AREA	0.00 m <sup>2</sup>	0.00%
TOTAL PERMEABLE SPACE	729.63 m <sup>2</sup>	58.51%
SITE COVER	198.91 m <sup>2</sup>	15.95%
PAVED AREA	0.00 m <sup>2</sup>	0.00%
DRIVEWAY AREA	318.45 m <sup>2</sup>	25.54%
TOTAL HARD COVER	517.36 m <sup>2</sup>	41.49%
SITE AREA	1246.99 m <sup>2</sup>	100.00%

**SITE CUT/FILL LEGEND & NOTES**  

DENOTES AREA OF SITE CUT  
 DENOTES AREA OF SITE FILL

  
**SITE CUT & FILL NOTE**  
PROVIDE SITE CUT OF 4000mm & FILL 40000mm OVER BUILDING AREA & PROVIDE AN ADDITION SCRAPE TO GARAGE TO ACCOMMODATE A 86 mm STEPDOWN NOTE: 45° BATTER ANGLE  
**NOTE:**  
PENETRATIONS THROUGH THE SISALATION PAPER ARE TO BE TAPED AROUND CAREFULLY TO ENSURE ANY GAPS ARE SEALED.  
**TREE REMOVAL**  
IT IS THE RESPONSIBILITY OF THE OWNER TO UNDERTAKE ANY TREE REMOVAL INCLUDING OBTAINING ANY NECESSARY PERMITS, & TO PROVIDE A SITE CLEAR OF ANY VEGETATION & DEBRIS, TO THE SATISFACTION OF THE BUILDER PRIOR TO COMMENCEMENT OF WORKS

ROOF GARDEN IS NON- TRAFFICABLE

SITE PLAN TO BE READ IN CONJUNCTION WITH ENGINEERING RETAINING STORM WATER PLAN AND WASTE MANAGEMENT PLAN

- DRAINAGE NOTES:**
- SITE DRAINAGE SHALL COMPLY WITH NCC 3.1.2 'DRAINAGE' AND AS3500 NATIONAL PLUMBING DRAINAGE CODE.
  - BASE OF CUT GRADED TO SILT TRAP AT 1:100 MIN. DRAINS SHALL BE PROTECTED BY GRAVEL FILTERS.
  - TEMPORARY DOWNPIPES CONNECTED TO THE STORM WATER SYSTEM TO BE INSTALLED AS SOON AS ROOF COVER IS COMPLETED.
  - STORMWATER DRAINS ARE INDICATIVE ONLY. DRAINER TO CONNECT TO LEGAL POINT OF DISCHARGE AT THEIR DISCRETION.
- GRADE SURFACE AWAY FROM HOUSE FOOTINGS(MINIMUM FALL 1:20).

GRADED INLET PIT CONNECTED TO STORMWATER SYSTEM DIRECTED TO LEGAL POINT OF DISCHARGE.

PROVIDE AG DRAIN AT BASE OF CUT GRADED TO SILT PIT AT 1:100 MIN.

SILT PIT CONNECTED TO AG DRAIN & DIRECTED TO LEGAL POINT OF DISCHARGE VIA STORMWATER SYSTEM.

ELECTRICIAN TO SUPPLY EXTERNAL POWER OUTLETS TO APPONITED AREAS OF THE SITE - TO CLIENT INSTRUCTIONS

GAS FIRE PLACE TO BE INSTALLED TO AS 4558-2011  
WATERPROOFING OF WET AREAS WILL BE IN ACCORDANCE WITH AS3740-2010 AND BCA TABLE 3.8.1.1  
SMOKE ALARMS WILL BE HARDWIRED IN ACCORDANCE WITH AS3786-2014

**BOUNDARY FENCE(S) REQUIRED**  
PROVIDE TIMBER PALING PERIMETER FENCING TO A MINIMUM HEIGHT OF 1800mm WITH CAPPING & EXPOSED POSTS TO ANY UNFENCED BOUNDARIES PRIOR TO OBTAINING A CERTIFICATE OF OCCUPANCY PERMIT.

6 STAR ENERGY REQUIREMENTS;  
AS PER ENERGY REPORT  
  
250 WIDE DURISOL BLOCKS  
U VALUE = 0.389  
R VALUE = 2.571  
  
EARTH ROOF  
R10  
  
WINDOWS  
MINIMUM U VALUE - 0.85  
SHC 0.28

BUSHFIRE ATTACK LEVEL FLAME ZONE

**SUBFLOOR SUPPORTS**  
SUBFLOOR SUPPORTS ENCLOSURE BY EXTERNAL WALL OR NON-COMBUSTIBLE WITH AN FRL 30/- OR BE TESTED FOR BUSHFIRE RESISTANCE TO AS1530.8.2

**FLOORS**  
CONCRETE SLAB ON GROUND, ENCLOSURE BY EXTERNAL WALL OR PROTECTION OF UNDERSIDE WITH A NON COMBUSTIBLE MATERIAL SUCH AS FIBRE CEMENT SHEET OR BE NON COMBUSTIBLE OR BE TESTED FOR BUSHFIRE RESISTANCE TO AS1530.8.1

**EXTERNAL WALLS**  
WALLS MADE FROM NON COMBUSTIBLE MATERIAL (eg MASONRY, BRICK VENEER, MUD BRICK, CONCRETE, AERATED CONCRETE) WITH A MINIMUM OF 90mm IN THICKNESS  
OR  
A SYSTEM COMPLYING WITH AS1530.8.2 WHEN TESTED FROM THE OUTSIDE.  
OR  
A SYSTEM WITH AN FRL OF 30/30/30 OR -/30/30 WHEN TESTED FROM THE OUTSIDE.  
OR  
A COMBINATION OF ANY OF THE ITEMS ABOVE.  
ALL JOINTS IN THE EXTERNAL SURFACE MATERIAL OF THE WALLS SHALL BE COVERED SEALED, OVERLAPPED, BACK OR BUTT JOINTED TO PREVENT GAPS GREATER THAN 3mm  
ALTERNATIVELY, SARKING TYPE MATERIAL MAY BE APPLIED OVER THE FRAME PRIOR TO FIXING ANY EXTERNAL CLADDING.  
VENTS AND WEEPHOLES IN EXTERNAL WALLS SHALL BE SCREENED WITH A MESH WITH A MAXIMUM APERTURE OF 2mm MADE OF CORROSION RESISTANT STEEL OR BRONZE.

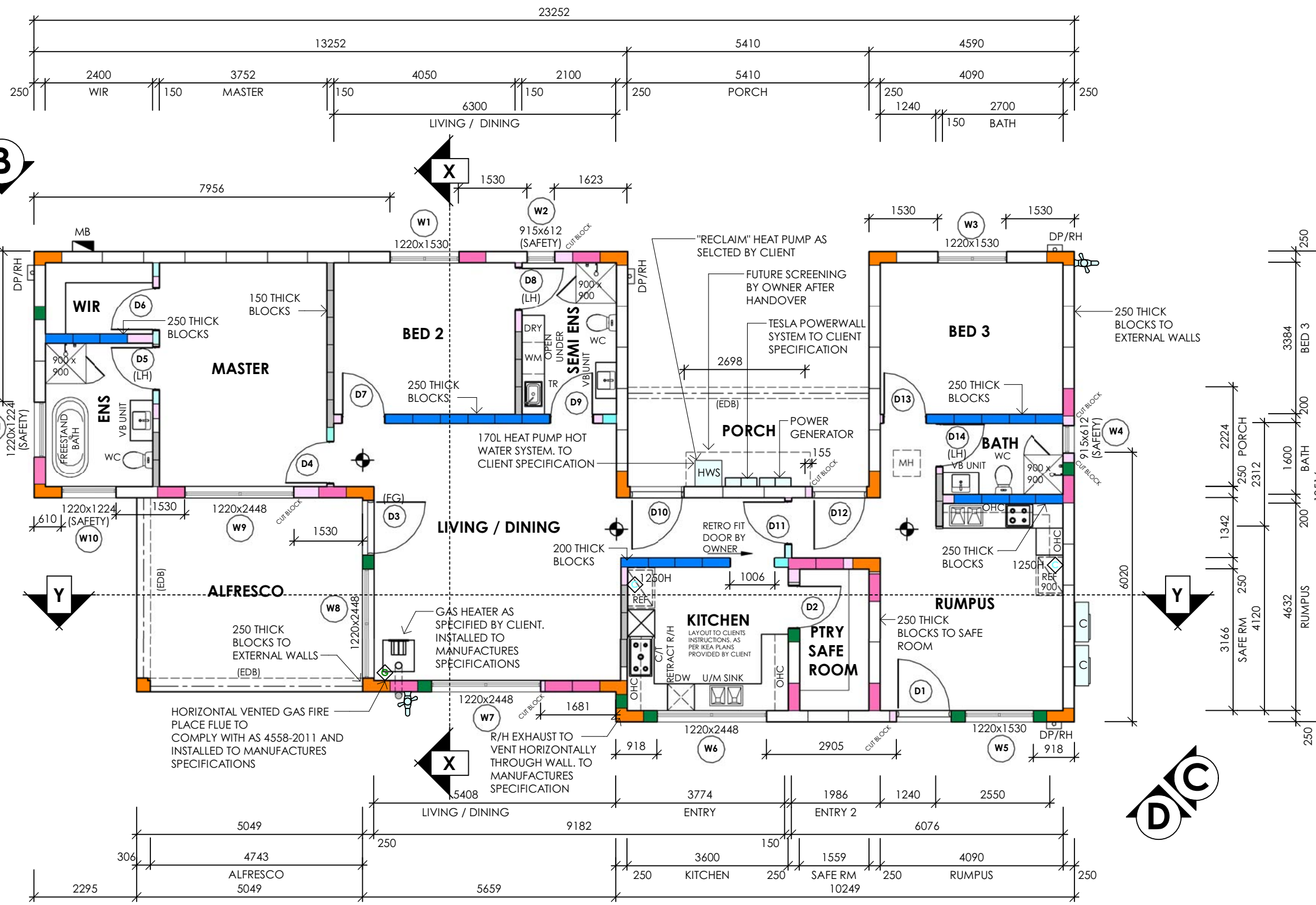
**EXTERNAL WINDOWS**  
SHALL BE COMPLETELY PROTECTED BY A BUSHFIRE SHUTTER  
OR  
THE OPENABLE PORTION OF THE WINDOW SHALL BE SCREENED WITH A MESH WITH A MAXIMUM APERTURE OF 2mm, MADE OF CORROSION RESISTANT STEEL OR BRONZE; AND EITHER  
- THE WINDOW SYSTEM SHALL HAVE AN FRL OF AT LEAST -/30/-; OR  
- THE WINDOW SYSTEM SHALL COMPLY WITH AS1530.8.2 WHEN TESTED FROM THE OUTSIDE.

**EXTERNAL DOORS**  
SIDE HUNG EXTERNAL DOORS INCLUDING FRENCH DOORS, PANEL FOLD OR BIFOLD DOORS SHALL COMPLY WITH THE FOLLOWING:  
THEY SHALL BE COMPLETELY PROTECTED BY A BUSHFIRE SHUTTER SLIDING DOORS SHALL BE COMPLETELY PROTECTED BY A BUSHFIRE SHUTTER.

**ROOFS**  
THE ROOF OR ROOF SYSTEM SHALL COMPLY WITH ONE OF THE FOLLOWING:  
- A SYSTEM COMPLYING WITH 1530.8.2 WHEN TESTED FROM THE OUTSIDE.  
- A SYSTEM WITH AN FRL OF 30/03/30 OR -/30-30 WHEN TESTED FROM THE OUTSIDE.  
ROOF AND WALL JUNCTIONS SHALL BE SEALED TO PREVENT OPENINGS GREATER THAN 3mm  
ROOF VENTILATION OPENINGS SHALL BE FITTED WITH NON COMBUSTIBLE EMBER GUARDS.  
ROOF MOUNTED EVAPORATIVE COOLERS ARE EXCLUDED FROM THIS LEVEL.

**VERANDAHS & DECKS**  
ENCLOSED SUB FLOOR SPACE OR NON COMBUSTIBLE SUPPORTS, FRAMING OF DECKS, VERANDAS, RAMPS OR LANDINGS SHALL BE OF NON COMBUSTIBLE MATERIAL. DECKING TO BE NON COMBUSTIBLE OR FIBRE CEMENTS SHEET AND HAVE NO GAPS.





AREAS TABLE		
AREAS	(m <sup>2</sup> )	(SQ)
GROUND FLOOR	175.52 m <sup>2</sup>	18.89
SUB TOTAL:	175.52 m <sup>2</sup>	18.89
OURDOOR LIVING	21.91 m <sup>2</sup>	2.36
PORCH	8.79 m <sup>2</sup>	0.95
TOTAL OTHER	30.70 m <sup>2</sup>	3.30
GRAND TOTAL	206.21 m <sup>2</sup>	22.20

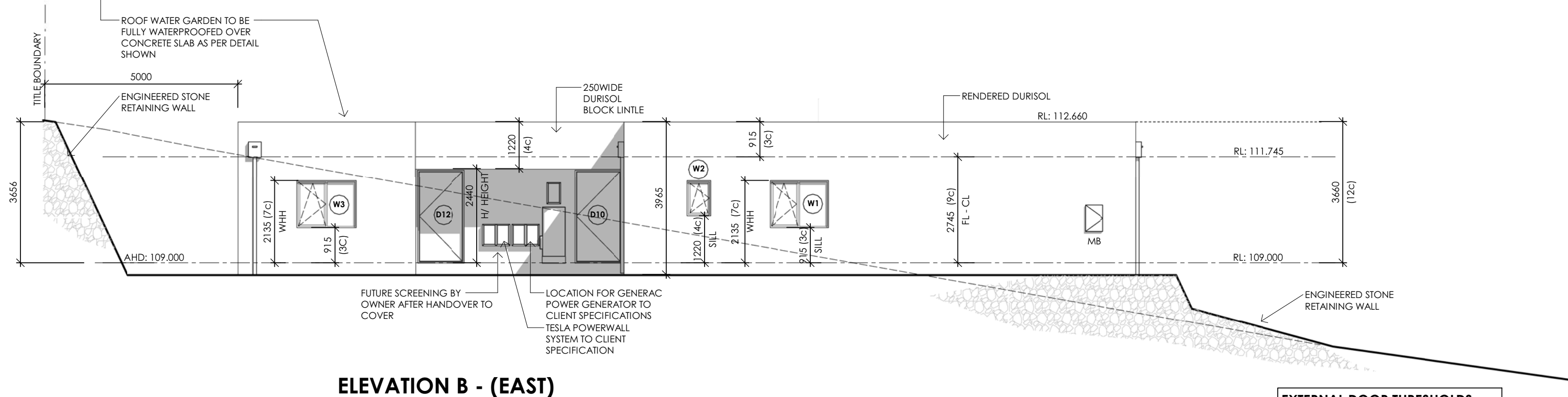
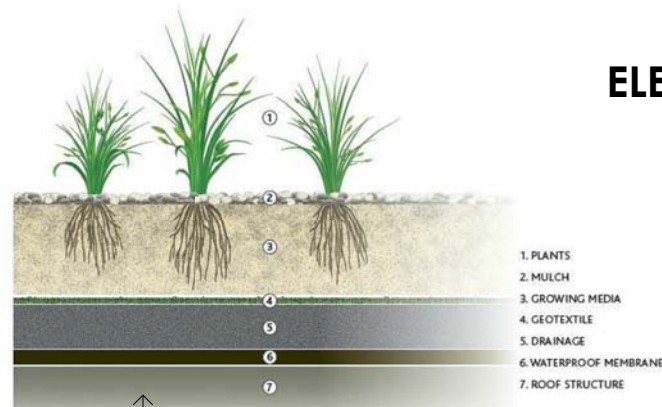
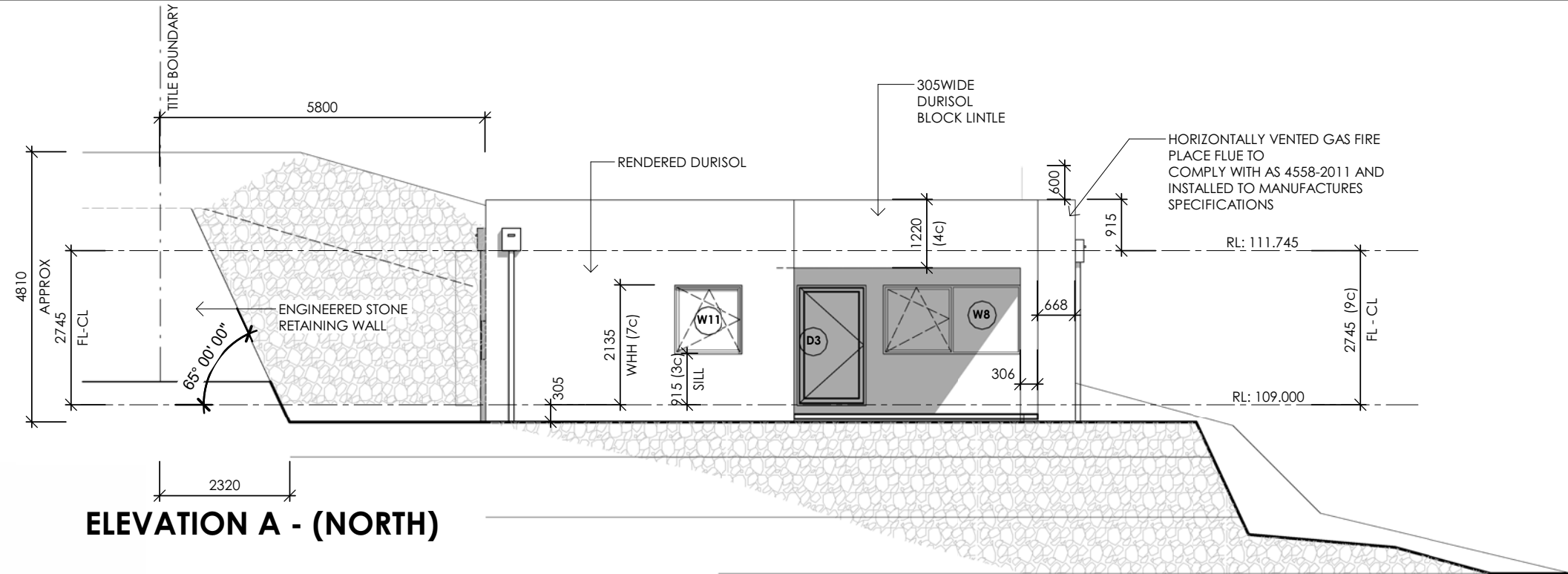
- GENERAL NOTES:**
- WRITTEN DIMENSIONS ALWAYS TAKE PREFERENCE OVER SCALE
  - BUILDER MAY ADJUST GARAGE DOOR HEIGHT ON SITE AS REQUIRED
  - UNLESS OTHERWISE INDICATED ALL WALL DIMENSIONS ARE:
    - \* EXTERNAL 240mm = 110 BRICK, 40 CAVITY, 90 STUD
    - \* INTERNAL 90mm STUD
  - ALL INTERNAL DOORS TO BE 2040H (2340H NOTED WITH ASTERISK - 820\*)
  - PROVIDE REMOVABLE HINGES TO HINGED WC & POWDER
  - ROOM DOORS WHERE INDICATED (LH)
  - PROVIDE WEATHER STRIPS TO FRONT ENTRY DOOR
  - 600x600 CEILING ACCESS MANHOLE LOCATION
  - SMOKE DETECTOR (INTERCONNECTED WITH BATTERY BACKUP)
  - ENGINEER DESIGNED BEAM - (EDB)
  - DOUBLE GLAZING - (DGL)
  - BRICKWORK ARTICULATION JOINT
  - EXTERNAL PLUMBING POINTS TO PLUMBER'S DISCRETION
  - SAFETY GLASS WHERE WINDOW IS WITHIN 2m OF SHR/BATH BASE
  - BIB TAP
  - RECYCLED TAP
  - GAS METER - 1m CLEARANCE TO OPENINGS & IGNITION SOURCES
  - HWS WATER SERVICE TO BE 500mm CLEAR OF BLDG OPENINGS

SMOKE ALARMA WILL BE HARDWIRED IN ACCORDANCE WITH AS3786-2014

ALL GLAZING TO COMPLY WITH AS 1288

ROLLER SHUTTERS TO BE FITTED TO ALL EXTERNAL WINDOWS AND DOORS

BLOCK SCHEDULE	
250 BLOCKS	<div>915</div> <div>FULL 250 BLOCK</div> <div>610</div> <div>250 CORNER BLOCK</div> <div>610</div> <div>2/3 250 BLOCK</div> <div>305</div> <div>1/3 250 BLOCK</div> <div>CUT TO SUIT</div> <div>250 CUT BLOCK</div>
200 BLOCKS	<div>915</div> <div>FULL 200 BLOCK</div> <div>610</div> <div>200 CORNER BLOCK</div> <div>610</div> <div>2/3 200 BLOCK</div> <div>305</div> <div>1/3 200 BLOCK</div> <div>CUT TO SUIT</div> <div>CUT 200 BLOCK</div>
150 BLOCKS	<div>610</div> <div>FULL 150 BLOCK</div> <div>305</div> <div>1/2 200 BLOCK</div> <div>CUT TO SUIT</div> <div>CUT 200 BLOCK</div>

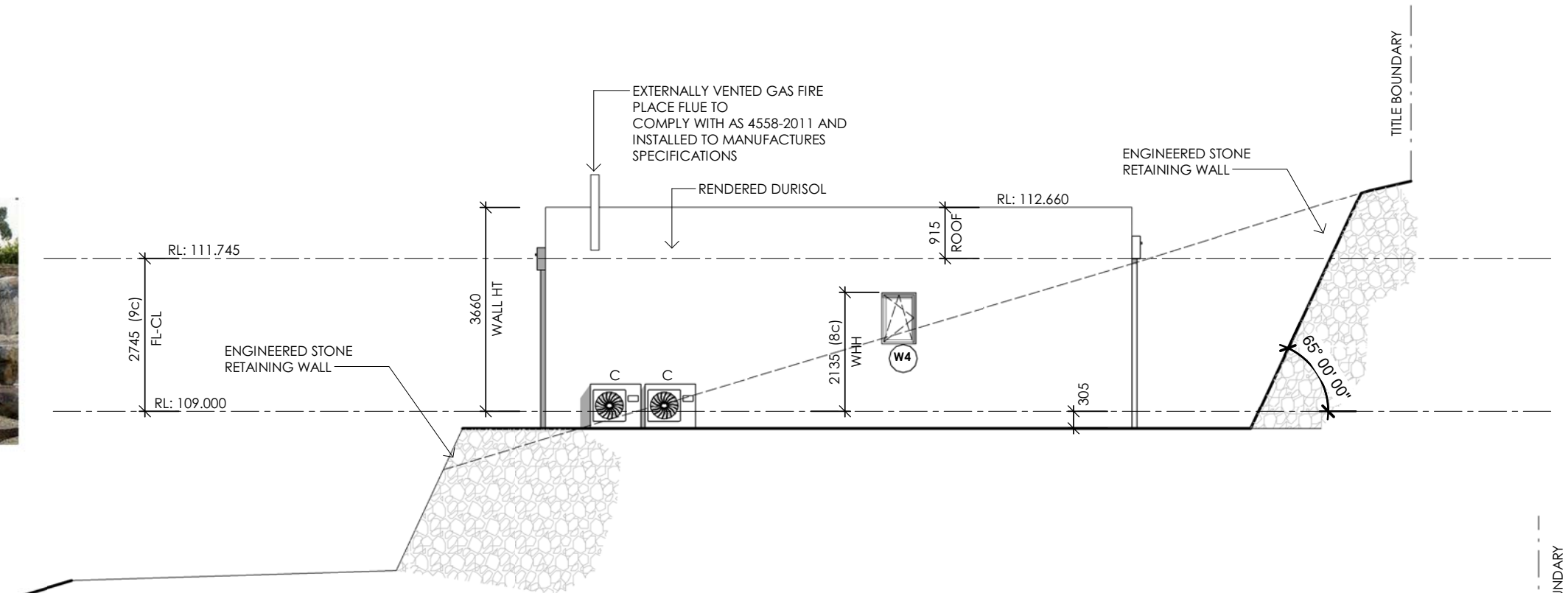


**EXTERNAL DOOR THRESHOLDS:**  
THRESHOLDS OF EXTERNAL DOORS TO BE NO GREATER THAN 230MM ABOVE THE ADJOINING SURFACE

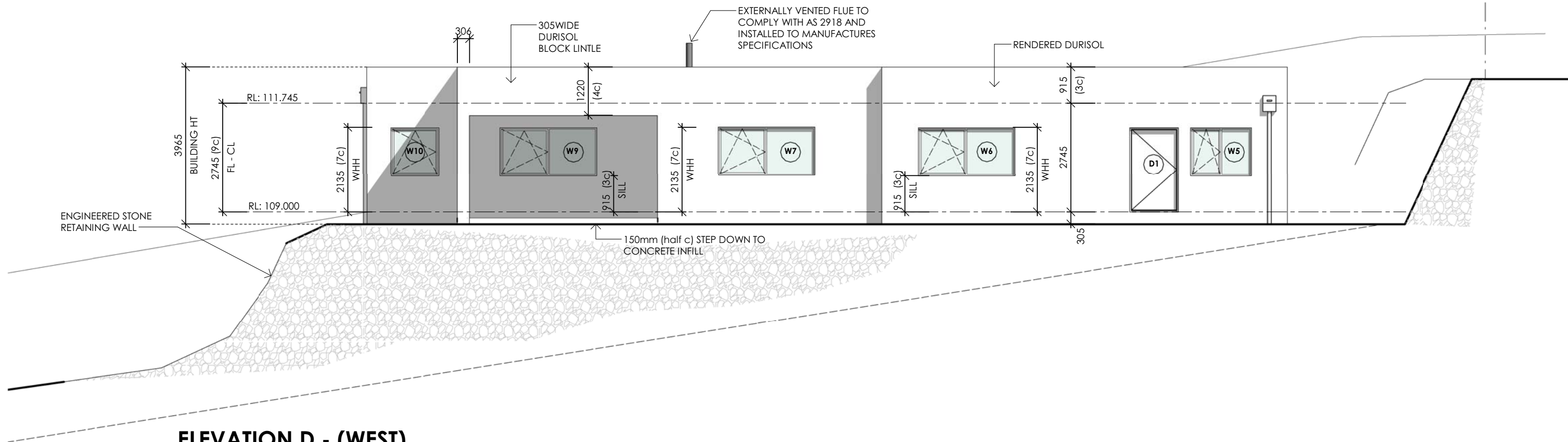




IMAGE OF INTERNDED STYLE OF  
ROCK RETAINING WALLS  
(TO ENGINEERS DESIGN)

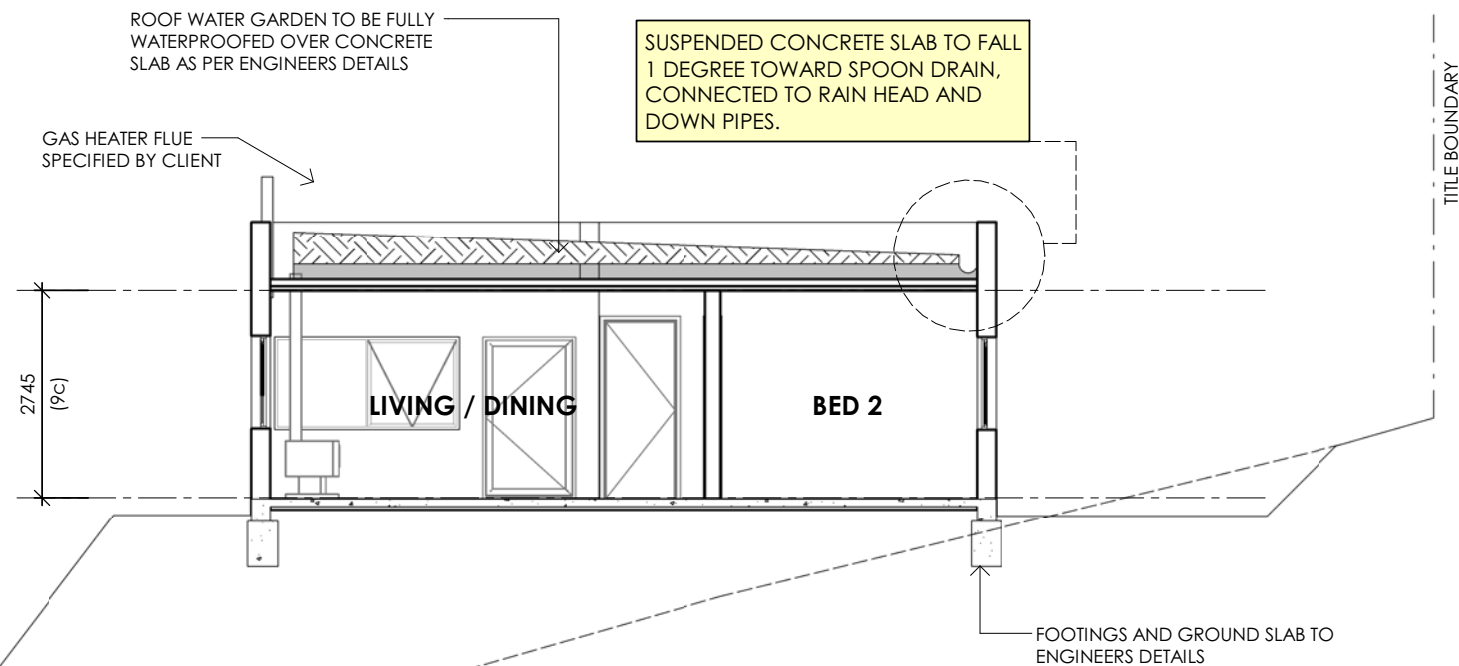


**ELEVATION C - (SOUTH)**

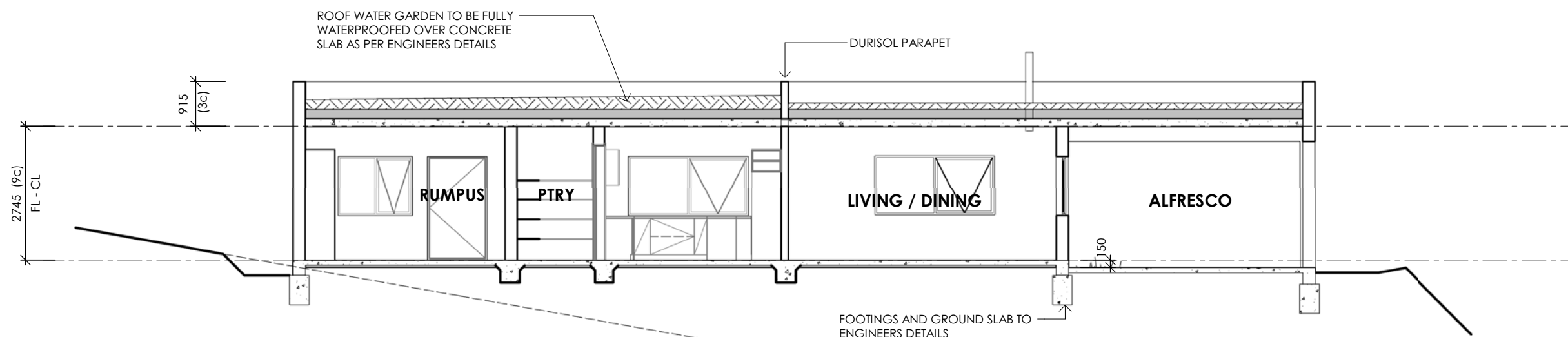


**ELEVATION D - (WEST)**





SECTION XX



SECTION YY



Harvan Design - Building Designers | 3/5 Cook Drive, Pakenham 3810 | P. 03 5940 2340 | design@harvan.com.au | www.harvan.com.au | find us on Facebook

proposed: **HOUSE - SKETCH DESIGN**

for: **U. SCHADE & A. TENG**

address: **39 EMMETT ROAD  
CRAFTERS WEST, 5152**

**WORKING DRAWINGS**

**HARVANDSIGN**  
BUILDING DESIGNERS

drawing: **SECTION**

drawn: **ACA** date: **18/07/19** scale: **1 : 100**

sheet: **6** of **10**

issue: **K**

date: **11/05/21**

job no.: **19-02680**

**HEATING/COOLING VENTS:**

THE LOCATION OF THE HEATER / COOLER AND VENT LOCATION IS UP TO THE DISCRETION OF THE INSTALLER AND MAY VARY PENDING TRUSS LOCATION

**ARTIFICIAL LIGHTING TABLE**

FLOOR AREA	162.30 m <sup>2</sup>	WATTAGE ALLOWED	812 w
POR./OUT AREA	17.91 m <sup>2</sup>	WATTAGE ALLOWED	72 w
GARAGE AREA	36.41 m <sup>2</sup>	WATTAGE ALLOWED	109 w
<b>TOTAL AREA</b>	<b>216.62 m<sup>2</sup></b>	<b>ALLOWABLE WATTS</b>	<b>992 w</b>
<b>HOUSE 5 W/m<sup>2</sup></b>		<b>NO. OF GLOBES USED</b>	<b>TOTAL WATTS</b>
FLUORESCENT GLOBES	15 w	16	240 w
LED DOWNLIGHTS	9 w	0	0 w
FLUORO TUBES	36 w	0	0 w
		<b>HOUSE TOTAL</b>	<b>240 w</b>
<b>POR./OUT 4 W/m<sup>2</sup></b>			
FLUORESCENT GLOBES	15 w	2	30 w
LED DOWNLIGHTS	9 w	0	0 w
FLUORO TUBES	36 w	0	0 w
		<b>PORCH TOTAL</b>	<b>30 w</b>
<b>GARAGE 3 W/m<sup>2</sup></b>			
FLUORESCENT GLOBES	15 w	1	15 w
LED DOWNLIGHTS	9 w	0	0 w
FLUORO TUBES	36 w	0	0 w
		<b>GARAGE TOTAL</b>	<b>15 w</b>

**LIGHTING LEGEND**

- CEILING LIGHT BATTEN HOLDER
- 90mm DOWNLIGHT
- 70mm DOWNLIGHT
- 50mm DOWNLIGHT
- WALL STAIR LIGHT
- EXTERNAL LIGHT POINT
- HEATER/FAN & LIGHT - 2 GLOBE
- HEATER/FAN & LIGHT - 4 GLOBE
- JUNCTION BOX
- CEILING FAN
- CEILING FAN WITH LIGHT
- PARA FLOOD LIGHT - SINGLE
- PARA FLOOD LIGHT - DOUBLE
- ROUND FLUORO
- 1200 FLUORO - SINGLE
- 1200 FLUORO - DOUBLE
- WALL LIGHT BATTEN HOLDER
- MOTION SENSOR
- CEILING EXHAUST FAN
- CEILING EXHAUST FAN SWITCHED WITH LIGHT
- SUSPENDED PENDANT

**HEAT/COOL LEGEND**

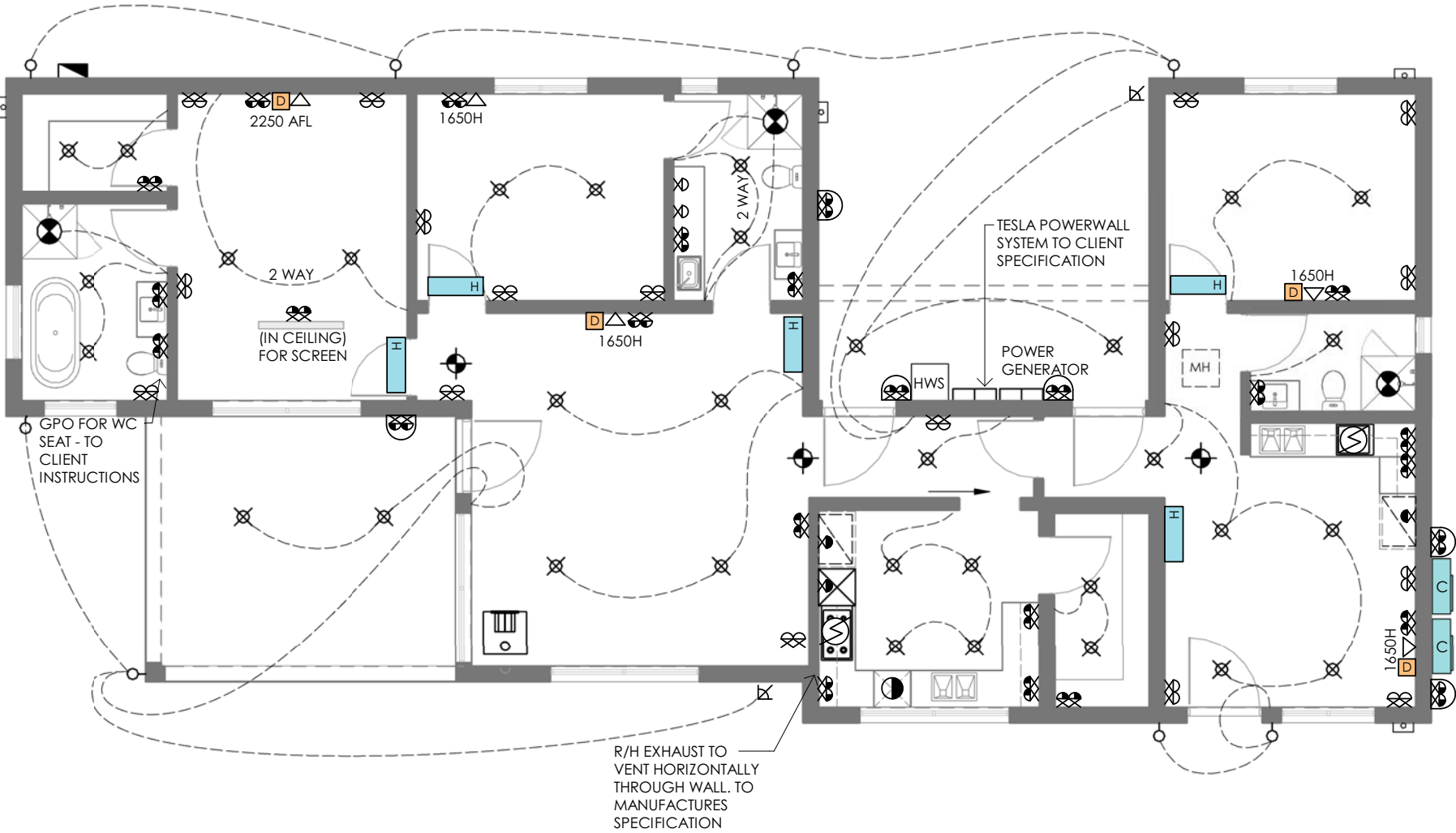
- CEILING HEATING DUCT (APPROX)
- DUCTED HEATING UNIT IN CEILING
- CEILING HEAT/COOL DUCT
- REV CYCLE DUCTED HEAT/COOL UNIT
- THERMOSTAT
- RETURN AIR
- EVAPORATIVE COOLING DUCT
- EVAPORATIVE COOLING UNIT
- AC CONDENSOR UNIT
- AC HEAD UNIT
- COOLING UNIT

**POWER LEGEND**

- SINGLE GPO - 300mm
- SINGLE GPO - 1100mm
- SINGLE GPO - 1350mm
- SINGLE GPO - EXTERNAL
- SINGLE GPO - FOR DISHWASHER
- SINGLE GPO - FOR MICROWAVE
- DOUBLE GPO - 300mm
- DOUBLE GPO - 1100mm
- DOUBLE GPO - 1350mm
- DOUBLE GPO - EXTERNAL
- TELEVISION POINT
- TELEPHONE POINT
- METER BOX
- SMOKE DETECTORS (INTERCONNECTED)
- UBO & RHOOD CONNECTIONS
- DATA POINT WIRED TO NBN
- NBN BOX

**DUCTED VACUUM**

- DUCTED VACUUM UNIT & SGPO
- DUCTED VACUUM OUTLET



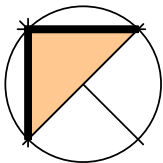
UNDERFLOOR HEATING MATS IN SCREED TO MANUFACTURES SPECIFICATION HOTWIREHEATING.COM.AU

ELECTRICIAN TO INSTALL PROVISIONS FOR TESLA POWER WALL SYSTEM

ELECTRICIAN TO INSTALL PROVISIONS FOR TESLA POWER WALL SYSTEM

ELECTRICIAN TO INSTALL HANDOVER SOCKET FOR GENERAC POWER GENERATOR. TO CLIENT SPECIFICATIONS

ELECTRICIAN TO SUPPLY EXTERNAL POWER OUTLETS TO APPONITED AREAS OF THE SITE - TO CLIENT ISTRUCTIONS



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proposed: **HOUSE - SKETCH DESIGN**

for: **U. SCHADE & A. TENG**

address: **39 EMMETT ROAD**

**WORKING DRAWINGS**

**HARVANDSIGN**  
BUILDING DESIGNERS

drawing: **GROUND ELECTRICAL PLAN**

**CRAFTERS WEST, 5152**

drawn: **ACA** date: **18/07/19** scale: **1 : 100**

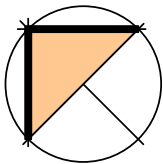
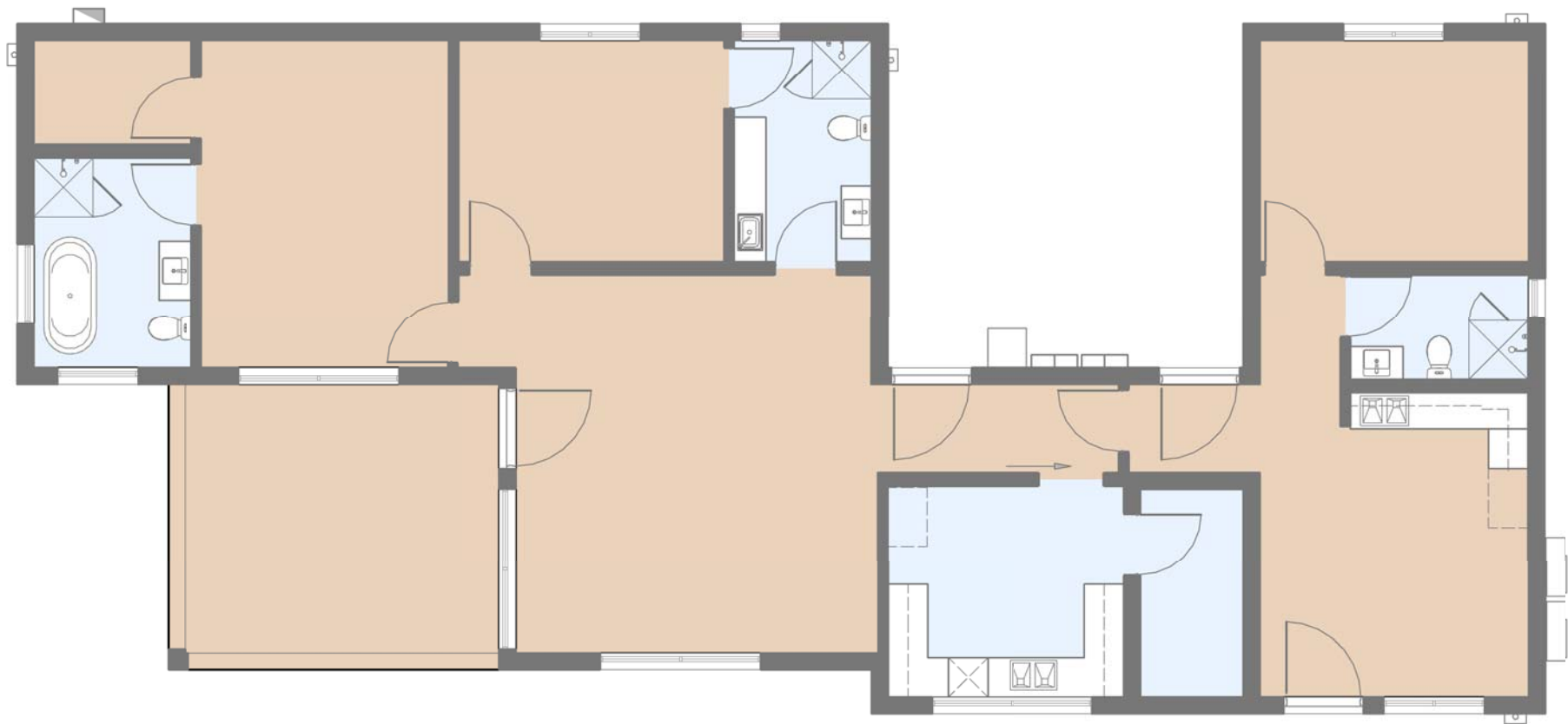
sheet: **7 of 10** issue: **K** date: **11/05/21**

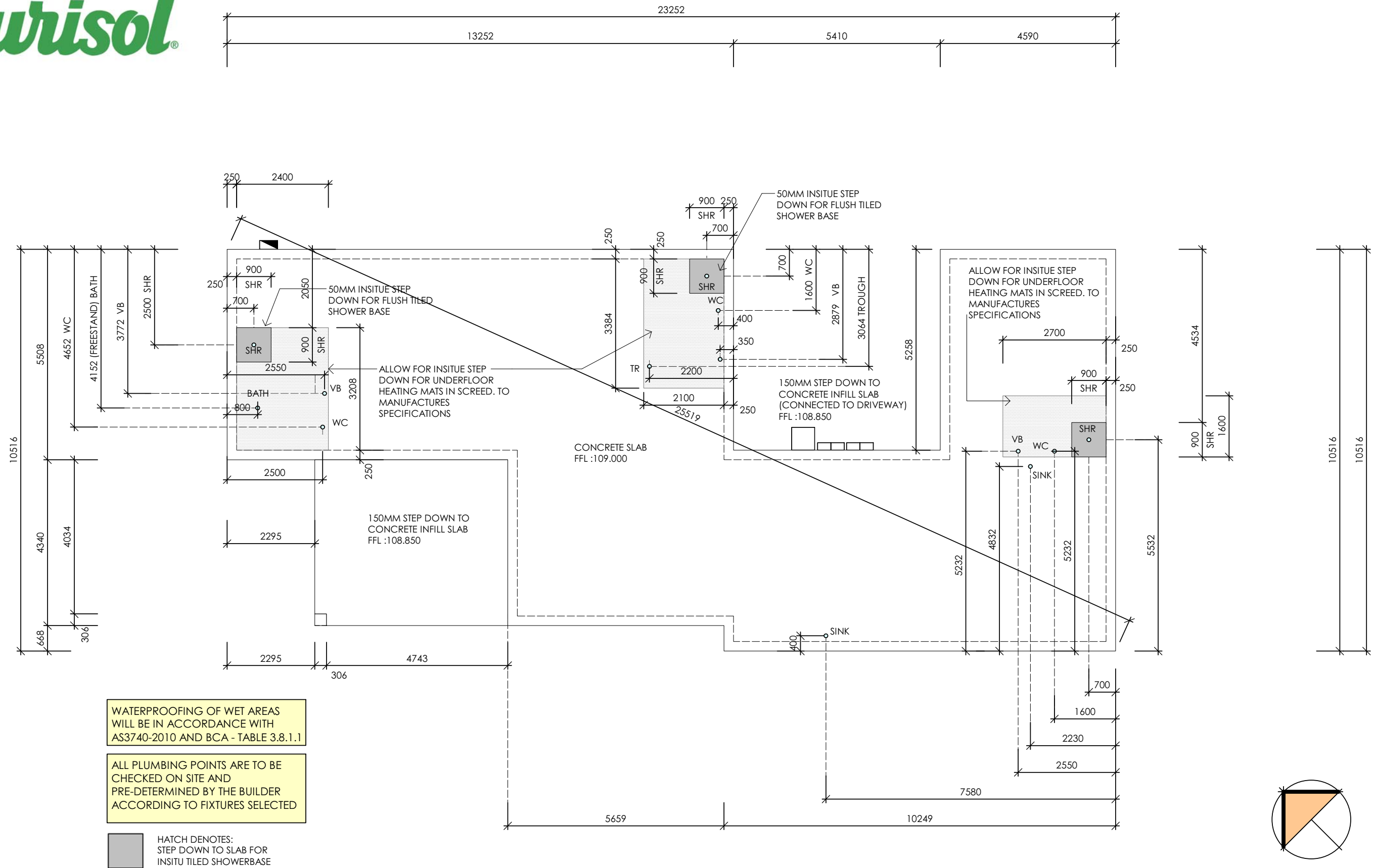
job no.: **19-02680**

TILES

TIMBER

	0.00 m <sup>2</sup>
CARPET	0.00 m <sup>2</sup>
TILES	35.64 m <sup>2</sup>
TIMBER	133.55 m <sup>2</sup>

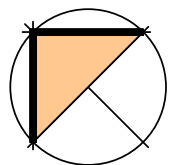


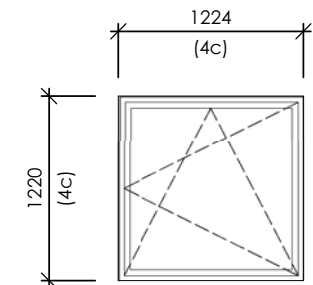
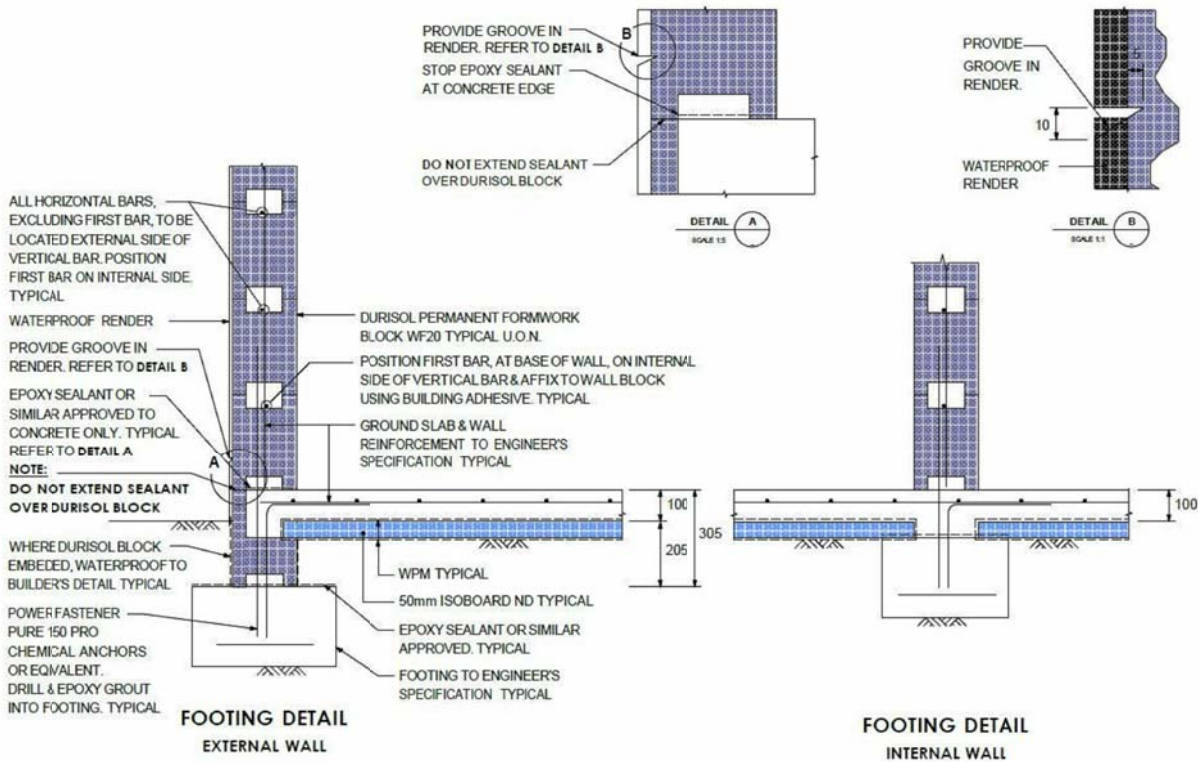


WATERPROOFING OF WET AREAS WILL BE IN ACCORDANCE WITH AS3740-2010 AND BCA - TABLE 3.8.1.1

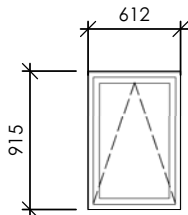
ALL PLUMBING POINTS ARE TO BE CHECKED ON SITE AND PRE-DETERMINED BY THE BUILDER ACCORDING TO FIXTURES SELECTED

HATCH DENOTES: STEP DOWN TO SLAB FOR INSITU TILED SHOWERBASE

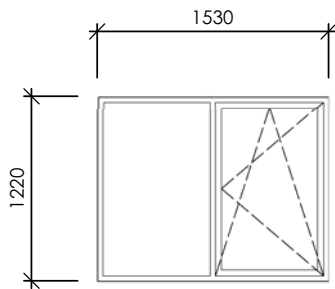




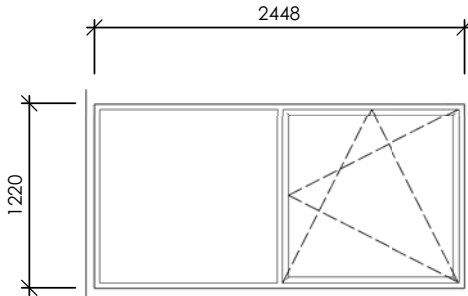
WINDOW: W10, W11  
SAFETY GLASS



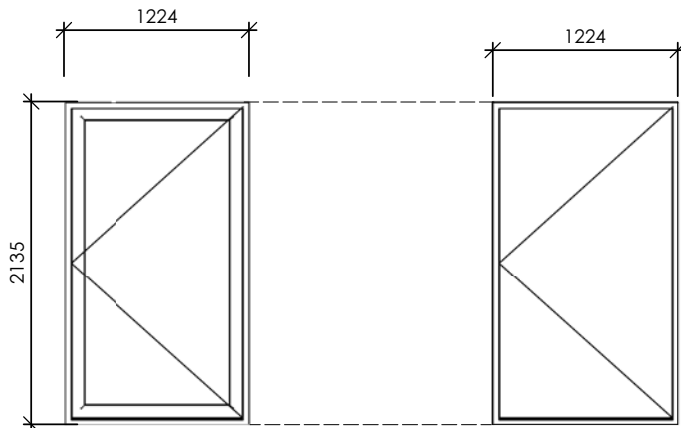
WINDOW: W2, W4  
SAFETY



WINDOW: W1, W3, W5



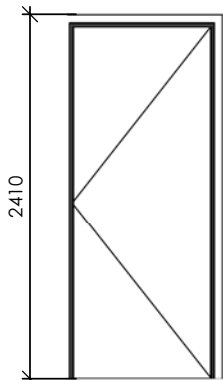
WINDOW: W6, W7, W8, W9



DOOR D3

DOOR D1, D10, D12

SWING DIRECTION AS INDICATED ON FLOOR PLAN



DOOR D2, D4, D5, D6, D7, D8, D9, D11, D13, D14

SWING DIRECTION AS INDICATED ON FLOOR PLAN

ALL WINDOWS ARE TO EXTERNAL FRAME. (TO FIT BETWEEN BLOCKS)

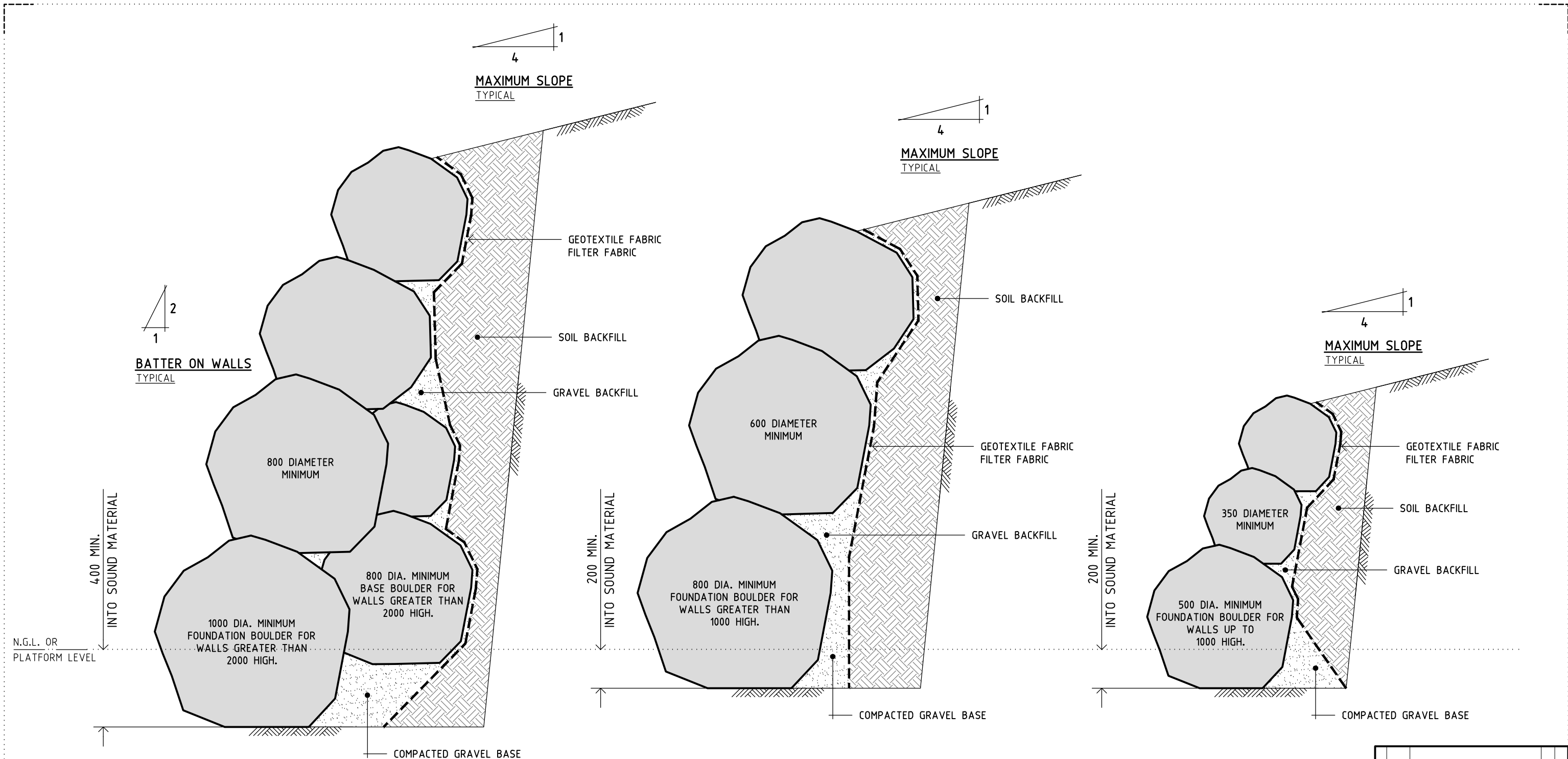
ALL WINDOWS ARE TRIPLE GLAZED INTERNORM KF500

ALL WINDOWS AS TILT AND TURN OPERATION AS INDICATED ON ELEVATIONS

ALL WINDOWS AND EXTERNAL DOOR TO BE FITTED WITH ROLLER/FIRE SHUTTERS

WINDOW SCHEDULE							
Quantity	Height	Width	Style	Double Glazing	Obscure Glazing	Safety Glass	Comments
2	915	612	AWN			(SAFETY)	
2	1220	1224	AWN			(SAFETY)	
3	1220	1530	AWN				
4	1220	2448	AWN				
Total Quantity : 11							





**2000-3000 HIGH WALL**  
**SCALE 1:20**

**1000-2000 HIGH WALL**  
**SCALE 1:20**

**1000 HIGH WALL**  
**SCALE 1:20**

**NOTE**  
CAN ACHIEVE MAXIMUM 6m HIGH WALL IF SECTION IS USED ON A 90 DEGREE INTERNAL CORNER WITH MINIMUM 4m RETURN IN EACH DIRECTION.

**CONSTRUCTION METHOD**

1. PLACE FOUNDATION BOULDER BELOW PLATFORM LEVEL TO RETAIN CUT OR BELOW NATURAL GROUND TO RETAIN FILL. (DEPTHS AS NOTED)
2. PLACE BASE BOULDER AS REQUIRED.
3. PLACE SOIL BEHIND FOUNDATION AND BASE BOULDERS AND COMPACT IN LAYERS.
4. CONTINUE PLACING BOULDERS AND COMPACTING SOIL IN LAYERS BEHIND UNTIL DESIGN PROFILE IS ACHIEVED

Rev	Date	Description	By	CHK
C02	10.05.21	ISSUED FOR CONSTRUCTION	BC	TMP
C01	22.02.21	ISSUED FOR CONSTRUCTION	BC	TMP

**EDGE**  
Gold Coast, Australia  
58 Kingston Drive,  
Hellenmore,  
Queensland, 4212,  
Australia  
T: +61 7 5561 8699  
E: goldcoast@edgece.com  
www.edgece.com

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**DO NOT SCALE DRAWINGS. IF IN DOUBT, ASK!**

Project Name  
**39 EMMETT ROAD  
CRAFERS WEST**

Client  
**ULRICH SCHADE**

Designed  
**T.M.P.**

Drawn  
**B.C.**

Checked  
**T.M.P.**

Scale @ A3  
**1:20**

Drawing Title  
**ROCK RETAINING WALL**

Project No.  
**200650**

Drawing No.  
**S01**

Revision  
**C02**

**ISSUED FOR CONSTRUCTION**

PlanSA DPTI Level 5, 50 Flinders Street Adelaide SA 5000	Adelaide Hills Council Melanie Scott / Sarah Kimber Senior Statutory Planner 24 Onkaparinga Valley Road Woodside SA 5244
---	--

## Variation application to retaining wall design Development Number 19/580/473

Dear Melanie,  
Dear Sarah,  
Dear Madam/Sir,

The DEVELOPMENT APPROVAL, Development Number 19/580/473, was granted on 29 May 2020, to build a "Single storey detached dwelling, retaining walls, water storage tank, removal of native vegetation & associated earthworks (non-complying).

Construction commenced on 4 February 2021. When we started the retaining wall construction and finished the first step, at the end of March 2021, we realised that the 3 tiered retaining wall takes up too much space but we persist on with the construction.

We went further but it became clear that the the 3 tiered retaining wall design was flawed. As soon as the problem became apparent we contacted EDGE consulting for engineering advise. The engineering decision was that the only way to move forward was to change the design into a 1 tiered retaining wall.

Main reasons for the he change into 1 tiered retaining wall is the enhanced safety aspects during a bush fire, to build an elegant free draining retaining wall, to reach a safe setback of the home and the retaining wall looks as is if nature intended it.

A 3 tiered retaining wall would have taken up to much space. Where the fill is 4 metres, the retaining wall thickness would have to be 8.7 metres.

The building could not have been build direct on the edge of the 3 tiered retaining wall because the footings would have charged the retaining wall, making the retaining wall potentially unstable. In order to prevent the charging of the footings onto the retaining wall, the design from OB Geotechnics requests to have the building 3 metres setback from the 3 tiered retaining wall.

The 1 tiered retaining wall design assures a safe setback of the house from the edge of the retaining wall.

Building a 3 tiered retaining wall would have meant that there is no space for the home for which we have DEVELOPMENT APPROVAL, Development Number 19/580/473, 29 May 2020.

In total the house would have needed to be setback by 11.7 metres. Adding the additional setback required by CFS of 5 metres to each boundary, limits the space even more. At a give width of of the building site of approximately 21 metres, no space would have been left to build a house.

It was clear by end of March and with the council from Edge consulting, the only retaining wall solution to solve the matter was to build the 1 tiered engineered stone retaining wall.

The 1 tiered retaining wall provides excellent protection from erosion and is self draining.

The 1 tiered retaining wall is build considering design elements to blend the structure into the landscape. Pockets in the retaining wall allow to be filled with soil to plant native vegetation.

Furthermore the 1 tiered retaining wall solution prevents that the house footings charge the retaining wall.

With the 1 tiered retaining wall solution we are able to build our bushfire safe, passive house which reflects modern technologies in eco friendly and safe homes.

We kindly ask you to approve the changes to the retaining wall.

Best regards

Alfred Teng  
Ulrich Schade

This document show the intended landscaping and planting of native vegetation after the retaining wall is finished.





+61 7 5561 8699  
www.edgece.com  
58 Kingston Street  
Helensvale  
QLD 4212  
Australia

7<sup>th</sup> May 2021

Adelaide Hills Council

Attention Ms Melanie Scott  
Senior Statutory Planner

**RE : 39 Emmett Road Crafter West SA – Revisions to Retaining Wall Design and Set Out.**

Dear Melanie,

The following refers to localised amendments made to the “as documented” design for the above. The amendments to the design were made under engineering supervision during the construction process. Please note that the original wall designs from DB Geotechnics were updated to the sections provided on the later EDGE Drawings/

These changes involved:-

1. Southeast Corner of the Site – 3-Tiered Wall – site constraints did not allow physical construction of the wall in 3 tiers. This required a redesign of this section of the wall into a single tier. The base of this wall has been reviewed on site by an engineer from EDGE Consulting Engineers.
2. Avoiding building surcharge to the walls in both the above location and at the western property boundary, the original tiered design and subsequent construction tolerances resulted in the house footings being too close to the zone of influence of the wall. The walls were redesigned to ensure that the wall alignment and top of the rock surface were sufficiently aligned to the away from the house foundations. EDGE have provided engineering guidance in this aspect.

Over and above the realignment requirements, the walls have been engineered and detailed with water and erosion control as prime consideration.

Any further queries can be addressed to the undersigned.

Yours faithfully,

A handwritten signature in black ink, appearing to read "J. M. Peters".

Tim Peters  
Managing Director  
B.Eng M.Eng CPEng Aust NER 27334











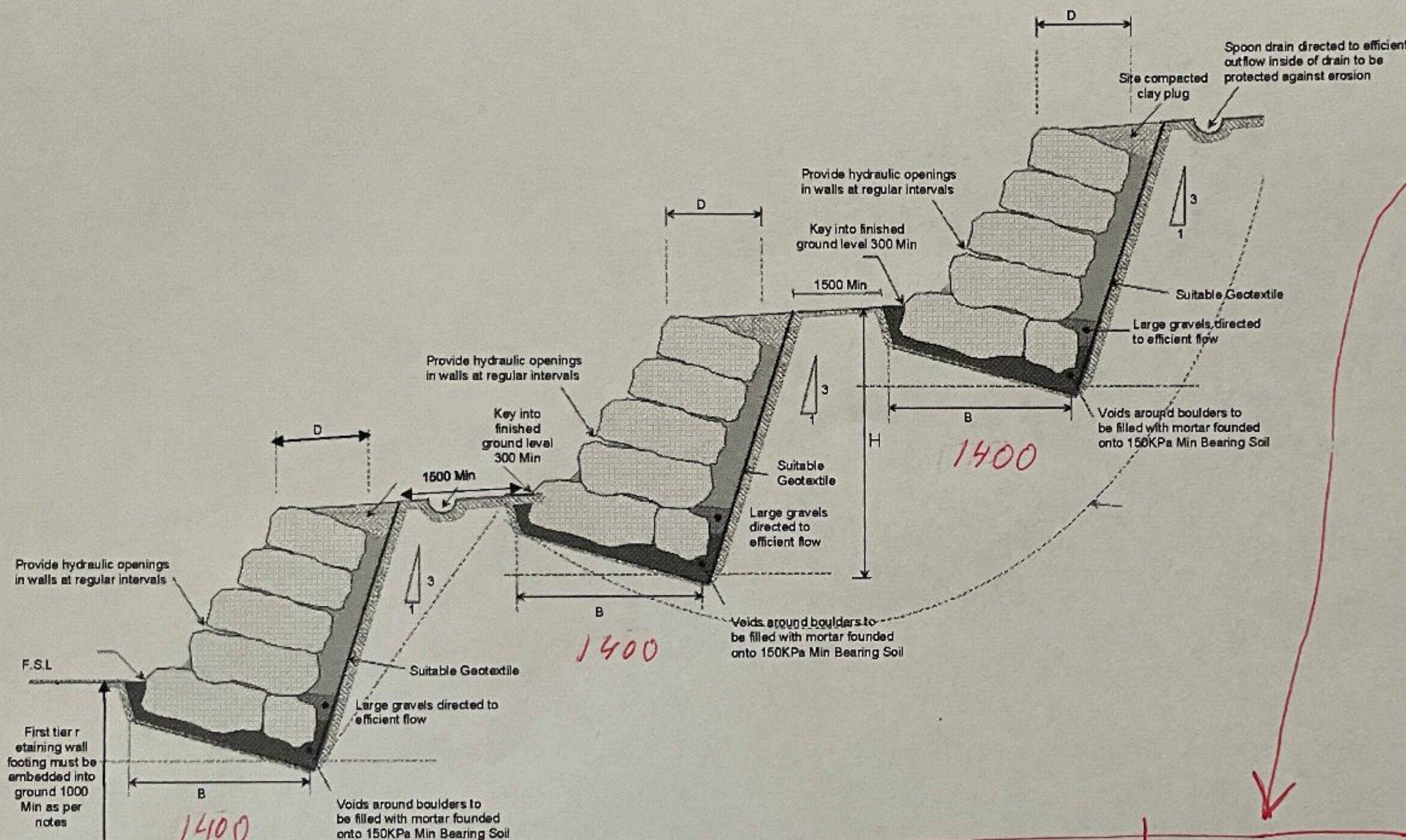






# Retaining Wall Notes:

1. Location of walls are shown on HarvanDesign Building site plan layout, sheet No. 2 of Job No. 19-02680, Issue 1, dated 19 March 2020.
2. Retaining wall design based on AS4678-2002 and the existing geotechnical conditions on site.
3. The wall is designed to support cohesive backfill with horizontal backfill surface. No surcharge shall be placed on the proposed retaining wall.
4. The fill behind the retaining walls is to be placed and compacted to at least 95% Standard Maximum Dry Density and is "Controlled Fill" in accordance with A.S. 2870 (Clause 6.4.2 (a)) - "Residential Slabs and Footings" and A.S. 3798.
5. The boulder wall is to be a minimum of 3.0m from any existing or proposed structures.
6. Upper wall height is not to exceed lower wall height
7. First tier retaining wall foundation to be taken down minimum 1m below ground surface level.
8. Retaining wall foundation to be taken down past Clayey Sand into stiffer stratum layer able to provide minimum 150kPa bearing pressure to be determined and approved by geotechnical engineer
9. Maintain wall height up to maximum 2.5m each tier.
10. Maintain minimum bench of 1.5m between tiers.
11. Install water pressure relieving drainage as shown and connect to storm water system
12. We recommend all work be inspected by a qualified Engineer prior to pouring of any concrete. For rock walls, a schedule of inspections would be 1) An inspection of the foundation soil or rock. 2) An inspection of geo-fabric and drainage before backfilling. 3) A final inspection at completion to check wall batter and rock size and interlock.
13. The boulder wall must be constructed to place no additional surcharge or undermine any existing or proposed structures.
14. The rock walls contained in this drawing may not accommodate the possible foundation movements induced by trees and shrubs. Should the owners wish to incorporate trees and shrubs in the landscaping they must accept the risk of some distress to the foundations and rock walling.
15. Drawing is not to scale; do not scale from drawing



H Effective Design Height	B Min Base Dimension	D Min Width Top of Wall
0.5	0.4m	Up to 0.5m
1.0	0.7m	Up to 0.5m
1.5m	1.00m	0.5m
2.0m	1.40m	0.5m
2.5m	1.75m	0.75m

OB Geotechnics		DETAIL SHEET
Geotechnical Engineering & Civil- Environmental Consulting 29 Cypress Court Byron Bay NSW 2481 ob.geotechnics@gmail.com		Rock Wall Retaining Wall
SUBJECT: Proposed New Dwelling, 39 Emmet Road, Crafrers West, SA 5152 For Ulrich Schade		
Approved by: Oded Ben-Nun MIEAust, CPEng -3887604	DATE / ENGINEER: 08/05/2020 OBN <i>OB</i>	SHEET No: 122/01



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Scale = 1:6032.880

200 m



Annotations

- Representor 6
- Representor 5
- Representor 4
- Representor 3
- Representor 2
- Representor 1
- Subject Land

Planners Summary

- PlanningSummary

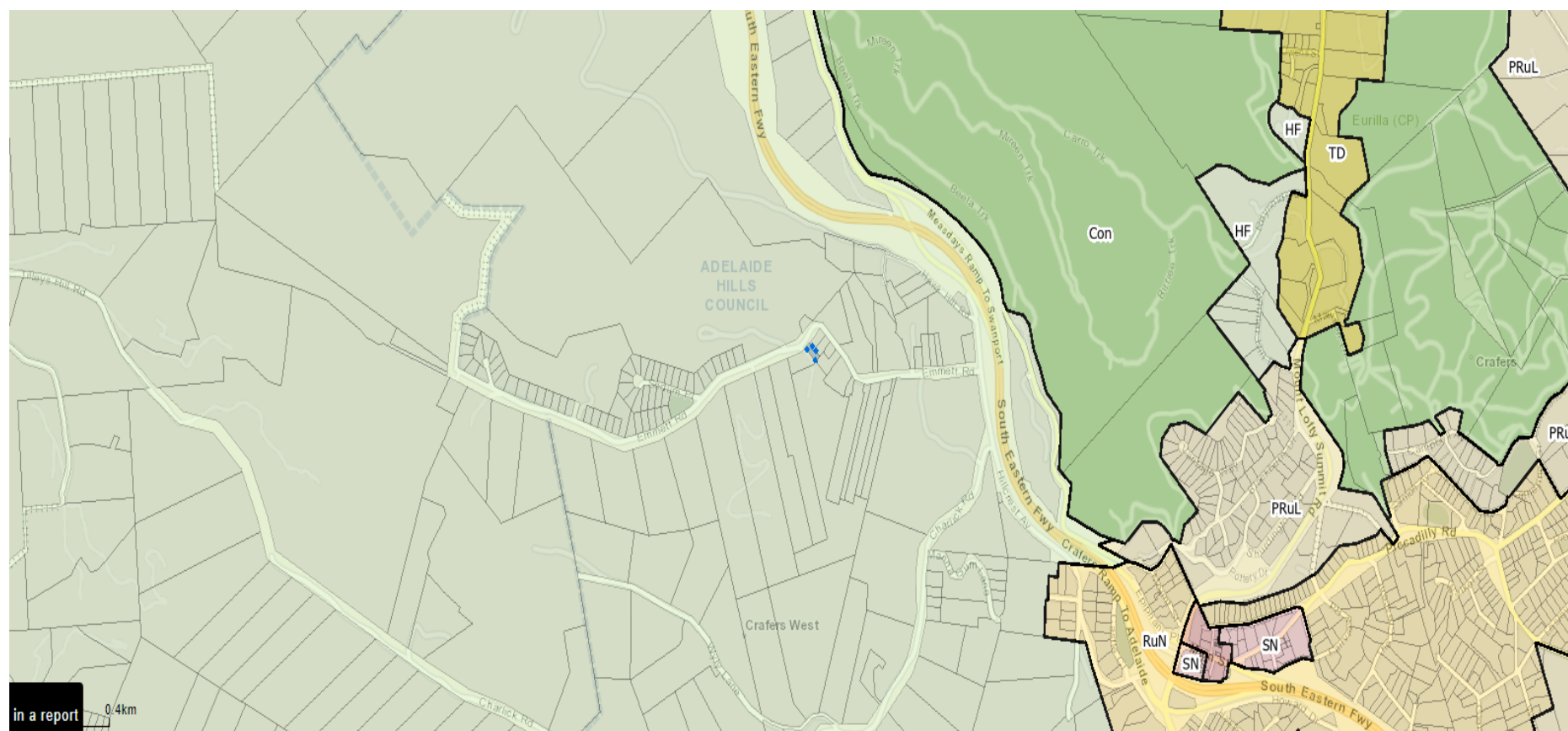
AHC Core

- Parks
- Townships

RoadsStreetView

- ADJOINING LGA RD
- AHC & PRIVATE
- AHC RD
- DPTI RD
- PRIVATE RD
- SHARED RD

- PropertyOwner
- Parcels
- Roads
- Suburbs
- Rivers
  - River
  - Creeks



**Details of submitter No: 1 - Richard and Julie Arbery**

<b>Submitter:</b>	Richard and Julie Arbery
<b>Submitter Address:</b>	37 Emmett Rd, Crafers West, Australia, 5152

# South Australia Planning, Development and Infrastructure ACT 2016

Representation on Application

**First name:**

Richard and Julie

**Last name:**

Arbery

**Daytime Phone:**

0403653031

**Would you like to present your submission in person at a hearing?**

- ☒ I wish to be heard in support of my representation
- ☐ I do not wish to be heard in support of my representation

**Nominated Speaker:**

Richard Arbery

**My position is:**

- ☒ I support the development
- ☐ I support the development with some concerns (detail below)
- ☐ I oppose the development

**The specific reasons I believe that planning consent should be granted/refused are:**

Attached Documents

File

No records to display.

**Details of submitter No: 2 - Chad & Nicole Harder**

<b>Submitter:</b>	Chad & Nicole Harder
<b>Submitter Address:</b>	71 Emmett Road, Crafers West, Australia, 5152

# South Australia Planning, Development and Infrastructure ACT 2016

Representation on Application

**First name:**

Chad & Nicole

**Last name:**

Harder

**Daytime Phone:**

0409509577

**Would you like to present your submission in person at a hearing?**

- ☐ I wish to be heard in support of my representation
- ☒ I do not wish to be heard in support of my representation

**My position is:**

- ☐ I support the development
- ☐ I support the development with some concerns (detail below)
- ☒ I oppose the development

**The specific reasons I believe that planning consent should be granted/refused are:**

The reasons I believe that planning consent should be refused are as follows:

- Work continued on the site without the proper approval from the relevant authority in an unsafe manner and not to the approved plans.
- The site looks unsafe, and the placement of the rocks has not been carried out correctly as per the engineering documents.
- The rock wall is too high to meet the hills face and retaining wall regulations. It is a complete eyesore that does not meet strict building guidelines for building in the hills face zone; "buildings to be in an unobtrusive location - particular should be located not to be visible against the skyline."
- There are also strict guidelines in relation to building two-story houses in hills face zone, so building a two-story rock wall would definitely not meet regulations.
- Aside from the sheer lack of aesthetics, the site appears completely unsafe. This is also reiterated by the fallen stones which have already fallen from the wall to the property below.

Attached Documents

File

No records to display.



**Details of submitter No: 3 - Davd Shaw**

<b>Submitter:</b>	Davd Shaw
<b>Submitter Address:</b>	3 Myrtle Ave, Myrtle Bank, Australia, 5064

# South Australia Planning, Development and Infrastructure ACT 2016

## Representation on Application

### First name:

Davd

### Last name:

Shaw

### Daytime Phone:

0401123803

### Would you like to present your submission in person at a hearing?

- ☒ I wish to be heard in support of my representation
- ☐ I do not wish to be heard in support of my representation

### Nominated Speaker:

David and Anthony Shaw

### My position is:

- ☐ I support the development
- ☐ I support the development with some concerns (detail below)
- ☒ I oppose the development

### The specific reasons I believe that planning consent should be granted/refused are:

39 Emmett Rd, Crafers Development

Submission from Susan, Anthony, Carolyn and David Shaw, adjoining landowners

In our view the development contravenes at least two Hills Face Zone Planning Outcomes, namely PO 3.1 and PO 3.2

PO3.1 states:

Excavation and filling of land outside townships and urban areas is:

(a)Kept to a minimum so as to preserve the natural form of the land and natural vegetation.

(b)Only undertaken in order to reduce the visual impact of buildings, including structures, or in order to construct water storage facilities for use on the allotment.

The depth of earthworks does not exceed:

1.In the case of excavation, 2m

2.In the case of filling of land 1m

The cut at the rear of the allotment is at least 4m and the retaining wall supports fill of at least 5m. The natural form of land and natural vegetation has been destroyed and only weeds will regrow on a pile of rocks.

PO 3.2 states:

Excavation and /or filling of land is only undertaken if the resultant slope can be stabilised to prevent erosion, and results in stable scree slopes which are covered in top soil and landscaped so as to preserve and enhance the natural character or assist in the re-establishment of the natural character of the area.

A massive wall of large foreign boulders, to a height of at least 5m, neither preserves nor enhances the natural character of the sloping bushland. Rather the natural character is destroyed, cannot be re-established, and is replaced with a quarry-like appearance to the hills face when travelling East up Emmett Rd.

Additional concerns relate to risk of injury to us and our visitors, as well as potential future owners of our land adjoining this development. The large boulders positioned precariously in the one tier have already become dislodged and rolled down across our access. There is no evidence that this will not occur again in the future.

Another risk to personal injury to adjacent landowners is the harboring of vermin and snakes in the large cavities between the boulders. This is a current and ongoing risk.

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## Attached Documents

File
No records to display.

**Details of submitter No: 4 - Tim Oosterbaan**

<b>Submitter:</b>	Tim Oosterbaan
<b>Submitter Address:</b>	78 Emmett Road, Crafers West, Australia, 5152

# South Australia Planning, Development and Infrastructure ACT 2016

Representation on Application

**First name:**

Tim

**Last name:**

Oosterbaan

**Daytime Phone:**

0424035357

**Would you like to present your submission in person at a hearing?**

- ☐ I wish to be heard in support of my representation
- ☒ I do not wish to be heard in support of my representation

**My position is:**

- ☐ I support the development
- ☐ I support the development with some concerns (detail below)
- ☒ I oppose the development

**The specific reasons I believe that planning consent should be granted/refused are:**

Thank you for taking the time to read my submission to oppose development approval for 39 Emmett Rd, Crafers West

Our family lives at 78 Emmett Rd. My three primary school aged daughters use the roadway/drive directly below 39 Emmett Rd to visit their grandmother.

As it is for the last 3 or so months it has not been safe to walk along the driveway due to the boulders which have already fallen and our assessment that there is risk of others falling.

There are three main reasons I believe this development should not be approved.

1. Safety
  - a. As stated above Children use the roadway/ driveway on the bottom side of the retaining wall to visit their Grandmother. We believe that there is a risk of further subsidence and rocks falling in the future. See below for where we believe the current retaining wall does not meet the specifications in the submission.

- b. It is clear to us that the retaining wall in its current structure will house rodents as they will be able to nest in amongst the boulders in the current voids. Even if filled they will burrow and nest. Similarly with the recent increase in rabbits in the area there is also the risk of a warren being developed. The presence of uncontrollable vermin will mean that snakes will be an ever present risk to anyone who lives, walks along or in the vicinity of the retaining wall. This appears to contravene PO 10.2 (c)

## 2. Engineering works

- a. The actual works as have been carried out do not meet the revised plans as submitted. The plans stipulate footing boulders at least 1m across. My measurement of the boulders at the bottom of the retaining wall would indicate that none of them are 1m.
- b. Similarly to above the plans stipulate that the boulders are to be set into the ground at least 400mm. None of them appear to be set into the ground. Some examples are attached as *boulder not set in ground.jpg* and *boulder not set in ground 2.jpg*
- c. The plans as submitted make reference to changes that 'needed' to be made during construction. Surely that would have required a resubmitting of the plans. I only raise this point as it would indicate that the owners and/or builders may be likely to do this in the future if this plan is approved.
- d. There are significant voids at the top and bottom of the retaining wall. See attached *void in upper wall.jpg* ; *void in upper wall 2.jpg* ; *void through wall.jpg* and *void in lower wall.jpg*
- e. Some boulders do not sit upon the boulders below and so over time could move laterally. See attached *boulder not abutting.jpg* What is in situ does not match the seating of the boulders as in the plans.
- f. Water run-off is already eroding the substrate and would continue to do so over coming years. I believe this may undermine the integrity of the structure. See attached *water control and erosion.jpg*
- g. It is not clear to me if this is in fact an engineered structure, surely such plans would contain engineering calculations. It is not clear how PO 10.5 is met.
- h. It is unclear if this application is to undertake remedial works (which would seem to be required as what is there doesn't meet the current plan) or is the applicant stating that what is there does meet the current plans. If remedial work is to be undertaken we would be concerned that more boulders would fall. I note that the site has already been shut down once following a SafeWork SA visit.
- i. It doesn't appear that impact on or effect to water resources has been addressed in the application.

## 3. Contravention of Hills Face Zone requirements

- a. I have lived in Crafers West all my life and I have never seen something so imposing and in conflict with the surrounds. Even other sites on steeper slopes have managed to use improved engineering that lessens the visual affect.
- b. My reading of the Hills Face Zone is that this retaining wall would contravene PO 3.1 in that the excavation has not been kept to a minimum and the natural form of the land has been significantly altered. See the original photographs as attached *39 Emmett Rd pre building top.jpg* and *39 Emmett Rd pre building.jpg* As you can see the natural slope has not been retained.
- c. DTS/DPF 3.1 states that the depth of earthworks does not exceed: in the case of excavation, 2m and in the case of filling of land 1m. From the plans the depth of excavation is approximately 4-5m so this has exceeded DTS/DPF 3.1 by a factor of at least 2. They have specified 2-3m high walls, but what is in situ is significantly higher, I believe it is at least 6m. This would mean that DTS/DPF 3.1 has been exceeded by a factor of 6.
- d. The excavation and/or filling has been done to allow a building to be built in the way that the applicant wants. Rather than being only to reduce the visual impact of the building as per PO 3.1. Granted you won't be able to see the building, but in its place is an imposing boulder wall.
- e. The design as submitted shows vegetation on the rocks, but top soil is not proposed to be added to the top of the wall so no vegetation will be able to grow. So even over time the visual impact will not diminish.
- f. The application does not mention what may be a significant or regulated tree on the property. See *significant or restricted tree.jpg*
- g. The natural character of the environment will be forever altered with large foreign boulders present in an unnatural form.
- h. The pockets that would allow the planting of native vegetation would also allow for pest plants

- and weeds to take hold and would be very difficult to control given the 70 degree slope.
- i. The general loss of amenity for all residents who walk or commute along Emmett Rd will occur if this development is allowed to proceed.

In summary we do not believe this application should be approved.

I advise that I wish to be heard in support of this representation.

Regards,

Tim Oosterbaan

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#### Attached Documents

File
39 Emmett Rd pre building
39 Emmett Rd pre building top
boulder not abutting
boulder not set in ground
significant or restricted tree
void in lower wall
void in upper wall
void through wall
water control and erosion
boulder not set in ground 2
void in upper wall 2























**Details of submitter No: 5 - Jarred and Sarah Sutton**

<b>Submitter:</b>	Jarred and Sarah Sutton
<b>Submitter Address:</b>	PO Box 251, Crafers, Australia, 5152

# South Australia Planning, Development and Infrastructure ACT 2016

## Representation on Application

**First name:**

Jarred and Sarah

**Last name:**

Sutton

**Daytime Phone:**

0414694912

**Would you like to present your submission in person at a hearing?**

- ☒ I wish to be heard in support of my representation
- ☐ I do not wish to be heard in support of my representation

**Nominated Speaker:**

Jarred Sutton

**My position is:**

- ☐ I support the development
- ☐ I support the development with some concerns (detail below)
- ☒ I oppose the development

**The specific reasons I believe that planning consent should be granted/refused are:**

Please find the letter outlining our concerns and correspondence from a Structural Engineer that has been added to the Supporting Documents.

**Attached Documents**

File

Objection to Amended Development Application 19\_580\_473

To Whom it may concern,

We strongly oppose the Variation to existing Development Approval 19/580/473 - Changes to retaining wall for the following reasons;

1. The development contravenes a number of the Desired Outcomes and Performance Outcomes relevant to the *Hills Face Zone, Design in Urban Areas, Interface Between Land Uses* and the *Regulated and Significant Tree Overlay*.
2. The application contains Incorrect, misleading and insufficient documentation.
3. The applicant has undertaken works without due process and this should be rectified as part of this application.

#### CONTRAVENTS PLANNING & DESIGN CODE DESIRED OUTCOMES AND PERFORMANCE OUTCOMES.

<i>Hills Face Zone Desired Outcome 1</i>	<p><i>To maintain the western slopes of the South Mount Lofty Ranges as an important natural asset of Greater Adelaide by limiting development to low-intensity agricultural activities and public and private open space. The natural character of the zone will be preserved, enhanced and re-established to:</i></p> <ol style="list-style-type: none"> <li>1. <i>provide a natural backdrop to the Adelaide Plain and a contrast to the urban area</i></li> <li>2. <i>preserve biodiversity and restore locally indigenous vegetation and fauna habitats close to metropolitan Adelaide</i></li> <li>3. <i>provide for passive recreation in an area of natural character close to the metropolitan area</i></li> <li>4. <i>provide a part of the buffer area between metropolitan districts and prevent the urban area extending into the western slopes of the Mount Lofty Ranges.</i></li> </ol> <p><i>'Natural character' refers to the natural topography, native vegetation and colours, such as greens and browns of non-reflective earthen tones, normally associated with a natural landscape. Additionally, natural character refers to the open character of the land in those areas of the zone where open grazing currently predominates.</i></p>
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- The Natural Character of the zone is not preserved, enhanced or re-established by the construction of the proposed retaining wall.

<p><i>Hills Face Zone Performance Outcome 3.1</i></p> <p><i>Excavation and/or filling of land outside townships and urban areas is:</i></p> <ol style="list-style-type: none"> <li>(a) <i>kept to a minimum so as to preserve the natural form of the land and native vegetation</i></li> <li>(b) <i>only undertaken in order to reduce the visual impact of buildings, including structures, or in order to construct water storage facilities for use on the allotment.</i></li> </ol>	<p><i>DTS/DPF 3.1</i></p> <p><i>The depth of earthworks does not exceed:</i></p> <ol style="list-style-type: none"> <li>1. <i>in the case of excavation, 2m.</i></li> <li>2. <i>in the case of filling of land, 1m.</i></li> </ol>
--	--

- Excavation and/or filling has not been kept to a minimum, does not preserve the natural form of the land and does not preserve the natural vegetation.
- Excavation and/or filling has not ONLY been undertaken in order to reduce the visual impact of the building.
- Depth of excavation exceeds 2m and filling exceeds 1m in height.

<i>Design in Urban Areas Performance Outcome 8.1</i> <i>Development, including any associated driveways and access tracks, minimises the need for earthworks to limit disturbance to natural topography.</i>	<i>DTS/DPF 8.1</i> <i>Development does not involve any of the following:</i> <i>(a) excavation exceeding a vertical height of 1m</i> <i>(b) filling exceeding a vertical height of 1m</i> <i>(c) a total combined excavation and filling vertical height of 2m or more.</i>
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**Application contravenes Hills Face Zone Performance Outcome 3.1 and Design in Urban Areas Performance Outcome 8.1**

<i>Hills Face Zone Performance Outcome 3.2</i> <i>Excavation and/or filling of land is only undertaken if the resultant slope can be stabilised to prevent erosion, and results in stable scree slopes which are covered with top soil and landscaped so as to preserve and enhance the natural character or assist in the re-establishment of the natural character of the area.</i>	<i>DTS/DPF 3.2</i> <i>None are applicable.</i>
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- Top soil is not proposed to be installed to the retaining wall.
- Large foreign boulders neither preserves or enhances the natural character or assist in the re-establishment of the natural character of the area.

**Application contravenes Hills Face Zone Performance Outcome 3.2**

<i>Hills Face Zone Performance Outcome 10.2</i> <i>Development not undertaken if it is likely to result in:</i> <i>(a) unnecessary loss or damage to native vegetation including the full range of tree, understorey and groundcover species/ native grasses so as to maintain and enhance environmental values and functions, including conservation, biodiversity and habitat</i> <i>(b) denudation of pastures</i> <i>(c) the introduction of or an increase in the number of pest plants or vermin.</i>	<i>DTS/DPF 10.2</i> <i>None are applicable.</i>
---	--

- Regulated trees on neighbouring properties have been impacted by works undertaken and are not mentioned on the plans.
- Site located adjacent native bushland and retaining wall will be a safe haven for all small vermin / rodents; the 'pockets' provide the perfect opportunity for pest plants and vermin to take residence.

**Application contravenes Hills Face Zone Performance Outcome PO 10.2**

<p><i>Hills Face Zone Performance Outcome 10.4</i>  <i>Development is not undertaken if it is likely to result in loss of amenity to adjoining land or surrounding localities from:</i></p> <ul style="list-style-type: none"> <li><i>(a) the visual impact of buildings, structures or earthworks</i></li> <li><i>(b) the intensity of activity associated with any such use, including significant adverse impacts arising from:</i> <ul style="list-style-type: none"> <li><i>(i) chemical spray drift</i></li> <li><i>(ii) use of audible bird or animal deterrent devices</i></li> <li><i>(iii) the use of associated vehicles and machinery.</i></li> </ul> </li> </ul>	<p><i>DTS/DPF 10.4</i>  <i>None are applicable</i></p>
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- Large excavation and fill to adjacent land owners boundaries; with no consideration to the safety of these land owners or their visitors.
- Large visual obstruction visible from neighbouring properties and from the road resulting in a loss of amenity.

<p><i>Interface Between Land Uses Desired Outcome 1</i></p>	<p><i>Development is located and designed to mitigate adverse effects on or from neighbouring and proximate land uses</i></p>
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**Application contravenes Hills Face Zone Performance Outcome PO 10.4 and Interface Between Land Uses Desired Outcome 1**

<p><i>Hills Face Zone Performance Outcome 10.5</i>  <i>Development does not occur on land if the slope poses an unacceptable risk of soil movement, landslide or erosion.</i></p>	<p><i>DTS/DPF 10.5</i>  <i>None are applicable</i></p>
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- Application documentation provides not justification on how this is met, no engineering calculation provided.
- Applicants' Engineer has made a blanket and unjustified statement that '*over and above the realignment, the walls have been engineered and detailed with water and erosion control as prime consideration.*'

**Requested that council seek further clarification on how Hills Face Zone Performance Outcome PO 10.5 is met**

<p><i>Hills Face Zone Performance Outcome 12.1</i>  <i>Retaining walls are constructed as a stepped series of low walls constructed of dark, natural coloured materials and screened by landscaping using locally indigenous plant species if possible.</i></p>	<p><i>DTS/DPF 12.1</i>  <i>None are applicable</i></p>
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- It is our understanding that an engineered, three-stepped retaining wall was originally approved by council
- Proposed retaining wall is not stepped, nor should a 5m high retaining wall be considered as a 'low wall'

**Application contravenes Hills Face Zone Performance Outcome PO 12.1**

<i>Design in Urban Areas Performance Outcome PO 8.4 Development on sloping land (with a gradient exceeding 1 in 8) avoids the alteration of natural drainage lines and includes on site drainage systems to minimise erosion.</i>	<i>DTS/DPF 8.4 None are applicable.</i>
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- Natural drainage lines severely altered.
- On site drainage system to minimise erosion has not been provided.

#### **Application contravenes Design in Urban Areas Performance Outcome PO 8.4**

<i>Regulated and Significant Tree Overlay Performance Outcome PO 2.1 Regulated and significant trees, including their root systems, are not unduly compromised by excavation and / or filling of land, or the sealing of surfaces within the vicinity of the tree to support their retention and health.</i>	<i>DTS/DPF 2.1 None are applicable.</i>
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- Plans are silent on the regulated trees on neighbouring properties.
- If significant / regulated then large excavation and disturbance on root zone likely to adversely affect the tree.
- If significant/ regulated an arborist report including establishment of tree protection zone / significant root zones to be met.

#### **Requested that council seek further clarification on how Regulated and Significant Tree Overlay Performance Outcome PO 2.1 is met**

#### **INCORRECT / MISLEADING / INSUFFICIENT APPLICATION DOCUMENTS**

- Engineering documents are insufficient, engineering calculations have not been provided and additional information / construction procedures are recommended by our independent structural engineer – *refer attached email correspondence from Jack Adcock, Jack Adcock consulting Pty Ltd Structural & Civil Engineering dated 29<sup>th</sup> June 2021*
- Heights of the proposed retaining wall are not provided on any of the application documentation and extent not accurately represented on the plans provided.
- Rock retaining wall on Harvan design sheet 5 of 10 is a misrepresentation of style of retaining wall being proposed.
- Retaining walls not accurately represented on elevation or section drawings.
- Size of boulders already placed on site do not meet/comply with Edge Engineering documentation and does not accurately reflect works which has been undertaken.
- Boulders have not been founded below natural ground or platform level as per Edge Engineering documentation.
- Edge Engineering documentation inaccurately shows how boulders have been placed on top of each; engineering documentation graphically show that boulders are sculptured to provide immediate continual bearing on top of each other, the retaining wall as already constructed on site has not been constructed in this way.
- Batter on retaining walls shown as 1 in 2, actual retaining wall constructed is steeper and in cases top of retaining wall overhangs base / lower boulders.
- Construction methodology (i.e. compacting soil behind boulders) to retaining walls which have been constructed have not been constructed in accordance with the Edge

engineers design. Applicant to provide details which accurately reflects construction works which has been undertaken.

- Engineering documentation notes retaining wall 2m-3m in height; with note that can achieve 6m high wall is used on 90 degrees internal corner, no engineer design solution provided along western boundary where retaining wall exceeds 3m in height and is not supported by an internal corner.

#### Applicants Letter

- Main reasons for the change into 1 tiered retaining wall is the enhanced safety aspects during a bush fire  
This statement is unjustified and does not warrant the approval of this variation.
- A 3 tiered retaining wall would have taken up to much space. Where the fill is 4 metres, the retaining wall thickness would have to be 8.7 metres  
This statement contradicts the documents provided; the approved documentation provided does not shown any retaining walls with a thickness of 8.7m.
- retaining wall looks as is if nature intended it  
This statement is misleading; nature intended the site to have a regular natural fall of around 14m across the site; the retaining wall is unnatural in appearance and requires excessive excavation / filling of the natural ground
- The building could not have been build direct on the edge of the 3 tiered retaining wall because the footings would have charged the retaining wall, making the retaining wall potentially unstable.  
This statement is unjustified; an engineering design solution was provided and approved with a 3 tiered retaining wall.
- Building a 3 tiered retaining wall would have meant that there is no space for the home for which we have DEVELOPMENT APPROVAL, Development Number 19/580/473, 29 May 2020.
- This statement is unjustified; the extent of the retaining wall between the 'approved plans and 'proposed retaining wall' plan does not significantly vary.

#### **APPLICANT UNDERTAKING WORKS WITHOUT DUE PROCESS**

- The Applicant has failed to notify and provide any documentation to neighbouring owners in regard to the retaining wall being constructed in accordance with **Section 64 Building Work Affecting Other Land** of the **Planning, Development and Infrastructure (General) Regulations** under the **Planning, Development and Infrastructure Act 2016**.
- Documentation regarding Notification for **Building Work Affecting Other Land** should form part of the Application for review instead of requiring residents to conduct Freedom of Information Applications to determine the impacts of a neighbouring development.
- Works have been undertaken which are not in accordance with the approval which has been granted.
- Retrospective approval is being sought by the applicant for works which has already been constructed and yet these works do not correspond to the provided plans.

**SUMMARY**

We strongly oppose the proposed application:

- Contravenes a number of Desired Outcomes and Performance Outcomes
- Documentation misleading / inaccurate
- Works have been undertaken without due process
- Works have been undertaken which are not in accordance with the documentation provided for approval

The application should not be approved; at very least deferred until all items can be satisfactorily addressed and accurate documentation provided, including engineering justification.

Kind regards,

Jarred and Sarah Sutton

**Attachment: Email Correspondence from Jack Adcock**

Hi Jarred

We have reviewed the variation application available on the Plan SA website.

The proposed single tiered wall is documented at a very steep slope with no reinforcement or concrete, and no allowance for up to 600 mm undermining on the neighbouring properties or easements on the property.

While this design configuration may work in principle, we strongly recommend the following is undertaken to ensure the safety of the site itself, and of neighbouring sites and passers by:

1. The proposed design and detailed calculations must be reviewed and certified by an Independent Technical Expert who is qualified and well experienced in unreinforced earthworks and retaining walls. Some geotechnical engineers may fall into this category.
2. The works on site must be inspected and assessed during construction to verify the design documents are followed. Reliance on Council inspections should not be made.
3. All building footings must be founded in firm, natural soil, at a depth to avoid influencing the retaining wall, unless designer, independent certifier and builder guarantee in writing that there will be no detrimental displacements in the walls or footings.
4. Confirmation must be sought to ensure that 600 mm or greater, depending on the easement owner's authority, is provided, to ensure stability in the event of minor works.

At this stage there is insufficient documentation provided to undertake our own investigation, short of us undertaking our own full design for this project.

Please let me know if you have any queries. I have another meeting now but could be available tomorrow afternoon for a phone call.

Regards

**Jack Adcock** BE(Civil) FIEAust CPEng NER  
APEC Engineer IntPE(Aus) RPEQ EC66574

Details of submitter No: 6 - Scott Hochwald

Submitter:	Scott Hochwald
Submitter Address:	43 Emmett Road, Crafers West, Australia, 5152

# South Australia Planning, Development and Infrastructure ACT 2016

Representation on Application

**First name:**

Scott

**Last name:**

Hochwald

**Daytime Phone:**

0417877328

**Would you like to present your submission in person at a hearing?**

- ☒ I wish to be heard in support of my representation
- ☐ I do not wish to be heard in support of my representation

**Nominated Speaker:**

Scott Hochwald

**My position is:**

- ☐ I support the development
- ☐ I support the development with some concerns (detail below)
- ☒ I oppose the development

**The specific reasons I believe that planning consent should be granted/refused are:**

See attached document

Attached Documents

File

Representation June 2021

Scott Hochwald

43 Emmett Road

Crafrers West

0417 877 328

scott@hochwald.id.au

30/6/2021

Representation re Application ID 21009955

“Changes to retaining wall, amendment to existing DA 19/580/473”

## Background

The original plans approved in 2020 specified a stacked stone retaining wall constructed from regular shaped blocks, either in close contact with each other or grouted, and backfilled with concrete. During development, the developer instead elected to build a wall from loose irregular shaped rocks at a very steep batter angle of 1:2. The developer now seeks retrospective approval for an alternative design entirely different to the approved plans.

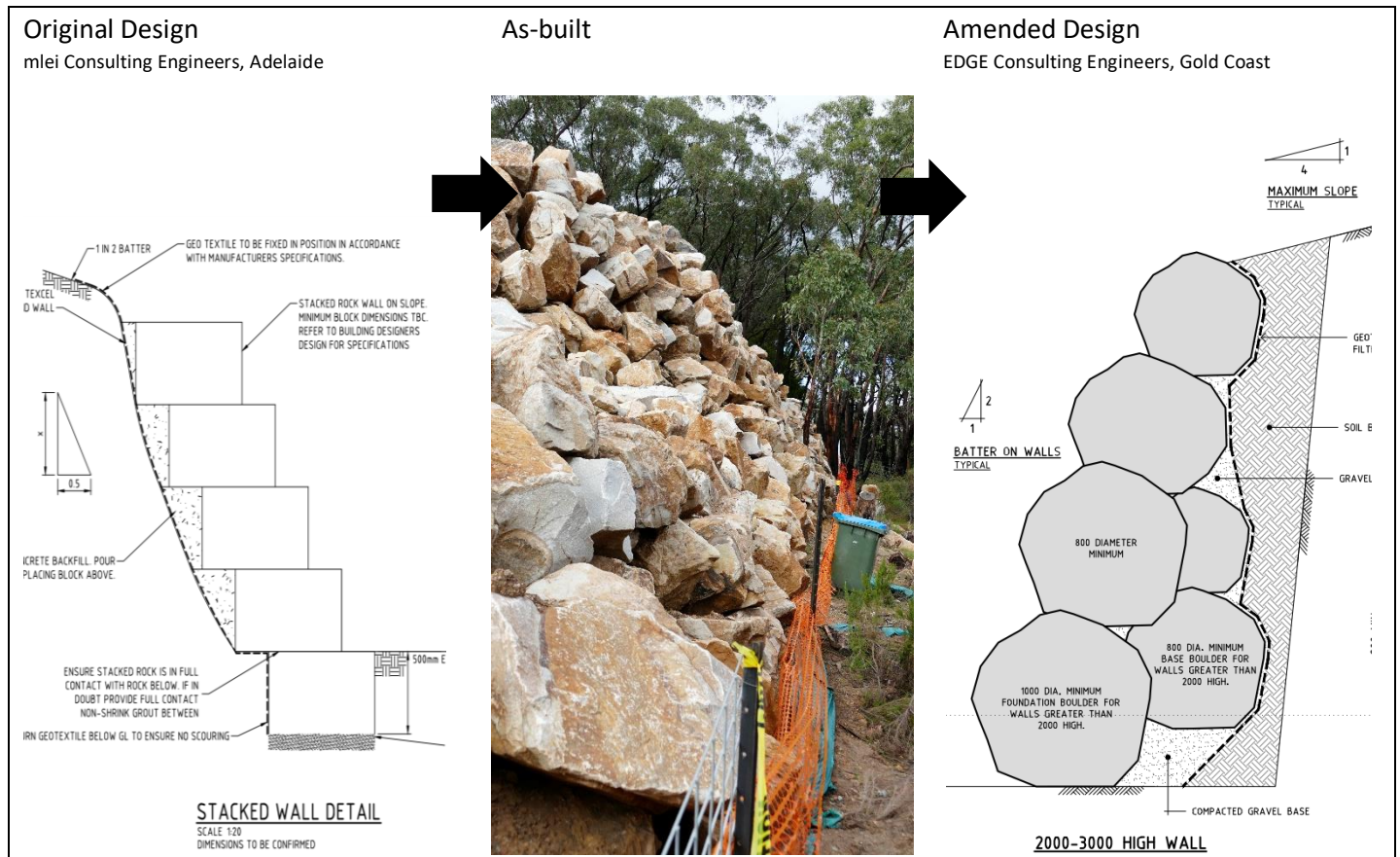


Image 1: Evolution of the wall

## Planning Code Non-compliance

The following table outlines the key ways in which the plans do not comply with the planning code.

This is clearly development as it is an engineered retaining wall meaning it meets the definition of a building.

### Hills Face Zone

	Performance Outcome	Compliance Issues
PO 2.1	<p><i>Buildings are unobtrusive and sited and designed in such a way as to:</i></p> <ol style="list-style-type: none"> <li><i>preserve and enhance or assist in the re-establishment of the natural character of the zone</i></li> <li><i>limit the visual intrusion of development in the Zone particularly when viewed from roads within the zone or from the Adelaide Plain.</i></li> </ol>	<p>The development does not preserve the natural character of the zone, it is totally out of character. There are no similar developments in the area and there is nothing in nature that can be compared to this development, particularly at this height of 6m.</p> <p>When viewed from Emmett Road (image 2) and Wylly Lane (image 3), the wall is visually intrusive. Its appearance is in stark contrast to the surrounding native bushland and existing dwellings.</p>
PO 3.1	<p><i>Excavation and/or filling of land outside townships and urban areas is:</i></p> <ol style="list-style-type: none"> <li><i>kept to a minimum so as to preserve the natural form of the land and native vegetation</i></li> <li><i>only undertaken in order to reduce the visual impact of buildings, including structures, or in order to construct water storage facilities for use on the allotment.</i></li> </ol>	<p>Works up to 4m substantially exceeds 2m and the wall at 6m high substantially exceeds fill of 1m.</p> <p>The works vastly change the natural form of the land, being 6m high at the highest point and over 50m long along the 39/43 boundary. The height simply demonstrates a complete lack of respect for the existing condition of the land. All native vegetation has been removed.</p> <p>The aim of the works appears to be to maximise space for the dwelling and gain a better view of the city rather than reducing visual impact. That can only be achieved by substantially altering the natural character of the land.</p>
PO 3.2	<p><i>Excavation and/or filling of land is only undertaken if the resultant slope can be stabilised to prevent erosion, and results in stable scree slopes which are covered with top soil and landscaped so as to preserve and enhance the natural character or assist in the re-establishment of the natural character of the area.</i></p>	<p>The proposed batter angle of 1:2 (55°) cannot be naturally stabilised and is more akin to a cliff face than a scree slope. The slope is so steep and the rocks so large that covering with top soil would be impractical at best. As an example, the current form of the retaining wall has failed many times with as many as 10 boulders having fallen from the wall during construction (image 8, attachment 2).</p>
PO 10.4	<p><i>Development is not undertaken if it is likely to result in loss of amenity to adjoining land or surrounding localities from:</i></p> <ol style="list-style-type: none"> <li><i>the visual impact of buildings, structures or earthworks</i></li> <li><i>...</i></li> </ol>	<p>The height and steepness of the wall along the 39/43 boundary substantially reduces the visual amenity of the adjoining land as:</p> <ul style="list-style-type: none"> <li>it towers above the track on 43 Emmett Road creating a sense of foreboding due to its sheer height and apparent lack of structural integrity (image 4)</li> <li>it carries unacceptable visual impact when viewed from the rear deck of the dwelling on 43 Emmett Road, looking rather like a quarry (image 5)</li> <li>The development has denuded the land of natural vegetation and there is no opportunity to establish such vegetation. From my perspective because of the existence of the right of way this reduces the opportunity to screen the wall from my property.</li> </ul>
PO 12.1	<p><i>Retaining walls are constructed as a stepped series of low walls constructed of dark, natural coloured materials and screened by landscaping using locally indigenous plant species if possible.</i></p>	<p>The wall is constructed from bright yellow/white quartzite which is especially visually obtrusive in the afternoon Sun (West facing). As demonstrated in the photos the colours do not blend in with the natural character.</p> <p>The new wall design is not stepped, instead being a very steep 1:2 batter single tier design which cannot practically be landscaped. It cannot be effectively screened due to the close proximity of the HV power line overhead.</p>



Image 2: View from Emmett Road in the afternoon Sun

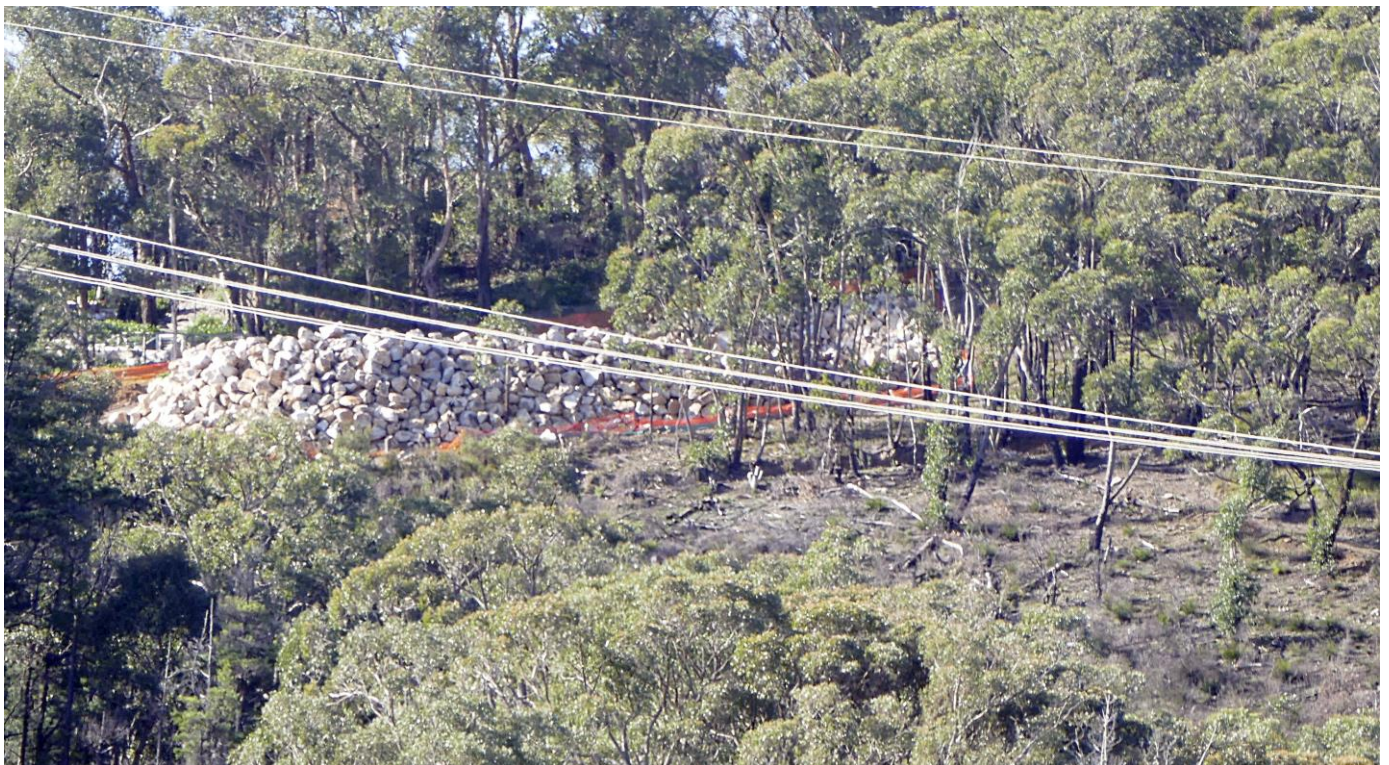


Image 3: View from Wyly Lane



Image 4: View from the right-of-way track on the 43 Emmett boundary



Image 5: View from house on adjoining property (43 Emmett)

## Inadequate Plans

### Ambiguities

The amended plans suffer from a lack of clarity making them difficult to interpret:

- The new section of retaining wall at the NW end of the 39/43 boundary (inside Easement A) fails to specify a construction type. The scale would suggest it being around 400mm wide but this is not achievable for the rock retaining wall design specified (see image 6).
- The wall design is predominantly presented in 2D plan view which seems lacking in detail for a large 3D structure critical to the success of the project. It would appear that a similar lack of detail in the original plans contributed to the developer's current predicament. We cannot allow that to occur again.
- Elevation C shows an image of a mild 3-tiered retaining wall which is outdated and misleading as it relates to the original scheme. The walls in the new plans are single tier, battered up to 55°.
- Elevations A (North) and Elevation C (South) locate the property boundaries on the high side of the property but fail to locate the boundary on the low side 39/43 boundary, nor is the batter angle specified. Thus, it is unclear how the retaining wall will affect the stability of the land in 43 Emmett Road.
- Section XX depicts a batter angle on the low side of the property around 50 degrees. The Rock Retaining Wall drawing specifies a batter angle of 1:2 (55°). The as-built wall measures 65° in places. Is the developer seeking to have the plans approved or to have the as-built wall approved?
- No location is specified for a 'septic tank' and runoff which would seem to be a key consideration in a such a development.

Due to these ambiguities, it is unclear how the developer could provide clear instructions to a contractor to build the wall, and it is difficult to see how compliance to plan could be assessed. As mentioned above there needs to be precision with these plans and something that can actually be built upon the ground and sympathetic to the natural character.

## Logical Flaws

### Rock Retaining Wall drawings are insufficient for the planned height

The drawings supplied by the replacement engineer "EDGE Consulting" (Gold Coast, Queensland) provide for rock walls up to 3000mm high. The application is generally vague on the maximum wall height required. At the highest point of the wall where the 39/43 boundary intersects the Line of Easement A, I make the original elevation to be 102.8m and the CUT is 108.85, a difference of 6m (see below). The ROCK RETAINING WALL drawing however only provides for a maximum height of 3000mm which is clearly far short of 6m. The red coloured NOTE regarding 6m high walls refers to INTERNAL corners. The highest point on the wall is an EXTERNAL corner.

This gives me great reason for concern because of what has happened in the past as the 55° batter cannot be supported naturally.

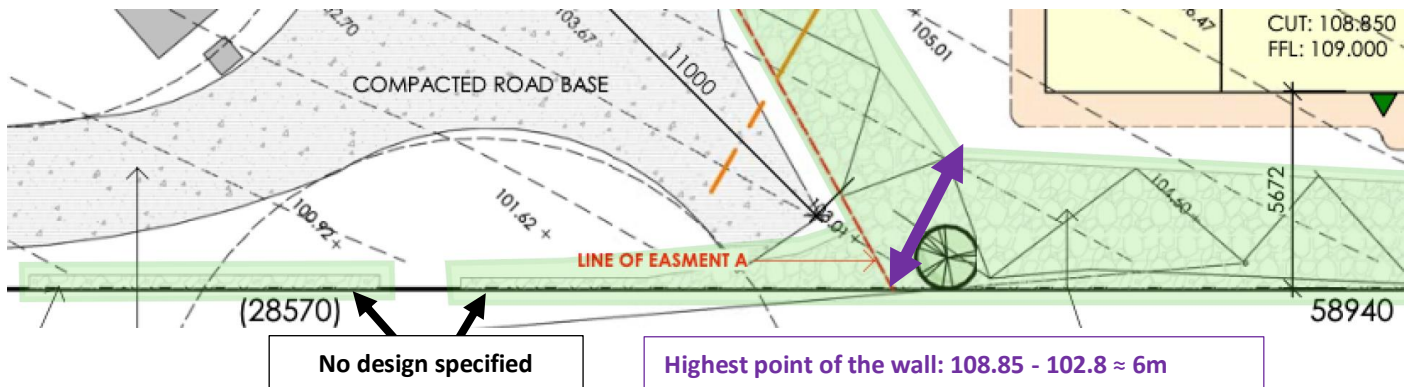


Image 6: Amended Plan issues

### Photo mock-ups suggest native vegetation can be grown on the wall

The amended plans include photo based mock ups indicating that native vegetation will be planted on the wall upon completion. The nature of a wall constructed from rocks up to 1000mm diameter on a 1:2 (55°) batter angle around 6m high is that it cannot practically be planted or landscaped:

- Climbing on such a wall would represent an ongoing OH&S issue
- The voids between rocks are so large that any top soil added would wash away
- It is not practical to climb on the wall to perform landscaping, planting, watering, pruning, etc.

## Closing Remarks

The rationale provided for amending the approved plans is essentially that the house would not fit within the confines of the wall and thus the walls need to be steeper. With proper engineering and construction supervision I would expect the wall could be built as per the original plans, i.e., if the original plans were properly considered engineering and the wall was built in compliance with the approved plans then this amendment would not be required. If that means some of the work has to be re-done, so be it. The original scheme is preferable particularly from both a height and gradient perspective.

As constructed, it has an unacceptable impact on the amenity due to its extraordinary height, length and batter angle, the highly reflective colour of the rocks used which colour is not natural to the area, thus the resulting jarring visual impact on the hills face zone landscape.

The height of the wall and depth of fill far exceeds the Hills Face Zone planning code provisions.

The developer must gain approval for plans addressing the planning code else he is not entitled to build on the allotment. I am all for responsible development, but allowing poorly designed and executed developments like this can only encourage more of the same in future.

I ask for the following:

- 1) The wall height to be reduced to 2m with a maximum batter angle of 2:1
- 2) The wall to be reconstructed/remediated in a manner that will make it safe and stable in the long term

I urge the council planning staff and councillors to view the wall in person, as this is the only way to fully appreciate the extraordinary scale of the wall and the way it sits in the landscape.

The application as presented must be refused.



Image 7: Poor build quality



Image 8: Fallen Rocks on Right-of-Way

## Attachment 1

Email sent to Council highlighting safety issues during construction of the wall.

**From:** George Manos <gm@bllawyers.com.au>  
**Sent:** Thursday, 6 May 2021 10:32 AM  
**To:** Marc Salver <msalver@ahc.sa.gov.au>  
**Cc:** Deryn Atkinson <datkinson@ahc.sa.gov.au>; 'Scott Hochwald' <scott@hochwald.id.au>  
**Subject:** Retaining wall- 39 Emmett Road, Crafers West - DA 473/580/19  
**Importance:** High

MOST URGENT

Hi Mark

I trust you are well.

I don't know if you know anything about the development being undertaken at 39 Emmett Road, Crafers West (the land).

I act for Scott Hochwald of 43 Emmett Road. His neighbour Jarred Sutton of 27 Emmett Road also has an interest in this matter noting both of those parcels adjoin the land.

In 2019, a DA was lodged for a non-complying dwelling on the land. It necessitated substantial earthworks including retaining walls on/adjacent to property boundaries. Cut and fill each of 4m was proposed

Earlier this year, work commenced on the site. Since that time, my clients' have been very concerned about the work that is being performed and the safety of that work.

To that end, Mr Sutton has retained an engineer to provide him with advice in relation to, in particular, the retaining walls being established. I understand that Mr Sutton has made a request of the Council to be provided with the plans, but that request was "denied". Nonetheless, Mr Sutton has now lodged an FOI request.

As far as Mr Hochwald is concerned, he made contact with the Council as a result of concerns in relation to the "retaining wall" being established on the common boundary. I understand Melanie Scott attended on site but did not have any or any real concerns. That is rather surprising and disappointing given what has happened as a number of large rocks have "fallen" from the land onto Mr Hochwald's land, over a period of several weeks. I attach a number of photographs and a plan being a legend as to where the photos were taken from together with the location of some of the rocks that have found their way onto my client's land and onto or over the shared right of way. The photos depict some rather large rocks - that is self-evident.

The rocks given their size are obviously capable of causing significant damage including causing substantial personal harm - or worse - to an unsuspecting person either on my client's land or on the right of way. Indeed one of the rocks found its way onto my client's land about 15 metres from the dwelling, having travelled at least 40 metres! Another rock - rock B - travelled at least 75 m! As of today, there are 7 large rocks that are on Mr Hochwald's land, confirming the seriousness of the situation.

There can be no doubt that there is a dangerous situation that has emerged for the purposes of the development legislation. Indeed that dangerous situation can properly be described as creating a "threat to safety arising out of the condition or use of building or an excavation" as those words are used in section 155 of the Planning, Development and Infrastructure Act (previously similar to section 69 of the Development Act).

Council must act immediately and issue an emergency order under section 155(3) of the PDI Act so as to prevent the owner of the land conducting any work/terminate a specific activity so as to prevent the retaining wall being constructed in such a manner whereby large rocks are able to "escape" from the site.

I remind the Council that it can be held liable in a situation where it is aware of an issue and whilst having the power to act, it fails to act.

We don't want anyone or any property to be damaged. Rather my client's want the Council to act as is their duty to enforce section 155 of the PDI Act given the circumstances as set out herein and which is clearly confirmed by the photographs attached.

I ask the Council to:

1. acknowledge receipt of this email;
2. acknowledge that it will take action;
3. advise when it has taken action, noting that such action should be taken immediately and in any event by no later than 10 May 2021.

I look forward to your prompt response.

PS: A request was made of the applicant's for consent to provide the plans that were granted full development approval and any variation thereof but they are yet to be provided. Given my clients' interest in this matter, it is appropriate for the Council to provide those plans so that advice can be obtained from an expert engineer at least to the method being used to construct the retaining wall so as to seek to ensure that work is done in a proper engineering manner.

None of that of course derogates from the need for the Council to take action under section 155 of the PDI Act.

Regards

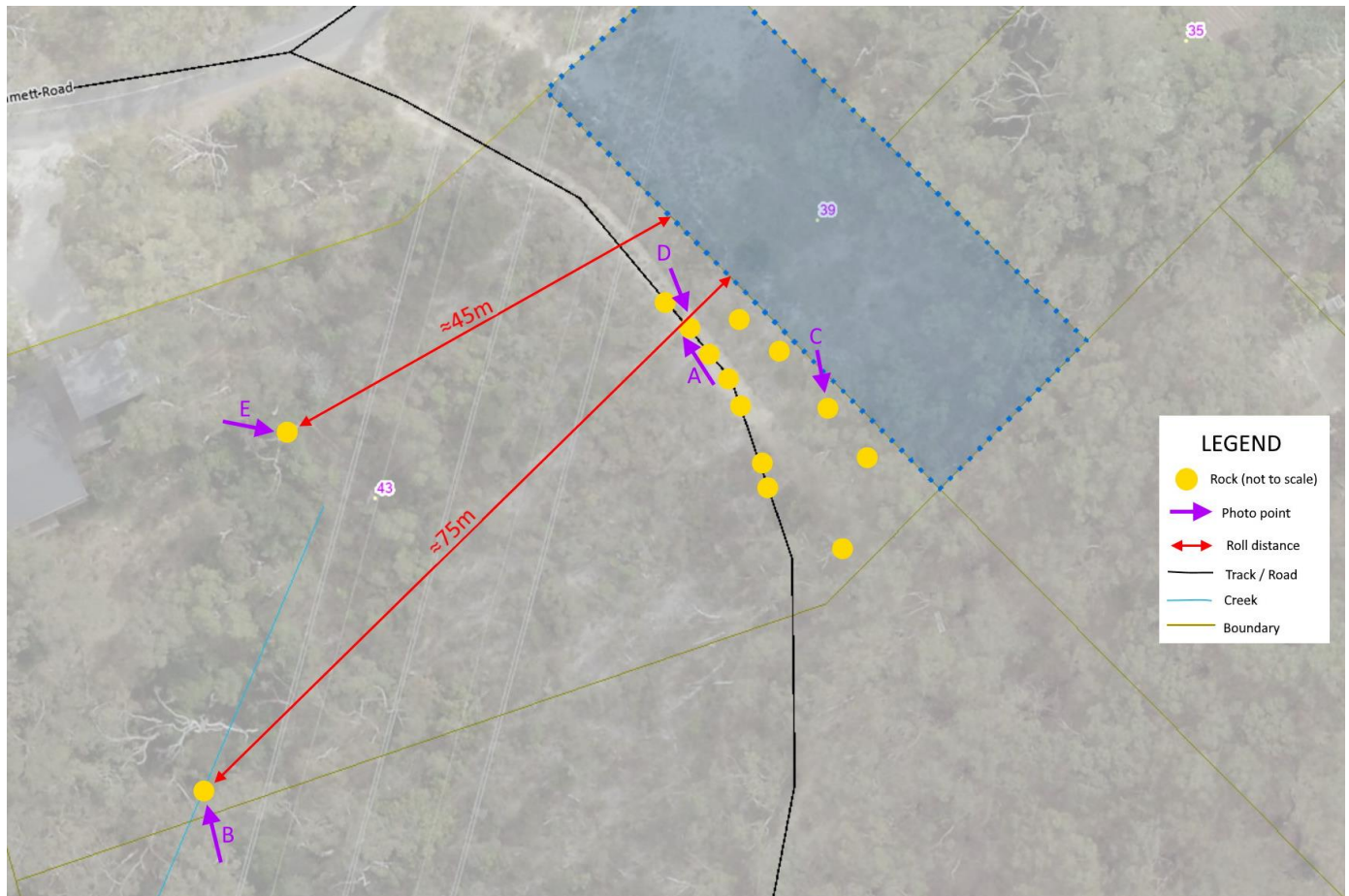


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 Principal  
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Please notify us immediately if this communication has been sent to you by mistake.  
 If it has, client legal privilege is not waived or lost and you are not entitled to use it in any way.

## Attachment 2

Diagram of some of the rocks that escaped the wall during construction.



Valued panel Members,

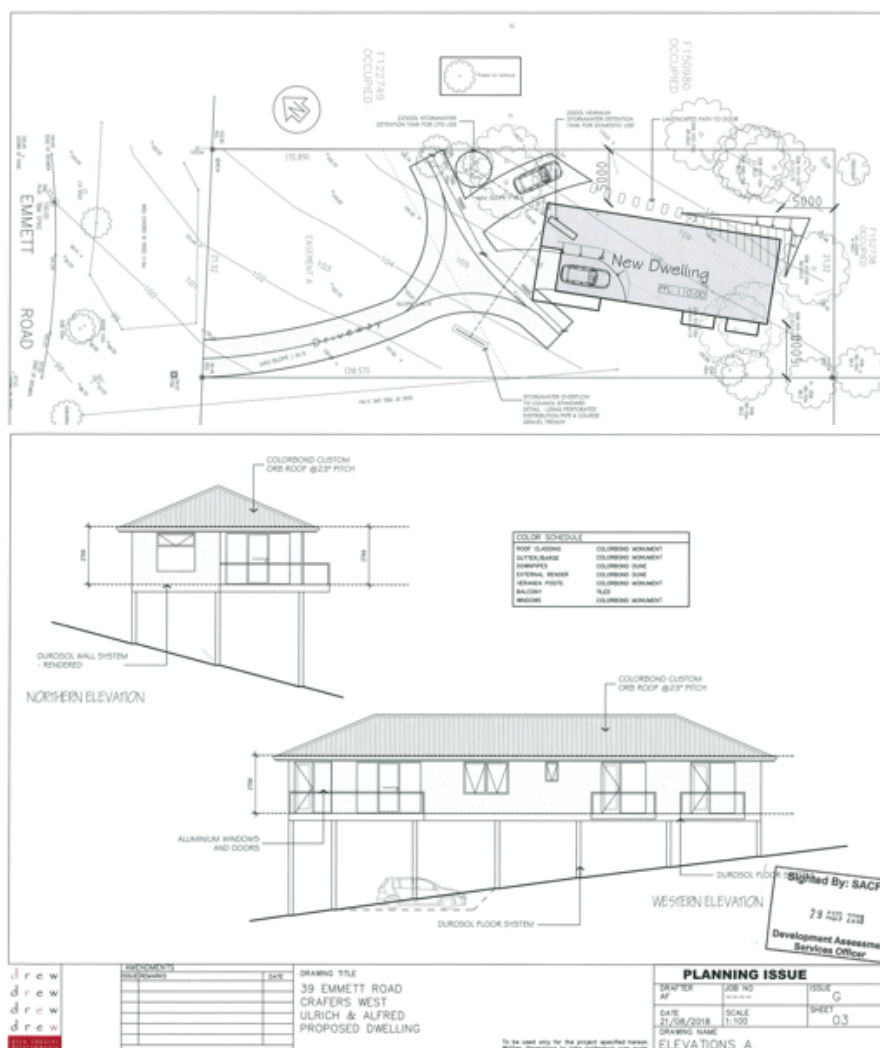
In 2018 my partner and I bought the land at 39 Emmett Road. On 13 February 2019, the Development Plan Consent, DA 18/353/473, was granted and we plan to build a home with a suspended slab.

At the north west facing boarder of 39/43 Emmett Road, the slab would have been 5.8 metres above ground and additional of 4.6 meters for the house which bring a total height of approximately 10.4 metres.

With the current design (DA 19/580/473), the height of the fill (not retaining wall) and the earth roof house design reached only approximately 8.1 metres. Moreover the slab is on level 109 instead of level 110 compared to the abolished design.

This demonstrates that our intention always has been to reduce the footprint of our residence which we achieved by around 3 metres.

During public notification no representations have been made for this design.



In 2019, due to fire safety issues, to abolish the design and to start over. During consultation with Council, I was told that: "A suspended slab should never have been approved by Council".

Council advised us that a cut and fill is the preferred way to go ahead. Due to the extent of the cut and fill of approximately 4 meters the application was non compliant and therefore public notification was necessary. With the second public notification, no negative representations have been made.

With the second DA granted, a retaining wall to retain approximately 4 meter fill (approximately from level 105 to 109) was approved. Council requested to use natural materials for the retaining wall and native plants for landscaping. We have been already in contact to the Belair National Park Nursery to research on suitable plants that help to blend the retaining wall into the landscape. See document Appendix A - Plant selection Belair National Park nursery.pdf. The pre selected plants are native in the Adelaide Hills area, bee friendly and partially fire resistant.

We decided to use the rock from Stonyfell quarry in order to buy material close by from the foothills of the Adelaide Hills. The direct line distance from Crafers West to the quarry is approximately 7km. The colour of the rocks is similar to the colour of the rock facing left and right of the M1 express way. We saw the same colour range during the excavation in February 2021 at the construction site. Please see images:

Appendix B - Colour of refusal clay sand layer.jpg

Appendix C - Rock retaining wall bathed in afternoon sun.jpg

Appendix D - Colour of soil.jpg

We are seeking your approval for the variation application purely because of limited space. The 3 tiered design did not allow for enough space at level 109 to build the approved home. Therefore we made the changes in good faith. The 3 tiered retaining wall was flawed and did not account for the CFS setback requirement of the house by 5 meters from the neighbour property boundaries.

Appendix E - 3 tiered retaining wall dimensions.pdf

The 2 steps of the 3 tiered retaining wall pose a severe risk during a bushfire because it's a collection area for ambers. The one tiered retaining wall reduces the risk of amber collection significantly.

The retaining wall in its current stage is not finished, not refined and have not been landscaped. The representations are made on an unfinished and not landscaped retaining wall.

You might ask why we don't contract a South Australian engineering company. Reason is because the home we build is a zero energy home with maximum fire protection to withstand any Australian bushfire situation, inherently protecting people and property.

The composite home system is unique and has carefully selected materials. All materials are non combustable. The components used on the outside of the house fulfil the BAL-FZ requirements, which are the highest fire protection standards and complying to AS-NZ 1530.1. Additionally highest environmental standards are met. The home is a composite

building. An engineering company with long-standing experience in composite buildings like EDGE consulting can advise on the engineering of a project like our home. Specially when it includes the combination of a retaining wall and a composite home that we are building.

Best regards

Alfred Teng & Ulrich Schade

Response to representations:

submitter No: 2 - Chad & Nicole Harder	
Concern	Response
Work continued on the site without the proper approval from the relevant authority in an unsafe manner and not to the approved plans.	The deviation from the approved plans happened, at the end of March 2021, after it was clear that the 3 tried retaining wall wasn't able to be build. Work has always been conducted in a safe manner, all trades are highly experienced and followed the WHS guidelines.
The site looks unsafe, and the placement of the rocks has not been carried out correctly as per the engineering documents	<p>The wall is construction to the latest structural engineering standards.</p> <p>The site is fenced in and marked as construction site. The rocks are placed as per engineering advise and documents.</p> <p>Please see attached images:  Appendix F - Construction site fence south west.jpg  Appendix G - Construction site fence south east.jpg  Appendix H - Fence south east.jpg  Appendix I - Fence south east1.jpg  Appendix J - Fence south.JPG</p>
The rock wall is too high to meet the hills face and retaining wall regulations. It is a complete eyesore that does not meet strict building guidelines for building in the hills face zone; "buildings to be in an unobtrusive location - particular should be located not to be visible against the skyline."	The height of the retaining wall did not change from the approved plans of the DA 19/580/473

There are also strict guidelines in relation to building two-story houses in hills face zone, so building a two-story rock wall would definitely not meet regulations.	Only a single story building will be build. The previous approved retaining wall in the original design would have been approximately 6 metres high too. Please see documentation DA (Development Number 19/580/473)
Aside from the sheer lack of aesthetics, the site appears completely unsafe. This is also reiterated by the fallen stones which have already fallen from the wall to the property below.	The site was shut down and we couldn't finish urgent tasks. The retaining wall is not yet finished and no landscaping has been done. The wall will blend into the landscape as mother nature intended. <b>The rocks fall during placement out of the hydraulic claw of the excavator.</b>
Submitter No: 3 - Davd Shaw	
Concern	Response
The cut at the rear of the allotment is at least 4m and the retaining wall supports fill of at least 5m. The natural form of land and natural vegetation has been destroyed and only weeds will regrow on a pile of rocks.	The approved development: (Development Number 19/580/473) was non compliant and after initial public notification, a 4 metres cut and fill was part of the DA. Council requested to use natural materials and native plants for landscaping. We have been already in contact to the Belair National Park Nursery to research on suitable plants that help to blend the retaining wall into the landscape. See Appendix A - Plant selection Belair National Park nursery.pdf. The pre selected plants are native in the Adelaide Hills area, bee friendly and partially fire resistant.

<p>A massive wall of large foreign boulders, to a height of at least 5m, neither preserves nor enhances the natural character of the sloping bushland. Rather the natural character is destroyed, cannot be re-established, and is replaced with a quarry-like appearance to the hills face when travelling East up Emmett Rd.</p>	<p>The retaining wall was build with natural materials requested by council. The rocks have been chosen from Stonyfell quarry which is airline approximately 7 km away. Landscaping will blend the retaining wall into the surrounding area. Furthermore the wall is not finished nor landscaped.</p>
<p>Additional concerns relate to risk of injury to us and our visitors, as well as potential future owners of our land adjoining this development. The large boulders positioned precariously in the one tier have already become dislodged and rolled down across our access. There is no evidence that this will not occur again in the future.</p>	<p>The retaining wall is under construction and unfinished.  <b>The rocks have fallen out of the excavators hydraulic claw during placement.</b></p>
<p>Another risk to personal injury to adjacent landowners is the harboring of vermin and snakes in the large cavities between the boulders. This is a current and ongoing risk.</p>	<p>The work on the retaining wall stopped and is not yet finalised. The comments are made on an unfinished retaining wall.</p>
<p>submitter No: 4 - Tim Oosterbaan</p>	
<p>As stated above Children use the roadway/driveway on the bottom side of the retaining wall to visit their Grandmother. We believe that there is a risk of further subsidence and rocks falling in the future. See below for where we believe the current retaining wall does not meet the specifications in the submission.</p>	<p>The construction of the retaining wall was stopped and couldn't be finished until now.</p> <p>When the retaining wall is finished a structural engineer will certify the safety of the retaining wall.</p>

<p>It is clear to us that the retaining wall in its current structure will house rodents as they will be able to nest in amongst the boulders in the current voids. Even if filled they will burrow and nest. Similarly with the recent increase in rabbits in the area there is also the risk of a warren being developed. The presence of uncontrollable vermin will mean that snakes will be an ever present risk to anyone who lives, walks along or in the vicinity of the retaining wall. This appears to contravene PO 10.2 (c)</p>	<p>The work on the retaining wall stoped and is not yet finalised. The comments are made on an unfinished retaining wall.</p>
<p>the actual works as have been carried out do not meet there revised plans as submitted. The plans stipulate footing boulders at least 1m across. My measurement of the boulders at the bottom of the retaining wall would indicate that none of them are 1m.</p>	<p>The base of the retaining wall is made out if 600-900 mm rocks which is in accordance to the advise of the EDGE structural engineer.</p>
<p>Similarly to above the plans stipulate that the boulders are to be set in to the ground at least 400mm. None of them appear to be set into the ground. Some examples are attached as boulder not set in ground.jpg and boulder not set in ground 2.jpg</p>	<p>The rock retaining rest on a 400mm gravel bed and leans backwards into natural ground and compacted fill, as recommended by the EDGE structural engineer.</p>
<p>The plans as submitted make reference to changes that 'needed' to be made during construction. Surely that would have required a resubmitting of the plans. I only raise this point as it would indicate that the owners and/or builders may be likely to do this in the future if this plan is approved.</p>	<p>The plans have been updated and currently resubmitted for approval in order to address the changes.</p>

<p>There are significant voids at the top and bottom of the retaining wall. See attached void in upper wall.jpg ; void in upper wall 2.jpg ; void through wall.jpg and void in lower wall.jpg</p>	<p>The construction of the retaining wall is not yet finished.</p>
<p>Some boulders do not sit up on the boulders below and so overtime could move laterally. See attached boulder not abutting.jpg What is in situ does not match the seating of the boulders as in the plans.</p>	<p>The construction of the retaining wall is not yet finished.</p>
<p>Water run off is already eroding the substrate and would continue to do so overcoming years. I believe this may undermine the integrity of the structure. See attached water control and erosion.jpg</p>	<p>The retaining wall is not yet finished. The retaining wall is build with erosion control. The water drains freely from behind the wall and geotextile retains the soil. The photo shows a puddle of water after rainfall. On the right side of the persons foot who is taking the photo, is the installed green erosion control sediment fence visible.</p>

## Appendix K Water puddle



<p>It is not clear to me if this is in fact an engineered structure, surely such plans would contain engineering calculations. It is not clear how PO 10.5 is met.</p>	<p>For the retaining wall a structural engineer produced guidance material, drawings and on demand engineering advise. Further a geotechnical engineer provided the geo technical stability analysis.</p> <p>Please see:</p> <p>Appendix L - Inspection report 39 Emmett Rd.pdf</p> <p>Appendix M - Report P119 Crafers West_ Amended.pdf</p> <p>Appendix N - 200650_S01_ROCK RETAINING WALL[C03].pdf</p> <p>Appendix O - P190 Letter.pdf</p>
<p>It is unclear if this application is to undertake remedial works(which would seem to be required as what is there doesn't meet the current plan) or is the applicant stating that what is there does meet the current plans. If remedial work is to be undertaken we would be concerned that more boulders would fall. I note that the site has already been shut down once following a SafeWork SA visit.</p>	<p>The retaining wall construction is not yet finished. The site was <b>not</b> shut down by WorksafeSA because no accident has happened and nobody was injured. WorksafeSA visited the site and deemed it safe. The WorksafeSA inspector made recommendation for the times when work was performed on the retaining wall. We have been asked to implement the measures which we did and it was communicated to the neighbours of the adjoining properties. Please see following email from WorksafeSA Snr WHS/DS Inspector, Igor Visintin</p>

## Appendix P - Worksafe SA instructions 16 Apr 2021.pdf

**From:** Visintin, Igor (DTF) Igor.Visintin@sa.gov.au  
**Subject:** Boulders  
**Date:** 16 April 2021 at 3:28 pm  
**To:** ulrichschade@gmail.com

IV

Hello Ulrich

As discussed during our visit today, the following should apply for the work being conducted:

That a spotter be put in place that ensures that persons are aware of the area and that he can advise the excavator operator to cease work when they are using the path below.

That you advise the persons in writing so that they know what is occurring.

That you advise them that you will need to access the area to retrieve the boulders as this is a fire road for the CFS and the boulder will cause an issue for their vehicles in the event of an emergency.

Please advise on the above when it is implemented.

Can you please supply your ABN Number, contact details including your address so I can enter this information into our system.

Kind Regards

Igor

**Igor Visintin**

Snr WHS/DS Inspector  
Construction Team



Level 4, World Park A, 33 Richmond Road, Keswick

**P** +61 8 8303 9989      **M** 0401 125 681

**W** [safework.sa.gov.au](http://safework.sa.gov.au)      **P** 1300 365 255

<p>It doesn't appear that impact on or effect to water resources has been addressed in the application.</p>	<p>The retaining wall is a free draining construction and there are no information on the water resources.</p>
<p>I have lived in Crafers West all my life and I have never seen some thing so imposing and in conflict with the surrounds. Even other sites on steeper slopes have managed to use improved engineering that lessens the visual affect.</p>	<p>The retaining wall is not finished and not landscaped yet. It will blend into the surrounding landscape as mother nature intended it.</p>
<p>My reading of the Hills Face Zone is that this retaining wall would contravene PO3.1 in that the excavation has not been kept to a minimum and the natural form of the land has been significantly altered. See the original photographs as attached 39 Emmett Rd pre building top.jpg and 39 Emmett Rd pre building.jpg As you can see the natural slope has not been retained.</p>	<p>The approved development: (Development Number 19/580/473) was non compliant with a public notification period and approved with the cut and fill outlined in the approved drawings.</p>
<p>DTS/DPF3.1 states that the depth of earthworks does not exceed: in the case of excavation, 2m and in the case of filling of land 1m. From the plans the depth of excavation is approximately 4-5m so this has exceeded DTS/DPF 3.1 by a factor of at least 2. They have specified 2-3m high walls, but what is in situ is significantly higher, I believe it is at least 6m. This would mean that DTS/DPF 3.1 has been exceeded by a factor of 6.</p>	<p>The approved development: (Development Number 19/580/473) was non compliant with a public notification period and approved with the cut and fill outlined in the approved drawings. The retaining wall height never changed.</p> <p>Appendix Q - Section 39 Emmett Road.pdf</p>

<p>The excavation and/or filling has been done to allow a building to be built in the way that the applicant wants. Rather than being only to reduce the visual impact of the building as per PO 3.1. Granted you won't be able to see the building, but in its place is an imposing boulder wall.</p>	<p>The cut and fill is in accordance to the approved development (Development Number 19/580/473). It was non compliant and approved after initial public notification period.</p> <p>The abolished design (DA 18/353/473) of the home with the suspended slab would have reached a total height of approximately 10.4 metres. With the current design (DA 19/580/473), the height of the fill (not retaining wall) and the earth roof house design reached only approximately 8.1 meters. Moreover the slab is on level 109 instead of level 110 compared to the abolished design.</p> <p>This demonstrates that our intention always has been to reduce the footprint of our residence which we achieved by around 3 metres.</p>
<p>The design as submitted shows vegetation on the rocks, but top soil is not proposed to be added to the top of the wall so no vegetation will be able to grow. So even over time the visual impact will not diminish.</p>	<p>Pockets in the retaining wall are designed for the growing of native plants suitable in Crafers West. Over time the native plants will established and blending with the surrounding landscape. We have been already in contact to the Belair National Park nursery to research on suitable plants that help to blend the retaining wall into the landscape. See Appendix A - Plant selection Belair National Park nursery.pdf. The pre selected plants are native in the Adelaide Hills area, bee friendly and partially fire resistant.</p>

<p>The application does not mention what may be a significant or regulated tree on the property. See significant or restricted tree.jpg</p>	<p>Matters regarding the trees are not part of the variation application and have gone through the process with the NVC. Please see: Appendix R - 3121-473 NVC Regulation Advice Notification_Signed.pdf</p> <p>To our information there are no significant and regulated trees on the land.</p>
<p>The natural character of the environment will be for ever altered with large foreign boulders present in an unnatural form.</p>	<p>Pockets in the retaining wall are designed for the growing of native plants suitable in Crafers West. The native plants will established and blending with the surrounding landscape. We have been already in contact to the Belair National Park nursery to research on suitable plants that help to blend the retaining wall into the landscape. See Appendix - A Plant selection Belair National Park nursery.pdf. The pre selected plants are native in the Adelaide Hills area, bee friendly and partially fire resistant.</p>
<p>The pockets that would allow the planting of native vegetation would also allow for pest plants and weeds to take hold and would be very difficult to control given the 70 degree slope.</p>	<p>The natural biodiversity will be part of our efforts to establish native vegetation from the Belair National Park Nursery.</p>
<p>The general loss of amenity for all residents who walk or commute along Emmett Rd will occur if this development is allowed to proceed.</p>	<p>From Emmett Road driving towards Hillcrest Road the retaining wall is barely visible. Please see video Appendix S - Drive on Emmett road pasting 39 Emmett Road.mp4 and the following photos.</p>

Appendix T - View from Emmett Road.jpg



Appendix U - View from Emmett Road next to 43 Emmett Road.jpg



Appendix V - View from driveway of 43 Emmett Road.jpg



submitter No: 5 - Jarred and Sarah Sutton

Concern

The Natural Character of the zone is not preserved, enhanced or re-established by the construction of the proposed retaining wall.

Response

The retaining wall is not yet completed or landscaped. Comments made on a incomplete structure.

Excavation and/or filling has not been kept to a minimum, does not preserve the natural form of the land and does not preserve the natural vegetation.

The approved development: (Development Number 19/580/473) was non compliant with a public notification period and approved with the cut and fill outlined in the approved drawings.

<p>Excavation and/or filling has not ONLY been undertaken in order to reduce the visual impact of the building.</p>	<p>The approved development: (Development Number 19/580/473) was non compliant with a public notification period and approved with the cut and fill outlined in the approved drawings.</p> <p>The abolished design (DA 18/353/473) of the home with the suspended slab would have reached a total height of approximately 10.4 metres. With the current design (DA 19/580/473), the height of the fill (not retaining wall) and the earth roof house design reached only approximately 8.1 meters. Moreover the slab is on level 109 instead of level 110 compared to the abolished design.</p> <p>This demonstrates that our intention always has been to reduce the footprint of our residence which we achieved by around 3 metres.</p>
<p>Depth of excavation exceeds 2m and filling exceeds 1m in height.</p>	<p>The approved development: (Development Number 19/580/473) was non compliant with a public notification period and approved with the cut and fill outlined in the approved drawings.</p>
<p>Top soil is not proposed to be installed to the retaining wall.</p>	<p>The retaining wall will constructed to the recommendation of the structural engineer and in accordance to the approved documents of DA 19/580/473.</p>
<p>Large foreign boulders neither preserves or enhances the natural character or assist in the re-establishment of the natural character of the area.</p>	<p>The material for the retaining wall is sourced from the Stonyfell quarry which is located less than 7 kilometres airline distance. The same rocks would have been used as well for the 3 tiered retaining wall.</p>

Regulated trees on neighbouring properties have been impacted by works undertaken and are not mentioned on the plans.	To our information, there are no regulated tree on the adjoining border of neighbouring properties
Site located adjacent native bushland and retaining wall will be a safe haven for all small vermin / rodents; the 'pockets' provide the perfect opportunity for pest plants and vermin to take residence.	The retaining wall is incomplete. Pockets in the retaining wall are designed for the growing of native plants suitable in Crafers West. The native plants will established and blending with the surrounding landscape. We have been already in contact to the Belair National Park nursery to research on suitable plants that help to blend the retaining wall into the landscape. See Appendix A - Plant selection Belair National Park nursery.pdf. The pre selected plants are native in the Adelaide Hills area, bee friendly and partially fire resistant.
Large excavation and fill to adjacent land owners boundaries; with no consideration to the safety of these land owners or their visitors.	All required safety procedures have been undertaken. The construction site has been clearly marked and fenced as construction site. Please see attached images.

Appendix W - Fence along western side.jpg



Appendix H - Fence south east.jpg



Appendix I - Fence south east1.jpg



Appendix X - Fence south west.jpg





Large visual obstruction visible from neighbouring properties and from the road resulting in a loss of amenity.

The site is under construction and no landscaping have been done.

Appendix T - View from Emmett Road.jpg



Appendix U - View from Emmett Road next to 43 Emmett Road.jpg



Application documentation provides not justification on how this is met, no engineering calculation provided.

Applicants' Engineer has made a blanket and unjustified statement that 'over and above the realignment, the walls have been engineered and detailed with water and erosion control as prime consideration.'

Calculation are contained within the geotechnical engineers report.

The construction of the retaining wall is not finished.

The retaining wall is a self draining design.

The geotechnical report shows that the development does not pose a risk of soil movement, landslip or erosion.

<p>It is our understanding that an engineered, three-stepped retaining wall was originally approved by council</p> <p>Proposed retaining wall is not stepped, nor should a 5m high retaining wall be considered as a 'low wall'</p>	<p>The dimension of the proposed 3 tiered retaining wall would not suited the to build the house on on the land. The retaining wall has never changed in height.</p> <p>In respect of bush fire safety the 1 tiered wall is a much safer approach (BAL-FZ)</p> <p>The height of the retaining wall does not change with the variation application.</p>
<p>Natural drainage lines severely altered.</p> <p>On site drainage system to minimise erosion has not been provided.</p>	<p>Based on what Information does Mr. &amp; Ms. Sutton claim that "Natural drainage lines severely altered"?</p> <p>The retaining wall is self draining and the gravel beds provide drainage to ensure the safety of the retaining wall.</p> <p>The approved DA includes stormwater management and drainage plans.</p>
<p>Plans are silent on the regulated trees on neighbouring properties.</p> <p>If significant / regulated then large excavation and disturbance on root zone likely to adversely affect the tree.</p> <p>If significant/ regulated an arborist report including establishment of tree protection zone / significant root zones to be met.</p>	<p>To our information, there are no regulated tree on the adjoining border of neighbouring properties.</p>

Engineering documents are insufficient, engineering calculations have not been provided and additional information / construction procedures are recommended by our independent structural engineer – refer attached email correspondence from Jack Adcock, Jack Adcock consulting Pty Ltd Structural & Civil Engineering dated 29 <sup>th</sup> June 2021	Mr. Adcock is not the engineer on the project therefore his comments are irrelevant. The relevant information have been submitted to council.
Heights of the proposed retaining wall are not provided on any of the application documentation and extent not accurately represented on the plans provided.	There are no changes to the retaining wall heights as per approved DA. (Development Number 19/580/473).
Rock retaining wall on Harvan design sheet 5 of 10 is a misrepresentation of style of retaining wall being proposed.	The photo is an illustration of how the natural rock and landscaping is used to blend into the surrounding.
Retaining walls not accurately represented on elevation or section drawings.	<p>The representation is made about the Harvan design drawings. Please see: Appendix Z - 39 EMMETT 19-02680 WKDGS revK Updated.pdf.</p> <p>The Harvan design drawings are draftsmen/ architectural drawings. The engineering drawings overwrite the draftsmen/ architectural drawings.</p>
Size of boulders already placed on site do not meet/comply with Edge Engineering documentation and does not accurately reflect works which has been undertaken.	<p>The retaining wall is constructed to the specification and recommendation of the structural engineer.</p> <p>The structural engineer will finally certify the retaining wall.</p>

Boulders have not been founded below natural ground or platform level as per Edge Engineering documentation.	The retaining wall is constructed to the specification and recommendation of the structural engineer. The rocks are place according the latest structural engineering advise.
Edge Engineering documentation inaccurately shows how boulders have been placed on top of each; engineering documentation graphically show that boulders are sculptured to provide immediate continual bearing on top of each other, the retaining wall as already constructed on site has not been constructed in this way.	The retaining wall is constructed to the specification and recommendation of the structural engineer. The rocks are place according the latest structural engineering advise.
Batter on retaining walls shown as 1 in 2, actual retaining wall constructed is steeper and in cases top of retaining wall overhangs base / lower boulders.	<p>No rock is overhanging lower rocks. The retaining wall is not yet finished. The retaining wall is constructed to the specification and recommendation of the structural engineer. The rocks are place according the latest structural engineering advise, which meets structural engineering recommendations and was verified by engineer.</p> <p>The retaining wall will undergo a final inspection and certification on its safety</p>
Construction methodology (i.e. compacting soil behind boulders) to retaining walls which have been constructed have not been constructed in accordance with the Edge engineers design. Applicant to provide details which accurately reflects construction works which has been undertaken.	The retaining wall is constructed to the specification, advise recommendation of the structural engineer. The retaining wall has not been finalised.

Engineering documentation notes retaining wall 2m-3m in height; with note that can achieve 6m high wall is used on 90 degrees internal corner, no engineer design solution provided along western boundary where retaining wall exceeds 3m in height and is not supported by an internal corner.	Work on the retaining wall was done to structural engineering advise and recommendation. The retaining wall has not been finalised.
The Applicant has failed to notify and provide any documentation to neighbouring owners in regard to the retaining wall being constructed in accordance with <i>Section 64 Building Work Affecting Other Land of the Planning, Development and Infrastructure (General) Regulations under the Planning, Development and Infrastructure Act 2016</i> .	The building work does not affect other land.
Documentation regarding Notification for <i>Building Work Affecting Other Land</i> should form part of the Application for review instead of requiring residents to conduct Freedom of Information Applications to determine the impacts of a neighbouring development.	The building work does not affect other land.
Works have been undertaken which are not in accordance with the approval which has been granted.	Some site modification was required due to the specific conditions. The dimension of the proposed 3 tiered retaining wall would not suited to build the house on the land. Variation application has been submitted to council.
Retrospective approval is being sought by the applicant for works which has already been constructed and yet these works do not correspond to the provided plans.	Some site modification was required due to the specific conditions. Application has been submitted to council.
submitter No: 6 - Scott Hochwald	

Concern	Response
<p>The development does not preserve the natural character of the zone, it is totally out of character. There are no similar developments in the area and there is nothing in nature that can be compared to this development, particularly at this height of 6m.</p> <p>When viewed from Emmett Road (image 2) and Wyly Lane (image 3), the wall is visually intrusive. Its appearance is in stark contrast to the surrounding native bushland and existing dwellings.</p>	<p>The provided images are photographed with an extreme zoom lens or have been cropped. Below is a range of images taken at Wyly lane. One of the images that was taken with the 50 mm lens, which is equal to the human eye.</p> <p><a href="https://en.wikipedia.org/wiki/Normal_lens">https://en.wikipedia.org/wiki/Normal_lens</a> : "...using 50mm lenses "approximates the angle of view and magnification of human vision",<sup>[6]</sup> or that "the normal focal length for a given format most closely approximates human sight"."</p>

Appendix AA - View from 44-52 Wyly Lane, photo taken with 24mm lens.jpg



Appendix AB - View from 44-52 Wyly Lane, photo taken with 50 mm lens, which is equal to the human eye.jpg



Appendix AC - View from 44-52 Wyly Lane, photo taken with 120mm zoom lens.jpg



Appendix AD - View from 44-52 Wyly Lane, photo taken with 300 mm zoom lens.jpg



<p>Works up to 4m substantially exceeds 2m and the wall at 6m high substantially exceeds fill of 1m.</p> <p>The works vastly change the natural form of the land, being 6m high at the highest point and over 50m long along the 39/43 boundary. The height simply demonstrates a complete lack of respect for the existing condition of the land.</p> <p>All native vegetation has been removed.</p> <p>The aim of the works appears to be to maximise space for the dwelling and gain a better view of the city rather than reducing visual impact. That can only be achieved by substantially altering the natural character of the land.</p>	<p>The approved development: (Development Number 19/580/473) was non compliant and after initial public notification, a 4 metres cut and fill was part of the DA.</p> <p>The approximate 6 metres height would have been achieved with the 3 tiered retaining wall as well. The retaining wall tappers fast back towards the south western corner.</p> <p>The retaining wall is approximately 30 metres long where the fill for the house pad is retained. Towards the north west facing side within the easement the retaining wall is 1.5 metres high for approximately 4 metres. Further along the north west facing side within the easement towards Emmett Road, the retaining is will be less than 0.6 metres purely to support the battered slope for the access driveway.</p> <p>The representation here claims that: “the works appears to be to maximise space for the dwelling and gain a better view of the city rather than reducing visual impact”. The height of the retained area of 109 level have not changed. Please see the approved drawings from Development Number 19/580/473.</p> <p>The abolished design (DA 18/353/473) of the home with the suspended slab would have reached a total height of approximately 10.4 metres. With the current design (DA 19/580/473), the height of the fill (not retaining wall) and the earth roof house design reached only approximately 8.1 meters. Moreover the slab is on level 109 instead of level 110 compared to the abolished design. This demonstrates that our intention always has been to reduce the footprint of our residence which we achieved by around 3 metres.</p>
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<p>The proposed batter angle of 1:2 (55°) cannot be naturally stabilised and is more akin to a cliff face than a scree slope. The slope is so steep and the rocks so large that covering with top soil would be impractical at best. As an example, the current form of the retaining wall has failed many times with as many as 10 boulders having fallen from the wall during construction (image 8, attachment 2).</p>	<p>The retaining wall in its current form is under construction and is fully engineered.</p> <p><b>During the construction process rocks slipped out of the excavators hydraulic claw in the placement process.</b></p>
<p>The height and steepness of the wall along the 39/43 boundary substantially reduces the visual amenity of the adjoining land as:</p> <ul style="list-style-type: none"> <li>• it towers above the track on 43 Emmett Road creating a sense of foreboding due to its sheer height and apparent lack of structural integrity (image 4)</li> <li>• it carries unacceptable visual impact when viewed from the rear deck of the dwelling on 43 Emmett Road, looking rather like a quarry (image 5)</li> <li>• The development has denuded the land of natural vegetation and there is no opportunity to establish such vegetation. From my perspective because of the existence of the right of way this reduces the opportunity to screen the wall from my property.</li> </ul>	<p>Regardless of the steepness of the wall, the 3 tiered retaining wall would have reached 6 metres in height. The stamped drawings from council and BCA concepts show the bottom of the wall starts at approximately level 103.2 and the top of the wall is at approximately level 109.0</p> <p>The construction of the retaining wall is not yet finished.</p> <p>When we bought the land in 2018 the land was already denuded by most of the native vegetation. Please see photo submitted by Mr. Oosterbaan.</p> <p>Pre construction we removed only 13 non significant or restricted trees in order to comply with CFS requirements for fire protection.</p>

Appendix AE - Photo submitted by Mr. Oosterbaan.png





The wall is constructed from bright yellow/white quartzite which is especially visually obtrusive in the afternoon Sun (West facing). As demonstrated in the photos the colours do not blend in with the natural character.

The new wall design is not stepped, instead being a very steep 1:2 batter single tier design which cannot practically be landscaped. It cannot be effectively screened due to the close proximity of the HV power line overhead.

Please see photo below, which shows the retaining wall in the afternoon sun. We choose the Stonyfell rocks because of its colour and because it's from the foothills of the Adelaide Hills.

The construction of the retaining wall is not yet finished.

The majority of the the retaining wall is not affected by the proximity of the overhead HV powerlines because it's out of the easement and safety zone of the HV overhead power line.

Appendix C - Rock retaining wall bathed in afternoon sun.jpg



As comparison the face of the cut at the easter side of the building site, see Appendix B - Color of refusal clay sand layer.jpg



<p>The new section of retaining wall at the NW end of the 39/43 boundary (inside Easement A) fails to specify a construction type. The scale would suggest it being around 400mm wide but this is not achievable for the rock retaining wall design specified (see image 6).</p>	<p>Construction will be done to the engineering advise. The retaining wall is not finished.</p>
<p>The wall design is predominantly presented in 2D plan view which seems lacking in detail for a large 3D structure critical to the success of the project. It would appear that a similar lack of detail in the original plans contributed to the developer's current predicament. We cannot allow that to occur again.</p>	<p>All relevant information are produced and submitted in accordance to council requirements.</p>
<p>Elevation C shows an image of a mild 3-tiered retaining wall which is outdated and misleading as it relates to the original scheme. The walls in the new plans are single tier, battered up to 55°.</p>	<p>The drawings have updated to a single tiered wall.</p>
<p>Elevations A (North) and Elevation C (South) locate the property boundaries on the high side of the property but fail to locate the boundary on the low side 39/43 boundary, nor is the batter angle specified. Thus, it is unclear how the retaining wall will affect the stability of the land in 43 Emmett Road.</p>	<p>The wall is engineered and constructed to the latest engineering recommendation. The report on the retaining wall and global stability analysis outline no negative affect on adjoining properties.</p>
<p>Section XX depicts a batter angle on the low side of the property around 50 degrees. The Rock Retaining Wall drawing specifies a batter angle of 1:2 (55°). The as-built wall measures 65° in places. Is the developer seeking to have the plans approved or to have the as-built wall approved?</p>	<p>The representation is made about the Harvan design drawings. Please see: Appendix Z - 39 EMMETT 19-02680 WKDGS revK Updated.pdf.</p> <p>The Harvan design drawings are draftsmen/ architectural drawings. The engineering drawings overwrite the draftsmen/ architectural drawings.</p>

<p>No location is specified for a 'septic tank' and runoff which would seem to be a key consideration in a such a development.</p>	<p>Not part of the variation application it is part of DA 19/580/473</p>
<p>Due to these ambiguities, it is unclear how the developer could provide clear instructions to a contractor to build the wall, and it is difficult to see how compliance to plan could be assessed. As mentioned above there needs to be precision with these plans and something that can actually be built upon the ground and sympathetic to the natural character.</p>	<p>The plans provide clear instructions for a professional company in order to construct the retaining wall in accordance to structural engineering and geotechnical engineering recommendations.</p>
<p>The drawings supplied by the replacement engineer "EDGE Consulting" (Gold Coast, Queensland) provide for rock walls up to 3000mm high. The application is generally vague on the maximum wall height required. At the highest point of the wall where the 39/43 boundary intersects the Line of Easement A, I make the original elevation to be 102.8m and the CUT is 108.85, a difference of 6m (see below). The ROCK RETAINING WALL drawing however only provides for a maximum height of 3000mm which is clearly far short of 6m. The red coloured NOTE regarding 6m high walls refers to INTERNAL corners. The highest point on the wall is an EXTERNAL corner. This gives me great reason for concern because of what has happened in the past as the 55° batter cannot be supported naturally.</p>	<p>The retaining wall is engineered and constructed to the latest engineering recommendation and documentation.</p> <p>The report on the retaining wall and global stability analysis outline no negative affect on the construction or neighbours properties.</p> <p>The retaining wall will be inspected and certified for its longevity and safety.</p>
<p>Climbing on such a wall would represent an ongoing OH&amp;S issue</p>	<p>The wall is not for climbing. OH&amp;S has been addressed by WorksafeSA and recommendations have been implemented.</p>

<p>The voids between rocks are so large that any top soil added would wash away</p>	<p>The retaining wall is not yet completed and landscaped. It will be finished to engineering and professional advise.</p>
<p>It is not practical to climb on the wall to perform landscaping, planting, watering, pruning, etc.</p>	<p>The retaining wall is not for climbing. OH&amp;S has been addressed by WorksafeSA and recommendations have been implemented. Low maintenance, drought tolerant and ground cover plants will be established, as recommended by the Belair National park nursery</p>
<p>The rationale provided for amending the approved plans is essentially that the house would not fit within the confines of the wall and thus the walls need to be steeper. With proper engineering and construction supervision I would expect the wall could be built as per the original plans, i.e., if the original plans were properly considered engineering and the wall was built in compliance with the approved plans then this amendment would not be required. If that means some of the work has to be re-done, so be it. The original scheme is preferable particularly from both a height and gradient perspective.</p>	<p>The previous retaining wall design was not achievable. The 3 tiered retaining wall would have taken too much space up and there would be no space to build the residence.</p> <p>The original 3 tiered is as wall problematic solution due to fire danger. 2 steps will collect amber during a bush fire and a treat for the home on top.</p>
<p>As constructed, it has an unacceptable impact on the amenity due to its extraordinary height, length and batter angle, the highly reflective colour of the rocks used which colour is not natural to the area, thus the resulting jarring visual impact on the hills face zone landscape.</p>	<p>Irregardless of the angle of the wall or if it is a 3 tiered or one tiered, the height of the wall remains 6 metres. The colour of the rock would have been the same regardless. The rock was sourced from Stonyfell quarry which is located less than 7 kilometres airline distance from the construction site.</p>
<p>The height of the wall and depth of fill far exceeds the Hills Face Zone planning code provisions.</p>	<p>The approved development: (Development Number 19/580/473) was non compliant with a public notification period and approved the cut and fill outlined in the approved drawings.</p>

<p>I ask for the following:</p> <p>1) The wall height to be reduced to 2m with a maximum batter angle of 2:1</p> <p>2) The wall to be reconstructed/ remediated in a manner that will make it safe and stable in the long term</p>	<p>1) If the retaining wall is only 2 metres to the north west side, it would mean a 8 metres cut on the south east side.</p> <p>2) The retaining wall is currently incomplete and when completed it will be safe and stable.</p> <p>A three tiered retaining wall will not allow space to build the single story dwelling</p>
<p>Attachment 2 Diagram of some of the rocks that escaped the wall during construction.</p>	<p>This is not relevant to the variation application.</p> <p>The rocks did not escaped the wall during construction!</p> <p><b>The rocks escaped the excavators hydraulic claw while placing the rocks.</b></p>