NOTICE OF PROPOSED DEVELOPMENT

Notice is hereby given that an application has been made for planning approval for the following development:

SITE: 3 Linden Road, Primrose Sands

PROPOSED DEVELOPMENT:
DWELLING

The relevant plans and documents can be inspected at the Council Offices at 47 Cole Street, Sorell during normal office hours, or the plans may be viewed on Council's website at www.sorell.tas.gov.au until **Tuesday 28th January 2025.**

Any person may make representation in relation to the proposal by letter or electronic mail (sorell.council@sorell.tas.gov.au) addressed to the General Manager. Representations must be received no later than **Tuesday 28th January 2025.**

APPLICANT: **Woolcott Land Services**

APPLICATION NO: **DA 2024 / 322 - 1**
DATE: **09 January 2025**

Part B: Please note that Part B of this form is publicly exhibited.

Full description of Proposal:	*Use:* Residential *Development:* Single dwelling *Large or complex proposals should be described in a letter or planning report.*
Design and construction cost of proposal:	$ 612,936

Is all, or some the work already constructed:	No: ☐ Yes: ☑

Location of proposed works:	Street address: 3 Linden Road Suburb: Primrose Sands Postcode: 7173 Certificate of Title(s) Volume: 65386 Folio: 71

Current Use of Site	residential land

Current Owner/s:	Name(s) Darrren John Cundy and Warrick Stanley Glynn

Is the Property on the Tasmanian Heritage Register?	No: ☑ Yes: ☐	*If yes, please provide written advice from Heritage Tasmania*
Is the proposal to be carried out in more than one stage?	No: ☑ Yes: ☐	*If yes, please clearly describe in plans*
Have any potentially contaminating uses been undertaken on the site?	No: ☑ Yes: ☐	*If yes, please complete the Additional Information for Non-Residential Use*
Is any vegetation proposed to be removed?	No: ☑ Yes: ☐	*If yes, please ensure plans clearly show area to be impacted*
Does the proposal involve land administered or owned by either the Crown or Council?	No: ☑ Yes: ☐	*If yes, please complete the Council or Crown land section on page 3*

If a new or upgraded vehicular crossing is required from Council to the front boundary please complete the Vehicular Crossing (and Associated Works) application form
https://www.sorell.tas.gov.au/services/engineering/

Part B continued: Please note that Part B of this form is publicly exhibited

Declarations and acknowledgements
• I/we confirm that the application does not contradict any easement, covenant or restriction specified in the Certificate of Title, Schedule of Easements or Part 5 Agreement for the land. • I/we consent to Council employees or consultants entering the site and have arranged permission and/or access for Council's representatives to enter the land at any time during normal business hours. • I/we authorise the provision of a copy of any documents relating to this application to any person for the purposes of assessment or public consultation and have permission of the copyright owner for such copies. • I/we declare that, in accordance with s52(1) of the *Land Use Planning and Approvals Act 1993*, that I have notified the owner(s) of the intention to make this application. • I/we declare that the information in this application is true and correct. *Details of how the Council manages personal information and how you can request access or corrections to it is outlined in Council's Privacy Policy available on the Council website.*
• I/we acknowledge that the documentation submitted in support of my application will become a public record held by Council and may be reproduced by Council in both electronic and hard copy format in order to facilitate the assessment process, for display purposes during public exhibition, and to fulfil its statutory obligations. I further acknowledge that following determination of my application, Council will store documentation relating to my application in electronic format only.
• Where the General Manager's consent is also required under s.14 of the *Urban Drainage Act 2013*, by making this application I/we also apply for that consent.

Applicant Signature:	Signature: ..... Date: 29 November 2024

Crown or General Manager Land Owner Consent
If the land that is the subject of this application is owned or administered by either the Crown or Sorell Council, the consent of the relevant Minister or the Council General Manager whichever is applicable, must be included here. This consent should be completed and signed by either the General Manager, the Minister, or a delegate (as specified in s52 (1D-1G) of the *Land Use Planning and Approvals Act 1993*). Please note: • If General Manager consent if required, please first complete the General Manager consent application form available on our website www.sorell.tas.gov.au • If the application involves Crown land you will also need a letter of consent. • Any consent is for the purposes of making this application only and is not consent to undertaken work or take any other action with respect to the proposed use or development.
I _____ being responsible for the administration of land at _____ declare that I have given permission for the making of this application for _____ Sorell Council Development Application: 5.2024.322.1 - Development Application - 3 Linden Road, Primrose Sands - P1.pdf Plans Reference:P1 Date Received: 29/11/2024

Signature of General Manager, Minister or Delegate:	Signature: ..... Date: .....

strata
geoscience and environmental

Onsite Wastewater System Design

3 Linden Road
Primrose Sands

July 2024

Important Notes:

The author, Strata Geoscience and Environmental, gives permission for this report to be copied and distributed to interested parties only if it is reproduced in colour and in full including all appendicies. No responsibility is taken for the contents and recommendations of this report if it is not reproduced as requested.

Strata Geoscience and Environmental reserves the right to submit this report the relevant regulatory agencies where it has a responsibility to do so.

1. Introduction

Strata Geoscience and Environmental Pty Ltd was commissioned to conduct an onsite wastewater system design for:

	Client and Site Details
Client Name	Tasbuilt
Site Address	3 Linden Road Primrose Sands
Proposed Development	New system for new dwelling

The investigation was conducted with reference to Australian Standards AS1547-2012 Onsite Domestic Wastewater Management and also follows the principles outlined in AS1726-1993 Geotechnical Site Investigations.

2. Summary of Site and Soil Evaluation and Design Outcomes

The investigation's key findings were:

	SSE and Design Outcomes
General Comments	Site suitable for disposal of secondary treatment
Key Site and Soil Limitations to System Design	• Shallow soils • Surface waters • Slope • Rocky shallow profiles
Summary of Proposed System Specification	Primary Treatment: AWTS Secondary Treatment: AWTS Land Application: Subsurface Irrigation

3. Investigation

Please refer to Appendix 3 for Site and Soil Evaluation results.

4. Interpretation

The site is situated on a moderate slope underlain by inferred rocky shallow clays derived from Jurassic Dolerite.

With respect to the sustainability of long term disposal of wastewater within the site boundaries the following comments are made:

Soils – Natural soils will have a low permeability for the acceptance of wastewater flows and will show a high cation exchange complex for the absorption of nutrients from effluent

Environmental Sensitivities – The development area is moderately sloping with nearest surface water body located approximately 50+ m downslope of the dwelling. Groundwater was not intersected throughout geotechnical investigation and is anticipated to be several meters beneath the existing ground surface however it may flow over clayey subsoils as a perched watertable throughout wet periods.

Climate - the nearest weather station with long term data is Dodgers Ferry Station with a mean annual rainfall of 512 mm (BOM 2024) and no evaporation data.

Title Searches – Searches of the Land Title did not show any easements or right of ways which would affect the positioning of the wastewater land application system.

Given the above, the general environmental and public health risk associated with the site is regarded as low provided adequate setback distances and other controls are adopted.

5. Onsite Wastewater System Design

5.1 Site and Soil Considerations

Results of the SSE (Appendix 3) found the following typical soil profile on site:

	Topsoils (A1-A3)	Subsoils (B1-B3)
Description	CLAYEY SILT (ML)	Silty CLAY (CL)
Soil Category (AS1547-5882)	1	5
Indicative Permeability (m/d)	1.5-2.0	0.1-0.5
Recommended DIR (mm/d)/DLR (L/D)	5/40	3 /12
pH	6.1	5.8
EC	2.2	4.2
Emmerson Class	8	5

5.2 Risk Management of Site and Soil Constraints

Risk identification and reduction measures compliant with AS1547 – 2012 Clause A3.2 is presented below:

Risk	Factors that Increase Risk Likelihood	Design Risk Reduction Measures
Hydraulic Overloading of System	• Under scaled system • Prolonged overuse • Leaking taps • Shock Loading • Excessive solid disposal	• Scale to peak potential loading • Use Conservative DLR/DIR • Use water conservation practices eg water reduction fixtures
Biological Failure	• Overuse of household chemicals • Shock loading	• Limit detergents and bleach use where practical • System not fit for sinkerator installation
Marginal Soil Conditions	• Dispersive soils • Poor aspect/drainage	• Treat with gypsum, manage sodium inputs
Site Constraints	• Rocky shallow clays • Slope • Proximal sensitive receivers	• Irrigation • Irrigation on flatter areas where possible • secondary treatment, subsurface irrigation, maintain maximum available setback

Risk	Factors that Increase Risk Likelihood	Design Risk Reduction Measures
High Rainfall/Torrential Rainfall	• Inappropriate LAA Scaling • Stormwater impacts	• Use suitable hydraulic scaling • Stormwater Diversion around LAA if required
Clogged Outlet Filter	• Overloading • Infrequent cleaning	• Clean monthly
Pipe Blockages	• Overloading • Infrequent de-sludging	• Reduce solids inflows • De-sludge septic max 3 year intervals • Check IO's regularly
Sludge transport to LAA	• Infrequent de-sludging • Clogged outlet filter • High organic loading	• De-sludge septic max 3 year intervals • Clean filter monthly • No sinkerator installation
Broken pipes in LAA	• Stock/vehicles	• Exclude stock/vehicles

5.3 Proposed Wastewater System Concept Design

It is therefore recommended that the following system be adopted:

Treatment Train Component	Proposed Concept Design
Primary Treatment	• AWTS
Secondary Treatment	• AWTS
LAA Design	• SUBSURACE IRRIGATION

5.4 Effluent Flow and Land Application Area Modelling

The development proposal is for the construction of a new wastewater system to service the proposed 3 bedroom equivalent house on tank water with standard water savings fixtures. Therefore under AS1547-2012 the calculated effluent flows and required disposal area is as follows:

Wastewater System Modelling	
Number of Proposed Bedrooms	3
Number of Equivalent Persons	5
Water Source (Tank/Mains)	Tank
Daily Loading (L/per person/D)	120
Total Daily Loading (L/D)	600
Adopted Soil Category (AS1547-5882)	5
Indicative Permeability (m/d)	0.3
Adopted DLR/DIR (mm/d OR L/m^2/d)	3
Required LAA (m^2)	200

The absorption area could be catered for by 200 m^2 subsurface Irrigation installed as shown on the site plan with adequate room for a 100% reserve if required (see Appendix 2). Refer to Appendix 2/3 for more detailed calculations as well as specific design and construction notes.

5.5 System Specifications

The system has the following specification (see Appendix 3 for further details):

- Min DN100 gravity fed sewer pipe
- Min 1200 L/day treatment capacity AWTS
- Min 200 m^2 Subsurface Irrigation
- Provision for 100% reserve area (must remain free from development)

5.6 Management Requirements

It is imperative that regular servicing of the treatment unit compliant with the prescriptions of the manufacturer and Council permit occur.

To ensure that the treatment system functions adequately and provides effective treatment and disposal of effluent over its design life, asset owners have the following responsibilities:

- Suitably qualified maintenance contractors must be engaged to service the system, as required by Council under the approval to operate.
- Keep as much fat and oil out of the system as possible; and
- Conserve water.

Minimum servicing schedule:

Treatment Train Component	Service Interval
AWTS	• INSPECT AND SERVICE QUARTERLY, MAINTAIN RECORDS

To ensure that the land application area (LAA) functions adequately and provides effective treatment and disposal of effluent over its design life, asset owners have the following responsibilities:

- LAA should be checked regularly to ensure that effluent is draining freely, including flushing of lines and cleaning of inline filters.
- All vehicles, livestock and large trees should be excluded from around the irrigation area.
- Low sodium/phosphorous based detergents should be used to increase the service life of irrigation area.

- Regularly harvest (mow) vegetation within the LAA and remove this to maximise uptake of water and nutrients;
- Not to erect any structures over the LAA;
- Ensure that the LAA is kept level by filling any depressions with good quality topsoil (not clay).

Excessive surface dampness, smell or growth of vegetation around the LAA may indicate sub-optimal performance and professional advice should be sort.

5.7 Compliance Requirements

The setbacks as indicated on the site plan conform with Acceptable Solutions or Performance Criteria for setback distance outlined in the Tasmanian Building Code 2016.

Acceptable Solutions	Performance Criteria	Compliance
A1 Horizontal separation distance from a building to a land application area must comply with one of the following: a. be no less than 6m: b. be no less than: (i) 2m from an upslope or level building. (ii) If primary treated effluent to be no less than 4m plus 1m for every degree of average gradient from a downslope building (iii) If secondary treatment and subsurface application, no less than 2m plus 0.25m for every degree of average gradient from a downslope building	P1 a. The land application area is located so that the risk of wastewater reducing the bearing capacity of the buildings foundations is acceptably low	Complies with b(i)
A2 Horizontal separation distance from downslope water to a land application area must comply with (a) or (b). a) be no less than 100m b) be no less than the following: i) If primary treated effluent to be no less than 15m plus 7m for every degree of average gradient from a downslope surface water, or; ii) if secondary treatment and subsurface application, no less than 15m plus 2 m for every degree of average gradient from a downslope surface water	P2 Horizontal separation distance from downslope water to a land application area must comply with all of the following: a) Setbacks must be consistent with AS/NZS 1547 Appendix R b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable	Complies with A2 (bii)
A3 Horizontal separation distance from a property boundary to a land application area must comply with either of the following:	P3 Horizontal separation distance from the boundary to a land application area must comply with all of the following:	Complies with A3 (B) (I and III)

a) be no less than 40m from a property boundary b) be no less than (i) 1.5m from an upslope or level property (ii) if primary treated effluent 2m fo downslope property boundary; or (iii) if secondary treated effluent and every degree of average gradient	a) Setbacks must be consistent with AS/NZS 1547 Appendix R, and b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable	
A4 Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must be no less than 50m and not be within the zone of influence of the bore whether up or down gradient	P4 Horizontal separation distance from a downslope bore to a land application area must comply with all of the following: a) Setbacks must be consistent with AS/NZS 1547 Appendix R, and b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable	Complies with A4
A5 Vertical separation distance between groundwater and a land application area must be no less than1.5m	P5 Vertical separation distance between groundwater to a land application area must comply with all of the following: a) Setbacks must be consistent with AS/NZS 1547 Appendix R, and b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable	Complies with A5
A6 Vertical separation distance between a limiting layer and a land application area must be no less than 1.5m	P6 Vertical setback must be consistent with AS/NZS 1547 Appendix R,	Complies with A6
A7 The arrangement of a land application area must comply with both of the following: (a) not include areas beneath buildings, driv (b) have a minimum horizontal dimension of	P7 No performance criteria	Complies with A7(a/b)

6. Conclusions and Further Recommendations

In conclusion the following comments and recommendations are made:

- The maximum wastewater flow rate (MWWF) modelling conducted in this report shows that the generated flows are likely to be no more than 600 L/day.

- That such flows will require a land application area (LAA) comprising one 200 m^2 Subsurface Irrigation.

- It is likely that peak flows associated with the development should be within the buffering capacity of the system both in terms of the system sizing as well as for their acceptance into the disposal area.

- If the hydraulic capacity of soils underlying disposal areas is exceeded by effluent water flows, the disposal area has the capacity to be increased by up to 100%.

- **If the prescriptions of this report are followed the likely human and environmental health risks associated with effluent disposal onsite is rated as low.**

S Nielsen MEngSc CPSS
Director
Strata Geoscience and Environmental Pty Ltd
E:sven@strataconsulting.com.au

7. References

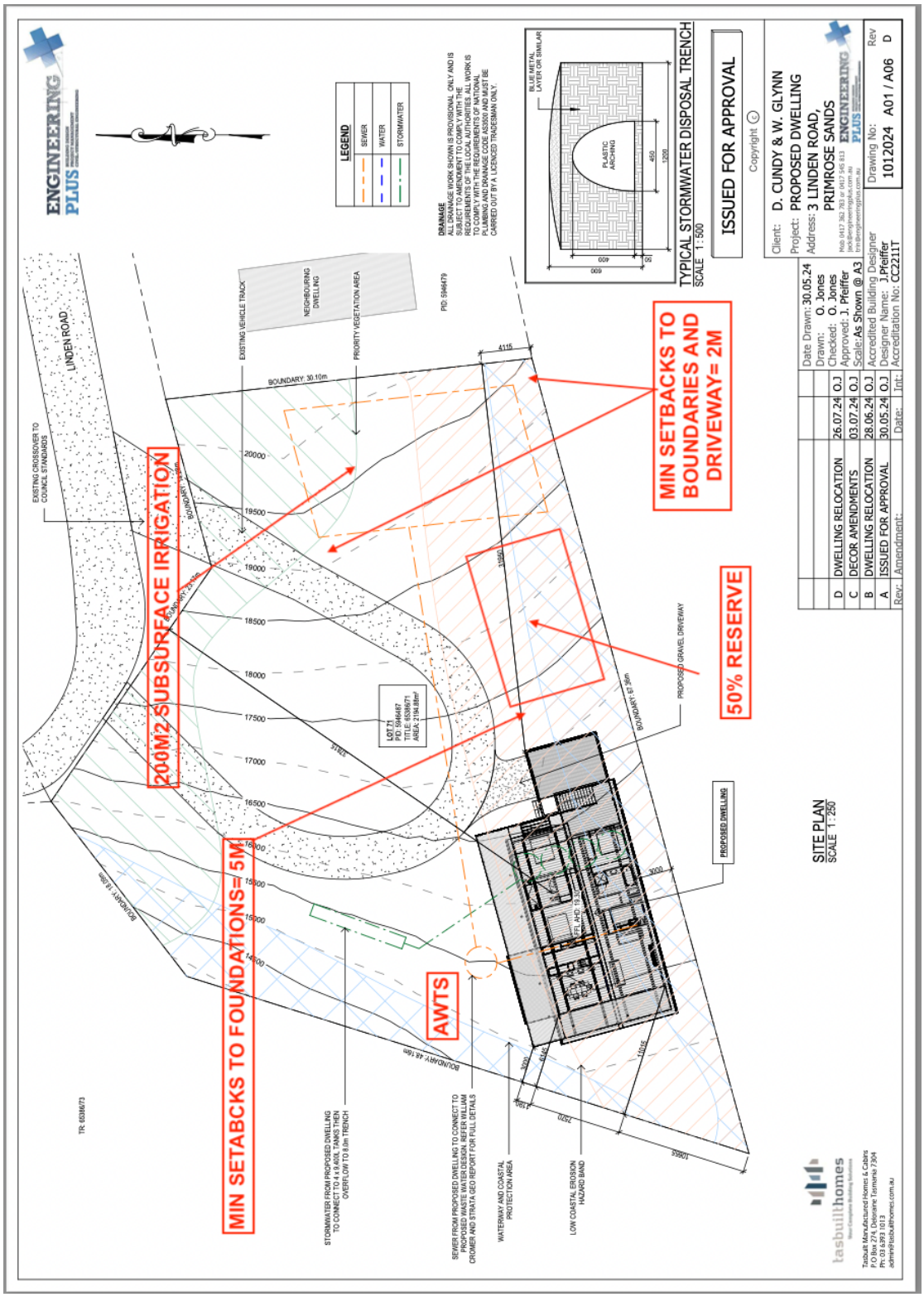
- AS1726-1993- Geotechnical Site Investigations
- AS1547-2012 Onsite Domestic Wastewater Management
- Bureau of Meteorology Website- Monthly Climate Statistics

Appendix 1 Wastewater Loading Certificate

Wastewater Loading Certificate*	
System Capacity	5EP at 120L/person/day = 600L/D
Design Summary	
• Effluent Quality	Secondary
• Adopted Soil category	5
• Amended Adopted Soil Category	Not amended
• Adopted DLR/DIR (mm/d OR L/m^2/d)	3
• LAA Design	Irrigation
• Primary LAA Requirement	200m^2
• Reserve Area	Min 100% reserve LAA must be maintained in an undeveloped state near the primary system as identified on the site plan
Fixtures	Assumes std water saving fixtures inc 6/3L dual flush toilets, aerator forcets, Washing/dishwashing machines with min WELSS rating 4.5 star
Consequences of Variation in Effluent Flows	
• High Flows	The system should be capable of buffering against flows of up to 10 % in a 24 hr period or 5% over a 7 day period. System not rated for spa installation.
• Low Flows	Should not affect system performance
Consequences of Variation in Effluent Quality	Residence to avoid the installation of sink disposal systems (eg “sinkerators”), or the addition of large amounts of household cleaning products or other solvents. These can overload system BOD or affect effluent treatment by system biota.
Consequences of Lack of Maintenance and Monitoring Attention	Owners should maintain the system in compliance with systems Home Owners Manual and council permit. All livestock, vehicles and persons to be excluded from the LAA. Failure to ensure the above may lead to infection of waterways, bores or the spread of disease, as well as production of foul odours, attraction of pests and excessive weed growth.

***** In accordance with Clause 7.4.2(d) of AS/NZS 1547-2012.

Appendix 2 Land Application Design Plans and Construction Notes



Irrigation Design (1:20)

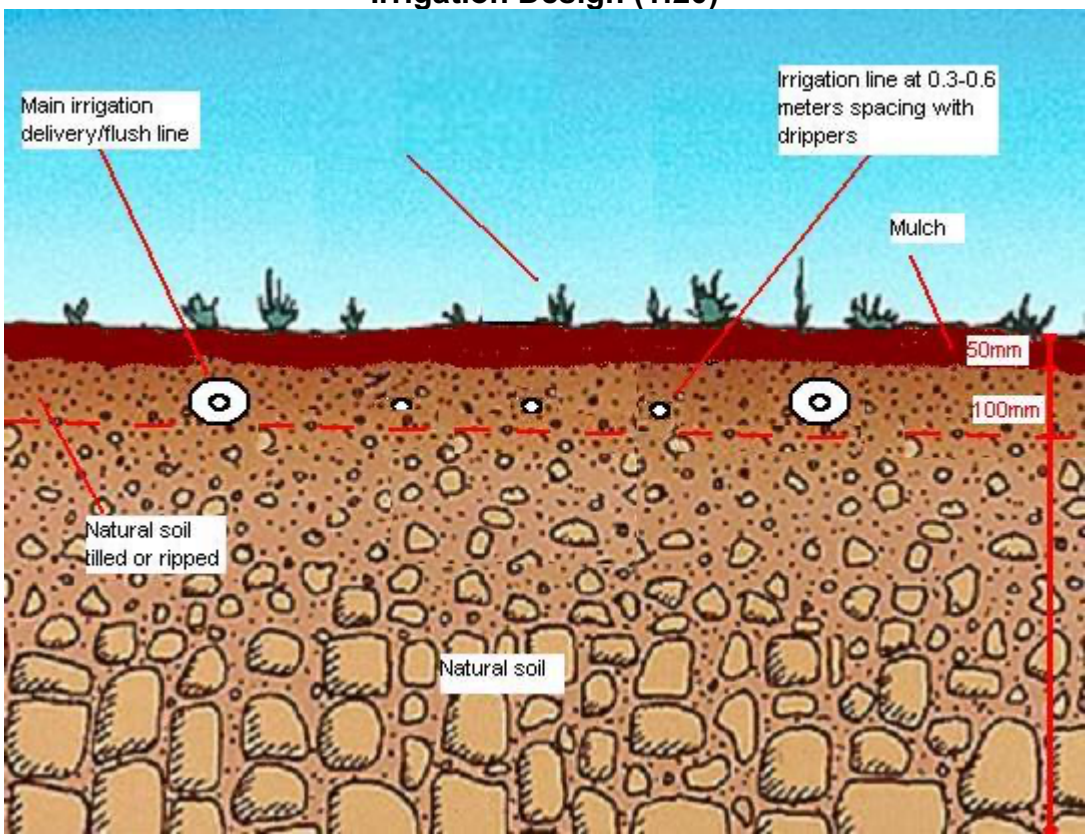


Figure 1 Irrigation cross section showing major delivery/flush lines and irrigation lines

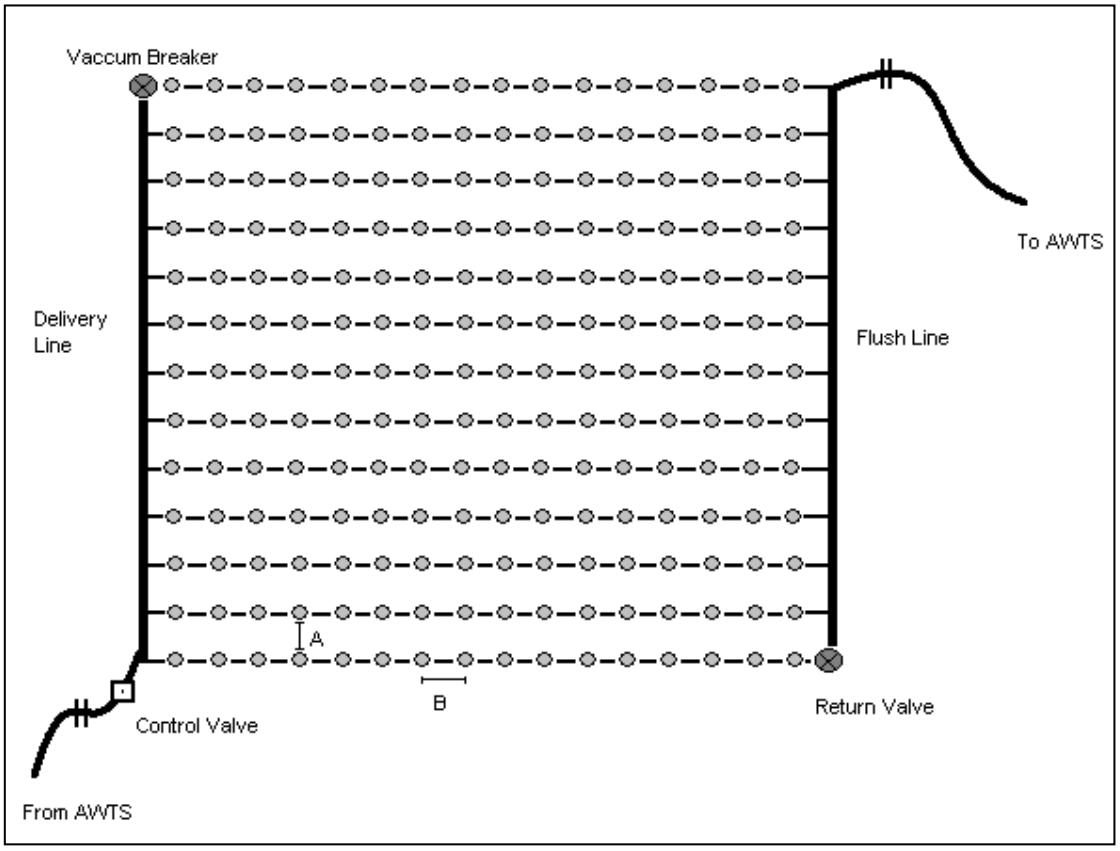


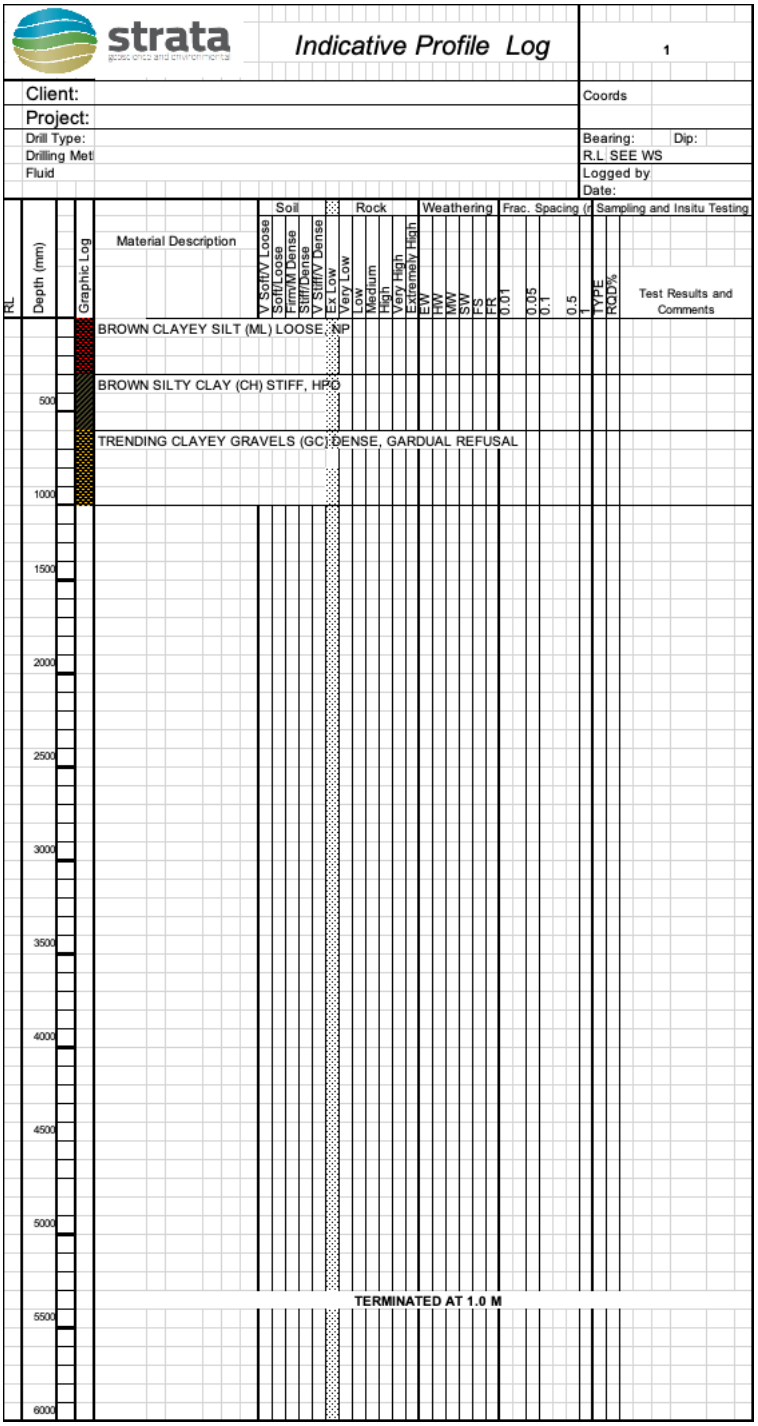
Figure 2 Irrigation Plan View

Land Application Area Design and Construction Notes

1. Delivery/flush line diameter = 25 -30 mm
2. Irrigation line diameter = 12-16mm
3. Irrigation line spacing (A) =300 mm for Sands, Sandy Loams and Loams to 600mm for Clay Loams, Light Clays and Heavy Clays (see the wastewater flow modelling section of this report for soil classification).
4. Dripper/Sprinkler spacing (B) as per manufacturers specifications.
5. A vacuum breaker should be installed at the highest point of the irrigation area (or in the case of multiple irrigation lots at each lot). This breaker should be protected and marked).
6. A flush line should be installed at the lowest point of the irrigation area incorporating a return valve for back flushing of the system back into the treatment chamber.
7. **All lateral lines MUST be installed parallel to the contours of the land. All minimum setbacks MUST be adhered to.**
8. An inline filter must be inserted into the delivery line.
9. The first 100mm of the natural soil below the ground surface should be mechanically tilled to aid line installation and soil permeability
10. Gypsum should be incorporated at the rate of 1kg/5m^2 in dispersive soils.
11. Imported topsoil (not clay) should be applied as shown above.
12. Irrigation areas greater than 400 m^2 should be split into 100 m^2 cells with effluent flows switched between irrigation lots with an automatic valve system.
13. Where practical a 50% reserve area should be identified on the site to allow movement of the irrigation area if required.
14. In areas of moderate to steep slopes (>10%) then upslope cut off drainage should be installed to minimise shallow ground water recharge of the irrigation area from upslope.
15. All livestock and Vehicles MUST be excluded from irrigation area.

Appendix 3 Site and Soil Evaluation

Site and Soil Evaluation with Reference to AS1547 Table D1 Appendix D1	
Site Factor	**Result**
Slope (over proposed system/LAA)	Approximately 5 degrees
Shape	Planar
Aspect	W
Exposure	Moderate exposure to both sun and wind
Erosion, mass movements landslip	No evidence of erosion, mass movement or landslip
Boulders/Rock Outcrops	None observed
Vegetation	Grass, weeds, trees
Watercourse	See site plans >50m from LAA.
Soil Water Regime	Perched water possible in flatter areas. Upslope interceptor drain to mitigate shallow groundwater impacts. Depth to permanent groundwater >10m
Fill	None observed
Run-on/Flooding	Not anticipated over the development area or LAA. Upslope interceptor to capture any surface, near surface flows.
Channeled Runoff	No concentrated runoff over proposed LAA. See storm water management plan (or similar) for details of onsite storm water management.
Soil Surface Condition	Grass/weeds
Salinity	No saline tolerant species, salt scald or bare earth observed.
Other Site and Soil Factors	Adequate slope to ensure gravity dosing of both tank and LAA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Indicative Profile Log
1
Client:
Project:
Drill Type:
Drilling Meth
Fluid
Coords
Bearing:
Dip:
R.L SEE WS
Logged by
Date:
RL
Depth (mm)
Graphic Log
Material Description
Soil
V Soft/V Loose
Soft/Loose
Firm/M Dense
Stiff/Dense
V Stiff/V Dense
Rock
Ex Low
Very Low
Low
Medium
High
Very High
Extremely High
Weathering
EW
HW
MW
SW
FS
FR
Frac. Spacing (m
0.01
0.05
0.1
0.5
1
Sampling and Insitu Testing
TYPE
RQD%
Test Results and Comments
BROWN CLAYEY SILT (ML) LOOSE, NP
BROWN SILTY CLAY (CH) STIFF, HPC
TRENDING CLAYEY GRAVELS (GC) DENSE, GARDUAL REFUSAL
TERMINATED AT 1.0 M
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000

Appendix 4 Form 35 and System Accreditation Certificate

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

Form **35**

To: TASBUILT *Owner name*

Address

Suburb/postcode

Designer details:

Name: S NIELSEN

Category: HYDRAULIC SERVICES

Business name: STRATA GEOSCIENCE AND ENVIRONMNETAL P/L

Phone No: 0419545358

Business address: 72-74 LAMBECK DRIVE

TULLAMARINE 3043

Fax No:

Licence No: CC6119K Email address: sven@strataconsulting.com.au

Details of the proposed work:

Owner/Applicant As above

Designer's project reference No. SR05637

Address: 3 LINDEN ROAD

Lot No:

PRIMROSE SANDS

Type of work: Building work ☐ Plumbing work ☒ *(X all applicable)*

Description of work:

WASTEWATER SYSTEM SPECIFICATION

(new building / alteration / addition / repair / removal / re-erection water / sewerage / stormwater / on-site wastewater management system / backflow prevention / other)

Description of the Design Work (Scope, limitations or exclusions): *(X all applicable certificates)*

Certificate Type:	Certificate	Responsible Practitioner
	☐ Building design	Architect or Building Designer
	☐ Structural design	Engineer or Civil Designer
	☐ Fire Safety design	Fire Engineer
	☐ Civil design	Civil Engineer or Civil Designer
	☒ Hydraulic design	Building Services Designer
	☐ Fire service design	Building Services Designer
	☐ Electrical design	Building Services Designer
	☐ Mechanical design	Building Service Designer

	☐ Plumbing design	Plumber-Certifier; Architect, Building Designer or Engineer
	☐ Other (specify)	
Deemed-to-Satisfy: ☐X	Performance Solution: ☐ (*X the appropriate box*)	
Other details:		

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers:	Prepared by:	Date:
Schedules:	Prepared by:	Date
Specifications:	Prepared by: SN	Date29/7/24
Computations	Prepared by: SN	Date 29/7/24
Performance solution proposals:	Prepared by:	Date:
Test reports:	Prepared by:	Date

Standards, codes or guidelines relied on in design process:

AS1547-2012

Any other relevant documentation:

Attribution as designer:

I SVEN NIESLEN..... am responsible for the design of that part of the work as described in this certificate;

The documentation relating to the design includes sufficient information for the assessment of the work in accordance with the *Building Act 2016* and sufficient detail for the builder or plumber to carry out the work i accordance with the documents and the Act;

This certificate confirms compliance and is evidence of suitability of this design with the requirements of the National Construction Code.

Name: (print)SVEN NIELSEN *SN*

Designer:	SVEN NIELSEN		29/7/24

Licence No: CC6119K

Assessment of Certifiable Works: (TasWater)

Note: single residential dwellings and outbuildings on a lot with an existing sewer connection are not considered to increase demand and are not certifiable.

If you cannot check ALL of these boxes, LEAVE THIS SECTION BLANK.

TasWater must then be contacted to determine if the proposed works are Certifiable Works.

I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

- [X] The works will not increase the demand for water supplied by TasWater
- [X] The works will not increase or decrease the amount of sewage or toxins that is to be removed by, or discharged into, TasWater's sewerage infrastructure
- [X] The works will not require a new connection, or a modification to an existing connection, to be made to TasWater's infrastructure
- [X] The works will not damage or interfere with TasWater's works
- [X] The works will not adversely affect TasWater's operations
- [X] The work are not within 2m of TasWater's infrastructure and are outside any TasWater easement
- [X] I have checked the LISTMap to confirm the location of TasWater infrastructure
- [X] If the property is connected to TasWater's water system, a water meter is in place, or has been applied for to TasWater.

Certification:

I .....SVEN NIELSEN..... being responsible for the proposed work, am satisfied that the works described above are not Certifiable Works, as defined within the *Water and Sewerage Industry Act 2008,* that I have answered the above questions with all due diligence and have read and understood the Guidelines for TasWater CCW Assessments.

Note: the Guidelines for TasWater Certification of Certifiable Works Assessments are available at: www.taswater.com.au

	Name: (print)	*Signed*	*Date*
Designer:	SVEN NIELSEN		Date: 29/7/24

Tasmanian Government

Certificate of Accreditation

On-Site Wastewater Management System

This Certificate of Accreditation is hereby issued by the Director of Building Control pursuant to Section 18(1) of the *Building Act 2016* (accreditation of products).

System:	Taylex® Advanced Blower System 1500 a) Concrete ABS 1500 (10EP) and b) Poly ABS 1500 (10EP)
Manufacturer or Supplier:	Taylex Industries Pty Ltd ACN: 113 453 091
Of:	56 Prairie Rd, Ormeau, QLD 4208

This is to certify that the Taylex® Advanced Blower System as described in Schedule 1, is accredited as an AWTS for use in plumbing installations in Tasmania for single dwellings. This accreditation is subject to the conditions and permitted uses specified in Schedule 2, and the National Construction Code.

Peter John Graham
Director of Building Control
Consumer, Building and Occupational Services
Department of Justice

Date of Issue: 6 November 2020 **Certificate Number:** DOC/20/89089

This Certificate of Accreditation is in force until 6 November 2025, unless withdrawn earlier at the discretion of the Director of Building Control

P: 1300 654 499 | PO Box 56, Rosny Park TAS 7018 | cbos.info@justice.tas.gov.au | www.cbos.tas.gov.au

Appendix 5 Terms and Conditions

Scope of Work
These Terms and Conditions apply to any services provided to you ("the Client") by Strata Geoscience and Environmental Pty Ltd ("Strata"). By continuing to instruct Strata to act after receiving the Terms and Conditions or by using this report and its findings for design and/or permit application processes and not objecting to any of the Terms and Conditions the Client agrees to be bound by these Terms and Conditions, and any other terms and conditions supplied by Strata from time to time at Strata's sole and absolute discretion. The scope of the services provided to the Client by Strata is limited to the services and specified purpose agreed between Strata and the Client and set out in the correspondence to which this document is enclosed or annexed ("the Services"). Strata does not purport to advise beyond the Services.

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Provision of Information
The Client is responsible for the provision of all legal, survey and other particulars concerning the site on which Strata is providing the Services, including particulars of existing structures and services and features for the site and for adjoining sites and structures. The Client is also responsible for the provision of specialised services not provided by Strata. If Strata obtains these particulars or specialised services on the instruction of the Client, Strata does so as agent of the Client and at the Client's expense. Strata is not obliged to confirm the accuracy and completeness of information supplied by the Client or any third party service provider. The Client is responsible for the accuracy and completeness of all particulars or services provided by the Client or obtained on the Client's behalf. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever suffered by the Client or any other person or entity resulting from the failure of the Client or third party to provide accurate and complete information. In the event additional information becomes available to the Client, the Client must inform Strata in writing of that information as soon as possible. Further advice will be provided at the Client's cost. Any report is prepared on the assumption that the instructions and information supplied to Strata has been provided in good faith and is all of the information relevant to the provision of the Services by Strata. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever if Strata has been supplied with insufficient, incorrect, incomplete, false or misleading information.

Integrity
Any report provided by Strata presents the findings of the site assessment. While all reasonable care is taken when conducting site investigations and reporting to the Client, Strata does not warrant that the information contained in any report is free from errors or omissions. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever resulting from errors in a report. Any report should be read in its entirety, inclusive of any summary and annexures. Strata does not accept any responsibility where part of any report is relied upon without reference to the full report.

Project Specific Criteria
Any report provided by Strata will be prepared on the basis of unique project development plans which apply only to the site that is being investigated. Reports provided by Strata do not apply to any project other than that originally specified by the Client to Strata. The Report must not be used or relied upon if any changes to the project are made. The Client should engage Strata to further advise on the effect of any change to the project. Further advice will be provided at the Client's cost. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever where any change to the project is made without obtaining a further written report from Strata. Changes to the project may include, but are not limited to, changes to the investigated site or neighbouring sites, for instance, variation of the location of proposed building envelopes/footprints, changes to building design which may impact upon building settlement or slope stability, or changes to earthworks, including removal (site cutting) or deposition of sediments or rock from the site.

Classification to AS2870-5881
It must be emphasised that the site classification to AS2870-5881 and recommendations referred to in this report are based solely on the observed soil profile at the time of the investigation for this report and account has been taken of Clause 2.1.1 of AS2870 - 5881. Other abnormal moisture conditions as defined in AS2870 – 5881 Clause 1.3.3 (a) (b) (c) and (d) may need to be considered in the design of the structure. Without designing for the possibility of all abnormal moisture conditions as defined in Clause 1.3.3, distresses will occur and may result in non "acceptable probabilities of serviceability and safety of the building during its design life", as defined in AS2870 - 5881, Clause 1.3.1. Furthermore the classification is preliminary in nature and needs verification at the founding surface inspection phase . The classification may be changed at this time based upon the nature of the founding surface over the entire footprint of the project area. Any costs associated with a change in the site classification are to be incurred by the client. Furthermore any costs associated with delayed works associated with a founding surface inspection or a change in classification are to be borne by the client. Where founding surface inspections are not commissioned the classifications contained within this report are void.

Subsurface Variations with Time
Any report provided by Strata is based upon subsurface conditions encountered at the time of the investigation. Conditions can and do change significantly and unexpectedly over a short period of time. For example groundwater levels may fluctuate over time, affecting latent soil bearing capacity and ex-situ/insitu fill sediments may be placed/removed from the site. Changes to the subsurface conditions that were encountered at the time of the investigation void all recommendations made by Strata in any report. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever resulting from any change to the subsurface conditions that were encountered at the time of the investigation. In the event of a delay in the commencement of a project or if additional information becomes available to the Client about a change in conditions becomes available to the Client, the Client should engage Strata to make a further investigation to ensure that the conditions initially encountered still exist. Further advice will be provided at the Client's cost. Without limiting the generality of the above statement, Strata does not accept liability where any report is relied upon after three months from the date of the report, (unless otherwise provided in the report or required by the Australian Standard which the report purports to comply with), or the date when the Client becomes aware of any change in condition. Any report should be reviewed regularly to ensure that it continues to be accurate and further advice requested from Strata where applicable.

Interpretation
Site investigation identifies subsurface conditions only at the discrete points of geotechnical drilling, and at the time of drilling. All data received from the geotechnical drilling is interpreted to report to the Client about overall site conditions as well as their anticipated impact upon the specific project. Actual site conditions may vary from those inferred to exist as it is virtually impossible to provide a definitive subsurface profile which accounts for all the possible variability inherent in earth materials. This is particularly pertinent to some weathered sedimentary geologies or colluvial/alluvial clast deposits which may show significant variability in depth to refusal over a development area. Rock incongruities such as joints, dips or faults may also result in subsurface variability. Soil depths and composition can vary due to natural and anthopogenic processes. Variability may lead to differences between the design depth of bored/driven piers compared with the actual depth of individual piers constructed onsite. It may also affect the founding depth of conventional strip, pier and beam or slab footings, which may result in increased costs associated with excavation (particularly of rock) or materials costs of foundations. Founding surface inspections should be commissioned by the Client prior to foundation construction to verify the results of initial site characterisation and failure to insure this will void the classifications and recommendations contained within this report. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever resulting from any variation from the site conditions inferred to exist.

Strata is not responsible for the interpretation of site data or report findings by other parties, including parties involved in the design and construction process. The Client must seek advice from Strata about the interpretation of the site data or report.

Report Recommendations
Any report recommendations provided by Strata are only preliminary. A report is based upon the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until earthworks and/or foundation construction is almost complete. Where variations in conditions are encountered, Strata should be engaged to provide further advice. Further advice will be provided at the Client's cost. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever if the results of selective point sampling are not indicative of actual conditions throughout an area or if the Client becomes aware of variations in conditions and does not engage Strata for further advice.

Geo-environmental Considerations
Where onsite wastewater site investigation and land application system designs are provided by Strata, reasonable effort will be made to minimise environmental and public health risks associated with the disposal of effluent within site boundaries with respect to relevant Australian guidelines and industry best practise at the time of investigation. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever resulting from:

(i) changes to either the project or site conditions that affect the onsite wastewater land application system's ability to safely dispose of modelled wastewater flows; or
(ii) seepage, pollution or contamination or the cost of removing, nullifying or clearing up seepage, polluting or contaminating substances; or
(iii) poor system performance where septic tanks have not been de-sludged at maximum intervals of 3 years or AWTS systems have not been serviced in compliance with the manufacturers recommendations; or
(iv) failure of the client to commission both interim and final inspections by the designer throughout the system construction; or
(v) the selection of inappropriate plants for irrigation areas; or
(vi) damage to any infrastructure including but not limited to foundations, walls, driveways and pavements; or
(vii) land instability, soil erosion or dispersion; or
(viii) design changes requested by the Permit Authority.

Furthermore Strata does not guarantee land application area design life beyond 2 years from installation.

Strata does not consider site contamination, unless the Client specifically instructs Strata to consider the site contamination in writing. If a request is made by the Client to consider site contamination, Strata will provide additional terms and conditions that will apply to the engagement.

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If, during the course of providing the Services, Strata develops, discovers or first reduces to practice a concept, product or process which is capable of being patented then such concept, product or process is and remains the property of Strata and:

(i) the Client must not use, infringe or otherwise appropriate the same other than for the purpose of the project without first obtaining the written consent of Strata; and

(ii) the Client is entitled to a royalty free licence to use the same during the life of the works comprising the project.

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If any report is provided to the Client in an electronic copy except directly from Strata, the Client should verify the report contents with Strata to ensure they have not been altered or varied from the report provided by Strata.

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STORMWATER DESIGN REPORT

3 Linden Road Primrose Sands

Exceed Engineering

CLIENT: Tasbuilt Homes
PROJECT: New Residence & Garage
JOB NO: EE962

Date	Purpose of Issue/Nature of Revision	Revision No.	Authorised by
05/07/2024	Issue for Client Review	REV01	SD

This report has been prepared by;
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This Report has been prepared in reliance on data, surveys, analysis, designs, plans and other information provided by the client, and other individuals and organisations referenced herein. Except as otherwise stated in this report, Exceed has not verified the accuracy or completeness of such data, surveys, analysis, designs, plans, and other information. The passage of time, manifestation of latent conditions or impacts of future events may result in the actual contents differing from that described in this report.

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This report does not purport to provide legal advice. Readers should engage professional legal advisers for this purpose.

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Contents

1 Introduction

This report has been prepared to design a stormwater management system for capture and on-site dispersal of stormwater produced at the proposed new dwelling and garage to be constructed at 3 Linden Road Primrose Sands.

The purpose of this report is to investigate, design and report the site stormwater detention and disposal via infiltration, produced from the new residence and garage.

The design provided in this report is in accordance with *Australian Runoff Quality A guide to Water Sensitive Urban Design* (Engineers Australia, 2006) and Water Sensitive Urban Design Engineering procedures for stormwater management in Tasmania (EPA Tas, 2012).

2 Site and development details

2.1 Existing site conditions

The site is a flat residential block of approximately **2,200m²** in area. It is mapped for low coastal erosion hazard on the southern part of the site and coastal protection area on the western side, as shown in **EE962-C101**.

It is proposed to be developed with a new residence and garage. Site is currently vacant, and grass covered.

A site classification was undertaken by W. C. Cromer in November 2018. Texture and thickness of the soil explained as below:

The soil is a weakly duplex (2-layered) profile comprising a topsoil (A1 horizon; Layer 1) of dark clayey silt (CL) between 0.1 – 0.2m thick over a subsoil of high plasticity clay (CH; Layer 2) 0.4 – 0.5m thick.

2.2 Development details

The project involves the construction of a new dwelling and a garage with total roof area of **220 m²**. This design considers the stormwater runoff generated from the new dwelling's and garage's roof areas.

The increase in impervious surfaces from the roofs will concentrate stormwater runoff flows. The proposed detention and infiltration system will be designed to accumulate these stormwater flows at a single point for infiltration into the soil and groundwater.

3 Stormwater design methodology

3.1 Design assumptions

A **20% AEP** storm was used as the basis of the design. This is considered appropriate given the low risk associated with stormwater discharge at the site. A range of storm durations from 5 mins to 72 hrs were assessed to determine the infiltration trench sizing required.

3.2 IFD data

Intensity–Frequency–Duration (IFD) design rainfall intensities were sourced from the Bureau of Meteorology 2016 Design Rainfalls website for the site location. They are as follows (in mm/hr):

	Annual Exceedance Probability (AEP)						
Duration	**63.2%**	**50%#**	**20%***	**10%**	**5%**	**2%**	**1%**
1 min	98.7	112	153	181	209	247	276
2 min	83.3	93.8	128	152	176	209	236
3 min	75.8	85.4	116	138	160	189	212
4 min	70.0	78.9	108	128	148	174	195
5 min	65.2	73.6	100	119	137	162	181
10 min	49.0	55.5	75.9	90.0	104	123	137
15 min	39.8	45.1	61.8	73.4	84.8	100	112
20 min	33.8	38.3	52.6	62.4	72.2	85.5	95.8
25 min	29.7	33.6	46.0	54.7	63.3	74.9	84.1
30 min	26.5	30.0	41.1	48.8	56.5	67.0	75.2
45 min	20.6	23.2	31.7	37.6	43.5	51.6	57.9
1 hour	17.1	19.3	26.2	31.0	35.9	42.5	47.7
1.5 hour	13.2	14.8	20.0	23.6	27.2	32.2	36.0
2 hour	11.1	12.3	16.5	19.4	22.4	26.3	29.4
3 hour	8.61	9.59	12.7	14.8	17.0	19.8	22.1
4.5 hour	6.75	7.49	9.80	11.4	12.9	15.0	16.6
6 hour	5.69	6.30	8.19	9.47	10.7	12.4	13.6
9 hour	4.48	4.95	6.38	7.33	8.25	9.46	10.4
12 hour	3.77	4.16	5.34	6.12	6.86	7.85	8.59
18 hour	2.94	3.24	4.15	4.75	5.31	6.06	6.62
24 hour	2.45	2.70	3.46	3.95	4.41	5.04	5.51
30 hour	2.11	2.33	2.99	3.42	3.82	4.37	4.78
36 hour	1.86	2.06	2.65	3.03	3.39	3.88	4.25
48 hour	1.52	1.68	2.17	2.49	2.79	3.20	3.51
72 hour	1.13	1.25	1.62	1.86	2.09	2.40	2.64

3.3 Design runoff coefficient

The runoff coefficient from the roof was assessed as 1.0.

		Developed	
Category	**Type**	**Area (m2)**	**Coefficient of Runoff**
Impervious Area	Roofed Area	220	1.0
	Asphalt/Concrete Driveway	-	0.9
	Paved and other handstand	-	0.7
	Total site area	**220**	
	Input Check (has to be 0)	-	
	Weighted average runoff coefficient	**1.0**	

3.4 Hydraulic conductivity

Hydraulic conductivity was estimated from the soil types as identified by Cromer, 2018. It is considered as medium clay with saturated hydraulic conductivity of (36mm/hr).

4 Detention and infiltration

Given the intent for all stormwater produced from the roofs to be contained within the site, an infiltration system is proposed which will act to capture, detain and infiltrate the stormwater to the ground.

4.1 Infiltration trench

An infiltration trench (also known as a soakage pit) is an in-ground device with porous walls and base in which plastic crates or gravel is placed to create a void which will accumulate and detain the stormwater and infiltrate it to the surrounding soil.

The infiltration trench was designed using the methodology of *Australian Runoff Quality A guide to WSUD Engineers Australia 2006* and *WSUD Engineering Procedures for Stormwater Management in Tasmania 2012.*

duration (mins)	Storm duration (hrs)	AEP 20% (mm/hr)	Volume in (m3)	Volume out (m3)	Storage volume required (m3)	% of storage provided	Emptying time (hrs)
5		100	1.83	0.14	1.69	238%	1
10		75.9	2.78	0.29	2.50	161%	1
30		41.1	4.52	0.86	3.66	110%	2
60	1	26.2	5.76	1.73	4.04	100%	2
120	2	16.5	7.26	3.46	3.80	106%	2
180	3	12.7	8.38	5.18	3.20	126%	2
360	6	8.19	10.81	10.37	0.44	909%	0
720	12	5.34	14.10	20.74	- 6.64	-61%	- 4
1080	18	4.15	16.43	31.10	- 14.67	-27%	- 8
1440	24	3.46	18.27	41.47	- 23.20	-17%	- 13
1800	30	2.99	19.73	51.84	- 32.11	-13%	- 19
2160	36	2.65	20.99	62.21	- 41.22	-10%	- 24
2880	48	2.17	22.92	82.94	- 60.03	-7%	- 35
4320	72	1.62	25.66	124.42	- 98.76	-4%	- 57

It is proposed to use a gravel-filled trench which will be in the west of the site and north side of the proposed building. It will receive stormwater from dwelling and garage, which conveys an area of **220 m²**. The design of the trench is **11.5m (L)x1.0 m x (W) x1.0m (D)**. This trench will provide **4.04m³** of the storage required to up to a **20% AEP** storm event with the critical storm being the **one-hour** duration.

4.1.1 Design requirements

Refer attached drawing **EE962-C101**

4.1.2 Setback distance

The recommended minimum setback distance for the infiltration trench for a medium clay soil type is **4.0 m** to boundaries and residence.

Table 10-2 Minimum set-back distances (adapted from Engineers Australia, 2006)

Soil Type	Saturated Hydraulic Conductivity	Minimum distance from structures and property boundaries
Sand	> 5 x 10^{-5} m/s (180 mm/hr)	1.0 m
Sandy Clay	1 x 10^{-5} to 5 x 10^{-5} m/s (36 to 180 mm/hr)	2.0 m
Weathered or Fractured Rock	1 x 10^{-6} to 1 x 10^{-5} m/s (3.6 to 36 mm/hr)	2.0 m
Medium Clay	1 x 10^{-6} to 1 x 10^{-5} m/s (3.6 to 36 mm/hr)	4.0 m
Heavy Clay	1 x 10^{-8} to 1 x 10^{-6} m/s (0.036 to 3.6 mm/hr)	5.0 m

4.1.3 Stormwater reticulation

Stormwater from the roof gutter/s will be directed by 100mm UPVC pipe to the infiltration system.

4.1.4 Infiltration trench

- The proposed dimensions of the trench are **11.5m (L) x 1.0m (W) x 1.0m (D).**
- After excavation the trench should be lined with geotextile fabric
- The total excavation depth should be **1.2 m** to allow for **200mm** soil cap to be placed over the gravel, after lining with geotextile fabric. This should be domed to allow for compaction and seeded with grass.

5 Code response

SOR-S2.7.2 Stormwater management

The performance criteria are addressed. The development is shown to be capable of accommodating an onsite stormwater management system that is adequate and suitable for the development and subject site. This is achieved using an infiltration trench where all stormwater from impervious surfaces will be conveyed to the trench and infiltrated to soil/groundwater.

Having regard to:

(a) the size of the lot; The lot is approximately 2,200m2 and regular, with the required area for stormwater detention trench being 11.5m2; hence the site has sufficient area, including appropriate setbacks from boundaries, to accommodate an on-site stormwater system.

(b) topography of the site; The site has a gentle slope towards the west, with no construction restrictions for the stormwater trench.

(c) soil conditions; The soil comprises a clayey silt and silty sand profile; Medium Clay soil classification was considered for the design of the infiltration trench

(d) any existing buildings on the site; The site is currently vacant; the stormwater system was designed to accommodate the proposed dwelling.

(e) any area of the site covered by impervious surfaces; Impervious areas (the proposed dwelling and garage roof) were considered for the design of the infiltration trench

(f) any watercourse on the land; There are no watercourses located within the site.

November 2024

PLANNING REPORT

3 Linden Road PRIMROSE SANDS

Application for single dwelling with carport

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Rev.no	Description	Date
1	Draft	
2	Final	26 November 2024

1. Contents

1. Introduction

This report has been prepared in support of a planning permit application under Section 57 of the *Land Use Planning and Approvals Act 1993*.

Proposed development
Single dwelling with garage

This application is to be read in conjunction with the following supporting documentation:

Document	Consultant
Proposal Plan	Engineering Plus / Tasbuilt Homes

Planning history
Conditioned approval under 5.2024.164.1

2. Subject site and proposal

2.1 Site details

Address	3 Linden Road, Primrose Sands TAS 7173
Property ID	5946487
Title	65386/71
Land area	~2195.42m^2
Planning Authority	Sorell Council
Planning Scheme	Tasmanian Planning Scheme – Sorell
Covenants or Agreements	None on title
Application status	Discretionary application
Existing Access	None existing
Zone	Low Density Residential

General Overlay	Southern Beaches On-site Waste Water and Stormwater Management Specific Area Plan
Overlays	Airport obstacle limitation area Low coastal erosion hazard band Waterway and coastal protection area Priority vegetation area
Existing development	Vacant
Existing services and infrastructure	
Water	Not serviced
Sewer	Not serviced
Stormwater	Not serviced

2.2 Proposal

The proposal is to develop the land with a single dwelling with a carport. This application has conditioned approval and requires a retrospective change to the application; specifically, clause 10.4.3 A2/P2.

The dwelling will have a building area of 128.14m^2 and will have 3 bedrooms; kitchen and living areas, laundry, bathroom and ensuite. It will have a partially roofed deck of 83.54m^2 and a single carport for one car parking space. The carport will be partially screened.

The development will include an onsite wastewater management system. Stormwater will be collected by tank and overflow directed to an absorption trench. The plans provided at Annexure 2 provide further detail along with supporting site and soil assessment reports at Annexure 3 and 5.

Figure 1 Aerial view of the subject site (Source: LIST)

3. Planning Scheme Assessment

3.1 Zone assessment

10.0 Low Density Residential Zone

10.1 Zone Purpose

10.1.1	To provide for residential use and development in residential areas where there are infrastructure or environmental constraints that limit the density, location or form of development.
10.1.2	To provide for non-residential use that does not cause an unreasonable loss of amenity, through scale, intensity, noise, traffic generation and movement, or other off site impacts.
10.1.3	To provide for Visitor Accommodation that is compatible with residential character.

10.2 Use Table

Use Class	Qualification
No Permit Required	
Residential	If for a single dwelling.

10.4 Development Standards for Dwellings

10.4.2 Building height

Objective	
That the height of dwellings is compatible with the streetscape and do not cause an unreasonable loss of amenity for adjoining properties.	
Acceptable Solutions	Performance Criteria
A1 A dwelling must have a building height not more than 8.5m.	P1 The height of dwellings must be compatible with the streetscape and not cause an unreasonable loss of amenity to adjoining properties having regard to: a) the topography of the site; b) the height of buildings on the site and adjacent properties; c) the bulk and form of existing and proposed buildings; d) sunlight to habitable rooms and private open space of dwellings; and e) any overshadowing of adjoining properties.

RESPONSE

A1 The acceptable solution is achieved. The building is maximum height 7.9m.

10.4.3 Setback

Objective	
That the siting of dwellings is compatible with the streetscape and does not cause an unreasonable loss of amenity for adjoining properties.	
Acceptable Solutions	Performance Criteria
A1 Dwellings, excluding protrusions that extend not more than 0.9m into the frontage setback, must have a setback from a frontage not less than 8m.	P1 The siting of a dwelling must be compatible with the streetscape and character of development existing on established properties in the area, having regard to: a) the topography of the site; b) the setbacks of surrounding buildings; c) the height, bulk and form of existing and proposed buildings; d) the appearance when viewed from roads and public open space adjacent to the site; and e) the safety of road users.

RESPONSE

A1 The acceptable solution is achieved. The front setback is 37.8m.

A2 Dwellings, excluding outbuildings with a building height of not more than 2.4m and protrusions that extend not more than 0.9m horizontally from the building, must have a setback from side and rear boundaries of not less than 5m.	P2 The siting of a dwelling must not cause an unreasonable loss of amenity to adjoining properties, having regard to: a) the topography of the site; b) the size, shape and orientation of the site; c) the setbacks of surrounding buildings; d) the height, bulk and form of existing and proposed buildings; e) the existing buildings and private open space areas on the site; f) sunlight to private open space and windows of habitable rooms on adjoining properties; and g) the character of development existing on established properties in the area.

RESPONSE

P2 The performance criteria are addressed. The side and rear setbacks are reduced. The side setback to the west boundary is 4.4m and causes a setback reduction for approximately 1.2m

before the 5m setback is achieved. This is due to the angle of the dwelling against the shape of the lot. The setback to the rear boundary is a minimum of 2.5m. There are no adjoining lots to the rear (south) boundary and the land is not suited to residential development in the future as it is Crown managed land and a public reserve.

The dwelling is sited on a lot at the end of a row of houses with only one adjoining neighbour, or residential lot, to the east. The setback to this neighbour is complaint. The setback is reduced only to the west and south boundary.

The Objective of this clause is for compatibility within the streetscape and not to cause loss of amenity to neighbours. In the context of this site the objective is met.

a. The topography of the site is gently sloped. The proposed dwelling is downhill to the neighbouring dwelling to the east and to the street. No untoward effect causing incompatibility is made due to a reduced setback to the frontage or the neighbouring lot and the topography causes no impact.
b. The shape of the site is irregular and the site has an area of an estimated 2195m^2. The irregular shape of the site allows for the gradual increase in setback to the west, where the building is sited parallel to the south boundary.
c. Surrounding buildings exhibit differing development pattern in terms of size and shape of lots, however, many dwellings are positioned to the rear boundary (south side on Linden Road), towards the coastline. Many dwellings are located on, or very near one, or both side boundaries. The building at 5 Linden Road (neighbouring lot to the east) has a reduced setback to the subject site. The building at 2 Linden Road also has a reduced side setback. Where there are lots in the area that are larger but irregular shaped, such as the subject site, the setbacks vary within the lot, due to the irregular lot shape. The proposed is consistent with the surrounding setbacks.
d. Surrounding buildings display variation in height, bulk and form. The proposed is not inconsistent with surrounding development and the deep setback means the building will have little visual impact to others and from the public road. The setback to the east boundary neighbour is in excess of the acceptable solution, offsetting the reduction to shared boundary setback from this dwelling. The impact to the amenity of adjoining neighbours is assured to be minimal and well within reason.
e. The setback to neighbouring dwellings and private open space is significant and no loss to neighbouring amenity is anticipated as a result of the siting of the subject dwelling. Only one lot is an adjoining residential lot and the distance between buildings is more than 30m. The neighbouring dwelling is most likely to enjoy private open space to the east of the building. However, the eastern neighbour will have continued privacy assured tot eh west

facing windows of the dwelling due to the proposed setback. The subject dwelling is most likely to enjoy private open space on the north and west facing decks, and the east deck is shielded from the neighbours by the car port. Given the slight difference in elevation also, there is well within reasonable provision of private open space to all lots in question.

f. No overshadowing to the eastern adjoining lot is anticipated from the proposed dwelling.

g. The proposed is reasonably consistent with the surrounding given the variance in development style and the variance in lot size for the subject site. The area is predominantly residential with buildings of varied age, height and bulk, positioned to take advantage of views. There appear to be a residential development at 2a Linden Road that is a larger lot with an irregular shape.

The objective of this clause is to provide neighbouring development with assurance that new development will not cause impact in regard to overlooking, overshadowing that reduces amenity. Amenity is defined in the Scheme and:

means, in relation to a locality, place or building, any quality, condition or factor that makes or contributes to making the locality, place or building harmonious, pleasant or enjoyable.

Given that the setback to the nearest neighbour is in excess of 5m, and the reduced setbacks are to the boundaries where there are no neighbours, the amenity of adjoining properties is maintained. For the amenity of the Crown land, the amenity will be consistent with the existing, given that there are several buildings with reduced setback to the Crown land (9 Linden Road, 57 Linden Road, 59 Linden Road, 3 Primrose Sands Esplanade)[1]. In this sense, the proposed dwelling will *appear* as typical for the area being residential and coastal.

Images for the surrounding area built form and development are provided (taken from real estate listings for the area).

[1] Estimated based on LIST imagery.

Figure 2 1 Casuarina Close[2]

Figure 3 7 Casuarina Close - showing built form at 2B Linden Road[3]

[2] https://www.realestate.com.au/property/1-casuarina-cl-primrose-sands-tas-7173/
[3] https://harcourts.net/au/office/signature/listing/tsg22298

Figure 4 5 Linden Road west elevation to subject site[4]

Figure 5 Showing built form in the area - note 2a and 2b in relation to the coastal reserve[5]

[4] https://www.realestate.com.au/property/5-linden-rd-primrose-sands-tas-7173/
[5] https://www.realestate.com.au/property/7-casuarina-cl-primrose-sands-tas-7173/

Figure 6 Showing west elevation of 5 Linden Road in relation to the boundary. The proposed ensures setbacks to this dwelling will protect amenity.

10.4.4 Site coverage

Objective
That site coverage: a) is consistent with the character of existing development in the area; b) provides sufficient area for private open space and landscaping; and c) assists with the management of stormwater runoff.

Acceptable Solutions	Performance Criteria
A1 Dwellings must have a site coverage of not more than 30%.	P1 The site coverage of dwellings must be consistent with that existing on established properties in the area, having regard to: a) the topography of the site; b) the capacity of the site to absorb runoff; c) the size and shape of the site; d) the existing buildings and any constraints imposed by existing development; e) the provision for landscaping and private open space; f) the need to remove vegetation; and (g) the site coverage of adjacent properties.

RESPONSE

A1 The acceptable solution is achieved. The site coverage is estimated at under 10%.

10.4.5 Frontage fences for all dwellings

Objective
That the height and transparency of frontage fences: a) provides adequate privacy and security for residents; b) allows the potential for mutual passive surveillance between the road and the dwelling; and c) is reasonably consistent with fences in the street

Acceptable Solutions	Performance Criteria
A1 No Acceptable Solution.	P1 A fence (including a free-standing wall) for a dwelling within 4.5m of a frontage must: a) provide for security and privacy, while allowing for passive surveillance of the road; and (b) be consistent with the height and transparency of fences in the street, having regard to: i. the topography of the site; and ii. traffic volumes on the adjoining road.

RESPONSE

Not applicable – no front fence is proposed.

3.2 Code Assessment

C2.0 Parking and Sustainable Transport Code

C2.5 Use Standards

RESPONSE

A1 The acceptable solution is achieved. Two car parking spaces can be accommodated on the site. One space is provided in the car port and a second car can be parked in tandem. There is sufficient driveway space provided for manoeuvring on the site.

C2.6 Development standards for buildings and works

C2.6.1 Construction of parking areas

RESPONSE

P1 The performance criteria are addressed. The manoeuvring (driveway) is formed. It is understood that as the access is from an unsealed road, the vehicle crossing may also be made from gravel.

C2.6.2 Design and layout of parking areas

RESPONSE

A1 The acceptable solution is achieved. Parking access and manoeuvring is compliant – please refer to proposal plans.

C2.6.3 Number of accesses for vehicles

RESPONSE

A1 The acceptable solution is achieved.

C3.0 Road and Railway Assets Code

C3.5 Use Standards

C3.5.1 Traffic generation at a vehicle crossing, level crossing or new junction

RESPONSE

A1 The acceptable solution is achieved. The access is existing with upgrades proposed to meet Council standards as conditioned. Please see the attached application for works supplied with this application.

SOR–S2.0 Southern Beaches On-site Waste Water and Stormwater Management Specific Area Plan

RESPONSE

Please refer to Annexure 5 for this response.

C7.0 Natural Assets Code

C7.6 Development Standards for Buildings and Works

C7.6.1 Buildings and works within a waterway and coastal protection area or a future coastal refugia area

RESPONSE

P1.1 The performance criteria are addressed. The building is within the overlay area.

a. The annexed soil reporting evidences that the site has no indications of instability. A suitable soil and water management plan at the time of construction can address siltation or sedimentation effects during works.
b. The site requires no removal of vegetation.
c. NA
d. NA
e. No effect to natural flow or drainage is anticipated.
f. No impact to fish passage is anticipated.
g. NA
h. The site is currently vacant without existing facilities.
i. Cut and fill is not proposed.
j. The building design uses pole construction to minimise disturbance of the land.
k. No impact to coastal process is anticipated.
l. Future works are not anticipated.
m. NA
n. Best practice guideline will be followed and can be conditioned.

P1.2 The spatial extent according to Table C7.3 is 40m. The subject site boundary is 42m from the highwater mark. The building and works is not within the spatial extent of the tidal waters.

A3 The acceptable solution is achieved. There is no new point of discharge to a watercourse.

A4 The acceptable solution is achieved. No dredging or reclamation is proposed.

A5 The acceptable solution is achieved. No coastal protection works are proposed.

C7.6.2 Clearance within a priority vegetation area

RESPONSE

A1 The acceptable solution is achieved. No clearance of native vegetation is proposed.

C10.0 Coastal Erosion Hazard Code

C10.4 Use or Development Exempt from this Code

C10.4.1 Excluding where development occurs on an actively mobile landform in the coastal zone, the following use or development is exempt from this code:

(a) use or development that requires authorisation under the Building Act 2016, excluding:

(i) a critical use, hazardous use, or vulnerable use;

(ii) if located within a high coastal erosion hazard band; or

(iii) coastal protection works;

RESPONSE

The application is exempt.

C16.0 Safeguarding of Airports Code

C16.4 Use or Development Exempt from this Code

C16.4.1 The following use or development is exempt from this code:

(a) development that is not more than the AHD height specified for the site of the development in the relevant airport obstacle limitation area.

RESPONSE

The application is exempt.

4. Conclusion

The proposed is for the development of a single dwelling in the Low Density Residential Zone. The development is compliant with the provisions of the Tasmanian Planning Scheme – Sorell and the applicable Local Provision; a planning permit is sought accordingly.

Annexures

Annexure 1 Copy of Title plan and Folio text

Annexure 2 Proposal Plan

Annexure 3 Site and soil report for Onsite Wastewater Management (updated version from Strata)

Annexure 5 Stormwater design and reporting

SORELL COUNCIL

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ABN 12 690 767 695

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Fax 03 6269 0014
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www.sorell.tas.gov.au

VEHICULAR CROSSING (AND ASSOCIATED WORKS) APPLICATION

Note: A vehicular crossing shall not be constructed, repaired or altered without the issue of a permit to do so. All work shall be carried out under the supervision and to the satisfaction of Council's Engineer and in compliance with the approval letter. **Mandatory fields marked with * must be completed. A fee is payable upon submission of this application in accordance with Sorell Council Fees and Charges.**

*Applicant's Name	Ashleigh Atkinson - Tasbuilt Homes
*Postal Address	6 Integrity Drive Westbury 7303
	Postcode
*Telephone 03 6393 1013	Mobile 0416 181 722
*Email	ashleigha@tasbuiltgroup.com.au
*Landowner's Name	Darren Cundy + Wanda Glynn
*Address of Property Concerned	3 Linden Road, Primrose Sands.

*You Must Provide A Sketch Of Your Proposed Crossing And / Or Modifications In Relation To Boundaries And Indicate Distances (Or Attach Sketch Or Drawings If Available)

See Drawings.

Sorell Council
Development Application: 5.2024.322.1 - Development Application - 3 Linden Road, Primrose Sands - P1.pdf
Plans Reference:P1
Date Received: 29/11/2024

Applicant's Signature	A. Atkinson
☐ Fee paid	Date 25.06.24
OFFICE USE ONLY	
Receipt No# (Receipt Type 437)	Date

DRAWING SCHEDULE

A00	COVER PAGE
A01	SITE PLAN
A02	CONSTRUCTION PLAN
A03	FLOOR PLAN
A04	DRAINAGE PLAN
A05	ELEVATIONS #1
A06	ELEVATIONS #2
A07	ROOF PLAN
A08	SECTION & DETAILS
A09	AREA PLAN
A10	3D PERSPECTIVES
A11	LIGHTING PLAN
A12	SOIL & WATER MANAGEMENT PLAN
A13	STANDARD TIEDOWN DETAILS
A14	STANDARD BRACING DETAILS
A15	STANDARD STAIR & HANDRAIL DETAILS
A16	STANDARD WET AREA & WATERPROOFING DETAILS - GENERAL
A17	STANDARD WET AREA & WATERPROOFING DETAILS - SHOWERS
A18	STANDARD WET AREA & WATERPROOFING DETAILS - BATH
A19	NCC NOTES #1
A20	NCC NOTES #2
A21	NCC NOTES #3
A22	NCC NOTES #4

Sorell Council

Development Application: 5.2024.322.1 - Response to Request for Information - 3 Linden Road, Primrose Sands - P2.pdf
Plans Reference: P2
Date received:13/12/2024

PROJECT INFORMATION

BUILDING DESIGNER:	GRANT JAMES PFEIFFER
ACCREDITATION No:	CC2211T
BUILDING CLASS:	CLASS 1A
LAND TITLE REFERENCE NUMBER:	65386/71
DESIGN WIND SPEED:	N4
SOIL CLASSIFICATION:	'M' (S)
CLIMATE ZONE:	7
BUSHFIRE-PRONE BAL RATING:	N/A
ALPINE AREA:	N/A
CORROSION ENVIRONMENT:	SEVERE
FLOODING:	NO
LANDSLIP:	NO
DISPERSIVE SOILS:	UNKNOWN
SALINE SOILS:	UNKNOWN
SAND DUNES:	NO
MINE SUBSIDENCE:	NO
LANDFILL:	NO
GROUND LEVELS:	REFER PLAN
ORG LEVEL:	75MM ABOVE GROUND LEVEL SURFACE

DEVELOPMENT AREA	
Name	Area
PROPOSED DWELLING	128.14 m²
DECK	83.54 m²
CARPORT	24.00 m²
	235.68 m²

PROPOSED DWELLING

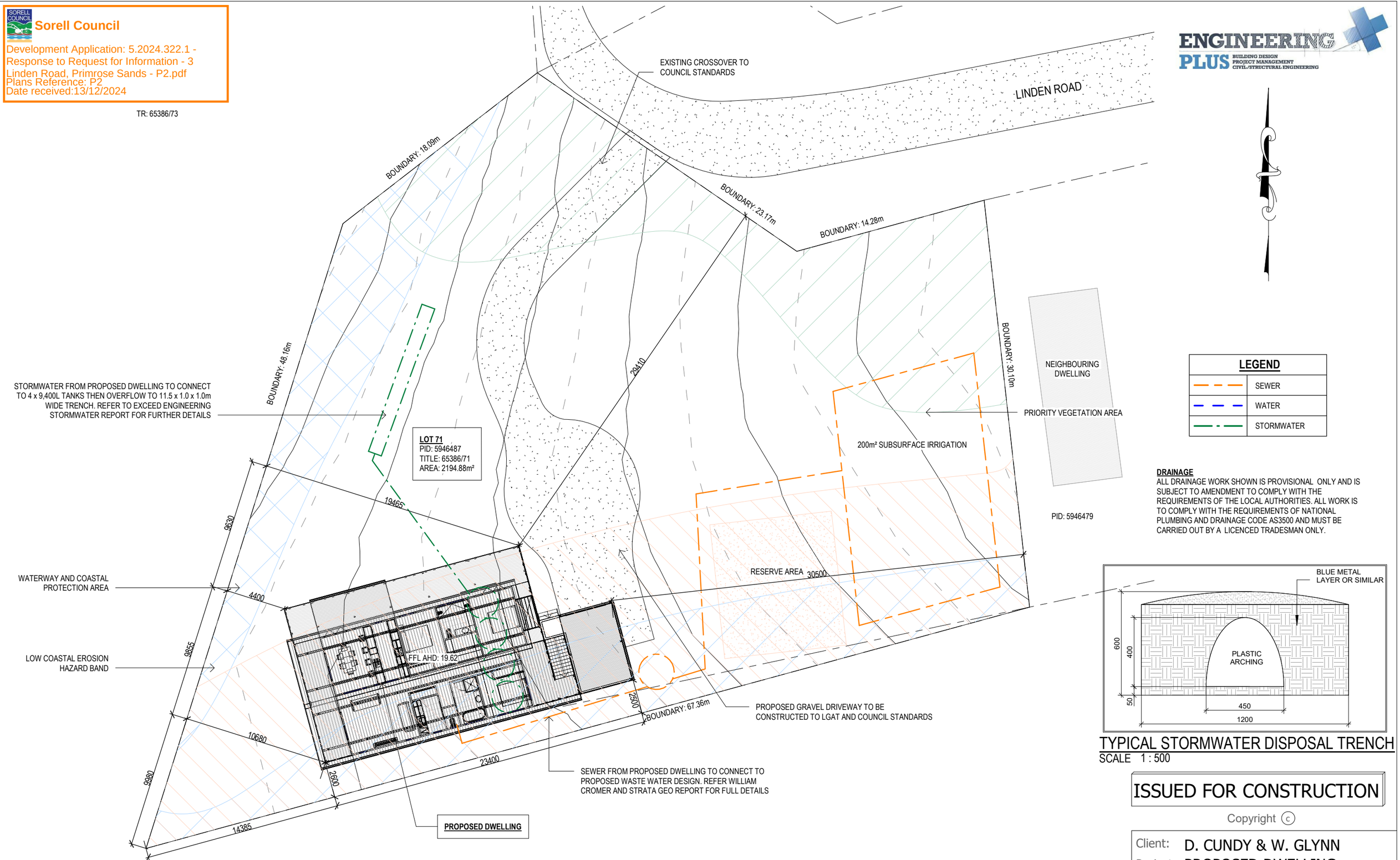
D. CUNDY & W. GLYNN
3 LINDEN ROAD
PRIMROSE SANDS

SORELL COUNCIL

ISSUED FOR CONSTRUCTION

81 Elizabeth Street, Launceston, Tasmania 7250 jack@engineeringplus.com.au, trin@engineeringplus.com.au
Jack 0417 362 783 or Trin 0417 545 813

TR: 65386/73



SITE PLAN
SCALE 1 : 250

ENGINEERING PLUS
BUILDING DESIGN
PROJECT MANAGEMENT
CIVIL/STRUCTURAL ENGINEERING

LEGEND	
	SEWER
	WATER
	STORMWATER

DRAINAGE
ALL DRAINAGE WORK SHOWN IS PROVISIONAL ONLY AND IS SUBJECT TO AMENDMENT TO COMPLY WITH THE REQUIREMENTS OF THE LOCAL AUTHORITIES. ALL WORK IS TO COMPLY WITH THE REQUIREMENTS OF NATIONAL PLUMBING AND DRAINAGE CODE AS3500 AND MUST BE CARRIED OUT BY A LICENCED TRADESMAN ONLY.

TYPICAL STORMWATER DISPOSAL TRENCH
SCALE 1 : 500

ISSUED FOR CONSTRUCTION

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Ph: 03 6393 1013
admin@tasbuilthomes.com.au

Rev:	Amendment:	Date:	Int:
1	MINOR AMENDMENT	25.11.24	W.T
0	ISSUED FOR CONSTRUCTION	07.10.24	O.J
E	DWELLING RELOCATION	02.09.24	O.J
D	DWELLING RELOCATION	26.07.24	O.J
C	DECOR AMENDMENTS	03.07.24	O.J
B	DWELLING RELOCATION	28.06.24	O.J

Date Drawn: 30.05.24
Drawn: O. Jones
Checked: O. Jones
Approved: J. Pfeiffer
Scale: As Shown @ A3
Accredited Building Designer
Designer Name: J.Pfeiffer
Accreditation No: CC2211T

Client: D. CUNDY & W. GLYNN
Project: PROPOSED DWELLING
Address: 3 LINDEN ROAD, PRIMROSE SANDS

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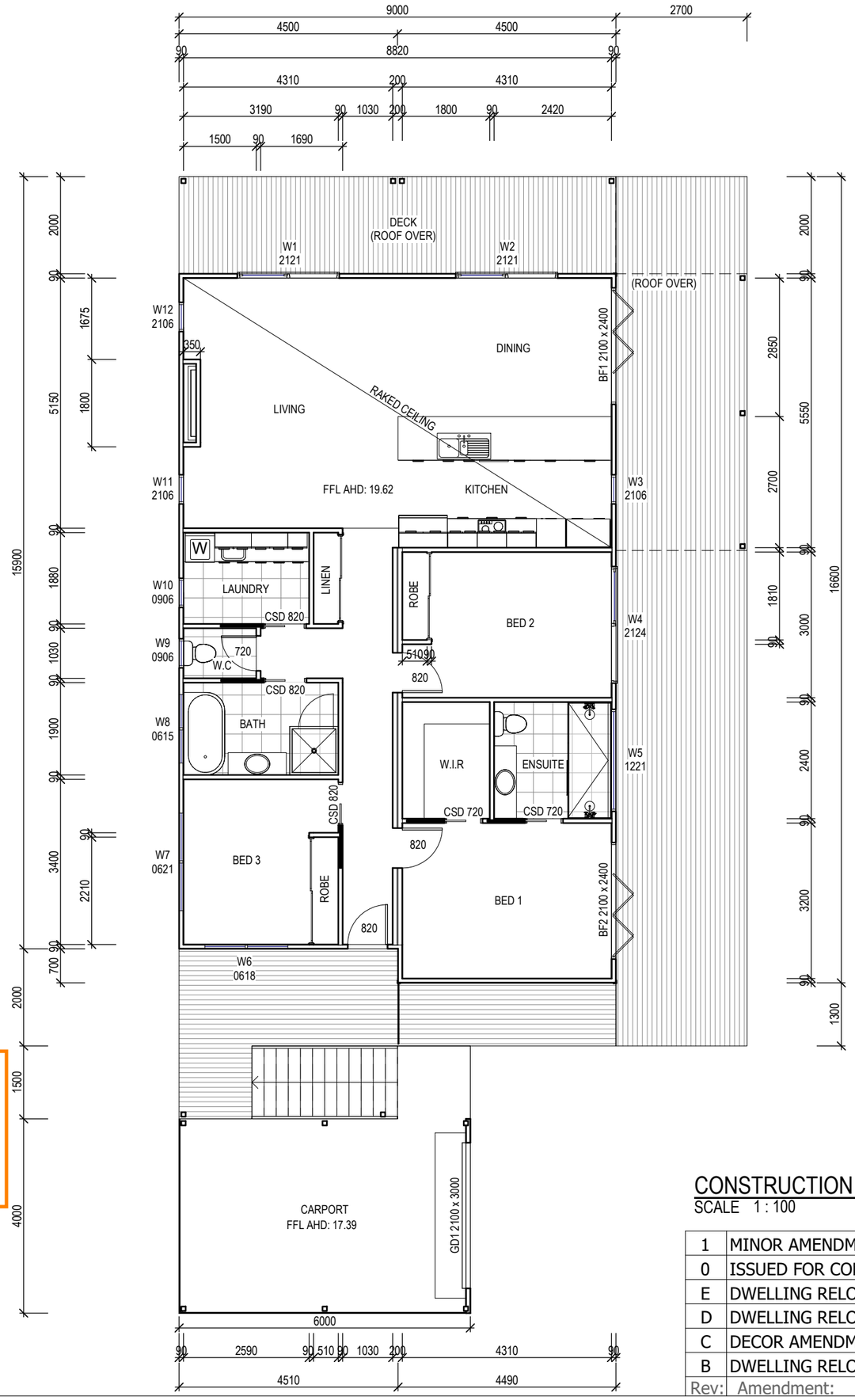
trin@engineeringplus.com.au
ENGINEERING PLUS BUILDING DESIGN PROJECT MANAGEMENT CIVIL/STRUCTURAL ENGINEERING

Drawing No: 1012024 A01 / A22
Rev 1



ENGINEERING PLUS
BUILDING DESIGN
PROJECT MANAGEMENT
CIVIL/STRUCTURAL ENGINEERING

WINDOW SCHEDULE

MARK	HEIGHT	WIDTH	TYPE	U-VALUE	SHGC
^W1	2100	2100	DG	4.3	.55
^W2	2100	2100	DG	4.3	.55
^W3	2100	600	DG	4.3	.55
^W4	2100	2400	DG	4.3	.55
W5	1200	2100	DG	4.3	.55
W6	600	1800	DG	4.3	.55
W7	600	2100	DG	4.3	.55
W8	600	1500	DG	4.3	.55
W9	900	600	DG	4.3	.55
W10	900	600	DG	4.3	.55
^W11	2100	600	DG	4.3	.55
^W12	2100	600	DG	4.3	.55
*W13	350	1800	DG	4.3	.55
*W14	350	1800	DG	4.3	.55
BF1	2100	2400	DG	4.0	.61
BF2	2100	2400	DG	4.0	.61

*REFER ELEVATIONS FOR HIGHLIGHT WINDOWS

^ - IF HEIGHT TO GROUND IS GREATER THEN 2.0m WINDOW TO HAVE PERMANENTLY FIXED ROBUST SCREEN INSTALLED OR HAVE AN OPENING RESTRICTED TO 125mm

DISCLAIMER:
ALL WINDOWS SHOWN ON PLAN ARE APPROX. BASED OFF STANDARD MANUFACTURING SIZES. ALL WINDOW DIMENSIONS TO BE CONFIRMED ON SITE BY BUILDER PRIOR TO ORDERING AND MANUFACTURING.

Area Schedule (Gross Building)

Name	Area	Area (sq)
PROPOSED DWELLING	128.14 m²	13.79
CARPORT	24.00 m²	2.58
DECK	83.54 m²	8.99
	235.68 m²	25.37

ISSUED FOR CONSTRUCTION

SORELL COUNCIL
Sorell Council
Development Application: 5.2024.322.1 - Response to Request for Information - 3 Linden Road, Primrose Sands - P2.pdf
Plans Reference: P2
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CONSTRUCTION PLAN
SCALE 1 : 100

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Project: PROPOSED DWELLING
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Accredited Building Designer
Designer Name: J.Pfeiffer
Accreditation No: CC2211T

Drawing No: 1012024 A02 / A22
Rev 1

1
A08

PROVIDE MECHANICAL VENTILATION TO THIS ROOM IN ACCORDANCE WITH NCC PART 10.6.3(b)

PROVIDE INSULATION TO WALLS AS INDICATED

FLOOR PLAN
SCALE 1 : 100

FLOOR COVERINGS
CARPET
CONCRETE
TIMBER DECKING
TILE
VINYL TIMBER FLOORING

SMOKE ALARMS
PROVIDE AND INSTALL SMOKE ALARMS & HARD WIRE TO BUILDING POWER SUPPLY TO AS 3786.
CEILING MOUNTED WITH 9VDC
ALKALINE BATTERY BACKUP
TO LOCATIONS INDICATED ON PLAN AND IN ACCORDANCE WITH NCC PART H3D6 - ACBC PART 9.5

(S) - DENOTES INTERCONNECTED SMOKE DETECTORS

Area Schedule (Gross Building)

Name	Area	Area (sq)
PROPOSED DWELLING	128.14 m²	13.79
CARPORT	24.00 m²	2.58
DECK	83.54 m²	8.99
	235.68 m²	25.37

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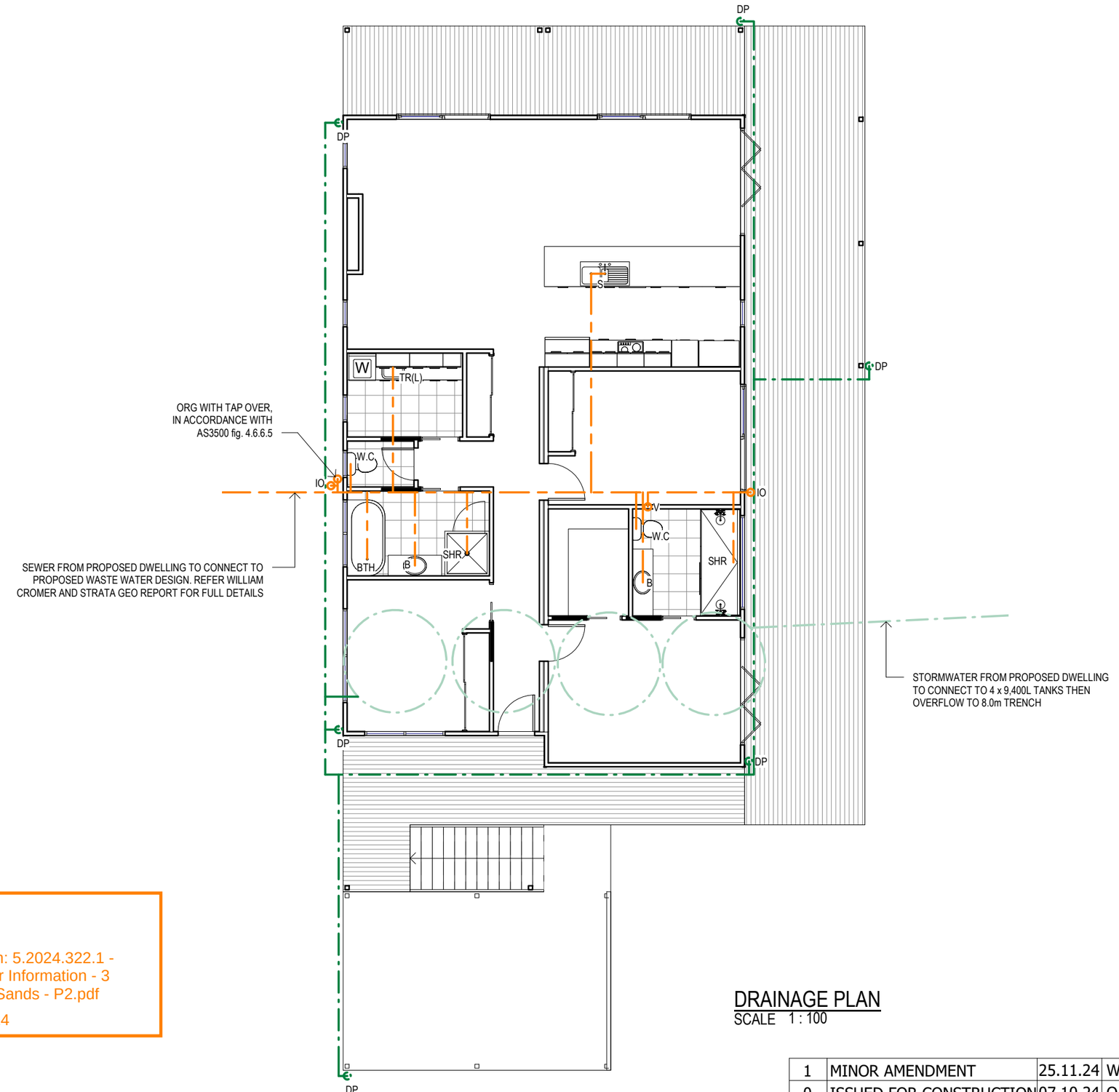
Rev 1



DRAINAGE PLAN
SCALE 1 : 100

PLUMBING FIXTURE	ABBREVIATION
BASIN	B
BATH	BTH
SHOWER	SHR
CLOTHES WASHING MACHINE	CWM
DISHWASHING MACHINE	DWM
FLOOR WASTE GULLY	FWG
OVERFLOW RELIEF GULLY	ORG
HOT WATER CYLINDER	HWC
SINK	S
TROUGH, LAUNDRY	TR(L)
WATER CLOSET PAN	W.C
INSPECTION OPENING	IO
DOWNPIPE	DP

PLUMBING NOTES:

ALL DRAINAGE WORK SHOWN IS PROVISIONAL ONLY AND IS SUBJECT TO AMENDMENT TO COMPLY WITH THE REQUIREMENTS OF THE LOCAL AUTHORITIES.
ALL WORK IS TO COMPLY WITH THE REQUIREMENTS OF AS/NZS 3500 & THE TASMANIAN PLUMBING CODE. AND MUST BE CARRIED OUT BY A LICENCED TRADESMAN ONLY.

LEGEND OF DIAMETERS
TROUGH = 50mm
SINK = 50mm
BATH = 40mm
BASIN = 40mm
SHOWER = 50mm
WC = 100mm
SEWER = 100mm DIA. uPVC
ORG OVERFLOW RELIEF GULLY
EV VENT
DP DOWNPIPE 90mm DIA
STORMWATER = 100mm DIA uPVC

THE INSTALLATION OF WATER PIPE LINES, INSTALLED WITH THE PRODUCT HIS 311 REHAU, WILL REQUIRE THE MAIN COLD WATER LINE TO BE DN 25mm WITH DN 16mm BRANCHES & HOT WATER MAIN LINES TO BE DN 20mm WITH DN 16mm BRANCHES TO FIXTURES, ALL OTHER PRODUCTS USED ARE TO COMPLY WITH THE REQUIREMENTS OF AS/NZS 3500.5.2021 & AS/NZS 3500.1.2021

HOT WATER INSTALLATION SHALL DELIVER HOT WATER TO ALL SANITARY FIXTURES USED FOR PERSONAL HYGIENE AT 50deg C, KITCHEN SINK & LAUNDRY SHALL BE 60deg C TO COMPLY WITH REQUIREMENTS OF AS/NZS 3500.5.2021 SECTION 3.4

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ISSUED FOR CONSTRUCTION

Client: D. CUNDY & W. GLYNN
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Address: 3 LINDEN ROAD, PRIMROSE SANDS

ENGINEERING PLUS
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Drawing No: 1012024 A04 / A22
Rev 1

SUB FLOOR VENTILATION. NCC VOL 2 PART 6.2.1

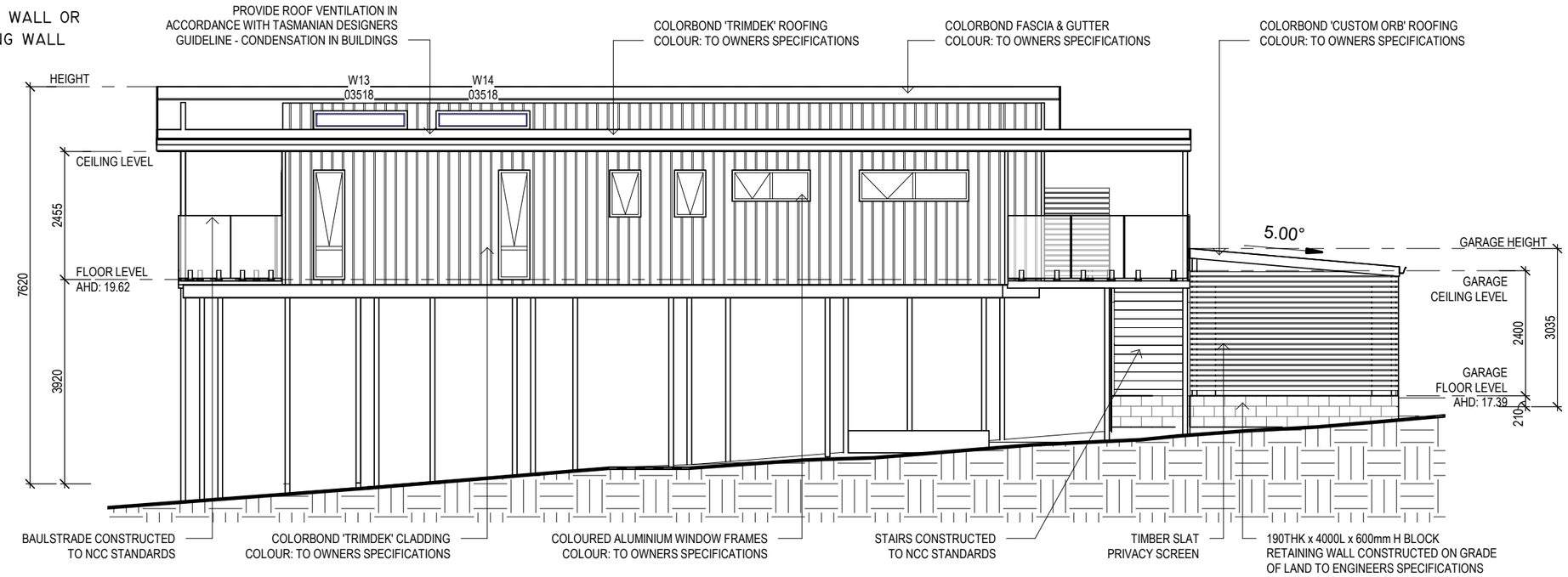
- A MINIMUM OF 150 MM OF SUB FLOOR CLEARANCE IS TO BE PROVIDED BETWEEN FINISHED SURFACE LEVEL & THE UNDERSIDE OF THE FLOOR BEARER.
- A MINIMUM OF 6000 MM2 PER METRE OF SUB FLOOR VENTILATION IS TO BE UNIFORMLY DISTRIBUTED AROUND THE EXTERNAL AND INTERNAL WALLS OF THE BUILDING.
- VENTS TO BE LOCATED NO GREATER THAN 600 MM FROM AN INTERNAL OR EXTERNAL CORNER.

PRYDA 230X75 - 52 HOLE VENT MAXIMUM SPACING 1050 MM ALONG WALL OR
PRYDA 230X165 - 117 HOLE VENT MAXIMUM SPACING 2350 MM ALONG WALL

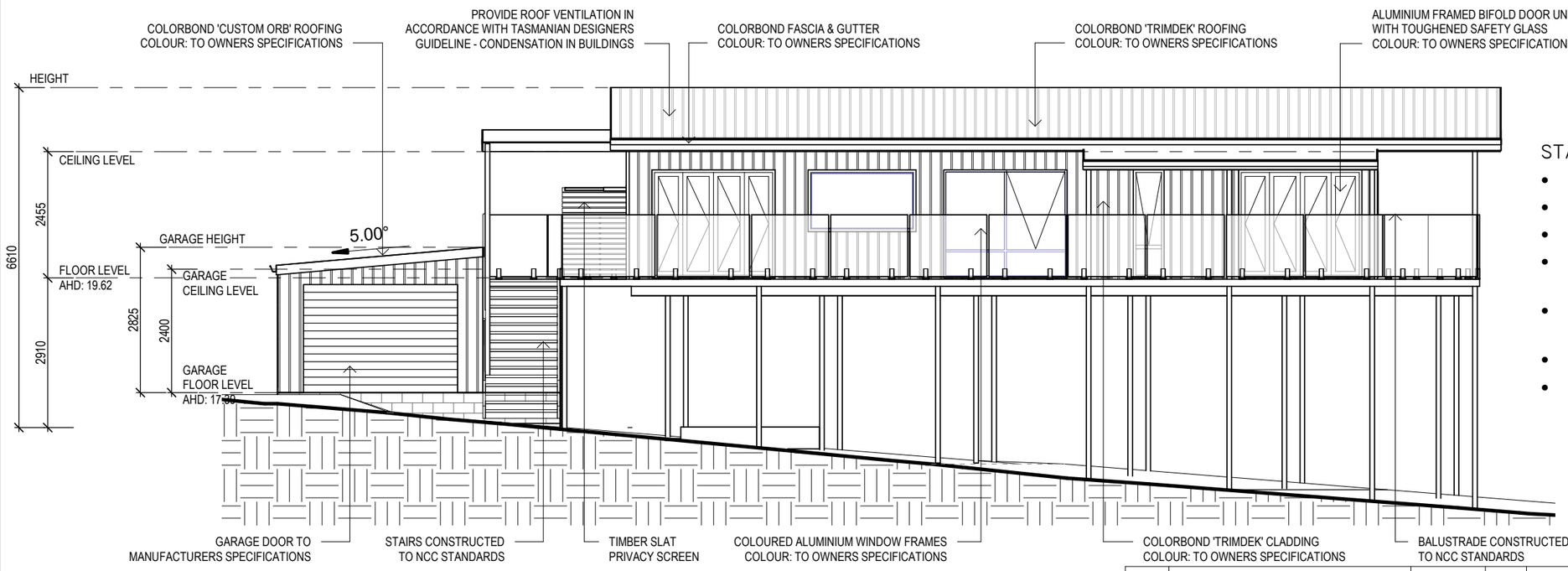
ADDITIONAL VENTILATION PROVISIONS TO BE INSTALLED WHERE OBSTRUCTIONS SUCH AS CONCRETE VERANDAH'S, DECKS, PATIOS AND PAVING ARE INSTALLED & OBSTRUCT VENTILATION.

Sorell Council

Development Application: 5.2024.322.1 - Response to Request for Information - 3 Linden Road, Primrose Sands - P2.pdf
Plans Reference: P2
Date received:13/12/2024



SOUTH EAST ELEVATION
SCALE 1 : 100



NORTH WEST ELEVATION
SCALE 1 : 100

STAIR CONSTRUCTION. ABCB VOLUME 2 PART 11.2

- TREADS: 240 MM
- RISERS: 180 MM
- TREATED PINE TIMBER STAIR MATERIAL TO AS1684
- TREATMENT LEVELS H4 FOR INGROUND USE & H3 FOR ABOVE GROUND USE.
- ALL FIXINGS FITTING BRACKETS AND CONNECTORS TO BE GALVANISED.
- STRINGER: 300X50 F5 TREATED PINE
- TREADS: 240X45 F5 TREATED PINE MAXIMUM TREAD SPAN 1000

ISSUED FOR CONSTRUCTION

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Scale: As Shown @ A3

Client: D. CUNDY & W. GLYNN
Project: PROPOSED DWELLING
Address: 3 LINDEN ROAD, PRIMROSE SANDS

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Accredited Building Designer
Designer Name: J.Pfeiffer
Accreditation No: CC2211T

Drawing No: 1012024 A05 / A22
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EAVE & SOFFIT CONSTRUCTION ABCB VOLUME 2 PART 7.4.5

EAVE WIDTH - 300MM

SOFFIT / EAVE LINED WITH 'HARDIFLEX' CEMENT SHEETING

- TRIMMERS LOCATED WITHIN 1200 MM OF EXTERNAL CORNERS TO BE SPACED @ 500 MM CENTERS, REMAINDER OF SHEET - 700 MM CENTERS
- FASTENER / FIXINGS WITHIN 1200 MM OF EXTERNAL CORNERS @ 200 MM CENTERS, REMAINDER OF SHEET - 300 MM CENTERS

ENGINEERING PLUS
BUILDING DESIGN
PROJECT MANAGEMENT
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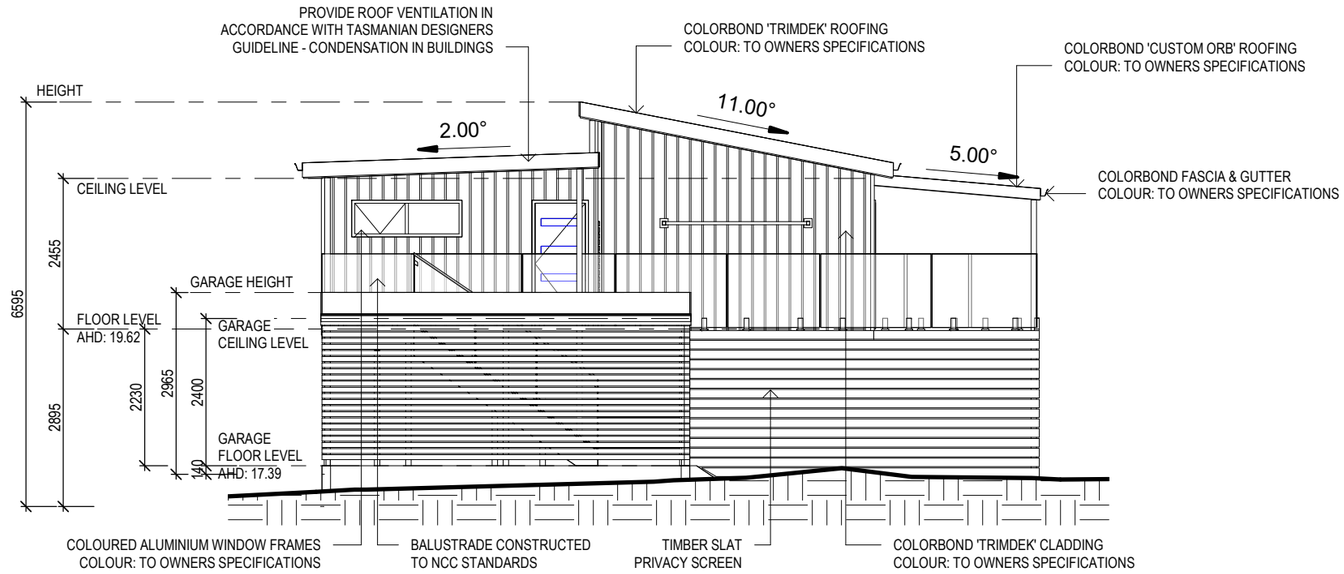
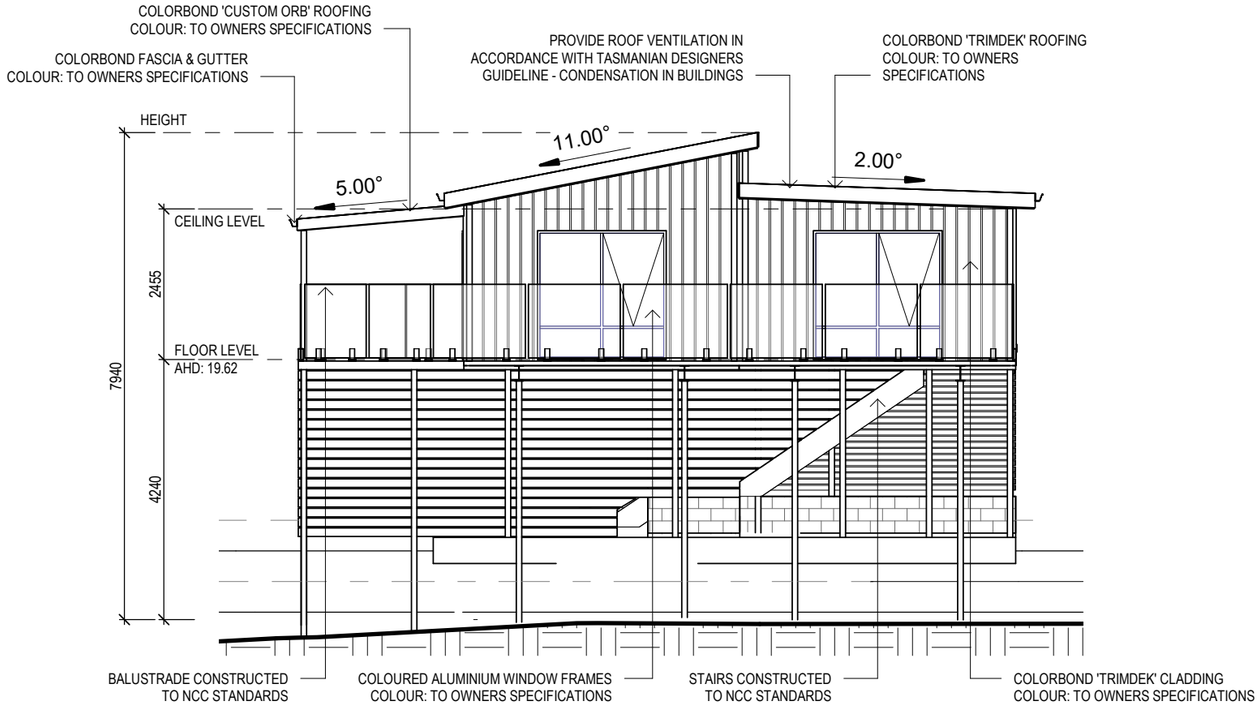


NORTH EAST ELEVATION
SCALE 1 : 100



SOUTH WEST ELEVATION
SCALE 1 : 100

SELECTED ALUMINIUM FRAMED WINDOWS - ABCB VOLUME 2 PART 8.3

POWDER COATED ALUMINIUM WINDOW & DOOR FRAMES, UNLESS OTHERWISE NOTED.

TASMANIAN OAK REVEALS AND TRIMS. ALL FLASHING AND FIXINGS TO MANUFACTURERS SPECIFICATIONS.

GLAZING & FRAME CONSTRUCTION TO AS 2047 & AS 1288

ALL FIXINGS AND FLASHINGS TO MANUFACTURERS REQUIREMENTS

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DOWNPIPES - **NCC PART 7.4**

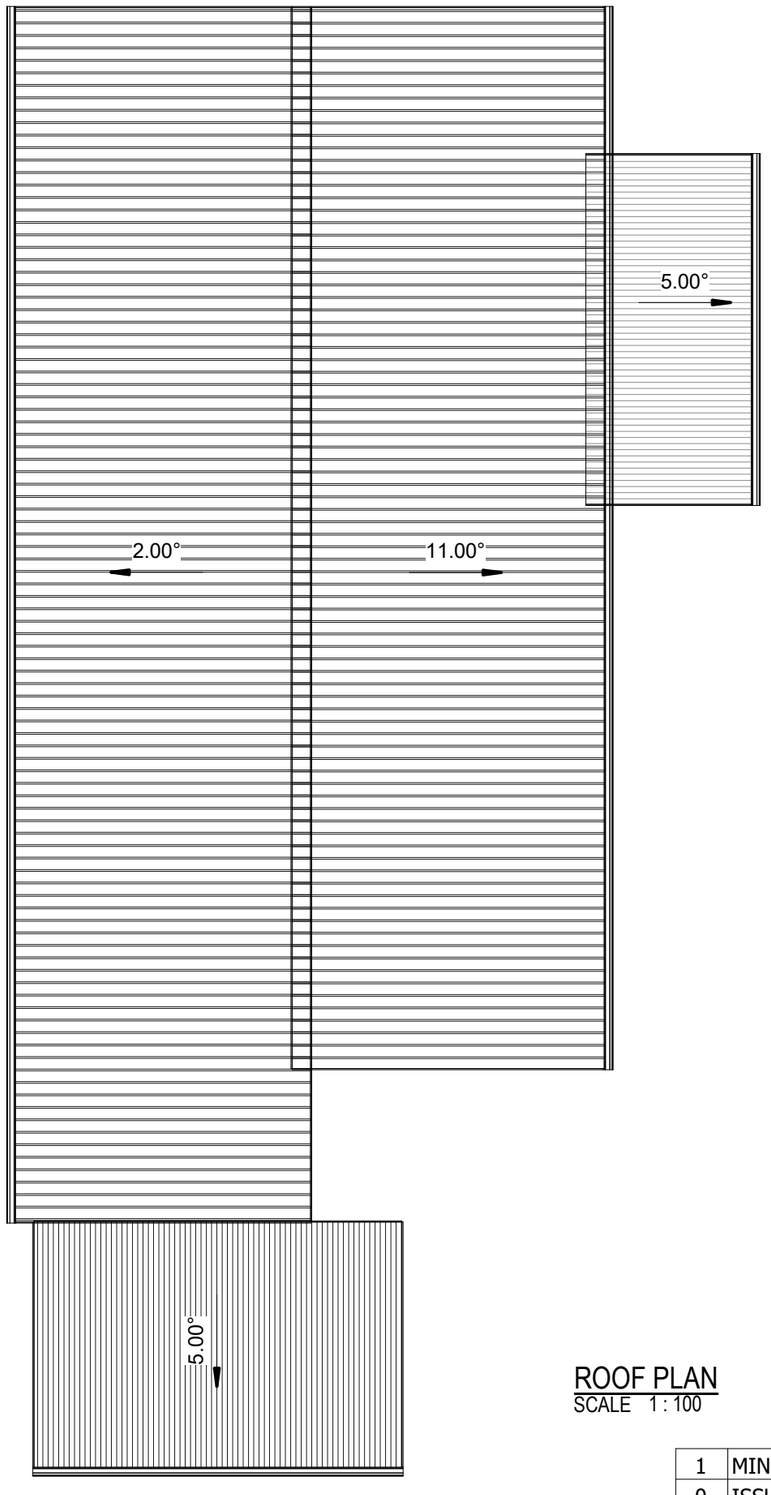
MAX. 12M GUTTER LENGTH PER DOWNPIPE
LOCATED AS CLOSE AS POSSIBLE TO VALLEY GUTTERS
SELECTED IN ACCORDANCE WITH TABLES 7.4.4a TO 7.4.4c

OVERFLOW MEASURES
IN ACCORDANCE WITH 7.4.7 AND TABLE 7.4.4a & 7.4.4b AND FIG. 7.4.7a TO 7.4.7d
END STOP WEIR
100mm MIN CLEAR WIDTH. INSTALLED 25mm BELOW FASCIA TOP
NOT SUITABLE WHEN END-STOP ABUTS WALL
INVERTED NOZZLE
INSTALLED WITHIN 500mm OF GUTTER HIGH POINT
100x50mm MIN. NOZZLE SIZE - MIN. 25mm BELOW FASCIA TOP
FRONT FACE WEIR
200mm CLEAR WIDTH - 20mm CLEAR HEIGHT
INSTALLED MIN. 25mm BELOW FASCIA TOP
RAINHEAD
75mm DIA HOLE IN OUTWARD FACE - CENTERLINE 100mm BELOW FASCIA TOP

GUTTERS - **NCC PART 7.4**

FALL NOT LESS THAN 1:500
SUPPORT BRACKETS FIXED AT STOP ENDS, CORNERS AND MAX. 1.2m CENTRES
VALLEY GUTTERS TO BE DIMENSIONED IN ACCORDANCE WITH TABLE7.4.4c
HAVE A ROOF PITCH AND SIDE ANGLE OF NOT LESS THAN 12.5deg
HAVE A MIN. FREEBOARD OF NOT LESS THAN 15mm

OVERFLOW MEASURES
IN ACCORDANCE WITH 7.4.6 AND TABLE 7.4.4a & 7.4.4b AND FIGURE 7.4.6a & 7.4.6b
FRONT FACE SLOTTED GUTTER
MIN SLOT OPENING 1200mm/ GUTTER m
LOWER EDGE OF SLOT INSTALLED 25mm BELOW FASCIA TOP
CONTROLLED BACK GAP
PERMANENT MIN. 10mm SPACER BETWEEN GUTTER & FASCIA
ONE PER BRACKET - MIN. 50mm WIDE
GUTTER INSTALLED MIN. 10mm BELOW FASCIA TOP



ROOF PLAN
SCALE 1 : 100

ROOF CLADDING. NCC PART 7.2 SHEET ROOFING

COLORBOND 'CUSTOM ORB' METAL SHEETING INSTALLED IN ACCORDANCE WITH THIS PART, AS 1562.1 AND MANUFACTURERS RECOMMENDATIONS.

COLORBOND 'TRIMDEK' METAL SHEETING INSTALLED IN ACCORDANCE WITH THIS PART, AS 1562.1 AND MANUFACTURERS RECOMMENDATIONS.

REFER TO LYSAGHT ROOFING & WALLING MANUAL FOR FULL DETAILS ON SHEET INSTALLATION, FIXINGS & FLASHINGS

COLORBOND 'CUSTOM ORB'

- MINIMUM PITCH 5 DEGREES.
- CORROSION PROTECTION IN ACCORDANCE WITH BCA TABLE 3.5.1.1.
- END LAP OF SHEETS 5-15 DEGREES - MINIMUM 200MM.

COLORBOND 'TRIMDEK'

- MINIMUM PITCH 2 DEGREES.
- CORROSION PROTECTION IN ACCORDANCE WITH BCA TABLE 3.5.1.1.
- END LAP OF SHEETS 2-5 DEGREES - MINIMUM 250MM

ABOVE 15 DEGREES - MINIMUM 150 MM.

- RIDGE LINE VALLEY TO BE TURNED UP (STOP ENDED).
- FASTENERS TO BE MADE OF COMPATIBLE MATERIAL WITH ROOFING MATERIAL.
- CREST FIXINGS OF END SPANS @ EVERY SECOND RIB AND INTERNAL SPANS @ EVERY THIRD RIB.
- WHERE POSSIBLE SHEETS TO BE LAID WITH SIDE LAPS FACING AWAY FROM PREVAILING WEATHER.
- REFLECTIVE FOIL INSULATION TO BE FITTED TO UNDERSIDE OF SHEETS.

R3.5 INSULATION BATTS TO ROOF SPACE ABOVE CEILING LINING.

RECOMMENDED FIXINGS FOR SEVERE EXPOSURE CONDITIONS TO AS 3566

USE CLASS 4 MATERIALS FOR SEVERE EXPOSURE & STAINLESS STEEL FOR VERY SEVERE COASTAL ENVIRONMENTS.

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INSULATION
PROVIDE THERMAL INSULATION IN ACCORDANCE WITH THE FOLLOWING

CEILING
R5 "ROCKWOOL" BULK INSULATION OR R5 GLASSWOOL BATTS BETWEEN CEILING JOISTS WITH UNDER ROOF COMPOSITE FOIL & R1.5 BLANKET

EXTERNAL WALLS
'TYVEK' HOUSE WRAP (OR SIMILAR) TO EXTERNAL FACE R2.5 GLASSWOOL BATTS BETWEEN STUDS

SUB FLOOR
85mm R2.5 POLYSTYRENE BETWEEN JOISTS

NOTE: CERTIFICATE OF COMPLIANCE TO BE PROVIDED BY THE PERSON ENGAGED TO INSTALL INSULATION TO WALLS AND CEILING AND COPY OF SAME TO BE FORWARDED TO THE BUILDING SURVEYOR.

WALL FRAMING
ALL TIMBER FRAMING GENERALLY IS TO COMPLY WITH THE REQUIREMENTS OF AS1684 [RESIDENTIAL TIMBER FRAMED CONSTRUCTION} & THE BCA CODE PART 3.4.3
WALL FRAMING TO BE MGP10 RADIATA PINE.
COMMON STUDS - 90x35 @ 450 CRS.
NOGGINGS - 90x35
OPEN STUDS - 90x35
TOP & BOTTOM PLATES - 90x35
BRACING TO AS 1684 & NCC CODE

SLABS & FOOTINGS
ALL CONCRETE PREPARATION INCLUDING EXCAVATIONS & PLACEMENT OF REINFORCEMENT IS TO BE SEEN & APPROVED BY COUNCIL BUILDING INSPECTOR AND/OR ENGINEER PRIOR TO POURING ANY CONCRETE. REFER TO ENGINEERS DRAWINGS FOR FOOTING & CONCRETE SLAB DETAILS. REFER TO SOIL REPORT FOR CLASSIFICATION & SITE MAINTENANCE REQUIREMENTS.

EXTERNAL CLADDING

EXTERNAL WALL CLADDING	REFER ELEVATIONS
SUB FLOOR	REFER ELEVATIONS

WINDOWS
COLOURED ALUMINIUM WINDOW FRAMES.
AWNING & HORIZONTAL SLIDING SASHES, REVEALS AND TRIMS TO OWNERS SPECIFICATIONS ALL FIXINGS AND FLASHING TO MANUFACTURERS RECOMMENDATIONS
REFER AS 1288 & CURRENT NCC STANDARDS.

PLASTER
LINE WALLS AND CEILINGS INTERNALLY WITH 10mm PLASTERBOARD SHEETING. SQUARE SET MOULDING TO CEILING JUNCTION WITH WALL.
PLASTERBOARD LININGS TO WET AREAS TO BE "VILLABOARD", W.R. BOARD OR OTHER APPROVED WATERPROOF LINING

WET AREAS
WATERPROOFING OF WET AREAS WITHIN THE DWELLING IE: SHOWERS, BATHROOMS WATERPROOFED IN ACCORDANCE WITH BCA PART 3.8.1.1 TO 3.8.1.27 INCLUSIVE AND FIG NOS 3.8.1.5 TO 3.8.1.16 INCLUSIVE.
AND TABLE 3.8.1.1

EAVES
OVERHANG ROOFS 300mm WHERE ROOFS OVERHANG LINE WITH FLEX BOARD SHEETING IN ACCORDANCE WITH AS 1684.2 7.2.24

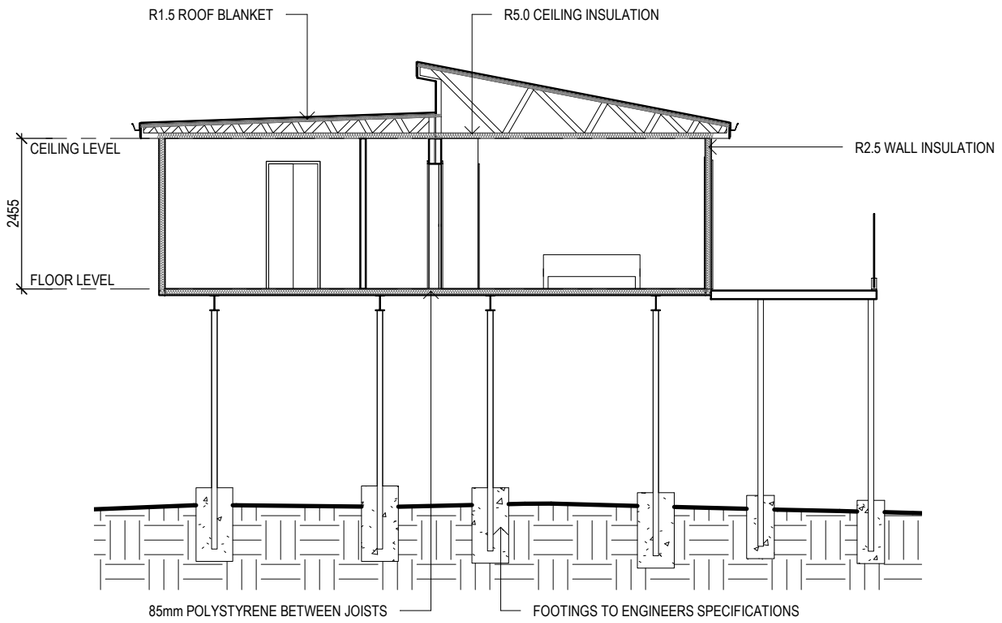
FASCIA
COLORBOND PREFORMED METAL FASCIA AND GUTTER INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. COLOUR TO OWNERS SPECIFICATIONS.

ROOF FRAMING
COLORBOND CUSTOM ORB, COLOUR TO OWNERS SPECIFICATIONS APPROVED ROOF TRUSSES INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. ALL TRUSS FIXING DETAILS TO BE ADHERED TO. FIX TRUSSES TO TOP PLATES WITH TRIP-L-GRIP CONNECTORS. PROVIDE DIAGONAL BRACING FIXED TO TOP CHORDS AT A MAX ANGLE OF 30° TO RIDGE. ANCHOR STRAP BRACING WITH 6 No 30x1.5 NAILS INTO DOUBLE TOP PLATE. WIND BRACING TO COMPLY WITH NCC

CAPPINGS & FLASHINGS
ALLOW FOR PREFORMED CAPPINGS & FLASHINGS NECESSARY TO ENSURE THE INTEGRITY OF THE ROOF STRUCTURE AGAINST WATER PENETRATION. INSTALL FLASHINGS TO ROOF VENTS, FLUES ETC. ALTERNATIVELY USE "DEKTITE" OR SIMILAR FITTINGS TO ROOF PENETRATIONS

GUTTERS
INSTALL SELECTED COLORBOND QUAD GUTTERS OR AS NOMINATED BY THE OWNER, LAP GUTTERS 75MM IN THE DIRECTION OF FLOW, RIVET & SEAL WITH AN APPROVED SILICONE SEALANT. VALLEY GUTTERS TO BE 450 WIDE COLORBOND STEEL TO MATCH ROOF. LAP 150MM UNDER ROOF CLADDING AND TURN UP ON BOTH SIDES.
LAP 150MM IN DIRECTION OF FLOW

DOWNPIPES
DOWNPIPES TO BE DN90 PVC PAINTED TO MATCH GUTTERING. FIX WITH WALL BRACKETS @ 1200CC BEGINNING AT DOWNPIPE ELBOW.
MAXIMUM CENTRES FOR GUTTERS TO BE 12000



Section 1
SCALE 1 : 100

FIGURE 2 - EAVES DETAILS : TRUSS & IRON ROOF BUSH FIRE MESH WHEN REQUIRED TO AS3959

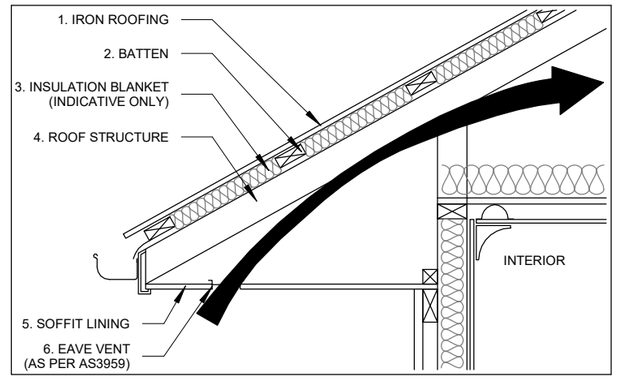


FIGURE 4 - RIDGE DETAILS : SKILLION & IRON ROOF BUSH FIRE MESH WHEN REQUIRED TO AS3959

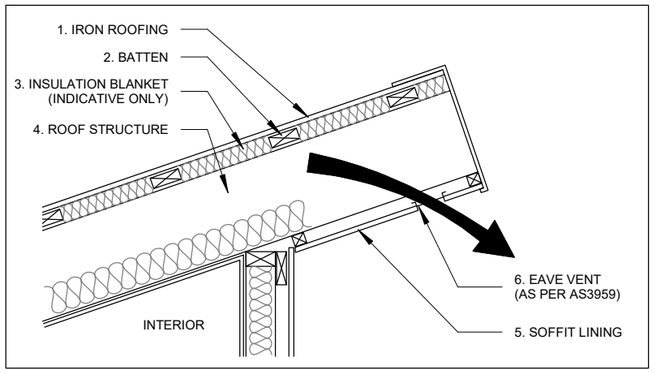
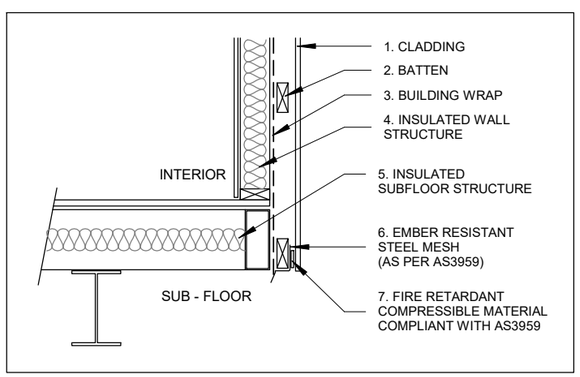


FIGURE 8 - EXTERNAL WALL
VENTED CLADDING SYSTEM - SUSPENDED TIMBER FLOOR
BUSHFIRE MESH WHEN REQUIRED TO AS3959



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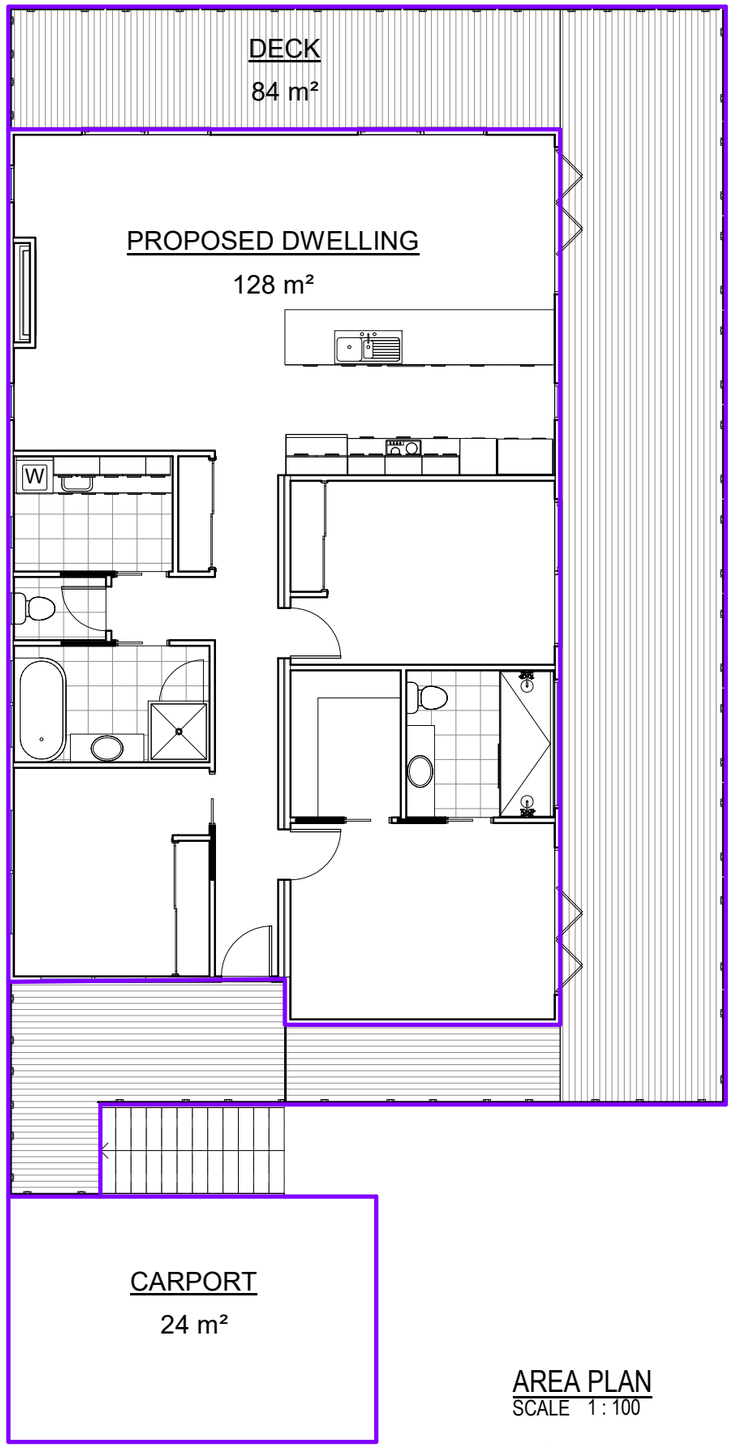

AREA PLAN
SCALE 1 : 100

Area Schedule (Gross Building)		
Name	Area	Area (sq)
PROPOSED DWELLING	128.14 m²	13.79
CARPORT	24.00 m²	2.58
DECK	83.54 m²	8.99
	235.68 m²	25.37

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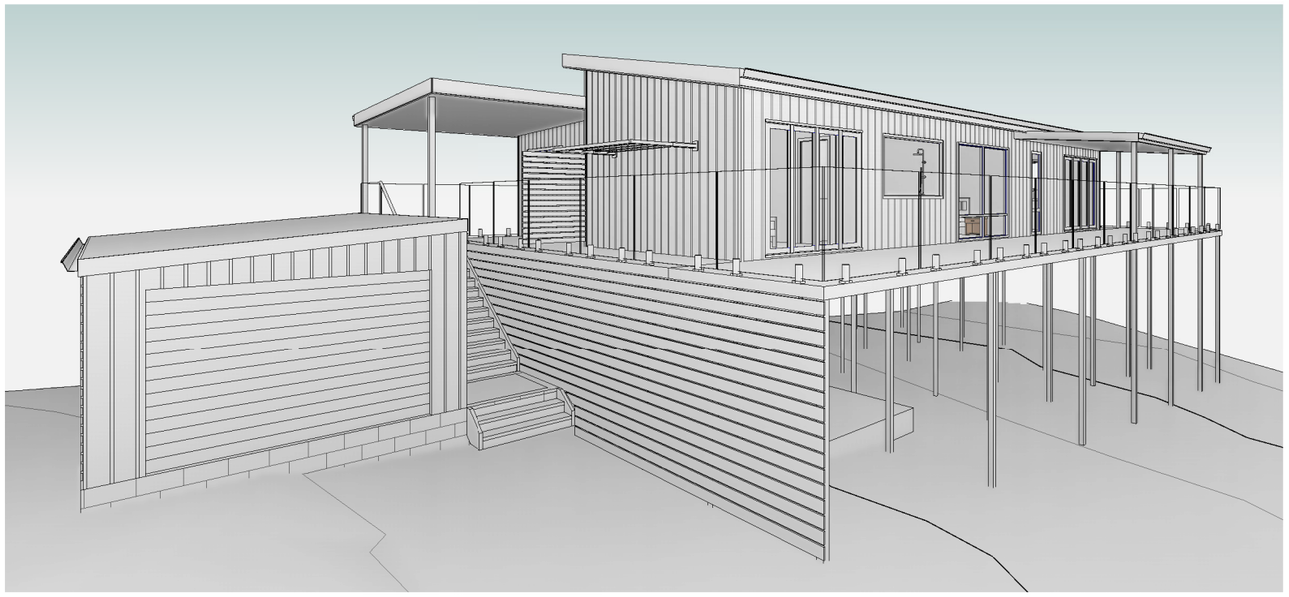

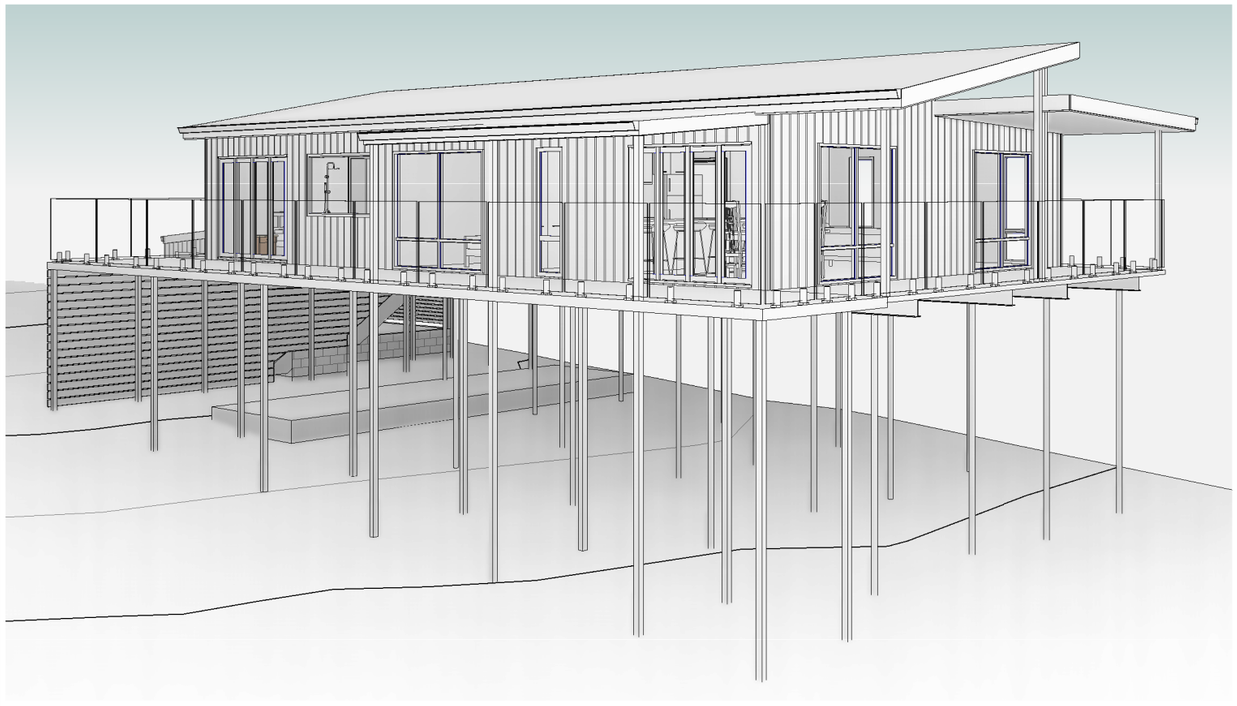

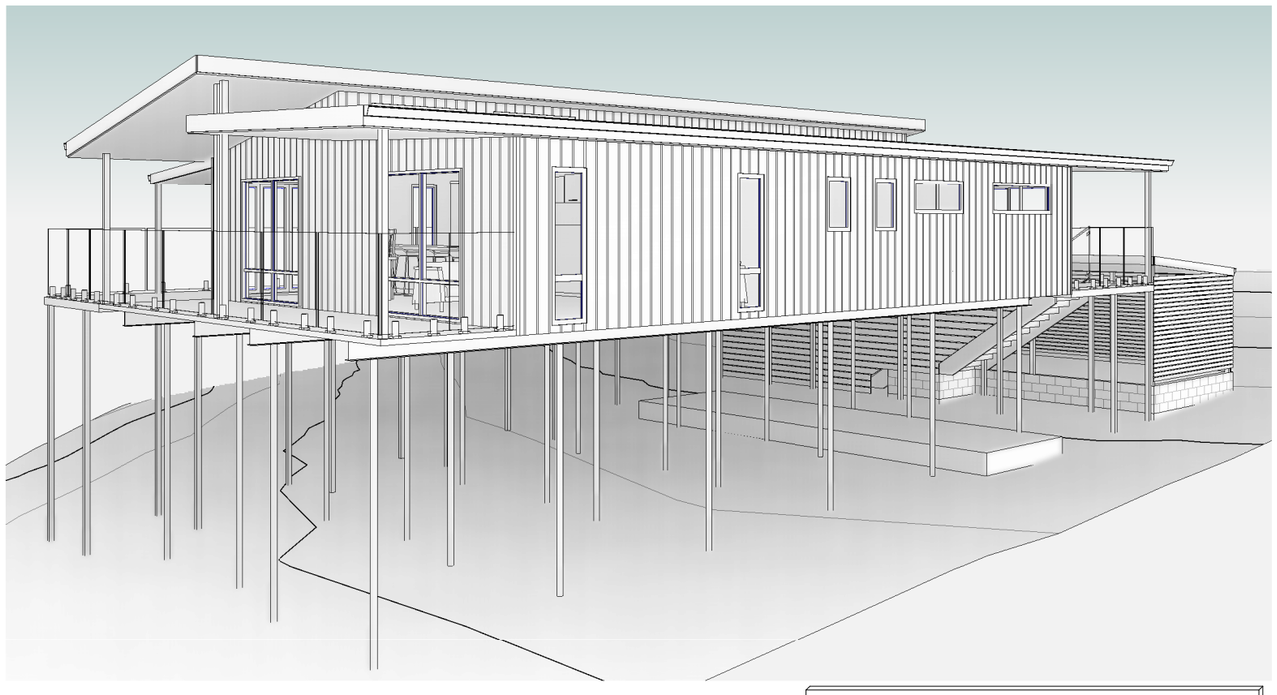

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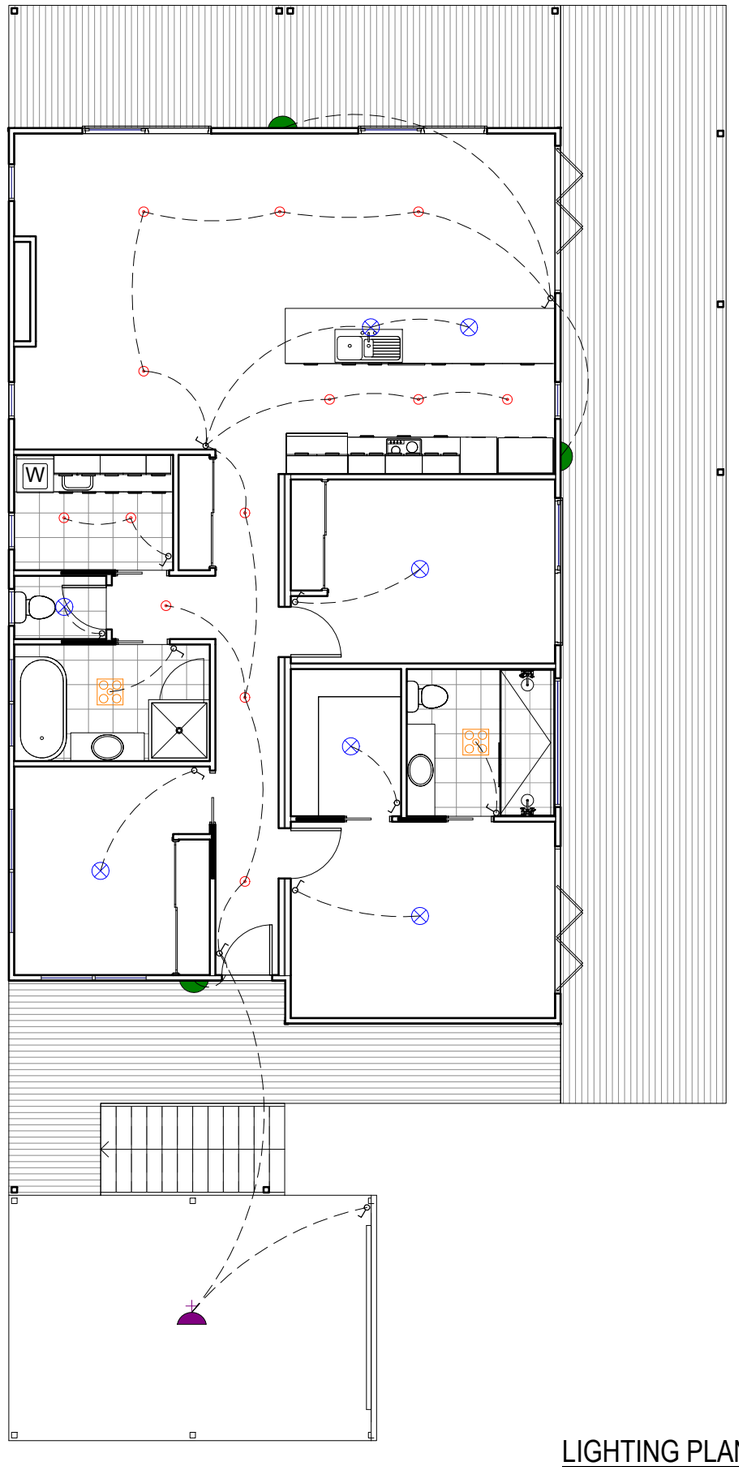

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LEGEND

- PENDANT BY CLIENT
- LED DOWN LIGHT
- WALL MOUNTED LIGHT
- WALL MOUNTED BUNKER LIGHT
- EXHAUST FAN
- ONE WAY SWITCH
- IXL 3 IN 1 HEAT/FAN/LIGHT TO BATHROOMS PROVIDE 4 No. HEAT GLOBES. SELECTED BY OWNER & INSTALLED BY BUILDER
- FLUORESCENT SENSOR LIGHT
- TWINSPOT SENSOR LIGHT

BUILDER TO CONSULT WITH CLIENT/S ABOUT ALL ELECTRICAL WORK PRIOR TO COMMENCING CONSTRUCTION. ALL LIGHTING SHOWN IS INDICATIVE ONLY AND TO BE REVIEWED AND APPROVED WITH BUILDER.

MAXIMUM 5W/m² LIGHTING FOR INTERNAL USE
MAXIMUM 4W/m² LIGHTING FOR EXTERNAL USE
IN ACCORDANCE WITH NCC 3.12.5.5

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LIGHTING PLAN
SCALE 1 : 100

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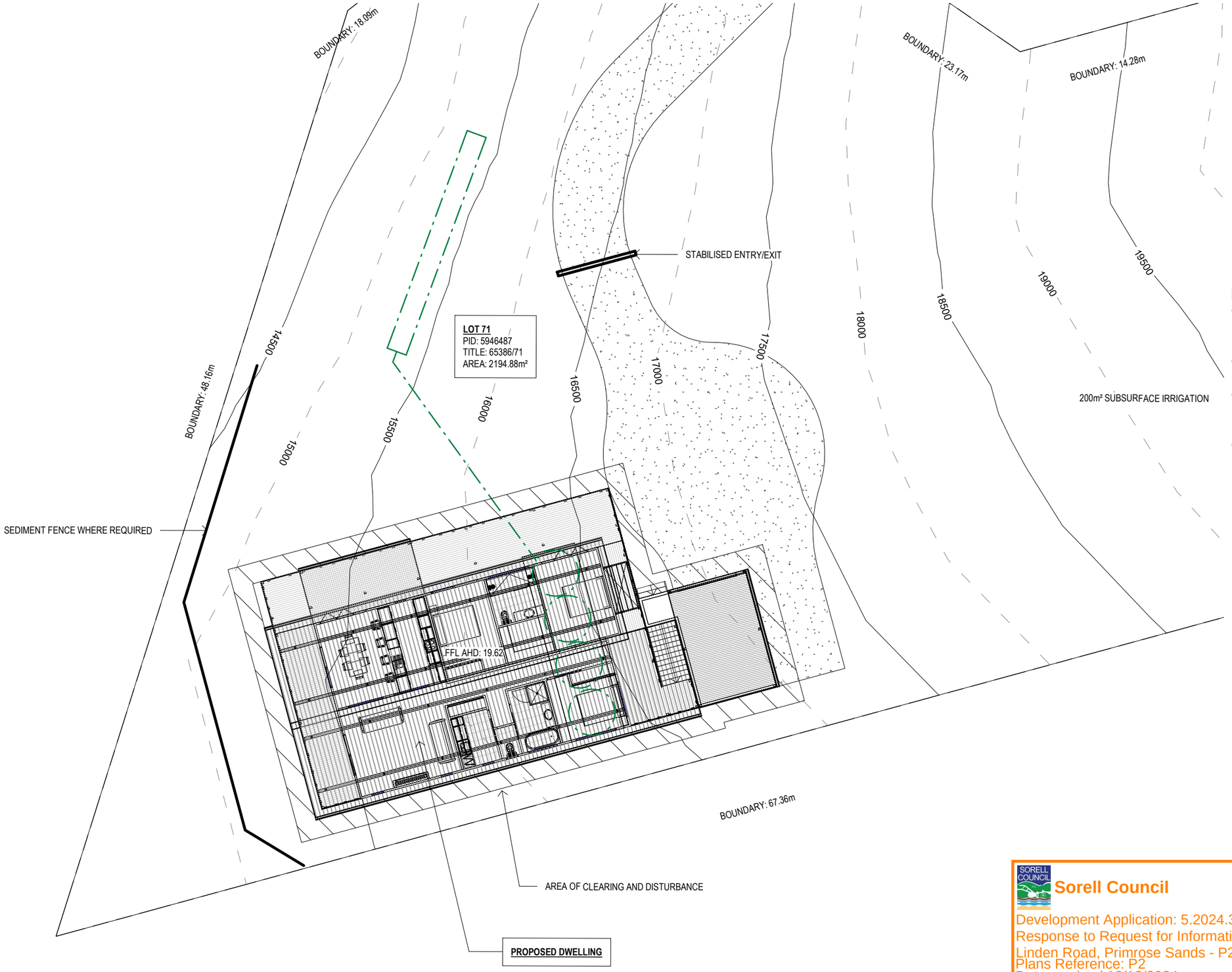
Ph: 03 6393 1013
admin@tasbuilthomes.com.au



ENGINEERING PLUS
BUILDING DESIGN
PROJECT MANAGEMENT
CIVIL/STRUCTURAL ENGINEERING

NOTE:

- ALL RUNOFF AND SEDIMENT CONTROL STRUCTURES TO BE INSPECTED EACH WORKING DAY AND MAINTAINED IN A FUNCTIONAL CONDITION BY BUILDER/OWNER
- ALL BUILDING MATERIALS TO BE STORED ABOVE SEDIMENT FENCE
- ALL STORMWATER FROM DWELLING TO BE CONNECTED TO STORMWATER SYSTEM IMMEDIATELY WHEN ROOF IS ERECTED
- DRIVEWAY AND PATHS TO BE OF ALL WEATHER USE CONSTRUCTION (COMPACTED GRAVEL OR SIMILAR)

NOTE:
ALL THOSE INVOLVED IN THE CONSTRUCTION PROCESS SHOULD BE AWARE THAT EVERYONE HAS A RESPONSIBILITY TO PREVENT POLLUTION. IF AN ACCIDENT CAUSING POLLUTION OCCURS, YOU ARE REQUIRED BY LAW TO NOTIFY THE SITE SUPERVISOR. IF THE SITE SUPERVISOR CANNOT BE CONTACTED, WORKERS SHOULD IMMEDIATELY NOTIFY THE LOCAL COUNCIL SO THEY CAN WORK WITH YOU TO MINIMISE ANY HARM TO THE ENVIRONMENT.

FOLLOW THE PRACTICES OUTLINED IN THIS PLAN TO MINIMISE EROSION AND SEDIMENT RUNOFF FROM THE SITE. THIS WILL ENSURE ALL LEGAL REQUIREMENTS ARE MET AND WILL HELP PROTECT OUR WATERWAYS

Sorell Council
Development Application: 5.2024.322.1 - Response to Request for Information - 3 Linden Road, Primrose Sands - P2.pdf
Plans Reference: P2
Date received:13/12/2024

ISSUED FOR CONSTRUCTION

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SOIL & WATER MANAGEMENT PLAN
SCALE 1 : 200

Rev:	Amendment:	Date:	Int:
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0	ISSUED FOR CONSTRUCTION	07.10.24	O.J
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D	DWELLING RELOCATION	26.07.24	O.J
C	DECOR AMENDMENTS	03.07.24	O.J
B	DWELLING RELOCATION	28.06.24	O.J

Date Drawn: 30.05.24
Drawn: O. Jones
Checked: O. Jones
Approved: J. Pfeiffer
Scale: As Shown @ A3

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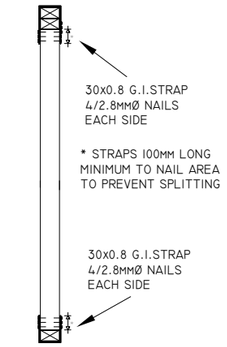
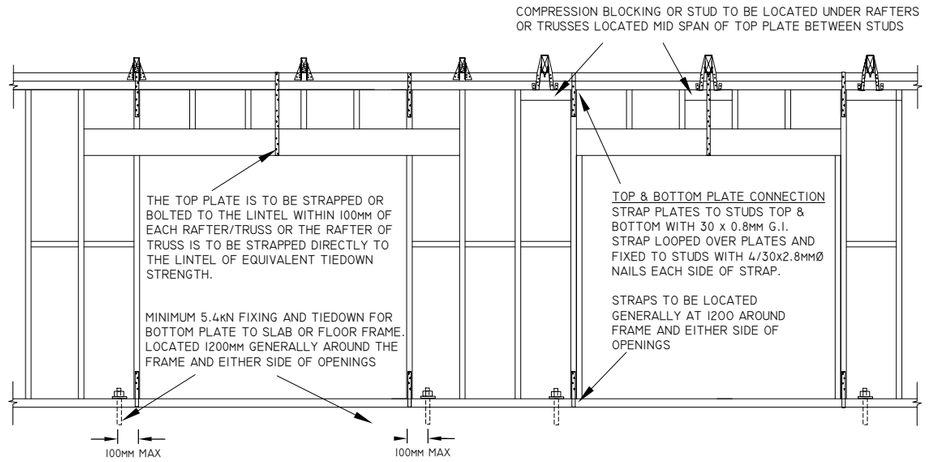
Accreditation No: CC2211T

Drawing No: 1012024 A12 / A22
Rev 1



PLATES TO STUDS

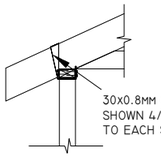
SCALE: NTS AS 1684.2 - JOINT GROUP JD4

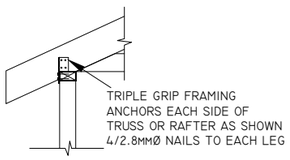


WALL FRAME STRAPS & TIEDOWNS

SSCALE: NTS AS 1684.2 - JOINT GROUP JD4

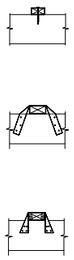
SPECIFIC TIEDOWNS (JD4)	
DESIGN WIND CLASSIFICATION	N3 (41m/s)
TRUSS SPAN	12000 Max
TRUSS SPACING	900 Max
BATTEN SPACING	450 Max
ROOF MATERIAL	SHEET STEEL
BOTTOM PLATE TO SLAB AT TIEDOWN POINTS	1-100mm M10 MASONRY ANCHOR WITH BROAD HEAD WASHER TO EACH END OF BRACING UNIT OR CHEMSET 10mm THREADED ROD WITH BROADHEAD WASHER AND NUT TO EACH END OF BRACING UNIT
BOTTOM PLATE TO SLAB INTERNAL WALLS CONNECTION FOR TYPE 'A' BRACING	1-100mm M10 DYNABOLTS WITH BROAD HEAD WASHER @ 1200 CTRS OR 1-75mm MASONRY NAIL @ 1200Max. CTRS
EXTERNAL & INTERNAL (LOAD BEARING) WALLS CONNECTION FOR TYPE 'B' BRACING	1-100mm M10 MASONRY ANCHOR WITH BROAD HEAD WASHER @ 1200 CTRS OR CHEMSET 10mm THREADED ROD WITH BROADHEAD WASHER AND NUT @ 1200CTRS
FLOOR JOISTS TO BEARER	MIN. 2-75x3.05mm SKEW NAILS 30x0.8mm G.I. STRAP 4-30z2.8mmØ NAILS EACH END OR 2 FRAMING ANCHORS
BOTTOM PLATE TO TIMBER FLOOR FRAME GENERALLY	75mm No.14 TYPE17 SCREW WITH BROAD HEAD WASHER @ 1200 CTRS Max GENERALLY
BOTTOM PLATE TO TIMBER FLOOR FRAME AT BRACING UNITS	1-M10 BOLT WITH BROAD HEAD WASHER THROUGH PLATE, JOIST & BEARER AT EACH END OF BRACING UNIT
TOP & BOTTOM PLATES TO STUDS	30 x 0.8mm G.I. LOOPED STRAP @ 1200 Max CTRS WITH 6/30x2.8mmØ NAILS EACH END OF STRAP
RAFTERS OR TRUSS TO TOP PLATE OR BEAM	30 x 0.8mm G.I. LOOPED STRAP WITH 4/30 x 2.8mmØ NAILS EACH END OR 2 FRAMING ANCHORS 4/30x2.8mmØ NAILS EACH LEG
LINTELS & PLATES TO STUDS AT EACH END OF OPENING	30 x 0.8mm G.I. LOOPED STRAP WITH 6/30 x 2.8mmØ NAILS EACH END & 1/M12 BOLT TO BOTTOM PLATE TO FLOOR AT EACH SIDE OF OPENING
LINTELS & TOP PLATES OVER SPAN OF OPENING	30 x 0.8mm G.I. LOOPED STRAP @ 1200 CTS WITH 8/30 x 2.8mmØ NAILS EACH SIDE OR 1/M12 BOLT THROUGH TOP PLATE & LINTEL
RAFTERS OR TRUSSESS TO TOP PLATES	EACH RAFTER OR TRUSS 30 x 0.8mm G.I. LOOPED STRAP / CYCLONE STRAP WITH 8/30 x 2.8mmØ NAILS EACH SIDE OR 1 FRAMING ANCHORS EACH SIDE WITH 4/2.8mmØ NAILS EACH LEG.
ROOF BATTENS TO TRUSSESS OR RAFTERS	75 LONG NO. 14, TYPE 17 BATTEN SCREW OR 1 FRAMING ANCHOR WITH 4/2.8mmØ NAILS EACH LEG.
OTHER	REFER TO AS1684.2





RAFTER/TRUSS TO TOP PLATE

SCALE: NTS AS 1684.2 - JOINT GROUP JD4



ROOF BATTEN - UPLIFT CAPACITY 6.0kN:
- 38x75 I/ 90 No14 TYPE 17 BATTEN SCREW
- 38x50 I/100 No14 TYPE 17 BATTEN SCREW
- 50mm PENETRATION INTO RECEIVING MEMBER
- 2 SCREWS PER FIXING FOR 75mm WIDE BATTEN

ROOF BATTEN - UPLIFT CAPACITY As Shown:
- 30x0.8mm G.I. STRAP WITH 3/2.8mmØ NAILS EACH END OF STRAP - UPLIFT CAPACITY 4.7kN
- 30x0.8mm G.I. STRAP WITH 4/2.8mmØ NAILS EACH END OF STRAP - UPLIFT CAPACITY 5.9kN

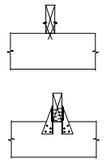
ROOF BATTEN - UPLIFT CAPACITY 5.9kN:
- 2 FRAMING ANCHORS 4/2.8mmØ NAILS TO EACH LEG

ROOFING BATTEN TO RAFTERS

SCALE: NTS AS 1684.2 - TABLE 9.25 JOINT GROUP JD4

BATTEN SPACING - 900mm MAXIMUM TRUSS/RAFTER SPACING - 1200mm MAXIMUM

FLOOR JOISTS TO BEARER:
- G.I. JOIST HANGER WITH 4 WINGS AND 2.8mmØ NAILS EACH WING. UPLIFT CAPACITY:
- 3 NAILS EACH WING 4.7kN
- 4 NAILS EACH WING 5.9kN
- 5 NAILS EACH WING 7.1kN
- 6 NAILS EACH WING 8.4kN

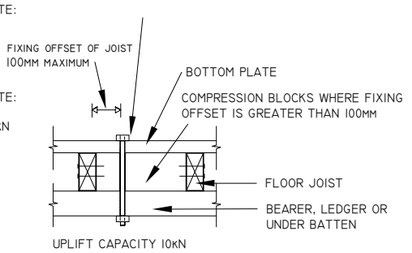


FLOOR JOISTS TO BEARER OR TOP PLATE:
- 2/75 x 3.05mmØ NAILS UPLIFT CAPACITY 1.2kN MINIMUM

FLOOR JOISTS TO BEARER OR TOP PLATE:
- 2 FRAMING ANCHORS WITH 4/2.8mmØ NAILS EACH LEG UPLIFT CAPACITY 4.7kN

FLOOR JOISTS TO BEARERS

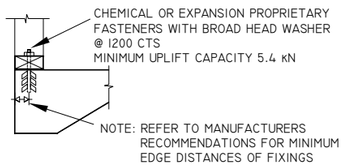
SCALE: NTS AS 1684.2 - TABLE 9.27 JOINT GROUP JD4



UPLIFT CAPACITY 10kN

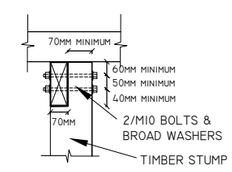
BOTTOM PLATE TO TIMBER FLOOR FRAME

SCALE: NTS AS 1684.2 - JOINT GROUP JD4

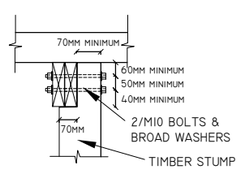


BOTTOM PLATE TO CONCRETE SLAB

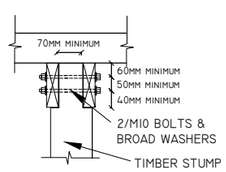
SCALE: NTS AS 1684.2 - JOINT GROUP JD4



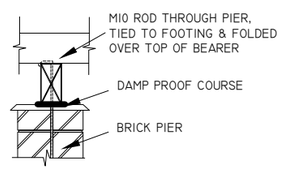
TIMBER STUMP
SINGLE BEARER
UPLIFT CAPACITY 12kN



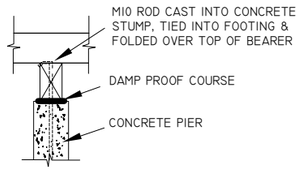
TIMBER STUMP
DOUBLE BEARERS
(NAIL LAMINATED)
UPLIFT CAPACITY 12kN



TIMBER STUMP
DOUBLE BEARER
UPLIFT CAPACITY 12kN



BRICK PIER
UPLIFT CAPACITY 12kN MINIMUM



CONCRETE PIER
UPLIFT CAPACITY 12kN MINIMUM

BEARERS TO PIERS & STUMPS

SCALE: NTS AS 1684.2 - JOINT GROUP JD4

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Project: PROPOSED DWELLING
Address: 3 LINDEN ROAD, PRIMROSE SANDS

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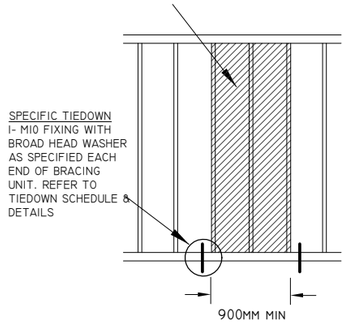
Accredited Building Designer
Designer Name: J.Pfeiffer
Accreditation No: CC2211T

Drawing No: 1012024 A13 / A22
Rev 1

PLYWOOD BRACING - FIX PLYWOOD PANELS WITH MINIMUM 30 x 2.8mmØ GALVANISED FLAT HEAD NAILS OR EQUIVALENT AS SPECIFIED. NAILS TO BE LOCATED A MINIMUM OF 7mm FROM PANEL EDGES



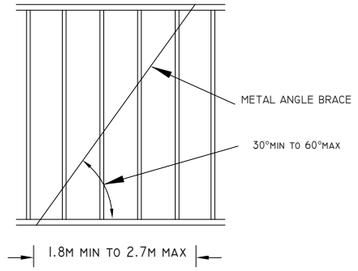
CONSTRUCTION DETAIL FOR 3.0 kN/m PLYWOOD BRACE

MINIMUM PLYWOOD THICKNESS (mm)						FIXING REQUIREMENTS (mm)	
PLYWOOD STRESS GRADES	F8	F11	F14	F27		TOP & BOTTOM PLATE	150
	PLY THICKNESS					VERTICAL EDGES	150
STUD SPACING						INTERMEDIATE STUDS	300
450mm	7	4.5	4	4			
600mm	9	7	6	4.5			
BRACE STRENGTH - 900mm WIDE PLY BRACE = 2.7 kN BRACING CAPACITY 1200mm WIDE PLY BRACE = 3.6 kN BRACING CAPACITY							

CONSTRUCTION DETAIL FOR 6.0 kN/m PLYWOOD BRACE

MINIMUM PLYWOOD THICKNESS (mm)						FIXING REQUIREMENTS (mm)	
PLYWOOD STRESS GRADES	F8	F11	F14	F27		TOP & BOTTOM PLATE	50
	PLY THICKNESS					VERTICAL EDGES	150
STUD SPACING						INTERMEDIATE STUDS	300
450mm	7	6	4	4			
600mm	9	7	6	4.5			
BRACE STRENGTH - 900mm WIDE PLY BRACE = 5.4 kN BRACING CAPACITY 1200mm WIDE PLY BRACE = 7.2 kN BRACING CAPACITY							

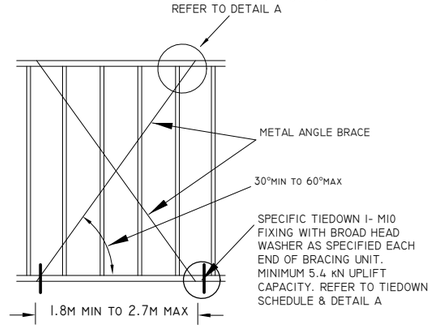
STRUCTURAL PLYWOOD PANEL BRACE (PB) - BRACING CAPACITY 3.4 kN/m & 6.0 kN/m SCALE: NTS



BRACING STRENGTH - 1800mm WIDE BRACE = 1.44kN BRACING CAPACITY
2100mm WIDE BRACE = 1.68kN BRACING CAPACITY
2400mm WIDE BRACE = 1.92kN BRACING CAPACITY
2700mm WIDE BRACE = 2.16kN BRACING CAPACITY

SINGLE DIAGONAL METAL TENSION STRAP BRACE (SMB)
BRACING CAPACITY 0.8 kN/m

TOP & BOTTOM PLATE CONNECTION - STRAPPED TO STUDS TOP & BOTTOM WITH 30 x 0.8mm G.I. STRAP LOOPED OVER PLATES AND FIXED TO STUDS WITH 4/30x2.8mmØ NAILS EACH SIDE OF STRAP. REFER TO DETAIL A

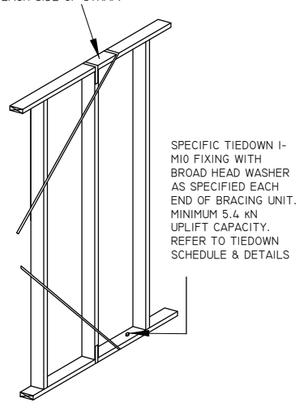


BRACING STRENGTH - 1800mm WIDE BRACE = 5.4kN BRACING CAPACITY
2100mm WIDE BRACE = 6.3kN BRACING CAPACITY
2400mm WIDE BRACE = 7.2kN BRACING CAPACITY
2700mm WIDE BRACE = 8.1kN BRACING CAPACITY

DOUBLE DIAGONAL METAL TENSION STRAP BRACE (DMB)
BRACING CAPACITY 3.0 kN/m

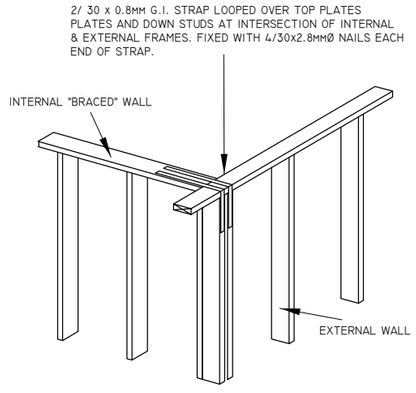
METAL TENSION STRAP BRACE - BRACING CAPACITY 0.8 kN/m & 3.0 kN/m SCALE: NTS

TOP & BOTTOM PLATES - STRAPPED TO STUDS TOP & BOTTOM WITH 30 x 0.8mm G.I. STRAP LOOPED OVER PLATES AND FIXED TO STUDS WITH 4/30x2.8mmØ NAILS EACH SIDE OF STRAP.



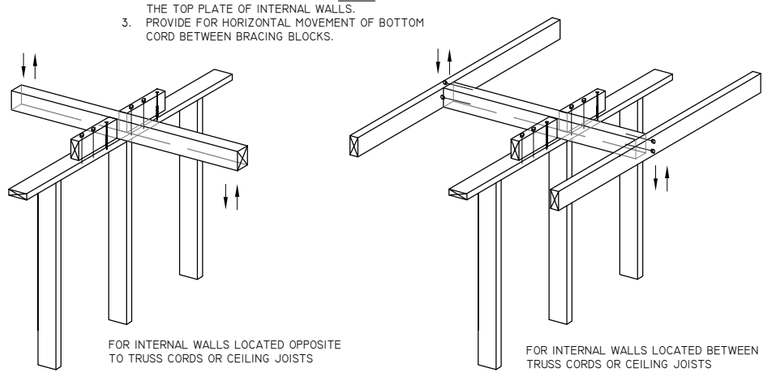
DETAIL A
STRAPPING OF TOP & BOTTOM PLATES AT ENDS OF BRACING UNITS
SCALE: NTS

2/ 30 x 0.8mm G.I. STRAP LOOPED OVER TOP PLATES AND DOWN STUDS AT INTERSECTION OF INTERNAL & EXTERNAL FRAMES. FIXED WITH 4/30x2.8mmØ NAILS EACH END OF STRAP.



FIXING TOP PLATES OF INTERNAL BRACED WALLS TO EXTERNAL WALLS
SCALE: NTS

FOR TRUSSED ROOFS:
1. PROVIDE CLEARANCE BETWEEN TRUSS BOTTOM CORD AND TOP PLATE IN ACCORDANCE WITH TRUSS DESIGN REQUIREMENTS.
2. ENSURE BOTTOM CORD OF TRUSS IS NOT NAIL FIXED TO THE TOP PLATE OF INTERNAL WALLS.
3. PROVIDE FOR HORIZONTAL MOVEMENT OF BOTTOM CORD BETWEEN BRACING BLOCKS.



FIXING TOP PLATES OF INTERNAL BRACED WALLS TO ROOF/CEILING FRAMING
SCALE: NTS

STRUCTURAL WALL BRACING - AS 1684.2 2010 WIND CLASSIFICATION N3

REFER TO AS 1684.2 - 2006 FOR OTHER STRUCTURAL FRAME BRACING DETAILS

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Drawing No: 1012024 A14 / A22
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STAIR CONSTRUCTION - BCA VOLUME 2 PART 3.9.1.

- A STAIR FLIGHT NO MORE THAN 18 RISERS AND NOT LESS THAN 2.
- TREADS TO BE OF SOLID CONSTRUCTION WHERE THEY HAVE A RISE IN EXCESS OF 10M OR CONNECTS MORE THAN 3 STORIES.
- MAXIMUM OF 3 WINDERS IN PLACE OF A QUARTER LANDING OR 6 WINDERS IN PLACE OF A HALF LANDING.
- THE OPEN GAP BETWEEN TREAD, WHERE INSTALLED IS TO BE LESS THAN 125MM.
- LANDINGS TO BE NOT LESS THAN 750MM MEASURED AT 500MM FROM THE INSIDE EDGE OF THE LANDING

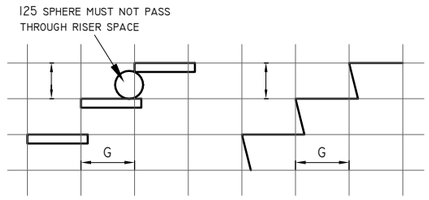
STAIR WIDTH: 900MM WIDE
TREADS WIDTH: 240MM MINIMUM
RISERS HEIGHT: 190MM MAXIMUM

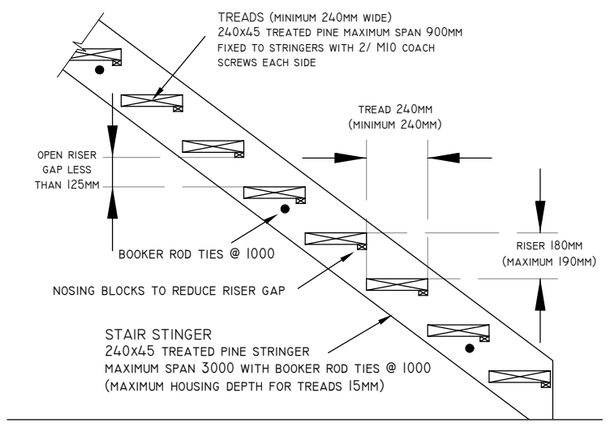
TREADS TO HAVE NON-SLIP FINISH OR A SUITABLE NON-SKID STRIP NEAR THE EDGE OF THE NOSINGS.

CEILING HEIGHT IMMEDIATELY ABOVE STAIR NOSINGS 2.0M MINIMUM

STAIR RISER & GOING DIMENSIONS
BCA VOLUME 2 FIGURE 3.9.1.2

	RISER (R)		GOING (G) TREAD		SLOPE RATIO (2R + G)	
STAIR TYPE	MAX	MIN	MAX	MIN	MAX	MIN
STAIR (OTHER THAN SPIRAL)	190	115	355	240	700	550
SPIRAL	220	140	370	210	680	590

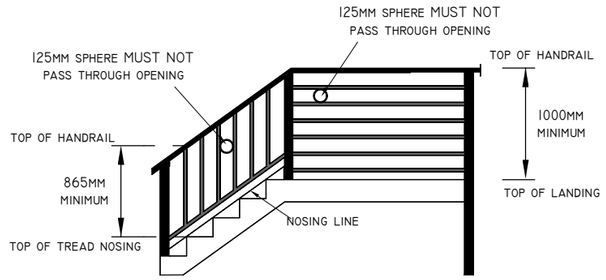




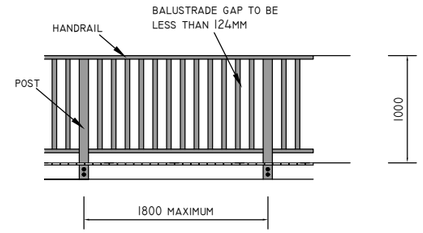
OPEN RISER STAIR CONSTRUCTION DETAIL
SCALE 1:20

BALUSTRADING - BCA VOLUME 2 PART 3.9.2

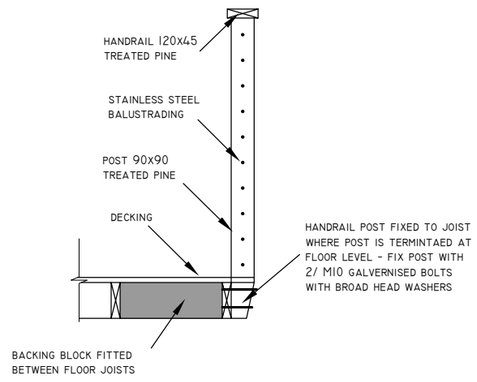
- BALUSTRADE HEIGHT TO BE A MINIMUM OF 1000MM FROM THE FINISHED FLOOR LEVEL AT LANDINGS AND 865MM FROM THE NOSING OF THE STAIR TREAD IMMEDIATELY BELOW.
- OPENINGS IN THE BALUSTRADE TO BE LESS THAT 125MM TO PREVENT A 125MM SPHERE FROM PASSING THROUGH ANY PART OF THE BALUSTRADE.
- VERTICAL BALUSTERS TO BE PREVENTED FROM CLIMBING WHERE STAIR OR LANDING LEVEL IS GREATER IN FALL HEIGHT THAN 4.0 METRES.
- STAINLESS STEEL WIRE BALUSTRADES TO BE INSTALLED IN COMPLIANCE WITH BCA TABLE 3.9.2.1



HANDRAIL CONSTRUCTION DETAIL



TIMBER HANDRAIL & BALUSTRADE
SCALE 1:50



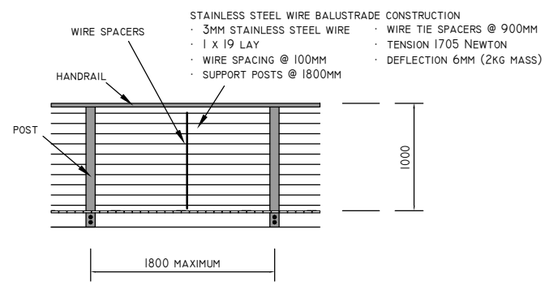
HANDRAIL SECTION DETAIL
SUPPORTS FIXED TO DECK JOISTS
STAINLESS STEEL WIRE BALUSTRADE SHOWN
SCALE 1:20

STAINLESS STEEL WIRE BALUSTRADE CONSTRUCTION DETAILS

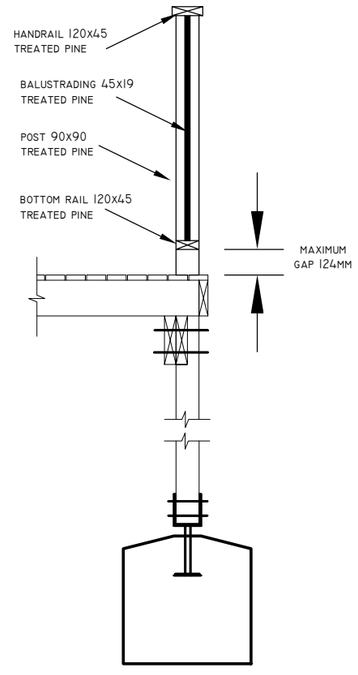
- 3MM STAINLESS STEEL WIRE
- 1 x 19 LAY
- WIRE SPACING @ 100MM
- SUPPORT POSTS @ 900MM
- TENSION 1705 NEWTON
- DEFLECTION 6MM (2KG MASS)

FOR ALTERNATIVE CONSTRUCTION & SPACINGS REFER TO BCA TABLE 3.9.2.1

ALTERNATIVE DESIGNS FOR STAINLESS STEEL BALUSTRADES TO BE PROVIDED TO BUILDING SURVEYOR FOR CERTIFICATION PRIOR TO ANY CONSTRUCTION



TIMBER HANDRAIL &
STAINLESS STEEL BALUSTRADE
SCALE 1:50



HANDRAIL SECTION DETAIL
WITH TIMBER BALUSTRADE
SCALE 1:20

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Sorell Council
Development Application: 5.2024.322.1 - Response to Request for Information - 3 Linden Road, Primrose Sands - P2.pdf
Plans Reference: P2
Date received:13/12/2024

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Project: PROPOSED DWELLING
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Accredited Building Designer
Designer Name: J.Pfeiffer
Accreditation No: CC2211T

Drawing No: 1012024 A15 / A22
Rev 1

WATERPROOFING & WATER RESISTANCE REQUIREMENTS FOR BUILDING ELEMENTS IN WET AREAS - GENERAL

Table F1.7 Waterproofing and water-resistance requirements for building elements in wet areas

Vessels or area where the fixture is installed	Floors and horizontal surfaces	Walls	Wall junctions and joints	Wall / floor junctions	Penetrations
Shower area (enclosed and unenclosed)					
With hob With step-down Without hob or step-down	*Waterproof* floor in *shower area* (including any hob or step-down).	(a) *Waterproof* all walls in *shower area* to a height the greater of— (i) not less than 150 mm above floor substrate; or (ii) not less than 25 mm above maximum retained water level; and (b) *Water resistant* walls in *shower area* to not less than 1800 mm above finished floor level of the shower.	*Waterproof* wall junctions within *shower area*.	*Waterproof* wall / floor junctions within *shower area*.	*Waterproof* penetrations in *shower area*.
With preformed shower base	N/A	*Water resistant* walls in *shower area* to not less than 1800 mm above finished floor level of the shower.	*Waterproof* wall junctions within *shower area*.	*Waterproof* wall / floor junctions within *shower area*.	*Waterproof* penetrations in *shower area*.
Area outside shower area					
For concrete and compressed fibre-cement sheet flooring	*Water resistant* floor of the room.	N/A	N/A	*Waterproof* wall / floor junctions.	N/A
For timber floors including particleboard, plywood and other timber based flooring materials	*Waterproof* floor of the room.				
Areas adjacent to baths and spas					
For concrete and compressed fibre-cement sheet flooring	*Water resistant* floor of the room.	(a) *Water resistant* to a height of not less than 150 mm above the *vessel*, for the extent of the *vessel*, where the *vessel* is within 75 mm of a wall. (b) *Water resistant* all exposed surfaces below *vessel* lip.	*Water resistant* junctions within 150 mm above a *vessel* for the extent of the *vessel*.	*Water resistant* wall / floor junctions for the extent of the *vessel*.	*Waterproof* tap and spout penetrations where they occur in horizontal surfaces.
For timber floors including particleboard, plywood and other timber based flooring materials	*Waterproof* floor of the room.				
Inserted baths and spas	(a) *Waterproof* shelf area, incorporating waterstop under the bath lip. (b) No requirement under bath.	(a) *Waterproof* to not less than 150 mm above lip of bath or spa; and (b) No requirement under bath.	(a) *Waterproof* junctions within 150 mm above bath or spa; and (b) No requirement under bath.	N/A	*Waterproof* tap and spout penetrations where they occur in horizontal surfaces.
Note: Where a shower is above a bath or spa, use requirements for shower.					
Other areas					
Walls adjoining other *vessel*	N/A	*Water resistant* to a height of not less than	*Waterproof* wall junctions where a	N/A	*Waterproof* tap and spout
Vessels or area where the fixture is installed	**Floors and horizontal surfaces**	**Walls**	**Wall junctions and joints**	**Wall / floor junctions**	**Penetrations**
(e.g. sink, basin or laundry tub)		150 mm above the *vessel*, for the extent of the *vessel*, where the *vessel* is within 75 mm of a wall.	*vessel* is fixed to a wall.		penetrations where they occur in surfaces *required* to be *waterproof* or *water resistant*.
Laundries and WCs	*Water resistant* floor of the room.	N/A	N/A	*Water resistant* wall / floor junctions.	*Waterproof* penetration where they occur in surfaces *required* to be *waterproof*
Bathrooms and laundries *required* to provide a floor waste by F1.11.	*Waterproof* floor of the room.	N/A	N/A	*Waterproof* wall / floor junctions.	*Waterproof* penetrations where they occur through the floor.

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FALLS IN FLOOR FINISHES

2.3 REQUIREMENTS FOR FALL

2.3.1 FALLS IN SUBSTRATE

Where a floor waste is required in a wet area, the membrane shall be applied to a substrate with a minimum 1:100 fall towards the floor waste.
NOTE: This requirement is intended to avoid ponding in the substrate.

2.3.2 FALLS IN SHOWER AREA FLOOR FINISHES (CATEGORY 1)

The fall to the floor waste in a shower area shall be a minimum of 1:80.

2.3.3 FALLS IN WET AREA FLOOR FINISHES ADJACENT TO SHOWER AREA WHERE THERE IS A FLOOR WASTE (CATEGORY 2)

Where a required floor waste is installed adjacent to a shower area, the minimum fall to the watse shall be 1:100
NOTE: Surface water should drain to the waste. Water should not exit the wet area at doorway thresholds under normal use. Where surface falls are provided in Category 2 area to a Category 1 shower waste, the whole of the Category 2 floor area should have falls provided.

2.3.4 FALLS IN WET AREA FLOOR FINISHES WHERE THERE IS NO FLOOR WASTE (CATEGORY 3)

The shower shall be an enclosed shower. There is no requirement for fall in the Category 3 area.
Water shall be retained within the wet area.
NOTE 1: Water retention may be achieved by localized falls away from doors.

2.3.5 WHOLE OF BATHROOM DESIGNED AS AN UNENCLOSED SHOWER

In a whole bathroom designed as an unenclosed shower without a shower screen installed, the floor substrate under the membrane shall have a minimum 1:80 fall.
NOTE 1: If a screed is used, the membrane should be applied on top of the screed.
NOTE 2: For further informaton on accessible bathrooms, refer to AS 1428.1

APPENDIX B

B.1 GENERAL

The primary consideration for falls in floor finishes is to ensure water does not remain on the finished floor in a manner that can adversely affect the heath or amenity of the occupants or deteriorate building elements.

B.2 FACTORS AFFECTING FALLS

The ratio of fall achieved in a floor may vary depending upon -
(a) finished height requirements at doorways;
(b) height of fixtures or fittings;
(c) dimensions of the tiles used: adequate falls become more difficult to achieve as the size of the tiles used increases;
(d) area of the floor to be drained; and
(e) requirements of persons with disabilities.

B.3 FALL RATIOS

Clause 2.3.2 specifies a fall ratio of 1:80 in shower areas.

Where falls flatter than 1:100 are proposed, the effectiveness of the floor drainage should be confirmed to ensure the primary consideration given in Clause B.1 has been met

B.4 DIAGONAL CUTTING OF TILES

Tiles may require diagonal cutting in the area around the waste to achieve the required falls, sufficient drainage and to ensure lipping is kept within the guidelines of AS 3958.1.

B.5 DETERMINATION OF PONDING

When conditions are suitable for drying and all other associated areas have dried, any remaining accumulation of water is deemed ponding. Water retained by surface tension alone should evaporate with 5 hours when local atmospheric conditions are 21°C, 1 013hPa, and 50% relative humidity.

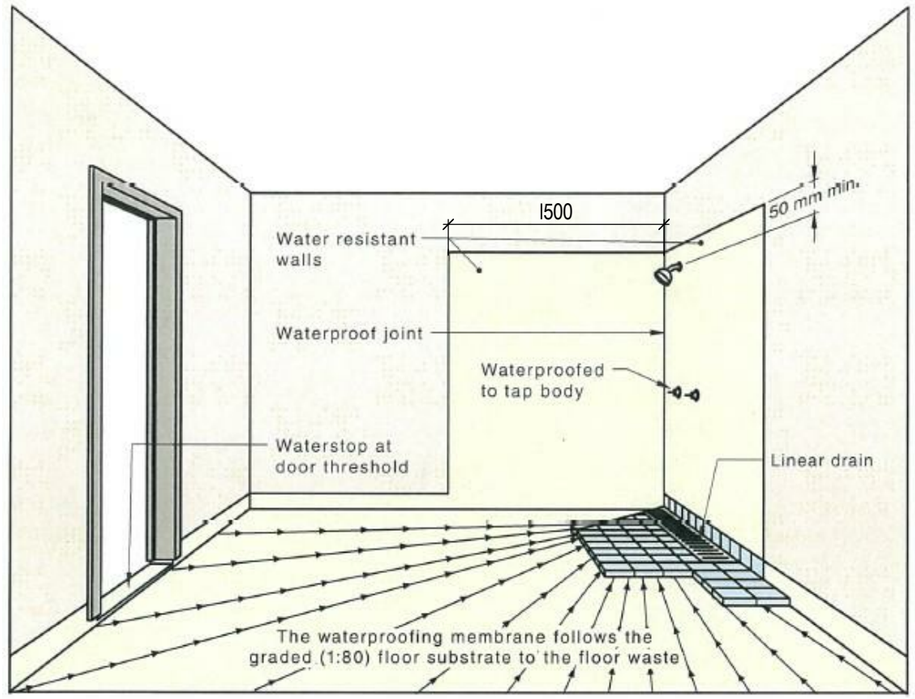

Figure A.6(B) — Whole of bathroom with linear drain

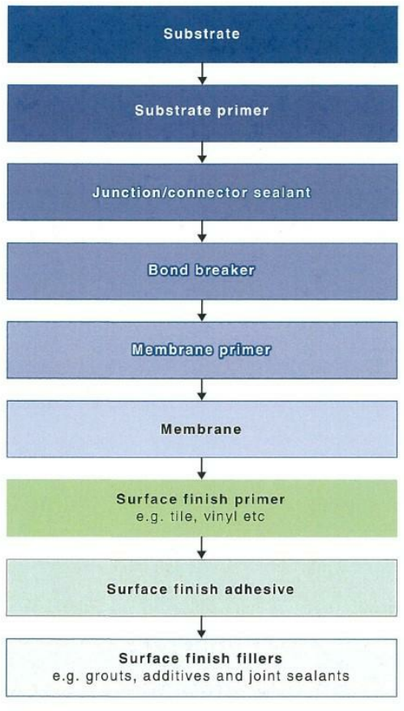

Figure E.1 — Compatibility chain

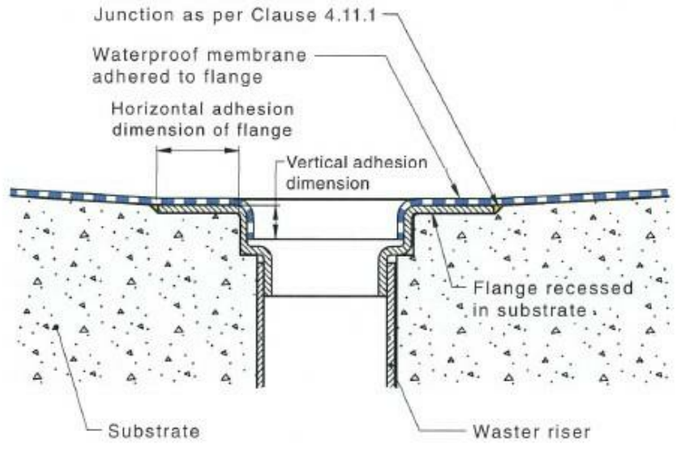

Figure 4.3.1(B) — Typical membrane termination at leak control flange with down leg

FOR FULL INSTALLATION DETAILS REFER TO AUSTRALIAN STANDARD 3740

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WATERPROOFING & WATER RESISTANCE REQUIREMENTS FOR BUILDING ELEMENTS IN WET AREAS - ENCLOSED & UNENCLOSED SHOWERS

SECTION 2: DESIGN

2.1 DESIGN PRINCIPLES

2.1.1 GENERAL

Water shall be retained in a Category 1 area for an enclosed or unenclosed shower.

NOTE 1: For classification of categories of risk for wet areas, see Appendix A.

Where a floor waste is required in a shower area or wet area, water shall drain to that floor waste.

In a Category 2 area, the extent of waterproofing shall be a distance of a minimum of 1500mm from the substrate connection of the shower rose.

2.2 SHOWER CLASSIFICATION

2.2.1 ENCLOSED SHOWER

For an enclosed shower, the shower screen shall be designed and installed to prevent the spread of water from the Category 1 area.

2.2.2 UNENCLOSED SHOWER

An unenclosed shower shall include:

(a) Type 1 -

(i) a frameless shower screen, unless the shower screen is fitted with seals and deflectors, all of which control the spread of water from the shower area; or

(ii) a shower over bath with up to 900mm fixed glass screen.

(b) Type 2 -

(i) a shower area with a curtain;

(ii) a shower over bath with curtain;

(iii) a shower area with no curtain; or

(iv) an area where a shower screen partitions one side of the shower, the entry to the shower is open, and the spray for the rose can still exit the shower past the screen 1500mm

NOTE: Unenclosed shower areas are not suitable for use directly adjacent to exits to wet areas. See Clause 4.8.5 for requirements relating to showers located near exits to wet areas.

SECTION 3: MATERIALS

3.3 MATERIALS

3.4 PREFORMED, PREFINISHED SHOWER BASES AND ENCLOSURES

Resin-based substrates and finishes, materials used in the manufacture of preformed, prefinished shower bases and enclosures shall be such that the finished product is waterproof and is in accordance with AS3588

SECTION 4: INSTALLATION

4.8 WATERSTOPS

4.8.2 WATERSTOPS FOR UNENCLOSED SHOWERS

An unenclosed shower shall incorporate a waterstop finishing at the perimeter of the shower area. This clause sets out requirements for waterstops according to the type of unenclosed shower (see Clause 2.2.2.1) as follows:

(a) Type 1 unenclosed showers - A waterstop shall be placed under the splash restriction device and across the opening of the shower of a Type 1 shower screen.

(b) Type 2 unenclosed showers - The waterstop of a Type 2 shower shall be a minimum of 1500mm from the shower rose connection to the wall or the ceiling.

For Type 1 and 2 unenclosed showers, the waterstop shall have the vertical leg finish flush with the finish surface of the floor and, where the waterstop intersects with or joins a wall, the junction shall be waterproof.

4.8.4 WATERSTOPS FOR ENCLOSED SHOWERS

An enclosed shower shall incorporate a waterstop under the bottom rail of the shower screen and the opening.

4.8.4 WATERSTOPS FOR ENCLOSED SHOWERS WITHOUT HOBS OR SETDOWNS

At the extremity of the shower area -

(a) where a shower screen is to be installed, a waterstop shall be positioned so that its vertical leg will finish a minimum of 5mm above the finished floor level, and;

(b) where the waterstop intersects with a wall or is joined, the junction shall be waterproof.

4.8.5 SHOWERS LOCATED NEAR EXITS TO WET AREAS

Where the extremity of a shower area is located within 200mm of an exit from a wet area, it shall -

(a) be an enclosed shower area as defined in Clause 1.3.31

(b) have one of the following:

(i) A waterstop that finishes a minimum of 5mm above the finished floor level, under the shower screen.

(ii) A hob at the extremity of the shower area

(iii) A step-down of minimum 15mm from the finished floor level at the extremity of the shower area

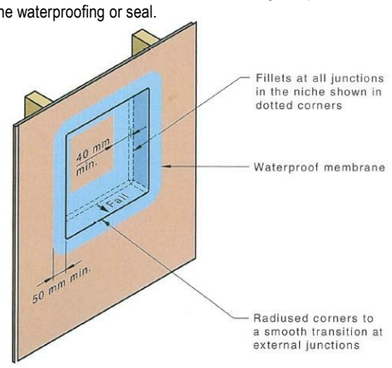
(c) have a vertical waterstop where the shower screen abuts the wall.

NOTE: It is recommended that the floor surface outside the shower area should have fall away from the exit to prevent water escaping from the wet area.

4.12 PENETRATIONS

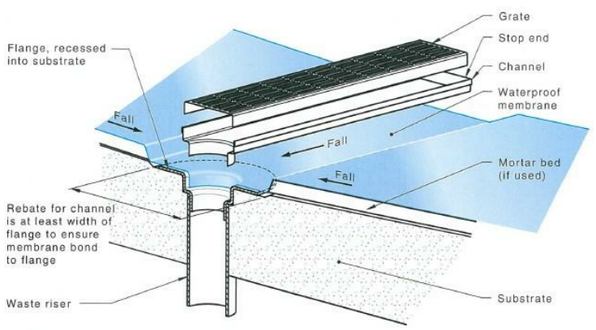
4.12.1 SHOWER AREAS

Penetrations for fixtures such as taps, shower nozzles, recessed soap holders and the like, shall be waterproofed by sealing with pre-formed flange systems or a sealant. When sealing the tap body to the wall, allowance shall be made for the servicing of tap washers or ceramic disks without damaging the waterproofing or seal.



NOTE Bond breaker or fillet to suit the membrane at all internal junctions in the niche shown in yellow.

Figure 4.12.4 — Niche in shower wall framework



NOTE Trim should not restrict substrate drainage at linear drain.

Figure 4.3.2 — Linear drain single outlet centrally located

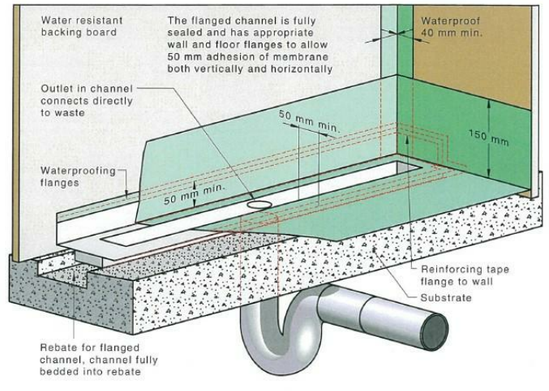


Figure A.6(C) — Custom fabricated flanged channel against a wall

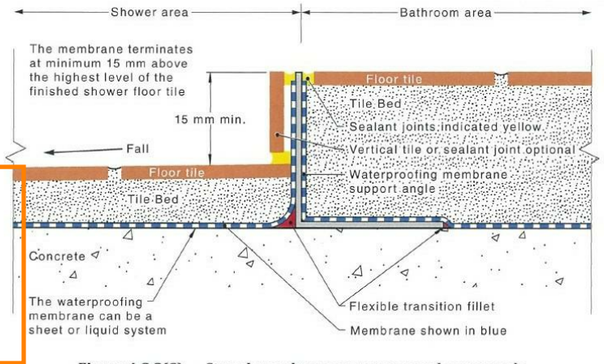


Figure 4.8.2(C) — Step-down shower waterstop and cover angle

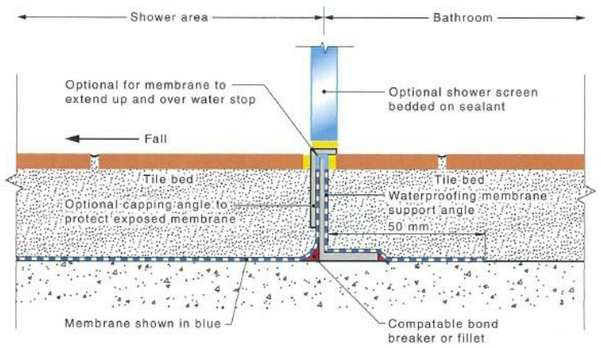


Figure 4.8.2(D) — Shower waterstop and cover angle

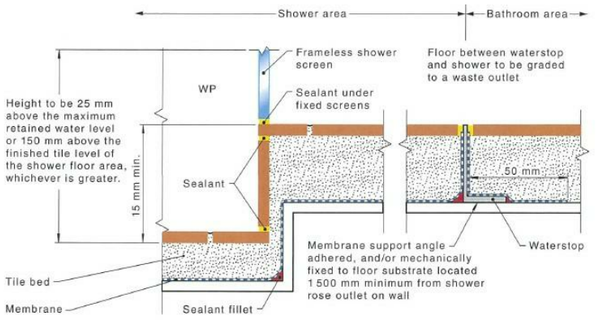
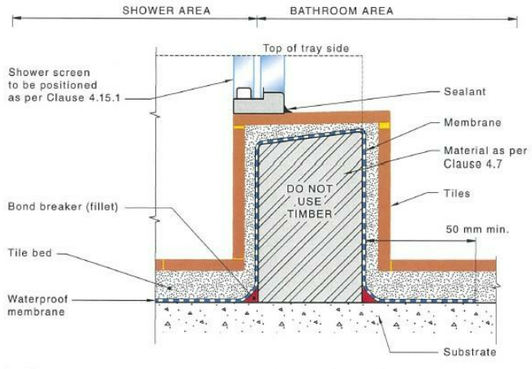


Figure 4.8.2(A) — Unenclosed shower — Membrane below tile bed



NOTE 1 The area outside the shower area should be designed as a Category 3.

NOTE 2 If the area outside the shower area is a Category 2 wet area, consideration should be given to extending the membrane across the whole of the floor.

Figure 4.6.2 — Shower with a hob liquid membrane

ENGINEERING PLUS — BUILDING DESIGN, PROJECT MANAGEMENT, CIVIL/STRUCTURAL ENGINEERING

Dimensions in millimetres

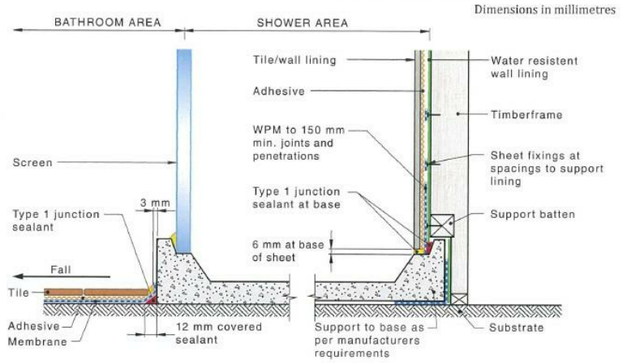


Figure 4.14(A) — Section through stud wall with self-supporting prefinished wall panels and preformed or cast shower bases

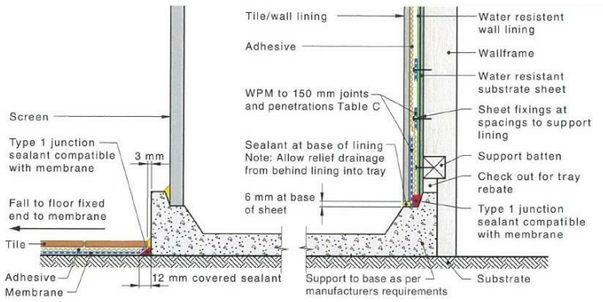
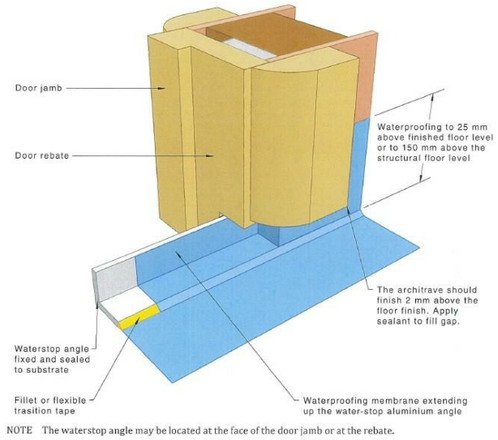


Figure 4.14(C) — Preformed shower base checked into wall, frame or render



NOTE The waterstop angle may be located at the face of the door jamb or at the rebate.

Figure 4.9.1(A) — Example of liquid waterproofing at door opening framework

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WATERPROOFING & WATER RESISTANCE REQUIREMENTS FOR BUILDING ELEMENTS IN WET AREAS - BATHS

SECTION 4: INSTALLATION

4.13 BATHS AND SPAS

4.13.1 GENERAL

Baths and Spas shall be supported to prevent distortion and cracking. Baths and spas that are recessed into the wall shall be installed to allow the water-resistant surface materials of the wall to pass down inside the rim of the bath or spa. The wall substrate shall be connected to the bath with a Type 2 junction sealant, as per Clause 4.11.1, compatible with the membrane.

Where a bath end wall is within a shower area, it shall be treated as a shower area wall.

For insert baths, a waterstop shall be installed around the periphery.

4.13.2 BATHS WITHOUT SHOWERS OVER THEM

4.13.2.1 BATHS WITHOUT AN INTEGRAL UPSTAND EDGE - INSERT BATHS

There shall be full waterproofing of walls around the bath to 150mm above any shower rose connection.

4.13.2.2 BATHS TO BE RECESSED INTO A WALL WITH NO SHOWER OVER THEM

Baths recessed into a wall shall have an integral vertical upstand lip along the side of the bath walls to enable a waterproof junction between the bath and walls. There shall be full waterproofing of bath/wall junctions. The walls around the bath shall be water resistant to 150mm above the bath edge.

4.13.3 BATHS WITH SHOWERS OVER THEM

4.13.3.1 BATH ADJOINING A TYPE 2 UNENCLOSED SHOWER

A bath installation adjoining a Type 2 unenclosed shower shall be waterproofed as a shower-over-bath installation for fitted or insert baths according to Clause 4.13.3.2 and 4.13.3.3

4.13.3.2 BATHS RECESSED INTO A WALL - FITTED BATHS

There shall be full waterproofing of walls around the bath to 150mm above the edge of the bath. There shall be full waterproofing to junctions and penetrations at a minimum of 1800mm from the bath floor.

4.13.3.3 BATHS WITHOUT AN INTEGRAL UPSTAND EDGE - INSERT BATH

There shall be full waterproofing of walls around the bath to 150mm above the edge of the bath. There shall be full waterproofing to junctions and penetrations at a minimum of 1800mm from the bath floor.

4.13.4 FREESTANDING BATHS

The extent of waterproofing for freestanding baths with or without a shower over them shall be as for Type 2 unenclosed shower.

4.13.5 BATH END WALLS ABUTTING A SHOWER

Where a bath end wall is within a shower area, it shall be treated as a shower area wall.

4.13.6 SPA BATHS

When installing spa baths, the following shall apply:

(a) Waterproofing underneath spa to 150mm vertical termination to internal spa shell.

(b) Provision of overflow to outer floor to conforming leak control flange to a maximum of 30mm below waterproofing tanking to spa shell.

(c) Where non-proprietary access to the pump is provided, water is to be excluded from entering the access panel.

(d) Pump mountings to be sealed so as not to perforate the membrane.

(e) Provision of ventilation under spa shell to manage condensation

(f) Where drainage is provided under the spa, provisions of that drainage at membrane level with falls to waste

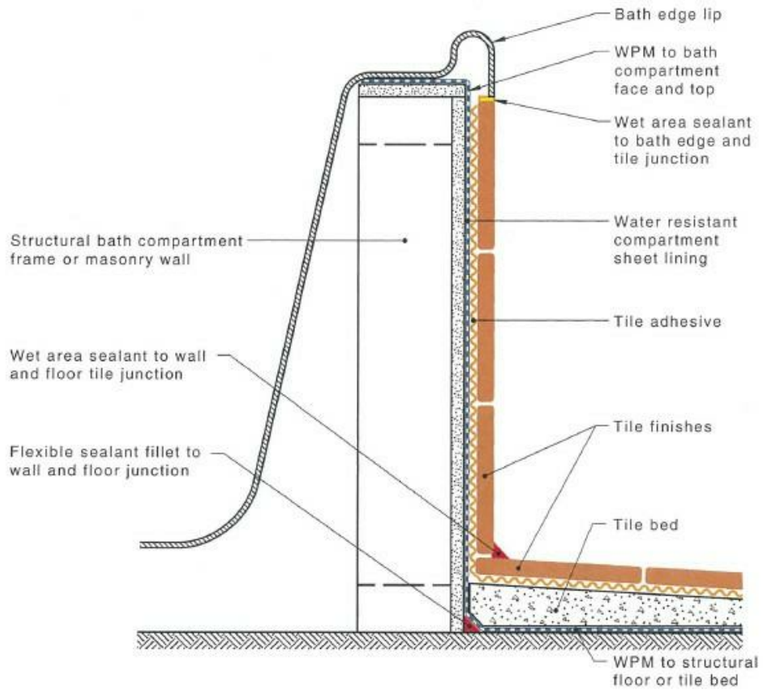

Figure 4.13.6 — Spa and bath compartment detail at bath face

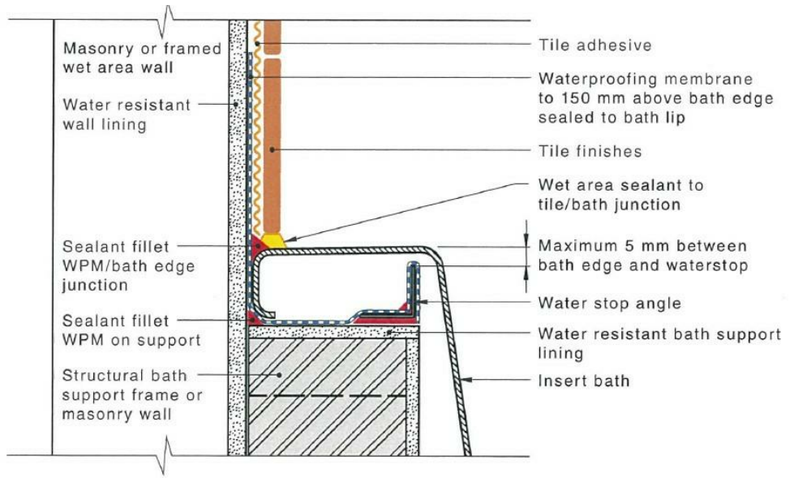

Figure 4.13.3(B) — Shower over bath — Fitted bath — Fitted against wall

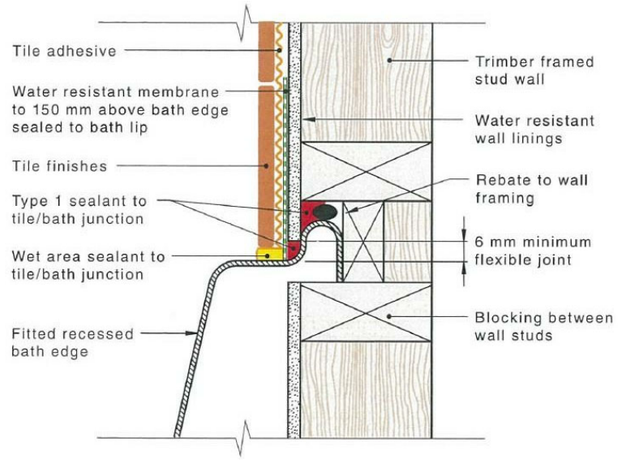

Figure 4.13.2.2(D) — Bath with no shower over it — Fitted bath — Timber-framed wall

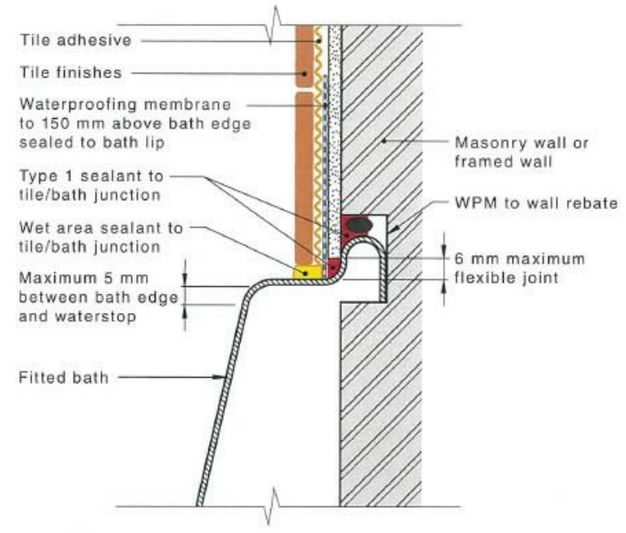

Figure 4.13.3(A) — Shower over bath — Fitted bath — Framed or masonry walls

FOR FULL INSTALLATION DETAILS REFER TO AUSTRALIAN STANDARD 3740

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Sorell Council
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NCC NOTES #1

EARTHWORKS - H1D2

ACBC PART 3.2

1. A SITE CUT USING AN UN-RETAINED EMBANKMENT MUST BE—
   (a) WITHIN THE ALLOTMENT; AND
   (b) NOT WITHIN THE ZONE OF INFLUENCE OF ANY EXISTING STRUCTURE ON THE PROPERTY, OR THE ALLOTMENT BOUNDARY AS DEFINED IN TABLE 3.2.1 AND FIGURE 3.2.1A; AND
   (c) NOT DEEPER THAN 2m FROM THE NATURAL GROUND LEVEL AT ANY POINT.

2. FILL, USING AN UN-RETAINED EMBANKMENT MUST—
   (a) BE PLACED WITHIN THE ALLOTMENT; AND
   (b) BE PLACED AT A GRADIENT WHICH COMPLIES WITH TABLE 3.2.1 AND FIGURE 3.2.1B; AND
   (c) BE PLACED AND MECHANICALLY COMPACTED IN LAYERS NOT MORE THAN 150mm; AND
   (d) BE NOT MORE THAN 2m IN HEIGHT FROM THE NATURAL GROUND LEVEL AT ANY POINT; AND
   (e) WHERE USED TO SUPPORT FOOTINGS OR SLABS, BE PLACED AND COMPACTED IN ACCORDANCE WITH PART 4.2; AND
   (f) HAVE SURFACE WATER DIVERTED AWAY FROM ANY EXISTING STRUCTURE ON THE PROPERTY OR ADJOINING ALLOTMENT IN ACCORDANCE WITH 3.3.3.

DRAINAGE - H2D2

DRAINAGE TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH - AS/NZS 3500.3; OR

ACBC PART 3.3

3.3.2 Drainage Requirements

DRAINAGE SYSTEMS MUST BE INSTALLED AS FOLLOWS:
   (a) AREAS ADJOINING AND UNDER BUILDINGS — SURFACE WATER DRAINAGE IN ACCORDANCE WITH 3.3.3;
   (b) WHERE SITE CONDITIONS EXIST THAT CREATE A NEED FOR SUBSOIL WATER TO BE DIVERTED AWAY FROM FOOTINGS, BASEMENTS, RETAINING WALLS etc. — SUB-SOIL DRAINAGE IN ACCORDANCE WITH 3.3.4;
   (c) WHERE UNDERGROUND DRAINAGE FROM ROOF AREAS IS REQUIRED OR PERMITTED — UNDERGROUND STORMWATER DRAINAGE IN ACCORDANCE WITH 3.3.5; AND
   (d) EXCAVATION FOR DRAINS ADJACENT TO EXISTING FOOTINGS MUST BE WITHIN THE AREA DESCRIBED IN FIGURE 3.3.2 AS BEING SAFE FOR EXCAVATION.

3.3.3 - Surface water drainage

1. SURFACE WATER MUST BE DIVERTED AWAY FROM A CLASS 1 BUILDING AS FOLLOWS:
SLAB-ON-GROUND — FINISHED GROUND LEVEL ADJACENT TO A BUILDING: THE EXTERNAL FINISHED SURFACE SURROUNDING THE SLAB MUST BE DRAINED TO MOVE SURFACE WATER AWAY FROM THE BUILDING AND GRADED TO GIVE A SLOPE OF NOT LESS THAN (SEE FIGURE 3.3.3A) —
   (a) 25 MM OVER THE FIRST 1m FROM THE BUILDING—
      (i) IN LOW RAINFALL INTENSITY AREAS FOR SURFACES THAT ARE REASONABLY IMPERMEABLE (SUCH AS CONCRETE OR CLAY PAVING); OR
      (ii) FOR ANY REASONABLY IMPERMEABLE SURFACE THAT FORMS PART OF AN ACCESS PATH OR RAMP PROVIDED FOR THE PURPOSES OF CLAUSES 1.1(2) OR (4)(C) OF THE ABCB STANDARD FOR LIVABLE HOUSING DESIGN; OR

2. 50mm OVER THE FIRST 1m FROM THE BUILDING IN ANY OTHER CASE.
SLAB-ON-GROUND — FINISHED SLAB HEIGHTS: THE HEIGHT OF THE SLAB-ON-GROUND ABOVE EXTERNAL FINISHED SURFACES MUST BE NOT LESS THAN (SEE FIGURE 3.3.3A) —
   (a) 100mm ABOVE THE FINISHED GROUND LEVEL IN LOW RAINFALL INTENSITY AREAS OR SANDY, WELL-DRAINED AREAS; OR
   (b) 50mm ABOVE IMPERMEABLE (PAVED OR CONCRETE) AREAS THAT SLOPE AWAY FROM THE BUILDING IN ACCORDANCE WITH (A); OR
   (c) 150mm IN ANY OTHER CASE.

3. THE GROUND BENEATH SUSPENDED FLOORS MUST BE GRADED SO THAT THE AREA BENEATH THE BUILDING IS ABOVE THE ADJACENT EXTERNAL FINISHED GROUND LEVEL AND SURFACE WATER IS PREVENTED FROM PONDING UNDER THE BUILDING (SEE FIGURE 3.3.3B).

3.3.4 Subsoil drainage

WHERE A SUBSOIL DRAINAGE SYSTEM IS INSTALLED TO DIVERT SUBSURFACE WATER AWAY FROM THE AREA BENEATH A BUILDING, THE SUBSOIL DRAIN MUST—
1. BE GRADED WITH A UNIFORM FALL OF NOT LESS THAN 1:300; AND

2. DISCHARGE INTO AN EXTERNAL SILT PIT OR SUMP WITH—
   (a) THE LEVEL OF DISCHARGE FROM THE SILT PIT OR SUMP INTO AN IMPERVIOUS DRAINAGE LINE NOT LESS THAN 50mm BELOW THE INVERT LEVEL OF THE INLET (SEE FIGURE 3.3.4); AND
   (b) PROVISION FOR CLEANING AND MAINTENANCE.

3.3.5 Stormwater drainage

WHERE A STORMWATER DRAINAGE SYSTEM IS INSTALLED, IT MUST COMPLY WITH THE FOLLOWING:
1. THE POSITION AND MANNER OF DISCHARGE OF THE STORMWATER DRAINAGE SYSTEM MUST BE TO THE SATISFACTION OF THE APPROPRIATE AUTHORITY.

2. THE STORMWATER DRAINAGE SYSTEM MUST BE DESIGNED SO THAT ANY OVERFLOW DURING HEAVY RAIN PERIODS IS PREVENTED FROM FLOWING BACK INTO THE BUILDING.

3. COVER TO STORMWATER DRAINS: THE COVER TO 90mm CLASS 6 UPVC STORMWATER DRAINS INSTALLED UNDERGROUND MUST BE NOT LESS THAN—
   (a) UNDER SOIL — 100mm; OR
   (b) UNDER PAVED OR CONCRETE AREAS — 50mm; OR
   (c) UNDER AREAS SUBJECT TO LIGHT VEHICLE TRAFFIC—
      (i) REINFORCED CONCRETE — 75mm; OR
      (ii) PAVED — 100mm.

MASONRY - H1D5

DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS3700, AS4773.1, AS4773.2, OR AS2870; AND
ACBC PART 5
MASONRY VENEER & CAVITY MASONRY WALL HEIGHT MUST NOT BE GREATER THAN 8.5m WHEN MEASURED ABOVE THE ADJACENT FINISHED GROUND LEVEL

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ACBC PART 5.4 - UNREINFORCED SINGLE LEAF MASONRY

5.4.2 - External Walls

1. SINGLE LEAF UNREINFORCED MASONRY WALLS WITH ENGAGED PIERS AND RETURN WALLS MUST COMPLY WITH THE RELEVANT PROVISIONS OF THIS PART AND BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING:
   (a) THE ROOF FRAME MUST BE CONNECTED CONTINUOUSLY TO THE TOP OF THE WALL (SEE FIGURE 5.4.2A).
   (b) STACK BONDED PIERS MUST HAVE WALL TIES AT EVERY FOURTH COURSE.
   (c) PIER AND RETURN SUPPORTS SIZE LIMITATIONS FOR—
      (i) SINGLE LEAF UNREINFORCED MASONRY WALLS WITH ENGAGED PIERS, MUST COMPLY WITH TABLE 5.4.2A AND FIGURE 5.4.2B; AND
      (ii) SINGLE LEAF UNREINFORCED MASONRY WALLS WITH RETURN SUPPORTS, MUST COMPLY WITH TABLE 5.4.2B AND FIGURE 5.4.2C.
   (d) AN ENGAGED PIER OR RETURN WALL MUST BE PROVIDED AT BOTH SIDES OF AN OPENING.
   (e) THE WIDTH OF AN OPENING MUST BE NOT MORE THAN THE SPACING BETWEEN THE ENGAGED PIERS UNLESS THE ENGAGED PIERS EITHER SIDE OF THE OPENING ARE DESIGNED IN ACCORDANCE WITH AS3700.
   (f) ARTICULATION JOINTS MUST BE LOCATED WITHIN 300mm OF VERTICAL SUPPORTS IN ACCORDANCE WITH 5.6.8.

2. A CLASS 10A BUILDING CONTAINING NOT MORE THAN 1 STOREY MAY BE ENCLOSED WITH SINGLE LEAF MASONRY EXTERNAL WALLS NOT LESS THAN 90mm IN THICKNESS, PROVIDED THAT—
   (a) THE BUILDING MEASURED IN THE DIRECTION OF THE SPAN OF THE ROOF IS NOT MORE THAN 9m AND THE HEIGHT IS NOT MORE THAN 2.7m; AND
   (b) ENGAGED PIERS ARE PROVIDED THAT ARE IN ACCORDANCE WITH TABLES 5.4.2C AND 5.4.2D; AND
   (c) THE ROOF DOES NOT PLACE ANY SPREADING THRUST ONTO THE EXTERNAL WALLS; AND
   (d) THE CLASS 10A BUILDING IS LOCATED IN AN AREA WITH A WIND CLASS OF NOT MORE THAN N2.

5.4.3 Internal Walls

INTERNAL MASONRY MUST BE ENGAGED WITH OTHER WALLS, COMPLY WITH THE RELEVANT PROVISIONS OF THE PART AND MUST BE -
   (a) NOT LESS THAN 75mm THICK; AND
   (b) SUPPORTED BY EITHER -
      (i) THE CEILING STRUCTURE IN ACCORDANCE WITH FIGURE 5.4.3a; OR
      (ii) RETURN WALLS IN ACCORDANCE WITH FIGURE 5.4.3b

ACBC PART 5.6 - MASONRY COMPONENTS AND ACCESSORIES

5.6.3 - Mortar Mixes

MORTAR USED FOR MASONRY CONSTRUCTION MUST COMPLY WITH AS3700 OR AS4773 EXCEPT THAT THE MORTAR MAY BE MIXED BY VOLUME IN THE PROPORTIONS STATED IN TABLE 5.6.3

MASONRY UNIT EXPOSURE CLASS	MORTAR MIX BY VOLUME - CEMENT - LIME - SAND	
	GENERAL USE	SUITABLE FOR CONCRETE MASONRY
PROTECTED	1 - 2 - 9	1 - 0 - 5
GENERAL PURPOSE	1 - 1 - 6	1 - 0 - 5
EXPOSURE CLASS	1 - 0.5 - 4.5	1 - 0 - 4.2

5.6.4 - Mortar joints

UNLESS OTHERWISE SPECIFIED, MASONRY BED AND PERPEND JOINTS MUST HAVE A NOMINAL THICKNESS OF 10mm.
RAKED JOINTS ARE NOT TO BE USED IN SALINE ENVIRONMENTS OR AREAS SUBJECT TO HEAVY INDUSTRIAL AIRBORNE POLLUTION.
WHERE RAKED JOINTS ARE USED THE DEPTH OF RAKING MUST NOT BE—
   (a) CLOSER THAN 5MM TO ANY PERFORATION IN CORED UNIT MASONRY OR 20mm IN HOLLOW UNIT MASONRY; OR
   (b) MORE THAN 5mm FOR MASONRY UNITS AT LEAST 90mm WIDE; OR
   (c) MORE THAN 10mm FOR MASONRY UNITS AT LEAST 110mm WIDE.

5.6.5 - Wall ties

1. COMPLY WITH AS 2699.1 AND—
   (a) FOR MASONRY VENEER WALLS BE—
      (i) A MINIMUM OF LIGHT DUTY VENEER TIES IN AREAS WHERE THE DESIGN WIND SPEED IS NOT MORE THAN N2; AND
      (ii) A MINIMUM OF MEDIUM DUTY VENEER TIES IN AREAS WHERE THE DESIGN WIND SPEED IS MORE THAN N2; AND
   (b) FOR CAVITY MASONRY WALLS BE—
      (i) A MINIMUM OF LIGHT DUTY CAVITY TIES IN AREAS WHERE THE DESIGN WIND SPEED IS N1; AND
      (ii) A MINIMUM OF MEDIUM DUTY CAVITY TIES IN AREAS WHERE THE DESIGN WIND SPEED IS MORE THAN N1; AND
   (c) WHERE NON-ENGAGED PIERS ARE PROVIDED, PIERS MUST BE TIED TO WALLS USING MEDIUM DUTY TIES; AND
   (d) FOR MONOLITHIC OR SOLID MASONRY CONSTRUCTION BE A MINIMUM OF MEDIUM DUTY TIES; AND

2. BE SPACED AND FIXED IN ACCORDANCE WITH TABLES 5.6.5A, 5.6.5B AND 5.6.5C (SEE ALSO FIGURES 5.6.5A AND 5.6.5B); AND

3. BE PROTECTED AGAINST CORROSION IN ACCORDANCE WITH TABLE 5.6.5D.

5.6.8 - Vertical articulation joints

1. VERTICAL ARTICULATION JOINTS MUST BE PROVIDED IN MASONRY WALLS IN ACCORDANCE WITH (2), EXCEPT IN WALLS CONSTRUCTED ON SITES WHERE THE SOIL CLASSIFICATION IS A OR S (SEE 4.2.2).

2. ARTICULATION JOINTS BETWEEN MASONRY ELEMENTS MUST HAVE A WIDTH OF NOT LESS THAN 10mm AND BE PROVIDED (SEE FIGURES 5.6.8A AND 5.6.8B)—
   (a) IN STRAIGHT, CONTINUOUS WALLS WITH OPENINGS LESS THAN 900mm X 900mm OR WALLS WITHOUT OPENINGS — AT NOT MORE THAN 6m CENTRES AND WITHIN 4.5m, BUT NOT CLOSER THAN 470mm OF ALL CORNERS; AND
   (b) IN STRAIGHT, CONTINUOUS WALLS WITH OPENINGS MORE THAN 900mm X 900mm — AT NOT MORE THAN 5m CENTRES AND LOCATED SO THAT THEY ARE NOT MORE THAN 1.2m AWAY FROM OPENINGS; AND
   (c) WHERE THE HEIGHT OF THE WALL CHANGES BY MORE THAN 20% — AT THE POSITION OF CHANGE IN HEIGHT; AND
   (d) WHERE A WALL CHANGES IN THICKNESS; AND
   (e) AT CONTROL OR CONSTRUCTION JOINTS IN FOOTINGS OR SLABS; AND
   (f) AT JUNCTIONS OF WALLS CONSTRUCTED OF DIFFERENT MASONRY MATERIALS.

3. ARTICULATION JOINTS MUST NOT BE LOCATED ADJACENT TO ARCHED OPENINGS.

4. ARTICULATION JOINTS MUST BE FILLED WITH FLEXIBLE SEALANT THAT IS SUPPORTED DURING INSTALLATION BY—
   (a) A COMPRESSIBLE FOAM OR POLYSTYRENE FILLER (SEE FIGURES 5.6.8D AND 5.6.8E); OR
   (b) A PURPOSE MADE BACKER ROD (SEE FIGURES 5.6.8C, 5.6.8D, 5.6.8E AND 5.6.8F).

ACBC PART 5.7 - WEATHERPROOFING OF MASONRY

5.7.2 Cavities

1. FOR MASONRY VENEER, THE CLEAR WIDTH OF A CAVITY BETWEEN THE MASONRY VENEER AND THE EXTERIOR FACE OF THE SUPPORTING FRAME MUST NOT BE—
   (a) LESS THAN 25 MM WIDE; AND
   (b) MORE THAN 75 MM WIDE.

2. FOR CAVITY MASONRY, THE CLEAR WIDTH OF A CAVITY BETWEEN THE INNER AND OUTER MASONRY LEAVES MUST NOT BE—
   (a) LESS THAN 35 MM; AND
   (b) MORE THAN 75 MM.

3. WHERE MASONRY VENEER AND CAVITY MASONRY IN (1) AND (2) ARE CONSTRUCTED ON A SLAB-ON-GROUND, THE CAVITY MUST BE DRAINED TO THE OUTSIDE IN ACCORDANCE WITH 5.7.5.

4. THE EXTERIOR MASONRY LEAF MUST NOT OVERHANG THE EDGE OF THE SLAB BY MORE THAN 15mm.

5.7.3 Damp-proof courses and flashings - material

DAMP-PROOF COURSES AND FLASHINGS MUST CONSIST OF—
   (a) A MATERIAL THAT COMPLIES WITH AS/NZS 2904; OR
   (b) EMBOSSED BLACK POLYETHYLENE FILM OF HIGH IMPACT RESISTANCE AND LOW SLIP, WITH A NOMINAL THICKNESS OF 0.5mm PRIOR TO EMBOSSING, AND COMPLY WITH CLAUSE 7.6 OF AS/NZS 2904; OR
   (c) POLYETHYLENE COATED METAL, THAT HAS AN ALUMINIUM CORE OF NOT LESS THAN 0.1mm THICK, IS COATED BOTH SIDES WITH BITUMEN ADHESIVE ENCLOSED IN POLYETHYLENE FILM OF NOT LESS THAN 0.1mm THICK ON EACH FACE, AND HAS A NOMINAL TOTAL THICKNESS OF NOT LESS THAN 0.5mm PRIOR TO EMBOSSING; OR
   (d) BITUMEN IMPREGNATED MATERIALS OF NOT LESS THAN 2.5mm THICK, THAT COMPLY WITH CLAUSE 7.5 OF AS/NZS 2904; OR

5.7.4 Damp-proof courses and flashings - installation

1. DAMP-PROOF COURSES AND FLASHINGS MUST BE—
   (a) LOCATED SO AS TO FORM A CONTINUOUS DAMP-PROOFING BARRIER—
      (i) AROUND THE BOTTOM PERIMETER OF WALLS WHERE CONSTRUCTED ON A CONCRETE SLAB; AND
      (ii) IN WALLS AND PIERS BELOW SUSPENDED FLOORS; AND
      (iii) WHERE A MASONRY WALL PASSES THROUGH A ROOF; AND
      (iv) WHERE A ROOF ABUTS AN EXTERNAL MASONRY WALL; AND
      (v) TO THE BOTTOM AND TOPS OF WINDOWS AND DOORS AND THE LIKE IN ACCORDANCE WITH (3), EXCEPT A DAMP-PROOF COURSE OR A FLASHING NEED NOT BE PROVIDED TO THE TOP OF A WINDOW OR DOOR WHERE THE OPENING IS PROTECTED BY AN EAVE OF A WIDTH MORE THAN 3 TIMES THE HEIGHT OF THE MASONRY VENEER ABOVE THE OPENING; AND
   (b) CONTINUOUS THROUGH THE WALL OR PIER AND BE VISIBLE FROM THE OUTSIDE FACE OF THE WALL.

2. THE LOCATION OF A DAMP-PROOF COURSE, OR FLASHING SERVING AS A DAMP-PROOF COURSE, MUST BE NOT LESS THAN—
   (a) 150mm ABOVE THE ADJACENT GROUND LEVEL; OR
   (b) 75mm ABOVE THE FINISHED SURFACE LEVEL OF ADJACENT PAVED, CONCRETED OR LANDSCAPED AREAS THAT SLOPE AWAY FROM THE WALL; OR
   (c) 50mm ABOVE FINISHED PAVED, CONCRETED OR LANDSCAPED AREAS COMPLYING WITH 3.3.3(B)(II) AND PROTECTED FROM THE DIRECT EFFECTS OF THE WEATHER BY A CARPORT, VERANDAH OR THE LIKE; OR
   (d) IN LOW RAINFALL INTENSITY AREAS—
      (i) 15mm ABOVE FINISHED PAVED, CONCRETED OR LANDSCAPED AREAS; OR
      (ii) 0mm ABOVE FINISHED PAVED, CONCRETED OR LANDSCAPED AREAS IF THE DAMP-PROOF COURSE IS PROTECTED FROM THE DIRECT EFFECTS OF THE WEATHER BY A CARPORT, VERANDAH OR THE LIKE.

3. SILL AND HEAD FLASHINGS SERVING OPENINGS MUST BE—
   (a) INSTALLED SO THAT THE FLASHING EXTENDS NOT LESS THAN 150mm BEYOND THE REVEALS ON EACH SIDE OF THE OPENING; AND
   (b) LOCATED NOT MORE THAN—
      (i) ONE COURSE BELOW THE SILL BRICK COURSE; AND
      (ii) 300mm ABOVE THE OPENING; AND
   (c) TURNED UP IN THE CAVITY NOT LESS THAN 150mm ABOVE THE OPENING; AND
   (d) EMBEDDED NOT LESS THAN 30mm INTO—
      (i) FOR MASONRY VENEER, THE MASONRY LEAF; AND
      (ii) FOR CAVITY MASONRY, THE OUTER MASONRY LEAF; AND
   (e) ATTACHED TO THE WINDOW OR WALL FRAMING.

5.7.5 Weepholes

1. EXCEPT WHERE EXCLUDED BY (2), OPEN PERPEND JOINTS (WEEPHOLES) MUST BE CREATED IN THE COURSE IMMEDIATELY ABOVE ANY FLASHING (INCLUDING ABOVE ANY DAMP-PROOF COURSE ACTING AS A FLASHING) AND BE—
   (a) A MINIMUM OF 50 MM IN HEIGHT, BY THE WIDTH OF THE VERTICAL MORTAR JOINT; AND
   (b) AT NOT MORE THAN 1.2 M CENTRES; AND

2. WEEPHOLES ARE NOT REQUIRED IN THE FOLLOWING LOCATIONS:
   (a) WHERE HEAD OPENINGS ARE LESS THAN 1.2 M WIDE.
   (b) BENEATH WINDOW AND DOOR SILLS.
   (c) WHERE THE LEVEL OF THE EXTERNAL IMPERVIOUS SURFACE IS ELEVATED FOR THE PURPOSE OF PROVIDING STEP-FREE ACCESS REQUIRED BY H8P1.

5.7.6 Weatherproofing for single leaf masonry walls

1. WATERPROOF COATING MUST BE APPLIED TO ALL EXTERNAL SINGLE SKIN MASONRY WALLS IN ACCORDANCE WITH:
   (a) THE COATING MUST EXTEND FROM THE UPPERMOST EXPOSED PART OF THE WALL—
      (i) TO A LEVEL ADJACENT TO THE INTERNAL FINISHED FLOOR LEVEL, IF THE EXTERNAL MASONRY WALL LEAF OVERHANGS THE EDGE OF THE SLAB BY NOT LESS THAN 10mm; OR
      (ii) 50mm BELOW THE INTERNAL FLOOR LEVEL IF NO EDGE OVERHANG IS PROVIDED.
   (b) ACCEPTABLE EXTERNAL WATERPROOF FINISHES ARE—
      (i) THREE COATS OF 100% ACRYLIC BASED EXTERIOR QUALITY GLOSS PAINT; OR
      (ii) ONE COMPLETE COAT OF CEMENT BASED PAINT AND TWO COATS OF 100% ACRYLIC BASED EXTERIOR QUALITY GLOSS PAINT; OR
      (iii) CLEAR WATER REPELLENT, PROVIDED THE WALL IS PROTECTED BY A ROOF OVERHANG OF NOT LESS THAN 1500mm.

2. WINDOWS MUST BE INSTALLED IN ACCORDANCE WITH FIGURE 5.7.6.

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Accredited Building Designer
Designer Name: J.Pfeiffer
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Rev 1

NCC NOTES #2

SUBFLOOR VENTILATION - H2D5

ACBC PART 6.2 SUBFLOOR VENTILATION

1. SUBFLOOR SPACES MUST—
   (a) BE PROVIDED WITH OPENINGS IN EXTERNAL WALLS AND INTERNAL SUBFLOOR WALLS IN ACCORDANCE WITH TABLE 6.2.1A FOR THE CLIMATIC ZONES GIVEN IN FIGURE 6.2.1A; AND
   (b) HAVE CLEARANCE BETWEEN THE GROUND SURFACE AND THE UNDERSIDE OF THE LOWEST HORIZONTAL MEMBER IN THE SUBFLOOR IN ACCORDANCE WITH TABLE 6.2.1B (SEE FIGURE 6.2.1B AND FIGURE 6.2.1C).

2. IN ADDITION TO (1), A SUBFLOOR SPACE MUST—
   (a) BE CLEARED OF ALL BUILDING DEBRIS AND VEGETATION; AND
   (b) HAVE THE GROUND BENEATH THE SUSPENDED FLOOR GRADED IN ACCORDANCE WITH 3.3.3; AND
   (c) CONTAIN NO DEAD AIR SPACES; AND
   (d) HAVE OPENINGS EVENLY SPACED AS FAR AS PRACTICABLE (SEE FIGURE 6.2.1D); AND
   (e) HAVE OPENINGS PLACED NOT MORE THAN 600mm IN FROM CORNERS.

3. IN DOUBLE LEAF MASONRY WALLS, OPENINGS SPECIFIED IN (1) MUST BE PROVIDED IN BOTH LEAVES OF THE MASONRY, WITH OPENINGS BEING ALIGNED TO ALLOW AN UNOBSTRUCTED FLOW OF AIR (SEE FIGURE 6.2.1D).

4. OPENINGS IN INTERNAL SUBFLOOR WALLS SPECIFIED IN (1) MUST HAVE AN UNOBSTRUCTED AREA EQUIVALENT TO THAT REQUIRED FOR THE ADJACENT EXTERNAL OPENINGS (SEE FIGURE 6.2.1D).

5. WHERE THE GROUND OR SUBFLOOR SPACE IS EXCESSIVELY DAMP OR SUBJECT TO FREQUENT FLOODING, IN ADDITION TO THE REQUIREMENTS OF (1) TO (4)—
   (a) THE SUBFLOOR VENTILATION REQUIRED IN (1) MUST BE INCREASED BY 50%; OR
   (b) THE GROUND WITHIN THE SUBFLOOR SPACE MUST BE SEALED WITH AN IMPERVIOUS MEMBRANE; OR
   (c) SUBFLOOR FRAMING MUST BE -
      (i) WHERE ABOVE GROUND — ABOVE GROUND DURABILITY CLASS 1 OR 2 TIMBERS OR H3 PRESERVATIVE TREATED TIMBERS IN ACCORDANCE WITH AS 1684.2, AS 1684.3 OR AS 1684.4; OR
      (ii) WHERE IN-GROUND — IN-GROUND DURABILITY CLASS 1 OR 2 TIMBERS OR H5 PRESERVATIVE TREATED TIMBERS IN ACCORDANCE WITH AS 1684.2, AS 1684.3 OR AS 1684.4; OR
      (iii)STEEL IN ACCORDANCE WITH NASH STANDARD 'RESIDENTIAL AND LOW-RISE STEEL FRAMING' PART 2

SUBFLOOR OPENING REQUIREMENTS

CLIMATIC ZONE C

MINIMUM AGGREGATE SUBFLOOR VENTILATION OPENINGS (mm^2/m OF WALL)
- WITH NO MEMBRANE - 6000
- WITH GROUND SEALED WITH IMPERVIOUS MEMBRANE - 3000

MINIMUM GROUND CLEARANCE HEIGHT WHERE TERMITE INSPECTION OR MANAGEMENT SYSTEM IS NOT REQUIRED (mm)
- 150

ACBC PART 6.3 & 7.2 CORROSION PROTECTION

6.3.9 Structural steel

STRUCTURAL STEEL MEMBERS THAT ARE NOT BUILT IN TO A MASONRY WALL MUST—
   (a) BE PROTECTED AGAINST CORROSION IN ACCORDANCE WITH BCA 2019 3.4.4.4
   (b) WHERE A PAINT FINISH IS APPLIED TO THE SURFACE, BE FREE FROM RUST; AND
   (c) WHERE ZINC COATINGS ARE APPLIED TO THE SURFACE, BE PROVIDED WITH A BARRIER COAT TO PREVENT DOMESTIC ENAMELS FROM PEELING; AND
   (d) WHEN CUT OR WELDED ON-SITE, HAVE THOSE AREAS AND ANY OTHER AREAS OF DAMAGE TO PROTECTIVE COATINGS COMPLY WITH (A).

BCA 2019 PART 3.4.4.4 CORROSION PROTECTION

TABLE 3.4.4.7

MODERATE - MORE THAN 1km FOR BREAKING SURF OR MORE THAN 100m FROM SALT WATER NOT SUBJECT TO BREAKING SURF OR NON-HEAVY INSUDTRIAL AREAS.

EXTERNAL
- 2 COATS ALKYD PRIMER
- 2 COATS ALKYS GLOSS
- HOT DIP GALVANISED 300g/m^2 MIN.
- HOT DIP GALVANISED 100g/m^2 MIN. PLUS
   (a) 1 COAT SOLVENT BASED VINYL PRIMER; OR
   (b) 1 COAT VINYL GLOSS OR ALKYD

SEVERE - WITHIN 1km FROM BREAKING SURF OR WITHIN 100m OF SALT WATER NOT SUBJECT TO BREAKING SURF OR HEAVY INDUSTRIAL AREAS

INTERNAL
- 2 COATS ALKYD PRIMER
- 2 COATS ALKYS GLOSS

EXTERNAL
- INORGANIC ZINC PRIMER PLUS 2 COATS VINYL GLOSS FINISHING COATS
- HOT DIP GALVANISED 300g/m^2
- HOT DIP GALVANISED 100g/m^2 MIN. PLUS
   (a) 2 COAT SOLVENT BASED VINYL PRIMER; OR
   (b) 2 COAT VINYL GLOSS OR ALKYD

7.2.2 Roofing

1. METAL SHEET ROOFING MUST BE PROTECTED FROM CORROSION IN ACCORDANCE WITH TABLE 7.2.2A.
2. WHERE DIFFERENT METALS ARE USED, INCLUDING FLASHINGS, FASTENERS, GUTTERING, DOWNPIPES, ETC., THEY MUST BE COMPATIBLE WITH EACH OTHER AS DESCRIBED IN TABLE 7.2.2B, TABLE 7.2.2C, TABLE 7.2.2D, AND TABLE 7.2.2E AND—
   (a) NO LEAD MATERIALS CAN BE USED UPSTREAM FROM ALUMINIUM/ZINC COATED MATERIALS; AND
   (b) NO LEAD MATERIALS CAN BE USED ON ROOFS THAT FORM PART OF A DRINKING WATER CATCHMENT AREA; AND
   (c) NO COPPER MATERIALS CAN BE USED UPSTREAM FROM GALVANIZED COATED MATERIALS.

ROOF AND WALL CLADDING - H1D7

ACBC PART 7

METAL SHEET ROOFING MUST COMPLY WITH THE -
   (a) MINIMUM PITCH REQUIREMENTS FOR THE ASSOCIATED ROOF PROFILE IN ACCORDANCE WITH FIGURE 7.2.3
   (b) MAXIMUM SPAN BETWEEN ROOFING SUPPORTS IN ACCORDANCE WITH TABLE 7.2.4 AND FIGURE 7.2.4

REFER MANUFACTURERS SPECIFICATIONS OR THE ABOVE STANDARDS FOR ROOF SHEETING REQUIREMENTS

7.2.5 Fixing of metal sheet roofing

METAL SHEET ROOFING MUST—
   (a) BE EITHER FIXED THROUGH THE ROOFING (CREST FASTENING) OR HAVE CONCEALED FASTENERS; AND
   (b) BE FIXED AT SPACINGS IN ACCORDANCE WITH TABLE 7.2.5; AND
   (c) USE FIXINGS OF A COMPATIBLE METAL TO THE ROOF IN ACCORDANCE WITH TABLES 7.2.2B, 7.2.2C, 7.2.2D AND 7.2.2E; AND
   (d) WHEN USING BOTH CLIPPED AND PIERCED FASTENING SYSTEMS, EMPLOY AN ANTI-CAPILLARY FEATURE IN THE SIDE LAP OF THE SHEET (SEE FIGURE 7.2.5).

7.2.6 Installation of roofing sheets

SHEETS MUST BE—
1. LAID WHEREVER POSSIBLE USING COMPLETE LENGTHS FROM THE FASCIA TO RIDGE; OR
2. WHERE A COMPLETE LENGTH CANNOT BE LAID—
   (a) EACH RUN MUST BE LAID FROM BOTTOM TO TOP BEFORE MOVING ON TO THE NEXT RUN (SEE FIGURE 7.2.6); AND
   (b) THE MINIMUM END LAP MUST BE—
      (i) FOR ROOF SLOPES ABOVE 15 DEGREES (1:4) – 150mm; AND
      (ii) FOR ROOF SLOPES BETWEEN 5–15 DEGREES (1:12-1:4) – 200mm; AND
3. STOP ENDED (I.E. EACH VALLEY TURNED UP 60 DEGREES) AT THE RIDGE LINE OF EACH LENGTH.

7.2.7 Flashings and Cappings

1. SHEET METAL ROOF FLASHINGS AND CAPPINGS MUST COMPLY WITH THE FOLLOWING:
   (a) ROOF FLASHINGS AND CAPPINGS MUST BE PURPOSE MADE, MACHINE-FOLDED SHEET METAL SECTIONS OF MATERIAL COMPATIBLE WITH ALL UP AND DOWNSTREAM METAL ROOF COVERING MATERIALS IN ACCORDANCE WITH 7.2.2(2).
   (b) THE TYPE OF FASTENERS FOR FLASHING AND CAPPINGS MUST COMPLY WITH 7.2.5.
   (c) THE FASTENER AND FIXING FREQUENCY FOR FLASHINGS AND CAPPINGS MUST COMPLY WITH TABLE 7.2.7.
   (d) JOINTS IN FLASHINGS AND CAPPINGS MUST BE NOT LESS THAN 75 MM, LAPPED IN THE DIRECTION OF THE FALL OF THE ROOF, AND FASTENED AT INTERVALS NOT MORE THAN 40mm.
   (e) WALL AND STEP FLASHINGS MUST BE FASTENED INTO MASONRY WALLS WITH GALVANIZED OR ZINC/ALUMINIUM SHEET METAL WEDGES AT EACH END OF EACH LENGTH AND AT INTERMEDIATE INTERVALS OF NOT MORE THAN 500 MM AND MUST OVERLAP BY NOT LESS THAN 75mm IN THE DIRECTION OF FLOW.
   (f) LEAD FLASHINGS MUST NOT BE USED WITH PREPAINTED STEEL OR ZINC/ALUMINIUM STEEL OR ON ANY ROOF IF THE ROOF IS PART OF A DRINKING WATER CATCHMENT AREA.
   (g) ANTI-CAPILLARY BREAKS MUST BE INSTALLED IN ACCORDANCE WITH FIGURE 7.2.7A AND BE—
      (i) FOR FLAT SURFACES – 10mm/30 DEGREE FOLD; AND
      (ii) ALL OTHER SURFACES – 10mm/90 DEGREE OR 135 DEGREE FOLD.
   (h) ACCEPTABLE FLASHING CONFIGURATIONS ARE SHOWN IN FIGURE 7.2.7B AND FIGURE 7.2.7C.

2. FLASHING OF PENETRATIONS MUST COMPLY WITH THE FOLLOWING:
   (a) COLLAR FLASHINGS MUST PERMIT THE TOTAL DRAINAGE OF THE AREA ABOVE THE PENETRATION.
   (b) ON COMPLETION OF INSTALLATION, THE ROOF STRUCTURE MUST BE RESTORED TO ITS ORIGINAL STRENGTH BY INSTALLING ROOF TRIMMERS AND SOAKER SUPPORTS AS NECESSARY.
   (c) THE TYPE OF FASTENERS FOR FLASHINGS AND CAPPINGS MUST COMPLY WITH 7.2.5.
   (d) LEAD FLASHINGS MUST NOT BE USED WITH PREPAINTED STEEL OR ZINC/ALUMINIUM STEEL OR ON ANY ROOF IF THE ROOF IS PART OF A DRINKING WATER CATCHMENT AREA.
   (e) ACCEPTABLE FLASHINGS FOR PENETRATIONS ARE SHOWN IN FIGURE 7.2.7D, FIGURE 7.2.7E AND FIGURE 7.2.7F.
   (f) CLEARANCE FOR HEATING APPLIANCE ROOF SUPPORT MEMBERS MUST BE IN ACCORDANCE WITH PART 12.4

7.2.8 Water discharge

WHERE AN EAVES GUTTER IS PROVIDED IN ACCORDANCE WITH H2D6(1), SHEETS MUST OVERHANG THE FASCIA, OR END BATTEN WHERE THERE IS NO FASCIA, BY NOT LESS THAN 50mm.

ABCB PART 7.4 GUTTERS AND DOWNPIPES

7.4.3 Selection of guttering

THE SIZE OF GUTTERING MUST—
   (a) FOR EAVES GUTTERS, BE IN ACCORDANCE WITH TABLE 7.4.3A, TABLE 7.4.3B AND TABLE 7.4.3C; AND
   (b) BE SUITABLE TO REMOVE RAINWATER FALLING AT THE APPROPRIATE 5 MINUTE DURATION RAINFALL INTENSITY LISTED IN TABLE 7.4.3D AS FOLLOWS—
      (i) FOR EAVES GUTTERS — 5% ANNUAL EXCEEDANCE PROBABILITY; AND
      (ii) FOR EAVES GUTTER OVERFLOW MEASURES — 1% ANNUAL EXCEEDANCE PROBABILITY.

7.4.5 Downpipes - size and installation

DOWNPIPES MUST—
   (a) NOT SERVE MORE THAN 12m OF GUTTER LENGTH FOR EACH DOWNPIPE; AND
   (b) BE LOCATED AS CLOSE AS POSSIBLE TO VALLEY GUTTERS; AND
   (c) BE SELECTED IN ACCORDANCE WITH THE APPROPRIATE EAVES GUTTER SECTION AS SHOWN IN TABLE 7.4.3A, TABLE 7.4.3B AND TABLE 7.4.3C.

REFER MANUFACTURERS SPECIFICATIONS FOR GUTTER AND DOWNPIPE DESIGN AND INSTALLATION REQUIREMENTS; OR THE ABOVE NCC STANDARDS, OR AS3500, AS2179 & AS1273

ABCB PART 7.5 TIMBER AND COMPOSITE WALL CLADDING

REFER MANUFACTURERS SPECIFICATIONS FOR TIMBER AND COMPOSITE WALL CLADDING DESIGN AND INSTALLATION REQUIREMENTS; OR THE ABOVE NCC STANDARDS, OR AS2908, AS1859, AS2269

7.5.5 Eaves and soffit linings

WHERE PROVIDED, EXTERNAL FIBRE-CEMENT SHEETS AND LININGS USED AS EAVES AND SOFFIT LININGS MUST—
   (a) COMPLY WITH AS/NZS 2908.2 OR ISO 8336; AND
   (b) BE FIXED IN ACCORDANCE WITH TABLE 7.5.5 AND FIGURE 7.5.5 USING—
   (i) 2.8 × 30mm FIBRE-CEMENT NAILS; OR
   (ii) NO. 8 WAFER HEAD SCREWS (FOR 4.5mm AND 6mm SHEETS ONLY);
   (iii) NO. 8 SELF EMBEDDING HEAD SCREWS (FOR 6mm SHEETS ONLY).

GLAZING - H2D7

ACBC PART 8.2 - WINDOWS AND EXTERNAL GLAZED DOORS

8.2.2 Installation of windows

WINDOWS MUST BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING:
   (a) STRUCTURAL BUILDING LOADS MUST NOT BE TRANSFERRED TO THE WINDOW ASSEMBLY.
   (b) A MINIMUM 10mm GAP MUST BE PROVIDED BETWEEN THE TOP OF THE WINDOW ASSEMBLY AND ANY LOADBEARING FRAMING OR MASONRY WALL ELEMENT.
   (c) THE REQUIREMENTS OF (B) MAY BE INCREASED WHERE NECESSARY TO ALLOW FOR FRAME SETTLEMENT OVER WIDE OPENINGS.
   (d) PACKING, IF PROVIDED BETWEEN EACH WINDOW ASSEMBLY AND THE FRAME, MUST BE—
      (i) LOCATED ALONG EACH SIDE AND BOTTOM; AND
      (ii) FIXED TO ENSURE THE SIDES AND BOTTOM OF THE WINDOW ASSEMBLY REMAIN STRAIGHT; AND
      (iii) CLEAR OF ANY FLASHING MATERIAL.

ACBC PART 8.3 - GLASS

GLASS TO BE IN ACCORDANCE WITH A1288

GLASS USED IN BARRIERS, EXCEPT A WINDOW SERVING AS A BARRIER, MUST WITHSTAND LOADING FORCES IN ACCORDANCE WITH AS 1170.1.

FOR 3mm MONOLITHIC ANNEALED GLASS, THE MAXIMUM AREA MUST NOT BE MORE THAN 0.85 M^2.

8.3.3 Fully framed glazing installed in perimeter of buildings

FULLY FRAMED MONOLITHIC ANNEALED GLASS INSTALLED IN THE PERIMETER OF BUILDINGS MUST COMPLY WITH—
   (a) IF THE BUILDING IS LOCATED IN AN AREA WITH A WIND CLASS NOT EXCEEDING N1 – TABLE 8.3.3A;
   (b) IF THE BUILDING IS LOCATED IN AN AREA WITH A WIND CLASS NOT EXCEEDING N2 – TABLE 8.3.3B;
   (c) IF THE BUILDING IS LOCATED IN AN AREA WITH A WIND CLASS NOT EXCEEDING N3 – TABLE 8.3.3C.

ACBC PART 8.4 - GLAZING HUMAN IMPACT

8.4.2 Doors, side panels and other framed glazing panels

GLASS IN DOORS MUST BE GRADE A SAFETY GLAZING MATERIAL IN ACCORDANCE WITH TABLE 8.4.2 AND FIGURE 8.4.2, EXCEPT THAT—
   (a) UNFRAMED DOORS, OTHER THAN THOSE INCORPORATED IN SHOWER SCREENS OR BATH ENCLOSURES, MUST BE GLAZED WITH TOUGHENED SAFETY GLASS WITH A MINIMUM NOMINAL THICKNESS OF 10mm OR LAMINATED TOUGHENED SAFETY GLASS WITH A MINIMUM TOTAL THICKNESS OF 10mm; AND
   (b) INDIVIDUAL PIECES OF MONOLITHIC ANNEALED GLASS INCORPORATED IN LEADLIGHTS MAY BE USED, TO A MAXIMUM AREA OF 0.05m^2 WITH A MINIMUM NOMINAL THICKNESS OF 3mm; AND
   (c) FOR ANNEALED AND ANNEALED DECORATED GLASS PANELS IN DOORS—
      (i) 3 & 4mm ANNEALED GLASS, THE MAXIMUM AREA MUST NOT BE <0.1m^2 WITH A MAXIMUM PANEL WIDTH OF 125mm; AND
      (ii) 5 & 6mm ANNEALED GLASS, THE MAXIMUM AREA MUST NOT BE <0.26m^2 WITH A MAXIMUM PANEL WIDTH OF 300mm;
   (d) FOR ANNEALED GLASS IN FULLY FRAMED PANELS WITH A THICKNESS OF <10mm, WITH OR WITHOUT BEVELLED EDGES, THE MAXIMUM AREA MUST NOT BE M<0.5m^2; AND
   (e) DOORS IN BATHROOMS, ENSUITES AND SPA ROOMS MUST BE GLAZED IN ACCORDANCE WITH 8.4.6.

8.4.3 Door side panels

1. ALL FRAMED GLASS (EXCEPT LEADLIGHT PANELS) WITH THE NEAREST VERTICAL SIGHT LINE LESS THAN 300mm FROM THE NEAREST EDGE OF THE DOORWAY OPENING MUST BE GRADE A SAFETY GLAZING MATERIAL IN ACCORDANCE WITH TABLE 8.4.2 AND FIGURE 8.4.2, EXCEPT THAT—
   (a) THE LOWEST VISIBLE SIGHT LINE IS <1.2m ABOVE THE HIGHEST ABUTTING FINISHED FLOOR LEVEL, MONOLITHIC ANNEALED GLASS WITH A MIN. THICKNESS OF 5mm AND AN AREA OF NOT <0.3m^2 MAY BE USED;
   (b) THE LOWEST VISIBLE SIGHT LINE IS <1.2m ABOVE THE HIGHEST ABUTTING FINISHED FLOOR LEVEL, MONOLITHIC ANNEALED GLASS WITH A MIN, THICKNESS OF 10mm WITH AN AREA OF NOT <0.5m^2, MAY BE USED;
   (c) WHERE THE SIDE PANEL CONSISTS OF GLASS LOUVRES WITH EXPOSED EDGES OR WHERE THE LOUVRES ARE INSTALLED >500mm ABOVE THE HIGHEST ABUTTING FINISHED FLOOR LEVEL—
      (i) FOR BLADE WIDTHS NOT <230mm WITH BLADE LENGTHS NOT <1m, GRADE A TOUGHENED SAFETY GLAZING NOT >5mm THICK MUST BE USED; AND
      (ii) BLADE WIDTHS <230mm, GRADE A TOUGHENED SAFETY GLAZING NOT >10mm THICK MUST BE USED.

2. FRAMED GLASS PANELS WITH THE NEAREST VERTICAL SIGHT LINE NOT >300mm FROM THE NEAREST EDGE OF THE DOOR OPENING ARE NOT CONSIDERED TO BE SIDE PANELS FOR THE PURPOSES OF (1).

8.4.4 Full height framed glazed panels

1. A GLAZED PANEL LOCATED IN A BUILDING SO THAT IT IS CAPABLE OF BEING MISTAKEN FOR AN UNOBSTRUCTED OPENING MUST BE GLAZED WITH GRADE A SAFETY GLAZING MATERIAL IN ACCORDANCE WITH TABLE 8.4.2.

2. GLAZED PANELS ARE NOT CONSIDERED AN UNOBSTRUCTED OPENING WHERE ANY OF THE FOLLOWING APPLY:
   (a) THE CLEAR OPENING WIDTH IS NOT MORE THAN 500mm.
   (b) THE LOWEST SIGHT LINE OF THE OPENING IS NOT >500mm ABOVE THE HIGHEST ABUTTING FINISHED FLOOR LEVEL.
   (c) GLASS IS MADE APPARENT BY TRANSOMS, COLONIAL BARS, OTHER COMPONENTS OF THE SYSTEM, PERMANENT MOTIFS OR OTHER DECORATION ON OR ETCHED INTO THE GLASS, OF A MAGNITUDE TO BE READILY APPARENT, OR IS OPAQUELY COLOURED OR PATTERNED TO INDICATE ITS PRESENCE.
   (d) A CHAIR RAIL OR HANDRAIL NOT LESS THAN 40mm THICK, OR THE LIKE, IS PROVIDED AT A HEIGHT OF NOT LESS THAN 700mm ABOVE THE ADJOINING GROUND LEVEL.
   (e) THE DIFFERENCE IN FLOOR LEVEL ON EITHER SIDE OF THE PANEL IS GREATER THAN 1000mm.

ENGINEERING PLUS
BUILDING DESIGN
PROJECT MANAGEMENT
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IF IN DOUBT REFER TO NCC AND STANDARDS OR CONTACT ENGINEERING PLUS

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ENGINEERING PLUS BUILDING DESIGN PROJECT MANAGEMENT CIVIL/STRUCTURAL ENGINEERING

Accredited Building Designer
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NCC NOTES #3

GLAZING - H2D7

8.4.5 Glazed panels, other than doors or side panels, on the perimeter of rooms

ALL FRAMED GLAZING WHERE THE LOWEST SIGHT LINE OF THE GLAZING PANEL IS LESS THAN 500mm FROM THE HIGHEST ABUTTING FINISHED FLOOR LEVEL (SEE FIGURE 8.4.5) MUST BE—

(a) GRADE A SAFETY GLAZING MATERIAL IN ACCORDANCE WITH TABLE 8.4.2; OR

(b) MONOLITHIC ANNEALED GLASS NOT >5mm NOM. THICK PROVIDED THE AREA OF THE GLAZED PANEL IS NOT <1.2m^2.

8.4.6 Kitchen, bathroom, ensuite, spa room and splash-back glazing

1. ALL GLAZING IN KITCHENS, BATHROOMS, SPA ROOMS OR THE LIKE, INCLUDING SHOWER DOORS, SCREENS, BATH ENCLOSURES, AND ASSOCIATED WINDOWS & DOORS (INCLUDING CABINET DOORS), WHERE THE LOWEST SIGHT LINE IS >2.0m ABOVE THE HIGHEST ABUTTING FINISHED FLOOR LEVEL, BOTTOM OF THE BATH, OR SHOWER BASE, MUST—

(a) FRAMED PANELS, GLAZED WITH GRADE A SAFETY GLAZING MATERIAL IN ACCORDANCE WITH TABLE 8.4.2;

(b) FOR PANELS OR DOORS WITH ANY EDGE EXPOSED, BE TOUGHENED SAFETY GLASS IN ACCORDANCE WITH TABLE 8.4.6 WITH A MINIMUM NOMINAL THICKNESS OF 6mm.

2. MONOLITHIC ANNEALED GLASS MAY BE USED FOR—

(a) MIRRORS, PROVIDED A FIXED VANITY OR BENCH WITH A HEIGHT OF NOT LESS THAN 760mm, DEPTH OF NOT LESS THAN 300mm AND EXTENDING THE FULL WIDTH OF THE MIRROR IS, LOCATED IN FRONT OF THE MIRROR;

(b) SPLASH-BACKS, PROVIDED IT IS FULLY BACKED BY AND CONTINUOUSLY ADHERED TO A SOLID WALL MATERIAL OR A FIXED CABINET OR BENCH THAT IS—

(i) A HEIGHT NOT LESS THAN 760mm; AND

(ii) A DEPTH NOT LESS THAN 300mm; AND

(iii) EXTENDING THE FULL WIDTH OF THE SPLASH-BACK; AND

(iv) LOCATED IN FRONT OF THE SPLASH BACK.

8.4.7 Visibility of glazing

1. IF THE PRESENCE OF GLAZING IN A DOOR, SIDE PANEL OR PANEL CAPABLE OF BEING MISTAKEN FOR A DOORWAY OR OPENING IS NOT MADE APPARENT IN ACCORDANCE WITH 8.4.4(2)(C), THE GLASS MUST BE MARKED TO MAKE IT READILY VISIBLE TO COMPLY WITH (2).
2. MARKING MUST BE IN THE FORM OF AN OPAQUE BAND NOT LESS THAN 20mm IN HEIGHT LOCATED SO THAT—

(a) THE UPPER EDGE IS NOT LESS THAN 700mm ABOVE THE FLOOR; AND

(b) THE LOWER EDGE IS NOT MORE THAN 1.2m ABOVE THE FLOOR.

3. A BAND OR MARKING IS NOT REQUIRED WHERE ANY OF THE FOLLOWING APPLIES:

(a) THE HEIGHT OF THE GLAZING IS NOT MORE THAN 1m IN ANY PART.

(b) THE WIDTH OF THE GLAZING PANEL IS NOT MORE THAN 500mm IN ANY PART.

(c) THERE IS NO GLAZING WITHIN 500mm OF THE FLOOR.

(d) THE GLAZING IS PROVIDED WITH NOT LESS THAN ONE FIXED GLAZING BAR WHICH MUST—

(i) BE FIRMLY ATTACHED TO THE STILES TO LOCATE AND PROTECT EACH FACE OF THE GLASS;

(ii) BE LOCATED WITH ITS UPPER EDGE NOT LESS THAN 500mm AND ITS BOTTOM EDGE NOT MORE THAN 1m ABOVE THE FLOOR; AND

(iii) HAVE A FACE WIDTH NOT LESS THAN 40mm.

8.4.8 Identification of safety glass

ALL SAFETY MATERIAL IN TABLES 8.4.2 AND TABLE 8.4.6 INSTALLED TO COMPLY WITH THIS PART MUST COMPLY WITH:

(a) SAFETY GLASS MUST BE MARKED IN THE FORM OF EITHER PERMANENT ETCHING OR A LABEL THAT CANNOT BE REUSED ONCE REMOVED.

(b) THE PERMANENT ETCHING OR LABEL MUST STATE THE FOLLOWING INFORMATION:

(i) THE STANDARD TO WHICH THE SAFETY GLASS HAS BEEN TESTED.

(ii) REGISTERED NAME OF THE MANUFACTURER OR SUPPLIER.

(iii) GRADE OF THE SAFETY GLASS.

(iv) NOMINAL THICKNESS OF THE SAFETY GLASS.

(v) THE TYPE OF SAFETY GLASS.

SMOKE ALARMS AND EVACUATION LIGHTING - H3D6

ACBC PART 9.5

TO COMPLY WITH AS3786

BE POWERED BY MAINS POWER WHERE AVAILABLE - BE INTERCONNECTED WHERE THERE IS MORE THAN ONE ALARM

9.5.2 Location - Class 1a buildings

IN A CLASS 1a BUIDING. SMOKE ALARMS MUST BE LOCATED IN -

(a) ANY STOREY CONTAINING BEDROOMS, EVERY CORRIDOR OR HALLWAY ASSOCIATED WITH A BEDROOM, OR IF THERE IS NO CORRIDOR OR HALLWAY, IN AN AREA BETWEEN BEDROOMS AND THE REMAINDER OF THE BUILDING;

(b) EACH OTHER STOREY NOT CONTAINING BEDROOMS

9.5.3 Location - Class 1b buildings

IN A CLASS 1b BUIDING. SMOKE ALARMS MUST BE LOCATED IN -

(a) EVERY BEDROOM; AND

(b) EVERY CORRIDOR OR HALLWAY ASSOCIATED WITH A BEDROOM, OR IF THERE IS NO CORRIDOR OR HALLWAY, IN AN AREA BETWEEN BEDROOMS AND THE REMAINDER OF THE BUILDING; AND

(c) EACH OTHER STOREY

9.5.4 Installation of smoke alarms

SMOKE ALARMS REQUIRED BY 9.5.2 AND 9.5.3 MUST BE INSTALLED ON OR NEAR THE CEILING, IN ACCORDANCE WITH:

(a) WHERE A SMOKE ALARM IS LOCATED ON THE CEILING IT MUST BE—

(i) A MINIMUM OF 300mm AWAY FROM THE CORNER JUNCTION OF THE WALL AND CEILING; AND

(ii) BETWEEN 500mm AND 1500mm AWAY FROM THE HIGH POINT AND APEXES OF THE CEILING, IF THE ROOM HAS A SLOPING CEILING.

(b) WHERE (A) IS NOT POSSIBLE, THE SMOKE ALARM MAY BE INSTALLED ON THE WALL, AND LOCATED A MINIMUM OF 300mm AND A MAXIMUM OF 500mm OFF THE CEILING AT THE JUNCTION WITH THE WALL

9.5.5 Lighting to assist evacuation - Class 1b buildings

IN A CLASS 1B, A SYSTEM OF LIGHTING MUST BE INSTALLED TO ASSIST EVACUATION OF OCCUPANTS IN THE EVENT OF A FIRE, AND—

(a) BE ACTIVATED BY THE SMOKE ALARM REQUIRED BY 9.5.3(B); AND

(b) CONSIST OF—

(i) A LIGHT INCORPORATED WITHIN THE SMOKE ALARM; OR

(ii) THE LIGHTING LOCATED IN THE CORRIDOR, HALLWAY OR AREA SERVED BY THE SMOKE ALARM.

WET AREAS - H4D2

WET AREAS TO COMPLY WITH AS3740; AND

ACBC PART 10.2

BUILDING ELEMENTS IN WET AREAS WITHIN A BUILDING MUST BE PROTECTED WITH A WATERPROOFING SYSTEM.

THE WATERPROOFING SYSTEM MUST BE EITHER WATERPROOF OR WATER RESISTANT IN ACCORDANCE WITH 10.2.2 - 10.2.6.

10.2.7 Materials

WHERE REQUIRED TO BE INSTALLED IN ACCORDANCE WITH 10.2.2 TO 10.2.6, MATERIALS USED IN WET AREAS FORMING A WATERPROOFING SYSTEM MUST BE EITHER WATERPROOF OR WATER RESISTANT IN ACCORDANCE WITH 10.2.8 TO 10.2.10

10.2.12 Construction of wet area floors - Falls

WHERE A FLOOR WASTE IS INSTALLED—

(a) THE MINIMUM CONTINUOUS FALL OF A FLOOR PLANE TO THE WASTE MUST BE 1:80; AND

(b) THE MAXIMUM CONTINUOUS FALL OF A FLOOR PLANE TO THE WASTE MUST BE 1:50.

Shower, hob and bath requirements

SHOWERS, HOB AND BATHS CONSTRUCTED IN ACCORDANCE WITH 10.2.14 TO 10.2.24

Membranes

MEMBRANES CONSTRUCTED IN ACCORDANCE WITH 10.2.25 TO 10.2.29

10.2.32 Shower screens

1. FOR A SHOWER WITH A HOB, THE SCREEN MUST BE INSTALLED FLUSH WITH THE SHOWER SIDE OF THE HOB OR OVERHANG INTO THE SHOWER AREA.

2. FOR A SHOWER WITH A STEPDOWN, THE SCREEN MUST BE INSTALLED FLUSH WITH THE FINISHED VERTICAL SURFACE OF THE STEPDOWN OF THE SHOWER AREA.

3. FOR A SHOWER WITHOUT A HOB OR STEPDOWN, THE SCREEN MUST INCORPORATE OR BE MOUNTED ON AN INVERTED CHANNEL, POSITIONED OVER THE TOP OF THE WATERSTOP, THAT DEFINES THE SHOWER AREA.

4. FOR BATH END WALLS AND DIVIDING WALLS ABUTTING A SHOWER, THE SHOWER SCREEN MUST BE POSITIONED SO THAT THE BOTTOM EDGE WITHIN THE SHOWER AREA IS EITHER FLUSH WITH THE OUTSIDE EDGE OF THE BATH OR OVERHANGING INTO THE SHOWER AREA.

FACILITIES - H4D5

ACBC PART 10.4

10.4.1 Required facilities

1. A CLASS 1 BUILDING MUST BE PROVIDED WITH—

(a) A KITCHEN SINK AND FACILITIES FOR THE PREPARATION AND COOKING OF FOOD; AND

(b) A BATH OR SHOWER; AND

(c) CLOTHES WASHING FACILITIES, COMPRISING AT LEAST ONE WASHTUB AND SPACE IN THE SAME ROOM FOR A WASHING MACHINE; AND

(d) A CLOSET PAN; AND

(e) A WASHBASIN.

2. IF ANY FACILITIES ARE DETACHED FROM THE MAIN BUILDING, THEY MUST BE SET ASIDE FOR THE EXCLUSIVE USE OF THE OCCUPANTS OF THE BUILDING.

10.4.2 Construction of sanitary compartments

THE DOOR TO A FULLY ENCLOSED SANITARY COMPARTMENT MUST—

(a) OPEN OUTWARDS; OR

(b) SLIDE; OR

(c) BE READILY REMOVABLE FROM THE OUTSIDE OF THE COMPARTMENT

UNLESS THERE IS A CLEAR SPACE OF AT LEAST 1.2m, MEASURED IN ACCORDANCE WITH FIGURE 10.4.2, BETWEEN THE CLOSET PAN WITHIN THE SANITARY COMPARTMENT AND THE DOORWAY.

LIGHT - H4D6

ACBC PART 10.5

10.5.1 Natural light

1. NATURAL LIGHT MUST BE PROVIDED BY—

(a) WINDOWS, EXCLUDING ROOF LIGHTS THAT—

(i) HAVE AN AGGREGATE LIGHT TRANSMITTING AREA MEASURED EXCLUSIVE OF FRAMING MEMBERS, GLAZING BARS OR OTHER OBSTRUCTIONS OF NOT LESS THAN 10% OF THE FLOOR AREA OF THE ROOM;

(ii) ARE OPEN TO THE SKY OR FACE A COURT OR OTHER SPACE OR AN OPEN VERANDAH, CARPORT OR THE LIKE;

(b) ROOF LIGHTS THAT—

(i) HAVE AN AGGREGATE LIGHT TRANSMITTING AREA MEASURED EXCLUSIVE OF FRAMING MEMBERS, GLAZING BARS OR OTHER OBSTRUCTIONS OF NOT LESS THAN 3% OF THE FLOOR AREA OF THE ROOM;

(ii) ARE OPEN TO THE SKY; OR

(c) A PROPORTIONAL COMBINATION OF WINDOWS AND ROOF LIGHTS REQUIRED BY (A) AND (B).

2. A WINDOW REQUIRED TO PROVIDE NATURAL LIGHT THAT FACES A BOUNDARY OF AN ADJOINING ALLOTMENT MUST NOT BE LESS THAN A HORIZONTAL DISTANCE OF 900mm FROM THAT BOUNDARY.

3. NATURAL LIGHT TO A ROOM MAY COME THROUGH ONE OR MORE GLAZED PANELS OR OPENINGS FROM AN ADJOINING ROOM (INCLUDING AN ENCLOSED VERANDAH) IF—

(a) THE GLAZED PANELS OR OPENINGS HAVE AN AGGREGATE LIGHT TRANSMITTING AREA OF NOT >10% OF THE FLOOR AREA OF THE ROOM TO WHICH IT PROVIDES LIGHT; AND

(b) THE ADJOINING ROOM HAS—

(i) WINDOWS, EXCLUDING ROOF LIGHTS THAT—

(A) HAVE AN AGGREGATE LIGHT TRANSMITTING AREA OF NOT >10% OF THE COMBINED FLOOR AREA OF BOTH ROOMS;

(B) ARE OPEN TO THE SKY OR FACE A COURT OR OTHER SPACE OR AN OPEN VERANDAH, CARPORT OR THE LIKE; OR

(ii) ROOF LIGHTS THAT—

(A) HAVE AN AGGREGATE LIGHT TRANSMITTING AREA OF NOT >3% OF THE COMBINED FLOOR AREA OF BOTH ROOMS;

(B) ARE OPEN TO THE SKY; OR

(iii) A PROPORTIONAL COMBINATION OF WINDOWS AND ROOF LIGHTS REQUIRED BY (i) AND (ii).

4. THE AREAS SPECIFIED IN (3)(a) AND (b) MAY BE REDUCED AS APPROPRIATE IF DIRECT NATURAL LIGHT IS PROVIDED FROM ANOTHER SOURCE.

VENTILATION - H4D7

CONSTRUCTED IN ACCORDANCE WITH AS1668.2; AND

ACBC PART 10.6

10.6.2 Ventilation requirements

VENTILATION MUST BE PROVIDED TO A HABITABLE ROOM, SANITARY COMPARTMENT, BATHROOM, SHOWER ROOM, LAUNDRY AND ANY OTHER ROOM OCCUPIED BY A PERSON FOR ANY PURPOSE BY ANY OF THE FOLLOWING MEANS:

(a) OPENINGS, WINDOWS, DOORS OR OTHER DEVICES WHICH CAN BE OPENED— WITH A VENTILATING AREA NOT LESS THAN 5% OF THE FLOOR AREA OF THE ROOM REQUIRED TO BE VENTILATED; AND

(b) OPEN TO—

(i) A SUITABLY SIZED COURT, OR SPACE OPEN TO THE SKY; OR

(ii) AN OPEN VERANDAH, CARPORT, OR THE LIKE; OR

(iii) AN ADJOINING ROOM IN ACCORDANCE WITH (B).

(b) NATURAL VENTILATION TO A ROOM MAY COME THROUGH A WINDOW, OPENING, DOOR OR OTHER DEVICE FROM AN ADJOINING ROOM (INCLUDING AN ENCLOSED VERANDAH) IF—

(i) THE ROOM TO BE VENTILATED OR THE ADJOINING ROOM IS NOT A SANITARY COMPARTMENT; AND

(ii) THE WINDOW, OPENING, DOOR OR OTHER DEVICE HAS A VENTILATING AREA OF NOT LESS THAN 5% OF THE FLOOR AREA OF THE ROOM TO BE VENTILATED; AND

(iii) THE ADJOINING ROOM HAS A WINDOW, OPENING, DOOR OR OTHER DEVICE WITH A VENTILATING AREA OF NOT >5% OF THE COMBINED FLOOR AREAS OF BOTH ROOMS; AND

(iv) THE VENTILATING AREAS SPECIFIED MAY BE REDUCED AS APPROPRIATE IF DIRECT NATURAL VENTILATION IS PROVIDED FROM ANOTHER SOURCE (SEE FIGURE 10.6.2).

(c) AN EXHAUST FAN OR OTHER MEANS OF MECHANICAL VENTILATION MAY BE USED TO VENTILATE A SANITARY COMPARTMENT, LAUNDRY, KITCHEN OR BATHROOM, OR WHERE MECHANICAL VENTILATION IS PROVIDED IN ACCORDANCE WITH 10.6.3(B), PROVIDED CONTAMINATED AIR EXHAUSTS COMPLY WITH 10.8.2.

CONDENSATION AND WATER VAPOUR MANAGEMENT - H4F7

ACBC PART 10.8

10.8.1 External wall construction

1. WHERE A PLIABLE BUILDING MEMBRANE IS INSTALLED IN AN EXTERNAL WALL, IT MUST—

(a) COMPLY WITH AS 4200.1; AND

(b) BE INSTALLED IN ACCORDANCE WITH AS 4200.2; AND

(c) BE LOCATED ON THE EXTERIOR SIDE OF THE PRIMARY INSULATION LAYER OF WALL ASSEMBLIES THAT FORM THE EXTERNAL ENVELOPE

2. WHERE A PLIABLE BUILDING MEMBRANE, SARKING-TYPE MATERIAL OR INSULATION LAYER IS INSTALLED ON THE EXTERIOR SIDE OF THE PRIMARY INSULATION LAYER OF AN EXTERNAL WALL IT MUST HAVE A VAPOUR PERMEANCE OF NOT LESS THAN—

(a) IN CLIMATE ZONES 4 AND 5, 0.143 µG/N.S; AND

(b) IN CLIMATE ZONES 6, 7 AND 8, 1.14 µG/N.S.

3. EXCEPT FOR SINGLE SKIN MASONRY OR SINGLE SKIN CONCRETE, WHERE A PLIABLE BUILDING MEMBRANE IS NOT INSTALLED IN AN EXTERNAL WALL, THE PRIMARY WATER CONTROL LAYER MUST BE SEPARATED FROM WATER SENSITIVE MATERIALS BY A DRAINED CAVITY.

10.8.3 Ventilation of roof spaces

1. IN CLIMATE ZONES 6, 7 AND 8, A ROOF MUST HAVE A ROOF SPACE THAT—

(a) IS LOCATED—

(i) IMMEDIATELY ABOVE THE PRIMARY INSULATION LAYER; OR

(ii) IMMEDIATELY ABOVE SARKING WITH A VAPOUR PERMEANCE OF NOT >1.14 MG/N.S, WHICH IS IMMEDIATELY ABOVE THE PRIMARY INSULATION LAYER; OR

(iii) IMMEDIATELY ABOVE CEILING INSULATION THAT MEETS THE REQUIREMENTS OF 13.2.3(3) AND 13.2.3(4);

(b) HAS A HEIGHT OF NOT LESS THAN 20 MM; AND

(c) IS EITHER—

(i) VENTILATED TO OUTDOOR AIR THROUGH EVENLY DISTRIBUTED OPENINGS IN ACCORDANCE WITH TABLE 10.8.3; OR

(ii) LOCATED IMMEDIATELY UNDERNEATH THE ROOF TILES OF AN UNSARKED TILED ROOF.

2. THE REQUIREMENTS OF (1) DO NOT APPLY TO A—

(a) CONCRETE ROOF; OR

(b) ROOF THAT IS MADE OF STRUCTURAL INSULATED PANELS; OR

(c) ROOF THAT IS SUBJECT TO BUSHFIRE ATTACK LEVEL FZ REQUIREMENTS IN ACCORDANCE WITH AS 3959.

ENERGY EFFICIENCY - H6D2

ACBC PART 13 or BCA 2019 PART 3.12

GENERALLY THIS PART APPLIES TO CLASS 1 AND CLASS 10a BUILDINGS WITH A CONDITIONED SPACE

ACBC PART 13.2 BUILDING FABRIC

13.2.2 Building fabric thermal insulation

1. WHERE REQUIRED, INSULATION MUST COMPLY WITH AS/NZS 4859.1 AND BE INSTALLED SO THAT IT—

(a) ABUTS OR OVERLAPS ADJOINING INSULATION OTHER THAN AT SUPPORTING MEMBERS SUCH AS COLUMNS, STUDS, NOGGINGS, JOISTS, FURRING CHANNELS AND THE LIKE WHERE THE INSULATION MUST BUTT AGAINST THE MEMBER;

(b) FORMS A CONTINUOUS BARRIER WITH CEILINGS, WALLS, FLOORS OR THE LIKE THAT INHERENTLY CONTRIBUTE TO THE THERMAL BARRIER;

(c) DOES NOT AFFECT THE SAFE OR EFFECTIVE OPERATION OF A DOMESTIC SERVICE OR FITTING.

2. WHERE REQUIRED, REFLECTIVE INSULATION MUST BE INSTALLED WITH—

(a) THE NECESSARY AIRSPACE, TO ACHIEVE THE REQUIRED R-VALUE BETWEEN REFLECTIVE SIDE OF THE INSULATION AND A BUILDING LINING OR CLADDING;

(b) THE REFLECTIVE INSULATION CLOSELY FITTED AGAINST ANY PENETRATION, DOOR OR WINDOW OPENING; AND

(c) THE REFLECTIVE INSULATION ADEQUATELY SUPPORTED BY FRAMING MEMBERS; AND

(d) EACH ADJOINING SHEET OF ROLL MEMBRANE BEING—

(i) OVERLAPPED GREATER THAN OR EQUAL TO 150mm; OR

(ii) TAPED TOGETHER.

3. WHERE REQUIRED, BULK INSULATION MUST BE INSTALLED SO THAT—

(a) MAINTAINS ITS POSITION AND THICKNESS, OTHER THAN WHERE IT CROSSES ROOF BATTENS, WATER PIPES, ELECTRICAL CABLING OR THE LIKE;

(b) IN A CEILING, WHERE THERE IS NO BULK INSULATION OR REFLECTIVE INSULATION IN THE EXTERNAL WALL BENEATH, IT OVERLAPS THE EXTERNAL WALL BY GREATER THAN OR EQUAL TO 50mm.

ENGINEERING PLUS — BUILDING DESIGN, PROJECT MANAGEMENT, CIVIL/STRUCTURAL ENGINEERING

ISSUED FOR CONSTRUCTION

Client: D. CUNDY & W. GLYNN

Project: PROPOSED DWELLING

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Rev:	Amendment:	Date:	Int:
1	MINOR AMENDMENT	25.11.24	W.T
0	ISSUED FOR CONSTRUCTION	07.10.24	O.J
E	DWELLING RELOCATION	02.09.24	O.J
D	DWELLING RELOCATION	26.07.24	O.J
C	DECOR AMENDMENTS	03.07.24	O.J
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Drawn: O. Jones
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Approved: J. Pfeiffer
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Designer Name: J.Pfeiffer
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Sorell Council

Development Application: 5.2024.322.1 - Response to Request for Information - 3 Linden Road, Primrose Sands - P2.pdf
Plans Reference: P2
Date received:13/12/2024

IF IN DOUBT REFER TO NCC AND STANDARDS OR CONTACT ENGINEERING PLUS

NCC NOTES #4

13.2.3 Roofs and ceilings

2. REFLECTIVE INSULATION MUST—
   (a) HAVE A SURFACE EMITTANCE OF NOT MORE THAN 0.05; AND
   (b) BE ADJACENT TO A ROOF SPACE OF NOT LESS THAN 20mm; AND
   (c) IN CLIMATE ZONES 3 TO 8, BE DOWNWARD FACING.

3. THE THERMAL BRIDGING IN A METAL-FRAMED ROOF MUST BE ADDRESSED AS FOLLOWS—
   (a) FOR A PITCHED ROOF WITH A HORIZONTAL CEILING—
      (i) ACHIEVES THE TOTAL R-VALUE IN TABLE 13.2.3S, CALCULATED USING A METHOD ACCOUNTING FOR THE EFFECTS OF THERMAL BRIDGING;
      (ii) INCREASING THE R-VALUE OF THE INSULATION BETWEEN THE CEILING FRAMES BY R0.5 MORE THAN THE REQUIRED R-VALUE; OR
      (iii) ADDING A CONTINUOUS CEILING INSULATION LAYER WITH A MINIMUM R-VALUE OF R0.13 ABOVE OR BELOW THE CEILING JOISTS OR THE BOTTOM CHORDS OF THE TRUSSES; OR
      (iv) ACHIEVES THE REQUIRED CEILING R-VALUE BY STACKING 2 LAYERS OF INSULATION IMMEDIATELY ON TOP OF EACH OTHER, SO THE TOP LAYER IS ORIENTATED TO COVER THE CEILING JOISTS OR BOTTOM CHORDS OF THE TRUSSES AND HAS AN R-VALUE OF AT LEAST R0.5;
   (b) FOR A FLAT, SKILLION OR CATHEDRAL ROOF—
      (i) ACHIEVES THE *TOTAL R-VALUE* IN TABLE 13.2.3T, CALCULATED USING A METHOD ACCOUNTING FOR THE EFFECTS OF THERMAL BRIDGING;
      (ii) COMPLYING WITH TABLE 13.2.3U.

4. WHERE 10.8.3(1) OF THE ABCB HOUSING PROVISIONS APPLIES, CONTINUOUS INSULATION PLACED ABOVE THE PRIMARY INSULATION LAYER TO MITIGATE THERMAL BRIDGING MUST HAVE A VAPOUR PERMEANCE OF NOT LESS THAN THAT OF THE PRIMARY INSULATION LAYER.

5. WHERE, FOR OPERATIONAL OR SAFETY REASONS, THE AREA OF CEILING INSULATION REQUIRED IS REDUCED, THE LOSS OF INSULATION MUST BE COMPENSATED FOR IN ACCORDANCE WITH TABLE 13.2.3W.

6. WHERE THE CEILING INSULATION REQUIRED BY (1) TO (5) HAS AN R-VALUE—
   (a) <R3.0 AND LESS THAN OR EQUAL TO R4.5, IT MAY BE REDUCED TO R3.0 WITHIN 450mm OF AN EXTERNAL WALL; OR
   (b) <R4.5, IT MAY BE REDUCED TO R3.0 WITHIN 450mm OF AN EXTERNAL WALL, PROVIDED ALL OTHER CEILING INSULATION IS INCREASED BY R0.5.
7. A ROOF THAT—
   (a) HAS METAL SHEET ROOFING DIRECTLY FIXED TO METAL PURLINS, METAL RAFTERS OR METAL BATTENS; AND
   (b) DOES NOT HAVE A CEILING LINING OR HAS A CEILING LINING FIXED DIRECTLY TO THOSE METAL PURLINS, METAL RAFTERS OR METAL BATTENS, MUST HAVE A THERMAL BREAK, CONSISTING OF A MATERIAL WITH AN R-VALUE OF GREATER THAN OR EQUAL TO 0.2, INSTALLED BETWEEN THE METAL SHEET ROOFING AND ITS SUPPORTING METAL PURLINS, METAL RAFTERS OR METAL BATTENS.

8. THE REQUIREMENTS OF (1) TO (7) DO NOT APPLY TO ROOFS CONSTRUCTED USING INSULATED SANDWICH PANELS.

9. ROOFS CONSTRUCTED USING INSULATED SANDWICH PANELS MUST ACHIEVE THE MINIMUM TOTAL R-VALUE IN TABLE 13.2.3X.

13.2.4 Roof lights

ROOF LIGHTS (INCLUDING ANY ASSOCIATED SHAFT AND DIFFUSER) SERVING A HABITABLE ROOM OR AN INTERCONNECTING SPACE SUCH AS A CORRIDOR, HALLWAY, STAIRWAY OR THE LIKE MUST HAVE—
   (a) A TOTAL AREA OF NOT MORE THAN 5% OF THE FLOOR AREA OF THE ROOM OR SPACE SERVED; AND
   (b) TRANSPARENT AND TRANSLUCENT ELEMENTS, INCLUDING ANY IMPERFORATE CEILING DIFFUSER, WITH A COMBINED PERFORMANCE OF—
      (i) FOR TOTAL SYSTEM SHGC, IN ACCORDANCE WITH TABLE 13.2.4; AND
      (ii) FOR TOTAL SYSTEM U-VALUE, NOT MORE THAN U3.9.

13.2.5 External walls

4. THE THERMAL BRIDGING IN A METAL-FRAMED WALL MUST BE ADDRESSED BY—
   (a) ACHIEVING THE TOTAL R-VALUE IN TABLES 13.2.5P, 13.2.5Q AND 13.2.5R, CALCULATED IN ACCORDANCE WITH AS/NZS 4859.2; OR
   (b) COMPLYING WITH ONE OF THE OPTIONS IN TABLES 13.2.5S, 13.2.5T AND 13.2.5U.

5. A METAL-FRAMED WALL THAT FORMS PART OF THE BUILDING ENVELOPE MUST HAVE A THERMAL BREAK, CONSISTING OF A MATERIAL WITH AN R-VALUE OF NOT >R0.2, INSTALLED AT ALL POINTS OF CONTACT BETWEEN THE EXTERNAL CLADDING AND THE METAL FRAME IF THE WALL—
   (a) DOES NOT HAVE A WALL LINING OR HAS A WALL LINING THAT IS FIXED DIRECTLY TO THE METAL FRAME; AND
   (b) IS CLAD WITH WEATHERBOARDS, FIBRE-CEMENT OR THE LIKE, OR METAL SHEETING FIXED TO THE METAL FRAME.

6. THE REQUIREMENTS OF (5) DO NOT APPLY TO WALLS CONSTRUCTED USING INSULATED SANDWICH PANELS.

13.2.6 Floors and subfloor walls

1. FLOOR INSULATION, WHERE THE FLOOR IS OVER AN UNENCLOSED SPACE, MUST ACHIEVE THE MINIMUM R-VALUE IN ACCORDANCE WITH TABLE 13.2.6A.

3. THE THERMAL BRIDGING IN A METAL-FRAMED FLOOR MUST BE ADDRESSED BY—
   (a) ACHIEVING THE TOTAL R-VALUE IN TABLE 13.2.6I, CALCULATED BY—
      (i) USING A METHOD THAT ACCOUNTS FOR THE EFFECT OF THERMAL BRIDGING IN A SUSPENDED FLOOR ABOVE AN ENCLOSED SUBFLOOR SPACE; OR
      (ii) USING AS/NZS 4859.2 FOR ALL OTHER FLOORS; OR
   (b) COMPLYING WITH ONE OF THE OPTIONS IN TABLE 13.2.6J.

4. A CONCRETE SLAB-ON-GROUND WITH AN IN-SLAB OR IN-SCREED HEATING OR COOLING SYSTEM, MUST HAVE INSULATION WITH AN R-VALUE GREATER THAN OR EQUAL TO 1.0, INSTALLED AROUND THE VERTICAL EDGE OF ITS PERIMETER.

5. EXCEPT FOR A WAFFLE-POD SLAB—
   (a) IN CLIMATE ZONES 6 AND 7—
      (i) INSULATION WITH R-VALUE GREATER THAN OR EQUAL TO 0.64 MUST BE INSTALLED AROUND THE VERTICAL EDGE OF ITS PERIMETER; AND
      (ii) INSULATION WITH AN R-VALUE GREATER THAN OR EQUAL TO 0.64 MUST BE INSTALLED UNDERNEATH THE SLAB; AND
   (b) IN CLIMATE ZONE 8—
      (i) INSULATION WITH AN R-VALUE GREATER THAN OR EQUAL TO 1.0 MUST BE INSTALLED AROUND THE VERTICAL EDGE OF ITS PERIMETER; AND
      (ii) INSULATION WITH AN R-VALUE GREATER THAN OR EQUAL TO 2.0 MUST BE INSTALLED UNDERNEATH THE SLAB.
6. INSULATION REQUIRED BY (4), (5)(A)(I) AND (5)(B)(I) MUST—
   (a) BE WATER RESISTANT; AND
   (b) BE CONTINUOUS FROM THE ADJACENT FINISHED GROUND LEVEL—
      (i) TO A DEPTH OF GREATER THAN OR EQUAL TO 300mm; OR
      (ii) FOR AT LEAST THE FULL DEPTH OF THE VERTICAL EDGE OF THE CONCRETE SLAB-ON-GROUND (SEE FIGURE 13.2.6).
7. THE REQUIREMENTS OF (4) DO NOT APPLY TO AN IN-SCREED HEATING OR COOLING SYSTEM USED SOLELY IN A BATHROOM, AMENITY AREA OR THE LIKE.

13.2.7 Attached Class 10a buildings

A CLASS 10A BUILDING ATTACHED TO A CLASS 1 BUILDING MUST—
   (a) HAVE AN EXTERNAL FABRIC THAT ACHIEVES THE REQUIRED LEVEL OF THERMAL PERFORMANCE FOR A CLASS 1 BUILDING; OR
   (b) BE SEPARATED FROM THE CLASS 1 BUILDING WITH CONSTRUCTION HAVING THE REQUIRED LEVEL OF THERMAL PERFORMANCE FOR THE CLASS 1 BUILDING.

RECOMMENDED INSULATION R-VALUES - CLIMATE ZONE 7 & 8

- ROOF	- ZONE 7 - 4.0	- ZONE 8 - 4.0
- EXTERNAL WALLS	- ZONE 7 - 2.5	- ZONE 8 - 2.7
- FLOORS	- ZONE 7 - 3.0	- ZONE 8 - 3.0
- FLOORS (with reflective insulation)	- ZONE 7 - 2.0	- ZONE 8 - 2.0

IF A REDUCTION IN INSULATION IS DESIRED CONSULT ABCB PART 13.2 FOR ABSOLUTE MINIMUMS

BCA 2019 PART 3.12.2 EXTERNAL GLAZING

GENERALLY THIS PART APPLIES TO CLASS 1 AND CLASS 10a BUILDINGS WITH A CONDITIONED SPACE

13.12.2.1 External glazing

1. THE AGGREGATE CONDUCTANCE OF THE GLAZING IN EACH STOREY, INCLUDING ANY MEZZANINE, OF A BUILDING MUST—
   (a) NOT EXCEED THE ALLOWANCES RESULTING FROM—
      (ii) IN CLIMATE ZONES 2 TO 8, USING THE CONSTANT C_U OBTAINED FROM TABLES 3.12.2.1B TO 3.12.2.1H, AS APPROPRIATE;
2. THE AGGREGATE SOLAR HEAT GAIN OF THE GLAZING IN EACH STOREY, INCLUDING ANY MEZZANINE, OF A BUILDING MUST—
   (a) NOT EXCEED THE ALLOWANCES RESULTING FROM MULTIPLYING THE AREA OF THE STOREY, INCLUDING ANY MEZZANINE, MEASURED WITHIN THE ENCLOSING WALLS, BY THE CONSTANT C_{SHGC} OBTAINED FROM TABLES 3.12.2.1A TO 3.12.2.1H, AS APPROPRIATE;

3. FOR THE PURPOSES OF TABLES 3.12.2.1A TO 3.12.2.1H, THE FOLLOWING APPLIES:
   (a) A STOREY HAS STANDARD AIR MOVEMENT IF ALL HABITABLE ROOMS COMPLY WITH PART 3.12.4.
   (b) A STOREY HAS HIGH AIR MOVEMENT IF THE TOTAL VENTILATION OPENING AREA SERVING THE HABITABLE ROOM IS—
      (ii) GREATER THAN OR EQUAL TO TWICE THAT FOR STANDARD AIR MOVEMENT WITHOUT A CEILING FAN OR EVAPORATIVE COOLER.
   (c) WHERE THE VENTILATION OPENING AREA SERVING THE HABITABLE ROOMS IS BETWEEN STANDARD AND HIGH, INTERPOLATION MAY BE USED TO DETERMINE THE APPLICABLE C_{SHGC}.
   (d) WHERE THE FLOOR CONSTRUCTION OF A STOREY, INCLUDING A MEZZANINE, IS PARTLY IN DIRECT CONTACT WITH THE GROUND AND PARTLY SUSPENDED, THE CONSTANTS FOR CONDUCTANCE AND SOLAR HEAT GAIN ARE TO BE—
      (i) INTERPOLATED BETWEEN THE CONSTANTS FOR THE TWO CONSTRUCTIONS IN PROPORTION TO THEIR RESPECTIVE AREAS; OR
      (ii) THOSE FOR A SUSPENDED FLOOR.

REFER TO NCC AND STANDARDS FOR DETAILED GLAZING CALCULATIONS

13.12.2.2 Shading

WHERE SHADING IS REQUIRED TO COMPLY WITH 3.12.2.1, IT MUST—
1. BE PROVIDED BY AN EXTERNAL PERMANENT PROJECTION, SUCH AS A VERANDAH, BALCONY, FIXED CANOPY, EAVES, SHADING HOOD OR CARPORT, WHICH—
   (a) EXTENDS HORIZONTALLY ON BOTH SIDES OF THE GLAZING FOR A DISTANCE GREATER THAN OR EQUAL TO THE PROJECTION DISTANCE P IN FIGURE 3.12.2.2; OR
   (b) PROVIDE THE EQUIVALENT SHADING TO (a) WITH A REVEAL OR THE LIKE; OR

2. BE PROVIDED BY AN EXTERNAL SHADING DEVICE, SUCH AS A SHUTTER, BLIND, VERTICAL OR HORIZONTAL BUILDING SCREEN WITH BLADES, BATTENS OR SLATS, WHICH—
   (a) IS CAPABLE OF RESTRICTING AT LEAST 80% OF THE SUMMER SOLAR RADIATION; AND
   (b) IF ADJUSTABLE, IS READILY OPERATED EITHER MANUALLY, MECHANICALLY OR ELECTRONICALLY BY THE BUILDING OCCUPANTS.

BCA 2019 PART 3.12.3 BUILDING SEALING

GENERALLY THIS PART APPLIES TO SEALING REQUIREMENT FOR CLASS 1 AND CLASS 10a BUILDINGS WITH A CONDITIONED SPACE AND A HABITABLE ROOM IN CLIMATE ZONES 4, 5, 6, 7 AND 8.

13.12.3.1 Chimneys and flues

THE CHIMNEY OR FLUE OF AN OPEN SOLID-FUEL BURING APPLIANCE MUST BE PROVIDED WITH A DAMPER OR FLAP THAT CAN BE CLOSED TO SEAL THE CHIMNEY OR FLUE

13.12.3.2 Roof lights

2. A ROOF LIGHT REQUIRED TO BE SEALED, OR CAPABLE OF BEING SEALED, MUST BE CONSTRUCTED WITH—
   (a) AN IMPERFORATE CEILING DIFFUSER OR THE LIKE INSTALLED AT THE CEILING OR INTERNAL LINING LEVEL; OR
   (b) A WEATHERPROOF SEAL; OR
   (c) A SHUTTER SYSTEM READILY OPERATED EITHER MANUALLY, MECHANICALLY OR ELECTRONICALLY BY THE OCCUPANT.

13.12.3.3 External windows and doors

2. SEALED TO RESTRICT AIR INFILTRATION—
   (a) FOR THE BOTTOM EDGE OF A DOOR, MUST BE A DRAFT PROTECTION DEVICE; AND
   (b) FOR THE OTHER EDGES OF A DOOR OR THE EDGES OF AN OPENABLE WINDOW OR OTHER SUCH OPENING, MAY BE A FOAM OR RUBBER COMPRESSIBLE STRIP, FIBROUS SEAL OR THE LIKE.

3. A WINDOW COMPLYING WITH THE MAXIMUM AIR INFILTRATION RATES SPECIFIED IN AS 2047 NEED NOT COMPLY WITH 2(ii).

13.12.3.5 Construction of ceilings, walls and floors

2. CONSTRUCTION MUST BE—
   (a) ENCLOSED BY INTERNAL LINING SYSTEMS THAT ARE CLOSE FITTING AT CEILING, WALL AND FLOOR JUNCTIONS; OR
   (b) SEALED AT JUNCTIONS AND PENETRATIONS WITH—
      (i) CLOSE-FITTING ARCHITRAVE, SKIRTING OR CORNICE; OR
      (ii) EXPANDING FOAM, RUBBER COMPRESSIVE STRIP, CAULKING OR THE LIKE.

ENGINEERING PLUS
BUILDING DESIGN
PROJECT MANAGEMENT
CIVIL/STRUCTURAL ENGINEERING

GENERALLY PLUMBING NOTES:

ALL WORK MUST BE CARRIED OUT BY A LICENSED PLUMBER
ALL PLUMBING TO BE INSTALLED IN ACCORDANCE WITH THE TASMANIAN PLUMBING REGULATIONS, TASMANIAN PLUMBING CODE AND AS3500

PRIOR TO COMMENCEMENT OF WORK:
1. OWNER, PUMBING OR BUILDER TO APPLY TO TASWATER FOR CONNECTIONS
   (a) SEWER CONNECTION - ESTABLISH LOCATION OF EXISTING CONNECTION OR INSTALLATION OF NEW CONNECTION
   (b) WATER CONNECTION, AND/OR INSTALLATION OF A WATER METER

2. THE PLUMBER/BUILDER MUST TAKE LEVELS TO ENSURE DRAINAGE LINES CAN BE CONNECTED TO LEGAL POINTS OF DISCHARGE (CONNECTION POINTS). DRAINAGE LINES TO BE INSTALLED AT GRADE WITH COVER

LEGEND OF PIPE DIAMETERS -UPVC

TROUGH = 50mm	SINK = 50mm
FLOOR WASTE = 40mm	BASIN = 40mm
SHOWER = 50mm	WC = 100mm
SEWER = 100mm	VENT = 50mm
DOWNPIPE = 90mm	BATH = 40mm
STORMWATER = 100mm	

SEWER LINE - DN 100 LAYED AT MINIMUM GRADE OF 1:60
STORM WATER - DN 90 LAYED AT MINIMUM GRADE OF 1:100

SEWER PLUMBING
- OVERFLOW RELIEF GULLY INSTALLATION TO BE A MINIMUM OF 150mm BELOW THE LOWEST FIXTURE AND 75mm ABOVE THE SURROUNDING FINISHED GROUND LEVEL
- CONCRETE SURROUND COLLARS TO BE FITTED TO OVERFLOW RELIEF GULLIES AT FINISHED GROUND LEVEL
- CONCRETE SURROUND COLLARS AND COVERS TO BE FITTED TO SEWER & DTORMWATER RISING SHAFT INSPECTION OPENINGS AT FINISHED GROUND LEVEL

STORMWATER PLUMBING
- STORMWATER IS TO BE COLLECTED FROM ALL ROOFED AREAS AND CONNECTED TO LEGAL POINT OF DISCHARGE WHICH INCLUDES:
   (a) COUNCIL STORMWATER MAIN WITH CONNECTION POINT
   (b) CONCRETE ROADSIDE KERB & CHANNEL
   (c) ONSITE DETENTION AND TRANSPORATION THROUGH FRENCH DRAINS

- ALL PAVED OR HARDSTAND AREAS TO BE DRAINED TOWARDS SURFACE PITS AND CONNECTED TO STORMWATER DISCHARGE SYSTEM
- CONCRETE SURROUND COLLARS AND COVERS TO BE FITTED TO STORMWATER RISING SHAFT INSPECTION OPENINGS AT FINISHED GROUND LEVEL

HOT AND COLD WATER PIPE AS/NZS 3500.5 & 3500.1
MATERIAL - COPPER, 311REHAU OR EQUIVALENT
COLD WATER SUPPLY LINE FROM WATER METER TO HOUSE - DN25mm
COLD WATER BRANCHES - DN16mm
HOT WATER MAIN LINE - DN20mm
HOT WATER BRANCHES - DN16mm

OUTLET PIPES FROM THE HOT WATER CYLINDER TO BE COPPER FOR A DISTANCE OF AT LEAST 1.0m BEFORE CONNECTION OR USE OR 311 REHAU OR EQUIVALENT POLY WATER PIPING.

HOT WATER DELIVERY TO ALL SANITARY FIXTURES USED FOR PERSONAL HYGIENE AT A MAXIMUM OF 50° AND TO KITCHEN SINK & LAUNDRY AT 60°

VACUUM BREAKER BACK FLOW DEVICES TO BE FITTED TO ALL OUTSIDE TAPS

HOT WATER SYSTEM PIPING TO BE THERMALLY INSULATED TO ACHIEVE MINIMUM R-VALUES FOR ENERGY EFFICIENT PERFORMANCE. REFER TO DRAWING A-12 FOR INFORMATION & SECTION 8 AS/NZS 3500.4

ISSUED FOR CONSTRUCTION

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Sorell Council
Development Application: 5.2024.322.1 - Response to Request for Information - 3 Linden Road, Primrose Sands - P2.pdf
Plans Reference: P2
Date received:13/12/2024

IF IN DOUBT REFER TO NCC AND STANDARDS OR CONTACT ENGINEERING PLUS

Rev:	Amendment:	Date:	Int:
1	MINOR AMENDMENT	25.11.24	W.T
0	ISSUED FOR CONSTRUCTION	07.10.24	O.J
E	DWELLING RELOCATION	02.09.24	O.J
D	DWELLING RELOCATION	26.07.24	O.J
C	DECOR AMENDMENTS	03.07.24	O.J
B	DWELLING RELOCATION	28.06.24	O.J

Date Drawn: 30.05.24
Drawn: O. Jones
Checked: O. Jones
Approved: J. Pfeiffer
Scale: As Shown @ A3

Client: D. CUNDY & W. GLYNN
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Accreditation No: CC2211T

Drawing No: 1012024 A22 / A22
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