SECTION-J REPORT

Proposed Child care Centre

Project: 187-189 Adelaide Street, St Marys NSW 2760 (Lot 1 DP 567556)

Prepared by : Outsource Ideas p/l

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LGA : PENRITH CITY COUNCIL

DESIGN STATEMENT

Pursuant to NCC BCA A2.2; this report relies on supplied documentation for assessment in regards to adopting measures contributing to deemed-to-satisfy of designed and built deliverables. It is our opinion that the project can be constructed to satisfy the requirements of the BCA 2019 Ament-1.

This report prepared from supplied materials for DA and CC purposes according to http://tinyurl.com/p4s7df6.

Lighting and a/c designs have not been sighted for review.

Ved Baheti B. Arch, M. Arch(UNSW) JP

Managing director

ABSA Assessor # 20901 | BDAV Assessor # 131521 | ACTPLA Assessor # 2011248

Document Control:

Rev	Date	Description
A	09/12/2021	Sec-J report prepared as per architectural drawings

Reference Document:

Issue	Date	Description
A	07/11/2021	Architectural Drawing by: Janssen Design PO Box 41, Kenthurst NSW 2156 Project Ref # 10116 Drawing status: CC

Energy Efficiency

In response to concerns over global warming, the Australian Government announced in July 2000 that agreement had been reached with industry and State and Territory Governments to adopt a two-pronged approach to reducing greenhouse gas emissions from buildings. The first approach was the introduction of mandatory minimum energy performance requirements through the Building Code of Australia (BCA), and the second approach was the encouragement of best practice voluntary initiatives by industry. Industry was supportive of this two-pronged approach, taking the view that building-related matters should be consolidated in the BCA wherever possible.

Given the importance of the energy performance of buildings to overall national greenhouse gas emissions performance, the Australian Building Codes Board (ABCB) and the Australian Greenhouse Office signed a Memorandum of Understanding to jointly develop the BCA Energy Efficiency Provisions.

The Energy Efficiency Project was endorsed under the National Framework for Energy Efficiency (NFEE), an agreement between all Australian Governments established to improve energy efficiency. The objective of NFEE is to unlock the significant economic potential associated with increased implementation of energy efficiency technologies and processes to deliver a least cost approach to energy efficiency in Australia.

To enable the effective involvement of stakeholders in the development of the BCA Energy Efficiency Provisions, several committees and working groups comprising representatives from a range of government, industry and community organisations were developed.

At specific stages of the project, the ABCB sought the views of the wider community. This process was undertaken when the ABCB released the Directions Report on the Energy Efficiency Project (2001), and on the release of Regulation Documents (RDs) and Regulatory Impact Statements (RISs). Any proposed annual changes to the BCA are also made public prior to finalisation.

Energy efficiency requirements are now incorporated in the Building Code of Australia. In Volume 1, it is Section J, hence the "Section J Report".

CONTENTS

DESIGN CERTIFICATE TO THIS REPORT

SECTION J
DESIGN CERTIFICATE

We certify that the design calculations contained in this report complies with BCA 2019 Ament-1

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NSW 2760 (Lot 1 DP 567556)

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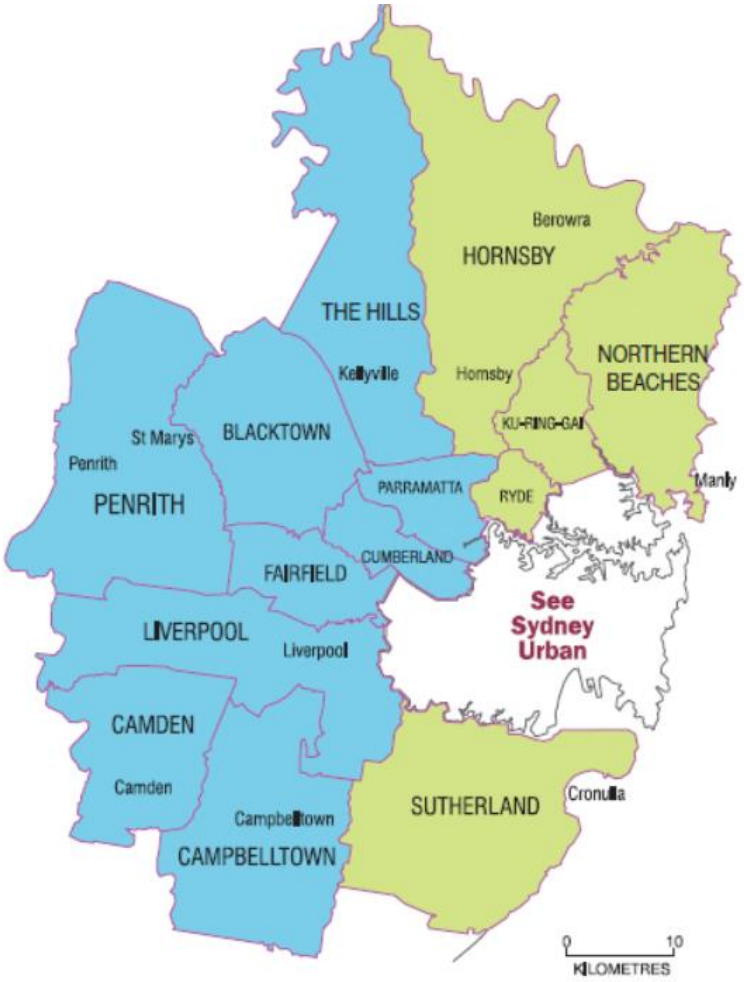
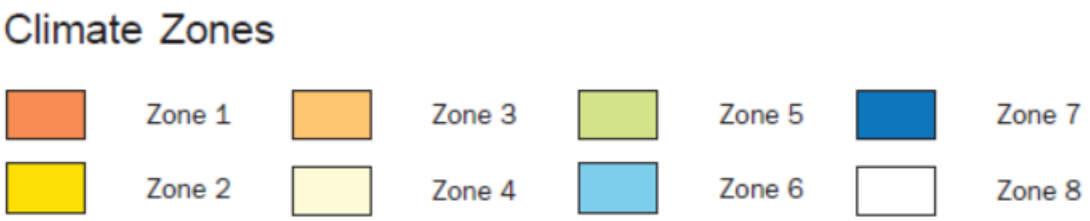
Section J review

Application

Childcare centre Section J affected

Climate Zone check

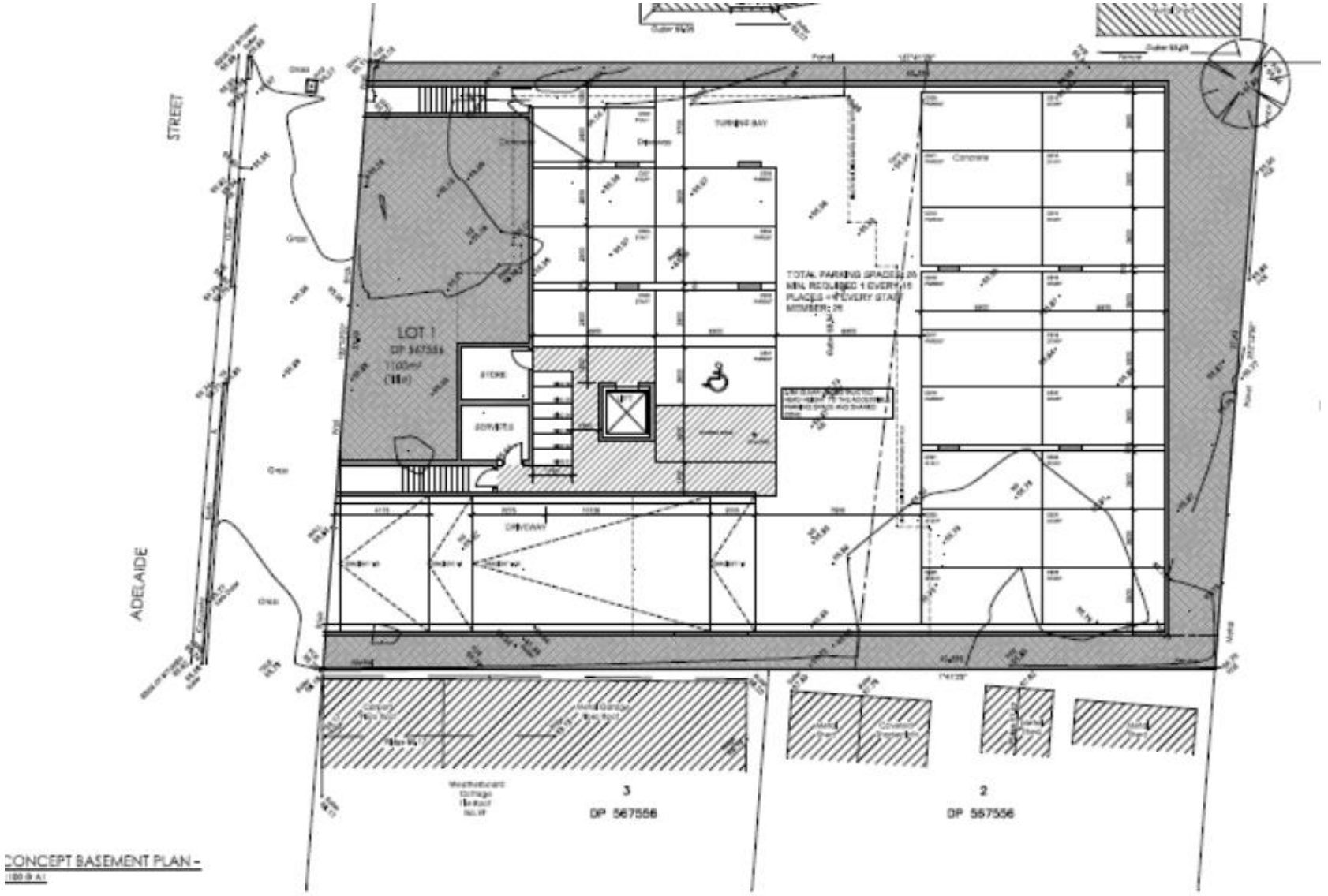




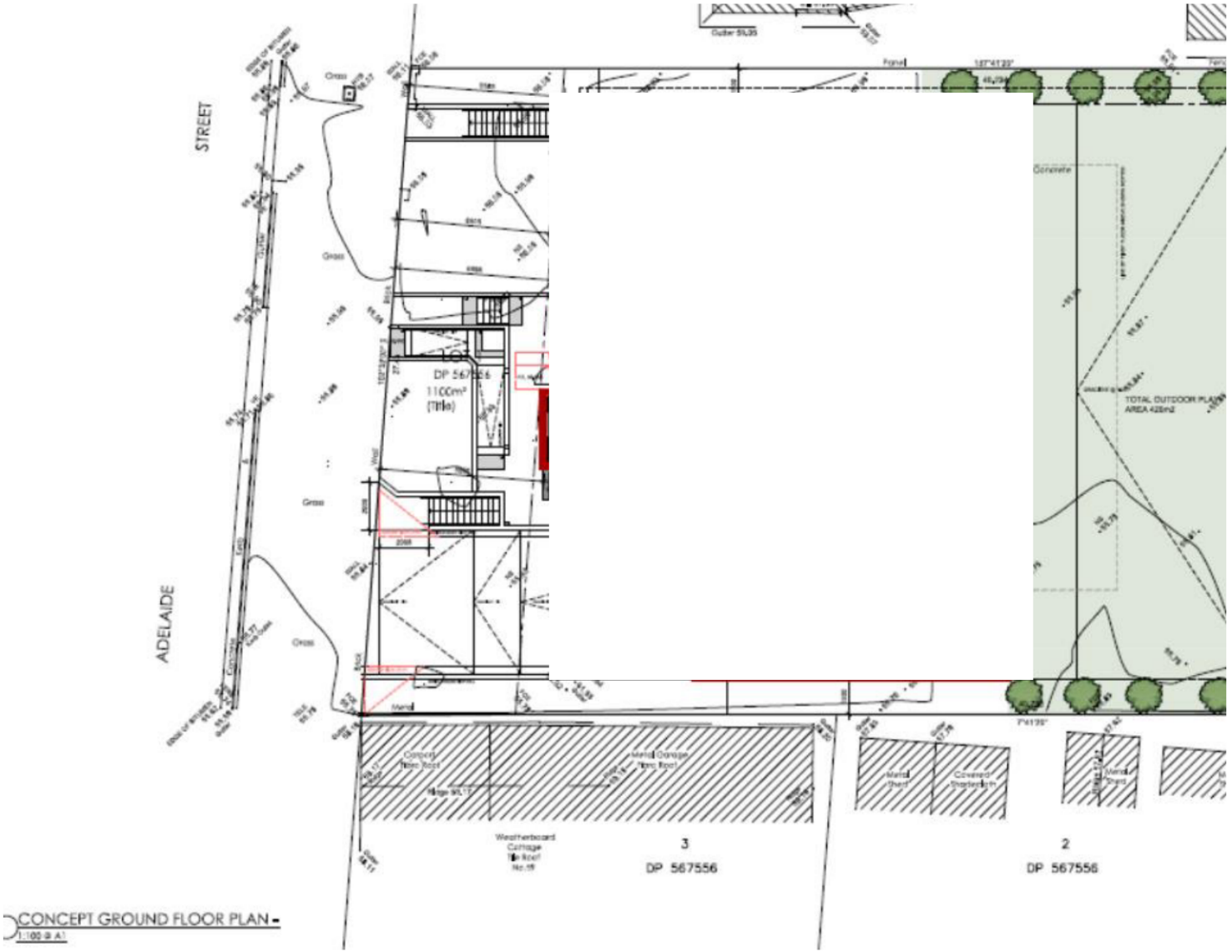
		Remarks	
Climate zone **Blacktown**	6	Light blue	As marked above

Conditioned spaces (likely to be heated or cooled)

Space	Conditioned	Non-conditioned
Childcare centre	**X**	**-**



CONCEPT BASEMENT PLAN -



CONCEPT GROUND FLOOR PLAN -
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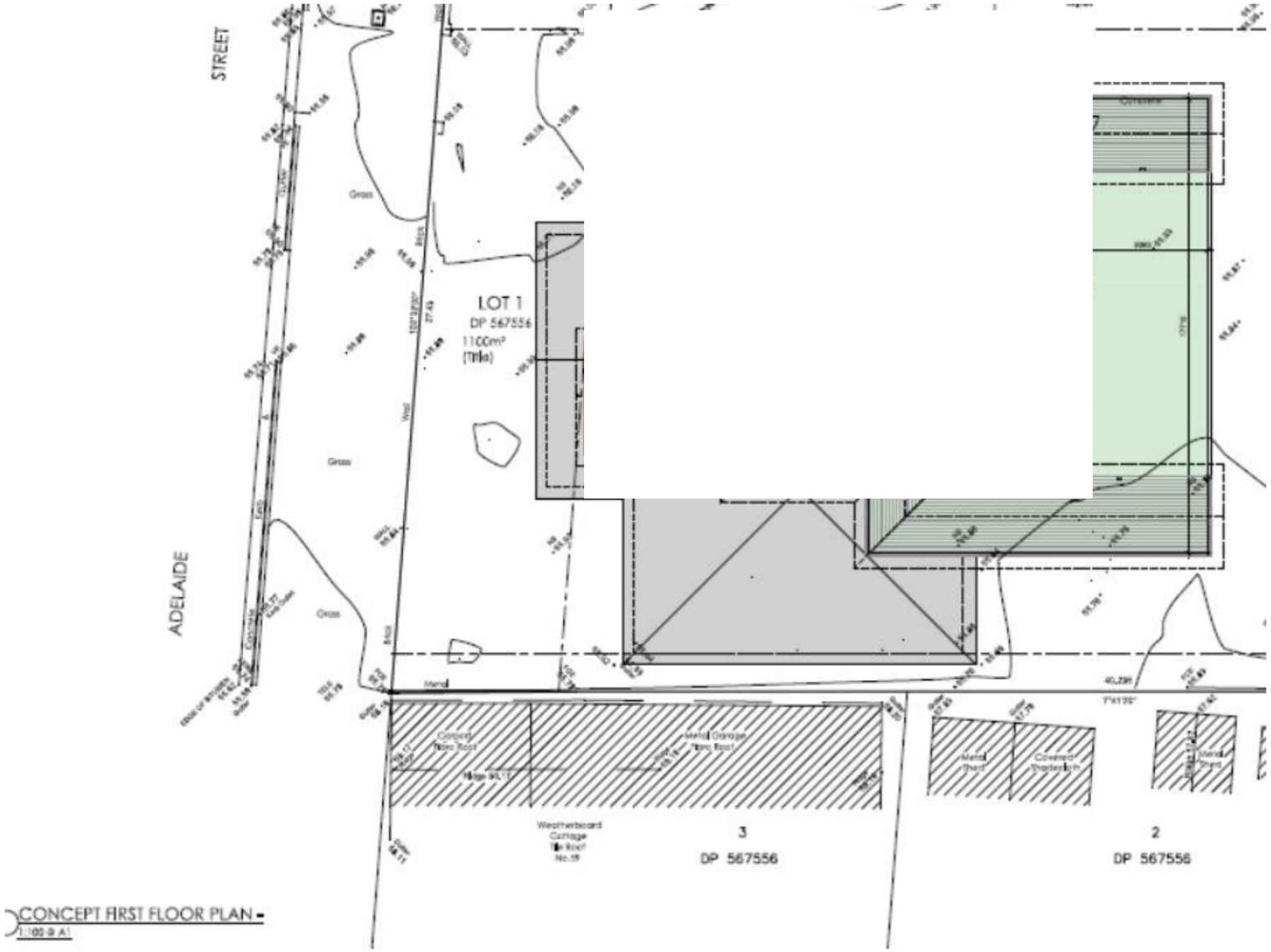

SOUTH ELEVATION - STREETSCAPE -
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EAST ELEVATION -
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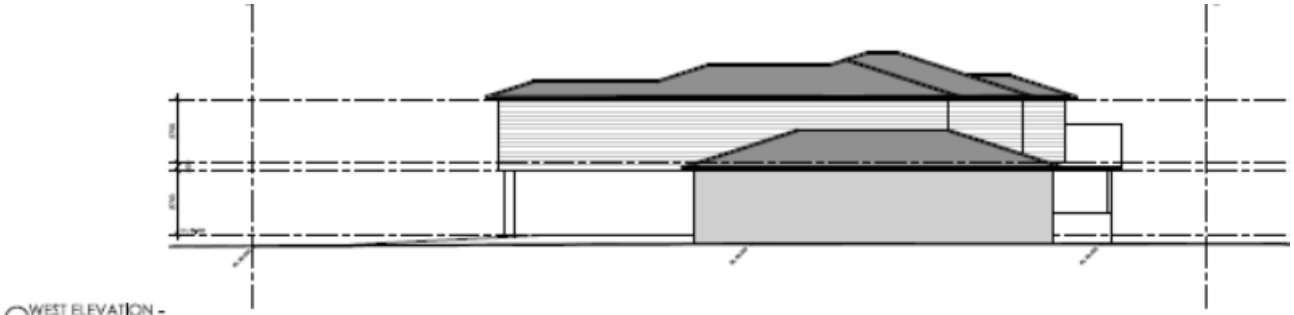
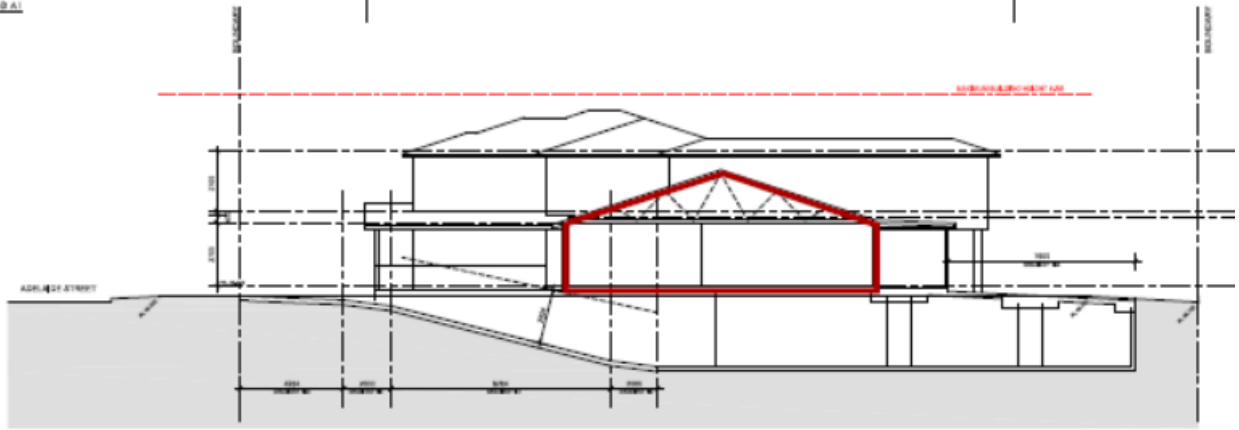


WEST ELEVATION -

NORTH ELEVATION -



SECTION A-A -

0. PART J0 ENERGY EFFICIENCY

	Requirements	Provide evidence to PCA	Certifier action
J0.1	**Application of Section J**	**Applies**	**PCA must satisfy himself that the installation is compliant.**
J0.2	Heating and cooling loads Class 2 or Class 4	Not applicable	Note

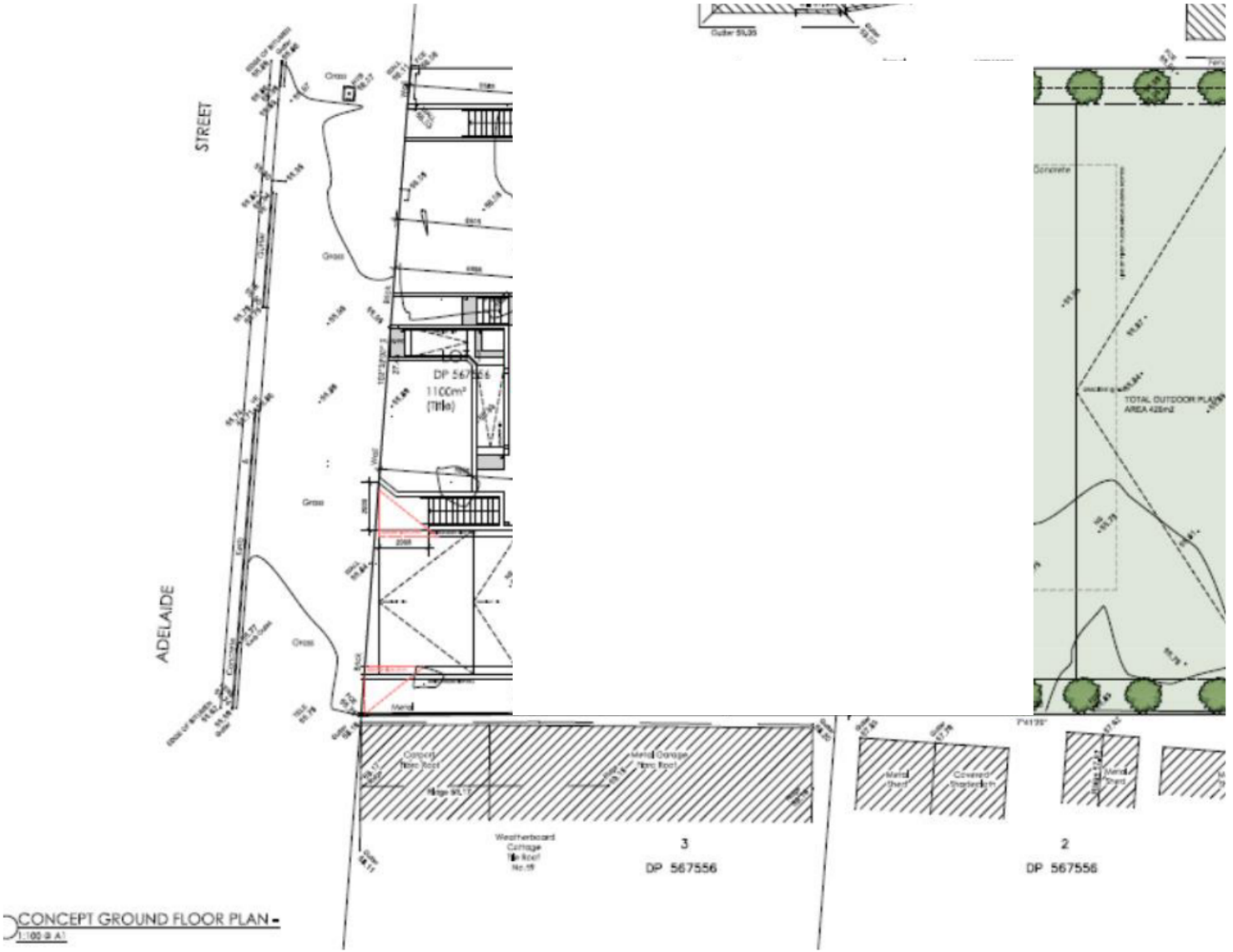
J0.3	**Ceiling fans**	**Applies IF INSTALLED.**
		Provide
		• **permanent installation [hard wired]**
		• **speed controller**
		• **serve whole room**
		  ○ **900 mm dia per 15 m2 room**
		  ○ **1200 mm dia per 25 m2 room**
			PCA must satisfy himself that the installation is compliant.

J0.4	**Roof thermal breaks**	**Applies WHERE METAL FRAMED** **R 0.2 minimum between metal framing and roofing.** **[Commercial thermal break tapes available in the marketplace.]**	**PCA must satisfy himself that the installation is compliant.**
J0.5	**Wall thermal breaks**	**Applies WHERE METAL FRAMED** **R 0.2 minimum between metal framing and cladding** **[Commercial thermal break tapes available in the marketplace.]**	**PCA must satisfy himself that the installation is compliant.**

1. PART J1 BUILDING FABRIC

	Requirements	Provide evidence to PCA	Certifier action
J1.1 NSW J(A)1.1	BUILDING FABRIC Including Building Classes 2 and 4 Note: Section J complements BASIX	Applies	Note
J1.2	THERMAL CONSTRUCTION — GENERAL	Applies	
(a)	Compliance with AS/NZS 4859.1 Including that product branded with thermal performance	Applies	PCA must satisfy himself that the installation is compliant.
	abut or overlap adjoining insulation other than at supporting members such as studs, noggings, joists, furring channels and the like where the insulation must be against the member	Applies	PCA must satisfy himself that the installation is compliant.
	Form a continuous barrier with ceilings, walls, bulkheads, floors or the like that inherently contribute to the thermal barrier	Applies	PCA must satisfy himself that the installation is compliant.
	Installation does not affect the safe or effective operation of a service or fitting	Applies	PCA must satisfy himself that the installation is compliant.
(b)	Air space next to reflective surface	Applies if selected	PCA must satisfy himself that the installation is compliant.
reflective insulation	Fit closely against any door or window opening Overlaps not less than 50 mm Tape all joins for air tightness	Applies	PCA must satisfy himself that the installation is compliant.
(c) Bulk insulation	Install to maintain position and thickness other than where it is compressed between cladding and	Applies	PCA must satisfy himself that the installation is compliant.

	Requirements	Provide evidence to PCA	Certifier action
	supporting members, water pipes, electrical cabling or the like In a ceiling, where there is no bulk insulation or reflective *insulation* in the wall beneath, it overlaps the wall by not less than 50 mm		
(d)	Roof, ceiling, wall and floor materials, and associated surfaces are deemed to have the thermal properties listed in Specification J1.2	Applies	PCA must satisfy himself that the installation is compliant.
(e)	The *required Total R-Value* and Total *System U-Value,* including allowance for thermal bridging, must be calculated in accordance with AS/NZS 4859.2 for a roof or floor; or determined in accordance with Specification J1.5a for *wall-glazing construction, or* determined in accordance with Specification J1.6 or Section 3.5 of CIBSE Guide A for soil or sub-floor spaces.	Applies	PCA must satisfy himself that the installation is compliant.



CONCEPT GROUND FLOOR PLAN -
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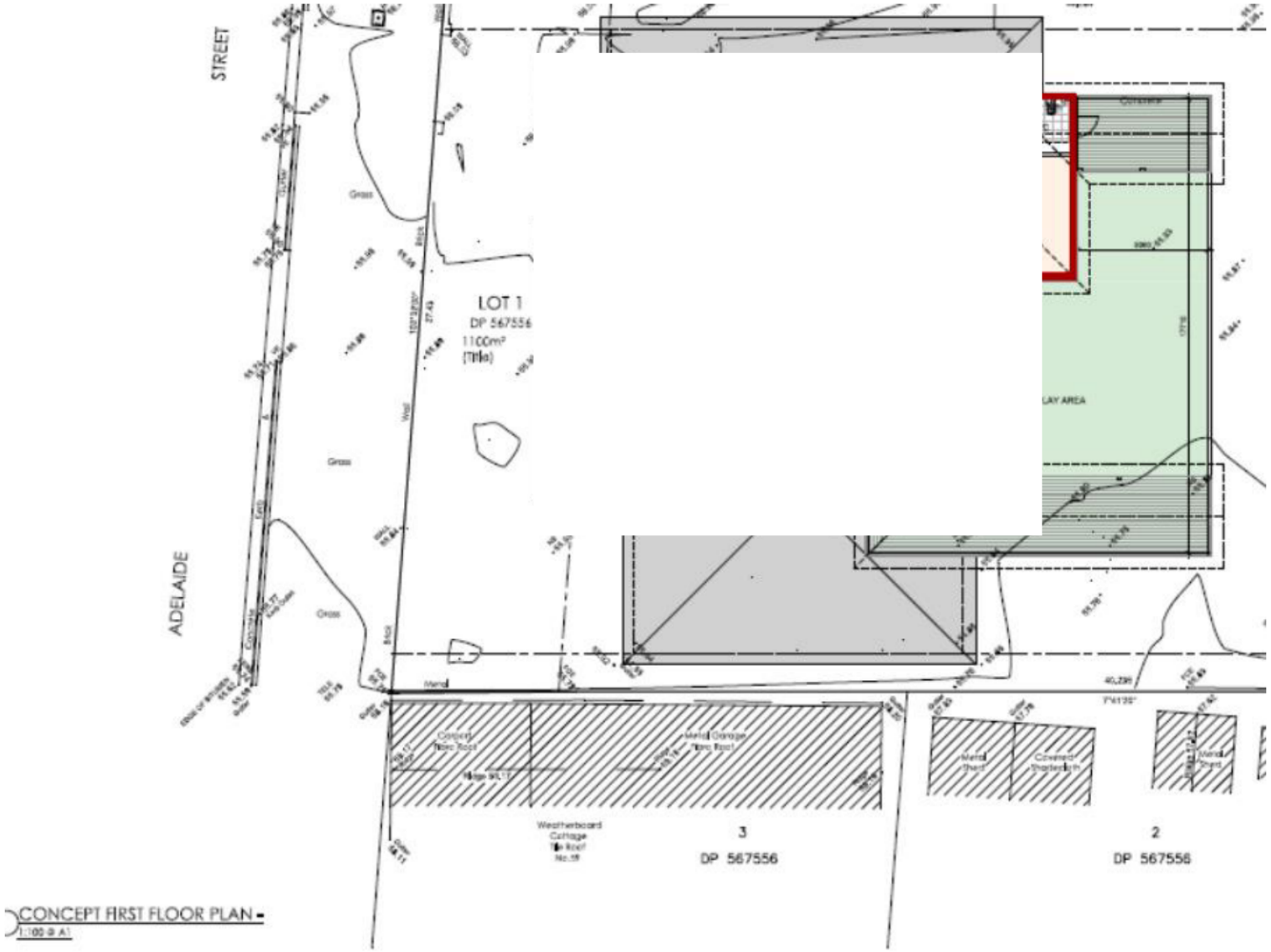

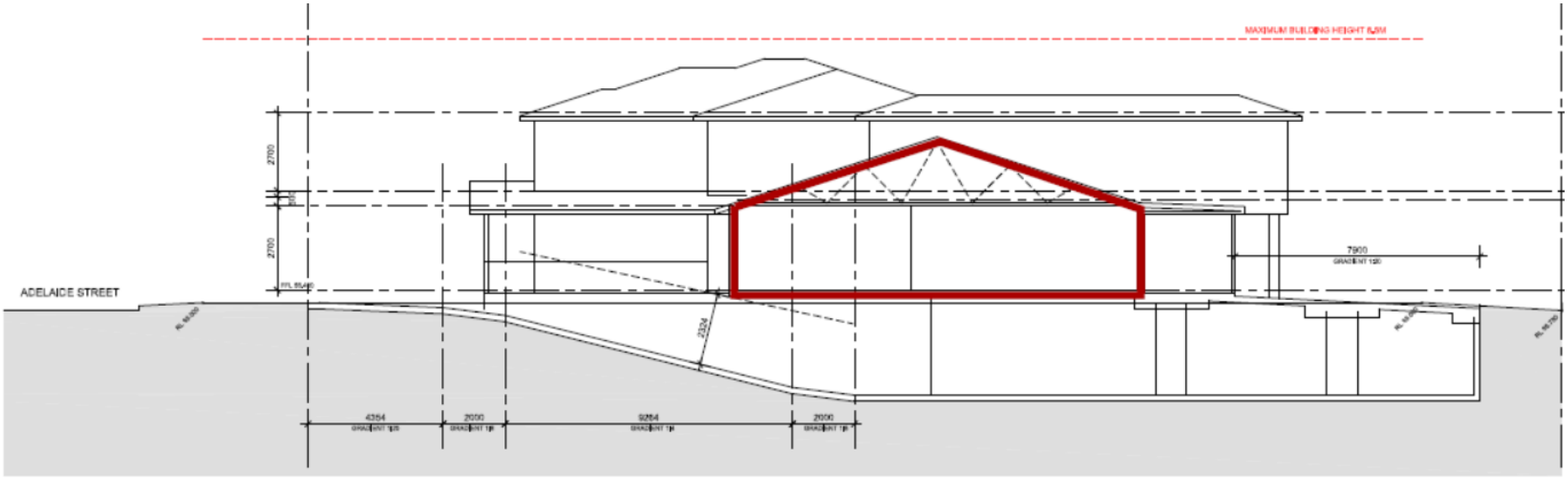

SECTION A-A -
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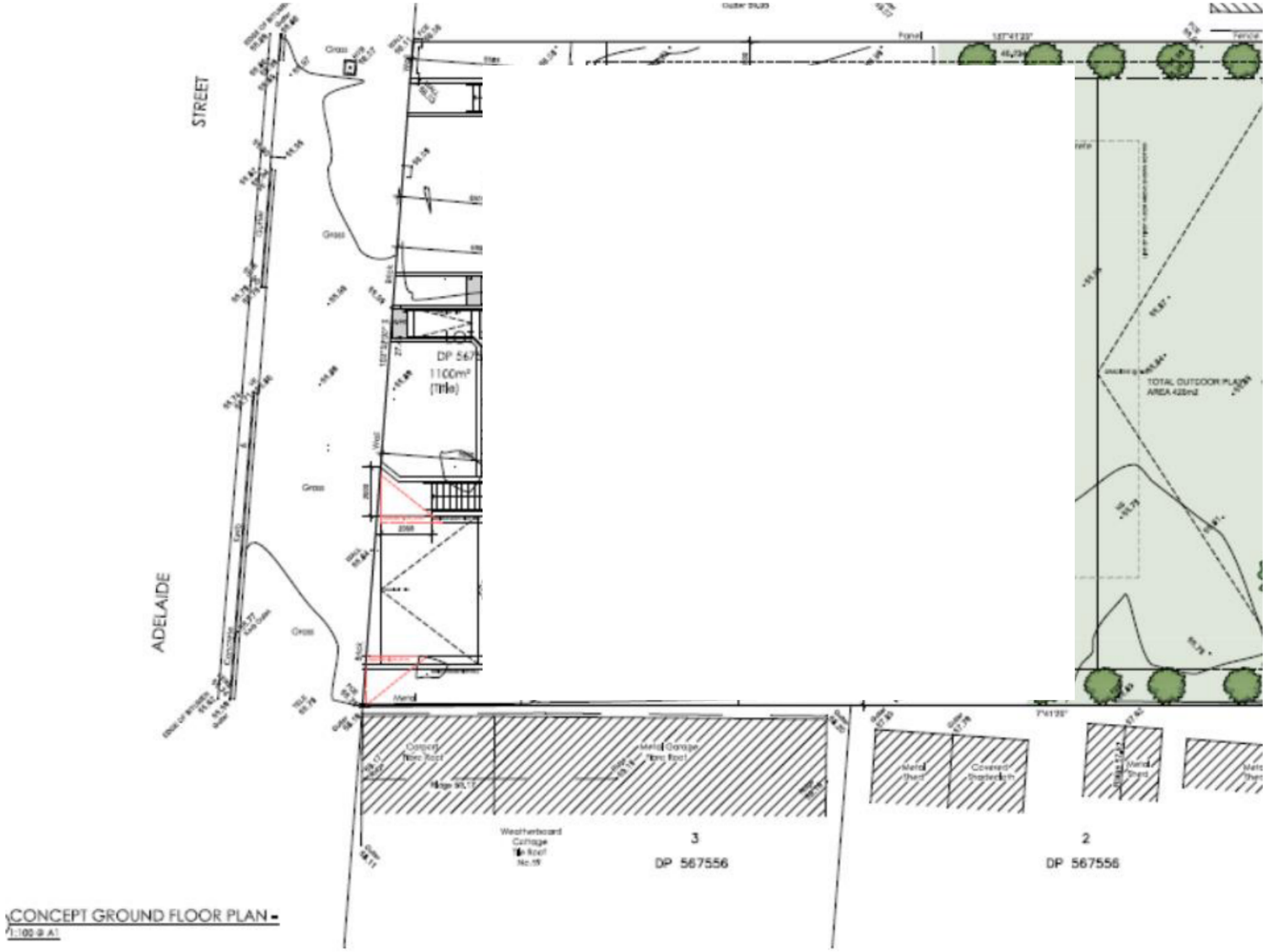
	Requirements	Provide evidence to PCA	Certifier action
J1.3	**ROOF AND CEILING CONSTRUCTION**		
(a) Climate zone 5:	achieve a *Total R-Value* greater than or equal to R 3.7 downward heat flow	Not applicable	Note
Climate zone 6:	**achieve a Total R-Value greater than or equal to** **R 3.2 downward heat flow** **Tiled and metal roofing R 0.56**	**Provide R 2.5 between roofing and ceiling**	**PCA must satisfy himself that the installation is compliant.**
(b) **Climate zone 6**	**Solar absorptance of the upper surface of a roof must be not more than 0.45.**	**Provide evidence to PCA**	**PCA must satisfy himself that the installation is compliant.**

	Item	R-value	Remarks
1	**Outdoor air film**	0.04	
2	**Metal cladding**	0.00	
3	**Roof insulation**	-	To be determined
4	**Ceiling space**	0.15	
5	**Ceiling insulation**	-	To be determined
6	**Plasterboard ceiling lining**	0.06	
7	**Indoor air film**	0.11	
	Total without insulation	**0.36**	



CONCEPT GROUND FLOOR PLAN -
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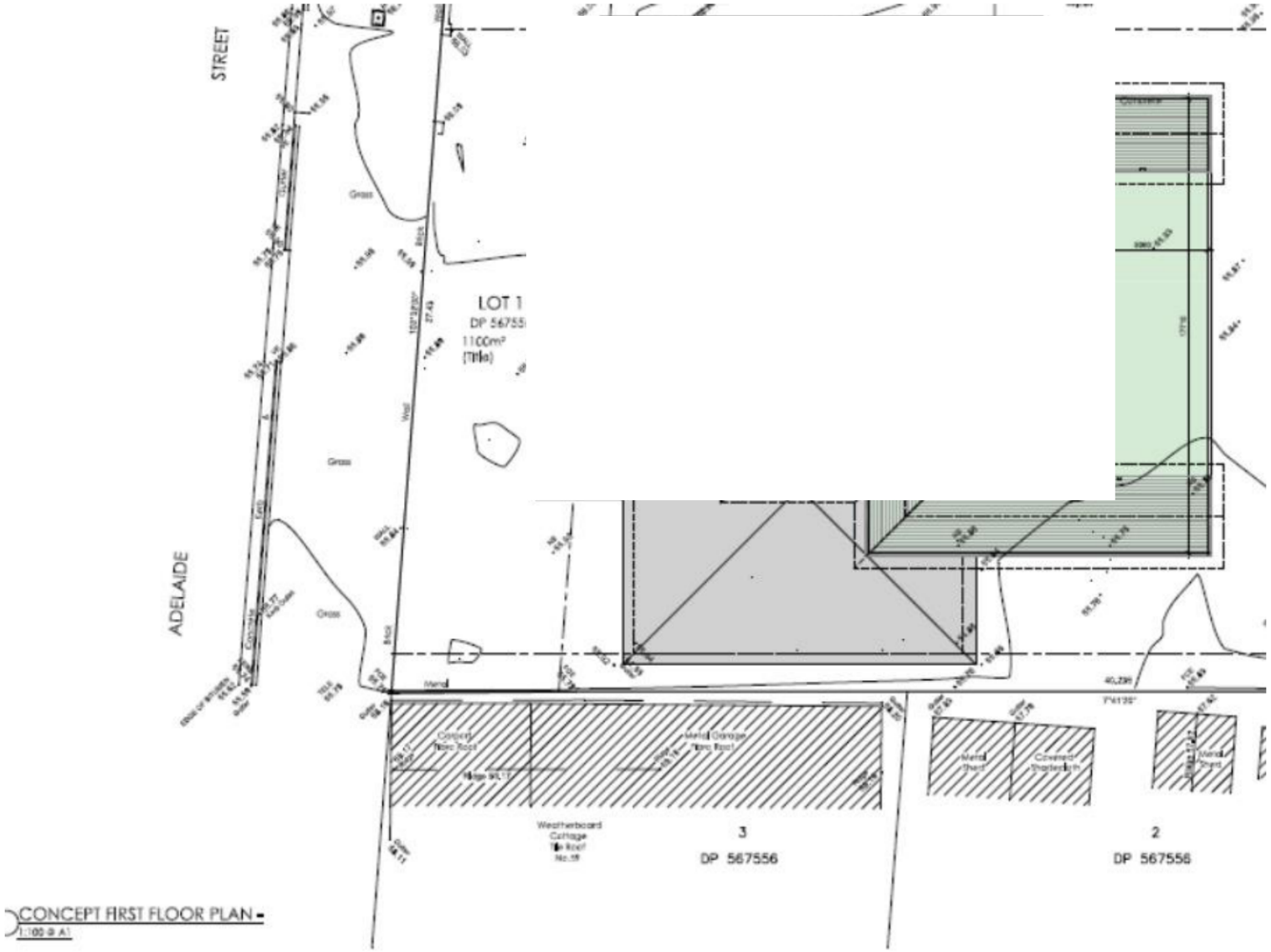

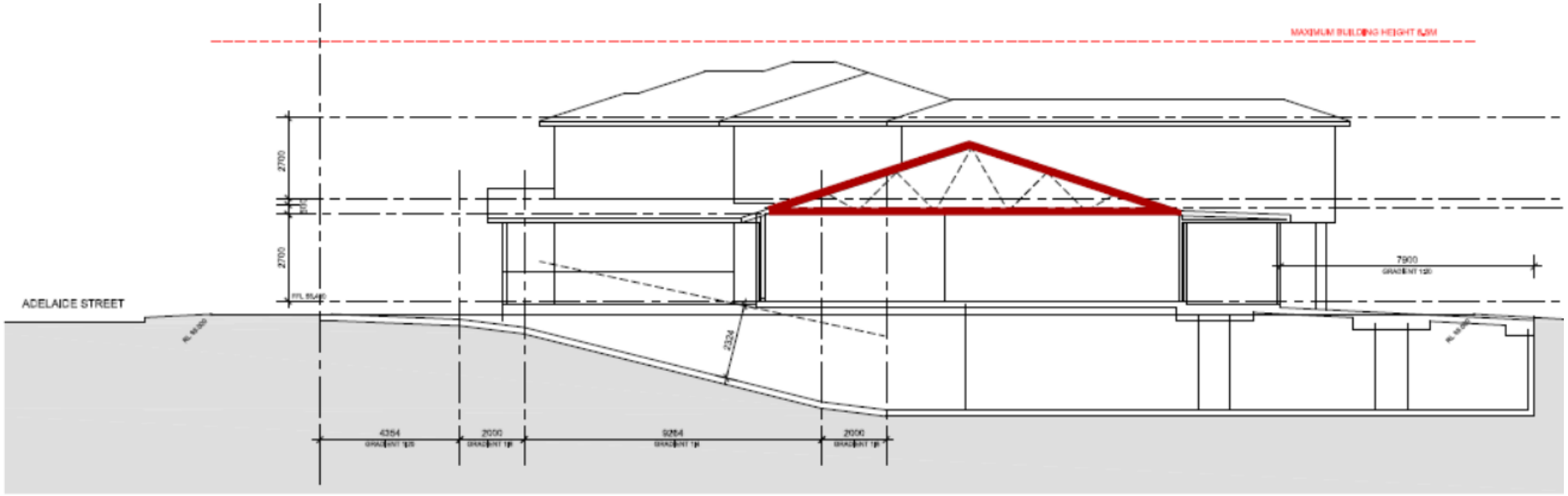

SECTION A-A -
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		Provide evidence to PCA	Certifier action
J1.4	**ROOF LIGHTS**		
(a)	**not more than 5% of the floor area of the room or space served**		**Note**
Play area 1	**Oversized roof lights**	**Reduce designed roof light area to 5% of floor area.**	**PCA must satisfy himself that the installation is compliant.**
Play area 2	**Oversized roof lights**	**Reduce designed roof light area to 5% of floor area.**	**PCA must satisfy himself that the installation is compliant.**
Play area 3	**Oversized roof lights**	**Reduce designed roof light area to 5% of floor area.**	**PCA must satisfy himself that the installation is compliant.**
(b)	**SHGC <0.49** **U<3.9**	**Select from https://www.awawers.net/en/skylight** **Provide WERS ID to PCA for approval**	**PCA must satisfy himself that the installation is compliant.**

		Provide evidence to PCA	Certifier action
J1.5	**WALLS AND GLAZING**		
(a)	**Total System U-Value of wall-glazing construction**		
	Class 2 common area, a Class 5, 6, 7, 8 or 9b building or a Class 9a building **<U-2**	**Refer calculations below**	**PCA must satisfy himself that the installation is compliant.**
Climate Zone 5	for a Class 3 or 9c building or a Class 9a ward area U-2.0	Not applicable	Note
Climate Zone 6	**for a Class 3 or 9c building or a Class 9a ward area** **<U-1.1**	**Refer calculations below**	**PCA must satisfy himself that the installation is compliant.**
(b)	Display glazing <U-5.8 shopfronts	Not applicable	Note
(c)	**Total System U-Value of wall-glazing construction must be calculated in accordance with Specification J1.5a**	**Refer calculations below**	**PCA must satisfy himself that the installation is compliant.**
(d) Climate zone 5	Wall area >80% or more of wall-glazing construction area Class 2 common area, Class 5, 6, 7, 8 or 9b building or a Class 9a building wall Total R-Value >R-1.4	Refer calculations below	PCA must satisfy himself that the installation is compliant.
Climate zone 5	Wall area >80% or more of wall-glazing construction area Class 3 or 9c building or Class 9a *ward area* wall Total R-Value >R-1.4	Not applicable	Note

		Provide evidence to PCA	Certifier action
(d) Climate zone 6	Wall area >80% or more of wall-glazing construction area Class 2 common area, Class 5, 6, 7, 8 or 9b building or a Class 9a building wall Total R-Value >R-1.4	Not applicable	Note
Climate zone 6	**Class 3 or 9c building or Class 9a ward area** **wall Total R-Value >R-2.8**	**Refer calculations below** **Always select from https://awawers.net/en/commercial** **or use their search engine** **https://awawers.net/comsearch/search/nsw** **+/- 10% rule does not apply**	**PCA must satisfy himself that the installation is compliant.**
(e) **Climate zones 5 and 6**	**Wall area <80% or more of wall-glazing construction area** **Class 2 common area, Class 5, 6, 7, 8 or 9b building or a Class 9a building** **wall Total R-Value >R-0.13**	**Refer calculations below** **Always select from https://awawers.net/en/commercial** **or use their search engine** **https://awawers.net/comsearch/search/nsw** **+/- 10% rule does not apply**	**PCA must satisfy himself that the installation is compliant.**
(e) Climate zone 5	Wall area <80% or more of wall-glazing construction area Class 3 or 9b building or Class 9a ward area wall Total R-Value R-0.10	Not applicable	Note
(e) **Climate zone 6**	**Wall area <80% or more of wall-glazing construction area**	**Refer calculations below** **Always select from** https://awawers.net/en/commercial	**PCA must satisfy himself that the installation is compliant.**

		Provide evidence to PCA	Certifier action
	Class 3 or 9b building or Class 9a ward area **wall Total R-Value R-0.07**	**or use their search engine** https://awawers.net/comsearch/search/nsw **+/- 10% rule does not apply**	

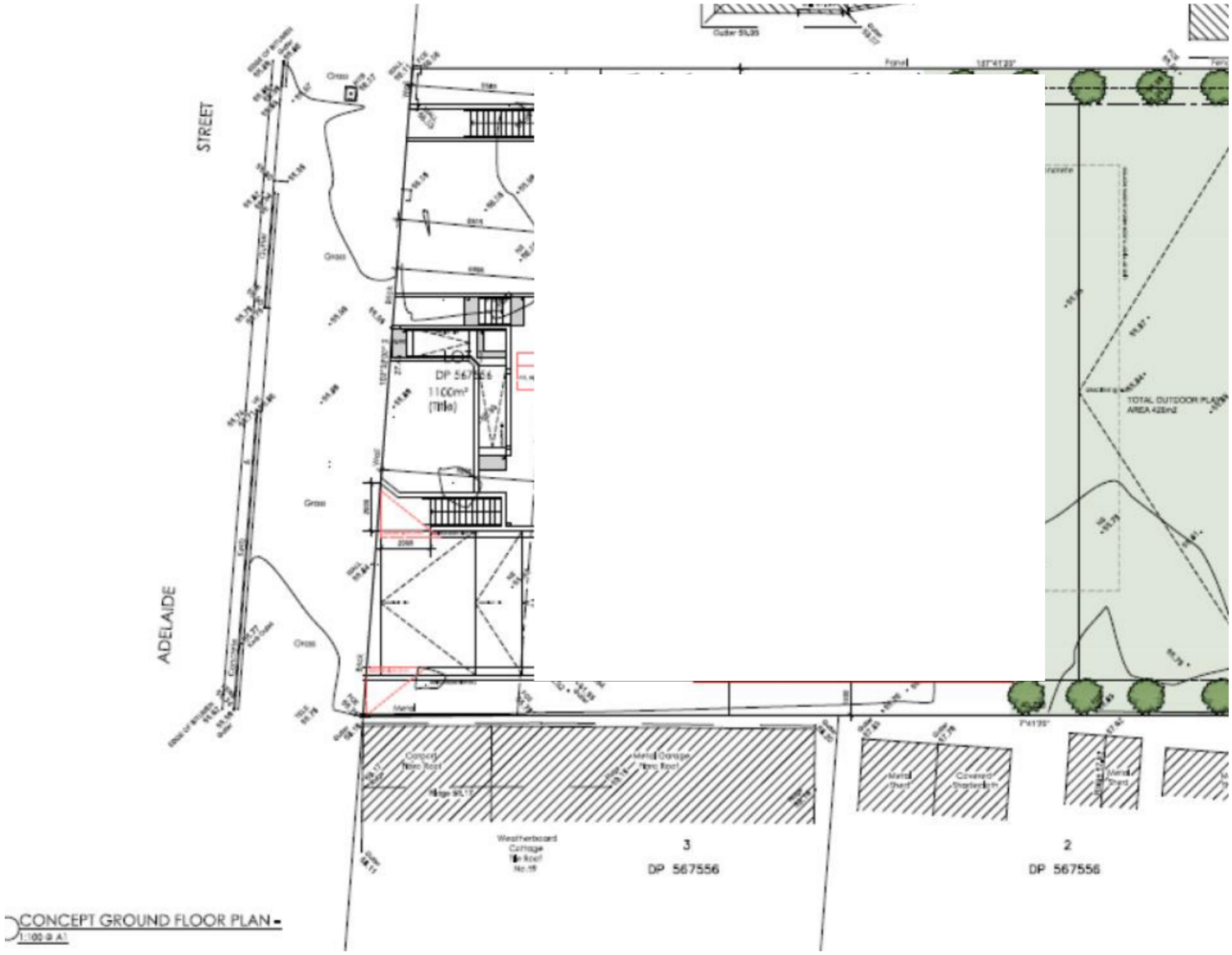
BRICK VENEER WALL + R 2.5 insulation

Extend to underside floor soffit or roofing.

Variation requires separate calculation for approval.

Allow for any required egress width if affected.

		R	
1	**outside air**	**0.04**	
2	**110 brick**	**0.09**	
3	**Cavity air**	**0.17**	
4	Vapour permeable membrane	0.00	Building wrap sarking to manage condensation
5	**Insulation in 90 mm frame**	**2.50**	
6	**plasterboard**	**0.06**	
7	**Inside air**	**0.12**	
	TOTAL	**2.98**	



CONCEPT GROUND FLOOR PLAN -
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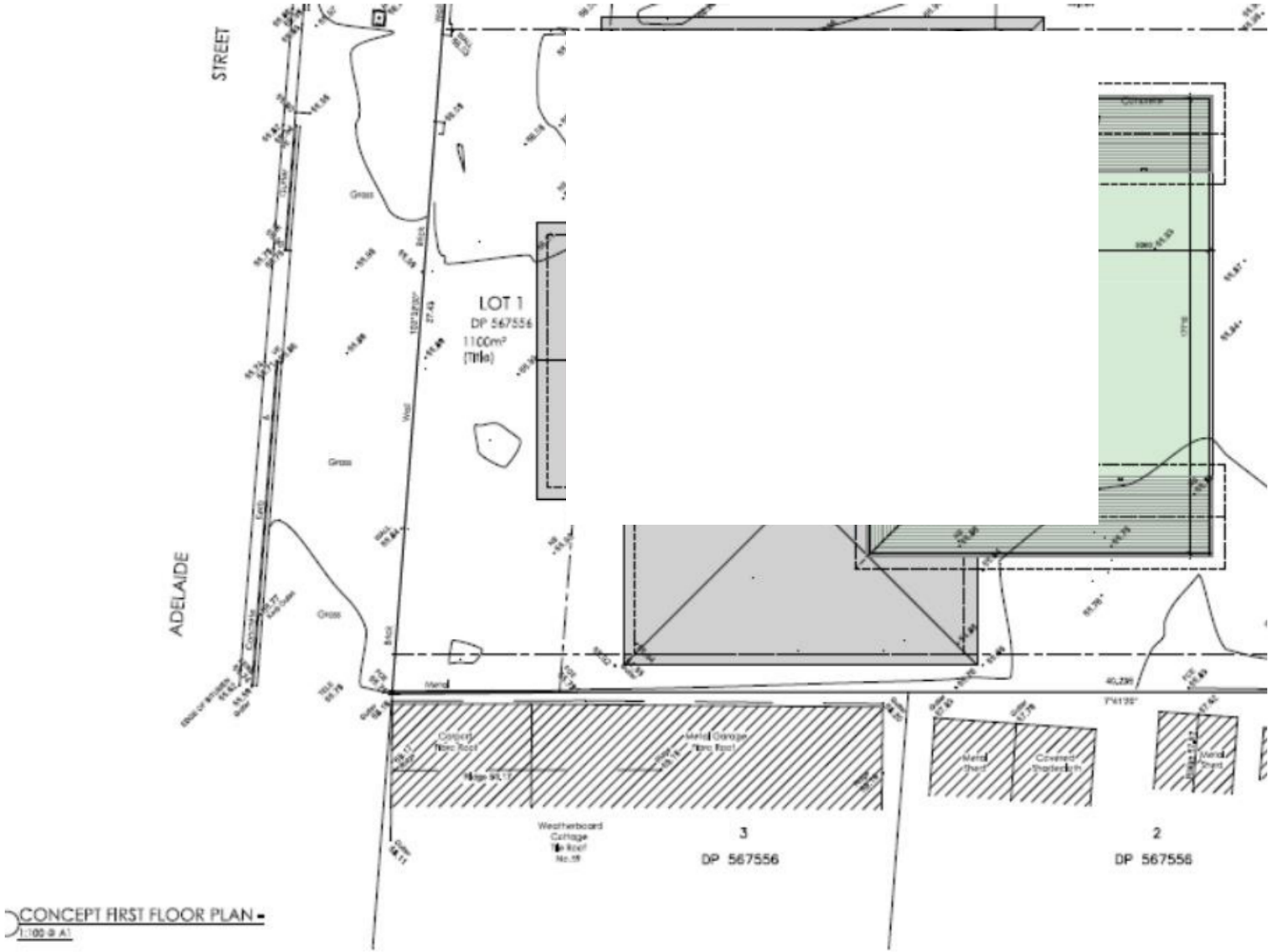

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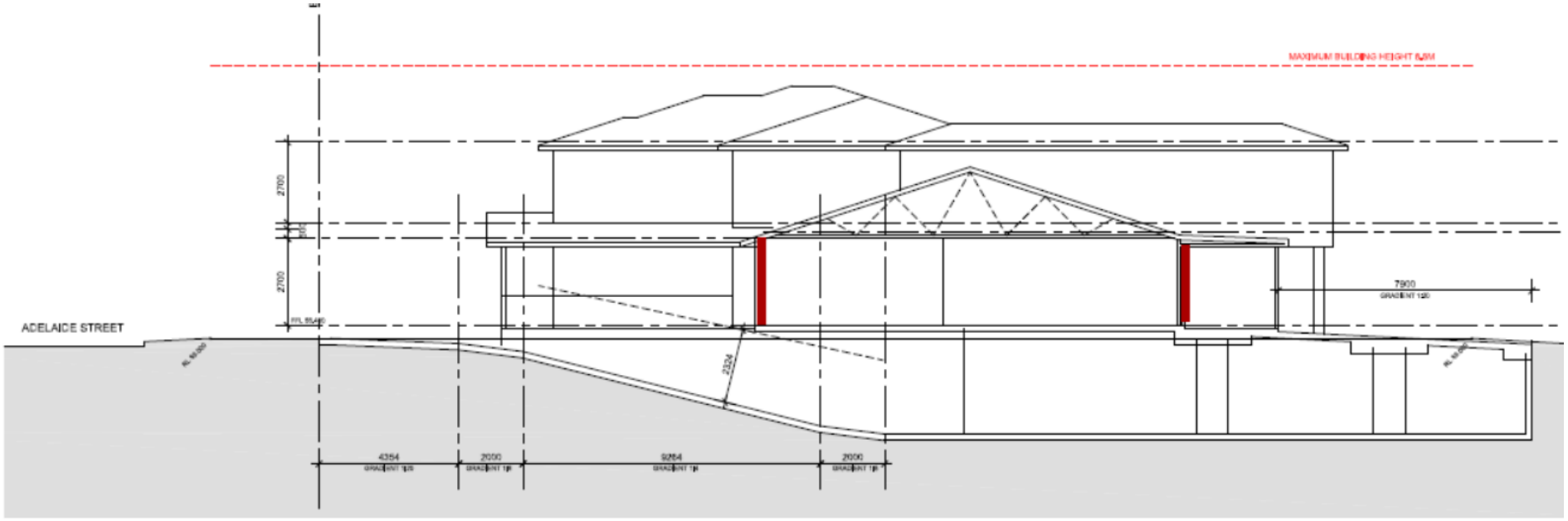

SECTION A–A –
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WINDOW SELECTION

DEEMED TO SATISFY WITH

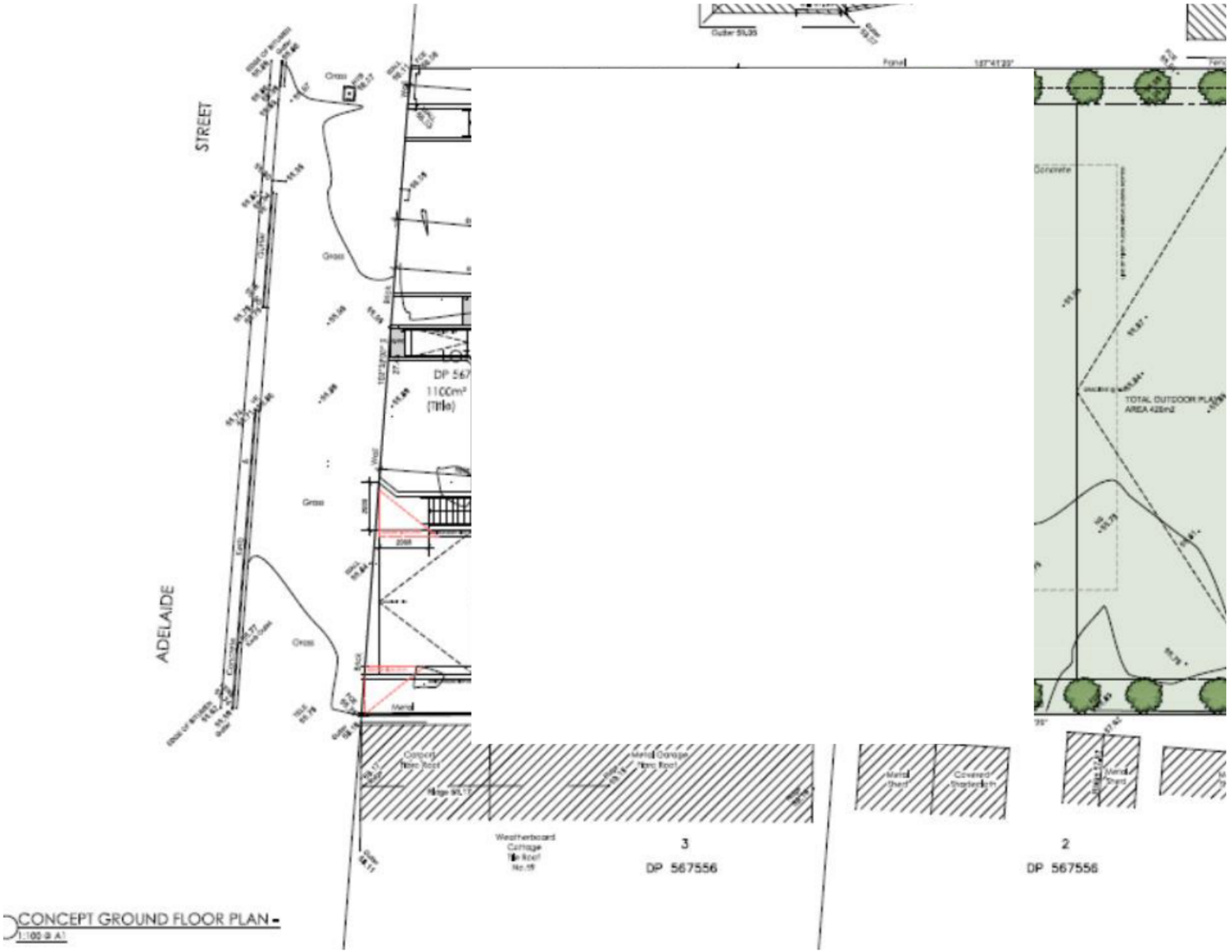
Total window value	**+/- 10% RULE TO WINDOW SELECTIONS** Does not apply to Section J
U-5.5 max figure	Variation requires separate recalculation for approval.
SHGC-0.60 max figure	Variation requires separate recalculation for approval.

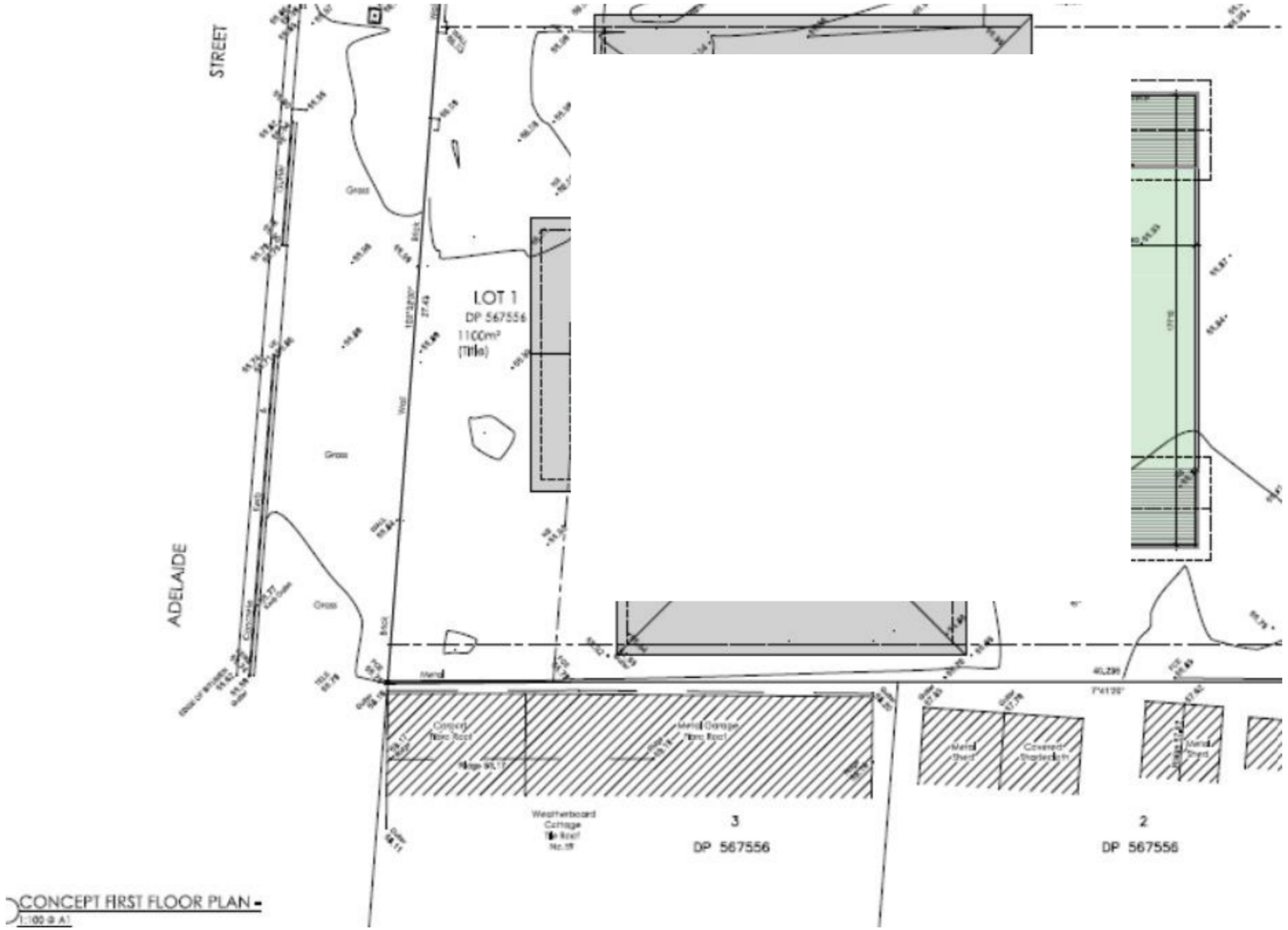
WINDOW SELECTION TO SATISFY PCA
Always select from
https://awawers.net/res
or https://awawers.net/en/commercial

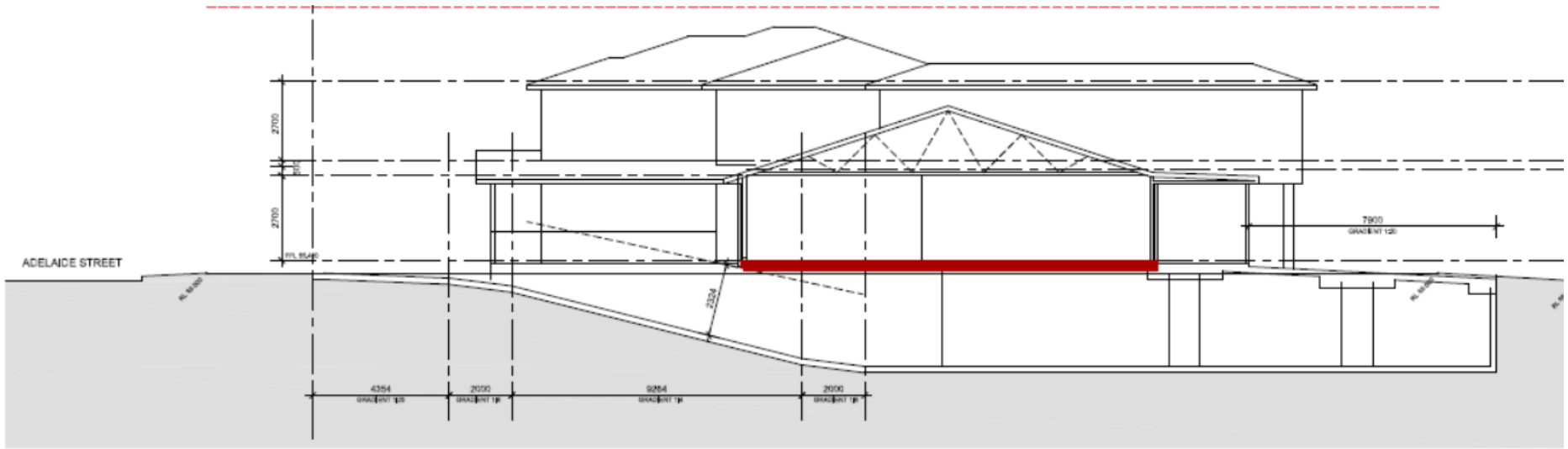
OR use their search engine
https://awawers.net/ressearch/search/nsw
or https://awawers.net/comsearch/search/nsw

		Provide evidence to PCA	Certifier action
(e) Climate zone 5	Wall area <80% or more of wall-glazing construction area Class 3 or 9b building or Class 9a ward area wall Total R-Value R-0.10	Not applicable	Note
(e) Climate zone 6	Wall area <80% or more of wall-glazing construction area Class 3 or 9b building or Class 9a ward area wall Total R-Value R-0.07	Not applicable	Note

		Provide evidence to PCA	Certifier action
J1.6 **(a)** **Climate zones 5 and 6**	**Floor insulation.** **Total floor R 2.0 required** **RC floor R 0.3**	**Provide R 1.7 insulation**	**PCA must satisfy himself that the installation is compliant.**







SECTION A-A -
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2. PART J2 – not used

3. PART J3 BUILDING SEALING

		Provide evidence to PCA	Certifier action
J3.1	**Note: includes Building Class 2**	**Applies**	**Note.**
J3.2	**CHIMNEYS AND FLUES**		Note
	chimney or flue of an open solid-fuel burning appliance provide a damper or flap that can be closed to seal the chimney or flue.	Not applicable	Note
J3.3 (a)	ROOF LIGHTS sealed, or capable of being sealed	Not applicable	Note
(b) Climates zones 5 and 6	Construct with— an imperforate ceiling diffuser or the like installed at the ceiling or internal lining level; or a weatherproof seal; or a shutter system readily operated either manually, mechanically or electronically by the occupant.	Not applicable	Note

		Provide evidence to PCA	Certifier action
J3.4 (a) And (b)	WINDOWS AND DOORS Climate zones 5 and 6 must be sealed except windows and doors to AS 2017 fire door smoke door roller shutter door – out of hours shutter grille – out of hours other security door or device – out of hours	Applies	Certify that the installation is deemed to satisfy
(c)	seal to restrict air infiltration bottom edge of a door, must have a draft protection device;	Applies	Certify that the installation is deemed to satisfy
(d)	Provide self-closing doors to entrances	Applies	Certify that the installation is deemed to satisfy
J3.5	Windows and doors Exhaust fans Fit with a sealing device such as a self-closing damper	Applies	Certify that the installation is deemed to satisfy
J3.6	Construction of ceilings, walls and floors Ceilings, walls, floors and any opening such as a *window* frame, door frame, *roof light* frame or the like must be constructed to minimise air leakage in accordance with (b) when forming part of— (i)the *envelope*; or	Show construction details and as installed evidences	Certify that the installation is deemed to satisfy

		Provide evidence to PCA	Certifier action
	(ii)in *climate zones* 4, 5, 6, 7 or 8. **Construction *required* by must be—** **(i)enclosed by internal lining systems that are close fitting at ceiling, wall and floor junctions; or** **(ii)sealed at junctions and penetrations with—** **(A)close fitting architrave, skirting or cornice; or** **(B)expanding foam, rubber compressible strip, caulking or the like.**		
J3.7	Evaporative coolers	Not applicable	Certify that the installation is deemed to satisfy

4. PART J4 – not used

		Provide evidence to PCA	Certifier action
J4.0		None	Note

5. PART J5 AIR CONDITIONING

		Action by a/c designer at CC and thereafter	Certifier action
J5.1	**Note: includes Building Class 2**	**Applies**	**Note**
J5.2	**When not occupied**	**Applies**	**Refer separate report by a/c designer**

		Action by a/c designer at CC and thereafter	Certifier action
	• Capable of being deactivated. • Dampers close when a/c deactivated. • Ductwork sealed and insulated. • Capable of controlling temperature during sleeping periods. • Fan power to Table J5.2.		Certify that the installation is deemed to satisfy
J5.3	Time Switch	Applies	Refer separate report by a/c designer Certify that the installation is deemed to satisfy
5.4	Applies if Heating And Cooling System installed	Applies	Refer separate report by a/c designer Certify that the installation is deemed to satisfy
5.5	Applies if Miscellaneous Exhaust Systems installed	Applies	Refer separate report by a/c designer Certify that the installation is deemed to satisfy

6. PART J6 ARTIFICIAL LIGHTING AND POWER

		Provide evidence to PCA	Certifier action
6		Applies	Certify that the installation is deemed to satisfy Refer also lighting designer certifications for compliance with Illumination code Part F4.
6.2		Submit to BCA, completed calculations from the following spreadsheet http://www.abcb.gov.au/Resources/Tools-Calculators/Lighting-Calculator	Refer separate report by lighting designer Certify that the installation is deemed to satisfy
6.3	Room or space Provide individually operated switch or other device control unless SOU for people with disability or aged. Locate	Applies	Refer separate report by lighting designer Certify that the installation is deemed to satisfy
	Switch controls location In visible position in room serviced or adjacent room.	Applies	
	Time switch To Specification J6	Applies	Refer separate report by lighting designer Certify that the installation is deemed to satisfy
6.4	Interior Decorative & Display Lighting	Applies	Refer separate report by lighting designer Certify that the installation is deemed to satisfy
6.5	Perimeter lighting Control by a	Applies	Refer separate report by lighting designer

		Provide evidence to PCA	Certifier action
	• daylight sensor or a • programmable time switch.		Certify that the installation is deemed to satisfy
	When the perimeter lighting load exceeds 100W the light source efficacy must not be less than 60 Lumens/W or Controlled by a motion detector in accordance with Specification J6	Applies	Refer separate report by lighting designer Certify that the installation is deemed to satisfy
	Decorative lighting	Applies	Refer separate report by lighting designer Certify that the installation is deemed to satisfy
6.6	Boiling Water and chilled water storage units	Applies	Refer separate report by lighting designer Certify that the installation is deemed to satisfy

7. PART J7 HEATED WATER SUPPLY AND SWIMMING POOL AND SPA POOL PLANT

		Provide evidence to PCA	Certifier action
7.2	Note: Includes Building Class 2 Design and install in accordance with Part B2 of NCC Volume Three — Plumbing Code of Australia.	Applies	Refer separate report by Hydraulic and Electrical consultants

8. PART J8 ACCESS FOR MAINTENANCE

		Provide evidence to PCA	Certifier action
8.2	**Note: includes Building Class 2** **Provide access to any operable controls.**	**Inclusions** **Times switches** **Thermostats** **Air dampers** **Light fittings** **Heat transfer equipment**	**Certify that respective controls are in place.**

END OF REPORT

END OF DOCUMENT

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