CURRENT REVISION + NOTES

Date:	Description:	Issue:	Drawn:
03.01.23	CLIENT CHG DECK	B	DC

PROPOSED DWELLING

CLIENT: WHITE
STATUS: CONSTRUCTION
LOT No: 80 **DP No:** 251603
STREET: 845 RIDGE ROAD, COOKS GAP
CWC JOB #: D5489

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10	WORK SAFETY NOTES	B

PROJECT STATUS: PRELIMINARY CC ISSUE
REVISION: A
DESIGNER: LN
DATE ISSUED: 19.12.22

I, _____CONFIRM PLANS HAVE BEEN REVIEWED WITH NO FURTHER CHANGES. ALL INFORMATION IS APPROVED & PLANS CAN BE FINALISED.

SIGNATURE:_____

DATE:_____

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GENERIC | TYPICAL KEY, LEGEND AND ABBREVIATIONS FOR COLLINS W COLLINS ARCHITECTURAL PLANS

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REVISED JANURARY 2021

SYMBOLS AND LINES

SITE PLAN | S68 S138 PLAN

- LOT BOUNDARY
- SEWER LINE
- STORMWATER LINE
- WATER CONNECTION LINE
- DOWNPIPE TO WATER TANK
- DOWNPIPE FROM TANK TO APPLIANCE
- SILTATION CONTROL FENCING
- SITE HOARDING FENCING
- BATTER EXTREMITIES LINE
- EASEMENT BOUNDARY
- OVERHEAD POWER LINES
- FALL OF BATTER SLOPE
- DRIVEWAY SURFACE
- GARDEN TAP
- WATER METER / ALTERNATE WATER METER
- SANDBAG
- TEMPORARY HOARDING GATES
- STREET TREE / SITE TREE
- LIGHT POLE (LP)
- POWER POLE (PP)
- E.P — ELECTRICAL CUBICLE / PIT
- NBN — NBN PIT
- T.PIT — TELECOMMUNICATIONS PIT
- TO BE DEMOLISHED / REMOVED
- DEMOLITION LINE

FLOOR PLANS / SECTIONS (INCL SETOUT, ROOF, DETAIL CALL OUTS)

- OVERHEAD ITEM
- DEMOLITION LINE
- UPPER FLOOR OUTLINE
- ROOF OUTLINE OVER
- RAKED CEILING LINE
- BEAM LINE
- SQUARE SET OPENING
- TERMITE PROTECTION: *TO A.S 3660.1*
- NATURAL GROUND LINE (EXCAVATED)
- COLUMN (MATERIAL AS PER SCHEDULE OR PLAN)
- MASONRY PIER (SIZE AS PER SCHEDULE OR PLAN)
- ENGAGED PIERS: *TO COMPLY WITH AS 4773.1-2010 & AS 4773 2-2010*
- INSULATION BATTING
- TO BE DEMOLISHED / REMOVED
- EARTH / SOIL
- FILL (TO ENGINEERS DETAIL)
- WET AREA TILED FLOOR SURFACE
- COMMON / OUTDOOR TILED FLOOR SURFACE
- BROOM FINISH CONCRETE FLOOR SURFACE
- MASONRY WALL
- CONCRETE
- TIMBER/METAL STUD FRAMED WALL
- CONCRETE BLOCK WALL
- MASONRY VENEER WALL
- METAL SHEET ROOFING
- KLIP LOK (OR SIMILAR) METAL SHEET ROOFING
- TILED ROOF
- WAFFLE POD (TO ENGINEERS DETAIL)
- TACTILE GROUND SURFACE INDICATORS: TO AS 1428.4.1:2009
- STAIRS INCLUDING DIRECTION OF TRAVEL (UP)
- RAMP INCLUDING DIRECTION OF TRAVEL (UP)
- GTAP — GARDEN TAP
- DP — RAINWATER DOWN PIPE: *TO AS 3500*
- SMOKE ALARMS: *TO AS3786 AND SECTION 3.7.5 OF THE NCC BCA VOL 2. ALL ALARMS/DETECTORS ARE TO BE INTERCONNECTED. LOCATIONS ON PLANS ARE INDICATIVE. INSTALLATION TO BE AS PER STANDARDS ABOVE, AND MANUFACTURERS SPECIFICATIONS*
- MECHANICAL VENTILATION: MECHANICAL VENTILATION EXTERNALLY DUCTED TO NCC 3.8.7.3 & 3.8.7.4
- SLIDING DOOR UNIT OPENING DIRECTION
- SLIDING WINDOW OPENING DIRECTION
- AWNING/CASEMENT WINDOW OPENING DIRECTION
- HINGED DOOR OPENING DIRECTION
- GAS BOTTLES
- ELECTRICAL METER BOX
- GAS INSTANTANEOUS HOT WATER SERVICE
- HOT WATER TANK
- SOLAR HOT WATER SERVICE
- COOKTOP
- SINK TYPICAL

GENERAL SYMBOLS AND ARCHITECTURAL SYMBOLS

- NORTH
- W01 — WINDOW TAG (DA/CC)
- D01 — DOOR TAG (DA/CC)
- TYPICAL SECTION MARKER (# / SHEET)
- TYPICAL ELEVATION MARKER (# / SHEET)
- TYPICAL CALL OUT MARKER (# / SHEET)
- VIEW TAG AND SCALE (VIEW / SCALE)

RENOVATION / DEMOLITION SYMBOLS

- TO BE DEMOLISHED OR REMOVED
- EXISTING ITEM / ELEMENT (FLOOR/WALLS/WINDOWS ETC)
- PROPOSED NEW ITEM / ELEMENT
- TO BE DEMOLISHED OR REMOVED
- EXISTING AREA / FACADE / ROOM

MULTI STOREY SITE PLAN SYMBOLS / LEGEND

- LOWEST FLOOR (GROUND TYPICAL)
- MIDDLE FLOOR
- UPPER FLOOR

GENERAL ABBREVIATIONS

ARI	AVERAGE RECURRANCE INDEX	**F**	FIXED GLASS / PANEL	**PB**	PLASTER BOARD
AHD	AUSTRALIAN HEIGHT DATUM	**FG**	FIXED GLASS WINDOW	**RET. WALL**	RETAINING WALL
CLT	CROSS LAMINATED TIMBER	**GLT**	GLUE LAMINATED TIMBER	**RC**	REINFORCED CONCRETE
COL.	COLUMN	**GTAP**	GARDEN TAP	**PV**	PHOTO VOLTAIC
COW	COST OF WORKS	**GPO**	GENERAL POWER OUTLET	**RL**	REDUCED LEVEL
DCP	DEVELOPMENT CONTROL PLAN	**GRG**	GARAGE	**SB**	SUB ELECTRICAL METER BOX
DEG.	DEGREES	**HWS**	HOT WATER SERVICE	**SL**	SURFACE LEVEL
DGPO	DOUBLE GENERAL POWER OUTLET	**LEP**	LOCAL ENVIRONMENT PLAN	**SW**	STORM WATER
DH	DOUBLE HUNG WINDOW	**LOH**	LIFT OFF HINGE	**TRH**	TOILET ROLL HOLDER
DP	RAINWATER DOWN PIPE	**LVL**	LAMINATED VENEER LUMBER	**T.O.K**	TOP OF KERB
DTR	DOUBLE TOWEL RAIL	**MECH.**	MECHANICAL	**T.O.W**	TOP OF WALL
HWS	HOT WATER SERVICE	**MB**	ELECTRICAL METER BOX	**WC**	WATER CLOSET
FC	FIBRE CEMENT	**MR**	MOISTURE RESISTANT	**1650B**	BATH SIZING
F.S.L	FINISHED SURFACE LEVEL	**MH**	MAN HOLE	**900V**	VANITY SIZING
		NGL	NATURAL GROUND LINE	**820**	INTERIOR DOOR SIZING

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PROJECT: PROPOSED DWELLING

STATUS: CONSTRUCTION | SHEET: 1 OF 10

LOT No: 80 DP No: 251603

STREET: 845 RIDGE ROAD, COOKS GAP

CLIENT: WHITE

LEGENDS

SCALE:	1 : 100
SHEET SIZE:	A3
START DATE:	19.12.22
DWG No:	D5489

DRAWING REVISION + NOTES

Date:	Revision:	Issue:	Drawn:
19.12.22	INITIAL ISSUE	A	LN
03.01.23	CLIENT CHG DECK	B	DC

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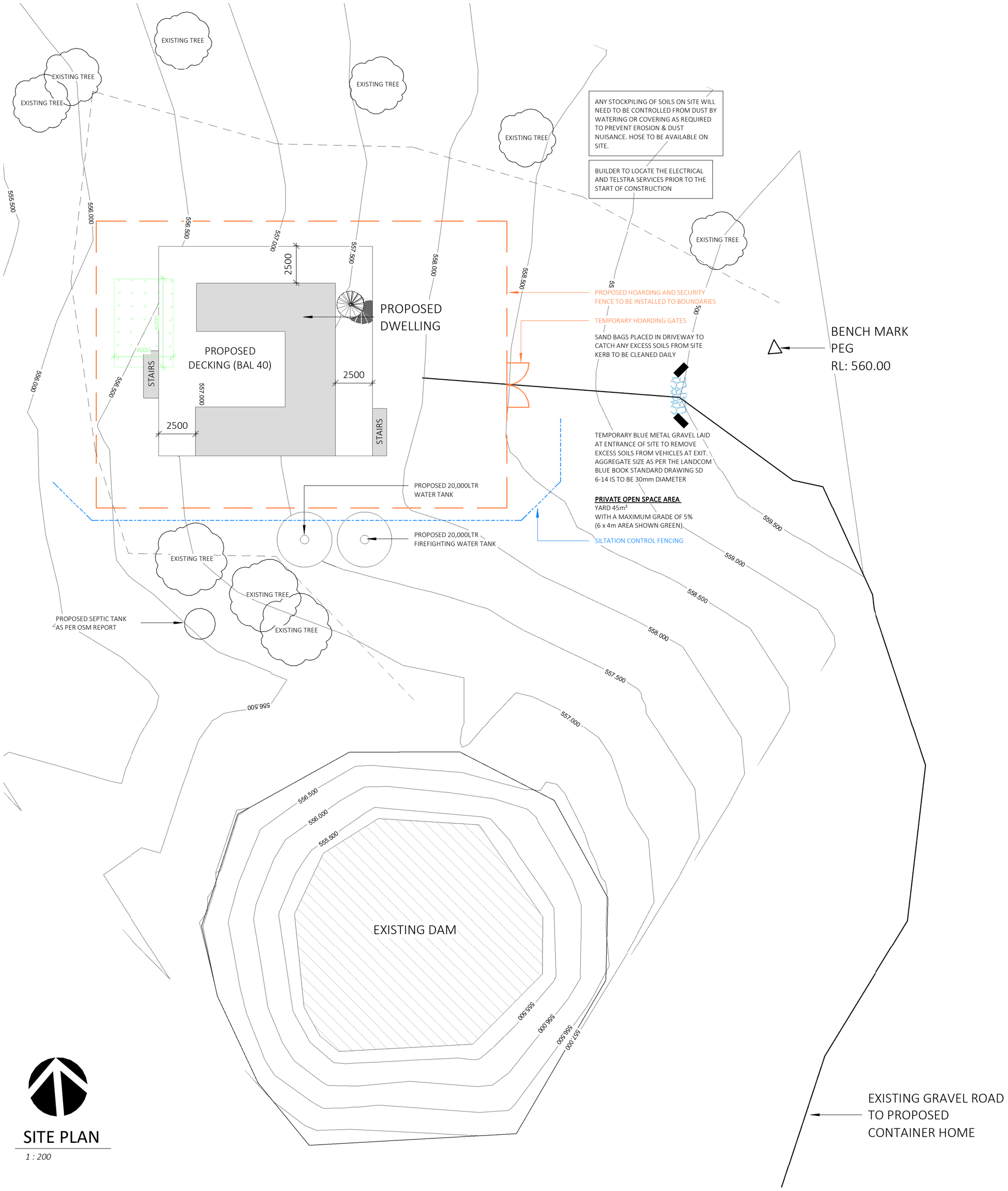

SITE PLAN

1 : 200

SITE INFORMATION & LEGEND

SITE AREA:	= 101205.5m²
	=10.1Ha
HABITABLE AREA (including garages)	= 83m²
FSR (as per LEP)	= 0.0008%
BUSHFIRE AFFECTED	= YES
APPROX 83m² HARDSTAND AREA	

SILTATION CONTROL IN ACCORDANCE WITH COUNCIL POLICY E1 AND THE ADOPTED AUSPEC STANDARD

SEWER LINE

GTAP — GARDEN TAP LOCATION

SITE HOARDING FENCING

FALL OF BATTER

ALL LEVELS WERE COMPLETED BY DE WITT CONSULTING AND ARE TO (APPROX) AHD. ALL LEVELS AND CONTOURS TO BE CONFIRMED BY BUILDER / SURVEYOR PRIOR TO START OF CONSTRUCTION.
REF: 13664-DET-20.09.22

BAL - 40

BUSHFIRE NOTES:
BAL = 40
PLEASE REFER TO BUSHFIRE REPORT BY ACCESS ENVIROMENTAL PLANNING
REF: OCTOBER 2022 *AND CONSTRUCTED IN ACCORDANCE TO* AS 3959-2018

BASIX NOTES:
PLEASE REFER TO THE "SUMMARY OF BASIX COMMITMENTS" ON PAGE 2 FOR FURTHER INFORMATION. PLEASE REFER TO THE BASIX CERTIFICATE FOR EXACT DETAILS.

GENERAL PLAN SET NOTES:
CHECK ALL DIMENSIONS ON SITE. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS, DRAWINGS, LEGENDS, NATIONAL CONSTRUCTION CODE, AUS & NZ STANDARDS, ENGINEERING & COUNCIL APPROVALS

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PROJECT: PROPOSED DWELLING
STATUS: CONSTRUCTION
LOT No: 80 DP No: 251603
STREET: 845 RIDGE ROAD, COOKS GAP
CLIENT: WHITE
SHEET: 2 OF 10

SITE PLAN

SCALE:	As indicated
SHEET SIZE:	A2
START DATE:	19.12.22
DWG No:	D5489

DRAWING REVISIONS + NOTES

Date:	Description:	Issue:	Drawn:
19.12.22	INITIAL ISSUE	A	LN
03.01.23	CLIENT CHG DECK	B	DC

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SIX MAP LOCATION

1 : 5000

SITE LOCATION PLAN

1 : 2000

BAL - 40

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PROJECT: PROPOSED DWELLING		SITE LOCATION PLAN	
STATUS: CONSTRUCTION	**SHEET:** 3 OF 10	**SCALE:**	As indicated
LOT No: 80 **DP No:** 251603		**SHEET SIZE:**	A3
STREET: 845 RIDGE ROAD, COOKS GAP		**START DATE:**	19.12.22
CLIENT: WHITE		**DWG No:**	D5489

DRAWING REVISION + NOTES

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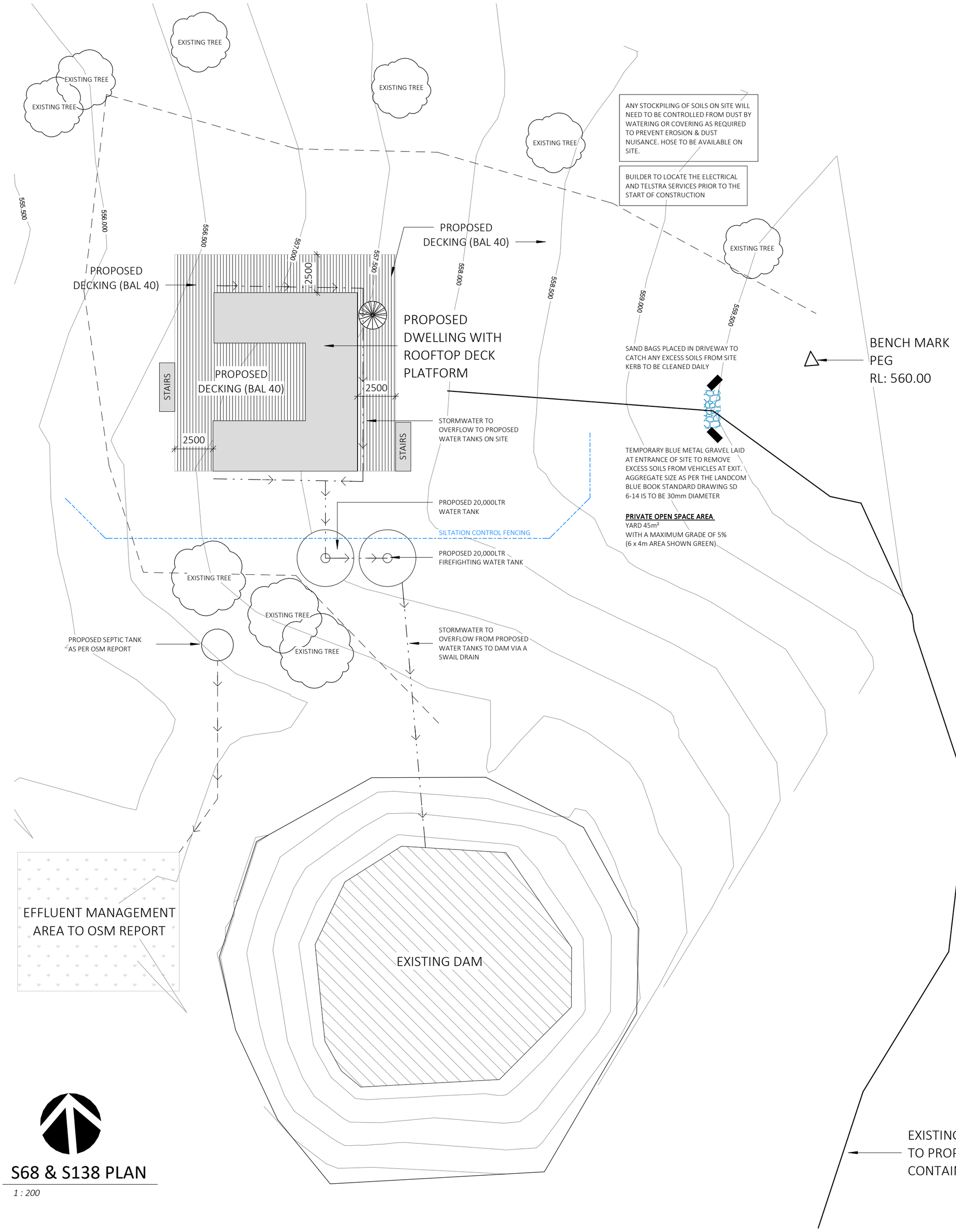

S68 & S138 PLAN

1 : 200

S68 & S138 SITE INFORMATION & LEGEND

STORMWATER/RAINWATER OVERFLOW TO PROPOSED 20,000LTR WATER TANK AND 20,000LTR FIREFIGHTER TANK, WATER TANK TO THEN OVERFLOW TO EXISTING DAM ON SITE
(SURFACE AND SUB-SURFACE STORMWATER TO BE DISPOSED OF VIA PIPEWORK IN ACCORDANCE WITH AS 3500)

CATCHMENT OF ROOF AREA TO BE: TBCm²
DIRECTED TO TANK (TO BE USED AS GUIDE ONLY)

PROPOSED TANK LOCATION: 20,000 LTRS (MIN)

SILTATION CONTROL IN ACCORDANCE WITH COUNCIL POLICY E1 AND THE ADOPTED AUSPEC STANDARD

WATER FLOW FROM TANK TO APPLIANCES (TO BE USED AS A GUIDE ONLY)

LAWN & GARDEN AREA TO BE 300m²
(AS PER BASIX CERTIFICATE TO BE USED AS A GUIDE ONLY)

SEWER LINE

GTAP GARDEN TAP LOCATION

DP° DOWN PIPE LOCATION

ALL LEVELS WERE COMPLETED BY DE WITT CONSULTING AND ARE TO (APPROX) AHD. ALL LEVELS AND CONTOURS TO BE CONFIRMED BY BUILDER / SURVEYOR PRIOR TO START OF CONSTRUCTION.
REF: 13664-DET-20.09.22

BAL - 40

BUSHFIRE NOTES:
BAL = 40
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REF: OCTOBER 2022 *AND CONSTRUCTED IN ACCORDANCE TO* AS 3959-2018

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PROJECT:	PROPOSED DWELLING
STATUS:	CONSTRUCTION
LOT No:	80 DP No: 251603
STREET:	845 RIDGE ROAD, COOKS GAP
CLIENT:	WHITE
SHEET:	4 OF 10

S68 & S138 PLAN	
SCALE:	As indicated
SHEET SIZE:	A2
START DATE:	19.12.22
DWG No:	D5489

DRAWING REVISIONS + NOTES

Date:	Description:	Issue:	Drawn:
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GENERAL AND PROJECT SPECIFIC CONSTRUCTION NOTES FOR COLLINS W COLLINS ARCHITECTURAL PLANS

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REVISED JANURARY 2021

GLAZING SPECIFICATIONS:

WINDOWS SPECIFIED USE NFRC UW & SHGCW VALUES. WINDOWS AS SPECIFIED OR EQUIVALENT MUST BE INSTALLED ON SITE

STANDARD GLAZING: SINGLE CLEAR GLAZING WITH STANDARD ALUMINIUM FRAMES THROUGHOUT

WEATHER STRIPPING TO BE INSTALLED THROUGHOUT.

PLEASE NOTE: ALL GLAZING IN BATHROOMS, ENSUITES, SPA ROOMS OR THE LIKE TO COMPLY WITH PART 3.6.4.5 OF THE BCA

BEDROOM WINDOWS - WHERE THE FLOOR LEVEL OF A BEDROOM IS MORE THAN 2m ABOVE THE SURFACE BENEATH, BEDROOM WINDOWS ARE TO COMPLY WITH BCA VOL 2 PART 3.9.2.6

WINDOWS AND GLAZING TO COMPLY WITH:

AS 4055 : WIND LOADS FOR HOUSING
AS 1288 : GLASS IN BUILDING - SELECTION & INSTALLATION
AS 2047 : WINDOWS & EXTERNAL DOORS IN BUILDING
AS 1170-Part 2: WIND ACTIONS
AS 3959 : CONSTRUCTION OF BUILDINGS IN BUSHFIRE PRONE AREAS
THE STANDARDS REFERRED ABOVE ARE THE VERSION ADOPTED BY BCA AT THE TIME THE RELEVANT CONSTRUCTION CERTIFICATE OR COMPLYING DEVELOPMENT CERTIFICATE APPLICATION IS MADE.

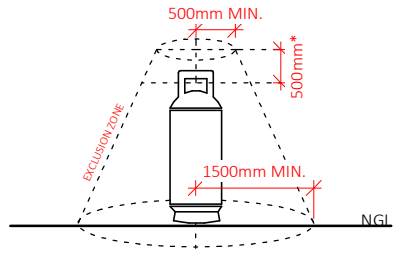
CONSTRUCTION NOTES:

STAIRS, HANDRAILS & BALUSTRADE NOTES:
STAIRS TO COMPLY WITH SECTION 3.9.1.2, 3.9.1.3 & SECTION 3.9.1.5 & 3.9.1.4 SLIP RESISTANCE CLASSIFICATION TABLE IN ACCORDANCE WITH AS4586.
HANDRAIL HEIGHTS TO BE NO LESS THAN 1000mm FROM PROPOSED FINISHED FL. BALUSTRADE & HANDRAIL TO BE IN ACCORDANCE WITH 3.9.2.3 & 3.9.2.4 OF THE BCA

WINDOW NOTES:
BEDROOM WINDOWS - WHERE THE FLOOR LEVEL OF A BEDROOM IS 2M OR MORE ABOVE THE SURFACE BENEATH, BEDROOM WINDOWS ARE TO COMPLY WITH VOL 2 BCA PART 3.9.2.6.

WINDOWS - WHERE THE FLOOR LEVEL IS 4m OR MORE ABOVE THE SURFACE BENEATH, WINDOWS ARE TO COMPLY WITH VOL 2 BCA PART 3.9.2.7. BARRIER WITH A HEIGHT OF NOT LESS THAN 865mm ABOVE FLOOR IS REQUIRED TO AN OPENABLE WINDOW TO COMPLY WITH VOL 2 BCA PART 3.9.2.6 (c) & 3.9.2.7 (b)
WIND CATEGORY TO BE CONFIRMED PRIOR TO START OF CONSTRUCTION. IF N2 OR HIGHER, ENGAGED PIERS TO BRICKWORK AREA'S ARE TO COMPLY WITH AS 4773.1-2010 & AS 4773 2-2010

LPG GAS BOTTLE STORAGE



*DISTANCE MEASURED FROM TOP OF ANY GAS BOTTLE VALVE

ALL GAS BOTTLE STORAGE AND HANDLING IN ACCORDANCE WITH AS1596-2014

GAS BOTTLES ON BUSHFIRE PRONE SITES:

DEVELOPMENT STANDARDS FOR BUSHFIRE PRONE LAND

- RETICULATED OR BOTTLED GAS ON THE LOT IS INSTALLED AND MAINTAINED IN ACCORDANCE WITH AS/NZS 1596-2008, THE STORAGE AND HANDLING OF LP GAS AND THE REQUIREMENTS OF RELEVANT AUTHORITIES (METAL PIPING MUST BE USED, AND
- ANY GAS CYLINDERS ON THE LOT THAT ARE WITHIN 10M OF A DWELLING HOUSE:
- HAVE THE RELEASE VALVES DIRECTED AWAY FROM THE DWELLING HOUSE, AND
- ARE ENCLOSED ON THE HAZARD SIDE OF THE INSTALLATION, AND
- HAVE METAL CONNECTIONS TO AND FROM THE CYLINDERS

THE REQUIREMENTS OF AS 3959—2018, CONSTRUCTION OF BUILDINGS IN BUSHFIRE-PRONE AREAS SET OUT IN THE BUILDING CODE OF AUSTRALIA ALSO APPLY.

BAL - 40

BUSHFIRE NOTES:
BAL = 40
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REF: OCTOBER 2022 *AND CONSTRUCTED IN ACCORDANCE TO* AS 3959-2018

BASIX NOTES:
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Building Designers

PROJECT: PROPOSED DWELLING
STATUS: CONSTRUCTION
SHEET: 5 OF 10
LOT No: 80 **DP No:** 251603
STREET: 845 RIDGE ROAD, COOKS GAP
CLIENT: WHITE

CONSTRUCTION NOTES

SCALE:	As Shown
SHEET SIZE:	A3
START DATE:	19.12.22
DWG No:	D5489

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PLANNING FOR BUSHFIRE PROTECTION 2019

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OWNER, BUILDER, SUB-CONTRACTORS, CONSULTANTS, RENOVATORS, OPERATORS, MAINTENORS, DEMOLISHERS.

SECTION 7.5 (ADDITIONAL CONST. REQUIREMENTS)

7.5 Additional Construction Requirements

To ensure the performance criteria for construction standards given in section 7.4 can be met, PBP adopts additional measures over and above AS 3959 and NASH Standard as follows:

- construction measures for ember protection at BAL-12.5 and BAL-19 provided by AS 3959.
- construction measures for development in BAL-FZ; and
- requirements over and above the performance criteria contained within AS 1530.8.1 and AS 1530.8.2 apply regarding flaming.

7.5.1 Ember Protection

Based on the findings from the 2009 Victorian Bush Fires Royal Commission, PBP aims to maintain the safety levels previously provided by AS 3959:1999 in relation to ember protection at lower Bush Fire Attack Levels.
In particular, the areas addressed are in relation to:

- sarking.
- subfloor screening.
- floors.
- verandas, decks, steps, ramps, and landings.
- timber support posts and beams; and
- fascia's and bargeboards.

7.5.2 NSW State Variations under G5.2(a)(i) and 3.10.5.0(c)(i) of the NCC

Certain provisions of AS 3959 are varied in NSW based on the findings of the Victorian Bush Fires Royal Commission and bush fire industry research.
The following variations to AS 3959 apply in NSW for the purposes of NSW G5.2(a)(i) of Volume One and NSW 3.10.5.0(c)(i) of Volume Two of the NCC.

- clause 3.10 of AS 3959 is deleted and any sarking used for BAL-12.5, BAL-19, BAL-29 or BAL-40 shall:
- be non-combustible; or
- comply with AS/NZS 4200.1, be installed on the outside of the frame, and have a flammability index of not more than 5 as determined by AS 1530.2; and
- clause 5.2 and 6.2 of AS 3959 is replaced by clause 7.2 of AS 3959, except that any wall enclosing the subfloor space need only comply with the wall requirements for the respective BAL and
- clause 5.7 and 6.7 of AS 3959 is replaced by clause 7.7 of AS 3959, except that any wall enclosing the subfloor space need only comply with the wall requirements for the respective BAL and
- fascia's and bargeboards, in BAL-40, shall comply with:
- clause 8.4.1(b) of AS 3959; or
- clause 8.6.6 of AS 3959.

7.5.3 Construction in the Flame Zone

The flame zone is the area that has significant potential for sustained flame contact during a bush fire. The flame zone is determined by the calculated distance at which the radiant heat of the design fire exceeds 40kW/m².
The NCC references AS 3959 and the NASH Standard. The NSW variation to the NCC excludes
both AS 3959 and the NASH Standard as a Deemed to Satisfy solution for buildings that are required to be constructed to BAL-FZ as defined in AS 3959.
Although Chapter 9 of AS 3959 and the NASH Standard has not been adopted, they should still be used as a basis for a performance-based solution demonstrating compliance with the performance requirements of the NCC and PBP for construction in the flame zone.
All flame zone developments should be sited and designed to minimise the risk of bush fire attack. Buildings should be designed and sited in accordance with appropriate siting and design principles to ensure the safest protection from bush fire impacts.

7.5.4 Flaming

Materials that allow flaming can be problematic and are not supported by the NSW RFS for the following reasons:

- flaming materials increase the exposure of other elements of construction and the adjoining structure to flame contact after a bush fire front has passed; and
- flaming materials will potentially increase the exposure of occupants of the building to radiant heat, direct flame contact, smoke after a bush fire front has passed.

This increase in exposure can contribute to the risk of loss of life and compromise the ability of residents to defend their property and egress from the building once the bush fire front has passed.
In addition, it can reduce the ability of occupants to make safe and effective decisions about their safety.
Where there is potential for materials of construction to ignite because of bush fire attack, the proposed building solution generally fails the construction performance criteria for residential infill development.
For development which may be subject to flame contact (BAL-40 and BAL-FZ), systems tested
in accordance with AS 1530.8.1 and AS 1530.8.2 respectively will be considered, except that there is to be no flaming of the specimen except for:

- window frames that have passed the criteria of AS 1530.8.1 and AS 1530.8.2, may be approved provided their flaming is not considered to compromise the safety of other elements of the building; and
- use of other minor elements which allow flaming may be considered provided they do not compromise the integrity of the fire safety of the building (examples include address numbers, house names, decorative artwork, etc).

Flaming of other more significant elements of the building (such as aesthetic wall cladding) is considered to pose an unacceptable risk and will not be supported. permanently fixed in the closed position.

SECTION 7.6 (FENCES & GATES)

7.6 Fences and gates

Fences and gates in bush fire prone areas may play a significant role in the vulnerability of structures during bush fires. In this regard, all fences in bush fire prone areas should be made of either hardwood or non-combustible material. However, in circumstances where the fence is within 6m of a building or in areas of BAL-29 or greater, they should be made of non-combustible material only

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PROJECT: PROPOSED DWELLING		BAL PLANNING NOTES	
STATUS: CONSTRUCTION	**SHEET:** 6 OF 10	**SCALE:**	1 : 100
LOT No: 80 **DP No:** 251603		**SHEET SIZE:**	A3
STREET: 845 RIDGE ROAD, COOKS GAP		**START DATE:**	19.12.22
CLIENT: WHITE		**DWG No:**	D5489

DRAWING REVISION + NOTES

Date:	Revision:	Issue:	Drawn:
19.12.22	INITIAL ISSUE	A	LN
03.01.23	CLIENT CHG DECK	B	DC

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AS3959-2018 – SECTION 3 - GENERAL CONSTRUCTION REQUIREMENTS

THESE NOTES MUST BE READ AND UNDERSTOOD BY ALL INVOLVED IN THE PROJECT. THIS INCLUDES (but is not limited to):

OWNER, BUILDER, SUB-CONTRACTORS, CONSULTANTS, RENOVATORS, OPERATORS, MAINTENORS, DEMOLISHERS.

3.1 GENERAL

This Section specifies general requirements for the construction of buildings for all Bushfire Attack Levels (BALs).
The BALs and the corresponding Sections for specific construction requirements are listed in Table 3.1.

TABLE 3.1

BUSHFIRE ATTACK LEVELS AND CORRESPONDING SECTIONS FOR SPECIFIC CONSTRUCTION REQUIREMENTS

Bushfire Attack Level (BAL)	Classified vegetation within 100 m of the site and heat flux exposure thresholds	Description of predicted bushfire attack and levels of exposure	Construction Section
BAL—LOW	See Clause 2.2.3.2	There is insufficient risk to warrant specific construction requirements	4
BAL—12.5	≤12.5 kW/m²	Ember attack	3 and 5
BAL—19	>12.5 kW/m² ≤19 kW/m²	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux	3 and 6
BAL—29	>19 kW/m² ≤29 kW/m²	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux	3 and 7
BAL—40	>29 kW/m² ≤40 kW/m²	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux with the increased likelihood of direct contact with flames	3 and 8
BAL—FZ	>40 kW/m²	Direct exposure to flames from fire front in addition to heat flux and ember attack	3 and 9

3.2 CONSTRUCTION REQUIREMENTS FOR SPECIFIC STRUCTURES

3.2.1 Attached structures and structures sharing a common roof space

Where any part of a garage, carport, veranda, cabana, studio, storage area or similar roofed structure is attached to, or shares a common roof space with, a building required to conform with this Standard, the entire garage, carport, veranda or similar roofed structure shall conform with the construction requirements of this Standard, as applicable to the subject building.
Alternatively, the structure shall be separated from the subject building by a wall that extends to the underside of a non-combustible roof covering, and that conforms with one of the following:
(a) The wall shall have an FRL of not less than 60/60/60 for loadbearing walls and –/60/60 for non-loadbearing walls when tested from the attached structure side and shall have openings protected as follows:
(i) *Doorways*—by self-closing fire doors with an FRL of –/60/30, conforming with AS 1905.1 and tested in accordance with AS 1530.4.
(ii) *Windows*—by fire windows with an FRL of –/60/– when tested in accordance with AS 1530.4 and permanently fixed in the closed position.
(iii) *Other openings*—by construction with an FRL of not less than –/60/– when tested in accordance with AS 1530.4.
NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not conform with Item (iii).
or
(b) The wall shall be of masonry, earth or masonry-veneer construction with the masonry leaf of not less than 90 mm in thickness and shall have openings protected as follows:
(i) *Doorways*—by self-closing fire doors with an FRL of –/60/30, conforming with AS 1905.1 and tested in accordance with AS 1530.4.
(ii) *Windows*—by fire windows with an FRL of –/60/– when tested in accordance with AS 1530.4 and permanently fixed in the closed position.
(iii) *Other openings*—by construction with an FRL of not less than –/60/– when tested in accordance with AS 1530.4.
NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not conform with Item (iii).

3.2.2 Garages and carports beneath the subject building

Where a garage or carport is beneath a building required to comply with this Standard, it shall conform with the construction requirements of this Standard, as applicable to the subject building.
Alternatively, any construction separating the garage or carport (including walls and flooring systems) from the remainder of the building shall conform with one of the following:
(a) The separating construction shall have an FRL of not less than 60/60/60 for loadbearing construction and –/60/60 for non-loadbearing construction when tested from the garage or carport side and shall have openings protected in accordance with the following:
(i) *Doorways*—by self-closing fire doors with an FRL of –/60/30, conforming with AS 1905.1 and tested in accordance with AS 1530.4.
(ii) *Windows*—by fire windows with an FRL of –/60/– when tested in accordance with AS 1530.4 and permanently fixed in the closed position.
(iii) *Other openings*—by construction with an FRL of not less than –/60/– when tested in accordance with AS 1530.4.
NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not conform with Item (iii).
or
(b) Where part or all of the separating construction is a wall, the wall need not conform with Item (a) above, provided the wall is of masonry, earth or masonry-veneer construction with the masonry leaf of not less than 90 mm in thickness and the wall has openings protected in accordance with the following:
(i) *Doorways*—by self-closing fire doors with an FRL of –/60/30 conforming with AS 1905.1 and tested in accordance with AS 1530.4.
(ii) *Windows*—by fire windows with an FRL of –/60/– when tested in accordance with AS 1530.4 and permanently fixed in the closed position.
(iii) *Other openings*—by construction with an FRL not less than –/60/– when tested in accordance with AS 1530.4.
NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not conform with Item (iii)

3.2.3 Adjacent structures on the subject allotment

Where any garage, carport, or similar roofed structure on the subject allotment is not attached to a building required to conform with this Standard, that structure shall conform with the construction requirements of this Standard.
Alternatively, the adjacent structure shall be separated from the subject building by one of the following:
(a) A distance of not less than 6 m from the building required to conform with this Standard. This distance is measured as any of the horizontal straight lines from the adjacent structure to the subject building.
or
(b) A wall of the building required to conform that extends to the underside of a non-combustible roof covering and has an FRL of not less than 60/60/60 for loadbearing walls and –/60/60 for non-loadbearing walls when tested from the outside. Any openings in the wall shall be protected in accordance with the following:
(i) *Doorways*—by self-closing fire doors with an FRL of –/60/30, conforming with AS 1905.1 and tested in accordance with AS 1530.4.
(ii) *Windows*—by fire windows with an FRL of –/60/– when tested in accordance with AS 1530.4 and permanently fixed in the closed position.
(iii) *Other openings*—by construction with an FRL of not less than –/60/– when tested in accordance with AS 1530.4.
NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not conform with Item (iii).
or
(c) A wall of the building required to conform that extends to the underside of a non-combustible roof covering and is of masonry, earth or masonry-veneer construction with the masonry leaf of not less than 90 mm in thickness. Any openings in the wall shall be protected in accordance with the following:
(i) *Doorways*—by self-closing fire doors with an FRL of –/60/30, conforming with AS 1905.1 and tested in accordance with AS 1530.4.
(ii) *Windows*—by fire windows with an FRL of –/60/– when tested in accordance with AS 1530.4 and permanently fixed in the closed position.
(iii) *Other openings*—by construction with an FRL of not less than –/60/– when tested in accordance with AS 1530.4.
NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not conform with Item (iii).
NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not conform with Item (iii).

3.3 EXTERNAL MOULDINGS

Unless otherwise required in Clause 3.6.1 and Sections 5 to 9, combustible external mouldings, jointing strips, trims and sealants may be used for decorative purposes or to cover joints between sheeting material.

3.4 HIGHER LEVELS OF CONSTRUCTION

The construction requirements specified for a particular BAL shall be acceptable for a lower level.
NOTE: For example, if the site has been assessed at BAL—12.5, BAL—12.5 construction is required; however, any element or combination of elements contained in BAL—19, BAL—29, BAL—40 and BAL—FZ levels of construction may be used to satisfy this Standard.

3.5 REDUCTION IN CONSTRUCTION REQUIREMENTS DUE TO SHIELDING

Where an elevation is not exposed to the source of bushfire attack, then the construction
requirements for that elevation can reduce to the next lower BAL. However, it shall not
reduce to below BAL—12.5.
An elevation is deemed to be not exposed to the source of bushfire attack if all the
straight lines between that elevation and the source of bushfire attack are obstructed by
another part of the same building (see Figure 3.1). However, it shall not reduce to below
BAL 12.5.
The shielding of an elevation shall apply to all the elements of the wall, including openings,
but shall not apply to subfloors or roofs.

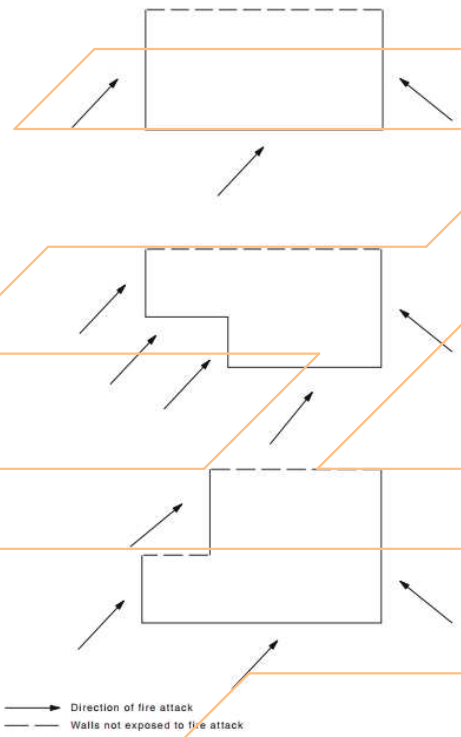

FIGURE 3.1 EXAMPLES OF WALLS SUBJECT TO SHIELDING

3.6 VENTS, WEEPHOLES, GAPS AND SCREENING MATERIALS

3.6.1 Vents, weepholes, joints and the like

All gaps including vents, weepholes and the like shall be screened, except for weepholes to
the sills of windows and doors.
All joints shall be suitably backed with a breathable sarking or mesh, except as permitted by
Clause 3.3.
The maximum allowable aperture size of any mesh or perforated material used as a screen
shall be 2 mm.
C3.6.1 *Weepholes in sills of windows and doors and those gaps between doors and door jambs, heads or sills (thresholds) are exempt from screening because they do not provide a direct passage for embers to the interior of the building or building cavity.*

3.6.2 Gaps to door and window openings

Where screens are fitted to door openings for ember protection, they shall have a maximum
aperture of 2.0 mm and be tight fitting to the frame in the closed position.
Gaps between doors including jambs, heads or sills (thresholds) shall be protected using
draught seals and excluders or the like (see Figure 3.2).
Windows conformant with AS 2047 will satisfy the requirements for gap protection.
Screens fitted to window openings shall have a maximum aperture of 2.0 mm and these
shall be tight fitting to the frames.
C3.6.2 *There are no requirements to screen the openable parts of doors for ember
protection at the lower BALs, however in many circumstances it may be desirable to screen the opening for insect protection. In such circumstances, where the insect screen is fitted internally, such screens may be considered as a door furnishing and the use of non-metallic mesh permissible, provided the screening system is fitted internally and wholly protected by the closed door.*

(iii) *Other openings*—by construction with an FRL of not less than –/60/– when tested in accordance with AS 1530.4.
NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not conform with Item (iii).

3.3 EXTERNAL MOULDINGS

Unless otherwise required in Clause 3.6.1 and Sections 5 to 9, combustible external mouldings, jointing strips, trims and sealants may be used for decorative purposes or to cover joints between sheeting material.

3.4 HIGHER LEVELS OF CONSTRUCTION

The construction requirements specified for a particular BAL shall be acceptable for a lower level.
NOTE: For example, if the site has been assessed at BAL—12.5, BAL—12.5 construction is required; however, any element or combination of elements contained in BAL—19, BAL—29, BAL—40 and BAL—FZ levels of construction may be used to satisfy this Standard.

3.5 REDUCTION IN CONSTRUCTION REQUIREMENTS DUE TO SHIELDING

Where an elevation is not exposed to the source of bushfire attack, then the construction
requirements for that elevation can reduce to the next lower BAL. However, it shall not
reduce to below BAL—12.5.
An elevation is deemed to be not exposed to the source of bushfire attack if all the
straight lines between that elevation and the source of bushfire attack are obstructed by
another part of the same building (see Figure 3.1). However, it shall not reduce to below
BAL 12.5.
The shielding of an elevation shall apply to all the elements of the wall, including openings,
but shall not apply to subfloors or roofs.

FIGURE 3.1 EXAMPLES OF WALLS SUBJECT TO SHIELDING

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3.6.1 Vents, weepholes, joints and the like

All gaps including vents, weepholes and the like shall be screened, except for weepholes to
the sills of windows and doors.
All joints shall be suitably backed with a breathable sarking or mesh, except as permitted by
Clause 3.3.
The maximum allowable aperture size of any mesh or perforated material used as a screen
shall be 2 mm.
C3.6.1 *Weepholes in sills of windows and doors and those gaps between doors and door jambs, heads or sills (thresholds) are exempt from screening because they do not provide a direct passage for embers to the interior of the building or building cavity.*

3.6.2 Gaps to door and window openings

Where screens are fitted to door openings for ember protection, they shall have a maximum
aperture of 2.0 mm and be tight fitting to the frame in the closed position.
Gaps between doors including jambs, heads or sills (thresholds) shall be protected using
draught seals and excluders or the like (see Figure 3.2).
Windows conformant with AS 2047 will satisfy the requirements for gap protection.
Screens fitted to window openings shall have a maximum aperture of 2.0 mm and these
shall be tight fitting to the frames.
C3.6.2 *There are no requirements to screen the openable parts of doors for ember
protection at the lower BALs, however in many circumstances it may be desirable to screen the opening for insect protection. In such circumstances, where the insect screen is fitted internally, such screens may be considered as a door furnishing and the use of non-metallic mesh permissible, provided the screening system is fitted internally and wholly protected by the closed door.*

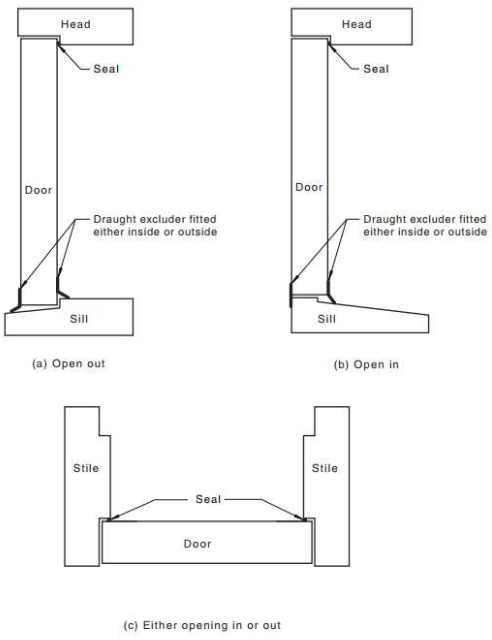

FIGURE 3.2 GAPS BETWEEN DOORS AND THE DOOR JAMBS, HEADS OR SILLS (THRESHOLDS)

3.7 BUSHFIRE SHUTTERS

Bushfire shutters shall—
(a) protect the entire window assembly including framing, glazing, sash, and sill;
(b) protect the entire door assembly including framing, glazing, sill and hardware;
(c) consist of materials specified in Clauses 5.5.1, 6.5.1, 7.5.1, 8.5.1 and 9.5.1 for the
relevant BAL;
(d) be fixed to the building and be non-removable.
(e) be capable of being closed manually from either inside or outside or motorised shutter
systems, where they are not reliant on mains power to close;
NOTE: If power assisted shutter systems are used then that system is powered with
continuous back-up energy such as a battery system.
(f) when in the closed position, have no gap greater than 2 mm between the shutter and
the wall, frame or sill; and
(g) where perforated, have uniformly distributed perforations with a maximum aperture
of 2 mm and a perforated area no greater than 20% of the shutter.
If bushfire shutters are fitted to all external doors then at least one of those shutters shall be
operable from the inside to facilitate safe egress from the building.

3.8 TESTING OF MATERIALS, ELEMENTS OF CONSTRUCTION AND SYSTEMS TO THE AS 1530.8 SERIES

Unless otherwise specified, elements of construction and systems satisfy this Standard when
tested in accordance with the AS 1530.8 series for the relevant BAL level and Crib Class in
Table 3.2.
Elements of construction or systems tested in accordance with AS 1530.8.1—2007 with
Crib Class A prior to the issue of this Standard are acceptable.

TABLE 3.2

TESTING OF MATERIALS, ELEMENTS OF CONSTRUCTION AND SYSTEMS

Acceptable test criteria	Relevant allowable BAL level	Crib class
AS 1530.8.1	BAL—12.5 to BAL—40	AA
AS 1530.8.2	BAL—FZ	Not applicable

Where any element of construction or system satisfies the test criteria in the AS 1530.8
series without screening for ember protection, the requirements of this Standard for
screening of openable parts of windows shall still apply.
Where a window protected with a shutter satisfies the test criteria of the AS 1530.8 series,
the additional requirements of this Standard for screening of openable parts of windows do
not apply.
NOTE: The ember protection function of tested shutter has been verified by the testing.

3.9 GLAZING

Glazing requirements shall be in accordance with Sections 5 to 9 of this Standard.
NOTES:
1 Where double-glazed assemblies are used, the glazing requirements provided in this Standard
apply to the external face of the glazed assembly only.
2 Refer to AS 1288 for an explanation of the terminologies used to describe various types of
glass in this Standard.

3.10 SARKING

Where sarking is required in Sections 5 to 9, the flammability index shall not exceed five
when tested to AS 1530.2.
C3.10 *Sarking material is a principal component used to control condensation and is used for energy efficiency purposes under the NCC. It may be vapour permeable or impermeable dependant on its location within the structure. Seek independent advice regarding selection of sarking prior to installation.*

3.11 TIMBER LOG WALLS

Where the thickness of a timber log wall is specified in Sections 5, 6 and 7, two criteria are
nominated, as follows:
(a) The nominal overall thickness is the overall thickness of the wall.
(b) The minimum thickness is the thickness of the wall at the interface of two logs in the
wall.
For most log profiles, the thickness of the log at the interface with an adjacent log is less
than the overall thickness of the wall.

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DRAWING REVISION + NOTES

Date:	Revision:	Issue:	Drawn:
19.12.22	INITIAL ISSUE	A	LN
03.01.23	CLIENT CHG DECK	B	DC

AS3959-2018 – CONSTRUCTION FOR BUILDINGS IN BUSHFIRE PRONE AREAS – SECTION 8 (BAL 40)

THESE NOTES MUST BE READ AND UNDERSTOOD BY ALL INVOLVED IN THE PROJECT. THIS INCLUDES (but is not limited to):

OWNER, BUILDER, SUB-CONTRACTORS, CONSULTANTS, RENOVATORS, OPERATORS, MAINTENORS, DEMOLISHERS.

8.1 GENERAL
A building assessed in Section 2 as being BAL—40 shall conform with Section 3 and
Clauses 8.2 to 8.8.
Any element of construction or system that satisfies the test criteria of AS 1530.8.1 may be used in lieu of the applicable requirements of Clauses 8.2 to 8.8 (see Clause 3.8).
NOTE: BAL—40 is primarily concerned with protection from ember attack, increased likelihood
of flame contact and radiant heat greater than 29 kW/m2 and up to and including 40 kW/m2.

8.2 SUB-FLOOR SUPPORTS
This Standard does not provide construction requirements for subfloor supports where the
subfloor space is enclosed with a wall that conforms with Clause 8.4, except that sarking is not required where specified in Clause 8.4.1(b).
Where the subfloor space is unenclosed, the support posts, columns, stumps, piers and poles
shall be—
(a) of non-combustible material; or
(b) a system conforming with AS 1530.8.1; or
(c) a combination of Items (a) and (b).
NOTE: This requirement applies to the subject building only and not to verandas, decks, steps,
ramps and landings (see Clause 8.7).
C8.2 Combustible materials stored in the subfloor space may be ignited by embers and impact the building.

8.3 FLOORS
8.3.1 General
This Standard does not provide construction requirements for concrete slabs on the ground.
8.3.2 Elevated floors
8.3.2.1 Enclosed subfloor space
This Standard does not provide construction requirements for elevated floors, including bearers, joists and flooring, where the subfloor space is enclosed with a wall that conforms with Clause 8.4, except that sarking is not required where specified in Clause 8.4.1(b).
8.3.2.2 Unenclosed subfloor space
Where the subfloor space is unenclosed, the bearers, joists and flooring, shall—
(a) be non-combustible; or
(b) have the underside of the combustible elements of the floor system protected with a non-combustible material (e.g., fibre-cement sheet or metal sheet); or
(c) be a system conforming with AS 1530.8.1; or
(d) be a combination of any of Items (a), (b) or (c).

8.4 WALLS
8.4.1 General
The exposed components of external walls shall be as follows:
(a) Non-combustible material including the following provided the minimum thickness is 90mm:
(i) Full masonry or masonry veneer walls with an outer leaf of clay, concrete, calcium silicate or natural stone.
(ii) Precast or in situ walls of concrete or aerated concrete.
(iii) Earth wall including mud brick.
or
(b) Cladding that is fixed externally to a timber-framed or a steel-framed wall that is
sarked on the outside of the frame and is—
(i)
fibre-cement a minimum of 9 mm in thickness; or
(ii) steel sheeting; or
(iii) a combination of Items (i) and (ii).
(c) A system conforming with AS 1530.8.1.
or
(d) A combination of any of Items (a), (b) or (c).
8.4.2 Joints
All joints in the external surface material of walls shall be covered, sealed, overlapped, backed or butt-jointed.
8.4.3 Vents and weepholes
Except for exclusions provided in Clause 3.6, vents and weepholes in external walls shall be screened with a mesh made of corrosion-resistant steel, bronze or aluminium.

8.5 EXTERNAL GLAZED ELEMENTS, ASSEMBLIES AND DOORS
8.5.1 Bushfire shutters
Where fitted, bushfire shutters shall conform with Clause 3.7 and be made from non-combustible material.
8.5.2 Screens for windows and doors
Where fitted, screens for windows and doors shall have a mesh or perforated sheet made of
corrosion-resistant steel or bronze.
The frame supporting the mesh or perforated sheet shall be metal.
Screen assemblies shall be attached using metal fixings.
8.5.3 Windows and sidelights
Window assemblies shall—
(a) be completely protected by a bushfire shutter that conforms with Clause 3.7 and
Clause 8.5.1.
or
(b) conform with the following:
(i) Frame material - Window frames and window joinery shall be metal.
(ii) Hardware - Externally fitted hardware that supports the sash in its functions of opening and closing shall be metal.
Trims or other components may use material other than metal.
(iii) Glazing - Glazing shall be toughened glass a minimum of 6mm thick or glass blocks with no restriction on glazing methods.
NOTE: Where double-glazed assemblies are used, the above requirements apply to the external face of the glazed assembly only.
(iv) Where used, seals and weather strips to stiles, head and sills or thresholds shall be manufactured from materials having a flammability index not exceeding 5 or from silicone.
(v) Screens Both the openable and fixed portions of the window shall be screened externally with screens that conform with Clause 3.6 and Clause 8.5.2.
C8.5.3 Components other than metal may be used provided they are shielded by the metal components of the window/door frame.
8.5.4 Doors—Side-hung external doors (including French doors, panel fold and
bi-fold doors)
Side-hung external doors, including French doors, panel fold and bi-fold doors, shall—
(a) be completely protected by bushfire shutters that conform with Clause 3.7 and Clause 8.5.1.
or
(b) conform with the following:
(i) Door panel material Materials shall be—
(A) non-combustible; or
(B) solid timber having a minimum thickness of 35 mm for the first 400mm above the threshold and protected on the outside by a metal-framed screen door with a mesh or perforated sheet conforming with Clause 3.6 and made of corrosion-resistant steel or bronze; or
(C) for fully framed glazed door panels the framing shall be metal.
(ii) Door frame material - The door frame material shall be metal.
(iii) Hardware - Externally fitted hardware that supports the panel in its functions of opening and closing shall be metal.
Trims or other components may use materials other than metal.
(iv) Glazing - Where doors incorporate glazing, the glazing shall be toughened glass a minimum of 6mm in thickness.
(v) Seals and weather strips Weather strips, draught excluders, or draught seals shall be installed.
Seals to stiles, head and sills or thresholds shall be manufactured from materials having a flammability index not exceeding 5.
(vi) Screens There is no requirement to screen the openable part of the door at this BAL level.
Where glazing is incorporated in the door, it shall be screened externally with screens that conform with Clause 8.5.2.
(vii) Doors shall be tight-fitting to the door frame and to an abutting door, if applicable.
8.5.5 Doors—Sliding doors
Sliding doors shall—
(a)
be completely protected by a bushfire shutter that conforms with Clause 3.7 and
Clause 8.5.1.
or
(b) conform with the following:
(i) Frame material - The material for door frames, including fully framed glazed doors, shall be made from metal.
(ii) Hardware - Externally fitted hardware that supports the panel in its functions of opening and closing shall be metal.
Trims or other components may use materials other than metal.
(iii) Glazing - Where doors incorporate glazing, the glazing shall be toughened glass a minimum of 6mm in thickness.
(iv) Seals and weather strips Seals to stiles, head and sills or thresholds shall be manufactured from materials with a flammability index not exceeding 5.
(v) Screens Both the fixed and openable portions of doors shall be screened externally with screens that conform with Clause 3.6 and Clause 8.5.2.
(vi) Sliding doors shall be tight-fitting in the frames.
8.5.6 Doors—Vehicle access doors (garage doors)
The following applies to vehicle access doors:
(a) Vehicle access doors shall be non-combustible.
(b) All vehicle access doors shall be protected with suitable weather strips, draught excluders, draught seals, or brushes. Door assemblies fitted with guide tracks do not need edge gap protection.
NOTES:
1 Refer to AS/NZS 4505 for door types.
2 Gaps of door edges or building elements should be protected as per Section 3.
C8.5.6(b) These guide tracks do not provide a direct passage for embers into the building.
(c) Weather strips, draught excluders, draught seals or brushes to protect edge gaps or thresholds shall be manufactured from materials having a flammability index not exceeding 5.
(d) Vehicle access doors shall not include ventilation slots.
C8.5.6 Components other than metal may be used provided they are shielded by the metal components of the door assembly.

8.6 ROOFS (INCLUDING PENETRATIONS, EAVES, FASCIAS AND GABLES, AND GUTTERS AND DOWNPIPES)
8.6.1 General
The following applies to all types of roofs and roofing systems:
(a) Roof tiles, roof sheets and roof-covering accessories shall be non-combustible.
(b) The roof/wall and roof/roof junction shall be sealed either using fascia and eaves linings or by sealing between the top of the wall and the underside of the roof and between the rafters at the line of the wall. They shall also be protected in accordance with Clause 3.6.
(c) Roof ventilation openings, such as gable and roof vents, shall be fitted with ember guards made of non-combustible material or a mesh or perforated sheet conforming with Clause 3.6 and made of corrosion-resistant steel or bronze.
(d) Roof-mounted evaporative coolers are not permitted in BAL—40.
8.6.2 Tiled roofs
Tiled roofs shall be fully sarked. The sarking shall—
(a) be located on top of the roof framing, except that the roof battens may be fixed above the sarking;
(b) cover the entire roof area including ridges and hips; and
(c) extend into gutters and valleys.
8.6.3 Sheet roofs
Sheet roofs shall—
(a) be fully sarked in accordance with Clause 8.6.2, except that foil-backed insulation blankets may be installed over the battens; or
(b) have any gaps sealed at the fascia or wall line hips and ridges by—
(i) a mesh or perforated sheet that conforms with Clause 3.6 and that is made of corrosion-resistant steel or bronze; or
(ii) mineral wool; or
(iii) other non-combustible material; or
(iv) a combination of any of Items (i), (ii) or (iii).
C8.6.3 Sarking is used as a secondary form of ember protection for the roof space to account for minor gaps that may develop in sheet roofing.
8.6.4 Veranda, carport and awning roof
The following applies to veranda, carport, and awning roofs:
(a) A veranda, carport or awning roof forming part of the main roof space [see Figure D1(a), Appendix D] shall meet all the requirements for the main roof, as specified in Clauses 8.6.1 to 8.6.6.
(b) A veranda, carport or awning roof separated from the main roof space by an external wall [see Figures D1(b) and D1(c), Appendix D] conforming with Clause 8.4 shall have a non-combustible roof covering and the complete support structure shall be—
(i) of non-combustible material; or
(ii) timber rafters lined on the underside with fibre-cement sheeting a minimum of 6mm in thickness, or with material conforming with AS 1530.8.1; or
(iii) a system conforming with AS 1530.8.1; or
(iv) a combination of any of Items (i), (ii) or (iii).
8.6.5 Roof penetrations
The following applies to roof penetrations:
(a) Roof penetrations, including roof lights, roof ventilators, aerials, vent pipes and supports for solar collectors or the like, shall be sealed. The material used to seal the penetration shall be non-combustible.
(b) Glazed assemblies for roof lights and skylights shall have an FRL of –/30/–.
(c) External single plane glazed elements of roof lights and skylights, where the pitch of the glazed element is 18 degrees or less to the horizontal, shall conform with Clause 3.6 and be made of corrosion-resistant steel or bronze.
(d) A pipe or conduit that penetrates the roof covering shall be non-combustible.
NOTE: AS/NZS 5601 contains requirements for gas appliance flue systems and cowls. Advice
can be obtained from manufacturers and State and Territory gas technical regulators.
.
8.6.6 Eaves linings, fascia's and gables
The following applies to eaves linings, fascia's, and gables:
(a) Gables shall conform with Clause 8.4.
(b) Fascia's and bargeboards shall conform with AS 1530.8.1.
(c) Eaves linings shall be—
(i) fibre-cement sheet, a minimum of 6 mm in thickness; or
(ii) calcium silicate sheet, a minimum of 6 mm in thickness; or
(iii) a combination of Items (i) and (ii) above.
(d) Eaves penetrations shall be protected the same as for roof penetrations as specified in Clause 8.6.5.
(e) Eaves ventilation openings shall be fitted with ember guards in accordance with Clause 3.6 made of corrosion-resistant steel or bronze.
(f) Joints in eaves linings, fascias and gables may be sealed with plastic joining strips or timber storm moulds.
8.6.7 Gutters and downpipes
This Standard does not provide requirements for downpipes.
If installed, gutter and valley leaf guards shall be non-combustible.
Gutters shall be non-combustible.
Box gutters shall be non-combustible and flashed at the junction with the roof with
non-combustible materials.

8.7 VERANDAS, DECKS, STEPS AND LANDINGS
8.7.1 General
Decking shall not be spaced.
There is no requirement to enclose the subfloor spaces of verandas, decks, steps, ramps or landings.
8.7.2 Enclosed subfloor spaces of verandas, decks, steps, ramps and landings
8.7.2.1 Materials to enclose a subfloor space
The subfloor spaces of verandas, decks, steps, ramps and landings are deemed to be
'enclosed' when—
(a) the material used to enclose the subfloor space conforms with Clause 8.4, except that sarking is not required where specified in Clause 8.4.1(b); and
(b) all openings are protected in accordance with Clause 3.6 and made of corrosion resistant steel or bronze.
8.7.2.2 Supports
This Standard does not provide construction requirements for support posts, columns, stumps, stringers, piers and poles.
8.7.2.3 Framing
This Standard does not provide construction requirements for the framing of verandas, pergolas, decks, ramps or landings (i.e. bearers and joists).
8.7.2.4 Decking, stair treads and the trafficable surfaces of ramps and landings
Decking, stair treads and the trafficable surfaces of ramps and landings shall be—
(a) of non-combustible material; or
(b) a system conforming with AS 1530.8.1, or
(c) a combination of Items (a) and (b).
8.7.3 Unenclosed subfloor spaces of verandas, decks, steps, ramps and landings
8.7.3.1 Supports
Support posts, columns, stumps, stringers, piers and poles shall be—
(a) of non-combustible material; or
(b) a system conforming with AS 1530.8.1; or
(c) a combination of Items (a) and (b).
8.7.3.2 Framing
Framing of verandas, decks, ramps or landings (i.e., bearers and joists) shall be—
(a) of non-combustible material; or
(b) a system conforming with AS 1530.8.1; or
(c) a combination of Items (a) and (b).
8.7.3.3 Decking, stair treads and the trafficable surfaces of ramps and landings
Decking, stair treads and the trafficable surfaces of ramps and landings shall be—
(a) of non-combustible material; or
(b) a system conforming with AS 1530.8.1; or
(c) a combination of Items (a) and (b).
8.7.4 Balustrades, handrails or other barriers
Those parts of the handrails and balustrades less than 125 mm from any glazing or any combustible wall shall be of non-combustible material.
Those parts of the handrails and balustrades that are 125 mm or more from the building have no requirements.
8.7.5 Veranda posts
Veranda posts shall be made from non-combustible material.

8.8 WATER AND GAS SUPPLY PIPES
Above-ground, exposed water supply pipes shall be metal.
External gas pipes and fittings above ground shall be of steel or copper construction having
a minimum wall thickness in accordance with gas regulations or 0.9 mm whichever is the
greater. The metal pipe shall extend a minimum of 400 mm within the building and 100mm
below ground.
NOTE: Refer to State and Territory gas regulations, AS/NZS 5601.1 and AS/NZS 4645.1.
C8.8 Concern is raised for the protection of bottled gas installations. Location, shielding and venting of the gas bottles needs to be considered.

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Building Designers

PROJECT: PROPOSED DWELLING		BAL 40 CONSTRUCTION NOTES	
STATUS: CONSTRUCTION	SHEET: 8 OF 10	SCALE:	1 : 100
LOT No: 80 DP No: 251603		SHEET SIZE:	A3
STREET: 845 RIDGE ROAD, COOKS GAP		START DATE:	19.12.22
CLIENT: WHITE		DWG No:	D5489

DRAWING REVISION + NOTES

Date:	Revision:	Issue:	Drawn:
19.12.22	INITIAL ISSUE	A	LN
03.01.23	CLIENT CHG DECK	B	DC

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REVISED DECEMBER 2019

BUILDING SPECIFICATIONS FOR CLASS 1 AND 10 BUILDINGS
All works to be completed in accordance with the current version of the National Construction Code Series, including Building Code of Australia (BCA), Volume 2 and the Plumbing Code of Australia (PCA), Volume 3 as applicable.
All Australian Standards listed are the versions that have been adopted by the relevant version of the National Construction Code Series at the time of Construction Certificate or Complying Development Certificate Application.

STRUCTURAL PROVISIONS
Structural Design Manuals – is satisfied by complying with:
a) 3.0.3, 3.0.4, 3.0.5 of the BCA; or
b) the relevant provisions of other Parts of Section 3 of the Housing Provisions of the BCA relating to structural elements; or
c) any combination thereof.
3.0.5 - Structural Software – Must comply with the Australian Building Codes Board (ABCB) Protocol for Structural Software and Part 3.4.0.2 of the BCA.

SITE PREPARATION
Earthworks - Earthworks are to be undertaken in accordance with Part 3.1.1 of the BCA.
Earth Retaining structures (ie. retaining walls & batter) to be in accordance with AS4678.
Drainage – Stormwater drainage is to be undertaken in accordance with AS/NZS 3500.3, or, the Acceptable Construction Practice as detailed in Part 3.1.3 of the BCA.
Termite Risk Management – Where a primary building element is considered susceptible to termite attack the building shall be protected in accordance with the following:
a) AS 3600.1, and
b) A durable notice is permanently fixed to the building in a prominent location, such as in a meter box or the like, including the details listed in Part 3.1.4.4 of the BCA.
c) The Acceptable Construction Practice as detailed in accordance with Part 3.1.4 of the BCA.

FOOTINGS AND SLABS
The footing or slab is to be constructed in accordance with AS 2870, except that for the purposes of Clause 5.3.3.1 of AS 2870, a damp-proofing membrane is required to be provided, or, the Acceptable Construction Practice detailed in Part 3.2 of the BCA
Piled footings are to be designed in accordance with AS 2159.

MASONRY
Unreinforced Masonry – to be designed and constructed in accordance with;

a) AS 3700; or
b) AS 4773 Parts 1 and 2
Reinforced Masonry – to be designed and constructed in accordance with;
a) AS 3700; or
b) AS 4773 parts 1 and 2

Masonry Accessories – to be constructed and installed in accordance with;

a) AS 3700; or
b) AS 4773 Parts 1 and 2
Weatherproofing of Masonry
This Part applies to an external wall (including the junction between the wall and any window or door) of a Class 1 Building.
This Part does not apply to any Class 10 building except where its construction contributes to the weatherproofing of the Class 1 building.
The weatherproofing of masonry is to be carried out in accordance with;
a) AS 3700; except as provided for by Part 3.3.2.0 (a), or
b) AS 4773 Part2 1 and 2

FRAMING
Sub-Floor Ventilation – Is to comply with the Acceptable Construction Practice of Part 3.4.1 of the BCA.
Steel Framing – is to be designed and constructed in accordance with the Acceptable Construction Practice of Part 3.4.2 of the BCA, or, one of the following manuals:
a) Steel structures: AS 4100.
b) Cold-formed steel structures: AS/NZS4600.
c) Residential and low-rise steel framing: NASH Standard.
Timber Framing – is to be designed and constructed in accordance with the following, as appropriate:
a) AS 1684.2.
b) AS 1684.4.
Structural Steel Members – is to be designed and constructed in accordance with the Acceptable Construction Practice of Part 3.4.4 of the BCA, or, one of the following manuals:
a) Steel Structures: AS 4100.
b) Cold-formed steel structures: AS/NZS 4600.

ROOF AND WALL CLADDING
Roof Cladding – is to comply with the Acceptable Construction Practice of Part 3.5.1 of the BCA, or, one of the following:
a) Roofing tiles: Part 3.5.2 BCA - AS2050.
b) Metal Roof Cladding: Part 3.5.1 BCA - AS1562.1.
c) Plastic sheet roofing: AS/NZS 4256 Parts 1, 2, 3 and 5; and AS/NZS 1562.3.
Gutters and Downpipes – are to be designed and constructed in accordance with the Acceptable Construction Practice of Part 3.5.3 of the BCA, or, AS/NZS 3500.3 – Stormwater drainage.
Timber & Composite Wall Cladding – to be designed and constructed in accordance with Acceptable Construction Practice of Part 3.5.4 of the BCA.
Autoclaved Aerated Concrete to AS5146.1
Metal wall cladding to be designed and constructed in accordance with AS 1562.1.

GLAZING
Glazing – to be designed and constructed in accordance with the Acceptable Construction Practice of Part 3.6.1 of the BCA, or, one of the following manuals as applicable under Part 3.6.0 BCA
a) AS 2047.
b) AS 1288.

FIRE SAFETY
Fire Hazard properties of materials to comply with Part 3.7.1 of the BCA.
Fire Separation of external walls to comply with Part 3.7.2 of the BCA.
Fire Separation of separating walls & floors to comply with Part 3.7.3 of the BCA.
Fire Separation of garage top dwelling to comply with Part NSW 1.1 of the BCA.
Smoke Alarms & Evacuation lighting to comply Part 3.7.5 of the BCA.

BUSHFIRE AREAS
Bushfire Areas – This section relates to:
a) A Class 1 building; or
b) A Class 10a building or deck associated with a Class 1 building,
If it is constructed in accordance with the following:
c) AS 3959, except as amended by planning for bushfire protection and, except for Section 9 Construction for Bushfire Attack Level FZ (BAL-FZ). Buildings subject to BAL-FZ must comply with specific conditions of development consent for construction at this level; or
d) The requirements of (c) above as modified by the development consent following consultation with the NSW Rural Fire Service undersection 79BA of the Environmental Planning and Assessment Act 1979; or
e) The requirements of (c) above as modified by the development consent with a bushfire safety authority issued under section 100B of the Rural Fire Act for the purposes of integrated development.

Alpine Areas – to be constructed in accordance with the Acceptable Construction Practice of Part 3.10.4 of the BCA if located in an alpine area.

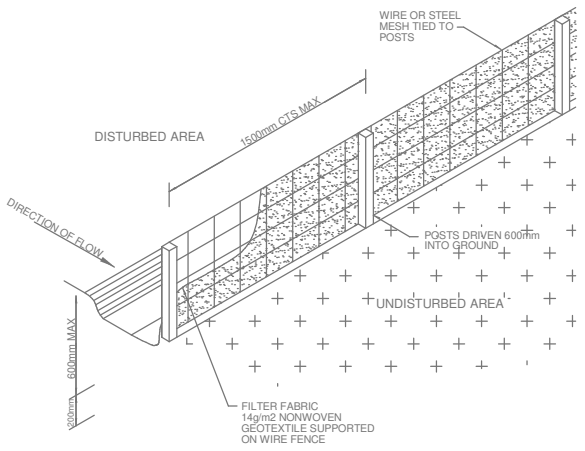
HEALTH AND AMENITY
Wet Areas and External Waterproofing – building elements in wet areas within a building must:
a) Be waterproof or water resistant in accordance with Table 3.8.1.1 of the BCA; and
b) Comply with AS 3740.
c) External areas to comply with AS4654.1 & AS4654.2
Room Heights – are to be constructed in accordance with the Acceptable Construction Practice of Part 3.8.2 of the BCA.
Facilities – are to be constructed in accordance with Acceptable Practice of Part 3.8.3 of the BCA.
Light – is to be provided in accordance with the Acceptable Construction Practice of Part 3.8.4 of the BCA.
Ventilation – is to be provided in accordance with the Acceptable Construction Practice of Part 3.8.5 of the BCA.
Sound Insulation – (only applies to a separating wall between two or more class 1 buildings) is to be provided in accordance with the Acceptable Construction Practice of Part 3.8.6 of the BCA.
Condensation Management to be provided in accordance with ACP Part 3.8.7 BCA.

SAFE MOVEMENT AND ACCESS
Stair Construction – to be constructed and installed in accordance with the Acceptable Construction Practice of Part 3.9.1 of the BCA.
Barriers and Handrails – to be constructed and installed in accordance with the Acceptable Construction Practice of Part 3.9.2 of the BCA.
Protection of openable windows to Part 3.9.2 of the BCA.

ANCILLARY PROVISIONS & ADDITIONAL CONSTRUCTION REQUIREMENTS
3.10.1 - Swimming Pools
Swimming Pool Access – to be designed and installed in accordance with the Swimming Pools Act 1992, Swimming Pool Regulation 2018 and AS 1926 Parts 1 and 2.
Swimming Pool Water recirculation Systems – is to be designed and constructed in accordance with AS1926.3.
High Wind Areas – Applies to a region that is subject to design wind speeds more than N3 or C1 (see table 1.1.1 of the BCA). To be constructed in accordance with one or more of the relevant manuals of Part 3.10.1 of the BCA
3.10.2 - Earthquake Areas subject to "seismic activity" to be constructed in accordance with Part 3.0 BCA.
3.10.3 - Flood Hazard Areas – applies to areas on a site (weather or not mapped) encompassing the land lower than the flood hazard level (as defined by the BCA) which has been determined by the appropriate authority (statutory authority), are to be constructed in accordance with the ABCB Standard for Construction of Buildings in Flood Hazard Areas.
3.10.4 - Construction "Alpine Areas" in accordance with Part 3.10.4.
3.10.5 - Construction in Bushfire Prone Areas in accordance with Part 3.10.5.
3.10.6 - Attachment of Decks & Balconies to external walls of buildings to be in accordance with the acceptable construction practice of Part 3.10.6 of the BCA, or alternatively be engineer designed in accordance with Part 3.0 of the BCA.
3.10.7 - Boilers, Pressure Vessels, Heating Applicances, Fire Places, Chimneys & Flues to be in accordance with Part 3.10.7 of the BCA.

ENERGY EFFICIENCY
Energy Efficiency – to comply with the measures contained in the relevant BASIX certificate, and the requirements of NSW parts 3.12.1, 3.12.3 & 3.12.5 of the BCA.

SEDIMENT CONTROL SPECIFICATIONS:



SILTATION CONTROL IN ACCORDANCE WITH COUNCIL POLICY E1 AND THE ADOPTED AUSPEC STANDARD

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Building Designers

PROJECT: PROPOSED DWELLING
STATUS: CONSTRUCTION
LOT No: 80 DP No: 251603
STREET: 845 RIDGE ROAD, COOKS GAP
CLIENT: WHITE
SHEET: 9 OF 10

BUILDING SPECIFICATIONS

SCALE:	As indicated
SHEET SIZE:	A3
START DATE:	19.12.22
DWG No:	D5489

DRAWING REVISION + NOTES

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1. FALLS, SLIPS, TRIPS
A) WORKING AT HEIGHTS
DURING CONSTRUCTION
Wherever possible, components for this building should be prefabricated off-site or at ground level to minimise the risk of workers falling more than two metres. However, construction of this building will require workers to be working at heights where a fall in excess of two metres is possible and injury is likely to result from such a fall. The builder should provide a suitable barrier wherever a person is required to work in a situation where falling more than two metres is a possibility.
DURING OPERATION OR MAINTENANCE
For houses or other low-rise buildings where scaffolding is appropriate: Cleaning and maintenance of windows, walls, roof or other components of this building will require persons to be situated where a fall from a height in excess of two metres is possible. Where this type of activity is required, scaffolding, ladders or trestles should be used in accordance with relevant codes of practice, regulations or legislation. For buildings where scaffold, ladders, trestles are not appropriate: Cleaning and maintenance of windows, walls, roof or other components of this building will require persons to be situated where a fall from a height in excess of two metres is possible. Where this type of activity is required, scaffolding, fall barriers or Personal Protective Equipment (PPE) should be used in accordance with relevant codes of practice, regulations or legislation.
B) SLIPPERY OR UNEVEN SURFACES
FLOOR FINISHES Specified
If finishes have been specified by designer, these have been selected to minimise the risk of floors and paved areas becoming slippery when wet or when walked on with wet shoes/feet. Any changes to the specified finish should be made in consultation with the designer or, if this is not practical, surfaces with an equivalent or better slip resistance should be chosen.
FLOOR FINISHES By Owner
If designer has not been involved in the selection of surface finishes, the owner is responsible for the selection of surface finishes in the pedestrian trafficable areas of this building. Surfaces should be selected in accordance with AS HB 197:1999 and AS/NZ 4586:2004.
STEPS, LOOSE OBJECTS AND UNEVEN SURFACES
Due to design restrictions for this building, steps and/or ramps are included in the building which may be a hazard to workers carrying objects or otherwise occupied. Steps should be clearly marked with both visual and tactile warning during construction, maintenance, demolition and at all times when the building operates as a workplace. Building owners and occupiers should monitor the pedestrian access ways and in particular access to areas where maintenance is routinely carried out to ensure that surfaces have not moved or cracked so that they become uneven and present a trip hazard. Spills, loose material, stray objects or any other matter that may cause a slip or trip hazard should be cleaned or removed from access ways. Contractors should be required to maintain a tidy work site during construction, maintenance or demolition to reduce the risk of trips and falls in the workplace. Materials for construction or maintenance should be stored in designated areas away from access ways and work areas.

2. FALLING OBJECTS
LOOSE MATERIALS OR SMALL OBJECTS
Construction, maintenance or demolition work on or around this building is likely to involve persons working above ground level or above floor levels. Where this occurs one or more of the following measures should be taken to avoid objects falling from the area where the work is being carried out onto persons below.

1. **Prevent or restrict access to areas below where the work is being carried out.**
2. **Provide toeboards to scaffolding or work platforms.**
3. **Provide protective structure below the work area.**
4. **Ensure that all persons below the work area have Personal Protective Equipment (PPE).**

BUILDING COMPONENTS
During construction, renovation or demolition of this building, parts of the structure including fabricated steelwork, heavy panels and many other components will remain standing prior to or after supporting parts are in place. Contractors should ensure that temporary bracing or other required support is in place at all times when collapse which may injure persons in the area is a possibility.
Mechanical lifting of materials and components during construction, maintenance or demolition presents a risk of falling objects. Contractors should ensure that appropriate lifting devices are used, that loads are properly secured and that access to areas below the load is prevented or restricted.

3. TRAFFIC MANAGEMENT
For building on a major road, narrow road or steeply sloping road: Parking of vehicles or loading/unloading of vehicles on this roadway may cause a traffic hazard. During construction, maintenance or demolition of this building designated parking for workers and loading areas should be provided. Trained traffic management personnel should be responsible for the supervision of these areas. For building where on-site loading/unloading is restricted: Construction of this building will require loading and unloading of materials on the roadway. Deliveries should be well planned to avoid congestion of loading areas and trained traffic management personnel should be used to supervise loading/unloading areas. For all buildings: Busy construction and demolition sites present a risk of collision where deliveries and other traffic are moving within the site. A traffic management plan supervised by trained traffic management personnel should be adopted for the work site.

4. SERVICES
GENERAL
Rupture of services during excavation or other activity creates a variety of risks including release of hazardous material. Existing services are located on or around this site. Where known, these are identified on the plans but the exact location and extent of services may vary from that indicated. Services should be located using an appropriate service (such as Dial Before You Dig), appropriate excavation practice should be used and, where necessary, specialist contractors should be used. Locations with underground power: Underground power lines MAY be located in or around this site. All underground power lines must be disconnected or carefully located and adequate warning signs used prior to any construction, maintenance or demolition commencing. Locations with overhead power lines: Overhead power lines MAY be near or on this site. These pose a risk of electrocution if struck or approached by lifting devices or other plant and persons working above ground level. Where there is a danger of this occurring, power lines should be, where practical, disconnected or relocated. Where this is not practical adequate warning in the form of bright coloured tape or signage should be used or a protective barrier provided.

5. MANUAL TASKS
Components within this design with a mass in excess of 25kg should be lifted by two or more workers or by mechanical lifting device. Where this is not practical, suppliers or fabricators should be required to limit the component mass
All material packaging, building and maintenance components should clearly show the total mass of packages and where practical all items should be stored on site in a way which minimises bending before lifting. Advice should be provided on safe lifting methods in all areas where lifting may occur. Construction, maintenance and demolition of this building will require the use of portable tools and equipment. These should be fully maintained in accordance with manufacturer's specifications and not used where faulty or (in the case of electrical equipment) not carrying a current electrical safety tag. All safety guards or devices should be regularly checked and Personal Protective Equipment should be used in accordance with manufacturer's specification.

6. HAZARDOUS SUBSTANCES
ASBESTOS
For alterations to a building constructed prior to 1990: If this existing building was constructed prior to: asbestos 1990 - it therefore may contain asbestos 1986 - it therefore is likely to contain either in cladding material or in fire retardant insulation material. In either case, the builder should check and, if necessary, take appropriate action before demolishing, cutting, sanding, drilling or otherwise disturbing the existing structure.
POWDERED MATERIALS
Many materials used in the construction of this building can cause harm if inhaled in powdered form. Persons working on or in the building during construction, operational maintenance or demolition should ensure good ventilation and wear Personal Protective Equipment including protection against inhalation while using powdered material or when sanding, drilling, cutting or otherwise disturbing or creating powdered material.
TREATED TIMBER
The design of this building may include provision for the inclusion of treated timber within the structure. Dust or fumes from this material can be harmful. Persons working on or in the building during construction, operational maintenance or demolition should ensure good ventilation and wear Personal Protective Equipment including protection against inhalation of harmful material when sanding, drilling, cutting or using treated timber in any way that may cause harmful material to be released. Do not burn treated timber.
VOLATILE ORGANIC COMPOUNDS
Many types of glue, solvents, spray packs, paints, varnishes and some cleaning materials and disinfectants have dangerous emissions. Areas where these are used should be kept well ventilated while the material is being used and for a period after installation. Personal Protective Equipment may also be required. The manufacturer's recommendations for use must be carefully considered at all times.
SYNTHETIC MINERAL FIBRE
Fibreglass, rockwool, ceramic and other material used for thermal or sound insulation may contain synthetic mineral fibre which may be harmful if inhaled or if it comes in contact with the skin, eyes or other sensitive parts or the body. Personal Protective Equipment including protection against inhalation of harmful material should be used when installing, removing or working near bulk insulation material.
TIMBER FLOORS
This building may contain timber floors which have an applied finish. Areas where finishes are applied should be kept well ventilated during sanding and application and for a period after installation. Personal Protective Equipment may also be required. The manufacturer's recommendations for use must be carefully considered at all times.

7. CONFINED SPACES
EXCAVATION
Construction of this building and some maintenance on the building will require excavation and installation of items within excavations. Where practical, installation should be carried out using methods which do not require workers to enter the excavation. Where this is not practical, adequate support for the excavated area should be provided to prevent collapse. Warning signs and barriers to prevent accidental or unauthorised access to all excavations should be provided.
ENCLOSED SPACES
For buildings with enclosed spaces where maintenance or other access may be required: Enclosed spaces within this building may present a risk to persons entering for construction, maintenance or any other purpose. The design documentation calls for warning signs and barriers to unauthorised access. These should be maintained throughout the life of the building. Where workers are required to enter enclosed spaces, air testing equipment and Personal Protective Equipment should be provided.
SMALL SPACES
For buildings with small spaces where maintenance or other access may be required:
Some small spaces within this building will require access by construction or maintenance workers. The design documentation calls for warning signs and barriers to unauthorised access. These should be maintained throughout the life of the building. Where workers are required to enter small spaces they should be scheduled so that access is for short periods. Manual lifting and other manual activity should be restricted in small spaces.

8. PUBLIC ACCESS
Public access to construction and demolition sites and to areas under maintenance causes risk to workers and public. Warning signs and secure barriers to unauthorised access should be provided. Where electrical installations, excavations, plant or loose materials are present they should be secured when not fully supervised.

9. OPERATIONAL USE OF BUILDING
RESIDENTIAL BUILDINGS
This building has been designed as a residential building. If it, at a later date, it is used or intended to be used as a workplace, the provisions of the Work Health and Safety Act 2011 or subsequent replacement Act should be applied to the new use.

10.OTHER HIGH RISK ACTIVITY
Code All electrical work should be carried out in accordance with of Practice:
Managing Electrical Risks at the Workplace, AS/NZ and all licensing requirements. 3012 All work using Plant should be carried out in accordance with Code of Practice:
Managing Risks of Plant at the Workplace. Code of All work should be carried out in accordance with Practice:
Managing Noise and Preventing Hearing Loss at Work. Due to the history of serious incidents it is recommended that particular care be exercised when undertaking work involving steel construction and concrete placement. All the above applies.

EXCAVATIONS
1.Excavations
The part of the site to be covered by the proposed building or buildings and an area at least 1000mm wide around that part of the site or to boundaries of the site, whichever is the lesser, shall be cleared or graded as indicated on the site works plan.
Top soil shall be cut to a depth sufficient to remove all vegetation. Excavations for all footings shall be in accordance with the Engineer's Recommendations or the BCA requirements.

FOUNDATIONS AND FOOTINGS
1. Underfloor Fill
Underfloor fill shall be in accordance with the BCA.
2. Termite Risk Management
Termite treatment shall be carried out in accordance with the BCA.
3. Vapour Barrier
The vapour barrier installed under slab-on-ground construction shall be 0.2mm nominal thickness, high impact resistance polyethylene film installed in accordance with the BCA.
4. Reinforcement
Reinforcement shall conform and be placed in accordance with the Engineer's Recommendation and the BCA.
Support to all reinforcement shall be used to correctly position and avoid any undue displacement of reinforcement during the concrete pour.
5. Concrete
Structural shall not be less than Grade N20 except otherwise approved by the engineer and in accordance with the BCA.
6. Curing
All concrete slabs shall be cured in accordance with AS 3600.
7. Footings and Slabs on Ground
Concrete slabs and footings shall not be poured until approval to pour concrete is given by the engineer or the *Local Authority*.
8. Sub-Floor Ventilation
Where required, adequate cross ventilation will be provided to the space under suspended ground floor. Construction is to meet the requirements of the BCA. No section of the under floor area wall to be constructed in such manner that will hold pockets of still air.
9. Sub-Floor Access
If required, access will be provided under suspended floors in position where indicated on plan.

EFFLUENT DISPOSAL/DRAINAGE
1. Storm Water Drainage
Stormwater drainage shall be carried out in accordance with the BCA. The Builder will allow for the supplying and laying of stormwater drains where shown on the site plan.

TIMBER FRAMING
1. Generally
All timber framework sizes, spans, spacing, notching, checking and fixing to all floor, wall and roof structure shall comply with the BCA or AS 1684. Alternative structural framing shall be to structural engineer's details and certification.
The work shall be carried out in a proper and trades personal like manner and shall be in accordance with recognised and accepted building practices.
2. Roof Trusses
Where roof truss construction is used, trusses shall be designed in accordance with AS 1720 and fabricated in a properly equipped factory and erected, fixed and braced in accordance with the fabricator's written instructions.
3. Bracing
Bracing units shall be determined and installed in accordance with AS 1684 as appropriate for the design wind velocity for the site. Bracing shall be evenly distributed throughout the building.
4. Flooring
Floor joists will be covered with strip or sheet flooring as shown on plan with particular regard to ground clearance and installation in wet areas as required by the BCA. Thickness of the flooring is to be appropriate for the floor joist spacing.
Strip and sheet flooring shall be installed in accordance with AS 1684.
When listed in Schedule of Works, floors shall be sanded to provide an even surface and shall be left clean throughout.
5. Timber Posts
Posts supporting the carports, verandas and porches shall be timber suitable for external use, or as otherwise specified, supported on glavanised or treated metal post shoes, unless otherwise specified. Posts shall be bolted to all adjoining beams as required by AS 1684 for the wind speed classification assessed for the site.
6. Corrosion Protection
All metal brackets, facing plates and other associated fixings used in structural timber joints and bracing must have appropriate corrosion protection.

STEEL FRAMING
1. Generally
Steel floor, wall or roof framing shall be installed in accordance with the manufacturer's recommendations and the BCA.

ROOFING
All roof cladding is to comply with the relevant structural performance and weathering requirements of the BCA and be installed as per the manufacturer's recommendations.
1.Tiled Roofing
The Builder will cover the roof of the dwelling with approved tiles as selected. The tiles are to be fixed (as required for appropriate design and wind speed) to battens of sixes appropriate to the spacing of rafters/trusses in accordance with the manufacturer's recommendations. The Builder will cover hips and ridges with capping and all necessary accessories including starters and apex caps. Capping and verge tiles are to be well bedded and neatly pointed. Roofing adjacent to valleys should be fixed so as to minimise water penetration as far as practicable. As roof tiles are made of natural products slight variation in colour is acceptable.
2. Metal Roofing
The *Builder* will provide and install a metal roof together with accessories all in accordance with the manufacturer's recommendations.
Except where design prohibits, sheets shall be in single lengths from fascia to ridge. Fixing sheets shall be strictly in accordance with the manufacturer's recommendation as required for the appropriate design and wind speed. Incompatible materials shall not be used for flashings, fasteners or downpipes.
3. Gutters and Downpipes
Gutters and downpipes shall be manufactured and installed in accordance with the BCA. Gutters and downpipes are to be compatible with other materials used.
4. Sarking
Sarking under roof coverings must comply with and be fixed in accordance with manufacturer's recommendations.
5. Sealants
Appropriate sealants shall be used where necessary and in accordance with manufacturer's recommendations.
6. Flashing
Flashings shall comply with, and be installed in accordance with the BCA.

MASONRY
1. Damp Proof Courses
All damp proof courses shall comply with the BCA and Clause 1.0.10. The damp proof membrane shall be visible in the external face of the masonry member in which it is placed and shall not be bridged by any applied coatings, render or the like.
2. Cavity Ventilation
Open vertical joints (weepholes) must be created in the course immediately above any DPC or flashing at centres not exceeding 1.2m and must be in accordance with the BCA.
3. Mortar and Joining
Mortar shall comply with the BCA. Joint tolerances shall be in accordance with AS 3700.
4. Lintels
Lintels used to support brickwork opening in walls must be suitable for the purpose as required by the BCA. The *Builder* will provide one lintel to each wall leaf. The *Builder* will provide corrosion protection in accordance with the BCA Part 3.4.4 as appropriate for the site environment and location of the lintels in the structure.
5. Cleaning
The *Builder* will clean all exposed brickwork with an approved cleaning system. Care should be taken not to damage brickwork or joints and other fittings.

CLADDING AND LININGS
1. External Cladding
Sheet materials or other external cladding shall be fixed in accordance with the manufacturer's recommendations and any applicable special details.
Where required in open verandas, porches and eave soffits, materials indicated on the plans shall be installed.
2.Internal Wall and Ceilings Linings
The *Builder* will provide gypsum plasterboards or other selected materials to walls and ceilings. Plasterboard sheets are to have recessed edges and will be a minimum of 10mm thick. Internal angles in walls from floor to ceiling are to be set. Suitable cornice moulds shall be fixed at the junction of all walls and ceilings or the joint set as required. The lining of wet area and walls shall be constructed in accordance with the BCA. Wet area lining is to be fixed in accordance with the manufacturer's recommendations. The ceiling access hole shall be of similar material to the adjacent ceiling.
3.Waterproofing
All internal wet area and balconies over internal habitable rooms are to be waterproof in accordance with the BCA.

JOINERY
1. General
All joinery work (metal and timber) shall be manufactured and installed according to accepted building practices.
2. Door Frames
External door frames shall be a minimum of 32mm thick solid rebated 12mm deep to receive doors. Internal jamb linings shall be a minimum of 18mm thick fit with 12mm thick door stops. Metal doorframes shall be installed where indicated on drawings in accordance with the manufacturer's recommendations.
3. Doors and Doorsets
All internal and external timber door and door sets shall be installed in accordance with accepted building practices. Unless listed otherwise in the Schedule of Works, doors and door sets shall be manufactured in accordance with AS 2688 and AS 2689.
4. Window and Sliding Doors
Sliding and other timber windows and doors shall be manufactured and installed in accordance with AS 2047.
Sliding and other aluminium windows and the doors shall be installed in accordance with manufacturer's recommendations and AS 2047.
All glazing shall comply with the BCA and any commitments outlined in the relevant BASIX Certificate.
5. Stairs, Balustrades and other Barriers
The *Builder* will provide stairs or ramps to any change in levels, and balustrades or barriers to at least one side of ramps, landings and balconies as per the BCA.

SERVICES
1.Plumbing
All plumbing shall comply with the requirements of the relevant supply authority and AS 3500. The work is to be carried out by a licensed plumber.
Fittings, as listed in the Schedule of Works, shall be supplied and installed to manufacturer's recommendations. Fittings, hot water system and any rainwater harvesting facilities shall be appropriate to satisfy any commitment outlined in the relevant BASIX Certificate.
2.Electrical
The *Builder* will provide all labour and materials necessary for the proper installation of the electricity service by a licensed electrician in accordance with AS/NZS 3000 and the requirements of the relevant supply authority. Unless otherwise specified, the electrical service shall be 240 volt, single phase supply.
3.Gas
All installation (including LPG) shall be carried out in accordance with the rules and requirements of the relevant supply authority.
4.Smoke Detectors
The *Builder* will provide and install smoke alarms manufactured in accordance with AS 3786 AS specified or as indicated on the plans and in accordance with the BCA.
5.Thermal Insulation
Where thermal insulation is used in the building fabric or services, such as air conditioning ducting or hot water systems, it shall be installed in accordance with manufacturer's recommendations to achieve the R-Values required by the BCA or as outlined in the relevant BASIX Certificate.

TILING
1.Materials
Cement mortar and other adhesives shall comply with AS 3958.1 or tile manufacturer's recommendation.
2.Installation
Installation of tiles shall be in accordance with AS 3958.1, manufacturer's recommendations or accepted building practices. Where practicable, spacing between tiles should be even and regular. The *Builder* will provide expansion joints where necessary. All vertical and horizontal joints between walls and fixtures e.g. bench top, bath, etc. and wall/floor junctions to be filled with flexible mould resistant sealant. All joints in the body of tiled surfaces shall be neatly filled with appropriate grout material as specified by the tile manufacturer or accepted building practice. As tiles are made of natural products a slight variation in colour is acceptable.

collinswcollins PTY LTD
Building Designers

PROJECT: PROPOSED DWELLING
STATUS: CONSTRUCTION
LOT No: 80 DP No: 251603
STREET: 845 RIDGE ROAD, COOKS GAP
CLIENT: WHITE
SHEET: 10 OF 10

WORK SAFETY NOTES

SCALE:	1 : 100
SHEET SIZE:	A3
START DATE:	19.12.22
DWG No:	D5489

DRAWING REVISION + NOTES

Date:	Revision:	Issue:	Drawn:
19.12.22	INITIAL ISSUE	A	LN
03.01.23	CLIENT CHG DECK	B	DC

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