



DEVELOPMENT APPLICATION

PDPLANPMTD-2026/063605

PROPOSAL: Classrooms Additions (Educational and Occasional Care)

LOCATION: 7 Golf Links Road, Geilston Bay

RELEVANT PLANNING SCHEME: Tasmanian Planning Scheme - Clarence

ADVERTISING EXPIRY DATE: 11/11/2026

The relevant plans and documents can be inspected at the Council offices, 38 Bligh Street, Rosny Park, during normal office hours until 11/11/2026. In addition to legislative requirements, plans and documents can also be viewed at www.ccc.tas.gov.au during these times.

Any person may make representations about the application to the Chief Executive Officer, by writing to PO Box 96, Rosny Park, 7018 or by electronic mail to clarence@ccc.tas.gov.au. Representations must be received by Council on or before 11/11/2026.

To enable Council to contact you if necessary, would you please also include a day time contact number in any correspondence you may forward.

Any personal information submitted is covered by Council's privacy policy, available at www.ccc.tas.gov.au or at the Council offices.

Clarence City Council



APPLICATION FOR DEVELOPMENT / USE OR SUBDIVISION

The personal information on this form is required by Council for the development of land under the Land Use Planning and Approvals Act 1993. We will only use your personal information for this and other related purposes. If this information is not provided, we may not be able to deal with this matter. You may access and/or amend your personal information at any time. How we use this information is explained in our **Privacy Policy**, which is available at www.ccc.tas.gov.au or at Council offices.

Proposal:

New Classrooms to existing school

Location:

7 Golf Links Rd
Address

Geilston Bay
Suburb/Town

Postcode ...7015

Current
Owners/s:

Applicant:

Personal Information Removed

Tax Invoice for
application fees to
be in the name of
(if different from
applicant)

Is the property on the Tasmanian Heritage Register?

Yes

☐

No

☒

(if yes, we recommend you discuss your proposal with Heritage Tasmania prior to lodgement as exemptions may apply which may save you time on your proposal)

If you had pre-application discussions with a Council Officer, please give their name

none

Current Use of Site:

School

Does the proposal involve land administered or owned by the Crown or Council?

Yes

No

☒

Declaration:

- *I have read the Certificate of Title and Schedule of Easements for the land and am satisfied that this application is not prevented by any restrictions, easements or covenants.*
- *I authorise the provision of a copy of any documents relating to this application to any person for the purposes of assessment or public consultation. I agree to arrange for the permission of the copyright owner of any part of this application to be obtained. I have arranged permission for Council's representatives to enter the land to assess this application*
- *I declare that, in accordance with Section 52 of the Land Use Planning and Approvals Act 1993, that I have notified the owner of the intention to make this application. Where the subject property is owned or controlled by Council or the Crown, their signed consent is attached. Where the application is submitted under Section 43A, the owner's consent is attached.*
- *I declare that the information in this declaration is true and correct.*

Acknowledgement:

- *I acknowledge that the documentation submitted in support of my application will become a public record held by Council and may be reproduced by Council in both electronic and hard copy format in order to facilitate the assessment process; for display purposes during public consultation; and to fulfil its statutory obligations. I further acknowledge that following determination of my application, Council will store documentation relating to my application in electronic format only.*

Applicant's
Signature:

Personal Information Removed

**PLEASE REFER TO THE DEVELOPMENT/USE AND SUBDIVISION CHECKLIST
ON THE FOLLOWING PAGES TO DETERMINE WHAT DOCUMENTATION MUST
BE SUBMITTED WITH YOUR APPLICATION.**

SEARCH OF TORRENS TITLE

VOLUME 5342	FOLIO 1
EDITION 5	DATE OF ISSUE 13-Sept-2025

SEARCH DATE : 02-Sept-2026

SEARCH TIME : 10.22 am

DESCRIPTION OF LAND

City of CLARENCE

Lot 1 on Sealed Plan [5342](#)

Derivation : Part of 2,560 Acres Gtd. to T.G. Gregson.

Prior CT [3391/61](#)SCHEDULE 1

[M751371](#) TRANSFER to CHRISTIAN EDUCATION MINISTRIES LTD
Registered 01-Aug-2019 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

SP [5342](#) EASEMENTS in Schedule of EasementsSP [5342](#) FENCING PROVISION in Schedule of Easements

NOTIFICATION Portion of the above right of drainage over the
lands marked drainage easement 3.00 wide has been
extinguished in consequence of the acquisition of
Portion of the servient land by notice No. 485199
Registered 10-June-1975 at noon

NOTICE: This Folio is affected as to amended
easements/covenants pursuant to Request to Amend No
\$B396917 made under Section 481 of the Local
Government Act 1962. Search Sealed Plan No [5342](#) .

[N270235](#) MORTGAGE to Commonwealth Bank of Australia
Registered 13-Sept-2025 at noon

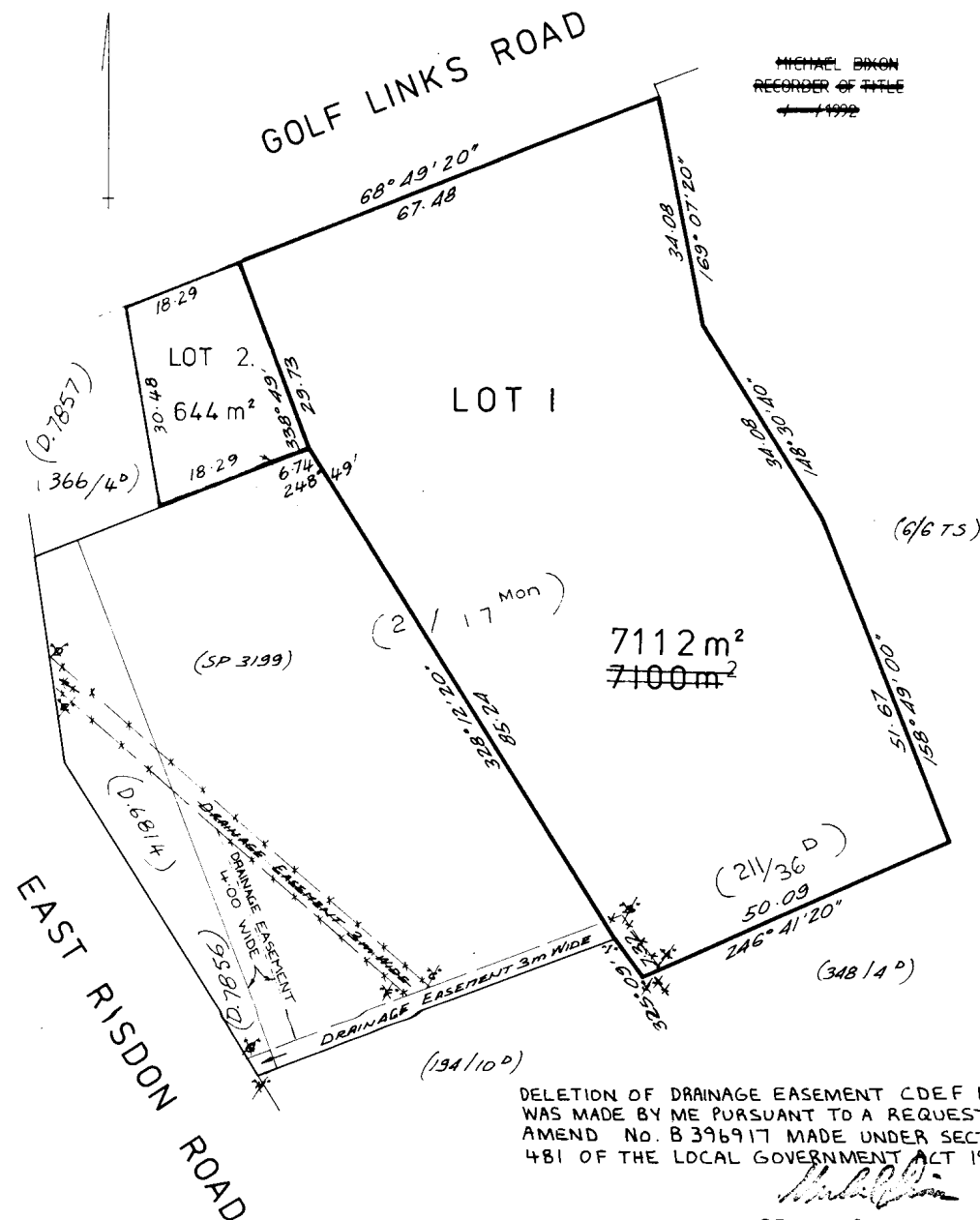
UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

Owner: <i>M. C. Shelley</i>	PLAN OF SURVEY by Surveyor <i>C. L. Andrews</i> of land situated in the	Registered Number: S.P.5342
Title Reference: <i>3121/7 C.T.</i> <i>2880/55 C.T.</i>	TOWN OF LINDISFARNE	Effective from: <i>17-4-74</i>
Grantee: <i>Part of 2560 ac</i> <i>Granted to Thomas George Gregson</i>	Scale <i>1:750</i>	P/I <i>M. Hutchinson</i> Recorder of titles

LENGTHS ARE IN METRES
LOT 2. COMPILED FROM
C.T. 3121-7 & THIS PLAN

PURSUANT TO REQUEST No. B396917 UNDER
SECTION 481 OF THE LOCAL GOVERNMENT ACT 1992
IS AFFECTED AS TO AMENDED EASEMENT SEARCH
SCHEDULE OF EASEMENTS FOR SEALED PLAN No. 5342



MICHAEL BIXON
RECORDER OF TITLE
1992

DELETION OF DRAINAGE EASEMENT CDEF HEREON
WAS MADE BY ME PURSUANT TO A REQUEST TO
AMEND No. B396917 MADE UNDER SECTION
481 OF THE LOCAL GOVERNMENT ACT 1962

M. Hutchinson
RECORDER OF TITLES
23/3/1992



SCHEDULE OF EASEMENTS

PLAN NO.

S.P.5342

NOTE:—The Town Clerk or Council Clerk must sign the certificate on the back page for the purpose of identification.

The Schedule must be signed by the owners and mortgagees of the land affected. Signatures should be attested.

FENCING PROVISION

M In respect of the Lots ~~1~~ shown hereon the ~~registered proprietor~~ Vendor
MARGARET COUPE SHELLEY shall not be required to fence.

RIGHTS OF DRAINAGE

M 1. The Lot 1 is TOGETHER WITH a Right of Drainage over the Drainage Easement shown hereon ~~passing through the balance of the land in the said Certificate of Title.~~
M 2. ~~The Lot 1 is subject to a right of drainage over the Drainage Easement passing through that Lot as appurtenant to the land comprised in Diagram 348/4.~~

SIGNED by MARGARET COUPE SHELLEY

the Registered Proprietor of the land shown on the Plan in the presence of :

Jan Saw
Law Clerk
Moonah

M Margaret Shelley

BANK OF NEW SOUTH WALES
BY ITS ATTORNEY

[Signature]

CHIEF MANAGER

Mortgagee under Memorandum of Mortgage No.A. 350740

Signed by IAN JEFFREY BEATON acting under Power of Attorney No. 18948 who hereby declares he has received no notice of revocation of the said Power.
In the presence of .

[Signature]
A Justice of the Peace

SIGNED by KENNETH FRANCIS LOWRIE

in the presence of :

Jan Saw
Law Clerk
Moonah

K.F. Lowrie
Mortgagee under Memorandum of Mortgage No.A.350741.

CORRECT for the purposes of "The Real Property Act 1862, as amended.

K.F. LOWRIE

Per: *[Signature]*

Solicitor for the Applicant

The right of drainage above was amended to read "Together with a Right of Drainage over the Drainage Easement shown hereon" pursuant to a Request to Amend No. B.396917 made under Section 481 of The Local Government Act 1962.

[Signature]
RECORDER OF TITLES

23-3-92

Certified correct for the purposes of the Real Property Act 1862, as amended.

K.F. LOWRIE

Per:

Subdivider/Solicitor for the Subdivider

This is the schedule of easements attached to the plan of

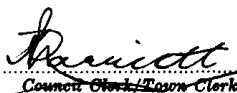
.....comprising part of the land in

Certificate of title Volume 2880 Folio 56

(Insert Title Reference)

Sealed by Clarence Municipal Council, Bellerive on 6th FEBRUARY 1974

80740


Council Clerk/Town Clerk

PINNACLE

Type of construction required C2D2 NCC Vol. I 2022		
Rise in storeys	Class of building 2, 3, 9	Class of building 5, 6, 7, 8
4 or more 3 2 1	A A B C	A B C C

Changes List			
Issue	Description of change	Date	Designer
Ch - 01	Removed Signage	08.09.26	JRN

Note: The images provided are artistic representations only and should not be used as references for final colours, finishes, or external/internal features.

7 Golf Links Rd, Geilston Bay

Owner(s) or Clients	Christian Education Ministries Ltd	Title Reference	5342/1
Building Classification	9b	Zoning	General Residential
Construction Type	B	Land Size	7095m²
No. of Storeys	1	Design Wind Speed	N2
Designer	Jason Nickerson CC6073Y	Soil Classification	M
Total Floor Area (Combined)	1332.35m² Deck 63.71m²	Climate Zone	7
Alpine Area	N/A	Corrosion Environment	Low
Other Hazards	Road or railway attenuation area,	Bushfire Attack Level (BAL)	Low

(eg. High wind, earthquake, flooding, landslip, dispersive soils, sand dunes, mine subsidence, landfill, snow & ice, or other relevant factors)

Airport obstacle limitation area, Flood-prone areas

ID	Sheet Name	Issue
A.01	Existing Site Plan	DA - 02
A.02	Site Plan	DA - 02
A.03	Site Plan (Enlarged)	DA - 02
A.04	Floor Plan - Lower	DA - 02
A.05	Floor Plan - Upper	DA - 02
A.06	Elevations	DA - 02
A.07	Elevations	DA - 02
A.08	Roof Plan	DA - 02
A.09	Door & Window Schedule	DA - 02



Issue	Date	Designer
NOTE: Refer to cover page for further details on changes.		

Legend

- Electrical Connection
- Electrical Turret
- Sewer Connection
- Stormwater Connection
- Telstra Connection
- Telstra Pit
- Water Meter
- Water Stop Valve
- Fire Hydrant
- Solar Bollard Light
- Spotlight with sensor

Survey Notes from Surveyor

"THIS PLAN AND ASSOCIATED DIGITAL MODEL IS PREPARED FOR PINNACLE DRAFTING FROM A COMBINATION OF FIELD SURVEY AND EXISTING RECORDS FOR THE PURPOSE OF DESIGNING NEW CONSTRUCTIONS ON THE LAND AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.

THE TITLE BOUNDARIES AS SHOWN ON THIS PLAN WERE NOT MARKED AT THE TIME OF THE SURVEY AND HAVE BEEN DETERMINED BY PLAN DIMENSIONS ONLY AND NOT BY FIELD SURVEY. NO MEASUREMENTS OR OFFSETS ARE TO BE DERIVED BETWEEN THE FEATURES ON THIS PLAN AND THE BOUNDARY LAYER. THE RELATIONSHIP BETWEEN THE FEATURES IN THIS MODEL AND THE BOUNDARY LAYERS CANNOT BE USED FOR ANY SET OUT PURPOSES OR TO CONFIRM THE POSITION OF THE TITLE BOUNDARIES ON SITE. DUE TO THE NATURE OF THE TITLE BOUNDARY INFORMATION, IF ANY STRUCTURES ARE DESIGNED ON OR NEAR A BOUNDARY WE WOULD RECOMMEND A RE-MARK SURVEY BE COMPLETED AND LODGED WITH THE LAND TITLES OFFICE TO SUPPORT THE BOUNDARY DEFINITION.

SERVICES SHOWN HAVE BEEN LOCATED WHERE VISIBLE BY FIELD SURVEY. SERVICES DENOTED AS BEING "PER BYDA ONLY" ARE APPROXIMATE AND FOR ILLUSTRATIVE PURPOSES ONLY. PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON THE SITE, THE RELEVANT AUTHORITY SHOULD BE CONTACTED FOR POSSIBLE LOCATION OF FURTHER UNDERGROUND SERVICES AND DETAILED LOCATIONS OF ALL SERVICES.

IF SUBSEQUENT DESIGN IS INTENDED FOR CONSTRUCTION SETOUT, FUTURE SURVEYING SETOUT COSTS ARE INCREASED IF THE DIGITAL DATA PROVIDED IS ROTATED, SCALED OR MOVED.

THIS NOTE FORMS AN INTEGRAL PART OF THE PLAN/DATA. ANY REPRODUCTION OF THIS PLAN/ MODEL WITHOUT THIS NOTE ATTACHED WILL RENDER THE INFORMATION SHOWN INVALID.

Building Area

Wood Working Building	165.60
Walkway & Ramp	51.32
Existing Classroom Gross Area:	662.89
Existing Science Building Gross Area:	126.00
Existing Deck Area:	126.05
Existing Building Gross Area:	36.90
Existing Food Tech Gross Area:	151.20
	1,319.96 m²

Site Areas

Site Area	7095 m²
Building Footprint	1332.35 m²
Driveway Area	1646.79 m²
Total Impervious Area	42%

PINNACLE

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Site Plan

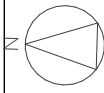
Revision: DA - 02
Approved by: JRD

Scale: 1:200 @ A2
Pg. No: A.02

Proposal: Woodtech Building
Client: Christian Education Ministries Ltd
Address: 7 Golf Links Rd, Geilston Bay

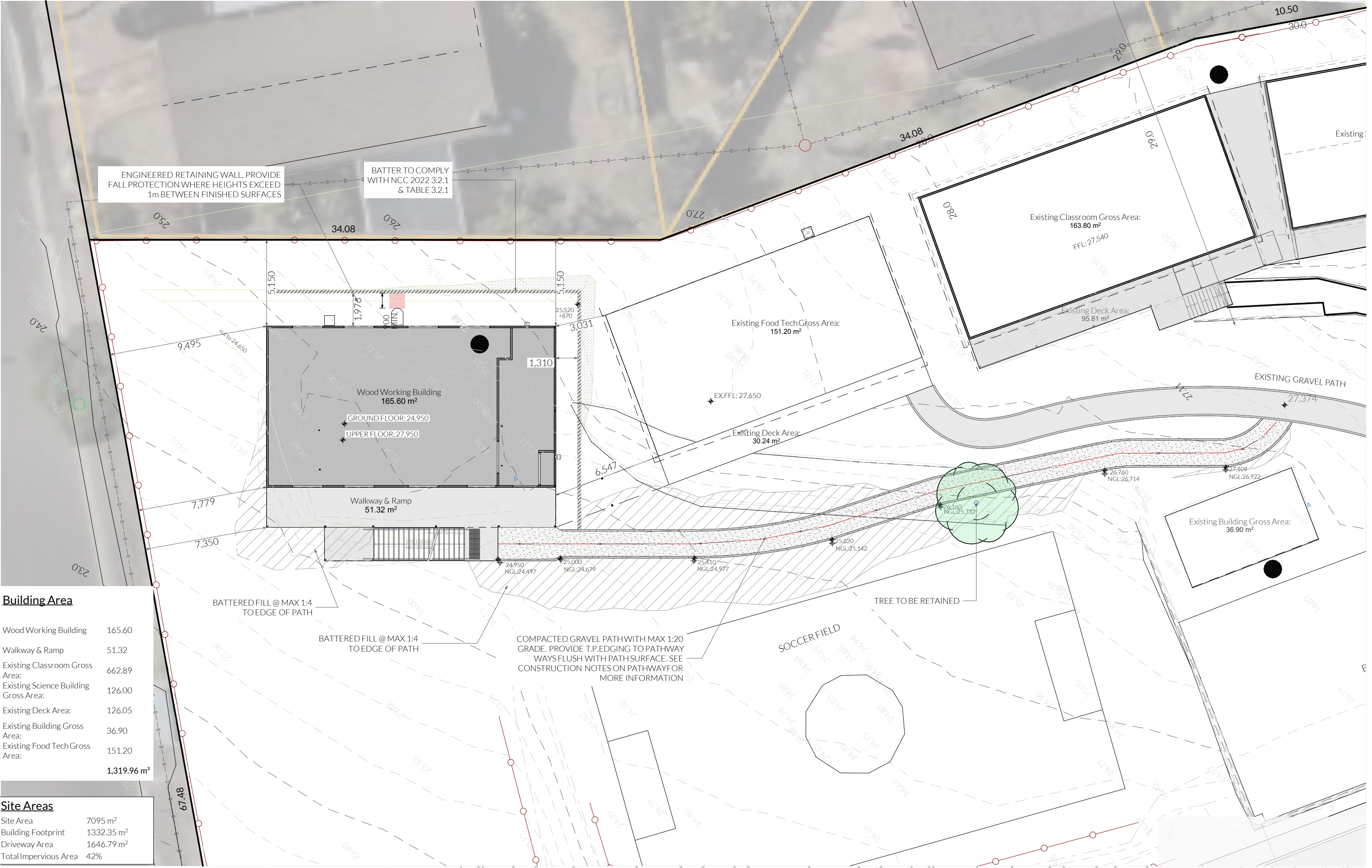
Date: 03.08.26
Drawn by: JRN
Job No: 57-2026
Engineer: CES
Building Surveyor: LTBS

Issue	Date	Designer
NOTE: Refer to cover page for further details on changes.		



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LEGEND

- Access Panel
- Articulation Joint
- TGSi
- Exit Sign
- Fire Hose Reel
- Fire Extinguisher
- Batts to wall
- Sound insulation

Doorway identification (Clause 10.1) - AS1428.1:2021

- All doorways shall have a minimum luminance contrast of 30% provided between-
- (a) door leaf and door jamb; or
 - (b) door leaf and adjacent wall; or
 - (c) architrave and wall; or
 - (d) door leaf and architrave; or
 - (e) door jamb and adjacent wall

The minimum width of the area of luminance shall be 50mm.

Explanation; where it is necessary to achieve sufficient contrast between building elements, this can usually be achieved by using very dark or very light materials.

Continuous accessible paths of travel (Clause 3.1) - AS1428.1:2021

- Unless otherwise specified (such as at doors, curved ramps and similar), the minimum unobstructed width of a continuous accessible path of travel shall be 1000 mm and the following shall not intrude into the minimum unobstructed width of a continuous accessible path of travel:
- (a) Fixtures and fittings such as lights, awnings, windows that, when open, intrude into the circulation space, telephones, skirtings and similar objects.
 - (b) Essential fixtures and fittings such as fire hose reels, fire extinguishers and switchboards.
 - (c) Door handles less than 900 mm above the finished floor level.

Tactile Ground Surface Indicators(TGSIs)

Tactile ground surface indicators (TGSIs) to warn people of hazards shall be in accordance with AS/NZS 1428.4.1. Locations of TGSIs are indicated as per plans. Refer to Legend.

Note: Stair Construction

- Stairs must comply with-
- clause 8.1 of AS 1428.1:2021, including the notes; and
 - clause 8.2 of AS 1428.1:2021
- Stair Risers: Min/Max = 115mm/190mm
Public Stair Goings: Min/Max = 250mm/355mm
Quantity Calculation Required ((2xRiser)+Goings):
Min/Max = 550mm/700mm
Minimum of 2 risers and maximum of 18 in a flight;
Not permit a 125mm sphere to pass through between treads;
Solid construction (i.e. not perforated) if more than 10m high or more than 3 storeys;
No winders (except internally of a residential apartment);

Artificial Lighting

- Artificial lighting must be provided -
- (a) in required stairways, passageways, and ramps; and
 - (b) if natural light of a standard equivalent to that required by F6D3 is not available, and the periods of occupation or use of the room or space will create undue hazard to occupants seeking egress in an emergency, in-(iii) Class 3, 5, 6, 7, 8 and 9 buildings - to all rooms that are frequently occupied, all spaces required to be accessible, all corridors, lobbies, internal stairways, other circulation spaces and paths of egress.

The artificial lighting system must comply with AS/NZS 1680.0.

If required onsite, the builder may work within the tolerances of the above as specified within the NCC 2022 Vol I. Builder to contact Pinnacle before undertaking works.

Building Area

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	1,319.96 m²

Internal Room Areas

R101	Wood Work	128.72
R102	Store	27.78
R103	Cleaners	1.66

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Floor Plan - Lower

Revision:
Approved by:

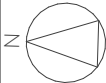
DA - 02
JRD

Scale:
1:100 @ A3
Pg. No:
A.04

Proposal: Woodtech Building
Client: Christian Education Ministries Ltd
Address: 7 Golf Links Rd, Geilston Bay

Date: 03.08.26
Drawn by: JRN
Job No: 57-2026
Engineer: CES
Building Surveyor: LTBS

Issue	Date	Designer
NOTE: Refer to cover page for further details on changes.		



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NOT FOR CONSTRUCTION

LEGEND

- 

Access Panel
- 

Articulation Joint
- 

TGSi
- 

Exit Sign
- 

Fire Hose Reel
- 

Fire Extinguisher
- 

Batts to wall
- 

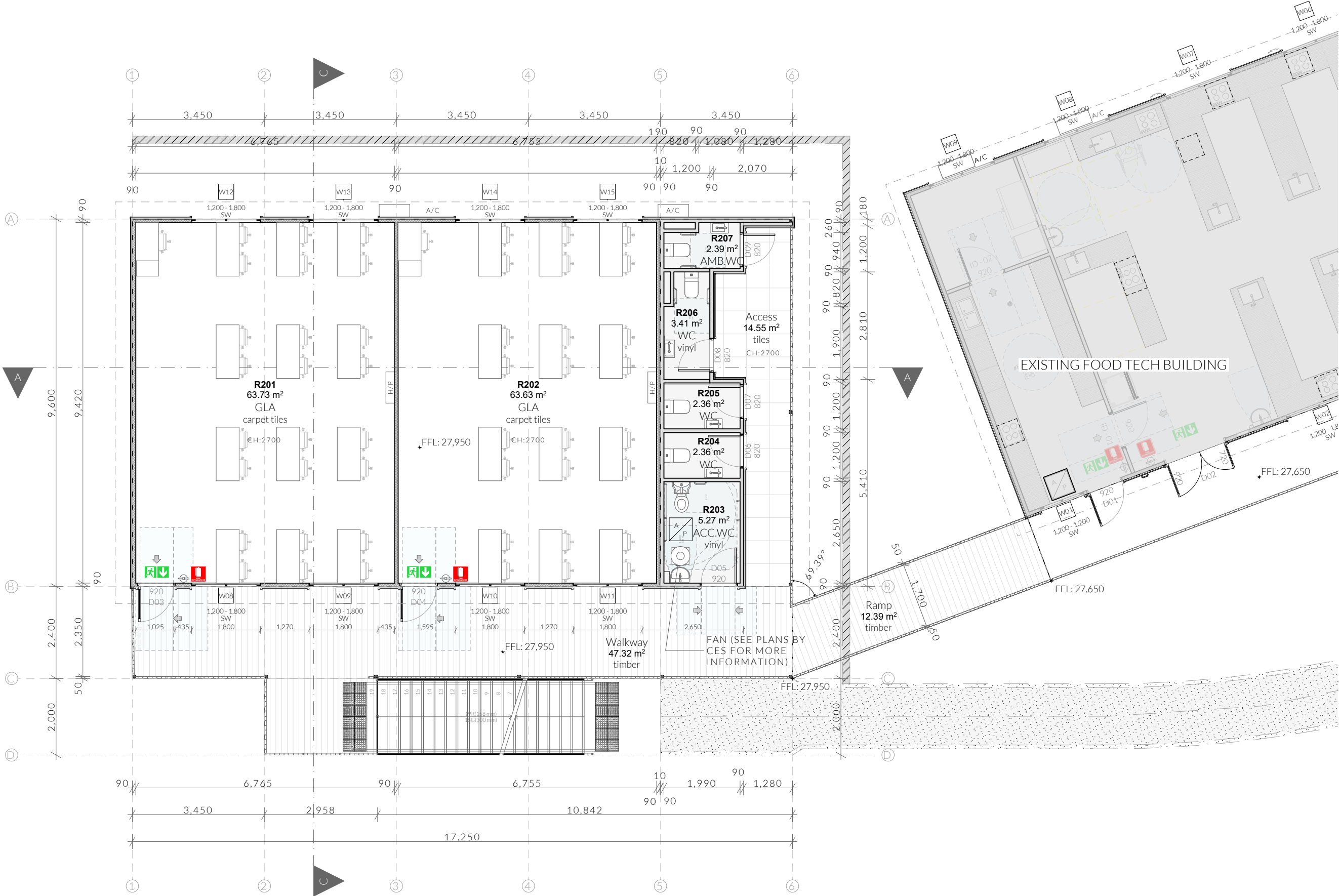
Sound insulation

Building Area

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	1,319.96 m²

Floor Areas - Upper

R201	GLA	63.73
R202	GLA	63.63
R203	ACC.WC	5.27
R204	WC	2.36
R205	WC	2.36
R206	WC	3.41
R207	AMB.WC	2.39



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Floor Plan - Upper

Revision: DA - 02
Approved by: JRD

Scale: 1:100 @ A3
Pg. No: A.05

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East Elevation

1:100



South Elevation

1:100

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Elevations

Revision:
Approved by:

DA - 02
JRD

Scale:
1:100 @ A3
Pg. No:
A.06

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Address: 7 Golf Links Rd, Geilston Bay

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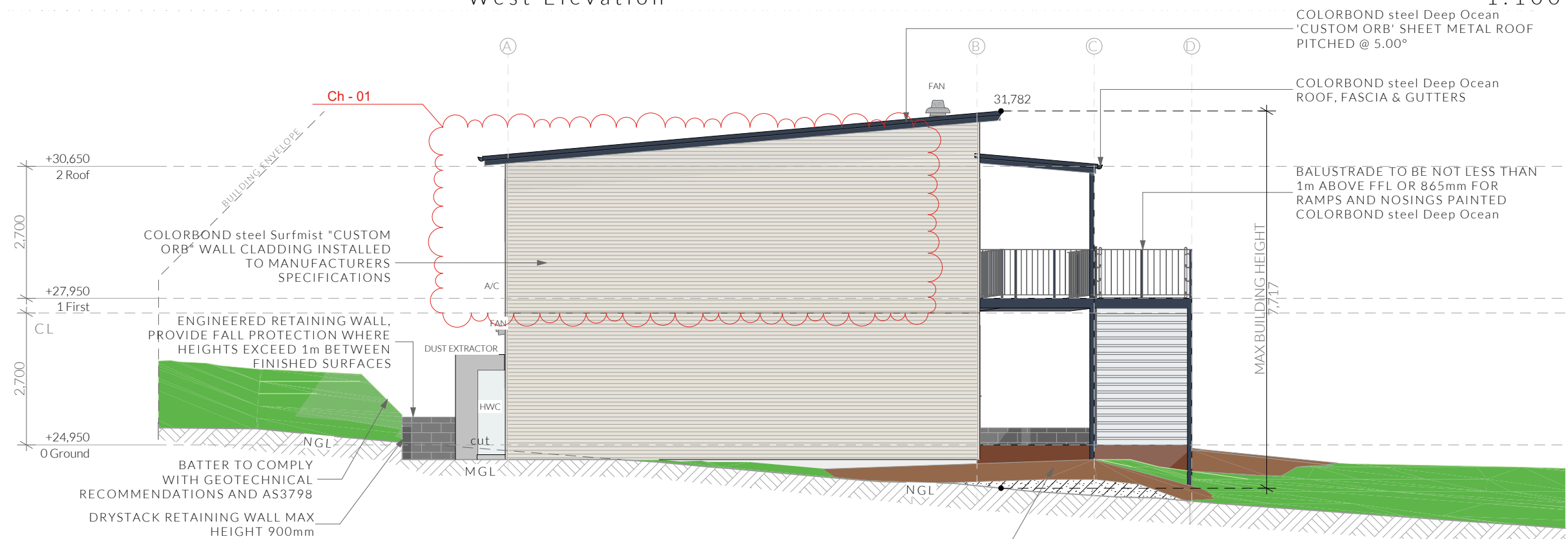
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West Elevation

1:100



North Elevation

1:100

NOT FOR CONSTRUCTION

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Elevations

Revision:
Approved by:

DA - 02
JRD

Scale:
1:100 @ A3
Pg. No:
A.07

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Address: 7 Golf Links Rd, Geilston Bay

Date: 03.08.26
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Building Surveyor: LTBS

Issue	Date	Designer
Ch - 01	08.09.26	JRN
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Stormwater Notes

All gutters, downpipes and rain heads to be designed and installed in compliance with AS3500.3.

Downpipes shown are indicative only, builder to refer to Civil/Hydraulic plans for exact location.

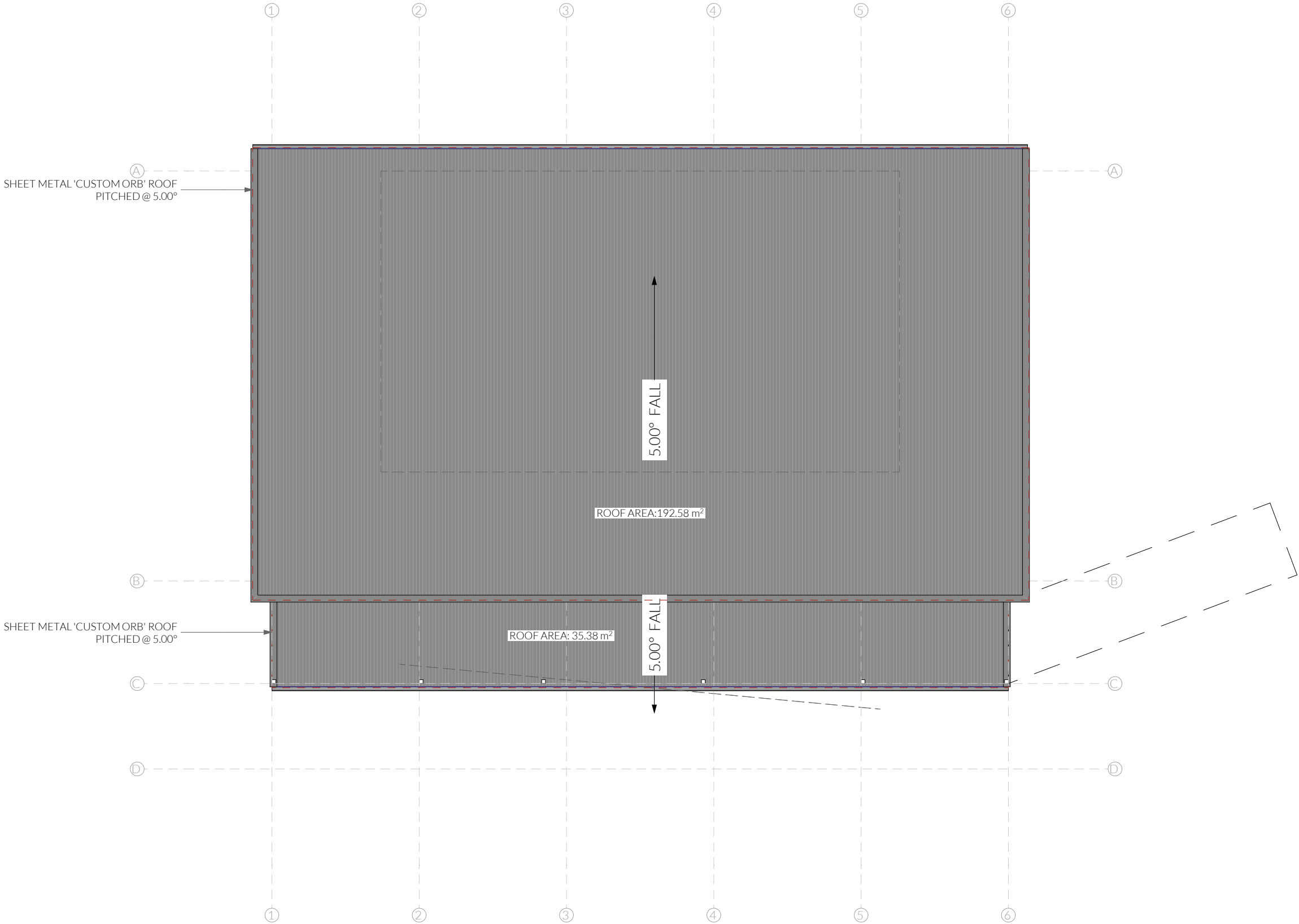
Roofing Cladding

All metal roof cladding, including flashing, capping, and fixings, must be designed and installed in strict accordance with:

- AS 1562.1 - Design and installation of sheet roof and wall cladding: Metal.
- AS 2179.1 - Specifications and performance – Flashing and cappings – Manufactured flashings and cappings.
- AS 3566.1 – Self-drilling screws for the building and construction industries – General requirements and mechanical properties.
- Relevant provisions of the National Construction Code (NCC) 2022.

Material Selection: Materials for roof cladding, flashings, cappings, and fixings must be suitable for the intended application, compliant with the aforementioned standards, and consider local environmental factors and corrosive environment classification to ensure performance and durability.

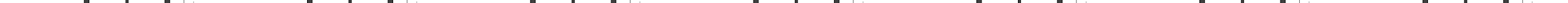
Installation: Adhere to manufacturer's recommendations and methods prescribed in the standards, ensuring waterproofing, wind resistance, and structural integrity. This encompasses correct fixing methods, support spacings, sealing, flashing techniques, and the use of appropriate cappings



External Door/Window Schedule

ID	D01	D02	D03	D04	D05	D06	D07
External View							
Sill Height	0	0	0	0	0	0	0
Notes							

ID	D08	D09	W01	W02	W03	W04	W05
External View							
Sill Height	0	0	1,200	1,200	1,200	1,200	1,200
Notes							

ID	W06	W07	W08	W09	W10	W11	W12
External View							
FFL							
Sill Height	1,200	1,200	1,200	1,200	1,200	1,200	1,200
Notes							

ID	W13	W14	W15
External View			
Sill Height	1,200	1,200	1,200
Notes	NOT		

Glazing

- All glazing installations must comply with the requirements stipulated in NCC Vol 1 2022.
- Glazing materials and their installation must be in accordance with AS 1288-2006 'Glass in Buildings – Selection and Installation' and any other relevant Australian standards.
- Safety glazing, where required as per NCC directives, must adhere to the specifications detailed in AS 2208 'Safety Glazing Materials in Buildings'.
- Glazing in Class 2-9 buildings must meet the performance requirements set out in NCC Vol 1 2022, ensuring safety, energy efficiency, and other relevant parameters.
- All full height frameless glass or sidelights that could be mistaken for an opening must be provided with visual manifestations not less than 75mm thick band and installed at a height between 900-1000mm AFFL.

Any deviations from the mentioned standards or requirements must be pre-approved by the designer and/or building surveyor and comply with the intent of the NCC.

Glazing - Double Glazed (clear)

All windows & doors to be glazed with the minimum following values:

Window Type	U-Value	SHGC
Awning	4.4	0.58
Fixed	3.6	0.70
Sliding	4.1	0.62
Sliding Doors	3.6	0.66
Hinged Doors	4.0	0.55
Bi-fold Doors	4.0	0.54

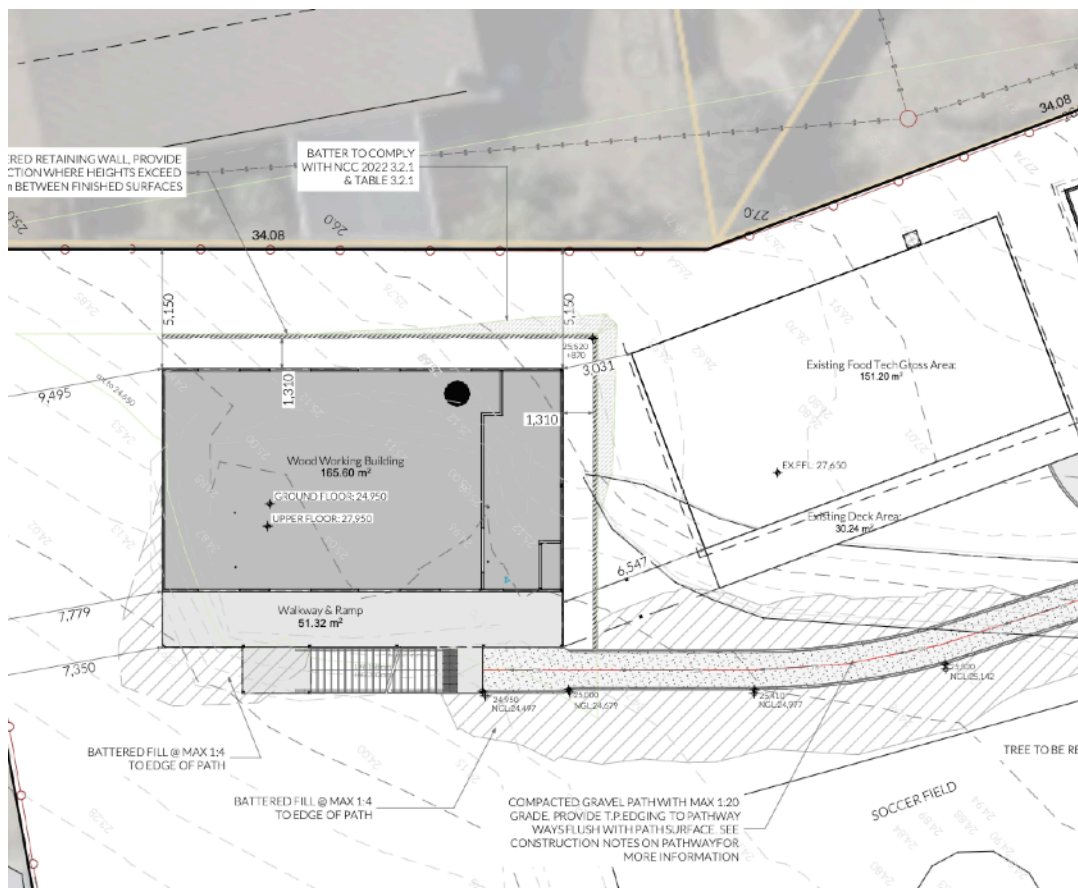
Values based on products from Clark Windows. Where Argon Gas is specified the U-Value is reduced by 0.1 across all products.

NOT FOR CONSTRUCTION

PINNACLE PINNACLE DRAFTING & DESIGN 7/3 Abernant Way, Cambridge 7170 03 6248 4218 admin@pinnacledrafting.com.au www.pinnacledrafting.com.au Licence: CC6073Y	Door & Window Schedule		Scale: 1:1 @ A3	Proposal: Woodtech Building	Date: 03.08.26	<table><thead><tr><th>Issue</th><th>Date</th><th>Designer</th></tr></thead><tbody><tr><td colspan="3">NOTE: Refer to cover page for further details on changes.</td></tr></tbody></table>	Issue	Date	Designer	NOTE: Refer to cover page for further details on changes.			These drawings are the property of Pinnacle Drafting & Design Pty Ltd, reproduction in whole or part is strictly forbidden without written consent. © 2026. These drawings are to be read in conjunction with all drawings and documentation by Engineers, Surveyors and any other consultants referred to within this drawing set as well as any Certificate of Likely Compliance and/or permit documentation. DO NOT SCALE FROM DRAWINGS; All Contractors are to verify dimensions on site before commencing any order, work or requesting producing shop drawings. ANY AND ALL DISCREPANCIES DISCOVERED BY OUTSIDE PARTIES ARE TO BE BROUGHT TO THE ATTENTION OF PINNACLE DRAFTING & DESIGN PTY LTD AS SOON AS PRACTICABLE. This document must be printed in colour. Pinnacle Drafting takes no responsibility for any errors, issues, or omissions caused by contractors and builders not following colour-printed plans.  BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA
	Issue	Date	Designer										
	NOTE: Refer to cover page for further details on changes.												
			Pg. No: A.09	Client: Christian Education Ministries Ltd	Drawn by: JRN								
	Revision: DA - 02			Address: 7 Golf Links Rd, Geilston Bay	Job No: 57-2026								
Approved by: JRD				Engineer: CES									
				Building Surveyor: LTBS									

Australian Christian College

Noise Impact Assessment



Executive Summary

The Australian Christian College proposes a new building at 7 Golf Links Road, Geilston Bay, comprising a ground floor woodwork room and two first-floor General Learning Areas (GLAs). As the proposal is located in close proximity to existing residential dwellings and includes woodworking equipment, a dust extraction system and air conditioning units, NVC has been engaged to undertake a Noise Impact Assessment to assess potential operational noise emissions against the relevant provisions of the Tasmanian Planning Scheme.

Unattended noise measurements were conducted between the 7th and 14th of August 2026 to quantify the existing acoustic environment surrounding the site. The measurements identified road traffic noise from the East Derwent Highway as a key contributor to the existing acoustic environment.

The Tasmanian Planning Scheme, Environment Protection Policy (Noise) 2009 and Environmental Management and Pollution Control (Noise) Regulations 2026 have been considered in establishing appropriate noise assessment criteria, comprising 45 dBA for fixed mechanical plant and 50 dBA $L_{eq,16hr}$ for noise emissions from the proposed building.

Software noise modelling indicates that noise emissions from the proposed dust extractor are predicted to exceed the adopted criteria at the nearest noise-sensitive premises without mitigation. Accordingly, three potential mitigation options have been identified, comprising enclosure of the dust extractor in its proposed location, selection of a lower-noise extractor, or relocation of the dust extractor to the southern side of the building. The mitigation options and associated design requirements are detailed in Section 6 of this report.

Subject to implementation of one of the recommended mitigation options and the general recommendations, noise emissions from the proposed development are predicted to comply with the adopted project criteria and are not expected to result in an unreasonable loss of amenity at surrounding sensitive uses. The proposal therefore demonstrates compliance with Clauses 8.3.1-A1, 8.3.1-P4 and 8.5.1-P6 of the Tasmanian Planning Scheme as they relate to noise.

Australian Christian College Noise Impact Assessment

Prepared for:
TAS CITY BUILDING
20 Maxwells Road
Cambridge TAS 7018
Attention: Max Williamson

Prepared by:
NVC
1/95 Elizabeth Street
Hobart TAS 7000
(03) 6145 7700
jack@nvc.com.au

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1. INTRODUCTION

The Australian Christian College is proposing the construction of a new building at 7 Golf Links Road, Geilston Bay, comprising a ground floor woodwork room and two first-floor General Learning Areas (GLAs). The proposal includes noise emissions from woodworking equipment, dust extraction equipment and general mechanical plant. The site is located in close proximity to existing residential dwellings, and thus the proponent requires a Noise Impact Assessment to assess potential operational noise emissions against the Tasmanian Planning Scheme. NVC has been engaged to conduct such a Noise Impact Assessment, the methodology and results of which are summarised in this report, completed by NVC in October 2026.

1.1. Scope

NVC has been engaged by Tas City Building to carry out a Noise Impact Assessment, assessing proposed noise emissions against the Tasmanian Planning Scheme and provision of recommendations as required. The scope of work comprises unattended noise measurements to quantify the existing acoustic environment and software noise modelling of expected noise emissions from the proposed building.

Noise intrusion into the proposed building or existing Australian Christian College buildings is beyond the scope of this Noise Impact Assessment.

2. BACKGROUND

2.1. Site and Surroundings

The site is located at 7 Golf Links Road, Geilston Bay, and forms part of the existing Australian Christian College (ACC) campus. The proposed development comprises a new building containing a ground floor woodwork room and two first-floor General Learning Areas (GLAs).

The site is located within an established residential environment, with the worst-affected noise-sensitive premises comprising residential dwellings directly to the east of the proposed building. The site and surrounding residential properties are zoned General Residential under the Tasmanian Planning Scheme.

The East Derwent Highway is located directly to the west of the site and represents a major road traffic noise source in the surrounding area, with a major controlled intersection nearby. Golf Links Road is located directly to the north of the proposed building and also contributes to the existing acoustic environment. The surrounding area otherwise consists of the existing ACC campus and residential dwellings.

The surrounding terrain slopes upwards towards the south-east, with a significant level change across the eastern portion of the college site. This results in the proposed building being elevated relative to residential dwellings to the west. Existing residential boundary fences along the eastern site boundary were observed to be approximately 2.1 m tall.

Figure 2.1, below, presents an overview of the proposed site and surrounding area, with the site denoted by the solid white outline, and the proposed building footprint shown in blue.



FIGURE 2.1: SITE AND SURROUNDING AREA

2.2. Proposed Development

The proposed woodwork room is expected to contain typical woodworking equipment, including fixed and portable power tools, dust extraction equipment and air conditioning equipment. The building is also proposed to accommodate two GLAs directly above the woodwork room.

Based on the provided drawings¹, the building is proposed to comprise external walls of Custom Orb cladding on timber stud framing with insulation and an internal plasterboard lining. Windows are specified as double glazing and located on the eastern and western facades. All access to the woodwork room is via the western facade, with no doors proposed on the northern, eastern or southern facades.

Figure 2.2, below, shows the proposed building location.

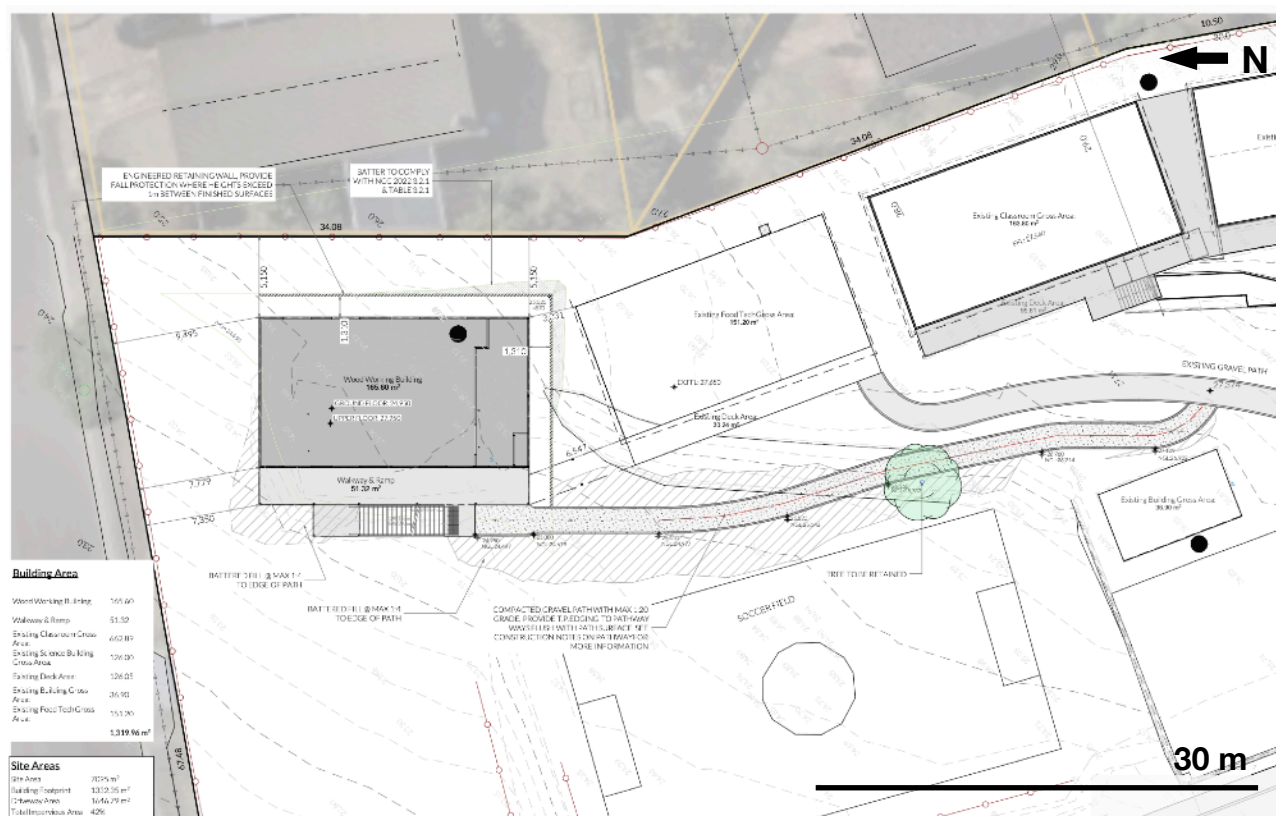


FIGURE 2.2: PROPOSED SITE PLAN

The dust extractor and air conditioning units are proposed to be located on the eastern side of the building.

NVC has been advised that the woodwork room and associated mechanical plant will operate during school hours only, between 8AM and 4PM, Monday to Friday.

2.3. Key Noise Sources

Based on information provided by the proponent, the key noise sources associated with the proposal are as follows:

- Mechanical plant equipment, specifically the dust extractor and air conditioning equipment.
- Woodwork equipment within the proposed building, primarily comprising a bandsaw, spindle sander, disc sander and a mitre saw.

¹ '7 Golf Links Rd, Geilston Bay DA-01', Pinnacle Drafting, 03/08/2026

2.4. Noise-Sensitive Premises

The key noise-sensitive premises (NSPs) surrounding site are summarised in Table 2.1, below, with Figure 2.3 showing their locations in relation to site and the proposed building.

TABLE 2.1: NEARBY NOISE-SENSITIVE PREMISES

Location	Address	Distance to Proposed Building	Description
1	11 Golf Links Road	9 m	Located directly to the east of site sharing a boundary. Residential dwelling is approximately 9 m from the proposed building.
2	6 Golf Links Road	40 m	Located directly to the north of site with clear line of sight to the proposed building.
3	276 East Derwent Highway	70 m	Located between site and the East Derwent Highway. 13 m from the site boundary but approximately 70 m from the proposed building.



FIGURE 2.3: KEY NOISE-SENSITIVE PREMISES

It is noted that noise-sensitive premises located to the south of site are substantially screened from the proposed building by existing buildings on site, and thus are substantially less affected by noise emissions from the proposed development.

3. ASSESSMENT CRITERIA

3.1. Tasmanian Planning Scheme

Clauses 8.3.1 and 8.5.1 of the Tasmanian Planning Scheme (the Scheme) contain provisions relating to Discretionary uses and non-residential buildings within a General Residential zone, respectively. Acceptable Solution (A1) and Performance Criterion (P4) of Clause 8.3.1, and Acceptable Solution (A6) and Performance Criterion (P6) of Clause 8.5.1, are relevant to the proposed development and are reproduced below.

8.3.1 Discretionary uses

Objective:	That Discretionary uses do not cause an unreasonable loss of amenity to adjacent sensitive uses.	
Acceptable Solutions		Performance Criteria
A1 Hours of operation of a use listed as Discretionary, excluding Emergency Services, must be within the hours of 8.00am to 6.00pm.		P1 Hours of operation of a use listed as Discretionary, excluding Emergency Services, must not cause an unreasonable loss of amenity to adjacent sensitive uses, having regard to: (a) the timing, duration or extent of vehicle movements; and (b) noise, lighting or other emissions.
A4 No Acceptable Solution.		P4 A use listed as Discretionary must not cause an unreasonable loss of amenity to adjacent sensitive uses, having regard to: (a) the intensity and scale of the use; (b) the emissions generated by the use; (c) the type and intensity of traffic generated by the use; (d) the impact on the character of the area; and (e) the need for the use in that location.

8.5.1 Non-dwelling development

Objective:	That all non-dwelling development: (a) is compatible with the character, siting, apparent scale, bulk, massing and proportion of residential development; and (b) does not cause an unreasonable loss of amenity on adjoining residential properties.	
Acceptable Solutions		Performance Criteria
A6 Air extraction, pumping, refrigeration systems or compressors, for a building that is not a dwelling, must have a setback from the boundary of a property containing a sensitive use not less than 10m. ⁷		P6 Air conditioning, air extraction, pumping, heating or refrigeration systems or compressors, for a building that is not a dwelling, within 10m of the boundary of a property containing a sensitive use must be designed, located, baffled or insulated to not cause an unreasonable loss of amenity, having regard to: (a) the characteristics and frequency of any emissions generated; (b) the nature of the proposed use; (c) the topography of the site and location of the sensitive use; and (d) any mitigation measures proposed.

The proposed woodwork room and associated equipment are intended to operate between 8AM and 4PM, Monday to Friday. Accordingly, the proposed hours of operation satisfy Clause 8.3.1-A1, which requires the hours of operation of a discretionary use to be between 8AM and 6PM.

As shown above, there is no Acceptable Solutions (A4) for Clause 8.3.1, and the proposal comprises mechanical plant equipment within 10 m of the eastern property boundary, and thus does not satisfy the Acceptable Solutions (A6) of Clause 8.5.1. As such, Performance Criteria 8.3.1-P4 and 8.5.1-P6 are relevant.

As the Scheme does not provide numerical noise limits under these Performance Criteria, the Environment Protection Policy (Noise) 2009 and Environmental Management and Pollution Control (Noise) Regulations 2026 have been referenced to establish appropriate noise assessment criteria, as detailed in Sections 3.2 and 3.3, respectively.

3.2. Tasmanian Environment Protection Policy (Noise) 2009

In Table 1 of the Tasmanian Environment Protection Policy (Noise) 2009² (TAS Noise EPP), a list of Acoustic Environmental Indicator levels is given for which the environmental values specified in the TAS Noise EPP “will be protected for the majority of the human population where the acoustic environment indicator levels are not exceeded”. A section of that table is reproduced here in Table 3.1.

TABLE 3.1: ACOUSTIC ENVIRONMENT INDICATOR LEVELS - TAS NOISE EPP

Specific Environment	Critical Health Effect	Leq dBA	Time hrs	L _{max} dBA
Outdoor Living Area	Serious annoyance, day time and evening	55	16	-
	Moderate annoyance, day time and evening	50	16	-
Outside Bedrooms	Sleep disturbance, window open (outdoor values)	45	8	60

It is noted that the TAS Noise EPP takes the day and night time periods to be 6AM to 10PM, and 10PM to 6AM respectively.

3.3. Environmental Management and Pollution Control (Noise) Regulations 2026

The Environmental Management and Pollution Control (Noise) Regulations 2026³ (TAS Noise Regulations) detail the following criteria for the operation of fixed equipment, under Section 7.1:

“(1) A person must not operate fixed equipment on any premises -

- a. from 7:00AM until 10:00PM, if the fixed equipment, when so operated, emits noise that is greater than 45 dBA; or
- b. from 10:00PM until 7:00AM, if the fixed equipment, when so operated, emits noise that is greater than 40 dBA.”

It is noted that the TAS Noise Regulations criteria apply 1 m from the residential building facade.

² ‘Tasmanian Environment Protection Policy (Noise) 2009’, Department of Environment, Parks, Heritage and Arts, 2009

³ ‘Environmental Management and Pollution Control (Noise) Regulations 2026’, Tasmanian Legislation, 2026

3.4. Adopted Project Criteria

Given the proposed operating hours of the development, all activities are proposed to only occur during the day time as defined by the TAS Noise EPP and TAS Noise Regulations, and thus sleep disturbance is not a consideration.

Table 3.2, below, summarises the adopted project criteria.

TABLE 3.2: SUMMARY OF ASSESSMENT CRITERIA

Criterion	Metric	Applicability
50 dBA	$L_{eq,16hr}$	From all proposed noise emissions. Applicable within private outdoor space.
45 dBA	Instantaneous	From mechanical plant equipment. Applicable 1 m from the worst-affected residential facade.

Compliance with the above criteria is sufficient in demonstrating no unreasonable loss of amenity at the predicted locations, and thus satisfies Clauses 8.3.1 and 8.5.1 of the Tasmanian Planning Scheme as they relate to noise.

4. NOISE MEASUREMENTS

4.1. Purpose and Measurement Locations

Unattended noise measurements were made in the vicinity of site between the 7th and 14th of August 2026 to quantify the existing acoustic environment in the area surrounding site. Measurements were undertaken in the community to the east of site (location B) and in the community between site and the East Derwent Highway (location A), and are considered reasonably representative of the existing noise levels experienced by the surrounding community.

Location A was located at the front fence of a residential dwelling near the East Derwent Highway. The noise logger had clear line of sight to both the East Derwent Highway and the site. Location B was located in the backyard of a residential dwelling to the east of site and was entirely screened from site and the East Derwent Highway by surrounding residential buildings.

Figure 4.1, below, presents the unattended noise measurement locations.



FIGURE 4.1: NOISE MEASUREMENT LOCATIONS

4.2. Measurement Methodology and Equipment

Measurements were made using Svan Type 1 sound level meters, logging in A-weighted decibels with a Fast response time. Calibration was checked before and after with a Larson Davis CAL200 acoustic calibrator, with no drift detected. The data set comprised overall levels, one-third octave spectra and full statistical data at 10-minute intervals, with spectra and overall levels also recorded at 1-second intervals.

4.3. Measurement Conditions

Throughout the noise measurement period, weather conditions were largely ideal for noise measurements, with no rain and intermittent wind. As per the TAS Noise Measurement Procedures Manual⁴, data during periods in which noise levels are likely to be unreasonably influenced by excessive wind have been excluded from the noise levels presented in Table 4.1 below.

4.4. Site Observations

The following observations made whilst on site and in the surrounding community are deemed relevant to the assessment:

Location A:

- Traffic from the East Derwent Highway was entirely dominant; noise from vehicle acceleration at the controlled intersection was clearly audible.
- On collection, noise from site was clearly audible. Children playing and music playing were clearly audible and distinguishable. However, traffic was still the dominant noise source.
- Dogs barking in the distance were clearly audible whilst at this location.

Location B:

- Traffic from the East Derwent Highway controlled the background noise levels here. Audible as broadband high-speed tyre noise.
- Typical suburban noise, local traffic, pedestrians, etc. were audible whilst at this location.
- Birds were clearly audible whilst at this location.
- Dogs barking in the distance were clearly audible whilst at this location.

4.5. Measurement Results

The overall noise levels across the measurement period are summarised in Table 4.1, below, with the measured noise trend and spectrograms at each of the measurement locations presented in figures 4.2 and 4.3.

TABLE 4.1: SUMMARY OF MEASURED NOISE LEVELS

Time Period	Sound Pressure Level (dBA)					
	Location A			Location B		
	L ₁₀	L ₉₀	L _{eq}	L ₁₀	L ₉₀	L _{eq}
Day (6AM - 10PM)	59	47	56	48	42	46
Night (10PM - 6AM)	47	36	45	40	33	38
School Hours (8AM - 4PM)	60	49	57	48	42	47

⁴ 'Noise Measurement Procedures Manual 2008 - Revised Second Edition (July 2025)', EPA Tasmania, July 2025

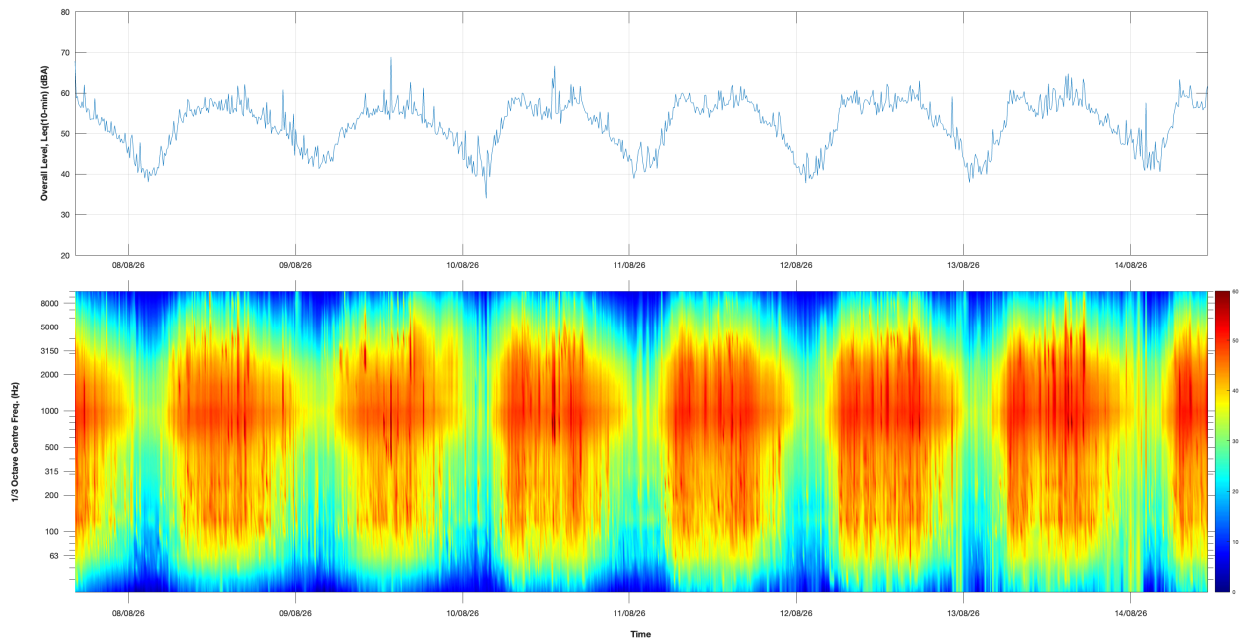


FIGURE 4.2: NOISE TREND AND SPECTROGRAM - LOCATION A

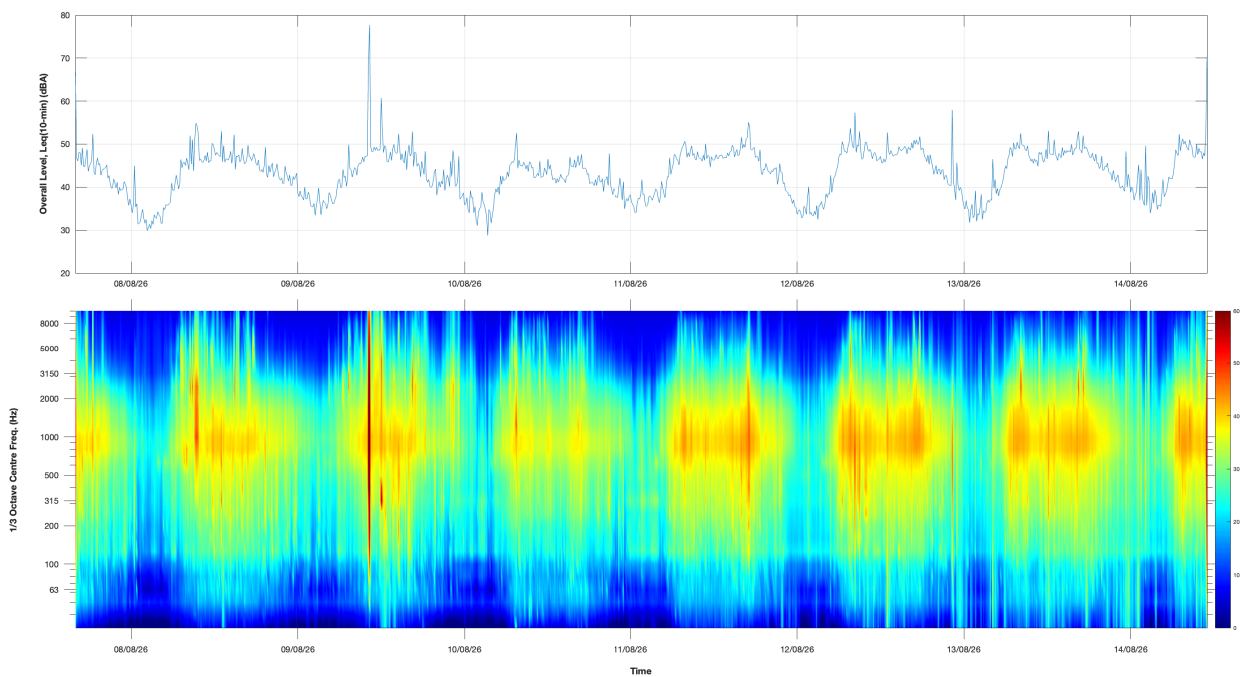


FIGURE 4.3: NOISE TREND AND SPECTROGRAM - LOCATION B

5. NOISE MODELLING

5.1. Model Description and Assumptions

A software noise model of the site and surrounding area has been constructed using *iNoise*⁵ software, which implements the ISO 9613⁶ algorithms for environmental noise. The predictions account for geometric divergence, barrier attenuation, atmospheric absorption, reflections / screening from buildings, and ground absorption. It is noted that ISO 9613 assumes atmospheric conditions favourable to noise propagation, i.e. the receiver being downwind of the source, or a mild temperature inversion, and thus predicted noise levels are worst-case.

The following assumptions have been made in the model:

- 1 m topographical contours (from LiDAR data) have been used to define the ground level of the site and surrounding area.
- The ground across site and the surrounding area comprises primarily grass and suburban areas (roads), and thus the ground has been assumed to have a ground factor of 0.5 (50% reflective) over the entire model.
- The existing dwellings surrounding the site have been included in the model, with their extents based on aerial imagery from TheList.
 - Residential dwellings have been assumed to be 3.5 m tall, representative of a typical single-storey dwelling.
 - All buildings have been modelled with a reflection factor of 0.8 (80% reflective).
- No fences or acoustic screening other than those stated below have been modelled, with additional small fencing and foliage ignored as this will only reduce the propagation of noise from the proposed building. The model therefore, assesses a worst-case scenario.
 - An existing fence has been modelled directly to the east of the proposed building, modelled at a height of 2.1 m as observed while on site.
 - All modelled barriers have been given a reflection factor of 0.8 (80% reflective).
- Noise levels due to mechanical plant equipment are predicted at the worst-affected residential facade at a height of 2 m above ground level, representing a conservative assessment height for noise received at a typical residential window.
- As per the TAS Noise Measurement Procedures Manual, noise levels as a result of general proposed noise emissions have been predicted at 1.2 m above ground level.

⁵ iNoise V2026 Pro, DGMR Software

⁶ 'ISO 9613 - Attenuation of sound during propagation outdoors', International Organization for Standardization, 1996

5.2. Model Input Data

The following key points are relevant to the model input data:

- All key workshop equipment, including the dust extractor, have been modelled to be operating continuously and simultaneously for 3 hours in the morning period and 3 hours in the afternoon period. This is considered conservative, as in practice, equipment usage is intermittent, and not all sources operate simultaneously.
- Noise emissions from the proposed building have been modelled using emitting façades, representing noise radiated through the building.
 - The model assumes typical wall construction comprising 13 mm internal plasterboard lining, lightweight insulation, 90 mm timber studs and 0.55 mm Custom Orb external cladding.
 - Glazing has been modelled as double glazing comprising 4 mm float glass / 12 mm air gap / 4 mm float glass.
- The dust extractor has been modelled as a fixed point source located on the eastern side of the building.
- Noise from patrons within the woodwork area and/or the GLAs has not been included in the model, as it is expected to be inaudible at surrounding NSPs.

Source sound power levels and the heights at which they have been modelled are summarised below in Table 5.1, with Figure 5.1 showing the modelled locations.

TABLE 5.1: MODELLED SOURCE SOUND POWER LEVELS

	Source	Description	Qty.	SWL (dBA)	Modelled Height
Mechanical Plant	Dust Extractor	A 3 HP Hare & Forbes Cyclone Dust Collector (CD-30) used to collect and remove airborne dust and wood particles generated by woodworking activities.	1	102	1.5 m
	AC Units (AC-1)	Representative of a typical air conditioning unit (Daikin FCA71CAVMA, or equivalent)	1	67	1 m
	AC Units (AC-2)		1	67	3 m
	AC Units (AC-3)		1	67	3 m
Woodwork Equipment	Band Saw	Fixed woodwork equipment used for cutting timber.	1	93 *	-
	Spindle Sander	Fixed woodworking machinery used for sanding timber.	1	85 *	-
	Mitre Saw	Fixed woodworking machinery used for cross-cutting and angled cutting of timber.	1	104 *	-
	Hand Held Power Tools	Portable woodworking tools used for drilling, cutting and sanding timber.	1	83 *	-
	Dust Extractor Ductwork	Ductwork conveying extracted dust from the woodwork room to the dust extraction system.	1	86 *	-

* Woodworking equipment is modelled as a combined internal reverberant sound pressure level, with noise emissions represented by the noise radiated from the building facade.

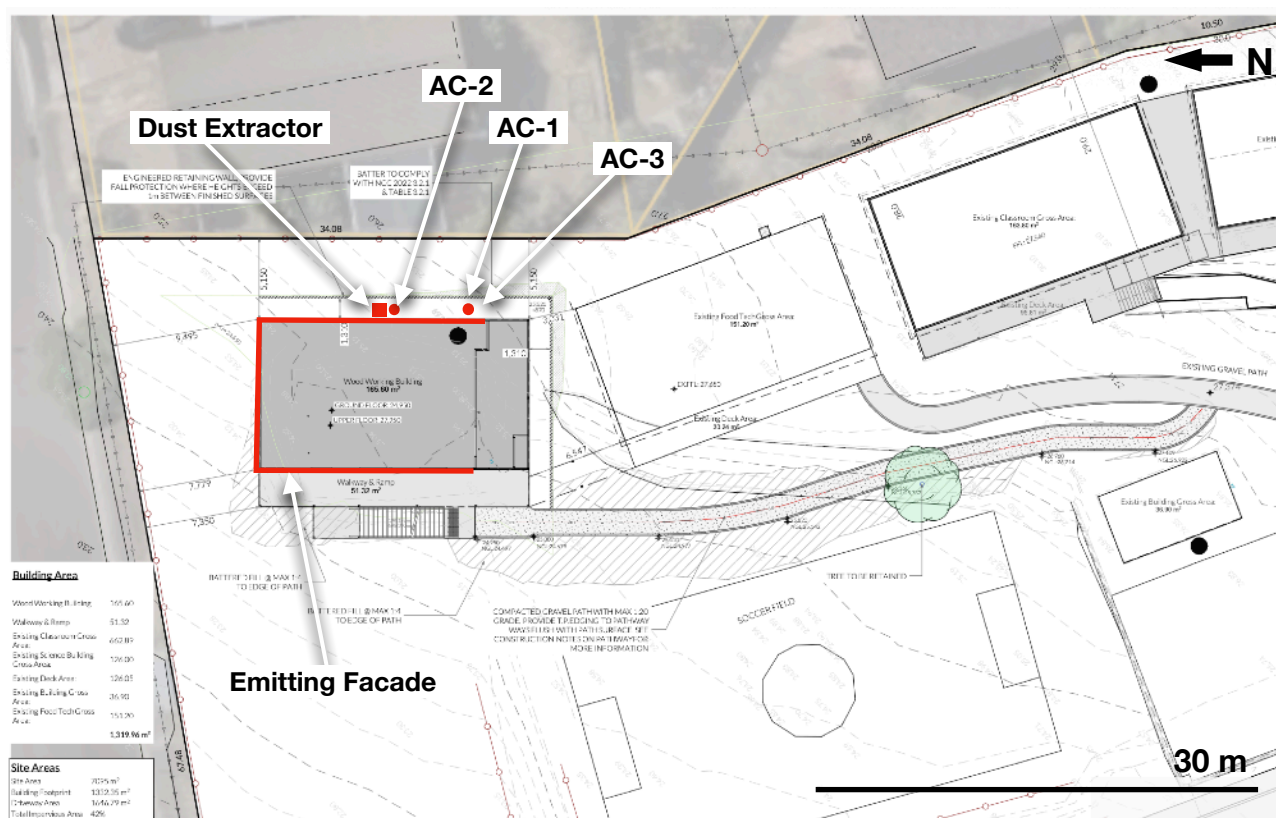


FIGURE 5.1: LOCATION OF MODELLED NOISE SOURCES

5.3. Predicted Results

The predicted noise levels are summarised in Table 5.2, below. Mechanical plant noise levels (dust extractor and air conditioning units), are predicted at a height of 2 m above ground level at the worst-affected residential facade. Overall noise levels from the proposed building's general operations (including mechanical plant), are predicted at a height of 1.2 m above ground level as required by the TAS Noise Measurement Procedures Manual.

TABLE 5.2: SUMMARY OF PREDICTED NOISE LEVELS

Source	Predicted Sound Pressure Level (dBA)		
	1	2	3
Dust Extractor	67 *	39 *	36 *
AC Units	38 *	< 20 *	< 20 *
Woodwork Noise	32	27	23
TOTAL (Mechanical Plant Only)	67 *	39 *	36 *
TOTAL (All Noise Sources)	63	39	36

* Predicted at a height of 2 m above ground level.

5.4. Discussion

Based on the above, the following key points are relevant to the noise predictions:

- The predicted noise levels for mechanical plant and general noise emissions (inclusive of mechanical plant) are assessed at heights of 2 m and 1.2 m above ground level, respectively. At location 1, the existing boundary fence between the proposed building and the residential dwelling provides less acoustic screening at the higher assessment position of 2 m for mechanical plant. This results in a higher predicted mechanical plant noise level than the total site noise level, despite the latter including additional noise sources.
- Without the implementation of any mitigation measures, predicted noise levels at location 1 are dominated by the dust extractor and are predicted to exceed the fixed mechanical plant criterion and general site noise criterion of 45 dBA and 50 dBA by 22 dB and 13 dB, respectively.
 - The predicted noise level is also significantly above the measured background (L_{90}) noise level of 42 dBA and the existing ambient (L_{eq}) noise level of 47 dBA measured at location B. Noise from the dust extractor is therefore expected to be clearly audible above existing road traffic noise.
 - The predicted levels also indicate that noise from the dust extractor is likely to be audible within the adjacent dwelling and would be expected to result in an unreasonable loss of amenity without mitigation.
- Predicted noise levels at locations 2 and 3 are also controlled by the dust extractor, with predicted levels of 39 dBA and 36 dBA, respectively. Both locations are predicted to comply with the fixed mechanical plant and general site noise criteria. These levels are below the measured background noise level of 49 dBA L_{90} and ambient noise level of 57 dBA L_{eq} measured at location A. Accordingly, noise from the proposed development is expected to be generally inaudible over existing road traffic noise at these locations.

Based on the above, mitigation of the dust extractor is required to achieve compliance with the adopted project criteria and minimise the likelihood of an unreasonable loss of amenity at location 1. Section 6, below, outlines potential mitigation options for the dust extractor.

6. RECOMMENDATIONS

6.1. Dust Extractor Noise Control

Based on the software noise modelling outlined in Section 5, above, significant noise control of the proposed dust extractor is required to achieve compliance with the adopted project criteria. NVC has been informed that the preference is to retain the proposed dust extractor in its current location. Accordingly, the following mitigation options are proposed, with implementation of at least one option required.

Option 1 - Enclosure of the Currently Proposed Dust Extractor

To retain the dust extractor in its currently proposed location on the eastern side of the proposed building (nominally 8.5 m from the nearest NSP to the east), the following is required:

- Construction of an acoustic enclosure encompassing the dust extractor and associated ducting, comprising the following details:
 - The walls and roof of the acoustic enclosure are to be constructed of a fixed, rigid material, with a minimum surface mass of 45 kg/m².
 - Examples of suitable constructions may include 2 × 12 mm compressed fibre-cement sheeting, core-filled concrete blockwork or precast concrete.
 - The proposed construction is to be reviewed by a suitably qualified Acoustic Engineer to confirm it will achieve the required noise reduction.
 - All gaps are to be sealed using a flexible-cure, fire-rated mastic, or acoustic sealant.
 - All internally facing surfaces (excluding the floor) are to be lined with minimum 50 mm thick acoustic absorption.
 - Examples of suitable products include Megasorber P50⁷ or FM50⁸.
- Access to the dust extractor is to be via the woodwork room, with no external doors directly into the enclosure.
- Manufacturer data of the proposed dust extractor shows a required airflow of nominally 2,204 CFM (approximately 1,040 L/s). As such, to satisfy this requirement whilst maintaining the required acoustic performance, it is strongly recommended that exhaust air is return ducted into the woodwork room.
 - It is critical that associated ducting does not penetrate or extend beyond the acoustic enclosure.
 - If the ductwork is to be routed externally, it must be enclosed using construction achieving the same minimum acoustic performance as the enclosure walls and roof specified above, including appropriate treatment of joints and penetrations.

An Acoustic Engineer is to be engaged during the detailed design phase of the enclosure to ensure the proposed design satisfies the acoustic requirements.

⁷ 'P50', Megasorber, <https://megisorber.com/acoustic-panels/sound-absorbing-panel-p/>

⁸ 'FM50', Megasorber, <https://megisorber.com/acoustic-panels/sound-absorbing-panel-fm/>

Option 2 - Alternative Dust Extractor

Reducing the noise emissions from the dust extractor will result in a reduction in the required noise control. As such, should selection of an alternative dust extractor be feasible, the following is required:

- Specify a dust extractor with a maximum sound *power* level (L_w) of 81 dBA.
 - Where manufacturer specifies a sound *pressure* level (L_p) instead, it is to be no greater than 70 dBA at 1 m, or 60 dBA at 3 m.
- Install an acoustic enclosure around the dust extractor and associated ductwork, incorporating the following:
 - The enclosure walls and roof are to have a minimum surface mass of 8 kg/m². Suitable materials include 9 mm compressed fibre-cement sheeting, 18 mm plywood or equivalent.
 - Should additional airflow be required, the enclosure walls may comprise *acoustic* louvres with a minimum depth of 200 mm.
 - Suitable products include Flexshield Sonic Series SL4-20⁹ or an equivalent system with demonstrated acoustic performance.
 - All gaps are to be sealed using a flexible-cure, fire-rated mastic, or acoustic sealant.
 - Any external ductwork associated with the dust extractor is to remain within the acoustic enclosure.

An Acoustic Engineer is to be engaged during the detailed design phase of the enclosure to ensure the proposed design satisfies the acoustic requirements.

Option 3 - Relocation of the Currently Proposed Dust Extractor

Relocating the proposed dust extractor to the southern side of the building would increase its separation from the nearest noise-sensitive premises and provide greater flexibility to accommodate the unit's airflow requirements and external access within the acoustic enclosure. Should this option be adopted, the following is required:

- Relocate the dust extractor to the southern side of the proposed building, with the eastern side of the acoustic enclosure located a minimum of 8 m from the eastern property boundary, as shown in Figure 6.1, below.
- Construction of an acoustic enclosure encompassing the dust extractor and associated ducting, comprising the following details:
 - The walls and roof of the acoustic enclosure are to be constructed of a fixed, rigid material, with a minimum surface mass of 15 kg/m².
 - Examples of suitable constructions may include 1 x 9 mm compressed fibre-cement sheeting, 1 x 12 mm fibre-cement sheeting or equivalent, provided the minimum surface mass is achieved.
 - The proposed construction is to be reviewed by a suitably qualified Acoustic Engineer to confirm it will achieve the required noise reduction.
 - All gaps are to be sealed using a flexible-cure, fire-rated mastic, or acoustic sealant.
 - All internally facing surfaces (excluding the floor) are to be lined with minimum 50 mm thick acoustic absorption.
 - Examples of suitable products include Megasorber P50 or FM50.

⁹ 'Sonic Series SL4-20', Flexshield, <https://flexshield.com.au/>

- Should additional airflow be required, minimum 200 mm deep acoustic louvres may be fitted to the western wall of the enclosure (facing away from location 1), as shown in Figure 6.1, below.
- Suitable products include Flexshield Sonic Series SL4-20 or an equivalent system with demonstrated acoustic performance.

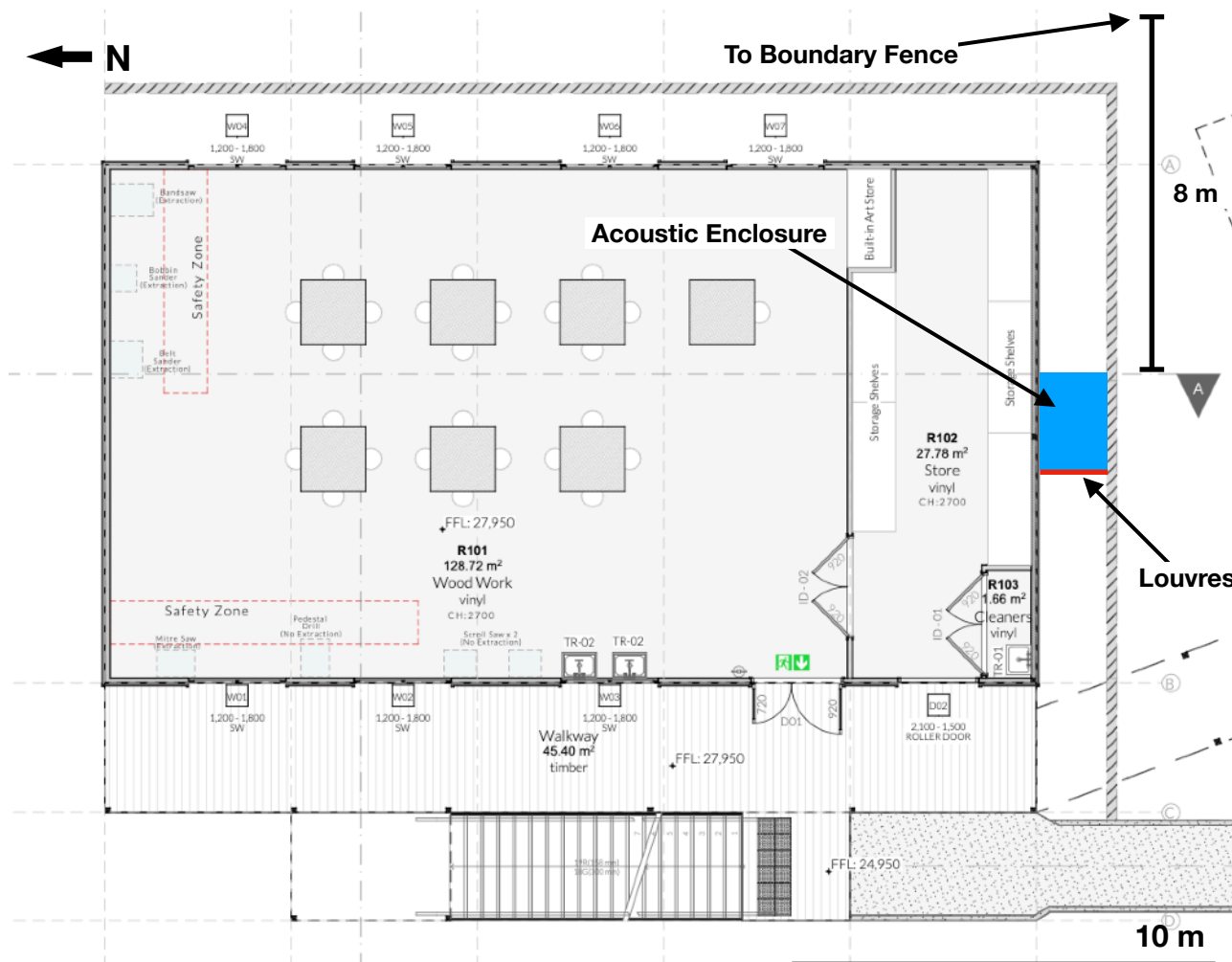


FIGURE 6.1: ENCLOSURE REQUIREMENTS FOR THE RELOCATED DUST EXTRACTOR

Given the significance of the required noise reduction and the balance between acoustic treatment and airflow requirements, it is strongly recommended that a suitably qualified Acoustic Engineer be engaged during the detailed design phase of the project to ensure any acoustic mitigation measures are compatible with airflow requirements.

6.2. General Recommendations

In addition to the implementation of one of the above options, the following general recommendations are relevant:

- Ensure the proposed AC units are installed on grade, maximising the acoustic screening from the existing shared boundary fence along the site's eastern boundary.
- The dust extractor is to have an automatic timer implemented, such that it cannot operate outside of typical school hours (8AM to 4PM).
- The overall external building façade is to achieve a minimum sound isolation rating of R_w 38.
 - The drawings indicate Custom Orb external cladding but do not specify the complete wall construction. As such, a typical lightweight wall construction comprising 0.55 mm Custom Orb cladding, 90 mm timber studs with insulation, and 13 mm internal plasterboard lining has been assumed. This is appropriate.
 - The provided drawings specify double glazing but do not provide further details. As such, typical double glazing comprising 4 mm float glass / 12 mm air gap / 4 mm float glass has been assumed. This is appropriate.
 - Note that glazing is assumed to occupy approximately 20% of the facade (four windows with a surface area of approximately 2 m² each). Should this significantly differ from the proposed drawings, NVC is to be informed.

7. ASSESSMENT

Software noise modelling indicates that, following implementation of at least one of the dust extractor mitigation options outlined in Section 6.1, noise emissions from the proposed development are predicted to comply with the adopted project criteria of 45 dBA for mechanical plant and 50 dBA $L_{eq,16hr}$ for general site noise emissions. Predicted noise levels at surrounding noise-sensitive premises are also expected to be comparable to, or below, measured background noise levels, such that noise emissions from the proposed development are not expected to result in an unreasonable loss of amenity.

Accordingly, subject to implementation of the recommended mitigation measures, the proposed development of the woodwork room and GLAs at 7 Golf Links Road, Geilston Bay, is not expected to result in an unreasonable loss of amenity at surrounding sensitive uses. The proposal therefore demonstrates likely compliance with Clauses 8.3.1-A1, 8.3.1-P4 and 8.5.1-P6 of the Tasmanian Planning Scheme as they relate to noise.

Appendix A – Acoustic Glossary

<i>Ambient Noise</i>	All noise associated with a measurement, and typically ignoring the particular noise under investigation. Typically measured as L_{eq} and will usually comprise noise from many sources.
<i>Background Noise</i>	Background noise describes the underlying level of noise present in the ambient noise. It may be described as the average of the minimum noise levels measured, and is typically measured by the statistical L_{90} level.
<i>Decibel [dB]</i>	The scale used for describing sound. It is a logarithmic scale that uses a reference sound pressure of 20 μ Pa, or reference sound power of 10^{-12} Watts.
<i>dBA</i>	A-weighted decibel. The human ear does not perform linearly and is better at hearing high frequency rather than low frequency sounds, ie. low frequency sound at the same dB level as a high frequency sound will be perceived as quieter. To replicate the human ear response a frequency weighting, denoted as an A-weighting, is applied to the sound. A sound measured in this way is then an A-weighted sound pressure level with units dBA. Practically all noise is measured using the A-weighting.
<i>L_{eq}</i>	Energy averaged sound pressure level over a period of time, usually 10 to 15 minutes. Units of decibels, typically A-weighted (L_{Aeq}). Because the decibel scale is a logarithmic ratio, the higher noise levels have far more sound energy, and therefore the L_{eq} level tends to indicate an average which is strongly influenced by short-term, high level noise events. Many studies show that human reaction to level-varying sounds tends to relate closer to the L_{Aeq} noise level than any other descriptor.
<i>Frequency</i>	Frequency is synonymous with pitch and has the units of Hertz (Hz) or cycles per second. A bass drum produces a low frequency sound, and a small bell a high frequency sound. The frequency range for human hearing is approximately 30 Hz to 16 kHz.
<i>L_{10}, L_{90}...</i>	L_{nn} is the sound pressure level that is exceeded for nn% of the time. Hence the L_{10} describes the noisier events during the interval, and L_{90} the quieter events. The L_{90} is often used to describe the background level. A significant variation between the L_{10} and L_{90} would indicate an environment where there is a strong variation in noise levels, and the background is not the dominant source. As the variation between the L_{10} and L_{90} decreases, the background becomes more dominant.
<i>L_{max}</i>	The instantaneous maximum level using the time response and frequency weighting set for the meter (typically <i>Fast</i> response, A-weighted).
<i>Inversion</i>	A condition typically occurring on clear, still nights which is characterised by the air near the ground being colder than air at higher altitudes. The increasing speed of sound with altitude bends the sound back towards the ground causing a focusing of the sound in a small area. The inversion effect can cause increases in noise levels of 5 to 10 dB with greater increases in exceptional circumstances.