




Reference number 3736

Member of the Fire Protection Association of Australia

Lot 1, DP 1144798, 155 Pacific Road, Palm Beach, NSW 2108.

Friday, 3 December 2021

Prepared and certified by:	Matthew Willis <i>BPAD – Level 3 Certified Practitioner</i> Certification No: BPD-PA 09337		03/12/2021
Can this proposal comply with AS3959-2018 (inc section 7.5, 7.5.1, 7.5.2, 7.5.3, 7.5.4 (where applicable) of the Rural Fire Services document Planning for Bushfire Protection 2019)?	Yes		
What is the recommended AS 3959-2018 level of compliance?	BAL-19 and BAL-12.5		
Is referral to the RFS required?	At the discretion of Council. Subjective opinion has been used in the slope assessment and bushfire behaviour for this proposal.		
Can this development comply with the requirements of PBP?	Yes		
Plans by "C M Studio" (Appendix 1) dated.	22/11/21		

© This document is copyright. It is a breach of copyright for this document to be used to support a development application or any other purpose for any persons/entities other than those for whom this document was prepared. Other than for the purpose for which this document has been prepared and subject to conditions prescribed under the Copyright Act no part of this document may in any form nor by any means be reproduced or stored in a retrieval system or transmitted without the prior written permission of the company (Bushfire Planning Services Pty Ltd ACN 115 714 826).



Bushfire Planning Services

15 Parkcrest Place

Kenthurst NSW 2156

02 96543228

0428408577

mattw@bushfireconsultants.com.au

Bushfire Risk Assessment

Friday, 3 December 2021

Contact

Emmi Wegener

C M Studio

409/19A Boundary Street

Rushcutters Bay NSW 2011

9380 5791

Subject Property

Lot 1, DP 1144798

155 Pacific Road

Palm Beach NSW 2108

BUSHFIRE RISK ASSESSMENT CERTIFICATE

THIS FORM IS TO BE COMPLETED BY A RECOGNISED CONSULTANT IN BUSHFIRE RISK ASSESSMENT IN ACCORDANCE WITH SECTION 4.14 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT.

Property Address	Lot 1, DP 1144798, number 155 Pacific Road Palm Beach
Description of the Proposal	Alterations and additions to an existing dwelling
Plan Reference	22/11/21
BAL Rating	BAL-19 and BAL-12.5
Does the Proposal Rely on Alternate Solutions?	No

I, Matthew Willis of Bushfire Planning Services Pty Ltd have carried out a bushfire risk assessment on the above-mentioned proposal and property. A detailed Bushfire Assessment Report is attached which includes the submission requirements set out in Planning for Bushfire Protection 2019 together with recommendations as to how the relevant Specifications and requirements are to be achieved.

I hereby advise, in accordance with Section 4.14 of the Environmental Planning and Assessment Act 1979 No 203:

1. That I am a person recognised by the NSW Rural Fire Service as a qualified consultant in bushfire risk assessment; and

2. That subject to the recommendations contained in the attached Bushfire Risk Assessment Report the proposed development conforms to the relevant specifications and requirements*

*The relevant specifications and requirements being specifications and requirements of the document entitled Planning for Bush Fire Protection prepared by the NSW Rural Fire Service in co-operation with the Department of Planning and any other document as prescribed by Section 4.14 of the Environmental Planning and Assessment Act 1979 No 203.

I am aware that the Bushfire Assessment Report, prepared for the above-mentioned site is to be submitted in support of a development application for this site and will be relied upon by Northern Beaches Council as the basis for ensuring that the bushfire risk management aspects of the proposed development have been addressed in accordance with Planning for Bushfire Protection 2019.

REPORT REFERENCE	<i>Friday, 3 December 2021</i>
REPORT DATE	<i>Friday, 3 December 2021</i>
CERTIFICATION NO/ACCREDITED SCHEME	<i>FPA A BPAD A BPD-PA 09337</i>

Attachments:

- Bushfire Risk Assessment Report
- Recommendations

SIGNATURE: ---  ----- **DATE:** -----Friday, 3 December 2021

Contents.

1	Executive Summary.	5
2	General.	6
3	Block Description.	6
4	Vegetation.	8
5	Expected bushfire Behaviour.	9
6	Known constraints on subject block.	10
7	Slope.	11
8	Utilities.	12
8.1	Water.	12
8.2	Electricity	12
8.3	Gas	12
9	Access/Egress.	12
10	Compliance with Planning for Bushfire Protection setbacks.	13
11	Siting.	13
12	Construction and design.	14
13	Utilities.	15
13.1	Water.	15
13.2	Electricity and Gas.	15
14	Asset Protection Zone (APZ).	15
15	Landscaping.	15
16	Constraints on the subject block.	16
17	Access/Egress.	16
18	Compliance or non compliance with the specifications and requirements for bushfire protection measures.	17
19	Conclusions.	17
20	References.	19
21	Appendix 1 - Plans .	20

1 Executive Summary.

Bushfire Planning Services has been requested by Emmi Wegener from C M Studio to supply a bushfire compliance report on lot 1, DP 1144798, 155 Pacific Road, Palm Beach.

The works proposed for the subject lot are for the alterations and additions to an existing dwelling and the construction of a detached Studio, see attached plans for details.

The subject lot is on the eastern side of Pacific Road and at its closest point to the hazard the proposed new work has a separation distance to the west of approximately 60.3m.

The vegetation that is considered to be the hazard to this proposal is situated on land that slopes down slope away from the property at an angle of approximately 16.50°¹.

For the purposes of this assessment this vegetation is considered to be Forest.

The remaining vegetation within the study area is contained within the boundaries of established allotments and is managed land and of low threat to this proposal.

The calculations and assumptions outlined in this report show that the development will be required to comply with the construction requirements of AS 3959-2018 BAL-19 on its exposed northern, western and southern aspects, and BAL-12.5 on the eastern aspects and any additional construction requirements contained within section 7.5, 7.5.1, 7.5.2, 7.5.3, 7.5.4 (where applicable) of the Rural Fire Services document Planning for Bushfire Protection 2019.

The following table is a summary of the pertinent findings of this assessment.

Aspect	North	East	South	West
Vegetation type	Managed land	Managed land	Managed land	Managed land/forest
Slope	N/A	N/A	N/A	10-15 degrees downslope
Setback within lot 1	N/A	N/A	N/A	3.3m
Setback outside lot 1	N/A	N/A	N/A	57m
Total setback	N/A	N/A	N/A	60.3m
Bal level	N/A	N/A	N/A	BAL-19
<p><i>Note: The above table is a summary of the significant variables used to determine the highest BAL for this proposal. THIS TABLE IS NOT INTENDED FOR CONSTRUCTION! Only the highest BAL level is shown, aspects marked as N/A will still have a BAL. Refer to section 11 for construction requirements for these other aspects.</i></p>				

¹ See section 6.

2 General.

This proposal relates to the alterations and additions to an existing dwelling and the construction of a detached studio on the subject lot and its ability to comply with the rules and regulations for building in a bushfire prone area.

The methodology used on this report is based on Planning for Bushfire Protection 2019 (PBP) as published by the New South Wales Rural Fire Service.

Any wording that appears in *blue italics* is quotes from Planning for Bushfire Protection 2019. Some of the measurements used in this report have been taken from aerial photographs and as such are approximate only.

3 Block Description.

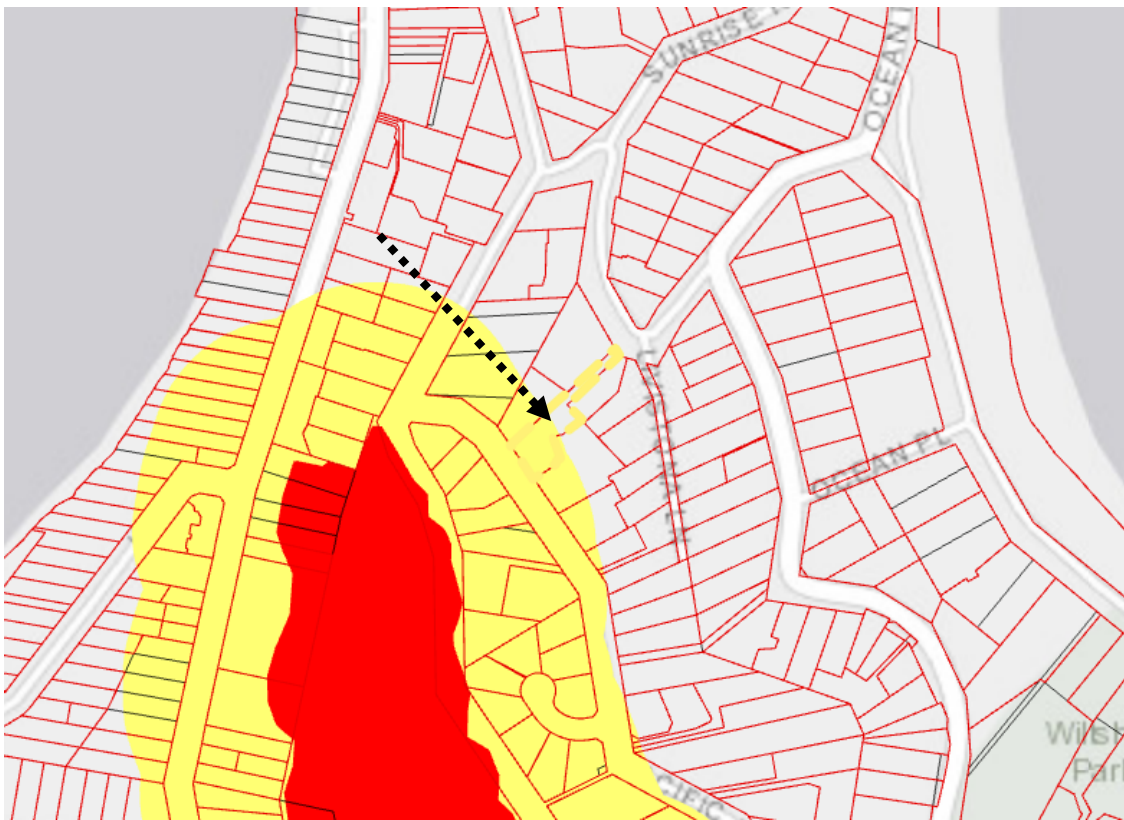
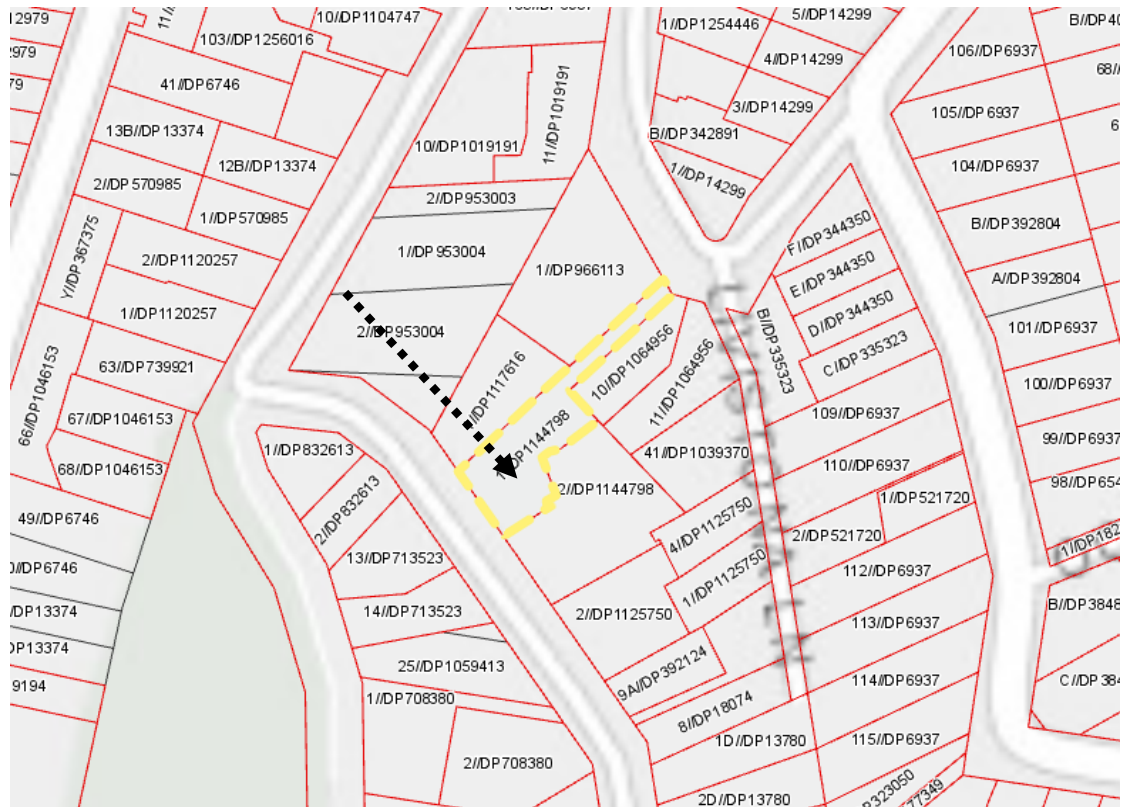
The subject block is situated on the eastern side of Pacific Road in an established area of Palm Beach.

The lot currently contains a multi-level class 1 dwelling.

The lands surrounding the proposed site on the subject lot to a distance of at least 60.3m contain existing development or land that is otherwise not considered to be a significant bushfire hazard.

- Lot; 1
- DP; 1144798.
- LGA; Northern Beaches.
- Area; 1508m².
- Address; 155 Pacific Road, Palm Beach.

This area has been left intentionally blank.



4 Vegetation.

The study area for the vegetation is 140m surrounding the subject block.

The vegetation within the study area for this development is considered to be largely managed land.

The major potential hazard to this development is the vegetation within an area of undeveloped land to the west.

For the purpose of this assessment and compliance with Planning for Bushfire Protection this area of undeveloped land is considered to be Forest and is the hazard to this proposal.



Photo 1 - An overview of the vegetation within the general area.



Photo 2 is a closer view of the vegetation in the area.

Table 1 outlines the vegetation orientation and distance from the development area.

Aspect	North	East	South	West
Vegetation type	Managed land	Managed land	Managed land	Managed land/forest
Setback within lot 1	N/A	N/A	N/A	3.3m
Off-site setback	N/A	N/A	N/A	57m
Total setback	N/A	N/A	N/A	60.3m

Table 1 - Any aspect marked with "N/A" in the table above indicates that it is considered there is none or only a secondary hazard in that direction.

5 Expected bushfire Behaviour.

The hazard to this proposal is an elongated section of forest vegetation running in a north-south direction to the west of the subject lot, on the opposite side of Pacific Road and behind a row of houses.

It is considered that the most likely ignition of this vegetation, under adverse circumstances, would occur from spot ignition within the hazard from a fire in the general region, most likely the National Park on the other side of Pittwater.

Spot ignitions can occur anywhere within the hazard and the impact of a spot fire on the subject lot would vary considerably depending on where the fire originated.

A worst-case scenario would be for a single or multi point ignition on the western interface of the hazard near Barrenjoey Road. This could also occur from an accidental or intentional ignition along this interface. A fire originating near Barrenjoey Road under adverse circumstances could be reasonably expected to progress towards the subject lot under the influence of the steep slope beneath the hazard.

Also running in a north-south direction is a steep escarpment within the hazard that could be reasonably expected to slow or halt the progress of a fire towards the subject lot. This escarpment would also be expected to redirect the path of any flame and cause the flame to lift vertically.

The land above the escarpment has a lesser slope than the land beneath the vegetation below the escarpment. Should a spot fire occur within the area above the escarpment, or a fire from below the escarpment ignite the vegetation above the escarpment, the slope between the top of the escarpment and the rear of the managed land further to the east is considered to be the effective slope.

It should also be noted that the area along the edge of the managed land/bush interface is partially managed, this is reflected in councils' bushfire prone land map. I have previously been informed that this is part of a council managed area.

As mentioned above, it is reasonable to expect that the escarpment would cause any flame to "lift" from the horizontal and not hug the ground. The length of the flame from a fire within forest vegetation on the slope of 36° has been calculated to be 210 m in length. A 210 m long flame coming from a section of fire run of 77m is considered highly unlikely to occur.

Given the position of the escarpment and the effect it will have on fire behaviour, the unrealistic calculation of the length of the flame, the semi managed area of vegetation above the escarpment, the presence of a road and a row of houses between the hazard interface and the subject lot, direct flame contact from a flame lying flat on the ground is considered to be highly unlikely to occur in this instance and therefore the RFS current position on using flame lengths as a separation distance to avoid Flame zone has been, in this instance, discounted.

6 Known constraints on subject block.

I have not been informed or know of any places of cultural or environmental significance within the boundaries of the subject block.

Given the nature of the surrounding land it is considered highly unlikely that anything of significance will be affected by this development.

7 Slope.

The slope of the land beneath the hazard that is most likely to influence bushfire behaviour has been calculated by topographical map analysis to a distance of 100m from the subject lot.

There are 2 distinct slopes within the study area for this proposal. There is an escarpment running in a north-south direction through the mapped hazard. The slope above the escarpment slopes downhill away from the proposal at an angle of approximately $16\frac{1}{2}^{\circ}$ while the slope below the escarpment slopes away at an angle in excess of 31° down to Barrenjoey Road.

An extract of the topographical map for the area is shown below and the relevant slope analysis is shown in Table 2.



Table 2 shows the slope beneath the hazard.

Aspect	North	East	South	West
Slope	N/A	N/A	N/A	10-15 degrees downslope

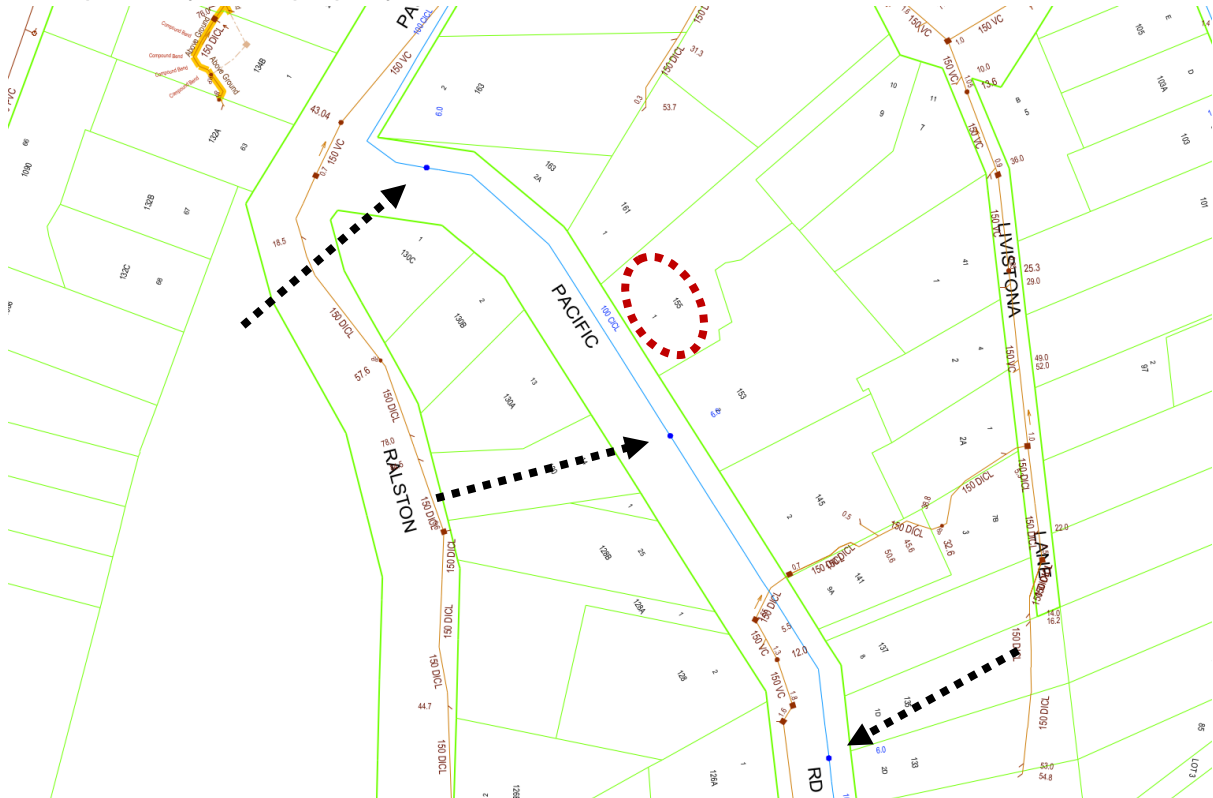
Table 2 - Any aspect marked with "N/A" in the table above indicates that it is considered there is no hazard in that direction.

8 Utilities.

8.1 Water.

The subject block will be serviced by a reticulated water supply.

The following map is an extract from Sydney waters hydrant map. Hydrants are indicated by a blue dot on a blue line. As can be seen there is at least one hydrant point indicated within close proximity of the property.



8.2 Electricity

Main's electricity is available to the block.

8.3 Gas

It is unknown if either bottled or mains gas is to be altered or installed in this proposal.

9 Access/Egress.

Access to the development site will be via a short private driveway from Pacific Road.

All roads in the vicinity are considered to be capable of carrying emergency services vehicles and pedestrian access onto the lot is also considered to be adequate.

Analysis of development and recommendation.

10 Compliance with Planning for Bushfire Protection setbacks.

Based on the development design, vegetation classification, effective slope estimates and setback distance already outlined in this report the subject development will be required to comply with the deemed to satisfy construction requirements of AS 3959-2018 BAL-19 and the RFS requirements on all fire prone aspects.

The following table is an extract from table A1.12.5 of Planning for Bushfire Protection 2019. This table is used to calculate the BAL for a proposal in an area with an FDI of 100.

The variables that have already been outlined in this assessment are highlighted in red with the highest BAL highlighted in yellow.

10-15 DEGREES DOWNSLOPE	Keith Vegetation Formation	BUSHFIRE ATTACK LEVEL (BAL)				
		BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
	Arid-Shrublands (acacia and chenopod)	< 7	7 -< 9	9 -< 14	14 -< 20	20 -< 100
	Forest (wet and dry sclerophyll) including Coastal Swamp Forest, Pine Plantations and Sub-Alpine Woodland	< 36	36 -< 45	45 -< 60	60 -< 77	77 -< 100
	Forested Wetland (excluding Coastal Swamp Forest)	< 15	15 -< 20	20 -< 29	29 -< 41	41 -< 100
	Freshwater Wetlands	< 5	5 -< 7	7 -< 11	11 -< 16	16 -< 100
	Grassland	< 11	11 -< 15	15 -< 23	23 -< 32	32 -< 50
	Grassy and Semi-Arid Woodland (including Mallee)	< 19	19 -< 25	25 -< 36	36 -< 49	49 -< 100
	Rainforest	< 17	17 -< 23	23 -< 34	34 -< 46	46 -< 100
	Short Heath	< 10	10 -< 13	13 -< 20	20 -< 29	29 -< 100
	Tall Heath	< 17	17 -< 22	22 -< 32	32 -< 44	44 -< 100

For the purpose of this assessment the western aspect has been chosen as the most potentially hazardous aspect due to the effective slope, potential run of fire and the prevailing fire weather of the area.

11 Siting.

The current site provides adequate separation between the proposed building and surrounding vegetation for a compliant structure to be built.

Recommendation;

Nil.

12 Construction and design.

All new work is to be undertaken in accordance with the relevant requirements of the NCC and AS3959 2018. The following recommendations are a minimum level of construction. Constructing the proposal to a higher level than that recommended is allowable under AS3959.

Recommendation; all new work to the northern, western and southern aspects of the house.

1. New construction on the northern, western and southern aspects of the house shall comply with the requirements of section 3 of Australian Standard AS3959-2018 "Construction of buildings in bush fire-prone areas" and,
2. New construction on the northern, western and southern aspects of the house shall also comply with the requirements of BAL-19 Australian Standard AS3959-2018 "Construction of buildings in bush fire-prone areas" or NASH Standard "National Standard Steel Framed Construction in Bushfire Areas" and any additional construction requirements contained within section 7.5, 7.5.1, 7.5.2, 7.5.3, 7.5.4 (where applicable) of the Rural Fire Services document Planning for Bushfire Protection 2019.

Recommendation; all new work to the eastern aspect of the house.

3. New construction on the eastern aspects of the house shall comply with the requirements of section 3 of Australian Standard AS3959-2018 "Construction of buildings in bush fire-prone areas" and,
4. New construction on the eastern aspects of the house shall also comply with the requirements of and BAL-12.5 Australian Standard AS3959-2018 "Construction of buildings in bush fire-prone areas" or NASH Standard "National Standard Steel Framed Construction in Bushfire Areas" and any additional construction requirements contained within section 7.5, 7.5.1, 7.5.2, 7.5.3, 7.5.4 (where applicable) of the Rural Fire Services document Planning for Bushfire Protection 2019.

Recommendation; all new work to the Studio.

5. New construction on the Studio shall comply with the requirements of section 3 of Australian Standard AS3959-2018 "Construction of buildings in bush fire-prone areas" and,
6. New construction on the Studio shall also comply with the requirements of BAL-12.5 Australian Standard AS3959-2018 "Construction of buildings in bush fire-prone areas" or NASH Standard "National Standard Steel Framed Construction in Bushfire Areas" and any additional construction requirements contained within section 7.5, 7.5.1, 7.5.2, 7.5.3, 7.5.4 (where applicable) of the Rural Fire Services document Planning for Bushfire Protection 2019.

Recommendation; all new work

7. New roofing valleys and guttering should be fitted with a non-combustible leaf protection to stop the accumulation of debris.

AS-3959 2018 is available as PDF from;

https://infostore.saiglobal.com/en-au/standards/as-3959-2018-122340_saig_as_as_2685241/

13 Utilities.

13.1 Water.

The proposed development will have access to a reticulated water supply. There is at least one hydrant indicated within the required distance from the dwelling.

Recommendation;

Nil.

13.2 Electricity and Gas.

Recommendation;

8. Any new electricity or gas connections are to comply with the requirements of table 7.4a of Planning for Bushfire Protection.

14 Asset Protection Zone (APZ).

The Asset Protection Zone is *“An area surrounding a development managed to reduce the bushfire hazard to an acceptable level. The width of an APZ will vary with slope, vegetation and construction level”*.

Recommendation;

9. At the commencement of building works and in perpetuity the entire property shall be managed as an Asset Protection Zone in accordance with the requirements of Planning for Bushfire Protection, the RFS document Standards for Asset Protection Zones and in a manner that does not create a bushfire hazard to the property.

15 Landscaping.

Recommendation;

10. Any new fencing is to be constructed in accordance with section 7.6 of Planning for Bushfire Protection 2019.
11. Any new landscaping to the site is to comply with the principles of Appendix 4 and section 3.7 of Planning for Bush Fire Protection 2019. In this regard the following landscaping principles are, where applicable, to be incorporated into the development²:
 - Suitable impervious areas being provided immediately surrounding the building such as courtyards, paths and driveways;

²Refer to referenced documents for a complete description.

- Grassed areas/mowed lawns/ or ground cover plantings being provided in close proximity to the building;
- Restrict planting in the immediate vicinity of the building which may over time and if not properly maintained come in contact with the building;
- Maximum tree cover should be less than 30%, and maximum shrub cover less than 20%;
- Planting should not provide a continuous canopy to the building (i.e. trees or shrubs should be isolated or located in small clusters);
- When considering landscape species consideration needs to be given to estimated size of the plant at maturity;
- Avoid species with rough fibrous bark, or which retain/shed bark in long strips or retain dead material in their canopies;
- Use smooth bark species of trees species which generally do not carry a fire up the bark into the crown;
- Avoid planting of deciduous species that may increase fuel at surface/ ground level (i.e. leaf litter);
- Avoid climbing species to walls and pergolas;
- Locate combustible materials such as woodchips/mulch, flammable fuel stores away from the building;
- Locate combustible structures such as garden sheds, pergolas and materials such timber garden furniture way from the building; and
- Use of low flammability vegetation species.

16 Constraints on the subject block.

None known.

Recommendation;

Nil

17 Access/Egress.

All roads in the area are considered to be capable of handling emergency service vehicles. Access from the roadway onto the property is also considered to be adequate for firefighting purposes.

Recommendation

Nil

18 Compliance or non compliance with the specifications and requirements for bushfire protection measures.

APZ A defensible space is provided onsite. An APZ is provided and maintained for the life of the development.	Achievable with the implementation of the recommendations in section 13
SITING AND DESIGN: Buildings are sited and designed to minimise the risk of bush fire attack.	Achievable with the implementation of the recommendations in section 10
CONSTRUCTION STANDARDS: It is demonstrated that the proposed building can withstand bush fire attack in the form of wind, smoke, embers, radiant heat and flame contact.	Achievable with the implementation of the recommendations in section 11
ACCESS Safe, operational access is provided (and maintained) for emergency services personnel in suppressing a bush fire while residents are seeking to relocate, in advance of a bush fire, (satisfying the intent and performance criteria for access roads in sections 4.1.3 and 4.2.7).	Achievable with the implementation of the recommendations in section 16
WATER AND UTILITY SERVICES: <ul style="list-style-type: none"> adequate water and electricity services are provided for firefighting operations Gas and electricity services are located so as not to contribute to the risk of fire to a building. 	Achievable with the implementation of the recommendations in section 12
LANDSCAPING: <ul style="list-style-type: none"> it is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind driven embers to cause Ignitions. 	Achievable with the implementation of the recommendations in section 14

19 Conclusions.

Based on the above report and with the implementation of the recommendation contained within this report the consent authority should determine that this development can comply with the requirements of AS 3959-2018 and 'Planning for Bushfire Protection' guidelines.

The recommendations contained within this report are to be implemented in their entirety. Changing one aspect may have an adverse effect on the rest of the recommendations.

Bushfires are affected by many external influences such as climactic conditions, vegetation type, moisture content of the fuel, slope of the land and human intervention to name a few and are difficult to predict.

This report does not intend to provide a guarantee that the subject property will survive if a bushfire should impact the surrounding area. The purpose of this report is to show the developments level of compliance or in some cases non-compliance with the New South Wales legislation regarding building in bushfire prone areas.

Where non-compliance is found measures will be suggested that should make the building less susceptible to the various attack mechanisms of a bushfire and comply with the performance requirements of the Building Code of Australia.

The opinions expressed in this report are based on the writers' experience and interpretation of the relevant guidelines and standards. Notwithstanding the above, these guidelines and standards are open to interpretation. All care has been taken to ensure that the opinions expressed in this report are consistent with past successful outcomes.

Some of the information used in the compilation of this assessment has been provided by the proponent or the proponent's representatives. While we believe this information to be true and have accepted the information in good faith however this company or its representatives will not accept any responsibility if the provided information is determined to be incorrect.

This document is to assist the consenting authorities with their assessment of this proposal. The recommendations contained in this assessment reflect the normal conditions that are typically applied by the consent authority for a proposal such as this however the conditions of consent for the proposal will be supplied by the certifying authority on approval of the development and may not necessarily be the same as the recommendations of this assessment.

The recommendations in this assessment are for planning guidance only, construction details and compliance with all building requirements are the responsibility of the Architect/Designer, Builder and Certifier.

To avoid confusion, unless specifically referenced by the consenting authority, it is strongly recommended that once this proposal has been approved that this document is no longer referenced and that only the official conditions of consent as reflected in documentation by the certifying body are used for construction guidance.

If any further clarification is required for this report, please do not hesitate to contact me using the details above.

Yours Sincerely



Matthew Willis
Grad Dip Planning for Bushfire Prone Areas
Bushfire Planning Services Pty Limited

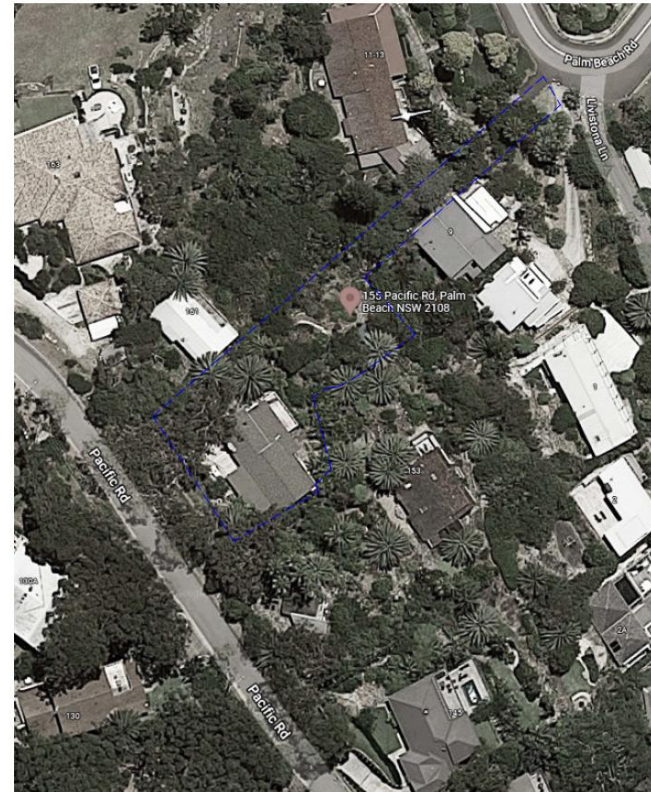
20 References.

- *Australian Building Codes Board (2019). National Construction Code Volume One - Building Code of Australia. ABCB*
- *Australian Building Codes Board (2019). National Construction Code Volume two - Building Code of Australia. ABCB.*
- *Keith, D.A. (2004). Ocean Shores to Desert Dunes: The Native Vegetation of New South Wales and the ACT. NSW Department of Environment and Conservation.*
- *National Association of Steel Framed Housing (2014). "Steel Framed Construction in Bush Fire Areas. NASH*
- *Ramsay, C and Rudolph, L (2003) "Landscape and Building Design for Bush fire Areas". CSIRO Publishing, Collingwood.*
- *Resources and Energy NSW (2016). ISSC 3 Guide for the Managing Vegetation in the Vicinity of Electrical Assets. NSW Government*
- *Rural Fire Service NSW (2005) "Standards for Asset Protection Zones"*
- *Standards Australia (2018). "AS 3959, Construction of buildings in bush fire prone areas".*
- *Standards Australia (2018). "AS/NZS 1530.8.1 Methods for fire tests on building materials, components and structures - Tests on elements of construction for buildings exposed to simulated bush fire attack - Radiant heat and small flaming sources".*
- *Standards Australia (2018). "AS/NZS 1530.8.2 Methods for fire tests on building materials, components and structures - Tests on elements of construction for buildings exposed to simulated bush fire attack - Large flaming sources".*
- *Standards Australia (2014). "AS/NZS 1596 The storage and handling of LP Gas".*

21 Appendix 1 - Plans .

Development Application Additions and Alterations 155 Pacific Road, Palm Beach 2108

DA Sheet List	
Sheet Number	Sheet Name
DA000	Title Page
DA030	Site Plan + Site Analysis
DA040	Erosion, Sediment Control + Waste Management Plan
DA050	Demolition Plan Lower Ground Floor
DA051	Demolition Plan Ground Floor
DA101	Proposed Lower Ground Floor Plan
DA102	Proposed Ground Floor Plan
DA103	Proposed Level 1 Plan
DA104	Proposed Roof Plan
DA105	Studio Plan + Section D-D
DA201	Southwest Elevation
DA202	Southeast Elevation
DA203	Northeast Elevation
DA204	Northwest Elevation
DA205	Streetscape Elevation
DA206	Studio Elevations
DA301	Section A-A
DA302	Section B-B
DA303	Section C-C
DA401	Landscape Area
DA402	GFA Calculations
DA403	Schedule of Finishes
DA404	Height Control + Envelope
DA501	Shadow Diagrams 9am
DA502	Shadow Diagrams 12pm
DA503	Shadow Diagrams 3pm
DA601	Excavation Plan
DA602	Excavation Section



cm

This Drawing must not be used for Construction unless signed and Approved
© Copyright - This document is and shall remain the property of CM Studio Pty Ltd.
CM Studio Conditions of Use: This Document may only be used for the purpose for which it was commissioned and in accordance with the terms of engagement for the commission.

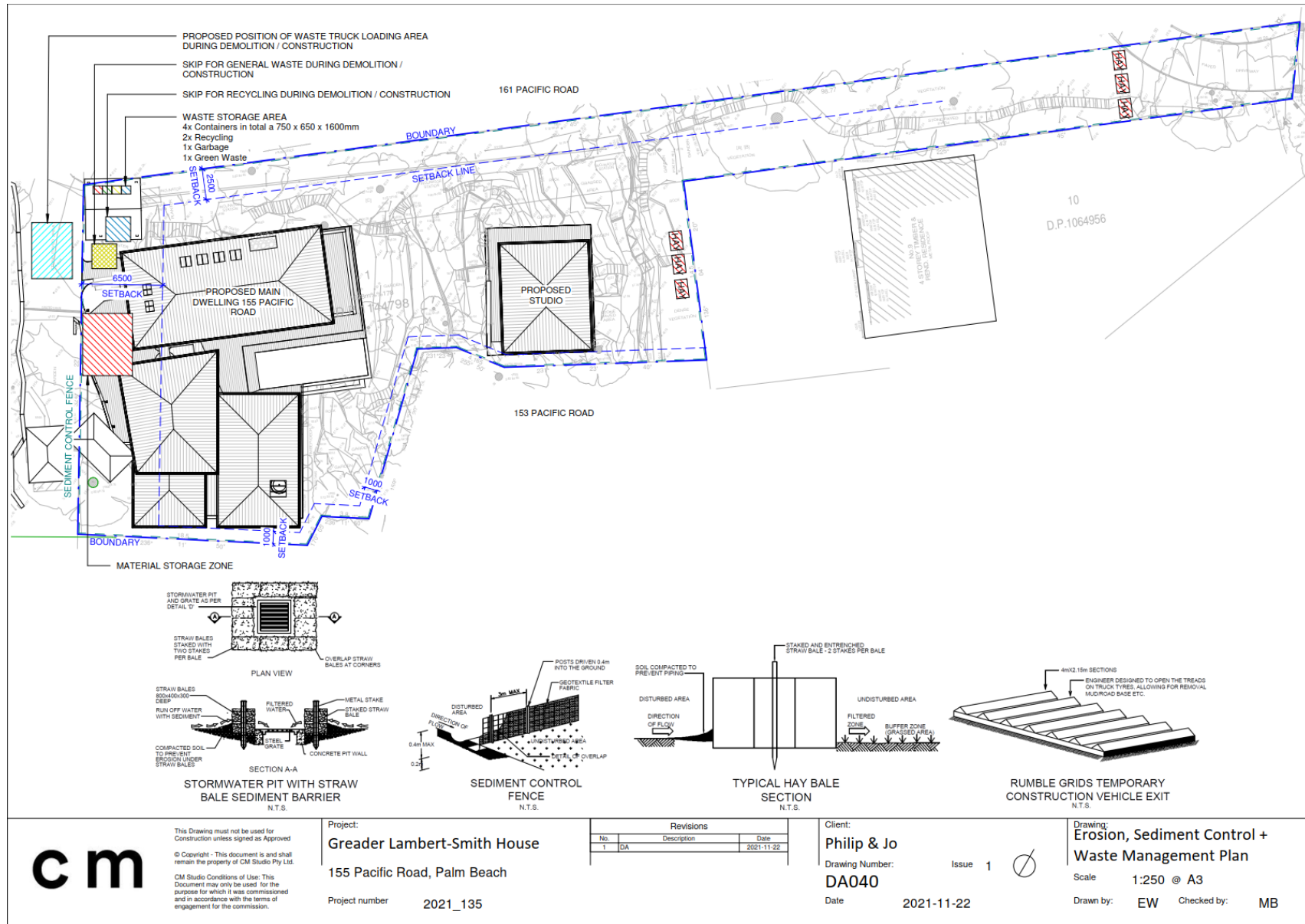
Project:
Greider Lambert-Smith House
155 Pacific Road, Palm Beach
Project number 2021_135

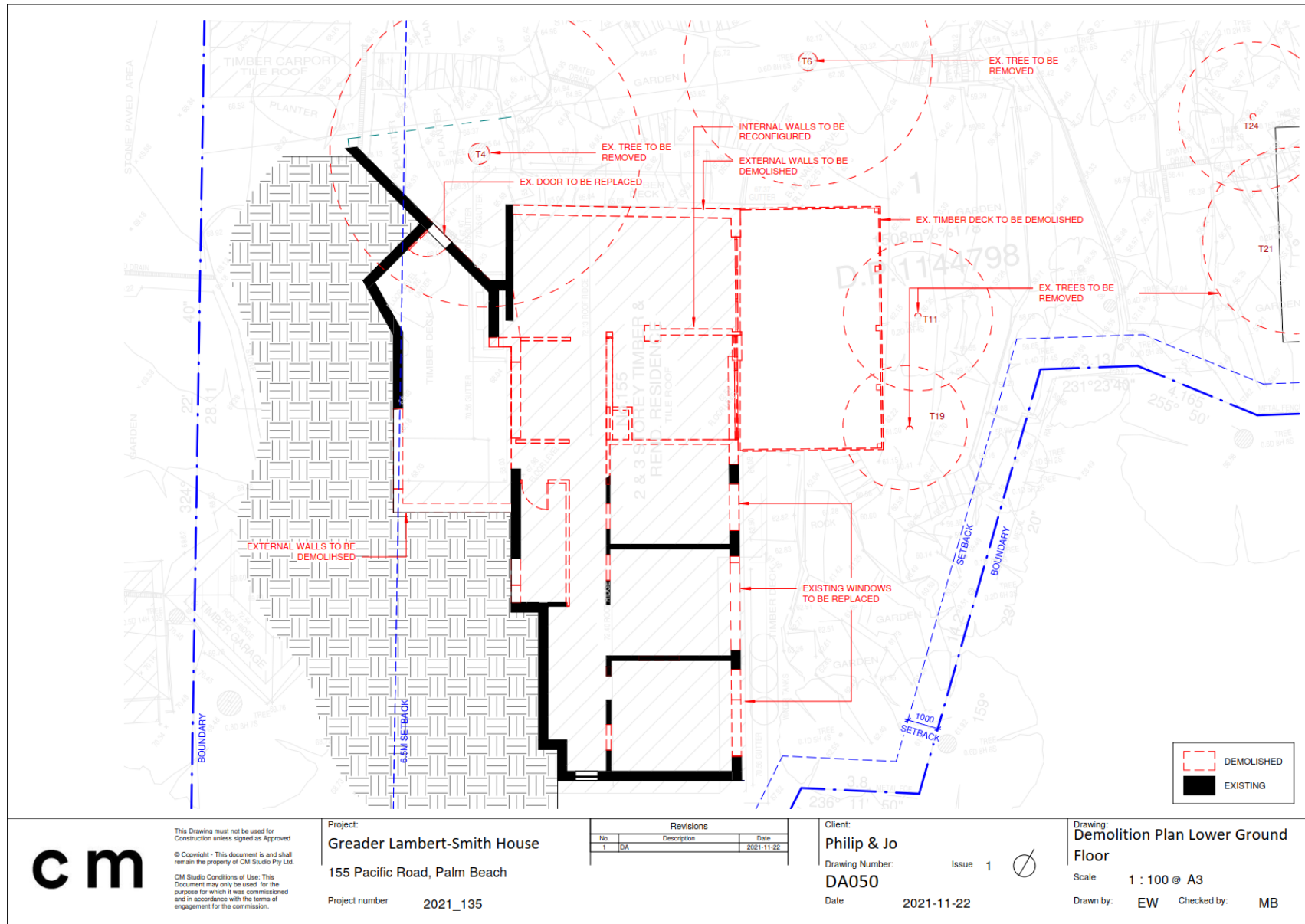
Revisions		
No.	Description	Date
1	QA	2021-11-22

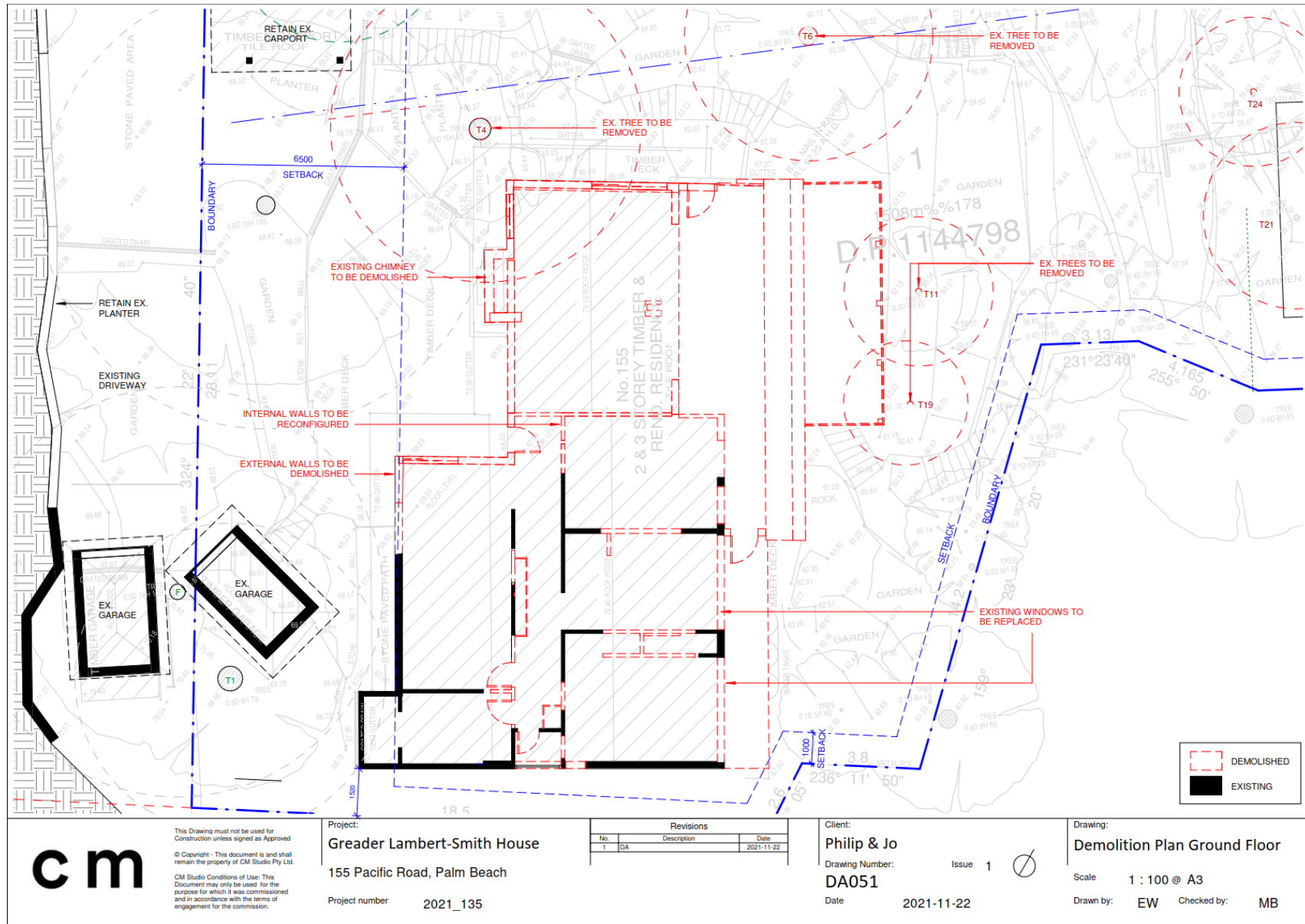
Client:
Philip & Jo
Drawing Number: **DA000** Issue 1
Date 2021-11-22

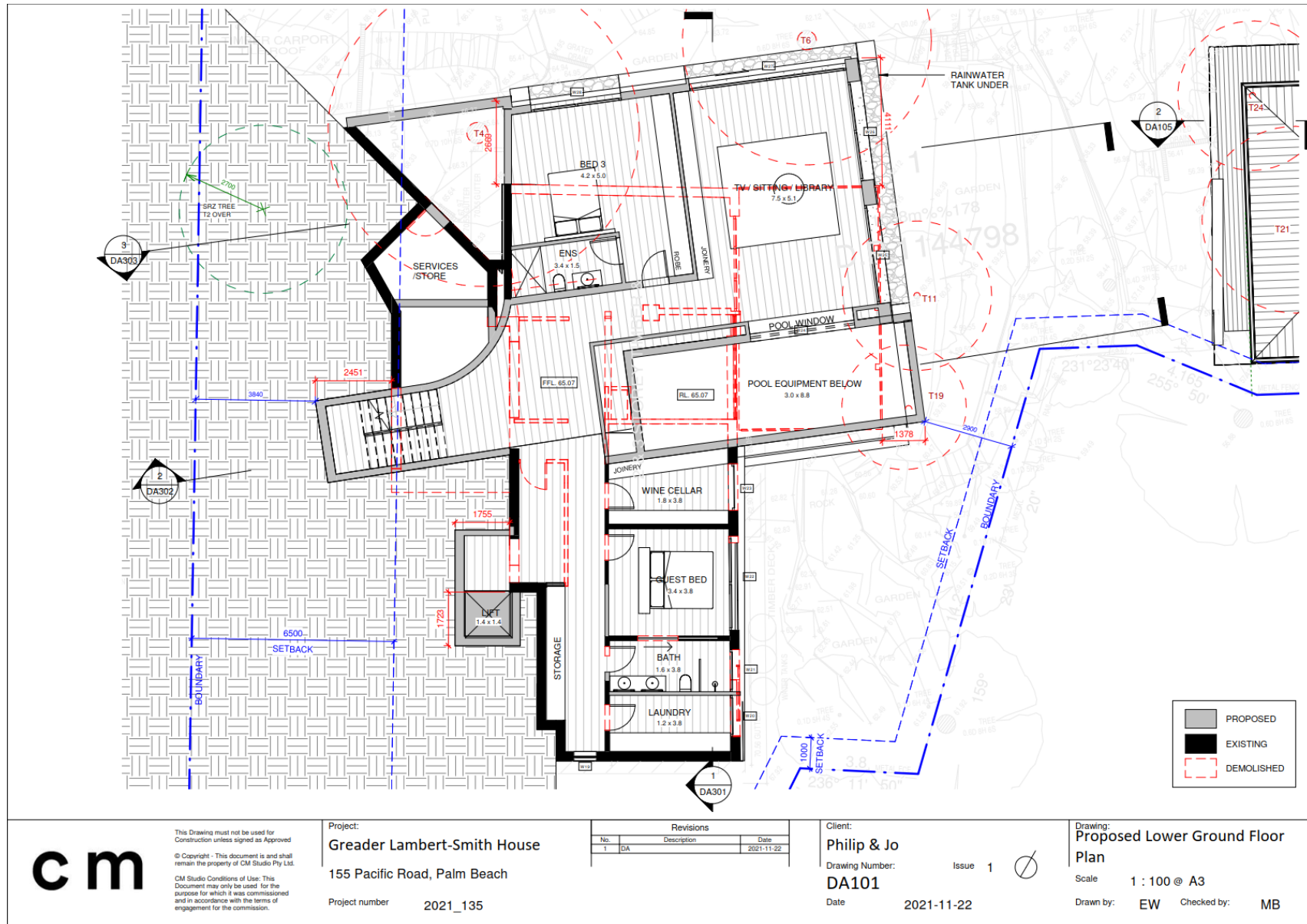
Drawing:
Title Page
Scale @ A3
Drawn by: EW Checked by: MB

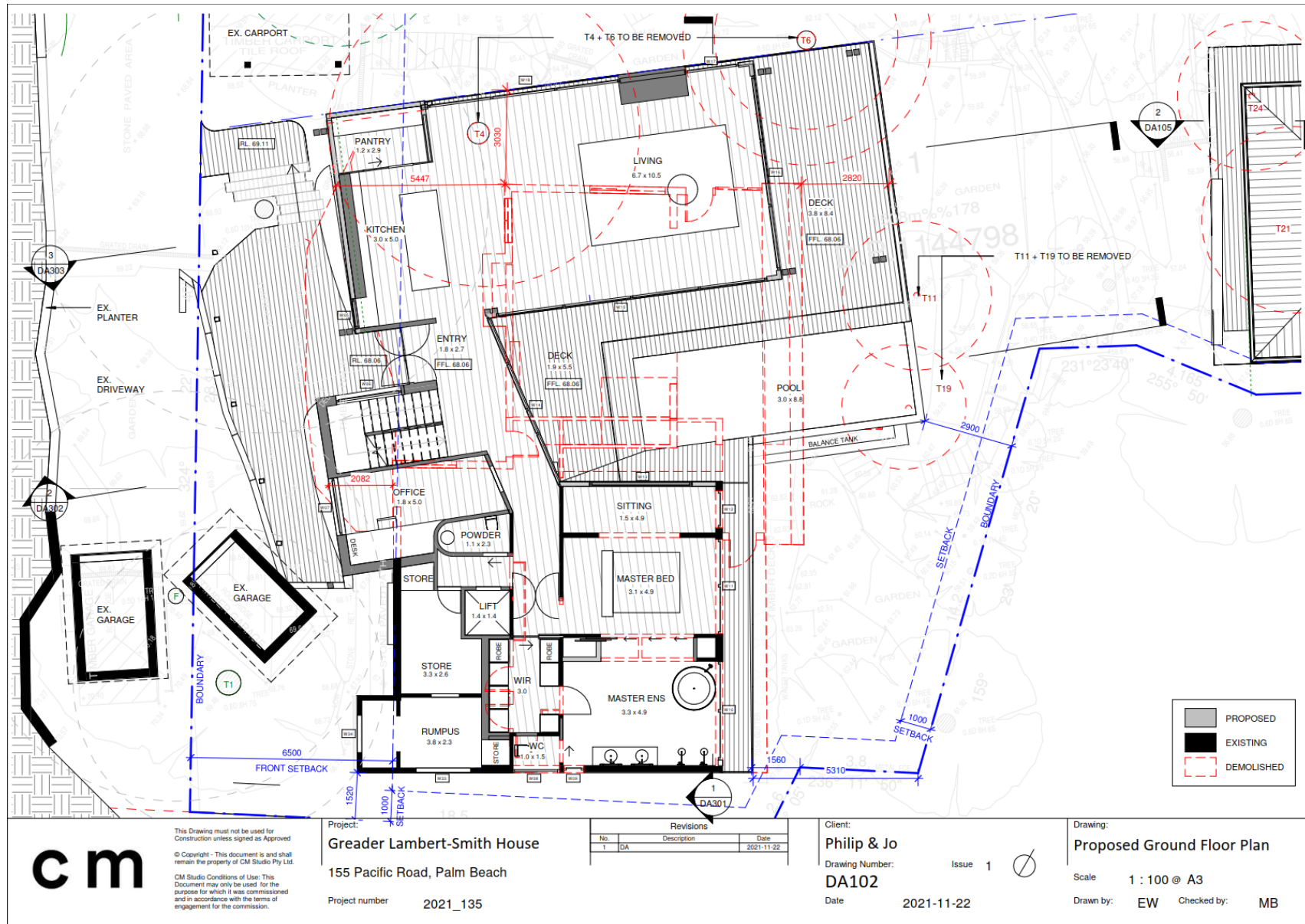


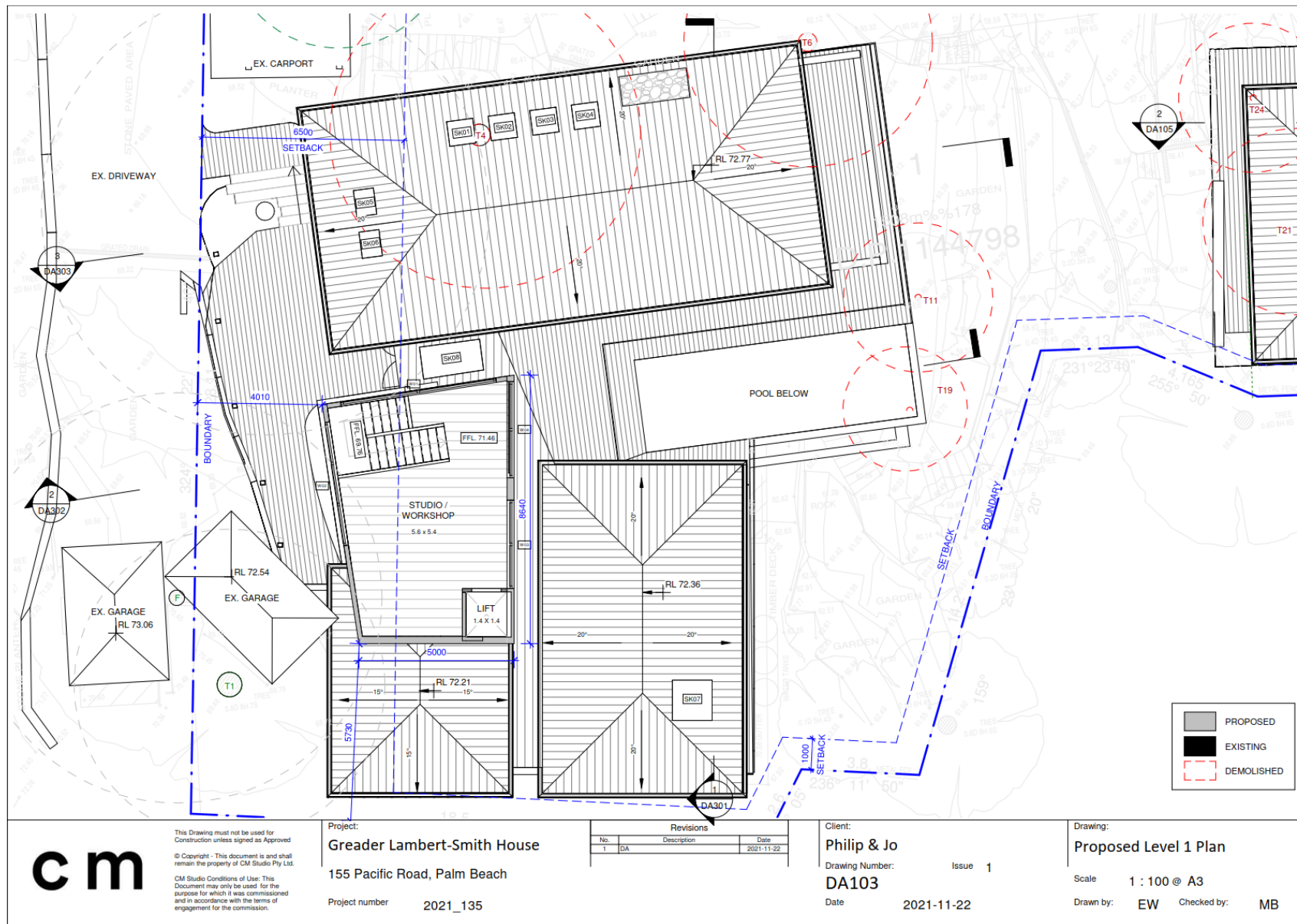


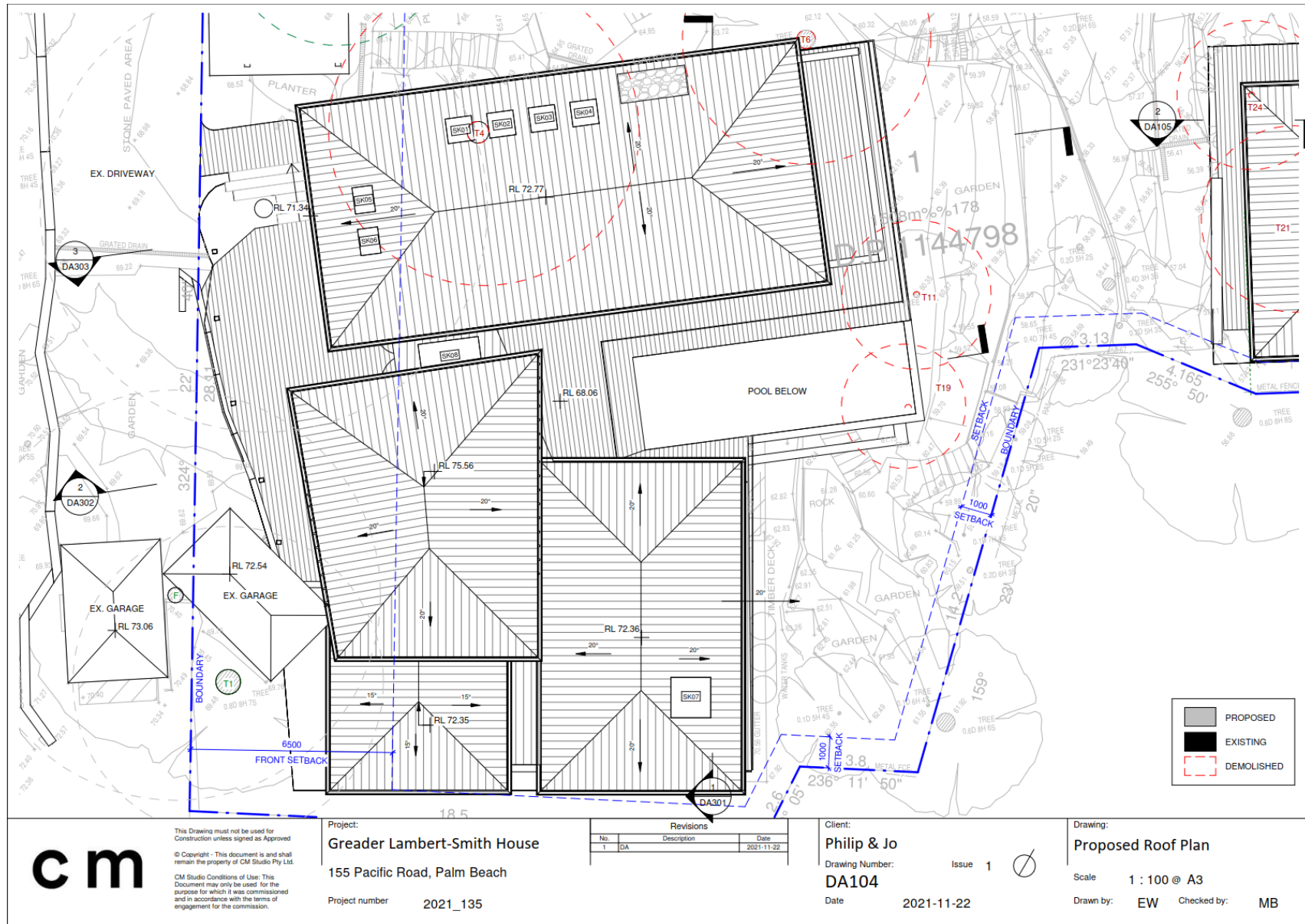


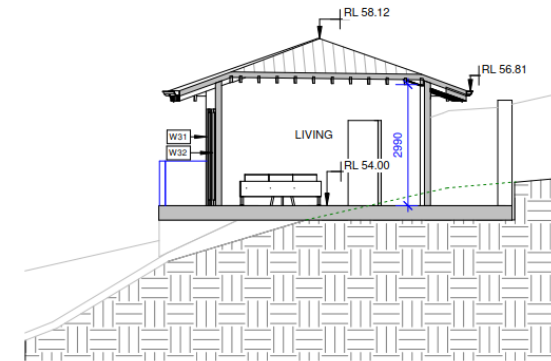






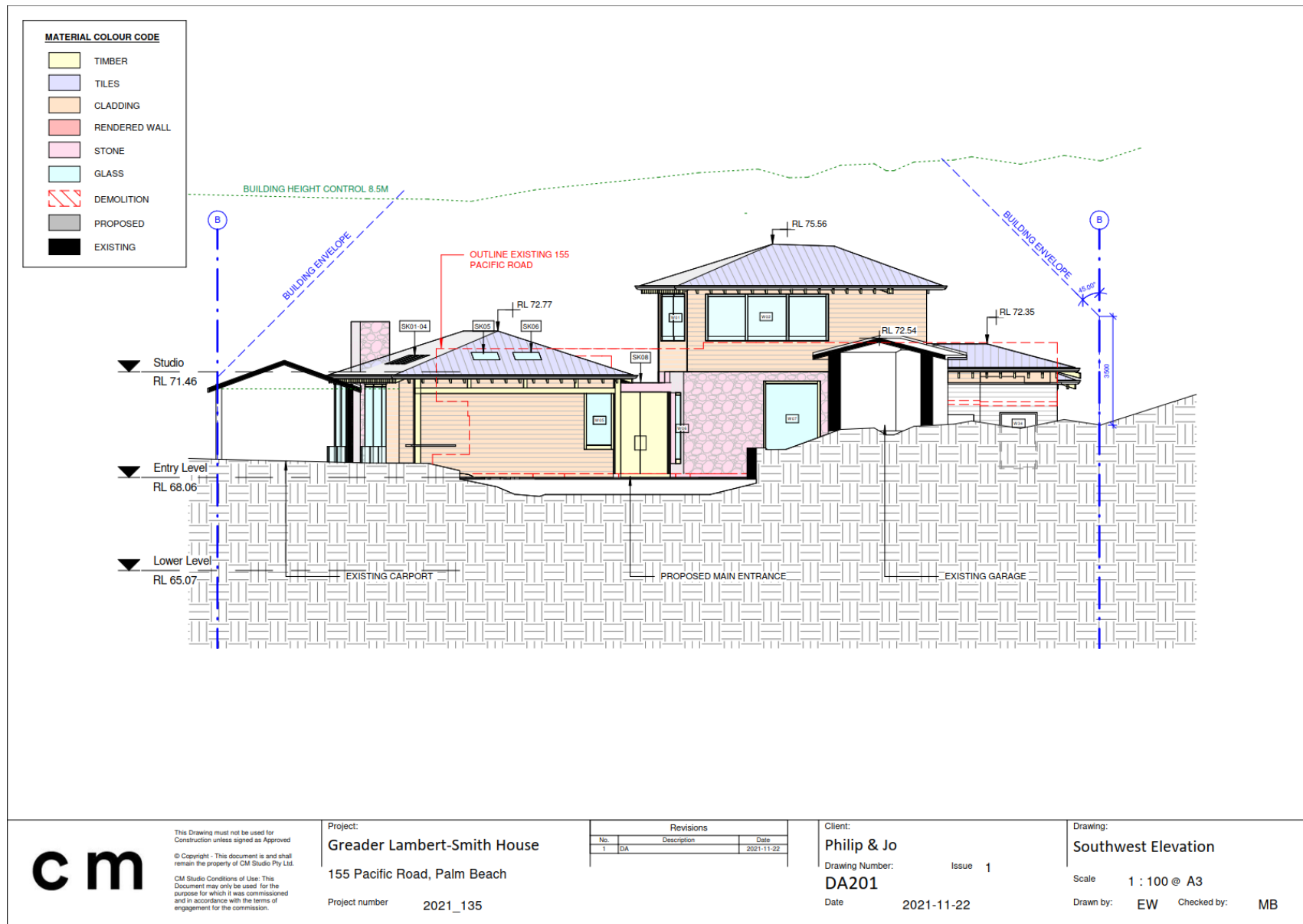


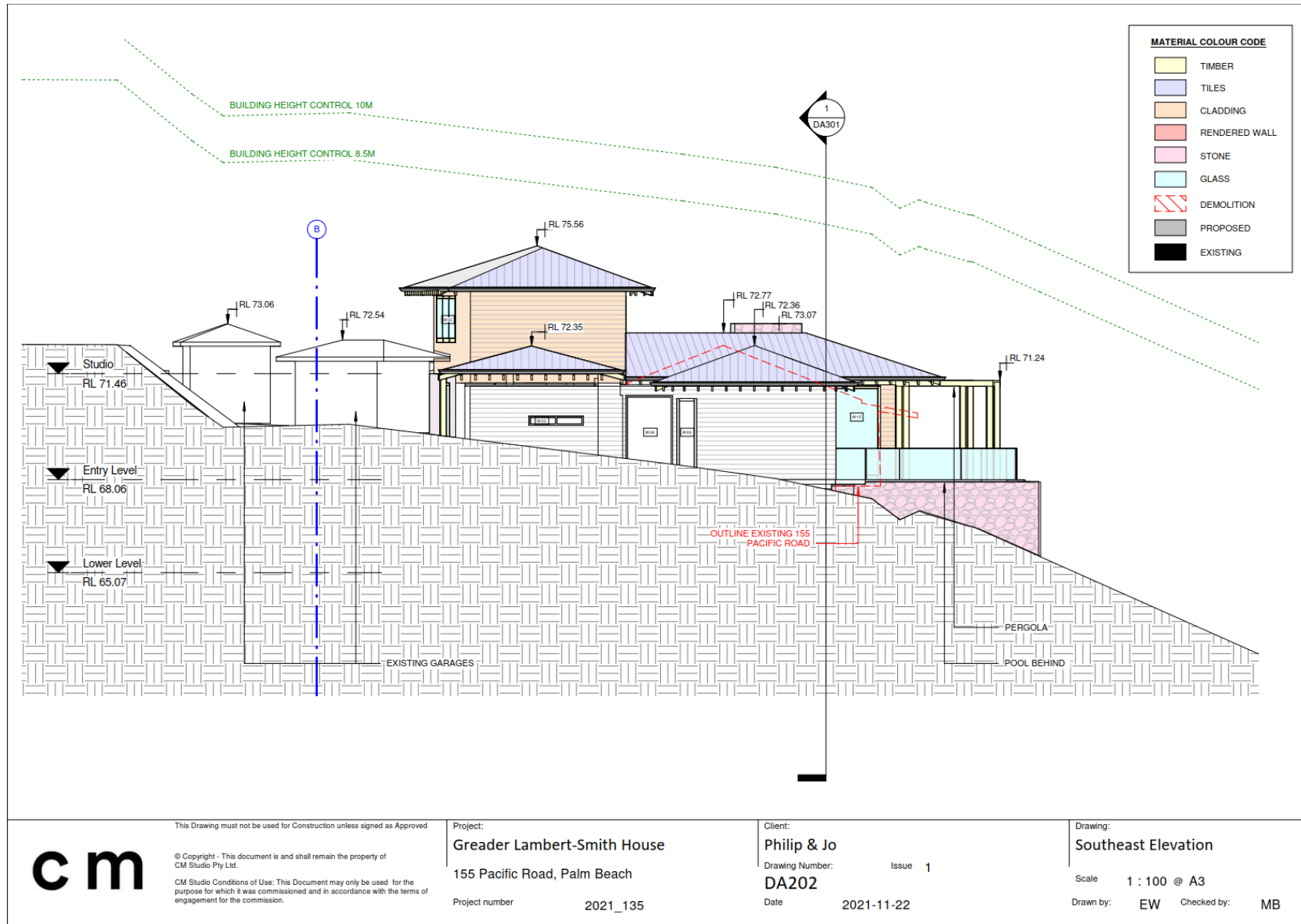


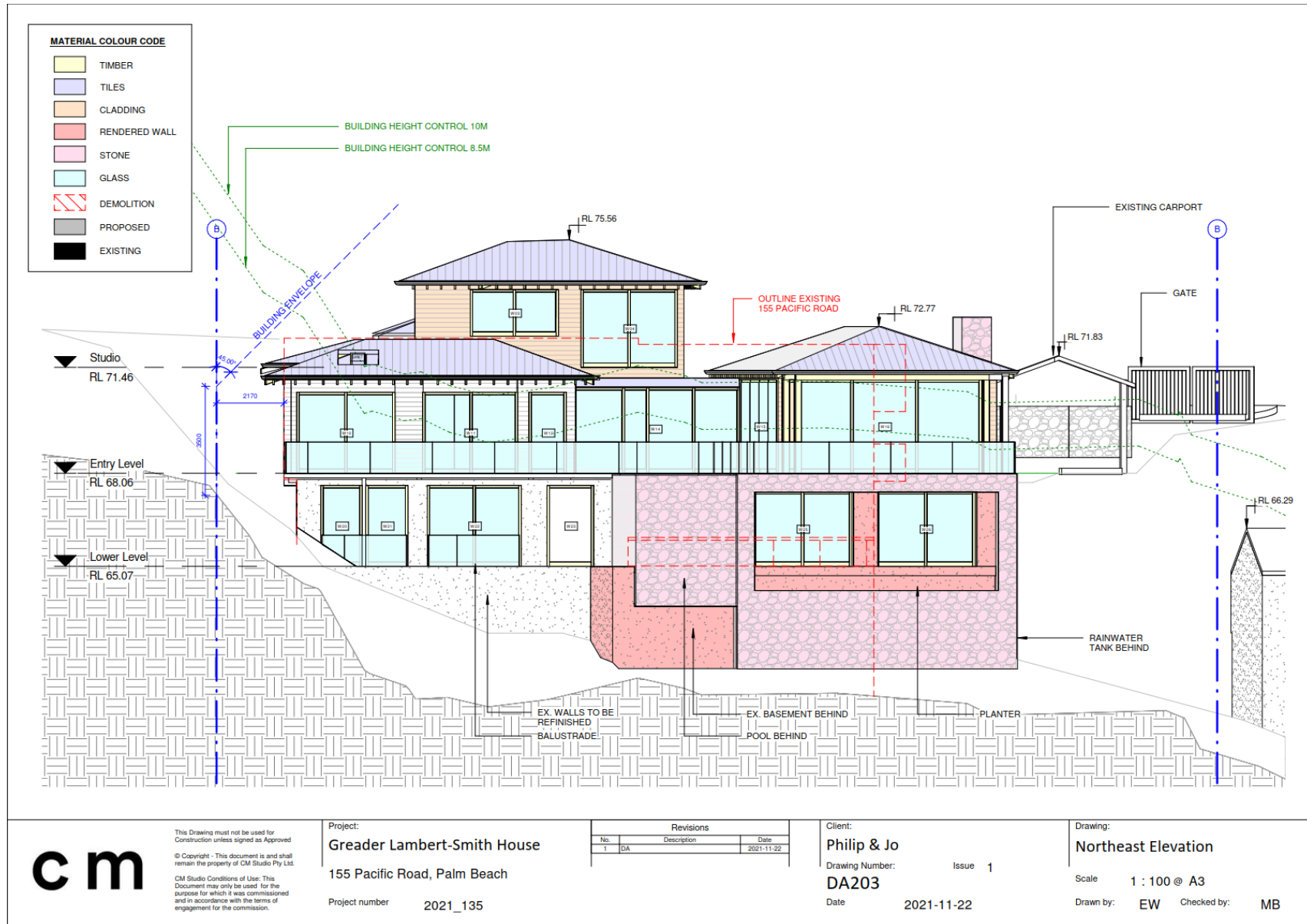


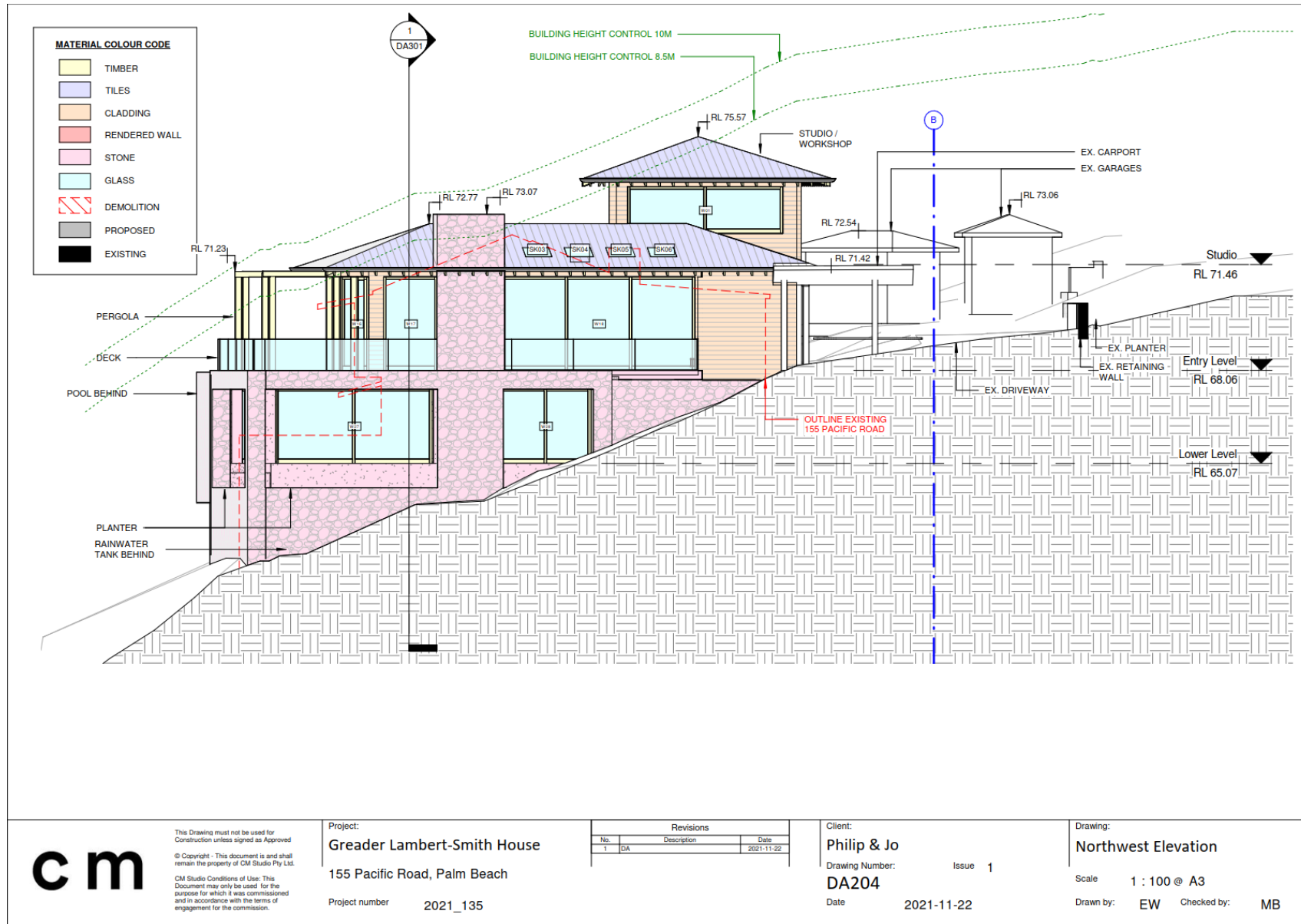
2 Section D-D
1 : 100

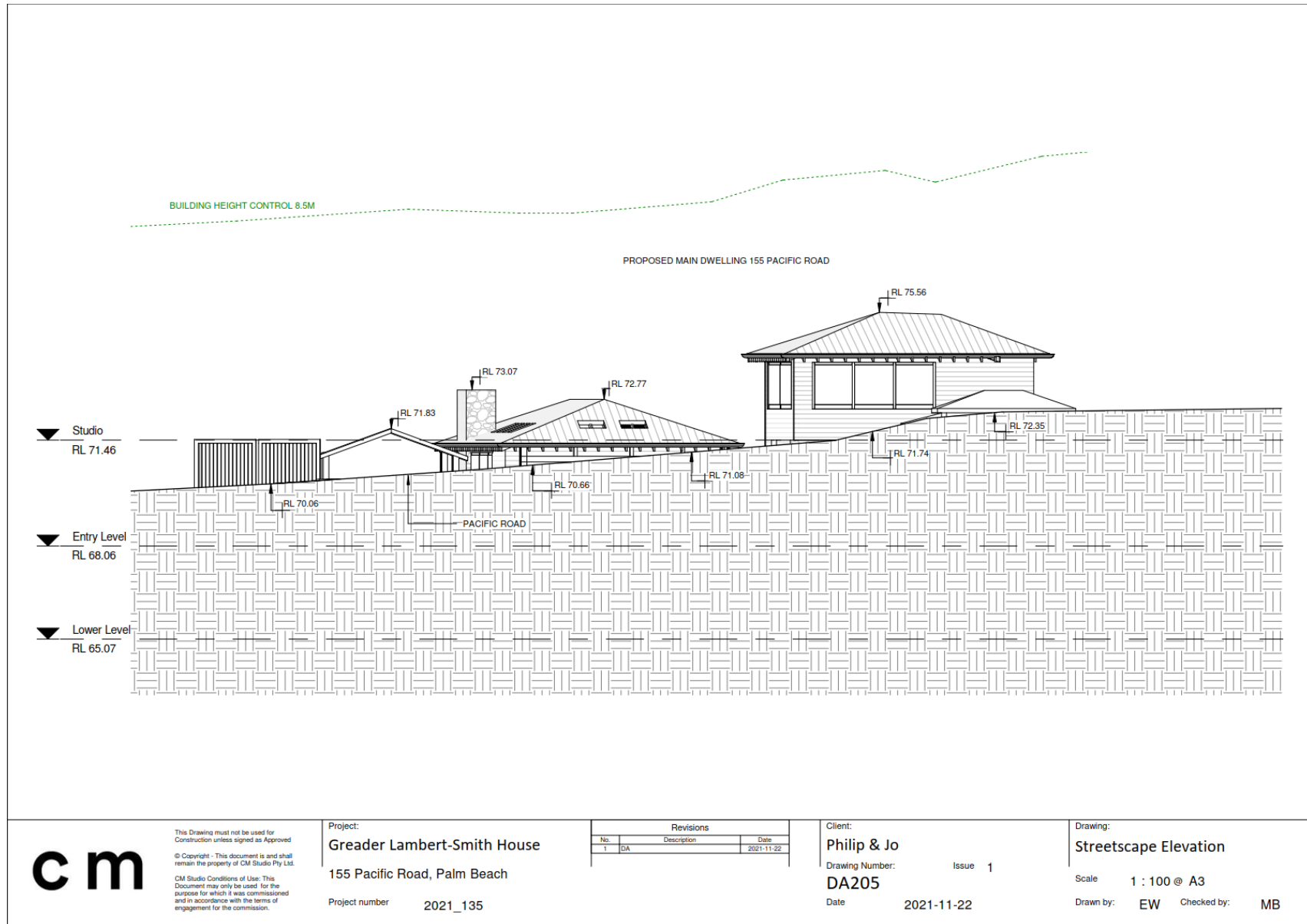
1 Studio Plan



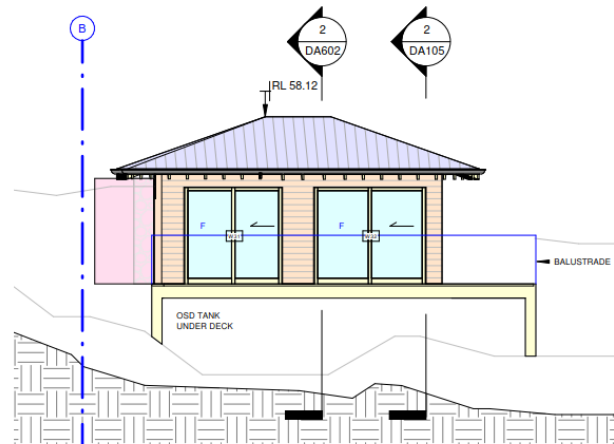




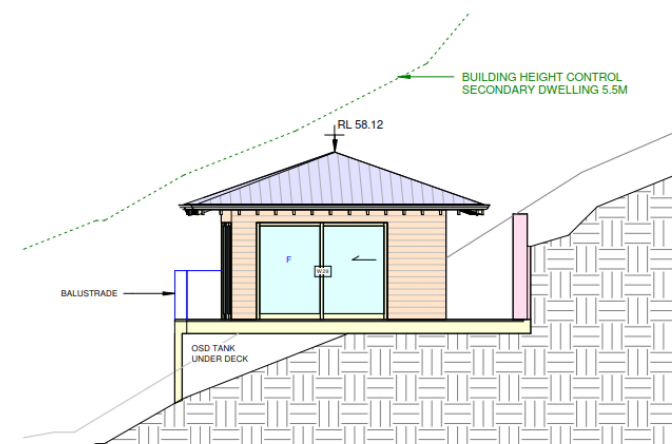




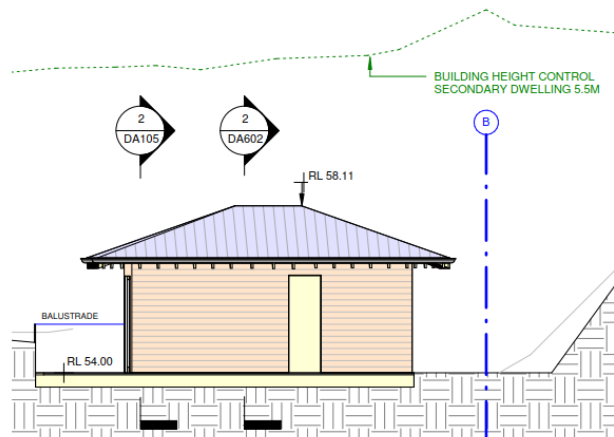
MATERIAL COLOUR CODE	
	TIMBER
	TILES
	CLADDING
	RENDERED WALL
	STONE
	GLASS
	DEMOLITION
	PROPOSED
	EXISTING



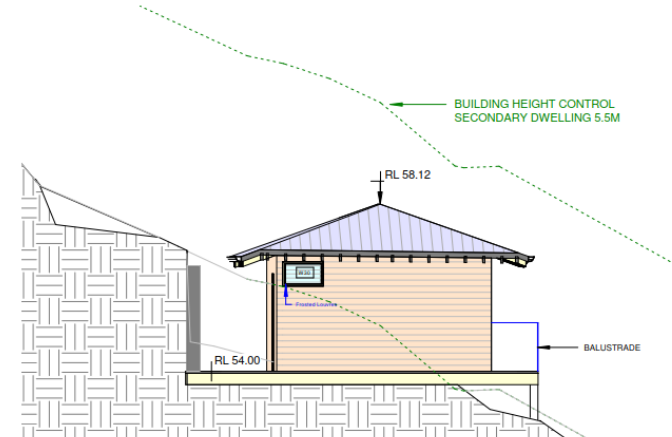
1 DA NE Elevation Studio
1 : 100



2 DA NW Elevation Studio
1 : 100



3 DA SW Elevation Studio
1 : 100



4 DA SE Elevation Studio
1 : 100

cm

This Drawing must not be used for Construction unless signed as Approved
© Copyright - This document is and shall remain the property of CM Studio Pty Ltd.
CM Studio Conditions of Use: This Document may only be used for the purpose for which it was commissioned and in accordance with the terms of engagement for the commission.

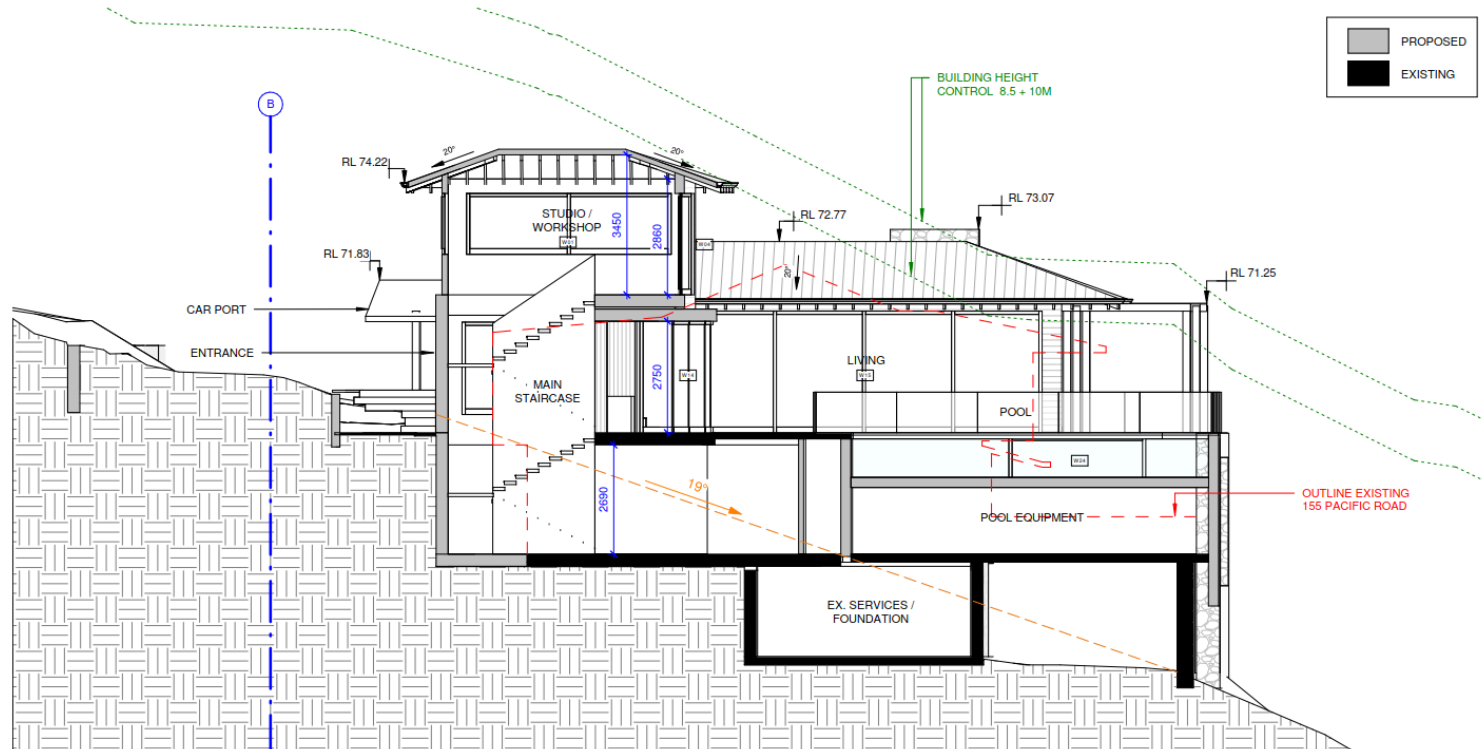
Project:
Greider Lambert-Smith House
155 Pacific Road, Palm Beach
Project number 2021_135

Revisions		
No.	Description	Date
1	DA	2021-11-22

Client:
Philip & Jo
Drawing Number: **DA206**
Date 2021-11-22
Issue 1

Drawing:
Studio Elevations
Scale 1 : 100 @ A3
Drawn by: **EW** Checked by: **MB**





cm

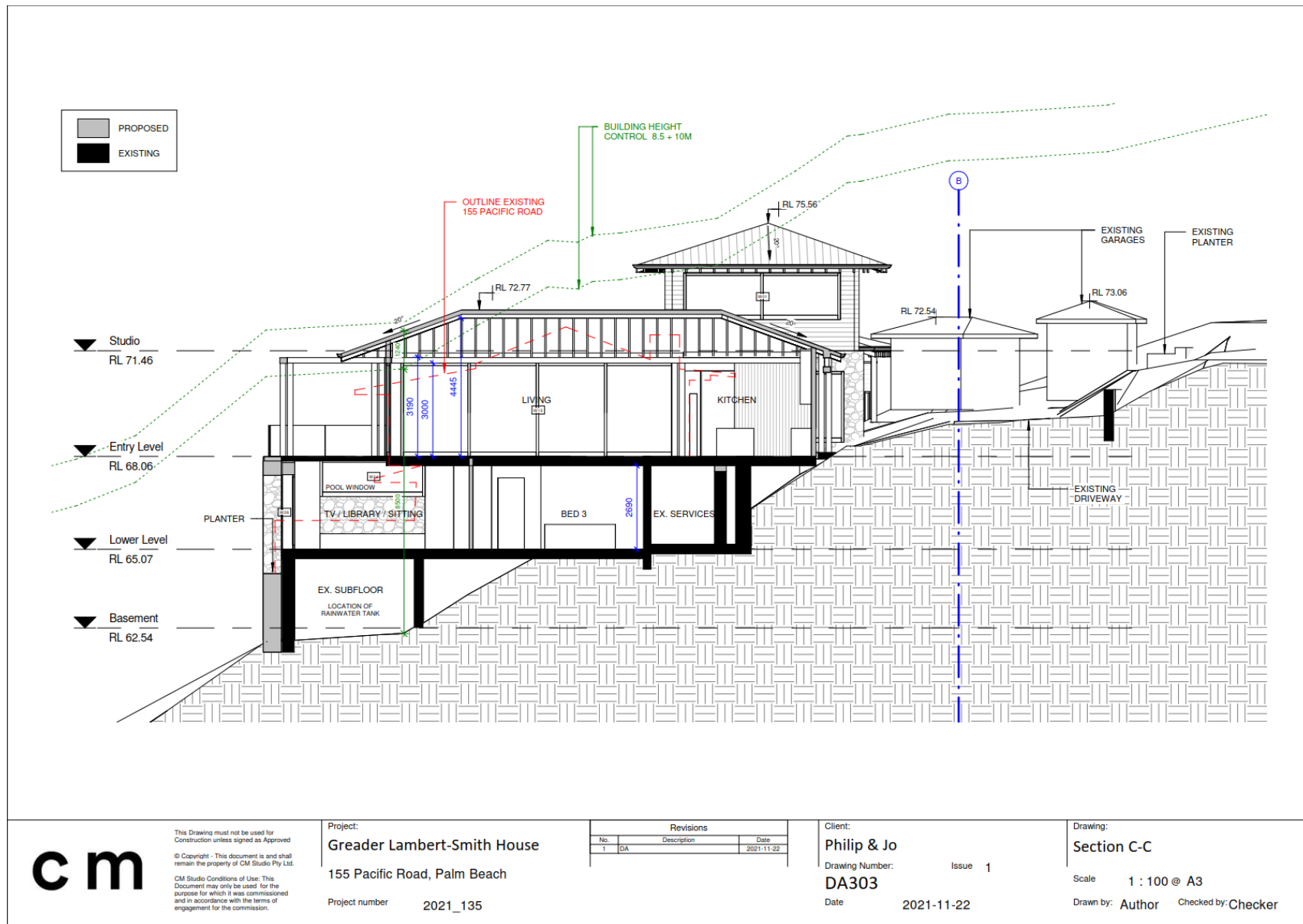
This Drawing must not be used for Construction unless signed as Approved
© Copyright - This document is and shall remain the property of CM Studio Pty Ltd.
CM Studio Conditions of Use: This Document may only be used for the purpose for which it was commissioned and in accordance with the terms of engagement for the commission.

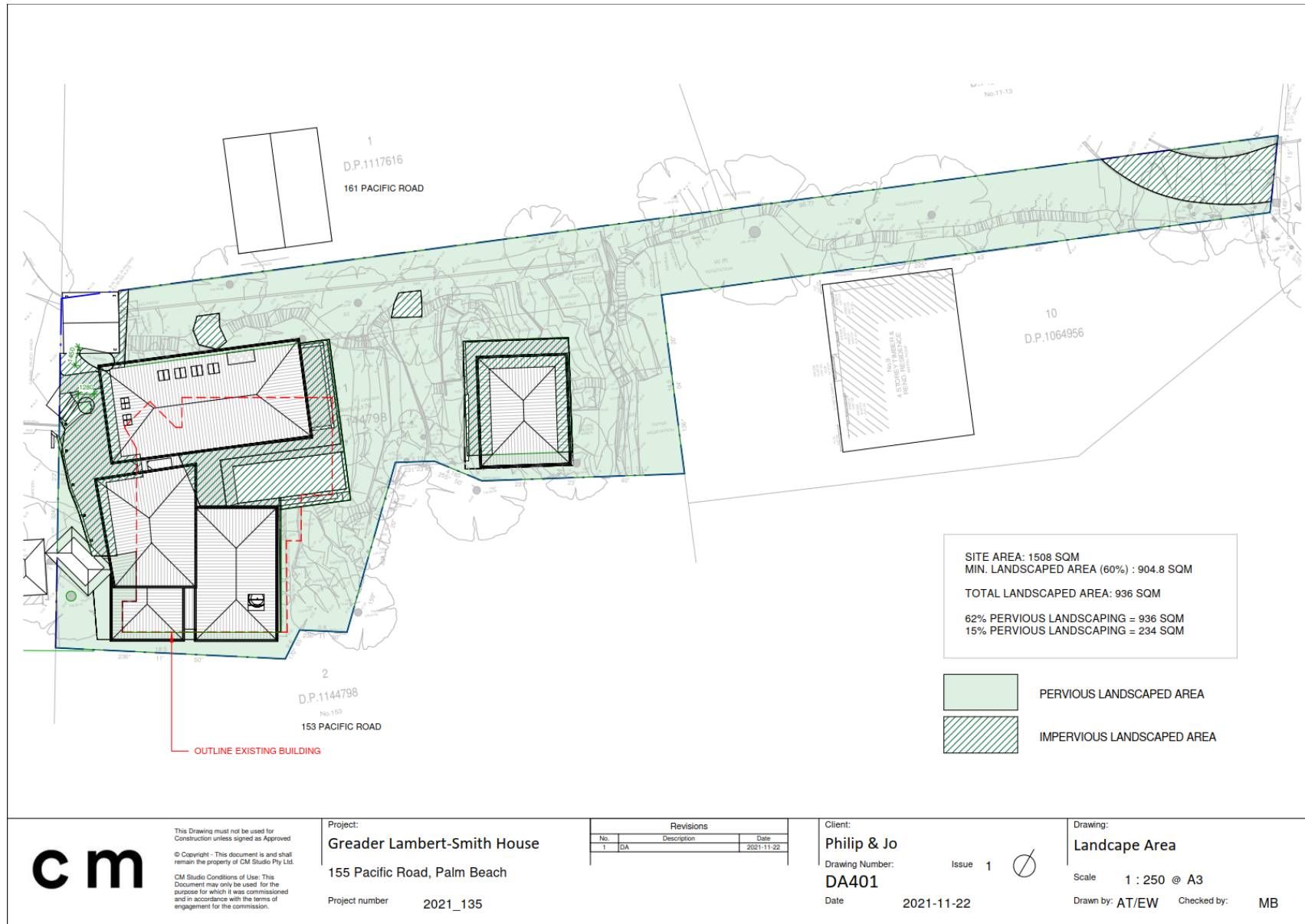
Project:
Greider Lambert-Smith House
155 Pacific Road, Palm Beach
Project number 2021_135

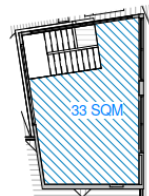
Revisions		
No.	Description	Date
1	DA	2021-11-22

Client:
Philip & Jo
Drawing Number: **DA302**
Date 2021-11-22

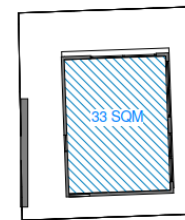
Drawing:
Section B-B
Scale 1 : 100 @ A3
Drawn by: **EW** Checked by: **MB**



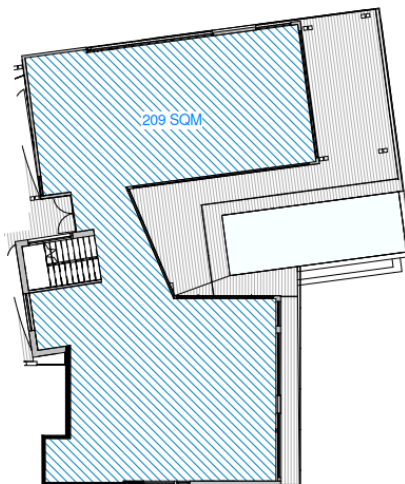




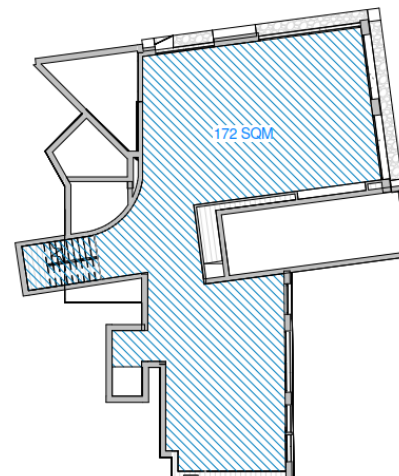
1 GFA Studio/Workshop
1 : 200



2 GFA Studio (Garden)
1 : 200



3 GFA Ground Floor
1 : 200



4 GFA Lower Ground Floor
1 : 200

Gross Floor Area
Site Area: 1508 SQM
Total GFA: 447 SQM

cm

This Drawing must not be used for
Construction unless signed as Approved
© Copyright - This document is and shall
remain the property of CM Studio Pty Ltd.
CM Studio Conditions of Use: This
Document may only be used for the
purpose for which it was commissioned
and in accordance with the terms of
engagement for the commission.

Project:
Greider Lambert-Smith House
155 Pacific Road, Palm Beach
Project number 2021_135

Revisions		
No.	Description	Date
1	DA	2021-11-22

Client:
Philip & Jo
Drawing Number: **DA402** Issue 1
Date 2021-11-22

Drawing:
GFA Calculations
Scale As indicated
Drawn by: **EW** Checked by: **MB**



cm

This Drawing must not be used for Construction unless signed as Approved
© Copyright - This document is and shall remain the property of CM Studio Pty Ltd.
CM Studio Conditions of Use: This Document may only be used for the purpose for which it was commissioned and in accordance with the terms of engagement for the commission.

Project:
Greider Lambert-Smith House
155 Pacific Road, Palm Beach
Project number 2021_135

Revisions		
No.	Description	Date
1	DA	2021-11-22

Client:
Philip & Jo
Drawing Number: **DA501**
Date 2021-11-22
Issue 1

Drawing:
Shadow Diagrams 9am
Scale 1 : 200 @ A3
Drawn by: EW Checked by: MB