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- Dimensions take preference over scale. Do not scale off drawing.
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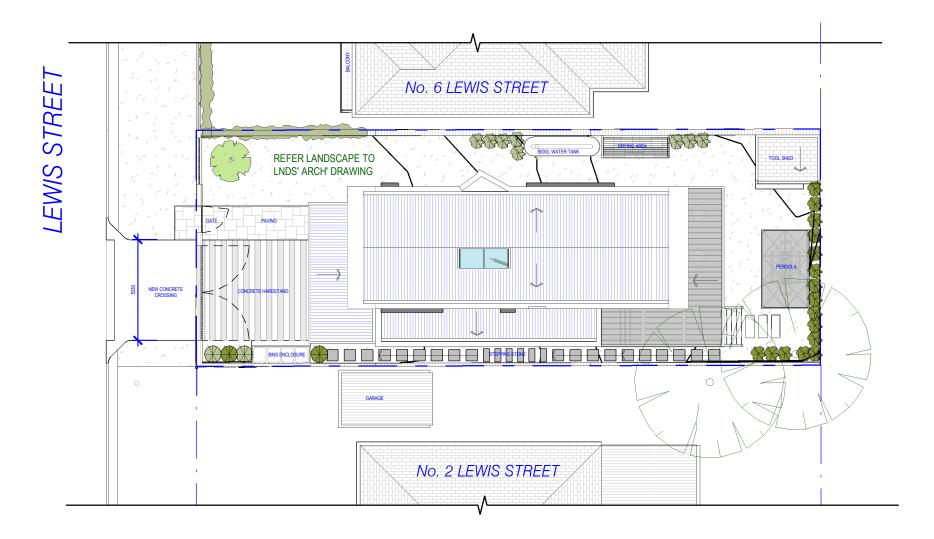
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- Refer to consulting engineers drawings for all structural, civil and stormwater details and member size and treatment.
- Windows frame type as selected to manuf' spec'
- Plasterboard lining to internal stud walls & ceilings
 Goods or materials on site, including their safe storage and protection from the weather are the responsibility of the principal contractor / builder until secured to the structure.

NOT FOR CONSTRUCTION





1 SITE PLAN
1:200





Concept Design Architect

Lot 1, Pier 8-9, 23 Hickson Road Walsh Bay New South Wales 2000 Australia
T 61 2 9290 2722 F 61 2 9290 1150 E sydney@jacksonteece.com
Jackson Teece Chesterman Wills Pty Ltd
Trading as Jackson Teece ABN 15 088 837 290
Nominated Architects: Damian Barker (8192), John Gow (6790), Daniel Hudson (8315)



	project No.	project		scale	date
	AP-19-076		4 Lewis Street, Balgowlah Heights	1 : 200	30/01/2020
		drawing		drawing no	Revision
dio			SITE PLAN	DA-100	

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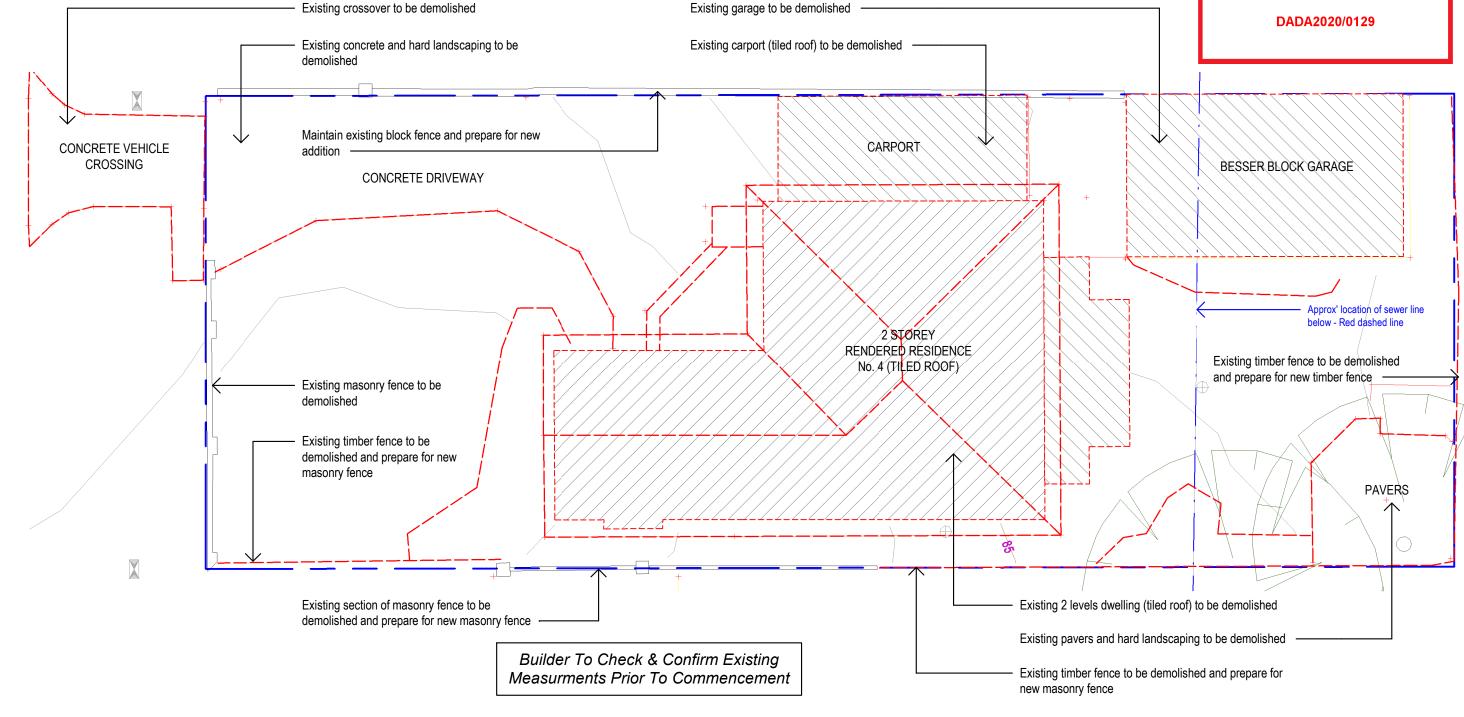
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NOT FOR CONSTRUCTION



Scale: 1:100



 $1 \frac{\text{SITE DEMOLITION PLAN}}{1:100}$

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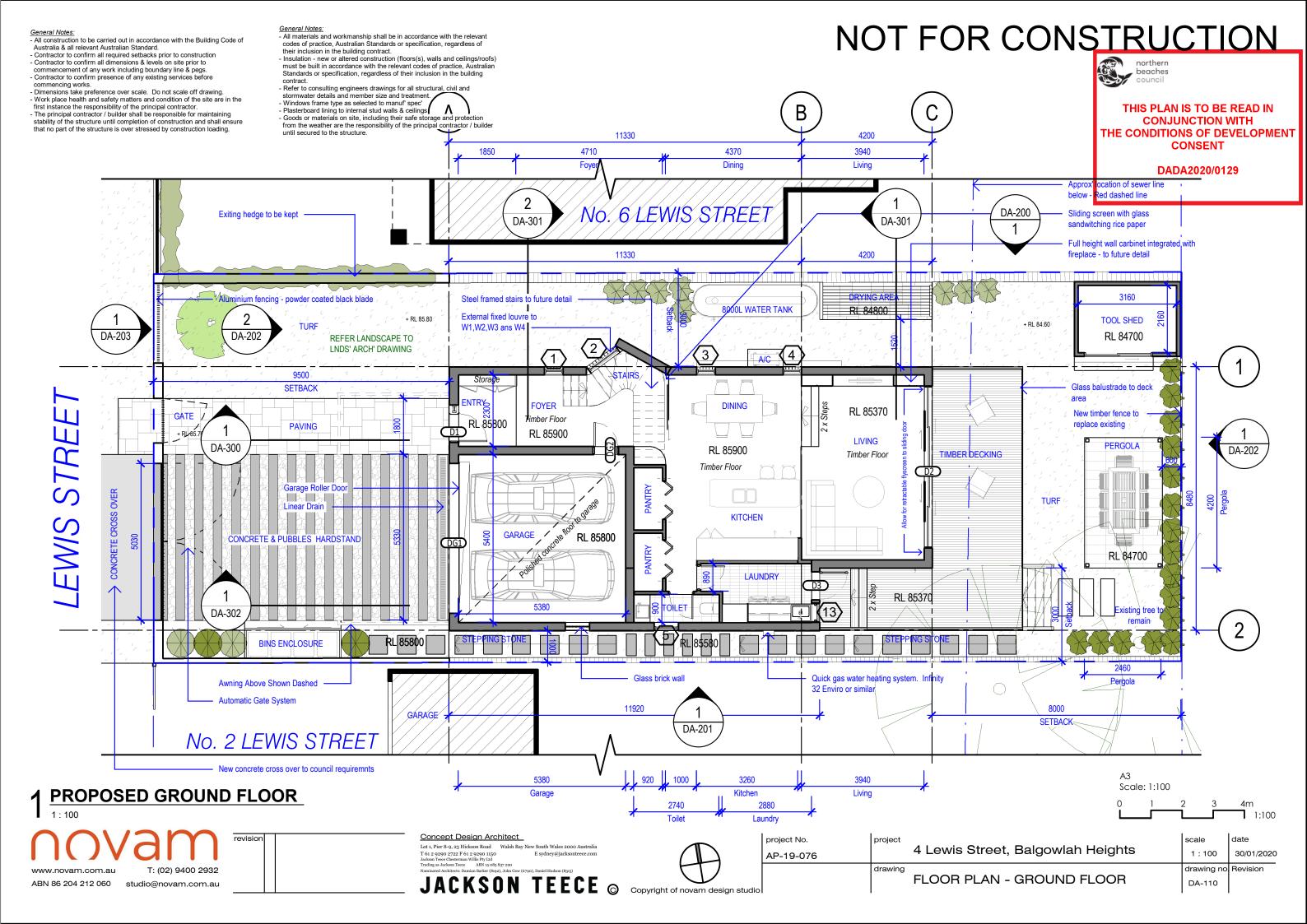
All Demolition to be done in Accordance with Australian Standards AS2601, BCA and Workcover Regulations

Concept Design Architect Lot 1, Pier 8-9, 23 Hickson Road Walsh Bay New South Wales 2000 Australia
T 61 2 9290 2722 F 61 2 9290 1150 E sydney@jacksonteece.com

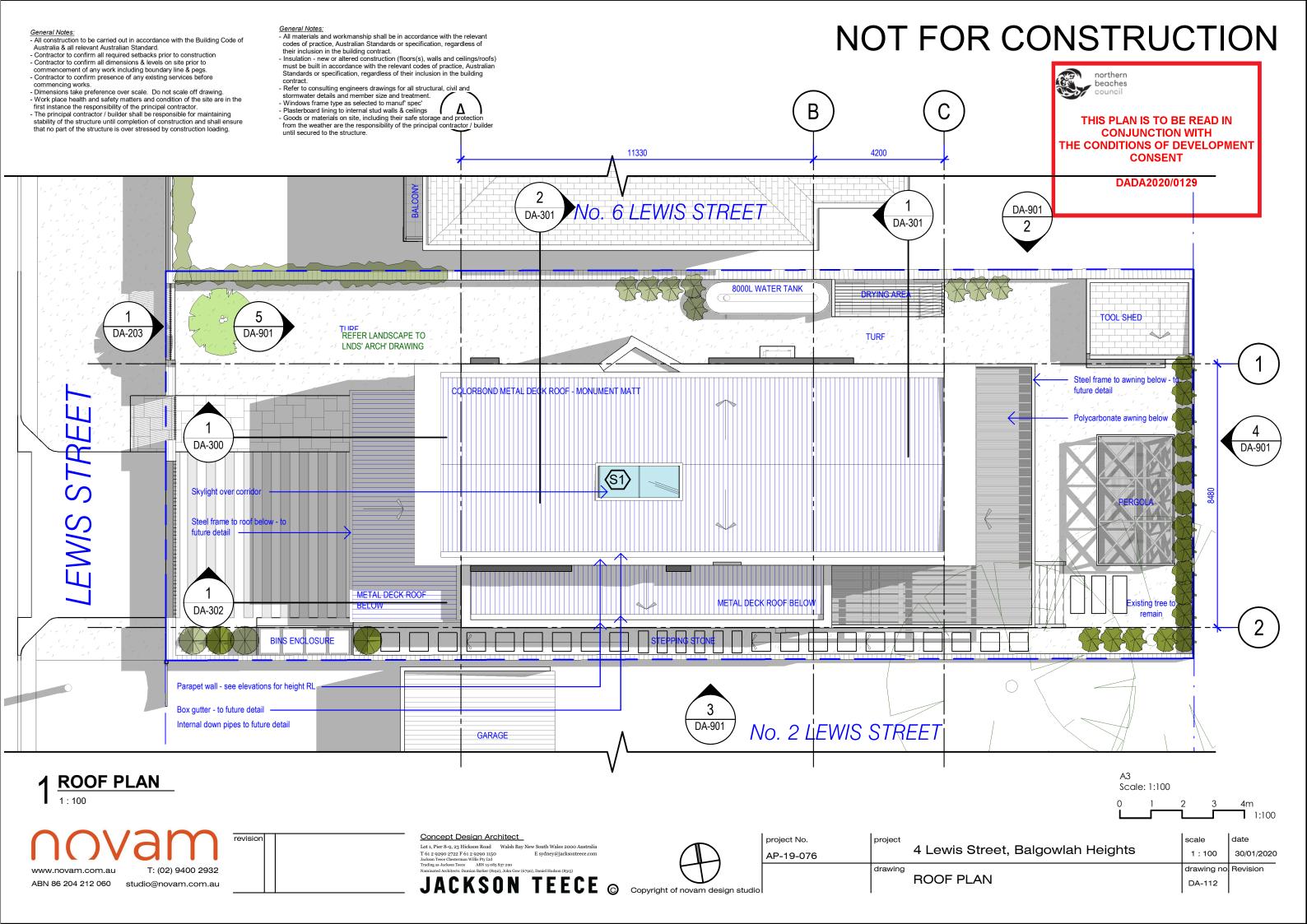
JACKSON TEECE ©



	project No. AP-19-076	project	4 Lewis Street, Balgowlah Heights	scale 1:100	date 30/01/2020
lio		drawing	DEMOLITION PLAN	drawing no. DA-101	Revision



<u>General Notes:</u> - All materials and workmanship shall be in accordance with the relevant codes of practice, Australian Standards or specification, regardless of NOT FOR CONSTRUCTION General Notes: · All construction to be carried out in accordance with the Building Code of Australia & all relevant Australian Standard. their inclusion in the building contract. - Insulation - new or altered construction (floors(s), walls and ceilings/roofs) Contractor to confirm all required setbacks prior to construction Contractor to confirm all dimensions & levels on site prior to must be built in accordance with the relevant codes of practice. Australian commencement of any work including boundary line & pegs. - Contractor to confirm presence of any existing services before Standards or specification, regardless of their inclusion in the building northern beaches commencing works. - Refer to consulting engineers drawings for all structural, civil and stormwater details and member size and treatment. Dimensions take preference over scale. Do not scale off drawing. Work place health and safety matters and condition of the site are in the - Windows frame type as selected to manuf' spec' first instance the responsibility of the principal contractor. - The principal contractor / builder shall be responsible for maintaining - Plasterboard lining to internal stud walls & ceilings - Goods or materials on site, including their safe storage and protection THIS PLAN IS TO BE READ IN stability of the structure until completion of construction and shall ensure from the weather are the responsibility of the principal contractor / builde until secured to the structure. that no part of the structure is over stressed by construction loading. **CONJUNCTION WITH** 11330 THE CONDITIONS OF DEVELOPMENT 2500 3600 4570 CONSENT Bedroom M.Bed No. 6 LEWIS STREE DA-200 DA-301 DA-301 11330 4200 Polycarbonate awning below 8000L WATER TANK DRYING AR Skylight over - Dashed line TOOL SHED DA-203 REFER LANDSCAPE TO LNDS' ARCH' DRAWING (6) **BEDROOM 3** 8000 SETBACK GATE BEDROC TURF **(**16) **PAVING** DA-300 BALCONY Carpet MASTER ROOM Carpet RL 89170 CORRIDOR Carpet Timber Floor BEDROOM 2 Tiles CONCRETE HARDSTAND TIMBER DECKING ELOW METAL DECK ROOF BELOW DA-302 Roof over driveway below GARAGE DA-201 No. 2 LEWIS STREET Scale: 1:100 PROPOSED LEVEL 1 Concept Design Architect project No. date scale Lot 1, Pier 8-9, 23 Hickson Road Walsh Bay New South Wales 2000 Australia T 61 2 9290 2722 F 61 2 9290 1150 E sydney@jacksonteece.com 4 Lewis Street, Balgowlah Heights 1:100 30/01/2020 AP-19-076 drawing no Revision T: (02) 9400 2932 www.novam.com.au JACKSON TEECE FLOOR PLAN - LEVEL 1 DA-111 ABN 86 204 212 060 studio@novam.com.au



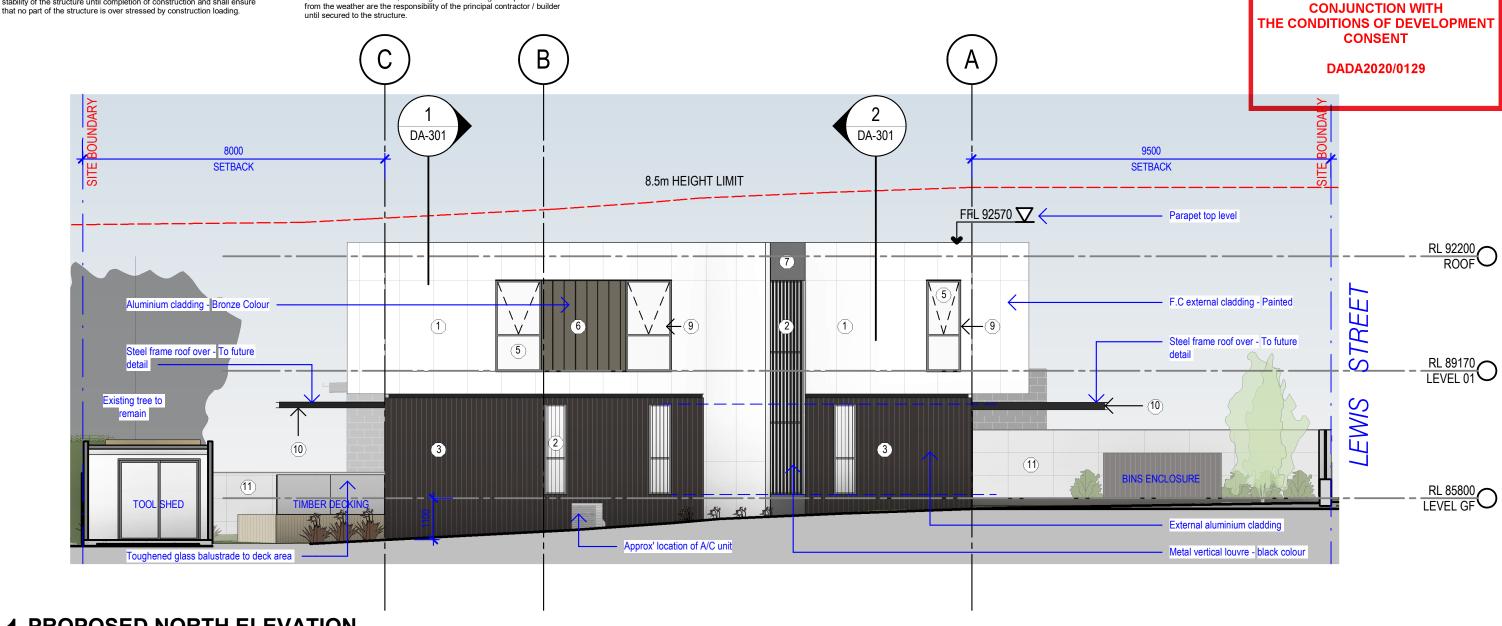
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THIS PLAN IS TO BE READ IN



PROPOSED NORTH ELEVATION





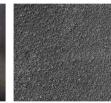






















12. black metal fence

Scale: 1:100

1. F.C. Board painted 2. black metal louvre

3. dark brown aluminium cladding

4. intergrated garage door

6. bronze facade material

7. dark grey painted

8. glass brick wall

9. black painted metal

10. black painted

11. off-white tiles

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project No. date scale 4 Lewis Street, Balgowlah Heights 1:100 30/01/2020 AP-19-076 drawing no Revision PROPOSED NORTH ELEVATION DA-200

- · All construction to be carried out in accordance with the Building Code of
- Australia & all relevant Australian Standard.
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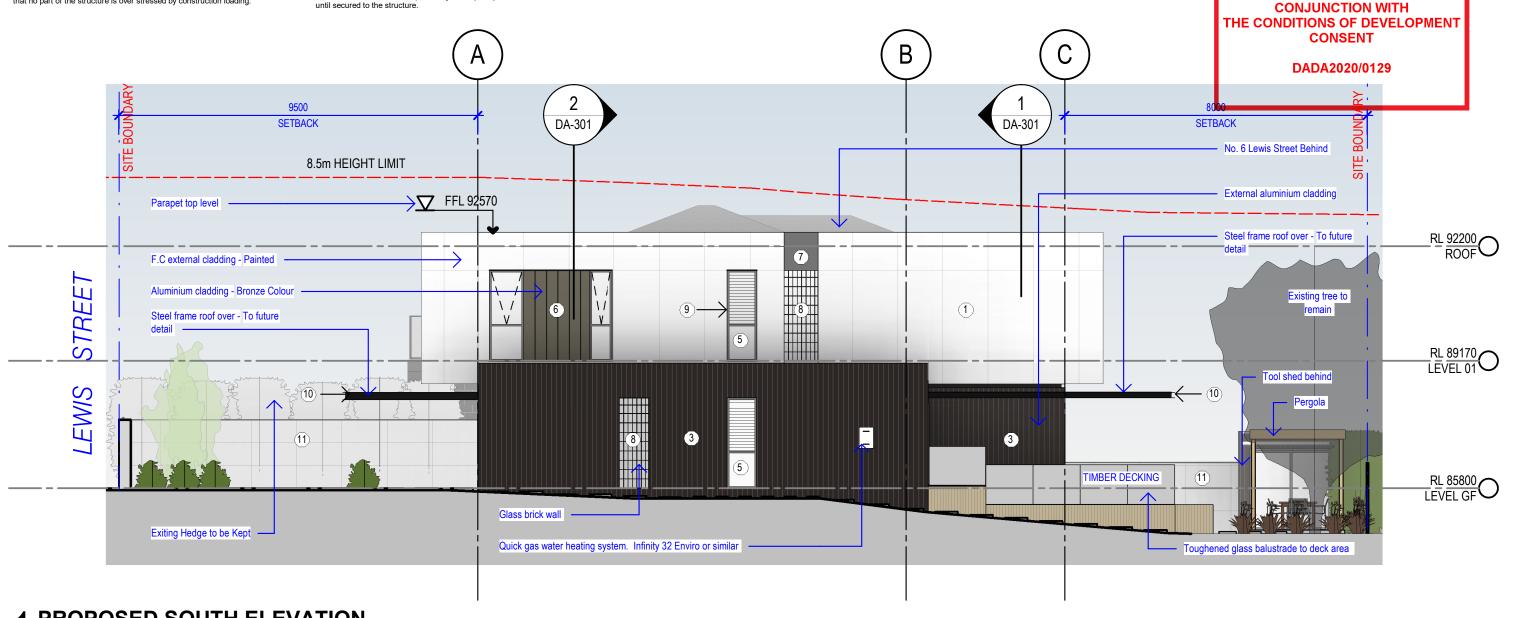
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NOT FOR CONSTRUCTION

beaches

THIS PLAN IS TO BE READ IN



PROPOSED SOUTH ELEVATION





3. dark brown

aluminium cladding



4. intergrated garage

door





6. bronze facade

material



7. dark grey painted



8. glass brick wall



9. black painted metal

framing



10. black painted

steel channel



11. off-white tiles





12. black metal fence

Scale: 1:100

1. F.C. Board painted 2. black metal louvre

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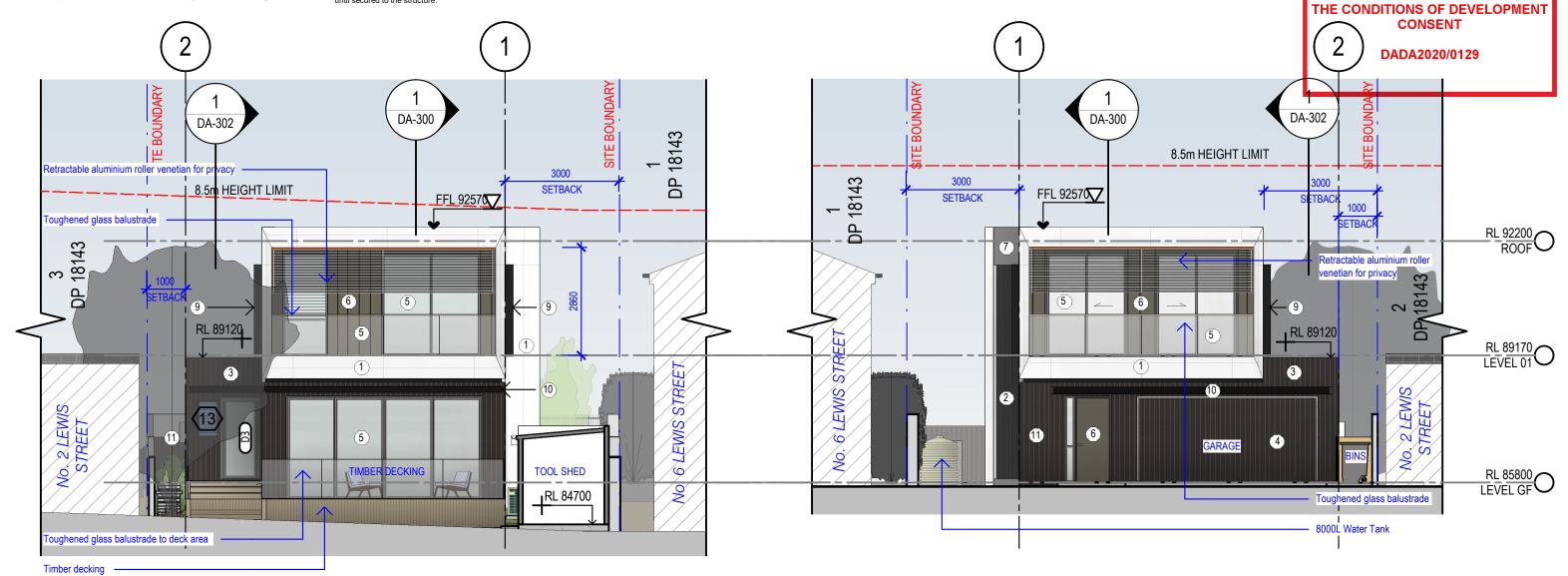
Concept Design Architect Lot 1, Pier 8-9, 23 Hickson Road Walsh Bay New South Wales 2000 Australia
T 61 2 9290 2722 F 61 2 9290 1150 E sydney@jacksonteece.com



	project No.	project		scale	date
	AP-19-076		4 Lewis Street, Balgowlah Heights	1 : 100	30/01/2020
		drawing		drawing no	Revision
udio			PROPOSED SOUTH ELEVATION	DA-201	

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PROPOSED EAST ELEVATION

$2^{\frac{\text{PROPOSED WEST ELEVATION}}{1:100}}$

























NOT FOR CONSTRUCTION

northern beaches

THIS PLAN IS TO BE READ IN

CONJUNCTION WITH



2. black metal louvre

aluminium cladding

4. intergrated garage door

6. bronze facade material

7. dark grey painted wall

steel channel

11. off-white tiles

12. black metal fence Scale: 1:100





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Jackson Teec Chesterman Willis Pty Ltd



	project No.	project		scale	date
	AP-19-076		4 Lewis Street, Balgowlah Heights	1 : 100	30/01/2020
		drawing		drawing no	Revision
ıdio			PROPOSED ELEVATIONS	DA-202	

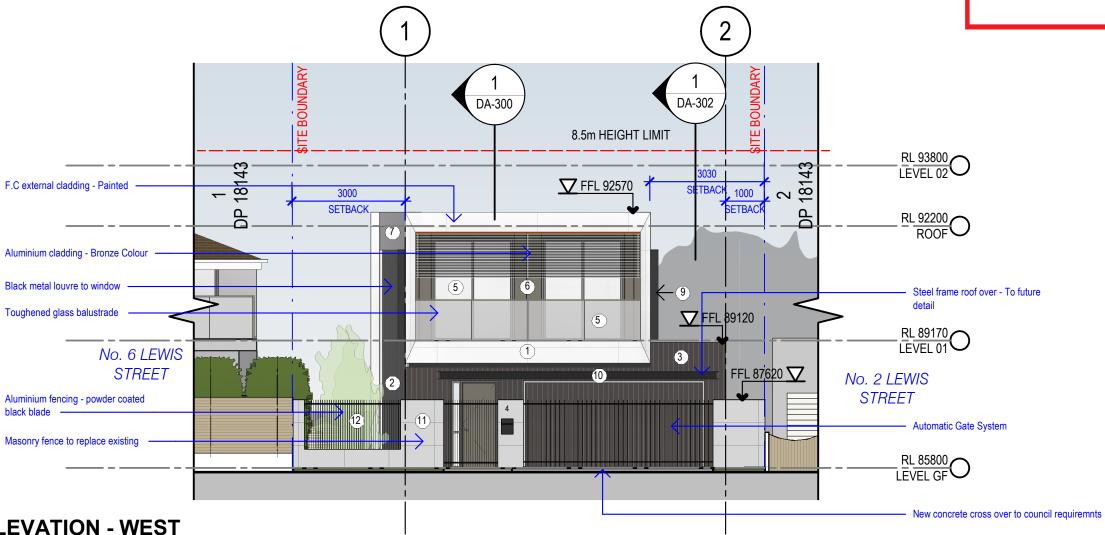
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NOT FOR CONSTRUCTION





LEWIS STREET ELEVATION - WEST





1. F.C. Board painted 2. black metal louvre



3. dark brown aluminium cladding



4. intergrated garage door





6. bronze facade material



7. dark grey painted



8. glass brick wall



9. black painted metal framing



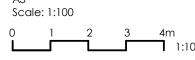
10. black painted steel channel



11. off-white tiles



12. black metal fence



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	project No. AP-19-076	project	4 Lewis Street, Balgowlah Heights	scale 1:100	date 29/04/2020
lio		drawing	PROPOSED LEWIS STREET ELEVATION	drawing no DA-203	Revision

- · All construction to be carried out in accordance with the Building Code of Australia & all relevant Australian Standard.
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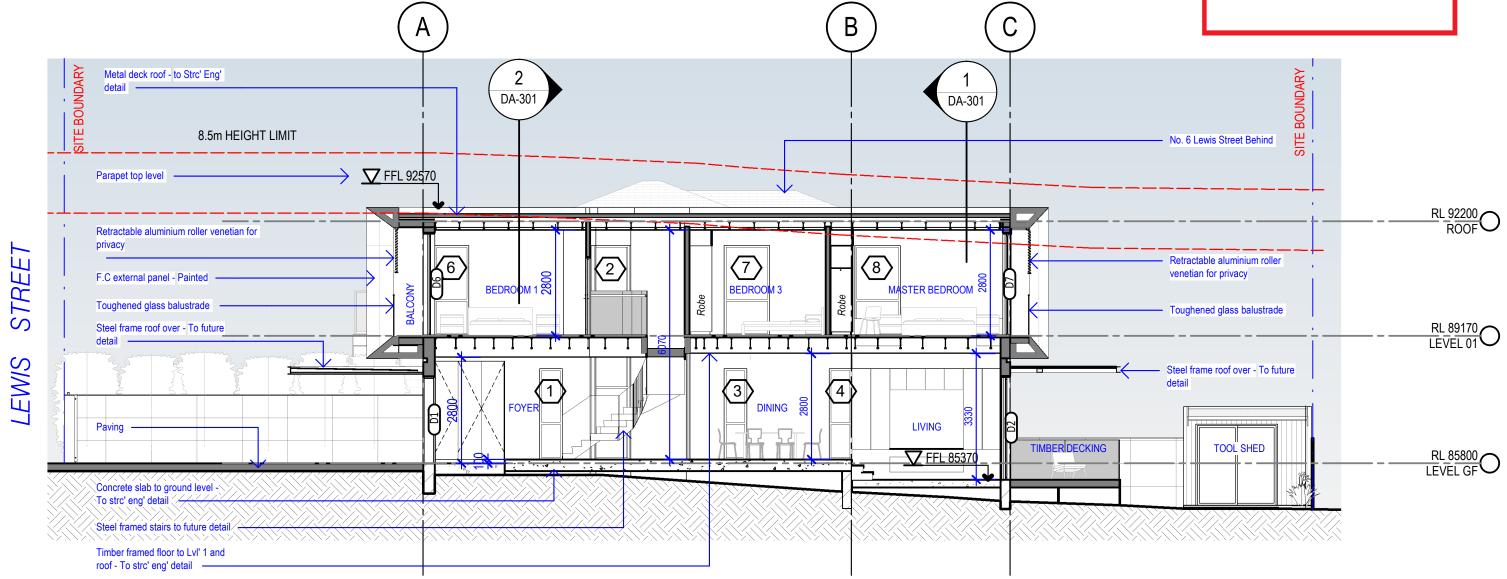
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PROPOSED LONG SECTION - AA





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Jackson Teec Chesterman Willis Pty Ltd JACKSON TEECE © project No. date scale 4 Lewis Street, Balgowlah Heights 1:100 AP-19-076 drawing drawing no Revision **SECTIONS - SHEET 01** DA-300

Scale: 1:100

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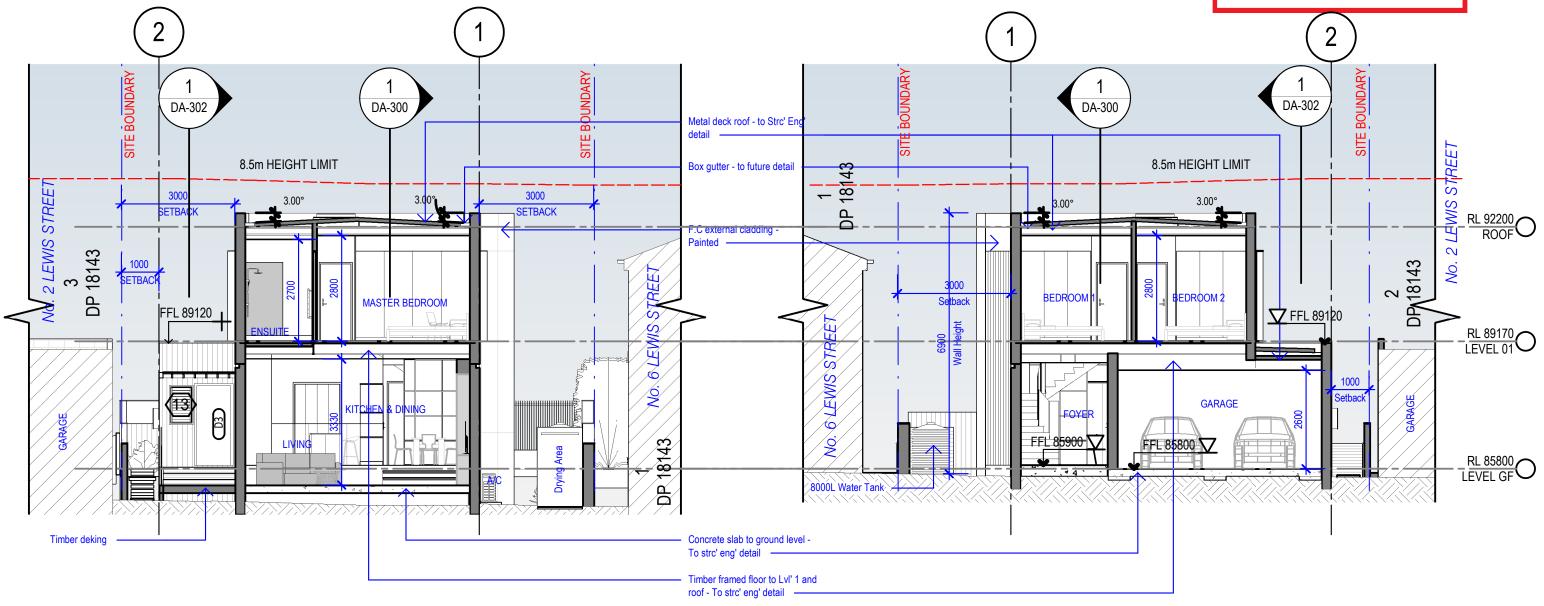
NOT FOR CONSTRUCTION



Scale: 1:100

30/01/2020

Revision



PROPOSED SECTION - BB

2 PROPOSED SECTION - CC





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project No. date scale 4 Lewis Street, Balgowlah Heights 1:100 AP-19-076 drawing no **SECTIONS - SHEET 02** DA-301

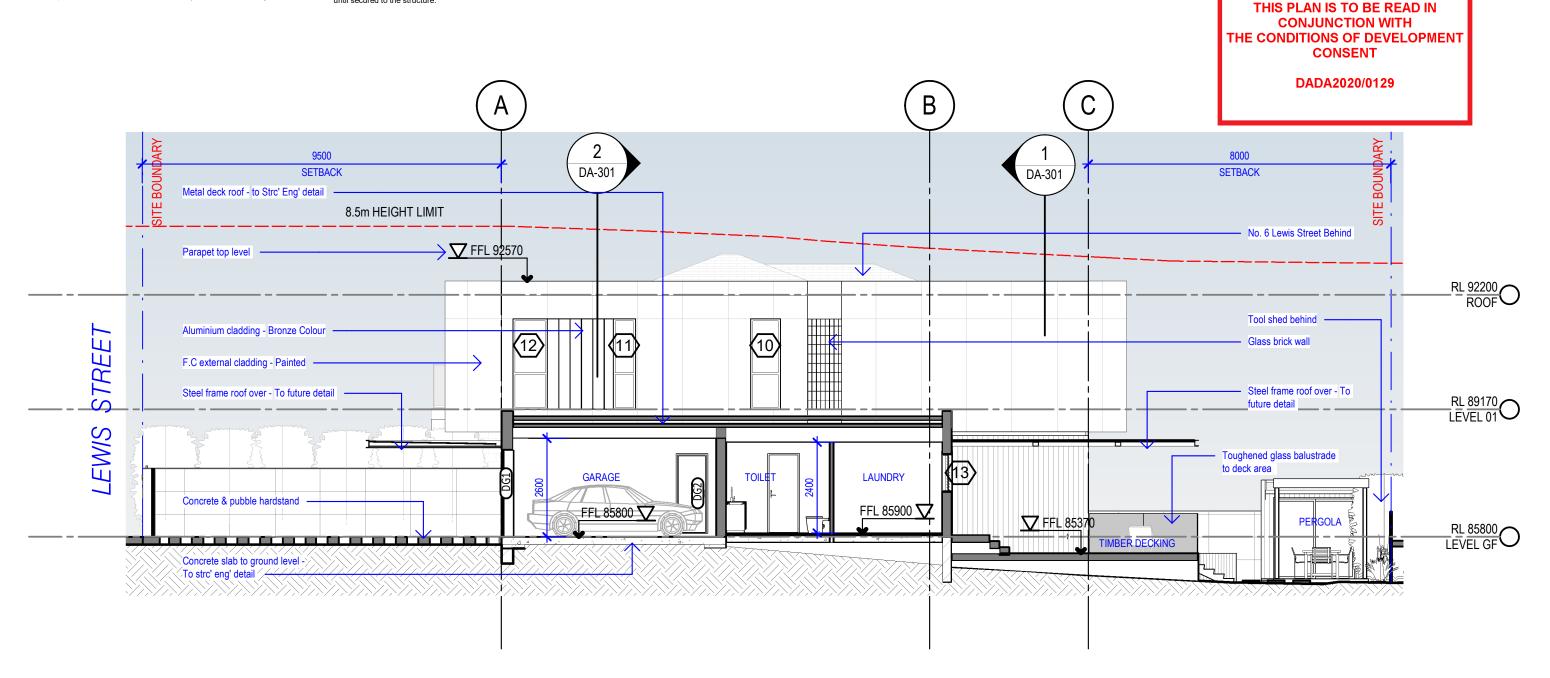
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NOT FOR CONSTRUCTION

beaches



PROPOSED LONG SECTION - DD

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Scale: 1:100

NOT FOR CONSTRUCTION



THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

DADA2020/0129

1. F.C board painted



2. black metal louvre



8. glass brick wall

3. dark brown aluminium cladding



9. black painted metal framing

4. intergrated garage door



10. black painted steel channel

5. glazing

6. bronze facade material



11. off-white tiles



12. black metal fence



revision

Lot 1, Pier 8-9, 23 Hickson Road Walsh Bay New South Wales 2000 Australi T 61 2 9290 2722 F 61 2 9290 1150 E sydney@jacksonteece.com Jackson Teece Chesterman Willis Pty Ltd Trading as Jackson Teece ABN 15 083 837 290 Nominated Architects: Damian Barker (1892), John Gow (6790), Daniel Hudson (8315)

Trading as Jackson Teece ABN 15 088 87 290
Nominated Architects: Dumian Barker (8192), John Gow (6790), Daniel Hudson (8915)

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01 WATER & SEDIMENT CONTROL MEASURES:

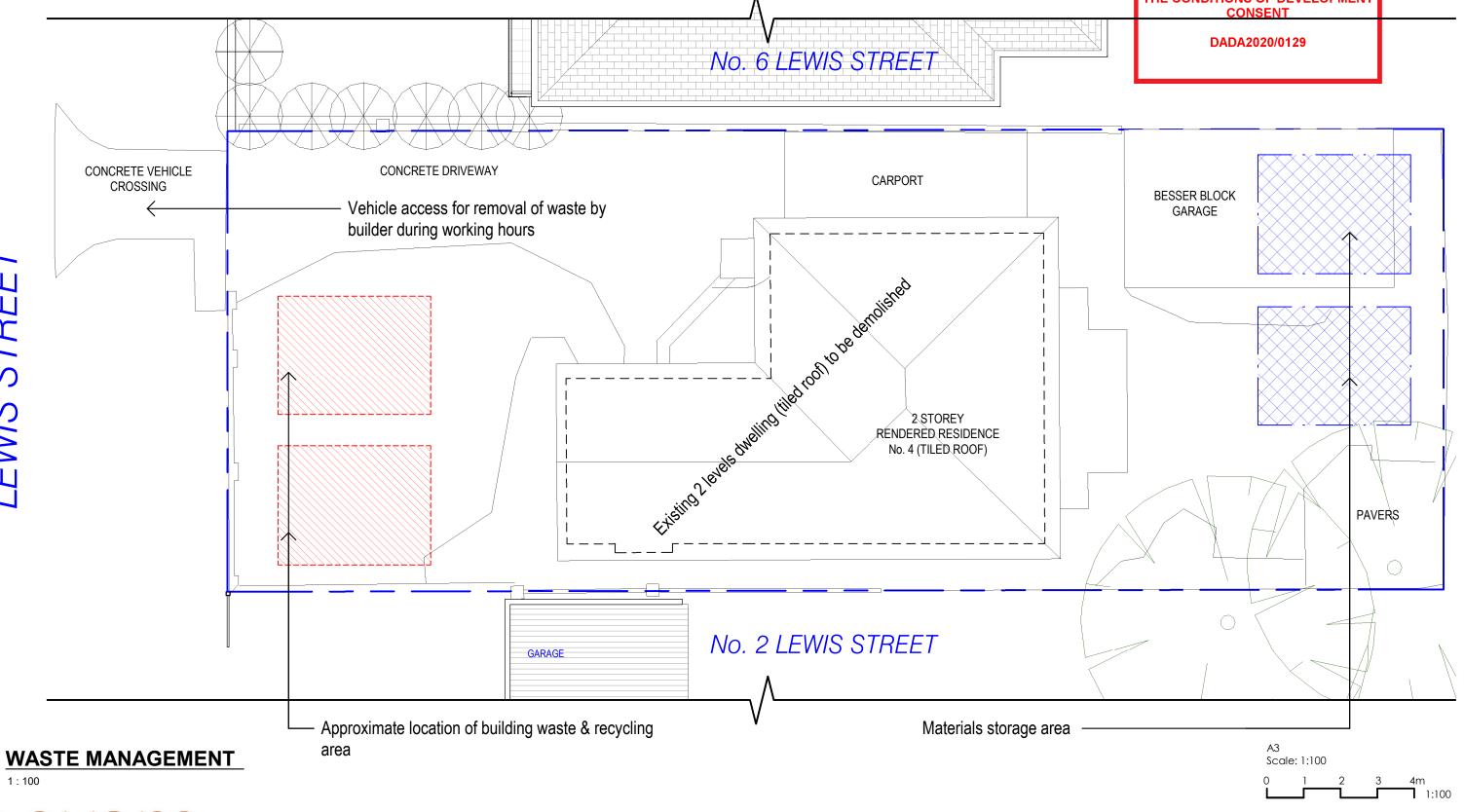
- 1. Pre existing site access points are retained during construction. Site access points are established with geo-textile fabric and blue matel. A vehicle grid ensures minimal soil particles are removed from the site.
- 2. Geo-textile sediment fences are located as indicated to prevent runoff. Existing vegetation buffers are maintained.
- 3. Kerb side drains are protected with gravel sausages.
- 4. Material stockpiles are covered and located within sediment fences.
- 5. Excavated material is paced up slope of service trenches. Trenches are filled and compacted immediately after installation of services.
- 6. Paved areas and footpaths are swept daily and sediment is collected
- 7. Erosion and sediment controls are to be checked daily and repaired when

02 SITE CONTROL MEASURES:

- Temporary fencing to boundaries to provide security to the adjoining properties
- All appropriate signage is to be clearly displayed at the front of the property.
 On site facilities such as power, water and toilet facilities will be provided from the building during construction.
- 4. The existing footpath crossing will be used during construction. Make good any damage at the completion of the project.
- 5. All scaffolding to be erected to the authority rules and regulations.
- All plant and equipment required will be stored on site during operations. All adjoining properties, including footpaths, fences and services to be protected during the delivery and removal of the equipment.
- 7. Rubbish skips will not be allowed on the road without council premission.

NOT FOR CONSTRUCTION





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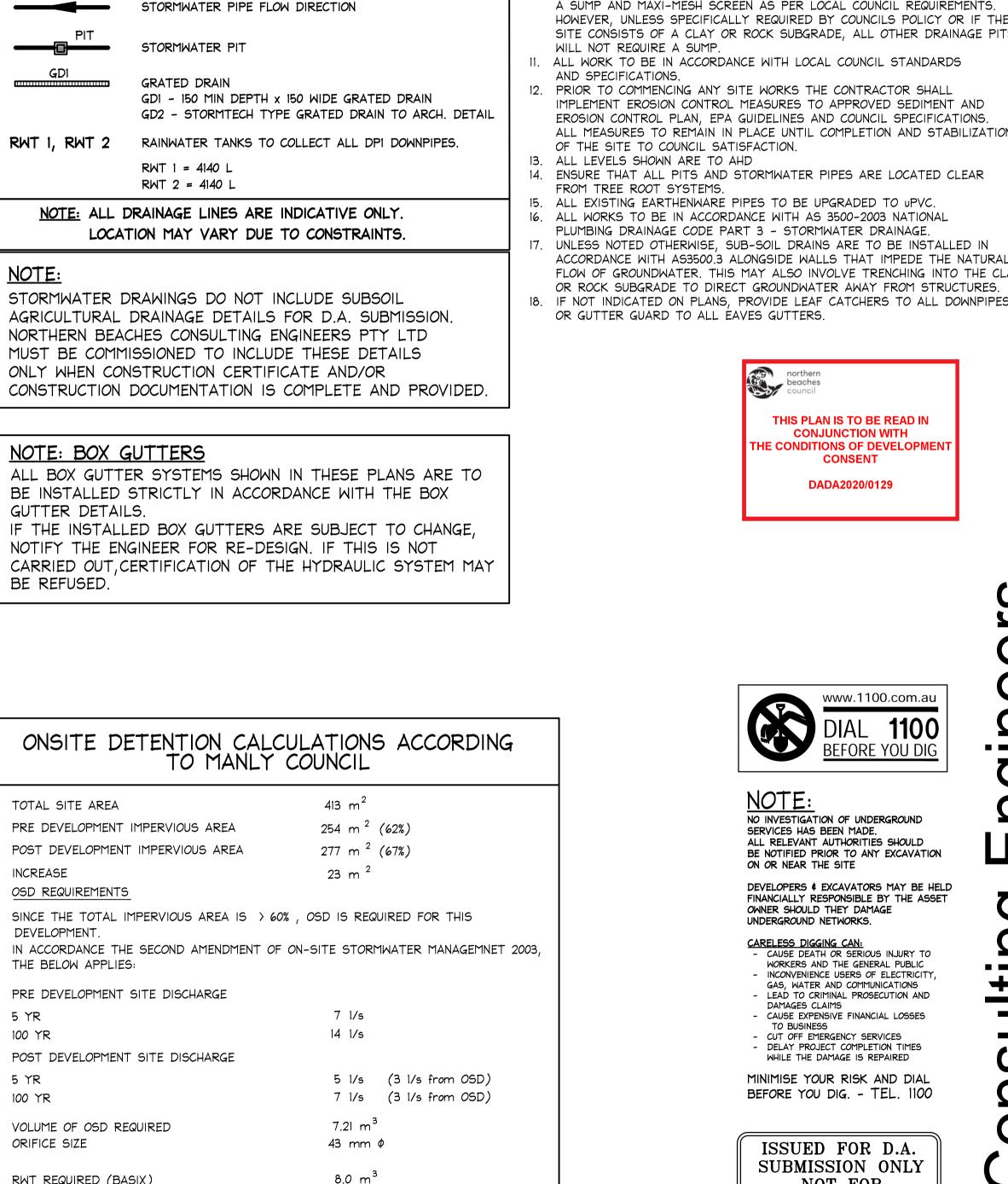
Concept Design Architect

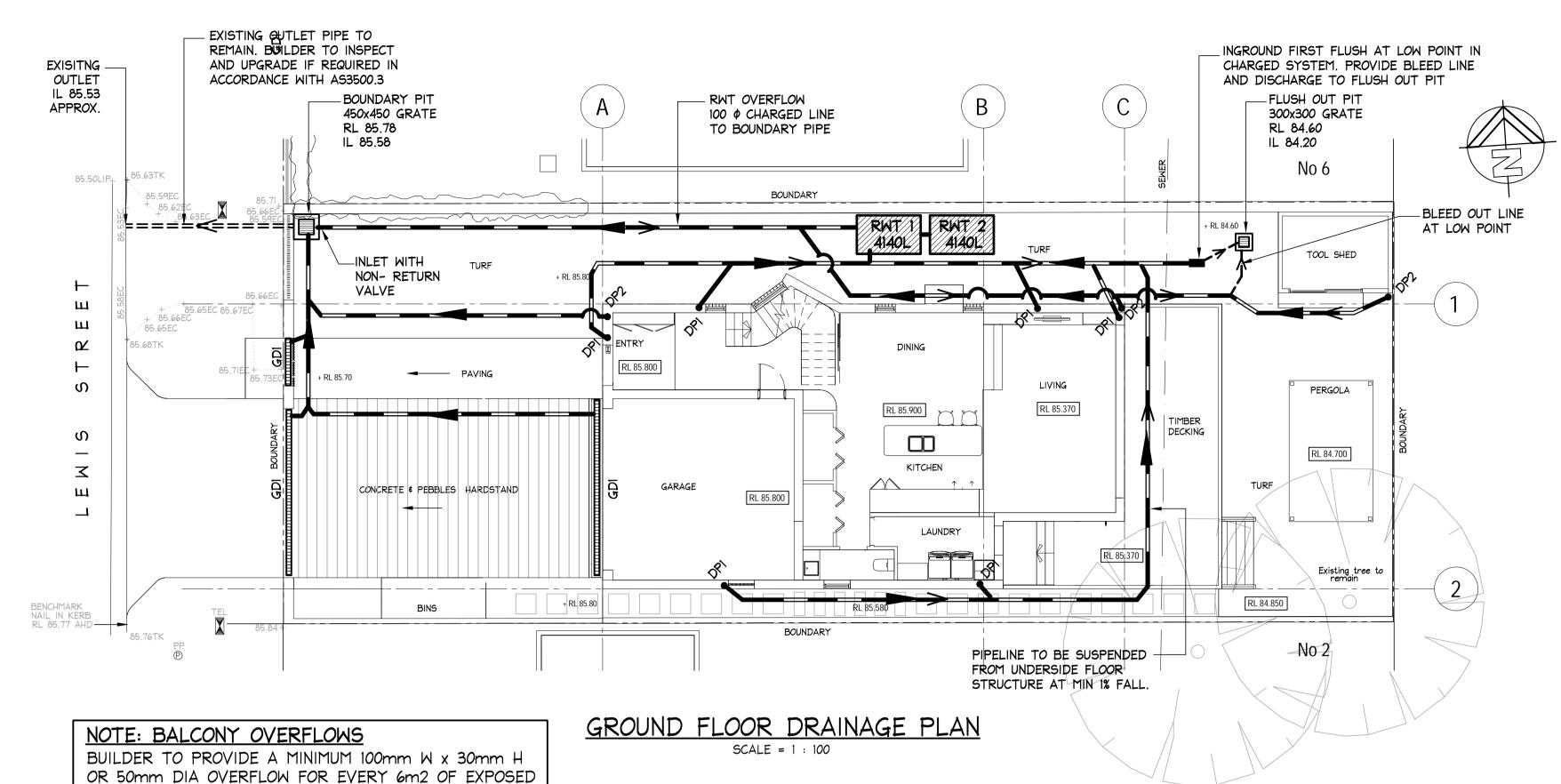
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project No.	project		scale	date
AP-19-076		4 Lewis Street, Balgowlah Heights		30/01/2020
	drawing		drawing no	Revision
		WASTE MANAGEMENT PLAN	DA-900	





NOTE: EXCAVATION AROUND TREES

CARE SHOULD BE TAKEN WHEN UNDERTAKING

WORKS IN THE VICINITY OF SELECTED TREES

NOT TO DISTURB THE TREE ROOT SYSTEM.

HAND DIGGING OF TRENCHES ETC MAY BE

NECESSARY. REFER ARBORISTS REPORT.

TERRACE AREA. THE FULL OVERFLOW DEPTH MUST BE

LOCATED BELOW THE ADJACENT INTERNAL FLOOR LEVEL

TO PROTECT AGAINST INCIDENTAL FLOODING DUE TO A

BLOCKED FLOOR OUTLET.

ш

S

NOTE: CHARGED SYSTEM

ALL PIPE WORK IN CHARGED SYSTEM

TO BE 100mm & uPVC PRESSURE OR

NOTE: ALL DPI DOWN PIPES TO DISCHARGE INTO RAINWATER RE-USE TANK IN ACCORDANCE WITH AS 3500.3

SEWER GRADE PIPES WITH ALL JOINTS PRESSURE SEALED TO 500mm ABOVE INLET LEVEL OF RWT. No 6 BOUNDARY TOOL SHED BEDROOM 3 PERGOLA DRAINAGE TO MANUFACTURER'S SPECIFICATIONS MASTER ROOM RL 88.900 PERGOLA BEDROOM BOUNDARY

FIRST FLOOR AND LOWER ROOF DRAINAGE PLAN SCALE = 1 : 100

STORMWATER NOTES:

2. ALL PIPES TO BE UPVC TO AS 1254-2002 UNLESS NOTED OTHERWISE. 3. ALL PIPES TO BE LAYED AT 1 % MINIMUM GRADE UNLESS NOTED OTHERWISE

4. ALL PIPES SHALL BE LAID ON A 75mm SAND BED, COMPACTED TO 100% S.M.D.D. BELOW PAVEMENTS

(NO COMPACTION REQUIRED BELOW LANDSCAPING) COVER TO SURFACE FROM TOP OF PIPE TO BE 300mm MINIMUM. BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF RAMMING AND WATERING IN. TRENCHES TO BE FILLED

WITH GRANULAR MATERIAL AS SPECIFIED. ALL DOWN PIPES TO BE 100mm & UNLESS NOTED OTHERWISE.

DOWN PIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE

CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT OF WORK.

PROVIDE CLEANING EYES AT ALL DOWNPIPES.

8. ALL PITS TO BE CAST INSITU OR, IF PRECAST, APPROVED BY ENGINEER CAST INSITU PITS TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE REINFORCED WITH 1 NI2 TOP TIE UNLESS NOTED OTHERWISE CAST INSITU PITS GREATER THAN 900 DEEP TO BE MINIMUM 900x600 AND TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE

REINFORCED WITH NI2 AT 300 EACH WAY UNLESS NOTED OTHERWISE. 9. ALL PITS GREATER THAN 1000mm DEEP SHALL HAVE STEP IRONS AS PER COUNCIL STANDARDS

10. THE BOUNDARY OR SILT ARRESTOR PIT SHOULD ALWAYS INCORPORATE A SUMP AND MAXI-MESH SCREEN AS PER LOCAL COUNCIL REQUIREMENTS. HOWEVER, UNLESS SPECIFICALLY REQUIRED BY COUNCILS POLICY OR IF THE SITE CONSISTS OF A CLAY OR ROCK SUBGRADE, ALL OTHER DRAINAGE PITS

12. PRIOR TO COMMENCING ANY SITE WORKS THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES TO APPROVED SEDIMENT AND EROSION CONTROL PLAN, EPA GUIDELINES AND COUNCIL SPECIFICATIONS. ALL MEASURES TO REMAIN IN PLACE UNTIL COMPLETION AND STABILIZATION

14. ENSURE THAT ALL PITS AND STORMWATER PIPES ARE LOCATED CLEAR

15. ALL EXISTING EARTHENWARE PIPES TO BE UPGRADED TO UPVC.

16. ALL WORKS TO BE IN ACCORDANCE WITH AS 3500-2003 NATIONAL

17. UNLESS NOTED OTHERWISE, SUB-SOIL DRAINS ARE TO BE INSTALLED IN ACCORDANCE WITH AS3500.3 ALONGSIDE WALLS THAT IMPEDE THE NATURAL FLOW OF GROUNDWATER. THIS MAY ALSO INVOLVE TRENCHING INTO THE CLAY



TOTAL SITE AREA PRE DEVELOPMENT IMPERVIOUS AREA POST DEVELOPMENT IMPERVIOUS AREA INCREASE

SINCE THE TOTAL IMPERVIOUS AREA IS > 60%, OSD IS REQUIRED FOR THIS DEVELOPMENT.

PRE DEVELOPMENT SITE DISCHARGE

5 YR 100 YR

OSD REQUIREMENTS

THE BELOW APPLIES:

LEGEND

BG2

======

BG3, SD3

NOTE:

GUTTER DETAILS.

BE REFUSED.

100mm \$\phi\$ DOWNPIPE TO DISCHARGE TO RWT

BOX GUTTER AND SUMP TO FUTURE DETAIL

100mm & DOWNPIPE WITH A SPREADER PIPE

SUMP WITH 100mm \$\phi\$ DOWNPIPE

BOX GUTTER, REFER TO DETAILS

EXISTING STORMWATER PIPE

STORMWATER PIPE FALL DIRECTION

NEW STORMWATER PIPE

IN CHARGED SYSTEMS

DISCHARGE TO RWT

100mm & DOWNPIPE TO DISCHARGE TO BOUNDARY PIT

5 YR

100 YR

VOLUME OF OSD REQUIRED ORIFICE SIZE

RWT REQUIRED (BASIX) RWT PROVIDED

OSD OFFSET FROM RWT

 $8.28 \text{ m}^3 (2 \times 41410 \text{L})$

100%

BE NOTIFIED PRIOR TO ANY EXCAVATION

FINANCIALLY RESPONSIBLE BY THE ASSET

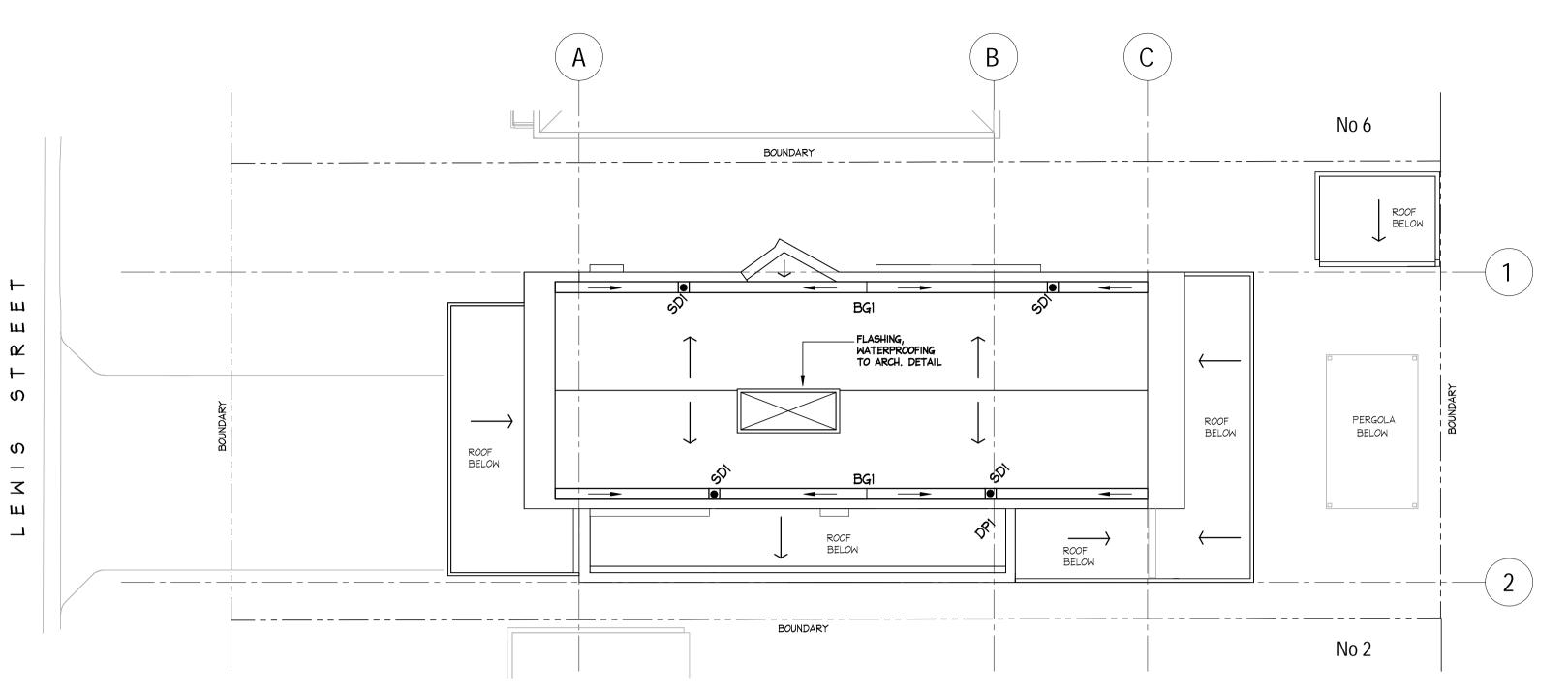
WORKERS AND THE GENERAL PUBLIC - INCONVENIENCE USERS OF ELECTRICITY,

NOT FOR CONSTRUCTION

IF IN DOUBT ASK

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		DOCUMENT CERTIFICATION	Consulting Engineers	Designer:	Project: PROPOSED NEW DWELLING	Date:	Design:	Drawn:	
		Date: 11-02-2010	STRUCTURAL - CIVIL - STORMWATER - REMEDIAL A.C.N. 076 121 616 A.B.N. 24 076 121 616	NOVAM	4 LEWIS STREET, BALGOWLAH HEIGHTS 2093	JAN. 2019	КО	MC	
11-02-2020		Rick G Wray	Sydney: Ph: (02) 9984 7000	Client:	Design Title	Job No:	<u> </u>	Drawing No:	leene.
16-01-2020	A ISSUED FOR DA SUBMISSION MC MW	BLICIVILICIO DIGITILADOL. INC. NI LOS DOZ-13.	Suite 207, 30 Fisher Road Dee Why N.S.W. 2099 Gold Coast: Ph: (07) 5631 4744		Drawing Little: STORMWATER MANAGEMENT				Issue:
Date:	Issue: Description:	, , , , , , , , , , , , , , , , , , ,	Unit 8, 1726 Gold Coast Highway Burleigh Heads QLD 4220 E: nb@nbconsulting.com.au W: www.nbconsulting.com.au		DRAINAGE PLANS	1912	(と)	D01	B

No 2



UPPER ROOF DRAINAGE PLAN

SCALE = 1 : 100

LEGEND

≥ 100mm ¢ DOWNPIPE TO DISCHARGE TO RWT

SUMP WITH 100mm Ø DOWNPIPE DISCHARGE TO RWT

BOX GUTTER, REFER TO DETAILS

NOTE: ALL DRAINAGE LINES ARE INDICATIVE ONLY.

LOCATION MAY VARY DUE TO CONSTRAINTS.

NOTE: BOX GUTTERS

ALL BOX GUTTER SYSTEMS SHOWN IN THESE PLANS ARE TO BE INSTALLED STRICTLY IN ACCORDANCE WITH THE BOX GUTTER DETAILS.

IF THE INSTALLED BOX GUTTERS ARE SUBJECT TO CHANGE, NOTIFY THE ENGINEER FOR RE-DESIGN. IF THIS IS NOT CARRIED OUT, CERTIFICATION OF THE HYDRAULIC SYSTEM MAY BE REFUSED.

NOTE:

ALL WATERPROOF MEMBRANES AND FLASHINGS TO BE INSTALLED AS PER ARCHITECTS DETAILS.

RAINWATER RE-USE TANKS:

- 1. CONSIDERING THE ROOF CATCHMENT AREA, LOCATION OF PROPERTY, INTENDED USE OF RAINWATER AND GARDEN SIZE WE RECOMMEND PROVIDING A RAINWATER TANK FOR USE AS PER BASIX REQUIREMENTS, SYDNEY WATER AND NSW HEALTH REQUIRMENTS FOR NON DRINKING USE ONLY AND TO BASIX AND LOCAL COUNCIL REQUIREMENTS.
- 2. THE TANKS PROVIDED WILL REDUCE PRESSURE ON COUNCIL'S STORMWATER INFRASTRUCTURE.

 3. REFERENCES:
- COOMBES P.J. & KUCZERA G. (2001), "RAINWATER TANK DESIGN FOR WATER SUPPLY & STORMWATER MANAGEMENT." STORMWATER INDUSTRY ASSOCIATION REGIONAL CONFERENCE. PATRICK DUPONT & STEVE SHACKEL, "RAINWATER"
- AUSTRALIAN GOVERNMENT (2004), "GUIDANCE ON USE OF RAINWATER TANKS"

 4. ALL CONNECTIONS TO PLUMBING AND RAINWATER TANKS TO BE IN ACCORDANCE WITH SYDNEY WATERS' GUIDE "INSTALLING A RAINWATER TANK"
- AVAILABLE AT www.sydneywater.com.au

 5. PROVIDE A DUAL SUPPLY SYSTEM AND BACKFLOW PREVENTION SYSTEM IN ACCORDANCE WITH 'BASIX-DESIGN GUIDE FOR SINGLE DWELLINGS' BY NSW DEPARTMENT OF INFRASTRUCTURE, PLANING AND NATURAL RESOURCES.
- 6. IF NOT SPECIFIED ON PLANS, THE FIRST FLUSH SYSTEM IS TO HAVE A MINIMUM SIZE OF 20L PER 100m2 OF ROOF CATCHMENT AREA PRIOR TO ENTERING THE RAINWATER TANK. INDIVIDUAL SITE ANALYSIS IS REQUIRED IN HEAVILY POLLUTED AREAS TO DETERMINE IF LARGER VOLUMES OF FIRST FLUSH RAINWATER ARE TO BE DIVERTED. IF IN DOUBT, CHECK WITH LOCAL HEALTH AUTHORITIES.
- SCREENED DOWNPIPE RAINWATER HEAD OR OTHER SUITABLE LEAF AND DEBRIS DEVICE TO BE INSTALLED ON EACH DOWNPIPE. SCREEN MESH TO BE 4-6mm AND DESIGNED TO BE SELF-CLEANING.
 FIRST FLUSH DEVICES, OR APPROVED ALTERATIVE, TO BE INSTALLED WITH AN AUTOMATED
- DIVERSION AND DRAINAGE SYSTEM, THAT IS, NO MANUAL DIVERSION AND DRAINAGE VALVES.

 REFER TYPICAL FLUSH OUT PIT FOR DETAILS.
- 9. BEFORE PURCHASING MATERIALS OR PAINT TO BE USED ON ROOF CATCHMENT AREAS, THE MANUFACTURER'S RECOMMENDATIONS ON LABELS AND BROCHURES FOR RAINWATER TANK SUITABILITY TO BE READ AND ADHERED TO.
- 10. PRE-STORAGE PITS FOR UNDERGROUND RAINWATER STORAGE TANKS AND FLUSH OUT PITS MAY ASSIST IN LIMITING SILT, AND PREVENT VERMIN, INSECTS (INCLUDING MOSQUITOES) AND DEBRIS FROM ENTERING THE RAINWATER STORAGE AREA.

 11. BUILDER/PLUMBER TO ENSURE THE INSTALLATION OF THE RAINWATER TANK SYSTEM IS IN
- 11. BUILDER/PLUMBER TO ENSURE THE INSTALLATION OF THE RAINWATER TANK SYSTEM IS IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND THE RAINWATER TANK DESIGN AND INSTALLATION HANDBOOK HB 230-2008. IF IN DOUBT CONTACT ENGINEER.
- 12. RAINWATER TANK TO BE WATER PROOFED IN ACCORDANCE WITH HB 230-200B





NOTE:

NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE.

ALL RELEVANT AUTHORITIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION ON OR NEAR THE SITE

DEVELOPERS & EXCAVATORS MAY BE HELD FINANCIALLY RESPONSIBLE BY THE ASSET OWNER SHOULD THEY DAMAGE UNDERGROUND NETWORKS.

CARELESS DIGGING CAN:
- CAUSE DEATH OR SERIOUS INJURY TO

- CAUSE DEATH OR SERIOUS INJURY TO WORKERS AND THE GENERAL PUBLIC
 INCONVENIENCE USERS OF ELECTRICITY, GAS, WATER AND COMMUNICATIONS
- LEAD TO CRIMINAL PROSECUTION AND DAMAGES CLAIMS
 CAUSE EXPENSIVE FINANCIAL LOSSES TO BUSINESS
- CUT OFF EMERGENCY SERVICES - DELAY PROJECT COMPLETION TIMES WHILE THE DAMAGE IS REPAIRED

MINIMISE YOUR RISK AND DIAL BEFORE YOU DIG. - TEL. 1100

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JAN. 2019

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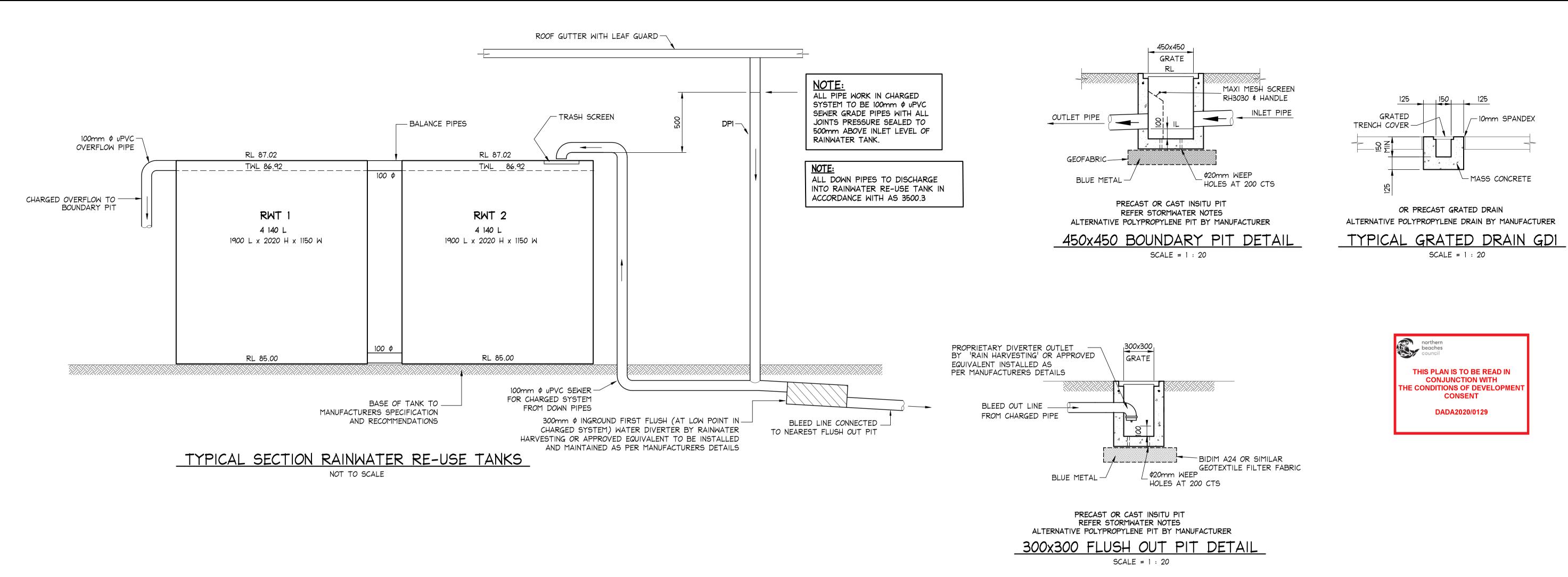
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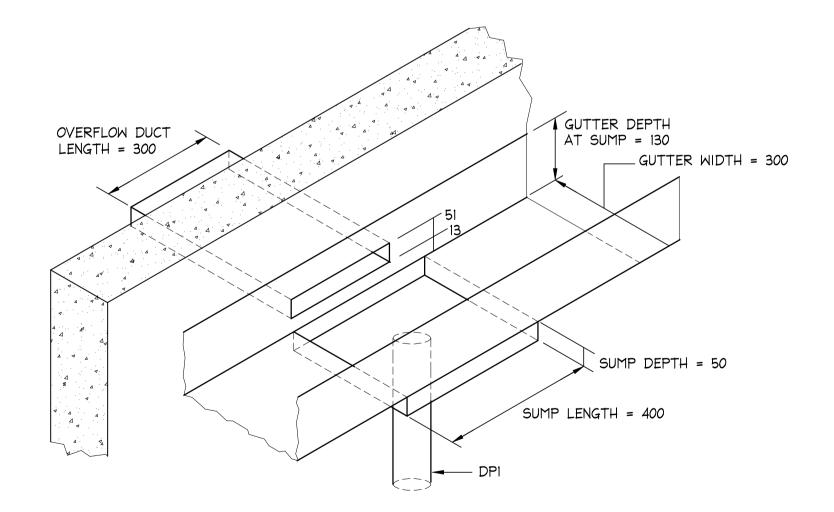
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					Date: 11-02-2010	Consulting Engineers STRUCTURAL - CIVIL - STORMWATER - REMEDIAL A.C.N. 076 121 616 A.B.N. 24 076 121 616	Designer: NOVAM	Project: PROPOSED NEW DWELLING 4 LEWIS STREET, BALGOWLAH HEIGHTS 2093
16-01-2020) A	ISSUED FOR DA SUBMISSION	MC	MW	Rick G Wray	Gold Coast: Pn: (07) 5631 4744		Drawing Title: STORMWATER MANAGEMENT
Date:	Issue:	Description:	Ву:	Review:	The copyright of this drawing remains with Northern Beaches Consulting Engineers Pty Ltd. Trading as NB Consulting Engineers	Unit 8, 1726 Gold Coast Highway Burleigh Heads QLD 4220 E : nb@nbconsulting.com.au W : www.nbconsulting.com.au	KOJI NEDACHI	UPPER ROOF DRAINAGE PLAN

3 Consulting Engir

Drawn:

Drawing No:





BOX GUTTER BGI AND SUMP SDI DETAIL SCALE = NTS

NOTE:

BOX GUTTER DEPTH TO BE A MINIMUM OF 95mm AT HIGHEST POINT IN INVERT OF BOX GUTTER WITH 0.5 % MINIMUM FALL TO RAINHEAD.

GUTTER DEPTH OVERFLOW DUCT LENGTH = 300 ___ GUTTER WIDTH = 300 SUMP DEPTH = 50 SUMP LENGTH = 400

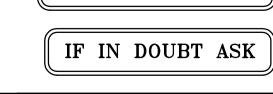
NOTE:

BOX GUTTER DEPTH TO BE A MINIMUM OF 90mm AT HIGHEST POINT IN INVERT OF BOX GUTTER WITH 0.5 % MINIMUM FALL TO RAINHEAD.

BOX GUTTER BG2 AND SUMP SD2 DETAIL SCALE = NTS

N	Consulting Engineers
	STRUCTURAL - CIVIL - STORMWATER - REMEDIAL A.C.N. 076 121 616 A.B.N. 24 076 121 616
	Sydney : Ph: (02) 9984 7000
3.	Suite 207, 30 Fisher Road Dee Why N.S.W. 2099

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KOJI NEDACHI	Drawing Title: STORMWATER MANAGEDETAILS



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			DOCUMENT CERTIFICATION	Consulting Engineers Designer:		Project: PROPOSED NEW DWELLING	Date:	Design:	Drawn:	
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			Rick G Wray	Sydney: Ph: (02) 9984 7000 Suite 207, 30 Fisher Road Dee Why N.S.W. 2099 Client:			Job No:	<u>'</u>	Drawing No:	Issue:
16-01-2020	A ISSUED FOR DA SUBMISSION MC	MW	BE(Civil), CPEng, MIEAust., NER., RPEQ: 08293. (Director NB Consulting Engineers)	Gold Coast: Ph: (07) 5631 4744		5 ORMATER MANAGEMENT	1912		ŭ	
Date:	Issue: Description:	Review:	7: The copyright of this drawing remains with Northern Beaches Consulting Engineers Pty Ltd. Trading as NB Consulting Engineers	Unit 8, 1726 Gold Coast Highway Burleigh Heads QLD 4220 E : nb@nbconsulting.com.au W : www.nbconsulting.com.au	KOJI NEDACHI	DETAILS	191205		D03	А

