DA No. DA0246/2020

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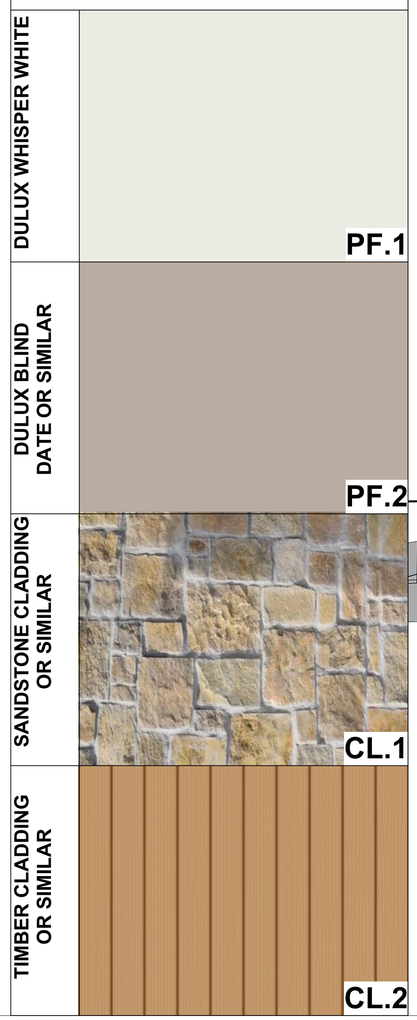
Shellharbour CITY COUNCIL

PROPOSED DUAL OCCUPANCY DEVELOPMENT

4 WOLLONGONG STREET, SHELLHARBOUR - LOT 1 | D.P 21994

PREPARED FOR SHELLHARBOUR CITY COUNCIL

MATERIALS AND FINISHES



Sheet Index

Layout ID	Layout Name
01	Cover Page/Material Schedule
02	BASIX Commitments
03	BASIX Obiligations
04	Site Plan
05	Site Anaylsis
06	Erosion & Sediment Control / Demolition Plan
07	Car Parking Plan
08	Ground Floor Plan
09	First Floor Plan
10	Roof Plan
11	Elevations
12	Sections
13	Shadow Diagrams
14	Area Calculation Plan
15	Proposed Plan of Subdivison

DEVELOPMENT APPLICATION

ISSUE	DESCRIPTION	DATE
A	ISSUE FOR DEVELOPMENT APPLICATION LODGEMENT	05/06/20
B	ISSUE FOR DEVELOPMENT APPLICATION LODGEMENT	16/10/20
C	REVISED FOR APPROVAL	29/01/21
D	REVISED FOR APPROVAL	29/01/21

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DESIGN LINK AUSTRALIA PTY LTD

DRAWING TITLE
Cover Page/Material Schedule
DRAWING NO
DA01

SCALE
1:100 @ A1 or 1:200 @ A3
0 0.5 1.0 2.0m

NORTH

Proposed Dual Occupancy
4 Wollongong Street, Shellharbour

JOB No.	DATE	DRAWN	CHECKED	SCALE
01820_DA	29/01/2021	J.D	A.M	As Shown on A1

DA No. DA0246/2020

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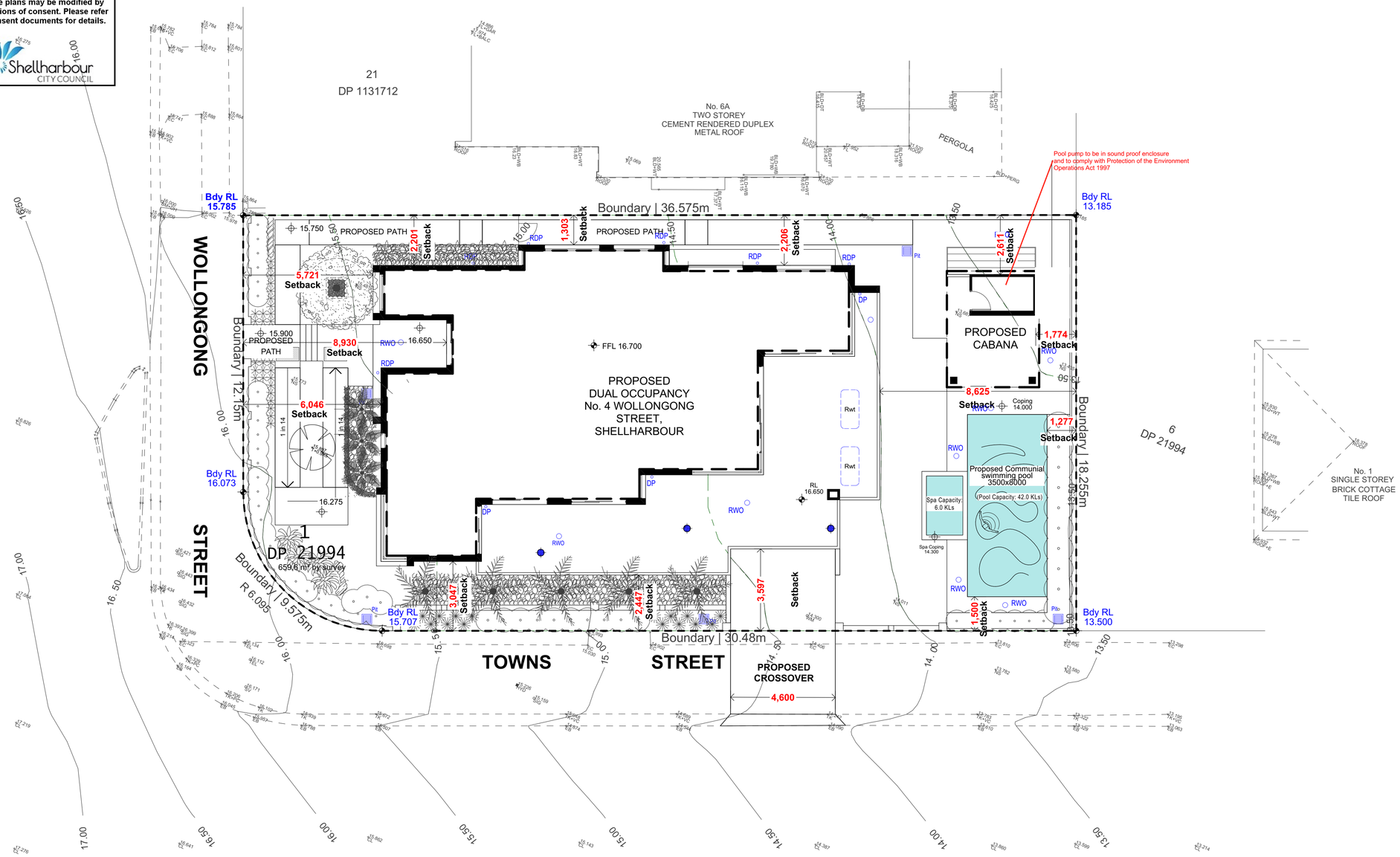
Shellharbour CITY COUNCIL



DEVELOPMENT SUMMARY

PROJECT: PROPOSED DUAL OCCUPANCY
SITE: 4 WOLLONGONG STREET, SHELLHARBOUR
LOT 1 | D.P 21994

SITE AREA: 659.6 m² (By Calc.)

NUMERICAL CONTROL:	PROPOSED
Ground GFA First GFA	164.58 m² 164.58 m²
Total GFA	329.16 m²
FSR *0.5:1*	0.50:1
LANDSCAPE AREA	162.64m²
PRIVATE OPEN SPACE	LOT 1 , 82.67 m² LOT 2 , 67.14 m²

1 Site Plan

1:100

DEVELOPMENT APPLICATION

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A	ISSUE FOR DEVELOPMENT APPLICATION LODGEMENT	05/06/20
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C	REVISED FOR APPROVAL	29/01/21
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DESIGN LINK AUSTRALIA PTY LTD

DRAWING TITLE
Site Plan
DRAWING NO
DA04

SCALE
1:100 @ A1 or 1:200 @ A3
0 0.5 1.0 2.0m

NORTH

Proposed Dual Occupancy
4 Wollongong Street, Shellharbour

JOB No.	DATE	DRAWN	CHECKED	SCALE
01820_DA	29/01/2021	J.D	A.M	As Shown on A1

DA No. DA0246/2020

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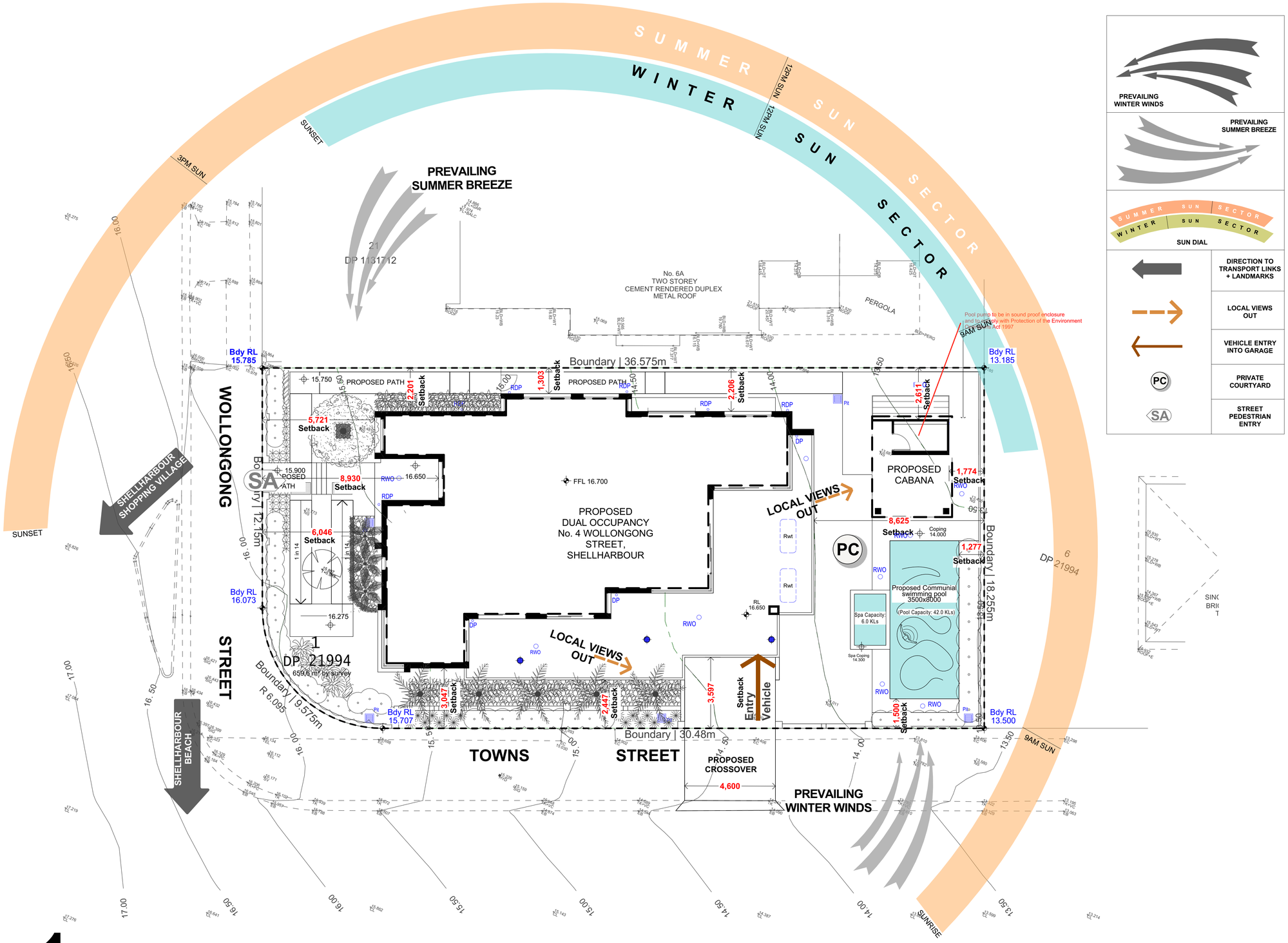
Figure 1: View of Towns Street Facing East

Figure 2: View of Towns Street Facing East

Figure 3: View of Shellharbour Boat Ramp



1 Site Anaylsis

1:100

DEVELOPMENT APPLICATION

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DRAWING TITLE
Site Anaylsis
DRAWING NO
DA05

SCALE
1:100 @ A1 or 1:200 @ A3

NORTH

Proposed Dual Occupancy
4 Wollongong Street, Shellharbour

JOB No.	DATE	DRAWN	CHECKED	SCALE
01820_DA	29/01/2021	J.D	A.M	As Shown on A1

DA No. DA0246/2020

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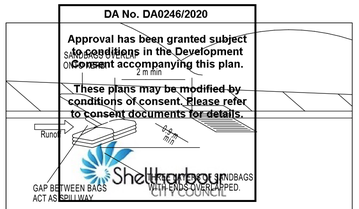
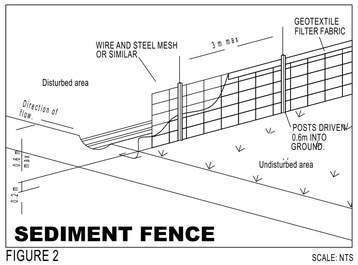


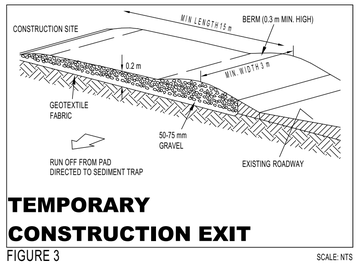
SANDBAG KERB INLET SEDIMENT TRAP

FIGURE 1 SCALE: NTS



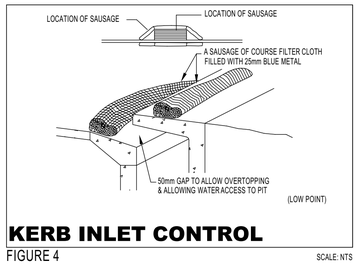
SEDIMENT FENCE

FIGURE 2 SCALE: NTS



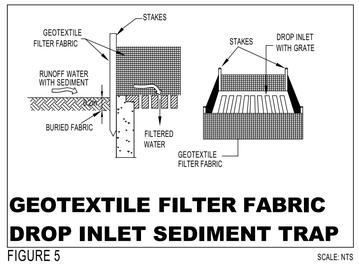
TEMPORARY CONSTRUCTION EXIT

FIGURE 3 SCALE: NTS



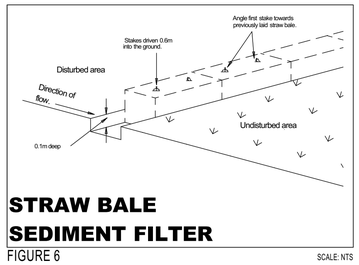
KERB INLET CONTROL

FIGURE 4 SCALE: NTS



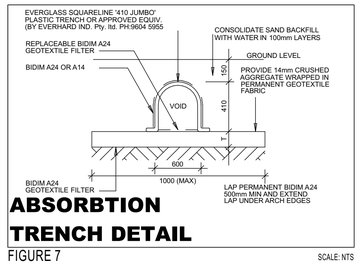
GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP

FIGURE 5 SCALE: NTS



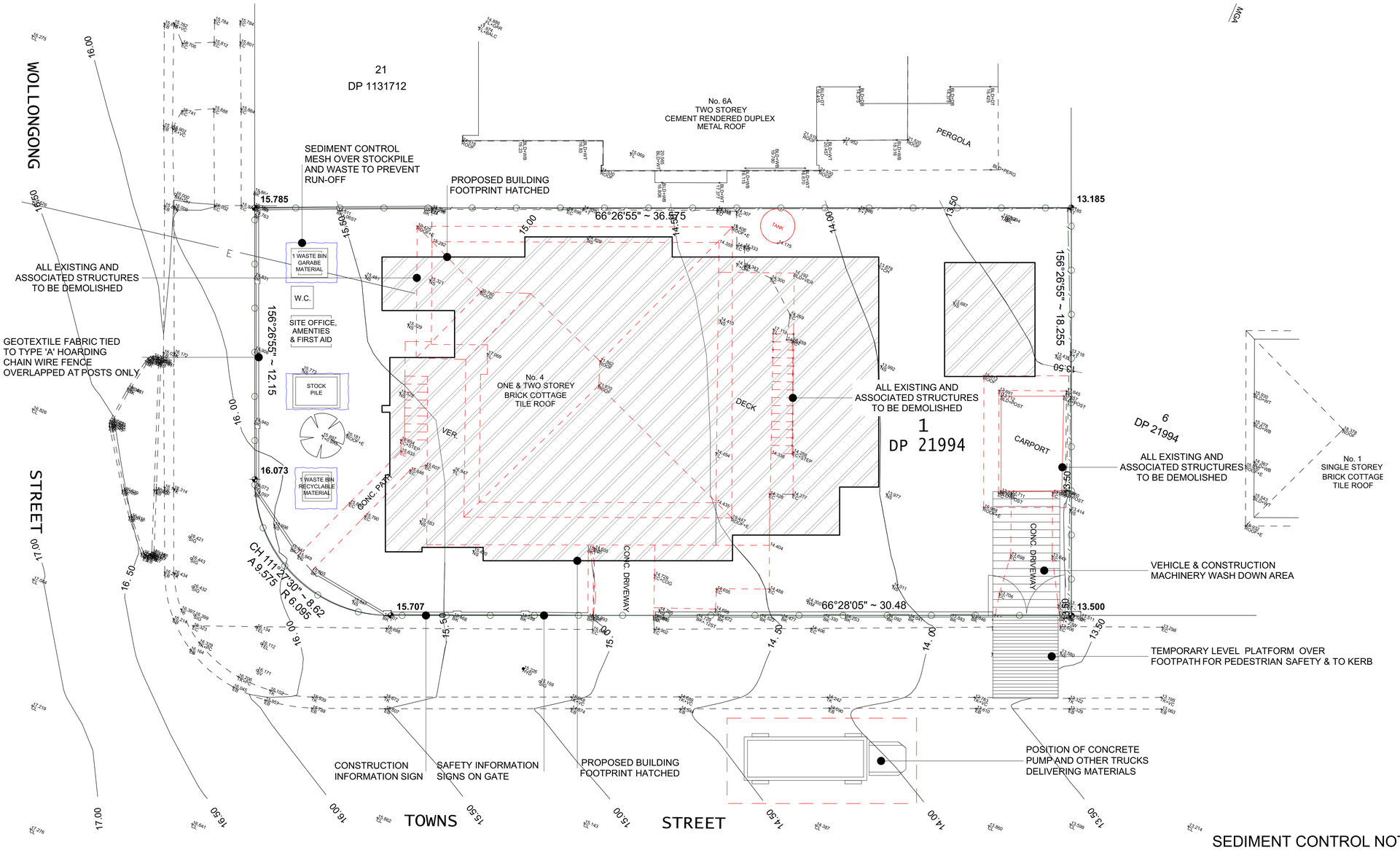
STRAW BALE SEDIMENT FILTER

FIGURE 6 SCALE: NTS



ABSORBTION TRENCH DETAIL

FIGURE 7 SCALE: NTS



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1 Soil & Water Management / Demoltion Plan

1:100

SEDIMENT CONTROL NOTES

1. All erosion and sedimentation control measures , including revegetation and storage of soil and topsoil , shall be implemented to the standards of the soil conservation of NSW .
2. All drainage works shall be constructed and stabilized as early as possible during development .
3. Sediment traps shall be constructed around all inlet pits , consisting of 300mm wide x 300mm deep trench.
4. All sediment basins and traps shall be cleaned when the structures are a maximum of 60% full of soil materials , including the maintenance period .
5. All disturbed areas shall be revegetated as soon as the relevant works are completed .
6. Soil and topsoil stockpiles shall be located away from drainage lines and area where water may concentrate .
7. Filter shall be constructed by stretching a filter fabric (propex) or approved equivalent between post at 3.0m centres. fabric shall be buried 150mm along its lower edge

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DRAWING TITLE
Erosion & Sediment Control / Demolition Plan

DRAWING NO
DA06

SCALE
1:100 @ A1 or 1:200 @ A3

NORTH

Proposed Dual Occupancy
4 Wollongong Street, Shellharbour

JOB No.	DATE	DRAWN	CHECKED	SCALE
01820_DA	29/01/2021	J.D	A.M	As Shown on A1

DA No. DA0246/2020

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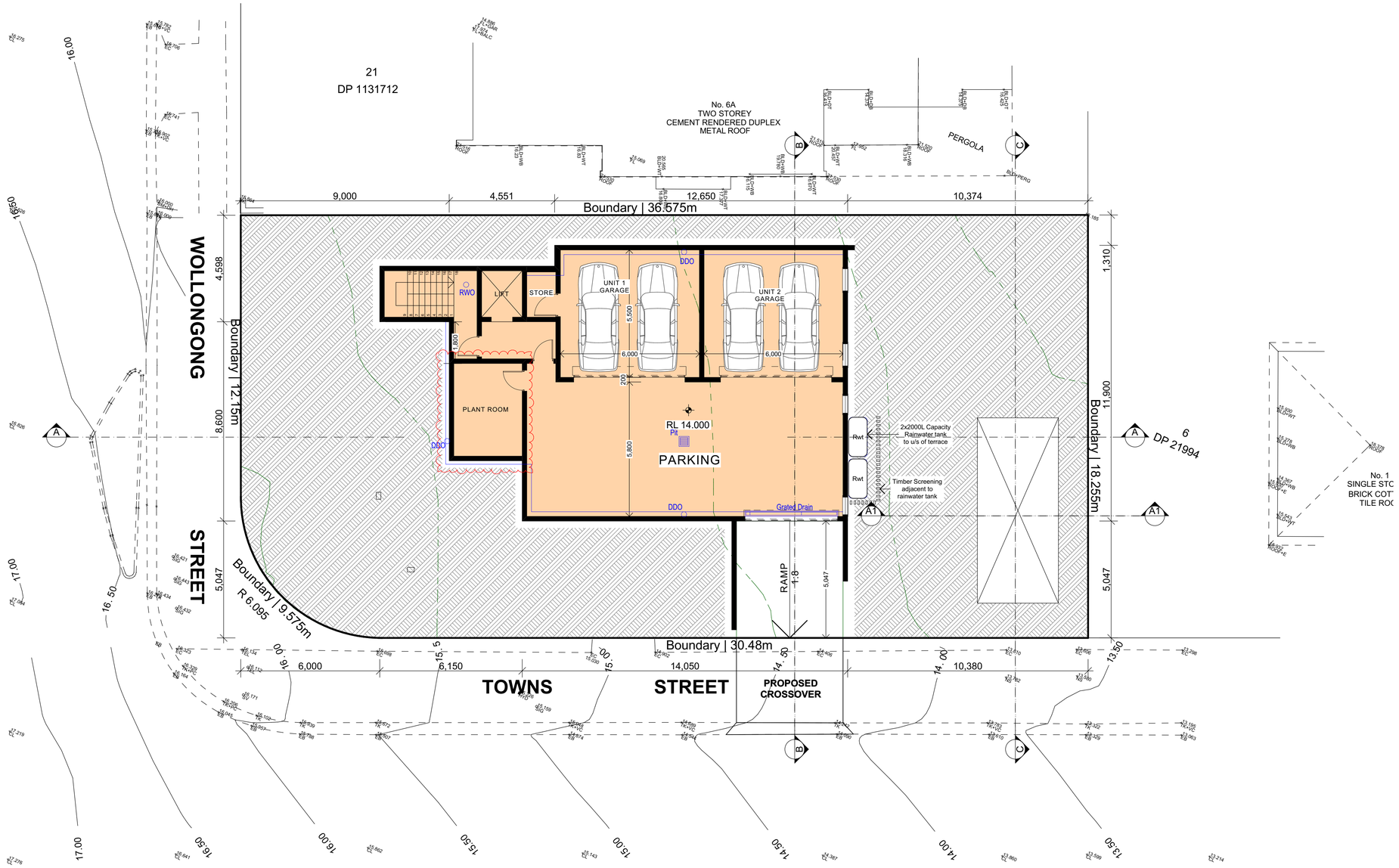
Shellharbour CITY COUNCIL



1 Car Parking Layout

1:100

DEVELOPMENT APPLICATION

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DRAWING TITLE
Car Parking Plan
DRAWING NO
DA07

SCALE
1:100 @ A1 or 1:200 @ A3
0 0.5 1.0 2.0m

NORTH
N

Proposed Dual Occupancy
4 Wollongong Street, Shellharbour

JOB No.	DATE	DRAWN	CHECKED	SCALE
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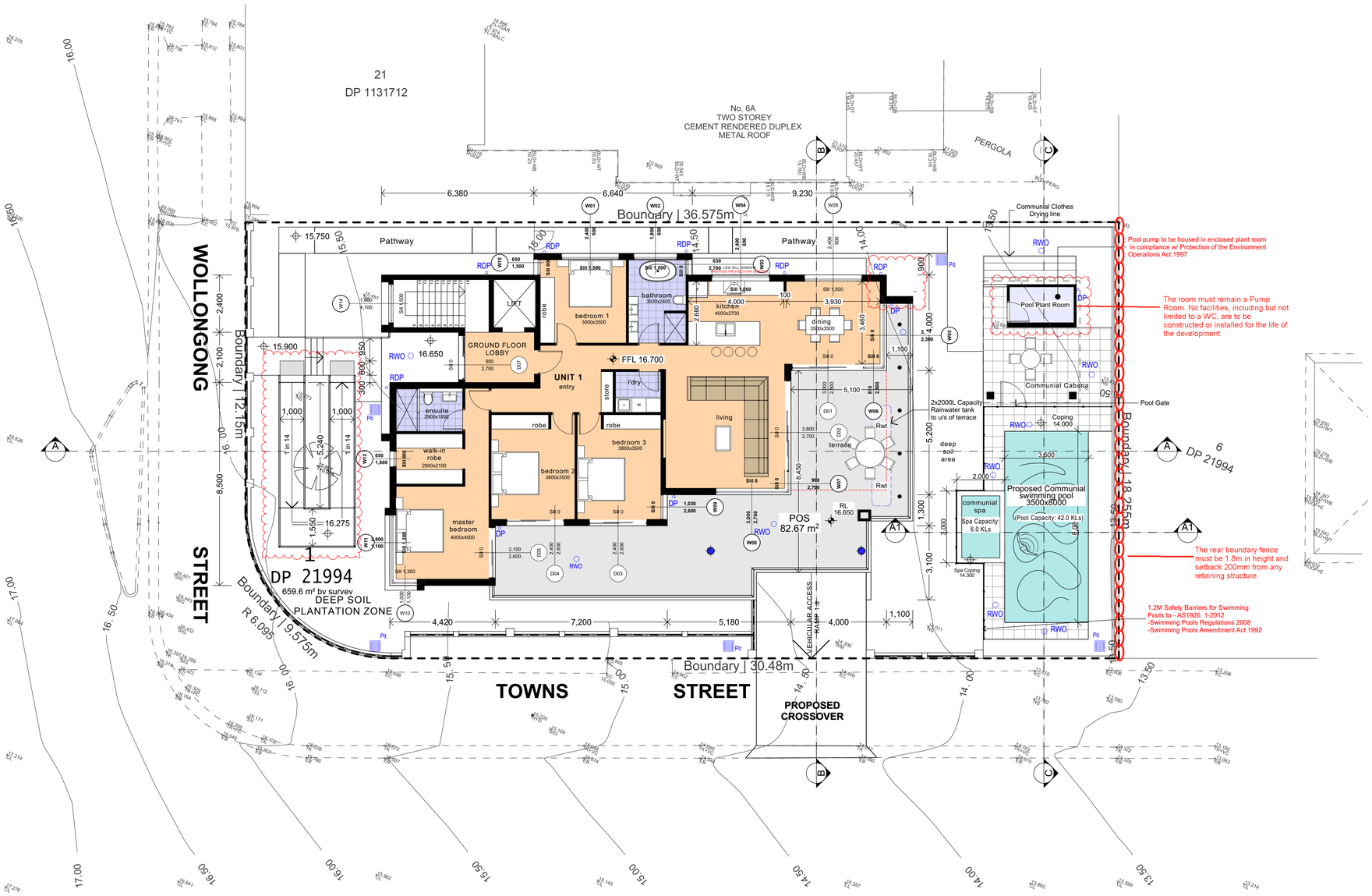

1 Ground Floor Plan

1:100

DEVELOPMENT APPLICATION

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DESIGN LINK AUSTRALIA PTY LTD

DRAWING TITLE
Ground Floor Plan
DRAWING NO
DA08

SCALE
1:100 @ A1 or 1:200 @ A3
0 0.5 1.0 2.0m

NORTH

Proposed Dual Occupancy
4 Wollongong Street, Shellharbour

JOB No.	DATE	DRAWN	CHECKED	SCALE
01820_DA	29/01/2021	J.D	A.M	As Shown on A1

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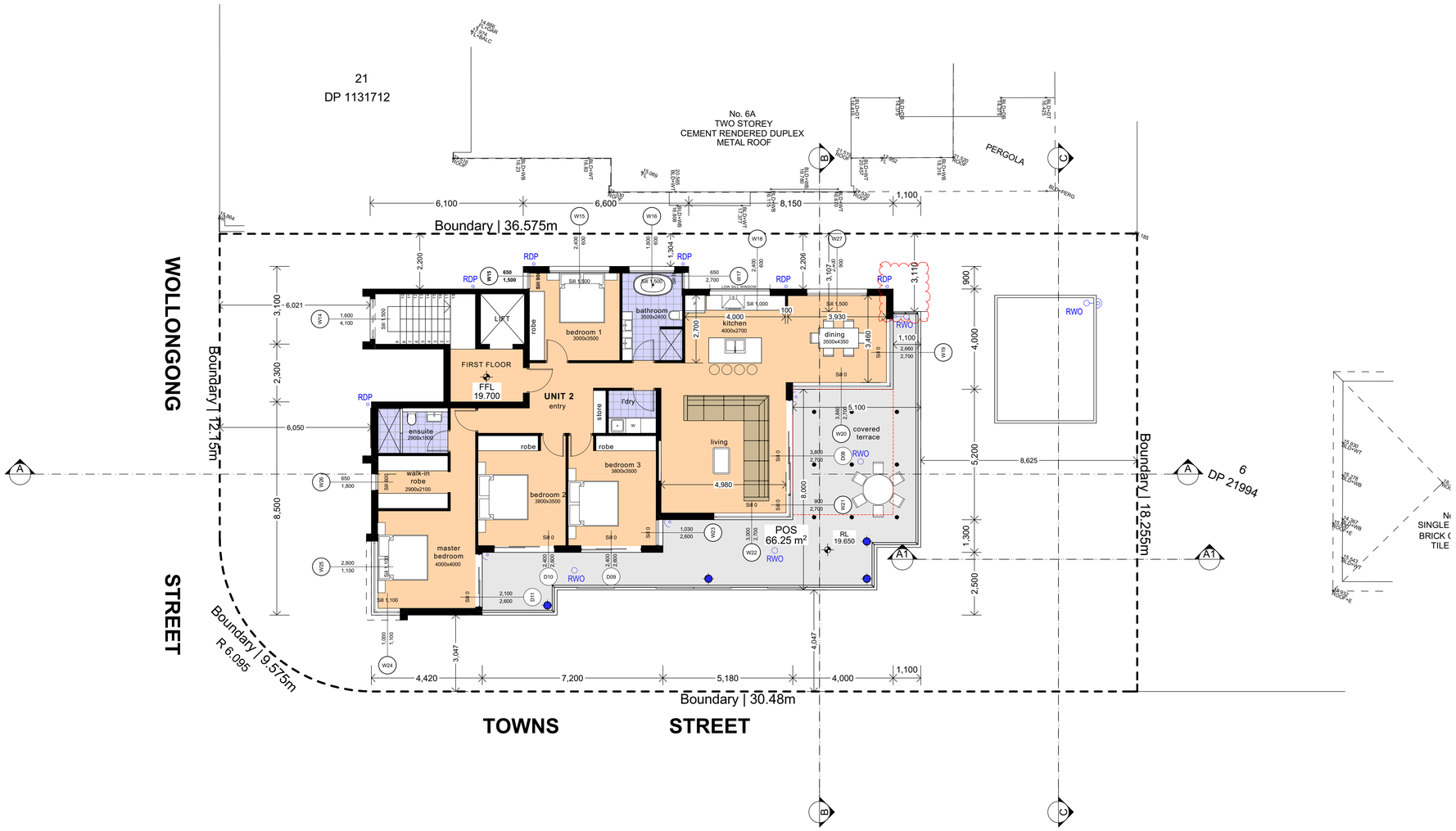

1 First Floor Plan

1:100

DEVELOPMENT APPLICATION

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DRAWING TITLE
First Floor Plan
DRAWING NO
DA09

SCALE
1:100 @ A1 or 1:200 @ A3

NORTH

Proposed Dual Occupancy
4 Wollongong Street, Shellharbour

JOB No.	DATE	DRAWN	CHECKED	SCALE
01820_DA	29/01/2021	J.D	A.M	As Shown on A1

DA No. DA0246/2020

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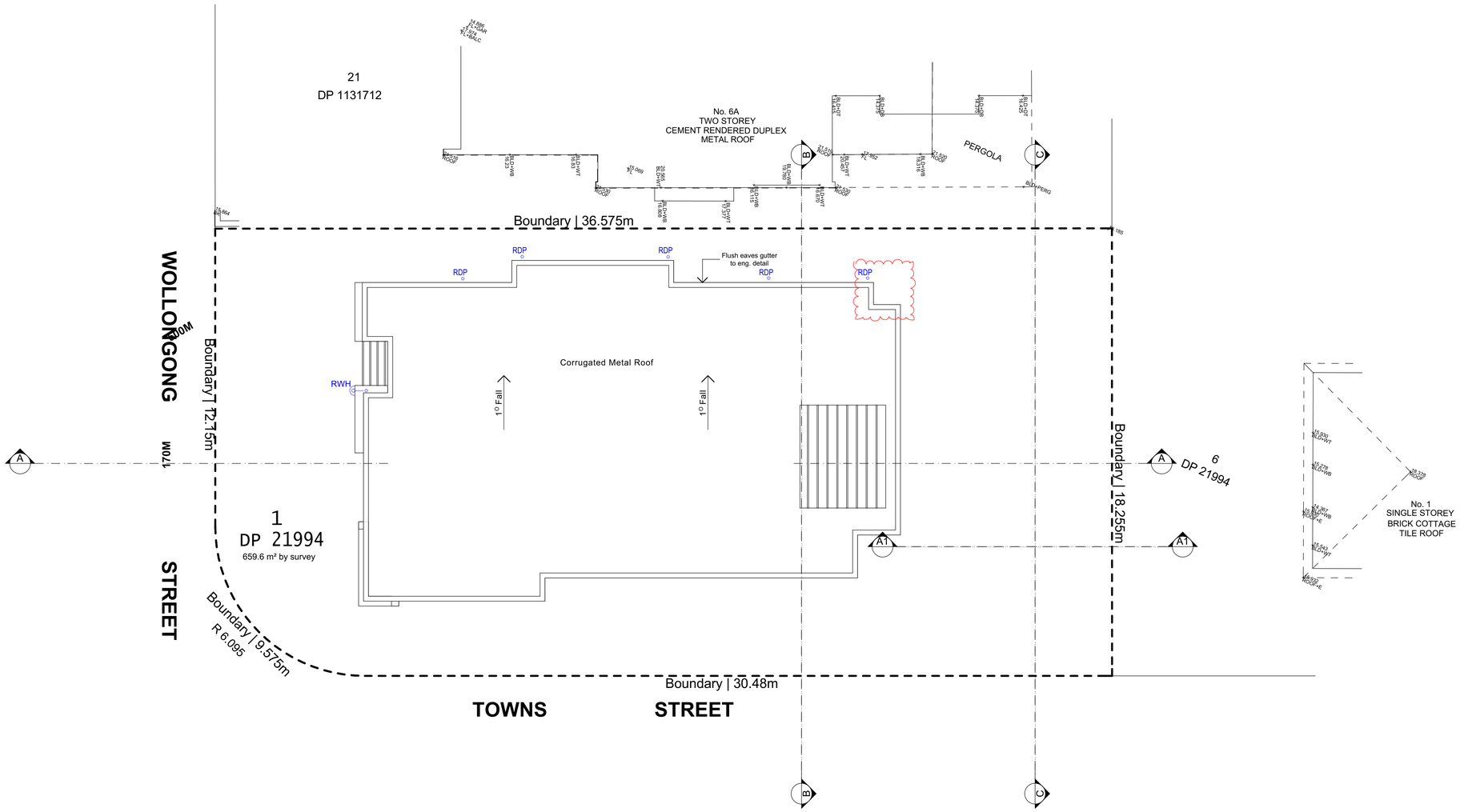

1 Roof Plan

1:100

DEVELOPMENT APPLICATION

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A	ISSUE FOR DEVELOPMENT APPLICATION LODGEMENT	05/06/20
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DRAWING TITLE
Roof Plan
DRAWING NO
DA10

SCALE
1:100 @ A1 or 1:200 @ A3
0 0.5 1.0 2.0m

NORTH

Proposed Dual Occupancy
4 Wollongong Street, Shellharbour

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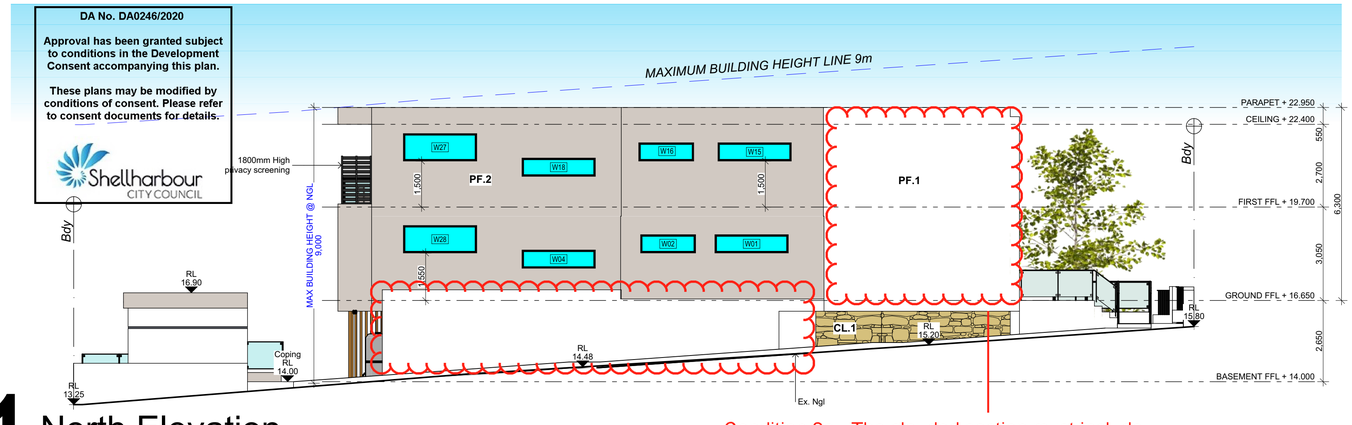
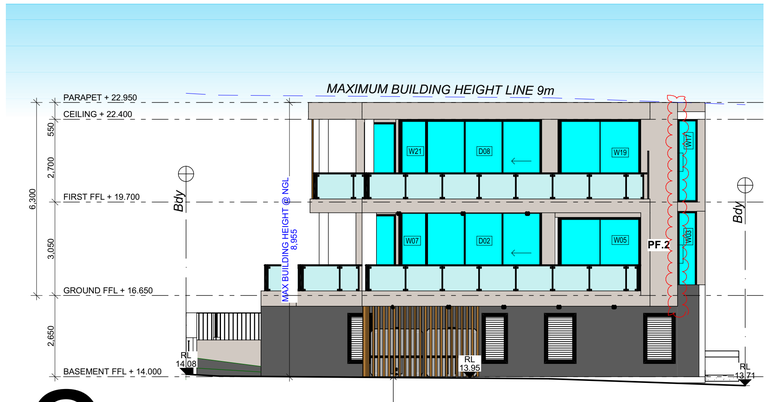


1 North Elevation
1:100

Condition 8a - The clouded section must include additional architectural features such as wall cladding or alternative materials to offset the blank expense.



2 East Elevation
1:100

3 South Elevation
1:100

4 West Elevation
1:100

5 Streetscape Elevation
1:100

6 Fence Elevation
1:100

MATERIALS AND FINISHES

DULUX WHISPER WHITE	PF.1
DULUX BLIND DATE OR SIMILAR	PF.2
SANDSTONE CLADDING OR SIMILAR	CL.1
TIMBER CLADDING OR SIMILAR	CL.2

DEVELOPMENT APPLICATION

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DRAWING TITLE
Elevations
DRAWING NO
DA11

SCALE
1:100 @ A1 or 1:200 @ A3

NORTH

Proposed Dual Occupancy
4 Wollongong Street, Shellharbour

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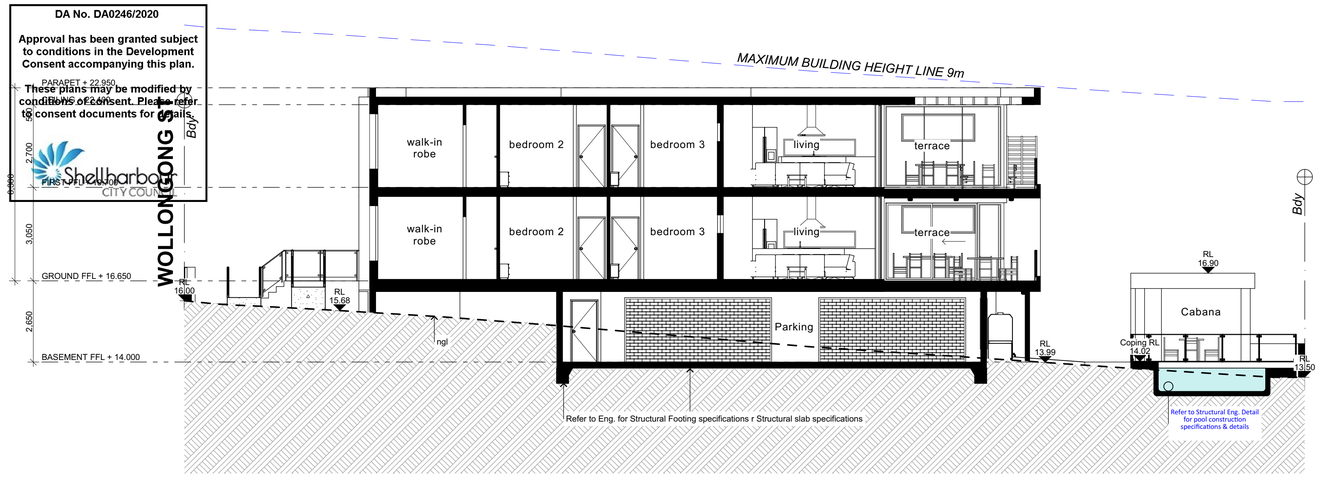

1 Section A - A

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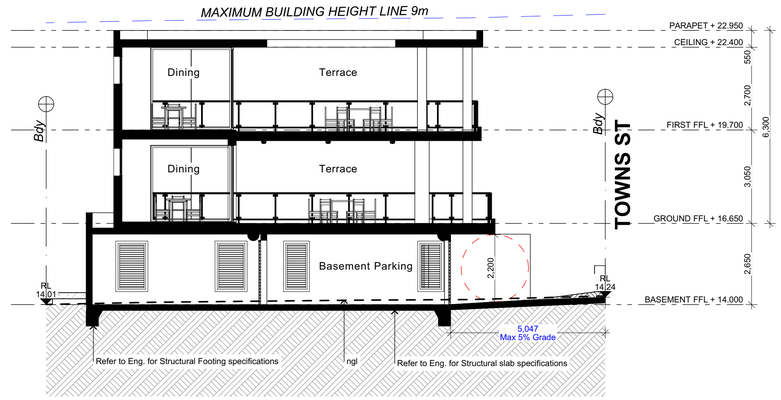

2 Section B - B

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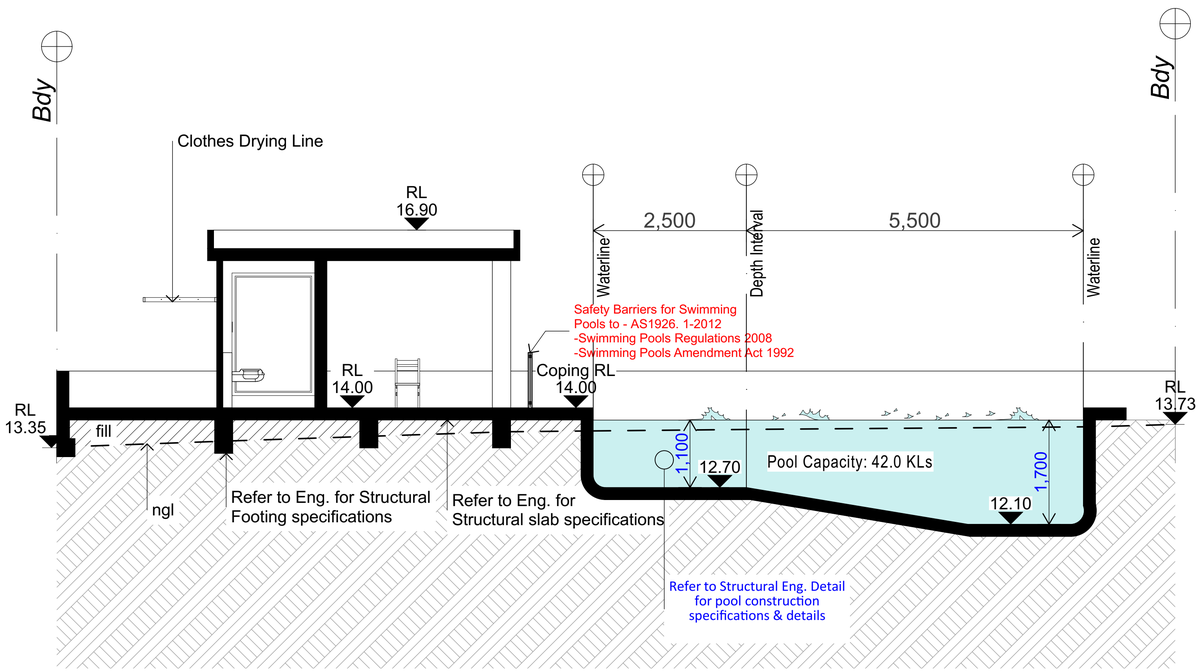

3 Section C - C

1:50

BCA ENERGY
Sustainable Design Consultants

ASSESSOR DETAILS	
Name:	Robert Romanous Q/A David Howard
Direct Number:	(02) 8484 4086
Office:	1300 787 302
AAO:	ABSA
Assessor Number:	20039
ASSESSMENT DETAILS	
Project Name:	4 Wollongong St, Shell Harbour
Software:	BERSPro – v4.4.01
Date:	04/06/2020
BASIX Certificate	1103768M_02
Group Certificate	0004890650
CLIENT DETAILS	
Name:	Allan Harriman

NCC COMPLIANCE

In addition to BASIX Commitments; building compliance is required to comply with the 'New South Wales Additions' in the NCC 2017- Volume 1.

This includes New South Wales Part J(A). Specific mention is made of the following provisions:

- Building thermal construction in accordance with part J1.2
- If metal framed, sarking of R0.2 is required between stud and cladding as a thermal break
- Loss of ceiling insulation is compensated for by increased roof insulation in accordance with Part J1.3(c)
- Any roof lights, windows, doors and exhaust fans are sealed in accordance with Part J3
- Any new air-conditioning system is installed in accordance with Parts J5.2(a), J5.2(b), J5.2(c), J5.2(d), J5.2(f) & J5.2(g)
- Any new mechanical ventilation system is installed in accordance with Part J5.3.
- Any new miscellaneous exhaust system is installed in accordance with Part J5.4.
- Any new heated hot water system is installed in accordance with Part J7.2
- Any new energy monitoring equipment is installed in accordance with Part J8.3.

NatHERS TECHNICAL NOTES – Defaults

- Models rated with no downlights
- Light coloured roof for temperate or cool climates
- Kitchens / wet areas tiled/timber
- All other zones carpet
- Vents to wet areas / laundry / kitchen
- Single story dwellings within 10m modelled as obstruction
- Double story dwellings within 20m modelled as obstruction
- Structures located at South are not modelled as obstruction

BASIX TECHNICAL NOTES - Defaults

- Medium coloured external walls
- Walls to common areas modelled as external with zero solar absorptance
- Glazed corridors modelled with additional zone
- All ensuites are treated as conditioned
- Spaces without an openable window / door are included in the zone which they are accessed
- No mechanical heating or cooling appliances are modelled, including ceiling fans

Ref: BASIX- 2324 Page 1 of 2

BCA ENERGY
Sustainable Design Consultants

WATER	
Pass – 45/40%	
Rain Water Tank	Central 4000L Tank connected to landscape and toilets
Common Landscape	100m² of Lawn + 100m² of low water use/indigenous garden
Private Landscape	0m²
All Taps	5 Star
All Showerheads	3 Star (4.5-6L/min)
All Toilet Flushers	4 Star
Common Pool	424L
Common Spa	6kL w/spa cover

THERMAL COMFORT		
Pass –		
GLAZING		
Units		**Fixed Windows around Living and Dining**
1 and 2	U-value 4.80 SHGC 0.59 (± 5%) Single, Low-e	U-value 3.60 SHGC 0.54 (± 5%) Double, Clear
WALLS		
Unit 1 - External Walls	Cavity Brick – No Additional Insulation Infill Wall – Additional 75mm R2.0 Insulation	
Unit 2 - External Walls	Brick Veneer – Additional 75mm R2.0 Insulation Infill Wall – Additional 75mm R2.0 Insulation	
Walls to corridors/lift	Additional 75mm R2.0 Insulation	
Internal Walls in Units	No Additional Insulation	
FLOORS		
All Suspended Floors to car park or plant below	Concrete - Additional R2.50	
ROOF		
Units exposed roof	Ceiling - Additional R3.0 Metal Roof - Additional R1.8 Reflective Blanket	

ENERGY	
Pass – 55/50%	
COMMON AREA	
Lighting	Car Park Area – Fluorescent w/ motion sensors Plant Room - Fluorescent w/ motion sensors Garbage Room - Fluorescent w/ motion sensors
Lift	Gearless Traction w/ VVVF Motor
Ventilation	Car Park Area – No mech vent Store / Plant Room – No mech vent Garbage Room – Exhaust continuous
DWELLINGS	
Hot Water	Individual 6 Star Gas Instantaneous
Heating /Cooling	3.5 Star Heating and Cooling AC. No day and night zoning
Lighting	Dedicated LED throughout
Ventilation	Bathroom - ducted to façade or roof w/ Manual Switch Kitchen - ducted to façade or roof w/ Manual Switch Laundry - ducted to façade or roof w/ Manual Switch Well ventilated Fridge Space
Appliances	Electric oven w/ gas cooktop
Photovoltaic System	5kW system each dwelling
Other	
Common Pool and Spa	Pumps on timer
Spa Heating	Gas only

Ref: BASIX- 2324 Page 2 of 2

DEVELOPMENT APPLICATION

ISSUE	DESCRIPTION	DATE
A	ISSUE FOR DEVELOPMENT APPLICATION LODGEMENT	05/06/20
B	ISSUE FOR DEVELOPMENT APPLICATION LODGEMENT	16/10/20
C	REVISED FOR APPROVAL	29/01/21
D	REVISED FOR APPROVAL	29/01/21

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DRAWING TITLE
Sections
DRAWING NO
DA12

SCALE
1:100 @ A1 or 1:200 @ A3
0 0.5 1.0 2.0m

NORTH

Proposed Dual Occupancy
4 Wollongong Street, Shellharbour

JOB No.	DATE	DRAWN	CHECKED	SCALE
01820_DA	29/01/2021	J.D	A.M	As Shown on A1

DA No. DA0246/2020

Approval has been granted subject to conditions in the Development Consent accompanying this plan.

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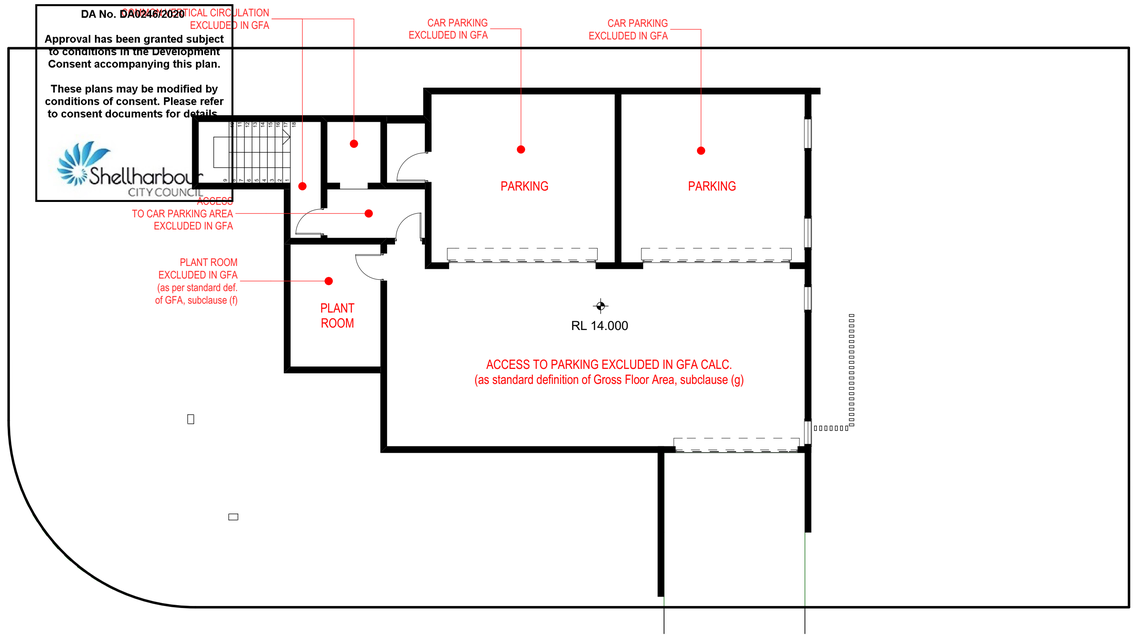
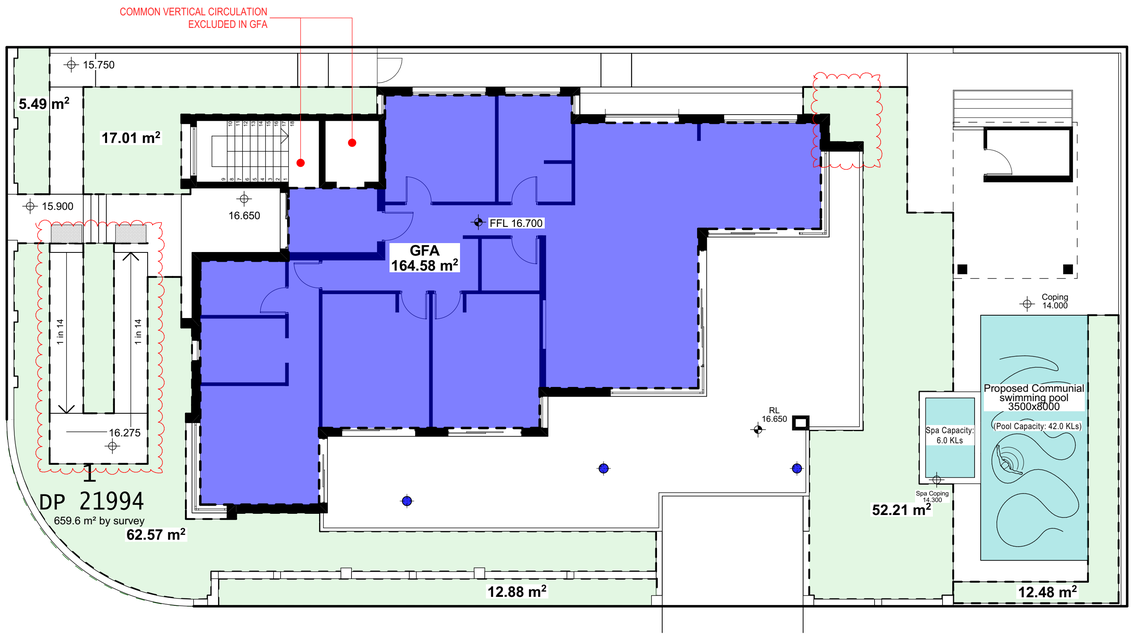
Shellharbour CITY COUNCIL



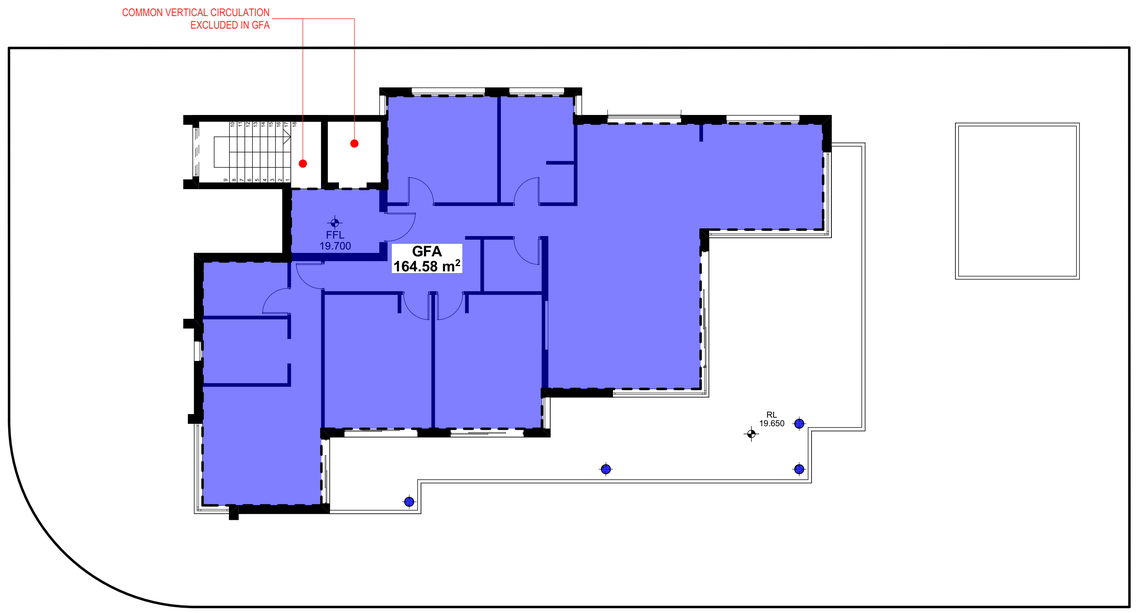
1 Basement Plan - Area Calculation

1:100



2 Ground Floor Plan - Area Calculation

1:100



SITE AREA:659.6m²

GROSS FLOOR AREA CALC.
CONTROL: 0.5:1

GROUND FLOOR: 164.58m²
FIRST FLOOR: 164.58m²

TOTAL GFA: 329.16m²

PROPOSED FSR: 0.50:1

LANDSCAPE AREA.
TOTAL LANDSCAPED AREA: 162.64m²

GFA CALC.

3 First Floor Plan - Area Calculation

1:100

DEVELOPMENT APPLICATION

ISSUE	DESCRIPTION	DATE
A	ISSUE FOR DEVELOPMENT APPLICATION LODGEMENT	05/06/20
B	ISSUE FOR DEVELOPMENT APPLICATION LODGEMENT	16/10/20
C	REVISED FOR APPROVAL	29/01/21
D	REVISED FOR APPROVAL	29/01/21

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DESIGN LINK AUSTRALIA PTY LTD

DRAWING TITLE
Area Calculation Plan
DRAWING NO
DA14

SCALE
1:100 @ A1 or 1:200 @ A3
0 0.5 1.0 2.0m

NORTH
N

Proposed Dual Occupancy
4 Wollongong Street, Shellharbour

JOB No.	DATE	DRAWN	CHECKED	SCALE
01820_DA	29/01/2021	J.D	A.M	As Shown on A1

DA No. DA0246/2020

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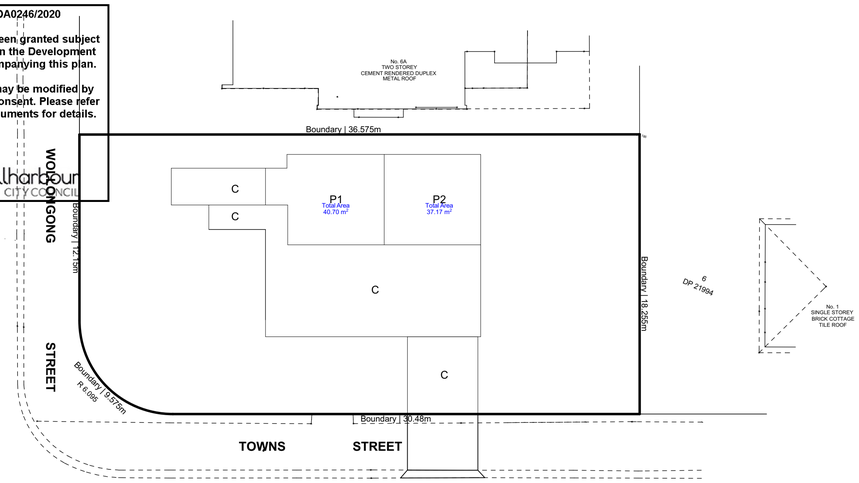
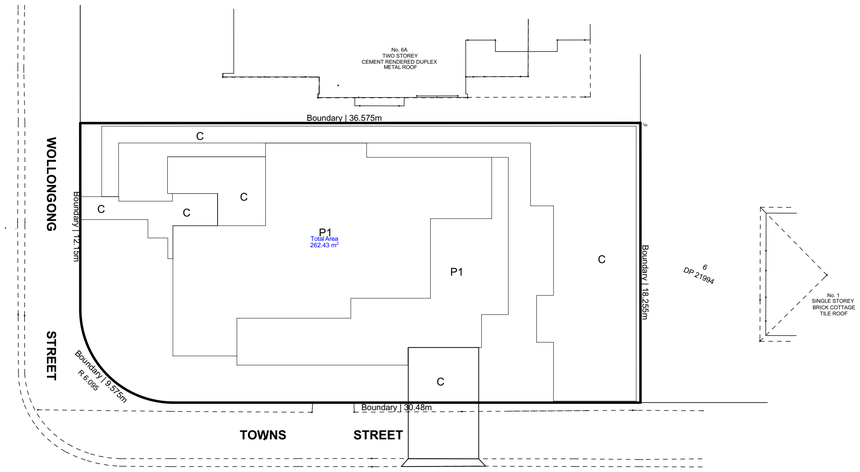
Shellharbour CITY COUNCIL



1 Basement Plan - Subdivison

1:100



2 Ground Floor Plan - Subdivison

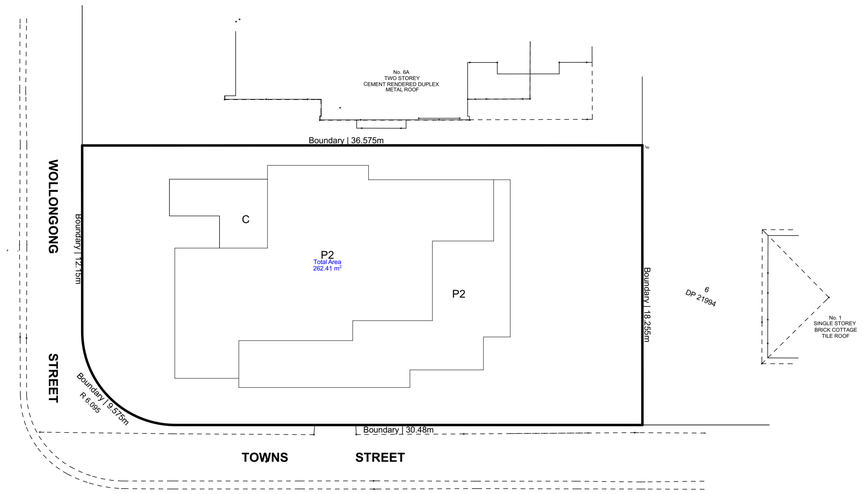
1:100

STRATA-SUBDIVISON CALCULATION

PROJECT: PROPOSED DUAL OCCUPANCY
SITE: 4 WOLLONGONG STREET, SHELLHARBOUR
LOT 1 | D.P 21994

SITE AREA: 659.6 m² (By Calc.)

NUMERICAL CONTROL:	PROPOSED
Unit 1 Subdvision Area (Inclu. Garage)	303.13 m²
Unit 2 Subdvision Area (Inclu. Garage)	299.60 m²



3 First Floor Plan - Subdivison

1:100

KEY:

C - COMMON PROPERTY
P1 - UNIT 1 PROPERTY
P2 - UNIT 2 PROPERTY

DEVELOPMENT APPLICATION

ISSUE	DESCRIPTION	DATE
A	ISSUE FOR DEVELOPMENT APPLICATION LODGEMENT	05/06/20
B	ISSUE FOR DEVELOPMENT APPLICATION LODGEMENT	16/10/20
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D	REVISED FOR APPROVAL	29/01/21

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DESIGN LINK AUSTRALIA PTY LTD

DRAWING TITLE
Proposed Plan of Subdivison
DRAWING NO
DA15

SCALE
1:100 @ A1 or 1:200 @ A3
0 0.5 1.0 2.0m

NORTH
N

Proposed Dual Occupancy
4 Wollongong Street, Shellharbour

JOB No.	DATE	DRAWN	CHECKED	SCALE
01820_DA	29/01/2021	J.D	A.M	As Shown on A1

Figure 1 - Eleaocarpus Reticulatus

Figure 2 - Daniella Caerulea Breeze

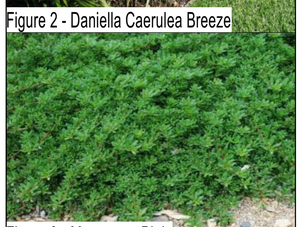
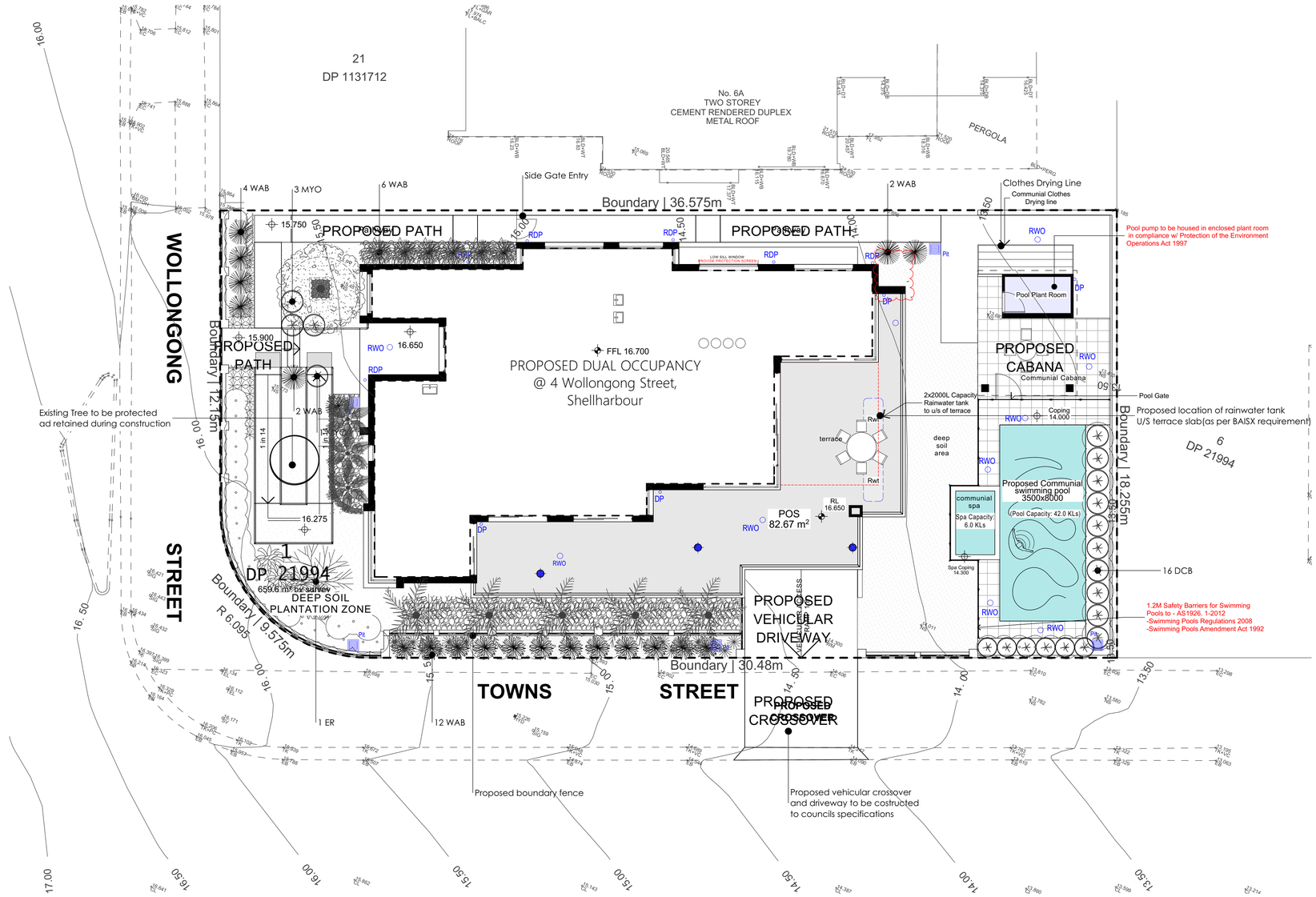


Figure 3 - Myoporum Pink

Figure 4 - Westringia Aussie Box



1 Landscape Plan

Scale 1:100

LANDSCAPE GUIDELINES

1. GENERAL
1.1 The Contractor shall familiarise themselves with the site prior to tender.
1.2 The Contractor will be held responsible for any damage to utility services, pipes, building structures, paving surfaces, fencing, footways, kerbs, roads and existing plant material.
1.3 The site is to be left in a clean and tidy condition at the completion of works to the satisfaction of the Superintendent.
1.4 No work involving an extra shall be undertaken unless approval is first obtained from the Superintendent.
1.5 No substitute of material shall be made unless approval is given by the Superintendent.
1.6 The Contractor shall continuously maintain all areas of the Contract during progress of the works specified.

2. SITE PREPARATION
2.1 Prepared sub-grade is to be free of stones larger than 100mm diameter, cement, rubbish and any other foreign matter that could hinder plant growth.

3. MASS PLANTED AREAS
3.1 Once clear of weed growth, grass and debris, sub-grade should be cultivated to a minimum depth of 150mm incorporating 'Dynamic Lifter' or equivalent at the manufacturers recommended rates.
3.2 Weeds shall be controlled by a combination of chemical and hand removal techniques.

4. PLANTING
4.1 All plant material is to be hardened off, disease and insect free and true to species, type and variety. Plants are to be well grown but not root bound and shall comply with Natspec - "Guide to Purchasing Landscape Trees".
4.2 All plants are to be removed from their containers prior to planting with as little disturbance to the root system as possible.
4.3 Planting shall not be carried out in dry soil or extreme weather conditions.
4.4 Plants should be planted at the same depth as the plants were in the containers and allow for a shallow saucer of soil to be formed around the plant to aid the penetration of water.
4.5 All plant material should be watered thoroughly immediately after planting.
4.6 The Contractor shall be responsible for the failure of plants during construction, except for acts of vandalism.
4.7 Labels shall be removed entirely from the plants.

5. STAKING
5.1 Ties should be firmly attached to the stakes, in a way to avoid damage to the stem while allowing a small degree of movement.

6. TURF AREAS
6.1 Turf areas should be cultivated before turfing by ripping or harrowing.
6.2 At the completion of turfing the whole area shall be thoroughly soaked and kept moist till the completion of landscape works.

7. MULCH
7.1 Mulch for all general mass planted beds shall be 'Droughtmaster' mulch as supplied by A.N.L. or similar.
7.2 Mulch for detention basin garden beds shall be 20mm Nepean River Gravel or similar laid to a minimum 50mm depth.

8. SOIL MIXES
8.1 Soil mix for mass planted areas shall be 3 parts site soil to 1 part 'Organic Garden Mix' as supplied by A.N.L. or equivalent.
8.2 Soil mix for street tree planting shall be 1 part site soil to 1 part 'Organic Garden Mix' as supplied by A.N.L. or equivalent.

TREE PROTECTION GUIDELINES

1. WORK NEAR TREES
GENERAL: All existing trees which are to remain undisturbed are indicated on the drawings and shall be adequately protected for the duration of the contract as specified by the client. Any variation from this specification or enquires regarding the protection/health of the trees to be retained must be referred to Council's Landscape Officer or Tree Preservation Officer for approval and/or advice.
REQUIREMENTS:Trees shall not be removed or lopped unless specific instruction is given in writing by the Superintendent. All tree protection works shall be carried out before excavation, grading and site works commence.

2. PROTECTION
Protect trees specified or shown to be retained from damage by ground works. Take necessary precautions, including the following:
2.1 Method: Fence off the root zones of all existing trees to be retained in accordance with the Tree Protection Fencing Detail. Protective fencing is to remain in place until the completion of all building and hard landscape construction. Fencing is to be located not less than 2 metres from trunks or at the edge of the drip line, wherever possible. A layer of organic mulch 100mm thick shall be placed over the protected area where existing garden beds are not already present. Where building works are required within the root zone of existing trees these works must be supervised by a qualified Arborist.
2.2 Harmful materials: Do not store or otherwise place bulk materials and harmful materials under or near trees. Do not place spoil from excavations against tree trunks. Prevent wind-blown materials such as cement from harming trees and plants. Prevent concrete wash or other substances from entering the protection zone.
2.3 Damage: Prevent damage to tree bark. Do not attach stays, guys and the like to trees
2.4. Work under trees: Do not add or remove topsoil within the drip line of the trees. If it is necessary to excavate within the drip line, use hand methods such that root systems are preserved intact and undamaged. Open up excavations under tree canopies for as short a period as possible.
2.5.Roots: Do not cut tree roots exceeding 50mm diameter unless undertaken by a qualified Arborist.

PROPOSED DUAL OCCUPANCY

4 Wollongong Street, Shellharbour

JOB No.	DATE	DRAWN	CHECKED	SCALE
01820_DA	JUNE 2020	H.F	A.M	As Shown on A1

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ISSUE	DESCRIPTION	DATE
1.	ISSUE FOR DEVELOPMENT APPLICATION	05/0620

PLANT SCHEDULE

Code	Name	Qty	Size	Pot Size
ER	Eleaocarpus reticulatus	1	6.0m	75Litre
DCB	Dianella caerulea breeze	16	0.5m	100mm
MYO	Myoporum parvifolium	4	Ground Cover	120mm
WAB	Westringia Aussie Box	14	0.9m	200mm

LEGEND

New Turf
Excavate / grade all areas to be turfed to 120mm below required finished levels. Do not excavate within 1500mm of the trunk of any existing tree to be retained. Ensure that all surface water runoff is directed towards the inlet pits, kerbs etc.. and away from buildings. Ensure that no pooling or ponding will occur. Further rip the subgrade to 150mm. Install 100mm depth of imported turf underlay. Just prior to spreading the turf, spread "Shirley's No.17 lawn fertilizer" over the underlay at the recommended rate. Lay "Sir Walter Buffalo" turf rolls closely butted. Fill any small gaps with topsoil. Water thoroughly.

Brick garden edging (refer to detail)
Lay a single coarse of paving bricks in a mortar haunch (200mm wide and 100mm deep). The edges are to be laid in even curves and straight lines as shown on the plan. Edge is to finish flush with the adjacent turf and garden levels.

Proposed clothes drying line

Existing trees or shrubs to be protected and retained during construction

Existing trees or shrubs to be removed (pending Council approval)

Existing boundary fencing to be retained or replaced (where required)

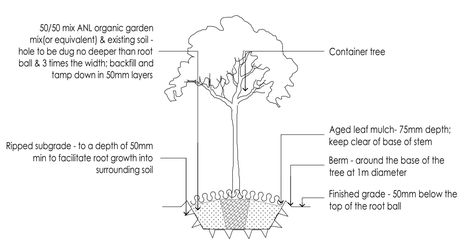
New 1.8m high dividing fence between rear private open space

Proposed 900mm high low boundary fence to front setback area (to be selected by owner)

Proposed pre-cast concrete stepping pads in mulched garden area (to be selected by owner)

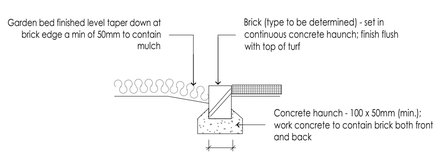
Landscaped areas
Excavate all Planting Areas to a depth of 150mm below finished levels. Cultivate subgrade a further 150mm. Supply & Install 100mm of soil mix that consists of 50% Site Top Soil (if suitable) with 50% ANL Organic Garden mix (or equivalent). Install 75mm depth of selected mulch.

Note:
Maintenance:
All landscape works are to be maintained for a period of twelve months from the date of practical completion. This includes all watering, weeding, spraying and re-mulching necessary to achieve vigorous growth. Any defects which arise during this period are to be rectified immediately. Any plants or areas of turf which fail during this period are to be replaced at no additional cost.



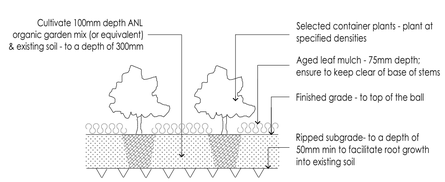
1 Tree Planting Detail

Section NTS @ A1 (Not to Scale)



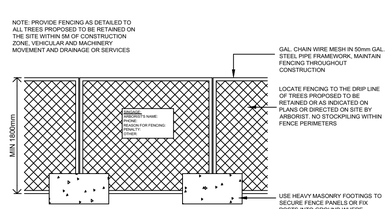
2 Brick Edge Detail

Section NTS @ A1 (Not to Scale)



3 Garden Bed Planting Detail

Section NTS @ A1 (Not to Scale)



TREE PROTECTION FENCING DETAIL nts

COPYRIGHT TO ZENITH LANDSCAPE DESIGNS

A1

DA No. DA0246/2020

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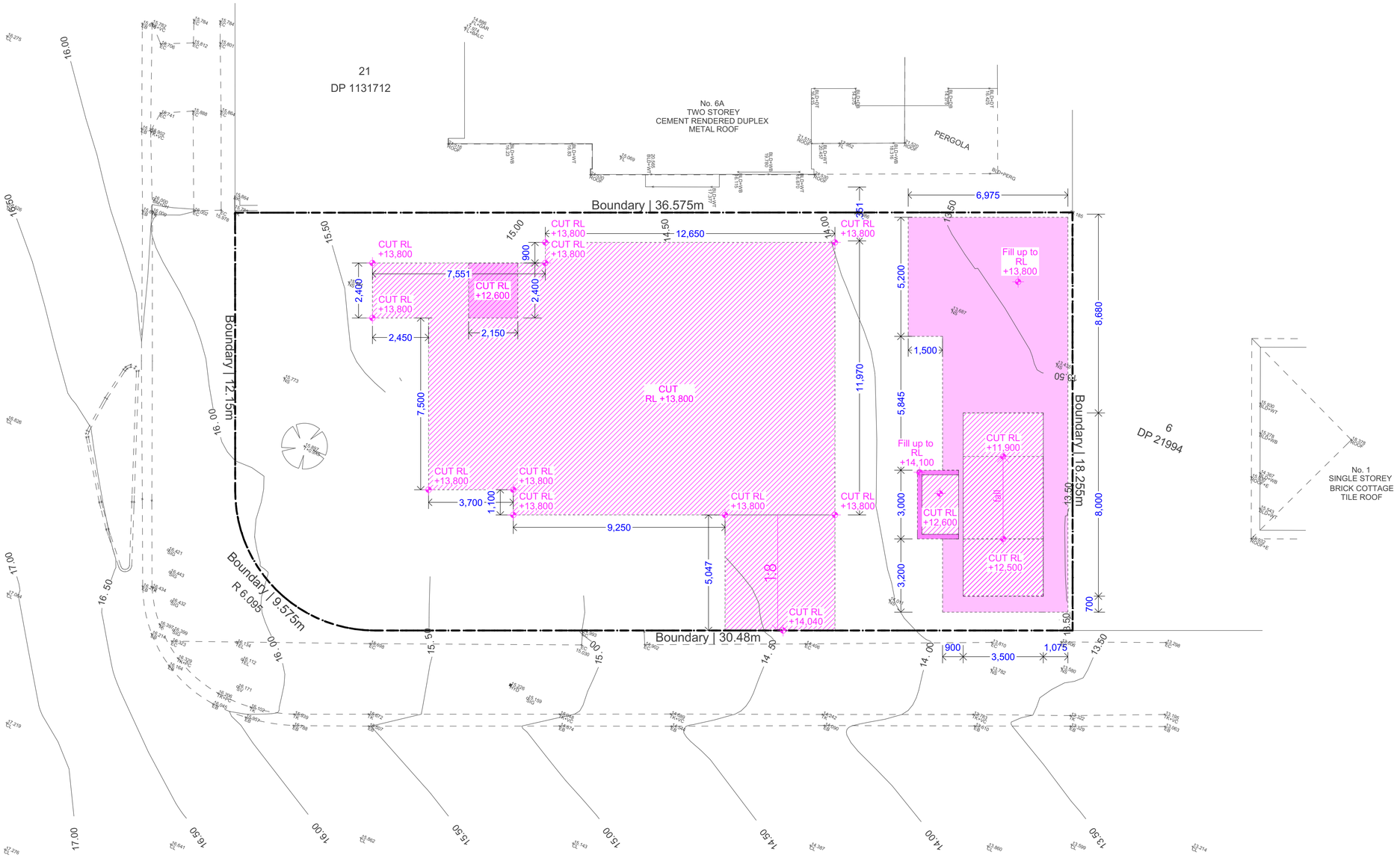
Shellharbour CITY COUNCIL



01 CUT & FILL PLAN
1:100

DEVELOPMENT APPLICATION

ISSUE	DESCRIPTION	DATE
A	ISSUED FOR DEVELOPMENT APPLICATION LODGEMENT	16/10/20

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p 02 9744 3116 e info@design-link.com.au

DESIGN LINK AUSTRALIA PTY LTD

DRAWING TITLE
Cut & Fill plan
DRAWING NO
DA24

SCALE
1:100 @ A1 or 1:200 @ A3
0 0.5 1.0 2.0m

NORTH
N

Proposed Dual Occupancy
4 Wollongong Street, Shellharbour

JOB No.	DATE	DRAWN	CHECKED	SCALE
01820_DA	2/11/2020	J.D	A.M	As Shown on A1

DA No. DA0246/2020

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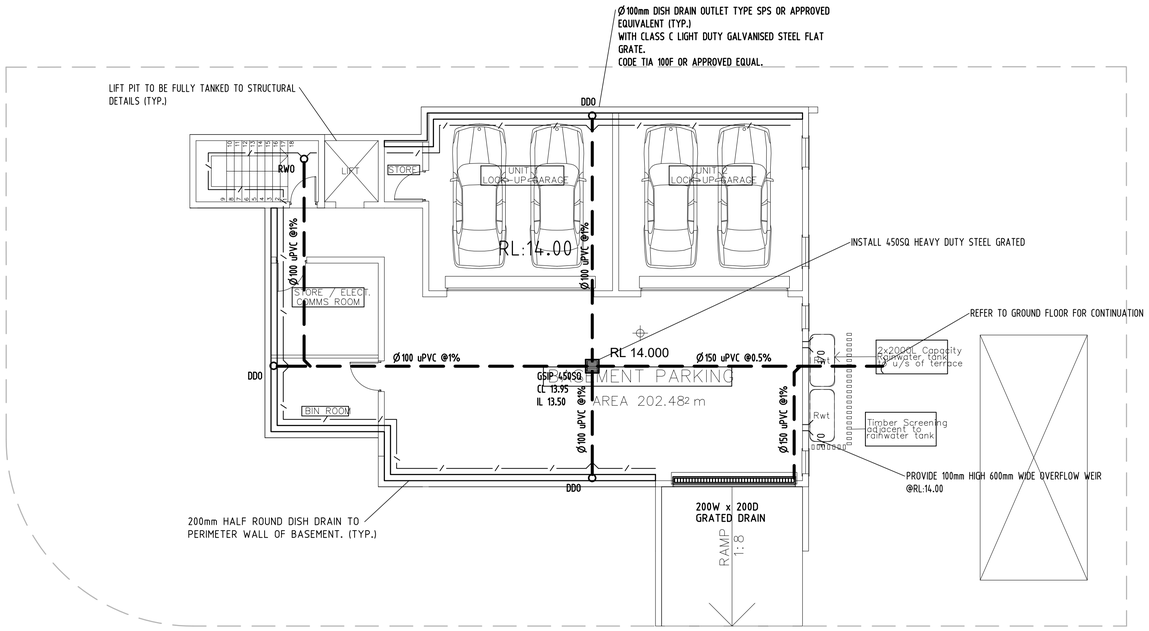
Shellharbour CITY COUNCIL



BASEMENT FLOOR PLAN

SCALE 1:100 (A1)
SCALE 1:200 (A3)

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN
A	05.06.2020	CONCEPT, ISSUED FOR DA APPROVAL	TA

TAA CONSULTING ENGINEERS
CONSULTING CIVIL & STRUCTURAL ENGINEERS
201/25 FALCON STREET, CROWS NEST NSW 2065 Ph 0411778799 TAAENGINEERS@GMAIL.COM

PROPOSED RESIDENTIAL DEVELOPMENT AT:

4 WOLLONGONG STREET, SHELLHARBOUR, NSW 2529

BASEMENT FLOOR DRAINAGE PLAN

DRAWN	CHECKED	SCALE	DATUM	DRAWING No.	REV.
TA	TONY ANAL – Civil & Structural Engineer B.E. Civil (USyd) (MIEAust):1080225	AS SHOWN	AHD	H399 – S1/6	A

Document Set ID: 11451145
Version: 1, Version Date: 09/06/2020

DA No. DA0246/2020

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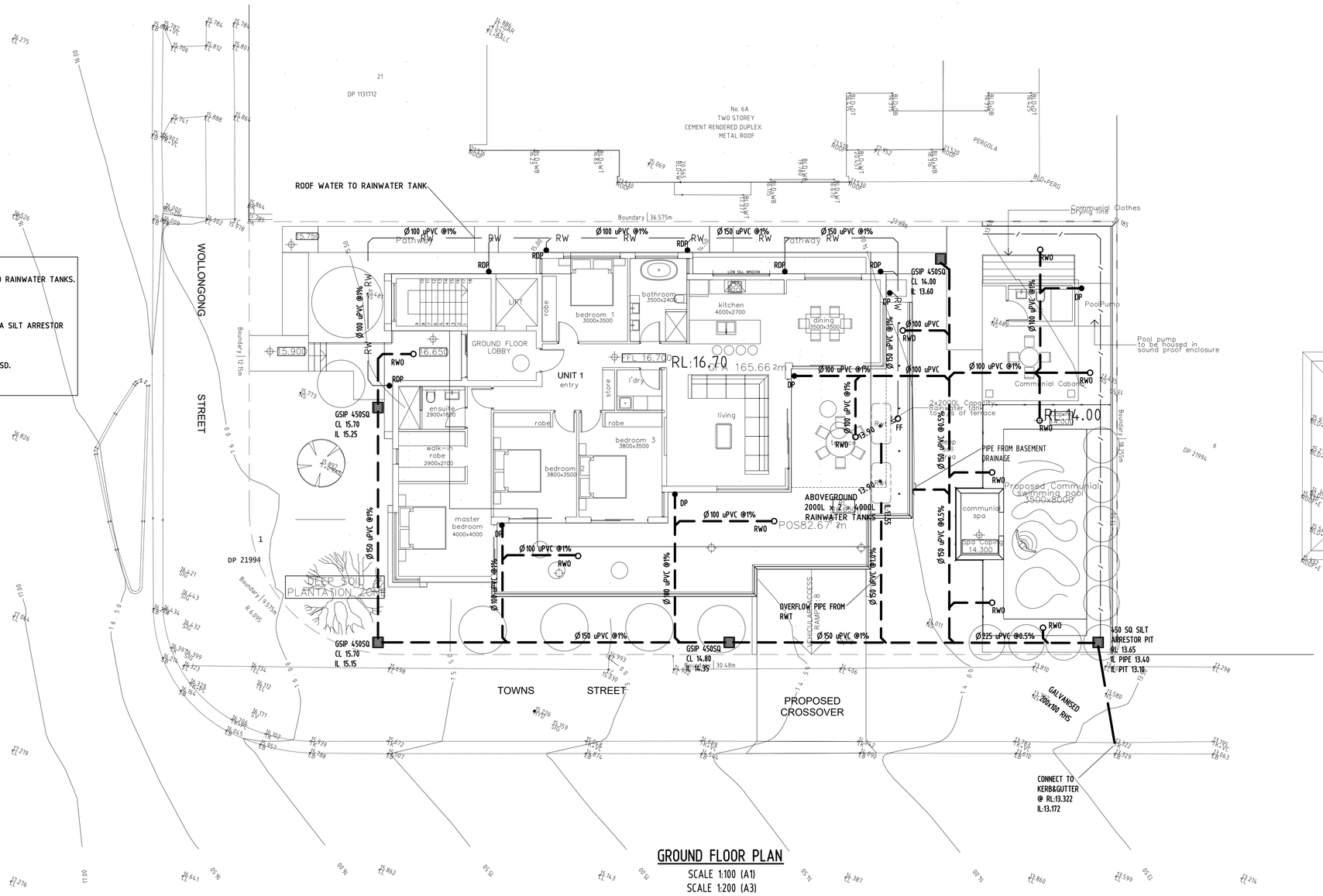
Shellharbour CITY COUNCIL

SITE SPECIFIC NOTES:

ALL ROOFWATER TO DRIAN BY GRAVITY TO UNDERGROUND RAINWATER TANKS.
OVERFLOW FROM RAINWATER TANKS TO DRAIN TO STREET KERB GUTTER BY GRAVITY VIA SILT ARRESTOR PIT.

SURFACE WATER TO DRAIN DIRECTLY TO KERB GUTTER VIA SILT ARRESTOR PIT. DO NOT CONNECT TO RAINWATTER TANKS.

TOTAL 4000L RAINWATER VOLUME PROVIDED IN LIEU OF OSD.



GROUND FLOOR PLAN

SCALE 1:100 (A1)
SCALE 1:200 (A3)

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN
A	05.06.2020	CONCEPT, ISSUED FOR DA APPROVAL	TA

TAA CONSULTING ENGINEERS
CONSULTING CIVIL & STRUCTURAL ENGINEERS
201/25 FALCON STREET, CROWS NEST NSW 2065 Ph 0411778799 TAAENGINEERS@GMAIL.COM

PROPOSED RESIDENTIAL DEVELOPMENT AT:
4 WOLLONGONG STREET, SHELLHARBOUR, NSW 2529

GROUND FLOOR DRAINAGE PLAN

DRAWN	CHECKED	SCALE	DATUM	DRAWING No.	REV.
TA	TONY AHAL – Civil & Structural Engineer B.E. Civil (USyd) (MIEAust):1080225	AS SHOWN	AHD	H399 – S2/6	A

Document Set ID: 11451145
Version: 1, Version Date: 09/06/2020

DA No. DA0246/2020

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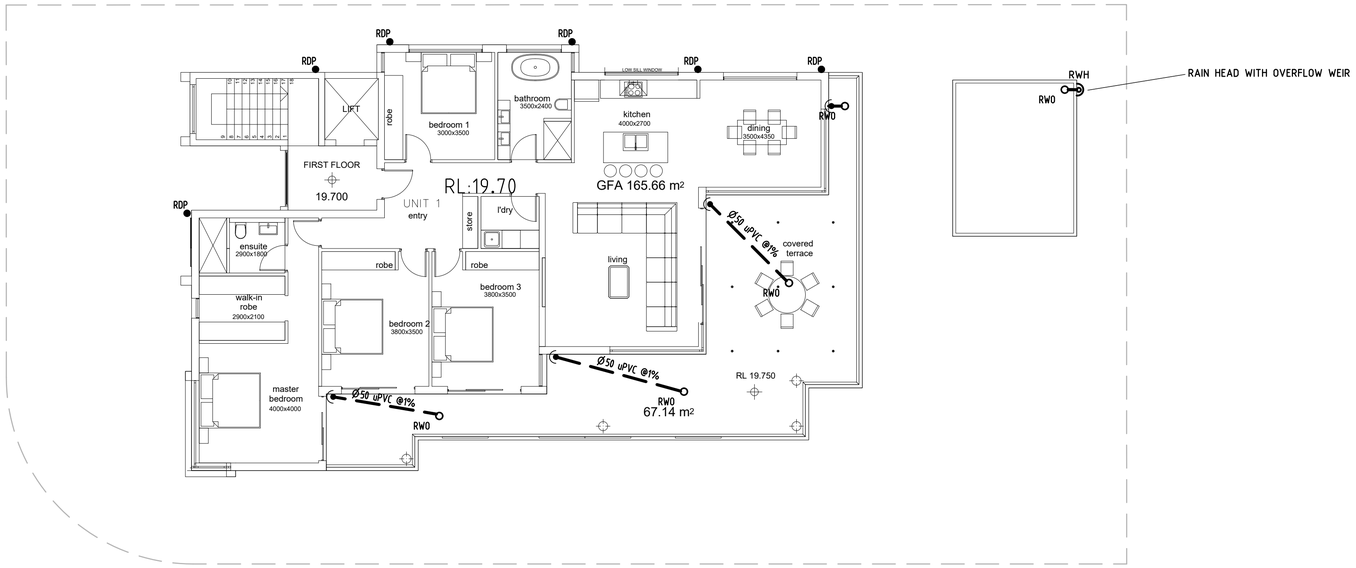
Shellharbour CITY COUNCIL



FIRST FLOOR PLAN

SCALE 1:100 (A1)
SCALE 1:200 (A3)

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN
A	05.06.2020	CONCEPT, ISSUED FOR DA APPROVAL	TA

TAA CONSULTING ENGINEERS
CONSULTING CIVIL & STRUCTURAL ENGINEERS
201/25 FALCON STREET, CROWS NEST NSW 2065 Ph 0411778799 TAAENGINEERS@GMAIL.COM

PROPOSED RESIDENTIAL DEVELOPMENT AT:

4 WOLLONGONG STREET, SHELLHARBOUR, NSW 2529

FIRST FLOOR DRAINAGE PLAN

DRAWN	CHECKED	SCALE	DATUM	DRAWING No.	REV.
TA	TONY AHAL – Civil & Structural Engineer B.E. Civil (USyd) (MIEAust):1080225	AS SHOWN	AHD	H399 - S3/6	A

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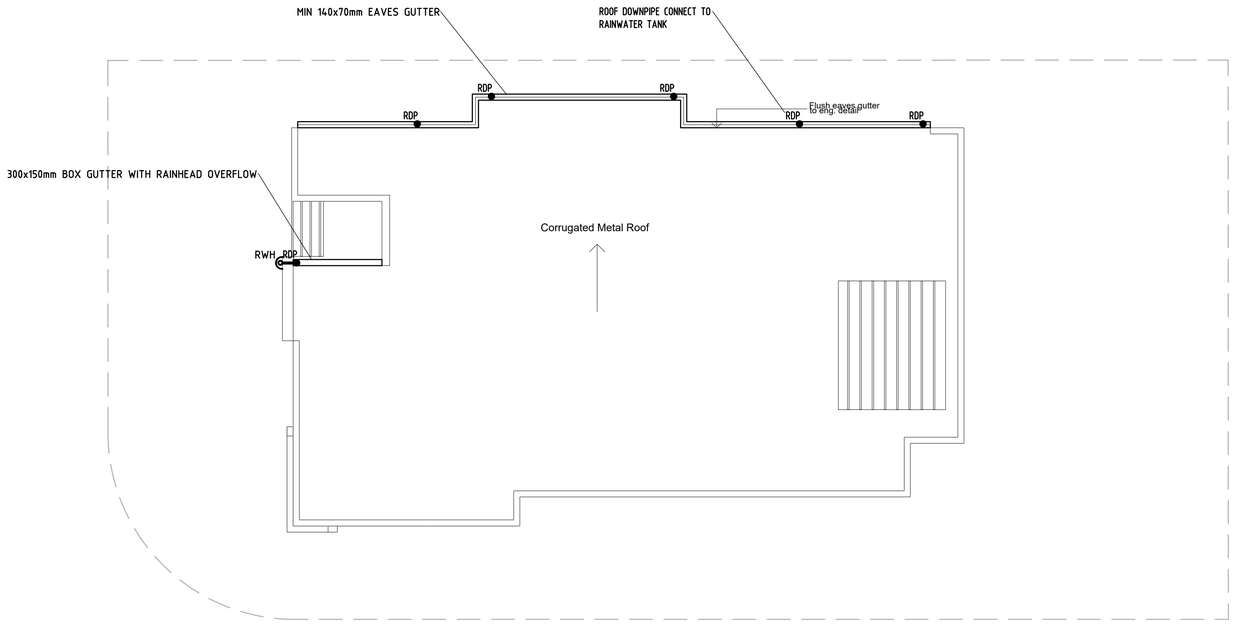

ROOF PLAN

SCALE 1:100 (A1)
SCALE 1:200 (A3)

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ROOF PLAN

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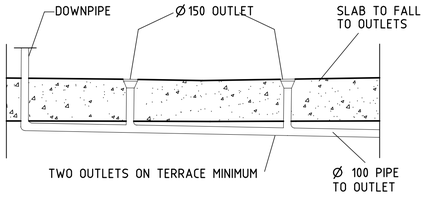
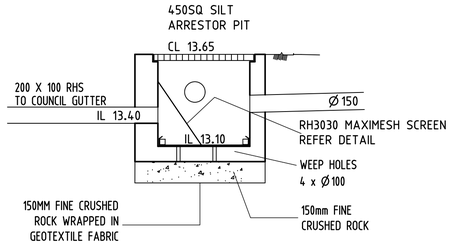
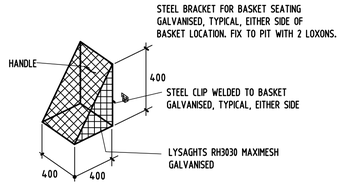


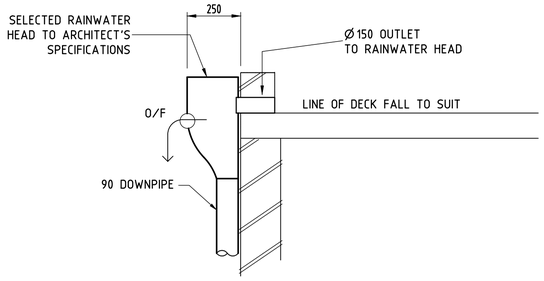
TERRACE OUTLET DETAIL (RWO)



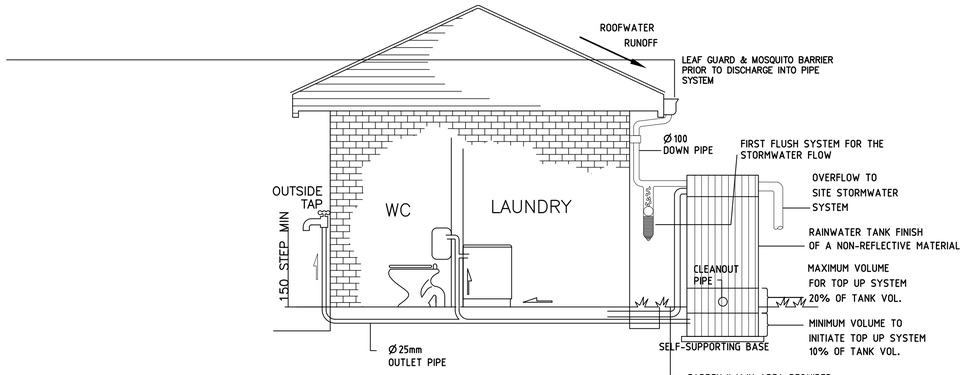
SILT ARRESTOR PIT DETAIL



SCREEN DETAIL TYPICAL



RAIN WATER HEAD DETAIL TYPICAL



RAINWATER TANK DETAIL

N.T.S.
INSTALLATION OF TANKS TO BE IN ACCORDANCE WITH MANUFACTURER SPECIFICATION.

RAINWATER TANK NOTES:

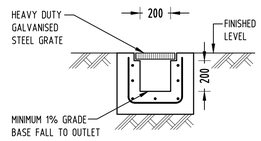
CONNECT ROOFWATER AS PER BASIX REQUIREMENTS

RECYCLED WATER CONNECTIONS AS PER BASIX REQUIREMENTS

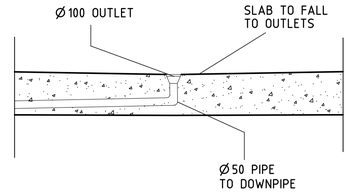
PROVIDE A MAINS BYPASS IN THE EVENT OF LOWER WATER LEVELS IN THE TANK OR POVER FAILURE.

PROVIDE WARNING LABEL AS PER SYDNEY WATER REQUIREMENT INDICATING THAT THE WATER IS RAINWATER AND NOT TO BE CONSUMED

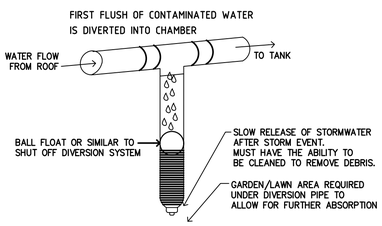
PROVIDE A FIRST FLUSH DIVERSION DEVICE AND SCREENING PRIOR TO WATER REACHING RAINWATER TANK. www.rainharvesting.com.au or equivalent



1 / - DETAIL
GRATED TRENCH DRAIN
NOT TO SCALE

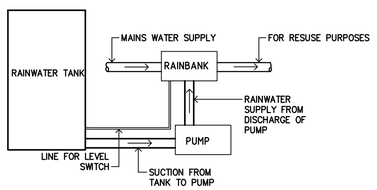


BALCONY OUTLET DETAIL (RWO)



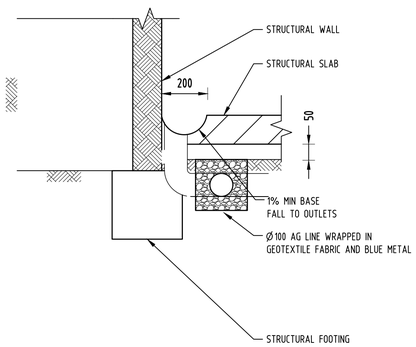
FIRST FLUSH WATER DIVERTER DETAIL

NTS



PLAN

N.T.S.



2 / - DETAIL
SUBSOIL DRAINAGE
N.T.S

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201/25 FALCON STREET, CROWS NEST NSW 2065 Ph 0411778799 TAAENGINEERS@GMAIL.COM

PROPOSED RESIDENTIAL DEVELOPMENT AT:

4 WOLLONGONG STREET, SHELLHARBOUR, NSW 2529

DETAILS SHEET

DRAWN	CHECKED	SCALE	DATUM	DRAWING No.	REV.
TA	TONY AHAL – Civil & Structural Engineer B.E. Civil (USyd) (MIEAust):1080225	AS SHOWN	AHD	H399 - S5/6	A

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DA No. DA0246/2020

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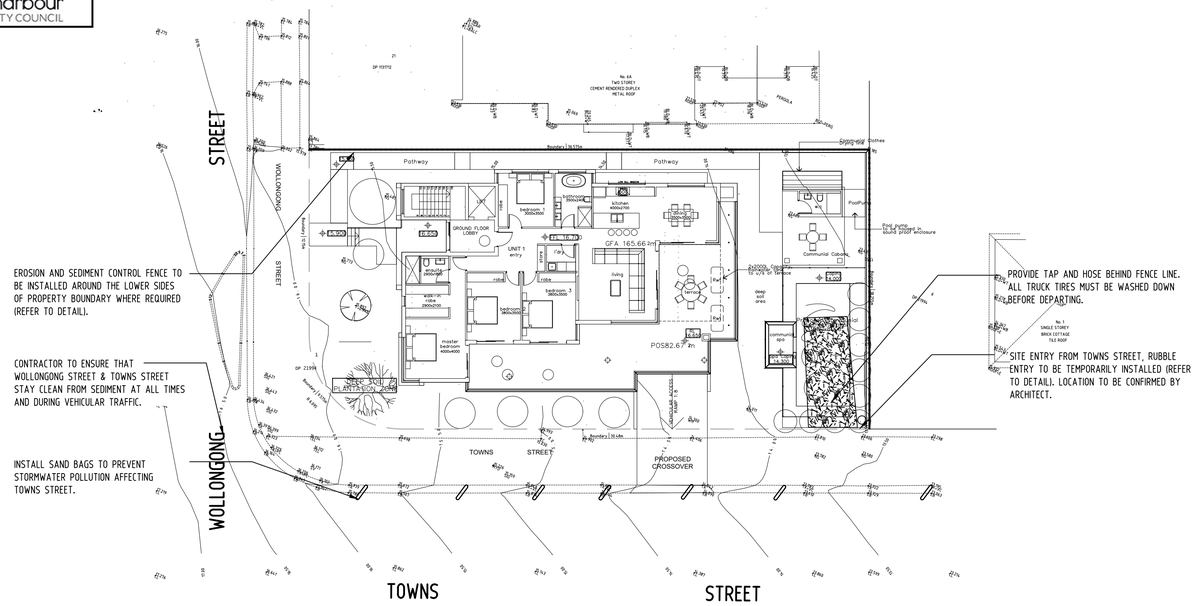
Shellharbour CITY COUNCIL



EROSION & SEDIMENTATION CONTROL NOTES

1. CONTRACTOR SHALL PROVIDE SEDIMENT FENCING MATERIAL DURING CONSTRUCTION TO THE LOW SIDE OF THE WORKS. TIE SEDIMENT FENCING MATERIAL TO CYCLONE WIRE SECURITY FENCE. SEDIMENT CONTROL FABRIC SHALL BE AN APPROVED MATERIAL (EG. HUMES PROPEX SILT STOP) STANDING 300mm ABOVE GROUND & EXTENDING 150mm BELOW GROUND.
2. EXISTING DRAINS LOCATED WITHIN THE SITE SHALL ALSO BE ISOLATED BY SEDIMENT FENCING MATERIAL.
3. NO PARKING OR STOCKPILING OF MATERIALS IS PERMITTED ON THE LOWER SIDE OF THE SEDIMENT FENCE.
4. GRASS VERGES SHALL BE MAINTAINED AS MUCH AS PRACTICAL TO PROVIDE A BUFFER ZONE TO THE CONSTRUCTION SITE.
5. CONSTRUCTION ENTRY/EXIT SHALL BE VIA THE LOCATION NOTED ON THE DRAWING. CONTRACTOR SHALL ENSURE ALL DROPPABLE SOIL & SEDIMENT IS REMOVED PRIOR TO CONSTRUCTION TRAFFIC EXITING SITE. CONTRACTOR SHALL ENSURE ALL CONSTRUCTION TRAFFIC ENTERING & LEAVING THE SITE DO SO IN A FORWARD DIRECTION.

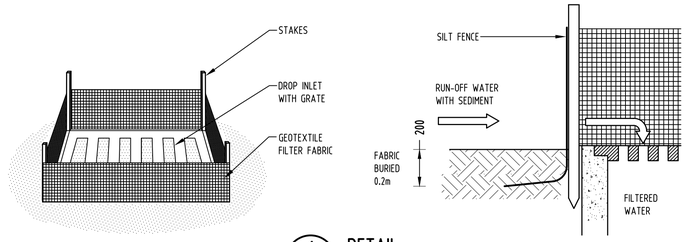
GENERAL NOTES

1. THIS PLAN IS A CONCEPT PLAN ONLY FOR STORMWATER DISPOSAL & EROSION CONTROL. IT IS NOT SUITABLE FOR CONSTRUCTION. THIS PLAN SHOULD BE ADAPTED BY THE BUILDER DURING DEMOLITION, EXCAVATION & CONSTRUCTION PHASES TO ENSURE ADEQUATE PERFORMANCE.
2. ALL DRAINAGE LAYOUT & DETAILS ARE DIAGRAMMATIC & INDICATIVE ONLY. ACTUAL LOCATION, SIZES, LEVELS & GRADES MAY ALTER WHEN DETAIL DESIGN WORKS ARE DOCUMENTED.

CLAY SOILS

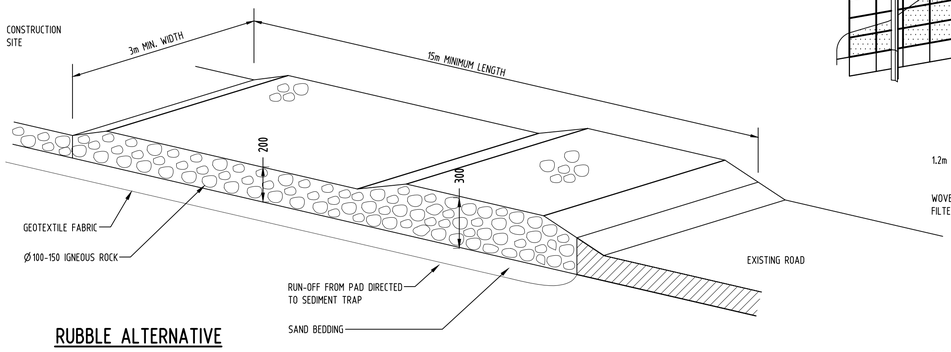
A SYSTEM SHALL BE INSTALLED TO EITHER:

1. TRANSPORT STORMWATER RUNOFF WITH SUSPENDED SOLIDS FROM SITE VIA PUMP TRUCKS.
2. TREAT THE STORMWATER RUNOFF WITH SUSPENDED SOLIDS SO THE DISCHARGE WATER QUALITY TO COUNCIL STORMWATER DRAINAGE SYSTEM HAS A MAXIMUM CONCENTRATION OF SUSPENDED SOLIDS THAT DOES NOT EXCEED 50 MILLIGRAMS PER LITRE IN ACCORDANCE WITH THE PROTECTION OF THE ENVIRONMENT OPERATION ACT (POEO 1997) AND SHALL BE APPROVED BY LOCAL COUNCIL



1 / - DETAIL

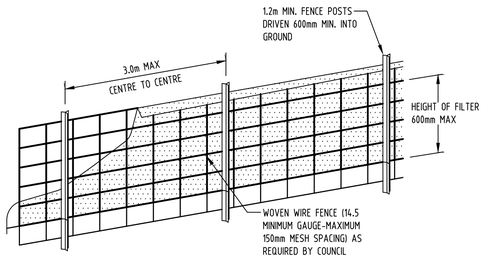
SUMP SEDIMENT TRAP
NOT TO SCALE



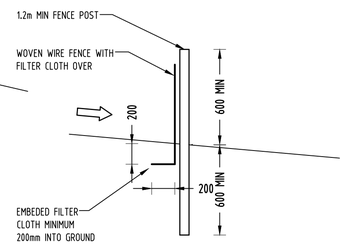
RUBBLE ALTERNATIVE

3 / - DETAIL

TEMPORARY CONSTRUCTION EXIT
NOT TO SCALE



DIAGRAMMATIC VIEW



TYPICAL SECTION

3 / - DETAIL

SEDIMENT FENCE
NOT TO SCALE

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PROPOSED RESIDENTIAL DEVELOPMENT AT:

4 WOLLONGONG STREET, SHELLHARBOUR, NSW 2529

EROSION AND SEDIMENT CONTROL PLAN AND DETAILS

DRAWN	CHECKED	SCALE	DATUM	DRAWING No.	REV.
TA	TONY AHAL - Civil & Structural Engineer B.E. Civil (USyd) (MIEAust):1080225	AS SHOWN	AHD	H399 - S6/6	A

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DA No. DA0246/2020

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WASTE MANAGEMENT PLAN
4 Wollongong Street, Shellharbour

SECTION ONE - DEMOLITION STAGE

MATERIALS ON-SITE		DESTINATION		
		REUSE AND RECYCLING		DISPOSAL
Type of Material	Estimated Volume cubic metres	ON-SITE Specify proposed resuse or on-site recycling methods	OFF-SITE Specify contractor and recucling outlet	Specify contractor and landfil site
Excavation Material	0.5	*Keep and re-use topsoil for landscaping. Store on-site. Use some behind retaining walls.*		*remainder to landfill site*
Green Waste	0.5	*Will be separated. Some chipped & stored on-site for re-use on landscaping*	*Remainder to landscape suppliers for composting or reuse*	*stumps and large trunks separated*
Bricks	10	*Clean lime mortar from bricks. Re-use bricks in new footings. Broken bricks for internal walls.*	*Concrete mortar bricks to crushing and recycling company*	*Nil*
Concrete	2.5	*Existing driveway to remain during construction*	*one completion to crushing and recycling company*	*Nil*
Timber - Please specify *oregon & pine*	2	*Re-use for formwork & studwork. Chip remainder for use in landscaping*	*to stockpile at transfer station*	*Nil*
Plasterboard	2	*Break-up & use in landscaping*	*remainder to land-scape suppliers*	*Nil*
Metals *water pipes* *gutters* *lead*	*1*	*Nil*	*remainder to metal recyclers*	*Nil*
Other- *roof tiles*	*1*	*Broken tiles for fill*	*Refer to attachment*	*Nil*
door fittings		*On-site sale*		*Nil*

WASTE MANAGEMENT PLAN: CONSTRUCTION

SECTION TWO - CONSTRUCTION STAGE				
MATERIALS ON-SITE		DESTINATION		
		REUSE AND RECYCLING		DISPOSAL
Type of Material	Estimated Volume cubic metres	ON-SITE Specify proposed resuse or on-site recycling methods	OFF-SITE Specify contractor and recucling outlet	Specify contractor and landfil site
Excavation Material	-	*Covered in SECTION 1* *As part of demolition*		
Green Waste	-	*Covered in SECTION 1* *As part of demolition*		
Bricks	2.5	*Use for fill behind retaining walls.*	*Remainder to crushing and recycling company*	*Nil*
Concrete	1.5	*Use for fill behind retaining walls*	*remainder to crushing and recycling company*	*Nil*
Timber - Please specify *oregon pine particle board finishes skirting and architraves*	2	*Chip for landscaping. Sell some for firewood.*	*remainder to landscape suppliers for chipping and composting*	*Nil*
Plasterboard	1.5	*Break-up & use in landscaping*	*remainder to landscape suppliers*	*Nil*
Metals *Copper steel reo mesh aluminium*	0.5	*Nil*	*some to metal recyclers for reuse*	*Remainder to landfill site by waste contractors*
Other- *Plastics*		*Nil*	*Refer to attachment*	

ESTIMATING WASTE

As a guide to estimating waste for inclusion in the waste management plan mentioned above.

TRADE	WASTE ALLOWANCE %
Bricks	2 - 5
Brick accessories	10
Concrete	5 - 10
Concrete reinforcement	< 1
Concrete membrane	10
Carpentry	3 - 15
Roof tiling	5
Drywall, plasterboard	5 - 10
Tiles	2 - 10

Demolition Waste & Recycling List

Waste Reduction & Recovery Tips:

Materials:	Company Name	Company Address	Contact Details
Excavation Material / Soil Waste	Enviroguard	[redacted]	
Green Waste	Ecocycle		
Bricks	Brandown		
Concrete	Brandown		
Timber	Artistic Popular Furniture		
Metals	Parramatta Scrap Metal		
Roof Tiles	Obsolete Tiles		
Door Fittings	Recycling Works		
Plastics	Chromford		
Plasterboard	Ecocycle		
Fibro Containing Asbestos	Enviroguard		

ONGOING WASTE MANAGEMENT PLAN

PROPOSED DUAL OCCUPANCY

4 Wollongong Street, Shellharbour

It is proposed that waste generated by the residences of the development will be stored on site in appropriate waste bins.

The location of the bins would be in the basement level, in a designated waste area. The appropriate bins supplied by council would be used for general household waste, recycling and garden waste. It is proposed that the residence would require:

- 2 x General household waste bins
- 2 x recycling bins
- 2 x Garden waste bin

These will be put out once a week on the designated garbage night and brought in the next morning by the residence.

BASIX® Certificate

Building Sustainability Index www.basix.nsw.gov.au

Multi Dwelling

Certificate number: 1103768M_02

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary
Date of issue: Thursday, 04 June 2020
To be valid, this certificate must be lodged within 3 months of the date of issue.

NSW GOVERNMENT | Planning, Industry & Environment

DA No. DA0246/2020

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Shellharbour CITY COUNCIL

Project summary	
Project name	4 Wollongong St, Shellharbour_02
Street address	4 Wollongong Street Shellharbour 2529
Local Government Area	Shellharbour City Council
Plan type and plan number	deposited 21994
Lot no.	1
Section no.	-
No. of residential flat buildings	0
No. of units in residential flat buildings	0
No. of multi-dwelling houses	2
No. of single dwelling houses	0

Project score		
Water	✔ 45	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 55	Target 50

Certificate Prepared by
Name / Company Name: BCA Energy Pty Ltd
ABN (if applicable): 72159518260

Document Set ID: 11451139
Version: 1, Version Date: 09/06/2020

Description of project

Project address	
Project name	4 Wollongong St, Shellharbour_02
Street address	4 Wollongong Street Shellharbour 2529
Local Government Area	Shellharbour City Council
Plan type and plan number	deposited 21994
Lot no.	1
Section no.	-
Project type	
No. of residential flat buildings	0
No. of units in residential flat buildings	0
No. of multi-dwelling houses	2
No. of single dwelling houses	0
Site details	
Site area (m²)	657
Roof area (m²)	247
Non-residential floor area (m²)	0.0
Residential car spaces	4
Non-residential car spaces	0

Common area landscape		
Common area lawn (m²)	100.0	
Common area garden (m²)	100.0	
Area of indigenous or low water use species (m²)	100.0	
Assessor details		
Assessor number	20039	
Certificate number	0004890650	
Climate zone	18	
Project score		
Water	✔ 45	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 55	Target 50

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Version: 1, Version Date: 09/06/2020

Description of project

The tables below describe the dwellings and common areas within the project

Multi-dwelling houses

Dwelling no.	No. of bedrooms	Conditioned floor area (m^2)	Unconditioned floor area (m^2)	Area of garden & lawn (m^2)	Indigenous species (min area m^2)
1	4 or more bedrooms	165.5	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m^2)	Unconditioned floor area (m^2)	Area of garden & lawn (m^2)	Indigenous species (min area m^2)
2	4 or more bedrooms	165.5	0.0	0.0	0.0

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Description of project

The tables below describe the dwellings and common areas within the project

Common areas of the development (non-building specific)

Common area	Floor area (m²)
Car park area (No. 1)	166.0
Plant or service room (No. 1)	10.5

Common area	Floor area (m²)
Lift car (No.1)	-

Common area	Floor area (m²)
Garbage room (No. 1)	10.6

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Schedule of BASIX commitments

1. Commitments for multi-dwelling houses
    - (a) Dwellings
        - (i) Water
        - (ii) Energy
        - (iii) Thermal Comfort

2. Commitments for single dwelling houses

3. Commitments for common areas and central systems/facilities for the development (non-building specific)
    - (i) Water
    - (ii) Energy

Document Set ID: 11451139
Version: 1, Version Date: 09/06/2020

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

1. Commitments for multi-dwelling houses

(a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✔	✔	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✔	✔
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✔	✔
(e) The applicant must install:			
(aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and		✔	✔
(bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✔	✔
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✔	✔	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✔	
(g) The pool or spa must be located as specified in the table.	✔	✔	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✔	✔	✔

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	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 4.5 but <= 6 L/min)	4 star	5 star	5 star	no	-	-	-	-	-	-	-	-	-

	Alternative water source							
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
All dwellings	central water tank (no. 1)	See central systems	See central systems	-	yes	-	-	-
None	-	-	-	-	-	-	-	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✔	✔	✔
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✔	✔
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✔	✔
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✔	✔

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(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✔	✔	✔
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must:			
(aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and		✔	
(bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✔	
(h) The applicant must install in the dwelling:			
(aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below;		✔	
(bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and		✔	✔
(cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✔	
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✔	
(j) The applicant must install the photovoltaic system specified for the dwelling under the "Photovoltaic system" heading of the "Alternative energy" column of the table below, and connect the system to that dwelling's electrical system.	✔	✔	✔

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	gas instantaneous 6 star	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

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	Cooling		Heating		Artificial lighting						Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/ toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
All dwellings	1-phase airconditioning 3.5 Star (old label)	1-phase airconditioning 3.5 Star (old label)	1-phase airconditioning 3.5 Star (old label)	1-phase airconditioning 3.5 Star (old label)	4 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	1	yes

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	-	-	-	no	no

	Alternative energy
Dwelling no.	Photovoltaic system (min rated electrical output in peak kW)
All dwellings	5.0

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must attach the certificate referred to under "Assessor details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for a final occupation certificate for the proposed development.			
(b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
(c) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.			

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(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(d) The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Thermal Comfort Protocol requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor, to certify that this is the case.	✔		
(e) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.		✔	
(f) The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✔	✔
(g) Where there is an in-slab heating or cooling system, the applicant must: (aa) Install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or (bb) On a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.	✔	✔	✔
(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.	✔	✔	✔

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
1	72.5	27.6
All other dwellings	69.4	29.4

	Construction of floors and walls				
Dwelling no.	Concrete slab on ground(m²)	Suspended floor with open subfloor (m²)	Suspended floor with endclosed subfloor (m²)	Suspended floor above garage (m²)	Primarily rammed earth or mudbrick walls
1	-	-	-	165	No
All other dwellings	165	-	-	-	No

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3. Commitments for common areas and central systems/facilities for the development (non-building specific)

(b) Common areas and central systems/facilities

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✔	✔
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✔	✔	✔
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✔	✔	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✔	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✔	✔
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✔	✔

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 4.5 but <= 6 L/min)	4 star	5 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	4000.0	To collect run-off from at least: - 200.0 square metres of roof area of buildings in the development	- irrigation of 200.0 square metres of common landscaped area on the site
Pool (No. 1)	Volume: 42.0 kLs	Location: Other Pool shaded: no	-
Spa (No. 1)	Volume: 6.0 kLs	Location: Other Spa shaded: no Spa cover: yes	-

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(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✔	✔
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✔	✔
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✔	✔	✔

	Common area ventilation system		Common area lighting		
Common area	**Ventilation system type**	**Ventilation efficiency measure**	**Primary type of artificial lighting**	**Lighting efficiency measure**	**Lighting control system/BMS**
Car park area (No. 1)	no mechanical ventilation	-	fluorescent	motion sensors	No
Lift car (No.1)	-	-	light-emitting diode	connected to lift call button	No
Garbage room (No. 1)	ventilation exhaust only	-	fluorescent	motion sensors	No
Plant or service room (No. 1)	no mechanical ventilation	-	fluorescent	motion sensors	No

Central energy systems	Type	Specification
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 3
Pool (No. 1)	Heating source: no heating	Pump controlled by timer: yes
Spa (No. 1)	Heating system: gas	Pump controlled by timer: yes

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Notes

1. In these commitments, "applicant" means the person carrying out the development.
2. The applicant must identify each dwelling, building and common area listed in this certificate, on the plans accompanying any development application, and on the plans and specifications accompanying the application for a construction certificate / complying development certificate, for the proposed development, using the same identifying letter or reference as is given to that dwelling, building or common area in this certificate.
3. This note applies if the proposed development involves the erection of a building for both residential and non-residential purposes (or the change of use of a building for both residential and non-residential purposes). Commitments in this certificate which are specified to apply to a "common area" of a building or the development, apply only to that part of the building or development to be used for residential purposes.
4. If this certificate lists a central system as a commitment for a dwelling or building, and that system will also service any other dwelling or building within the development, then that system need only be installed once (even if it is separately listed as a commitment for that other dwelling or building).
5. If a star or other rating is specified in a commitment, this is a minimum rating.
6. All alternative water systems to be installed under these commitments (if any), must be installed in accordance with the requirements of all applicable regulatory authorities. NOTE: NSW Health does not recommend that stormwater, recycled water or private dam water be used to irrigate edible plants which are consumed raw, or that rainwater be used for human consumption in areas with potable water supply.

Legend

1. Commitments identified with a "✔" in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).
2. Commitments identified with a "✔" in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
3. Commitments identified with a "✔" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled. (Note: a certifying authority must not issue an occupation certificate (either interim or final) for a building listed in this certificate, or for any part of such a building, unless it is satisfied that each of the commitments whose fulfilment it is required to monitor in relation to the building or part, has been fulfilled).

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