



CIVIL ENGINEERING REPORT

TriCare (Hastings) Limited
Lot 1 DP 786570
87-89 Tweed Coast Road, Hastings Point

Prepared by:
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Cozens Regan Group Pty Ltd

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Date:
February 2025
Revision Date:
-



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TriCare (Hastings) Limited
Lot 1 DP 786570, 87-89 Tweed Coast Road, Hastings Point
Civil Engineering Report



DOCUMENT CONTROL RECORD

Report Details

Client: TriCare (Hastings) Limited
Document Name: Civil Engineering Report
Site Address: 87-89 Tweed Coast Road, Hastings Point
Job Number: 220450
File Name: 220450_ ENG REPORT_SEAR_A

Issue	Rev	Approved	Date	Distributed to:	Qty.
Final	A		27/02/25	Planit Consulting	1

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**AGED CARE FACILITY DEVELOPMENT
87-89 Tweed Coast Road, Hastings Point
LOT 1 DP 786570**

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1.0 INTRODUCTION

Cozens Regan Group Pty Ltd has been commissioned by TriCare (Hastings) Limited to prepare an Engineering Report on the Aged Care Facility Development at the subject site.

A Seniors Housing development was approved on the subject land in May 2007 by Tweed Shire Council. Stage 1 of the development was developed in 2009 by another provider. Stage 1 incorporates the 91 independent living units across three buildings with basement car parks.

TriCare subsequently purchased the site in 2011 and currently operate the existing development.

The remaining stages, which comprised 94 supported living units and 67 residential aged care beds across 4 buildings, has never been built. Nevertheless, the consent remains valid.

TriCare has reviewed the balance of the approved development and concluded that the design no longer responds to the contemporary vision of senior living needs and requirements - including the quality of accommodation, allowance for lifestyle amenity, provision of greater passive and active communal spaces and the support and encouragement of age in place principles.

Accordingly, TriCare has elected to review the balance of the master plan and embark on a new delivery outcome for the balance stages of the Aged Care Facility community.

This Civil Engineering Report is required to support a development application to Tweed Shire Council. The Report addresses the existing engineering constraints and proposes solutions which are tailored to enable practical and cost-effective development of the project.

It is noted that Stage 1 of the original development approval has already been constructed and thus some consideration has been made to this with regards to servicing of the remaining stages of development.

2.0 THE SITE

2.1 SITE DESCRIPTION

The TriCare Hastings Point development site is located at 87-89 Tweed Coast Road, Hastings Point, Lot 1 DP 786570 Parish of Cudgen and County of Rous.

The 37,390m² site is located at the southern end of the Hastings Point. Hastings Point is predominantly a low-scale coastal settlement providing a range of recreational, holiday and residential opportunities.

The site is surrounded by public open space and environmental land including Cudgera Creek to the west, Cudgera Beach and dunal foreshore to the east and the Pottsville Environmental Park to the north and south. An existing Service Station adjoins the site's south-east.

The site is cleared of all existing structures and falls to the rear towards Cudgera Creek. A detailed survey of the site has been carried out, a copy of which is contained in Appendix A.

The subject property is shown below, with the approximate property highlighted in red and the approximate site extent highlighted in green.



Figure 1 – Locality Image – Google Earth

2.2 DESCRIPTION OF DEVELOPMENT

The TriCare Hastings Point development comprises both independent living units (ILUs) and a residential aged care home (RAC) home, that will be supported by a range of other services.

Specifically, the proposal includes:

- A 47 place RAC (Building D) comprising:
 - individual private rooms with ensuite facilities.
 - shared dining, lounge and sitting rooms.
 - café.
 - kitchen.
 - serveries.
 - nurses' stations.
 - offices.
 - staff room and facilities.
 - waste room; and
 - loading bay.
- 51 ILUs split across 3 buildings, including:
 - 24 ILUs in Building E
 - 18 ILUs in Building F
 - 9 ILUs in Building G.

Complimenting the ILUs and RAC, the development offers a range of communal facilities for entertainment, health, active and passive recreation. These facilities include:

- Bowling Green and pavilion with bowls store, amenities, kitchen and covered seating area.
- Indoor swimming pool and spa, with amenities and viewing area.
- Perimeter walking trail; and
- Landscaped gardens.

The proposed development will provide an important contribution to supporting the need for seniors' accommodation and care within the Kingscliff locality.

No changes to the existing Stage 1 development are proposed.

Refer to the Architectural Plans contained within Appendix B.

3.0 EARTHWORKS

The bulk earthworks proposed for the development will be undertaken to provide suitable building platforms and excavated basements and overland flow paths. It is proposed to minimise earthworks over the site and therefore retain the existing topography of the site as much as possible.

Earthworks will be required to facilitate the construction of the main building platforms., including basement car parking and proposed driveways. This will involve cut to fill earthworks. All fill material is to be won on site. No imported fill material is required.

Excavation of the basements for each building will result in the order of 12,000m³ of material to be won on site. Not all material will be required on site and thus in the order of 8,000m³ of material is expected to need to be removed from the site

The site has had a geo-technical investigation undertaken by Martens. Natural soil materials are expected to be primarily sand. Shoring of vertical excavation would be required and will require further consideration during detailed design.

Groundwater will also be intercepted during basement excavation based on the geotechnical results. A Dewatering Management Plan will be required for any construction works where excavation is deeper than 1.2m. This plan is to be prepared by others.

There are no significant earthworks constraints which have been identified which may inhibit development of the site.

Erosion and Sediment control is dealt with under Section 5 and a separate Erosion and Sediment Control Plan.

The Local Authority By-Law and Statutory Authority provisions related to Workplace Health & Safety, Dust and Smoke Nuisance, Environment and Occupational Noise Suppression will be rigidly enforced as part of the general site works contractual arrangements. The plant numbers and duration of operation will be dependent on the particular stage sector and the modus-operandi of the particular selected Contractor

4.0 ACID SULPHATE SOILS

This engineering report has not considered the evidence or treatment of Acid Sulphate Soils.

5.0 FLOODING

The proposed development site is partially affected by flooding of Cudgera Creek.

Only a small area along the creek frontage within the property is affected by the design flood extents with the proposed development works being situated above the flood level and extents.

The proposed development works are not expected to be impacted by flood waters in the Design Flood Event. All proposed habitable floor areas are above the minimum habitable floor level of 3.1m.

Refer to the Property Flood Report contained in Appendix C for more information.

6.0 ACCESS/PARKING

Access to the development site will be made via the existing site access. Construction of an internal private circulation driveway to the proposed buildings is required. An access to Tweed Coast Road has been provided to service the development and has been constructed as part of the earlier stages of this development. Future works will only involve the connection to the internal driveway.

Parking is to be provided within the basement levels of the proposed buildings along within areas surrounding the circulation driveway. Refer to the architectural plans contained in Appendix B for more information.

Based on the contours of the site and the proposed preliminary grading there are not expected to be any issues in achieving compliant gradings in accordance with TSC standards and AS2890.

A separate Traffic Impact Assessment has been prepared outlining any further requirement for the access and parking.

7.0 CATCHMENT AND STORMWATER DRAINAGE

The existing site grades to the rear and has no defined drainage paths within the property.

The Property accepts and sheds stormwater runoff as follows: -

- (a) Existing site drainage is via sheet flow to the rear of the site. The legal point of discharge is Cudgera Creek.
- (b) Runoff from the previous stage of the development will not be affected.
- (c) The site is not affected by external catchments.

Stormwater quality during the construction phase shall be maintained utilising the controls outlined in the separate Erosion and Sediment Control Plan.

Discharge water quality is subject to compliance with the requirements of the "Tweed Urban Stormwater Management Plan" and the requirements of Appendix E "D7 - Stormwater Quality". Methods of compliance are within the separately documented Stormwater Management Plan

8.0 EROSION AND SEDIMENT CONTROL

The site is subject to compliance with the requirements of the "Tweed Urban Stormwater Management Plan" and the requirements of Appendix E "D7 - Stormwater Quality". The Code of Practice in Annexure A is to be adopted.

The area of the works is 1.69Ha, thus the sediment expected to be generated is minor. During construction the installation of sediment control devices such as sediment fences and traps along with the excavated basements, is considered adequate.

A separate Erosion and Sediment Control Plan details all the requirements for maintenance for the structures during the construction phase and required methods of reporting.

9.0 SEWERAGE RETICULATION

The site is serviced by the existing one hundred- and fifty-millimetre (150mm) diameter Council Gravity Sewer at the front of the site within Tweed Coast Road.

Stage One of the development which has already been constructed is serviced by a private sewer pumping system located to the northeast of the site with a private rising main (63mm diameter) discharging via a property connection to Councils sewer at the northeast corner.

The discharge rate is required to be limited to 5.2 l/s due to downstream council pump station constrains.

This existing pump system, rising main and connection point is proposed to be maintained to service stage one of the development already constructed.

The existing sewage pump system is understood to be positioned hydraulically too high to service the remaining stages of development and therefore it is proposed to construct a new second private pump system at a location which can service the new buildings by gravity.

It is noted that the above comments regarding the existing pump station have been made based on interpretation of existing design, survey information and view of the correspondence between Cozens Regan and Tweed Shire council dated November

2008. All comments made are considered preliminary in nature and are subject to more comprehensive survey information and detailed design.

It is noted that the development application proposes a reduction in the total number of units and therefore will result in a reduction in the overall demand compared to the previous approval.

The expected wastewater discharge has been calculated in accordance with TSC Specifications for sewerage system (D12). Determination of Equivalent Persons for the whole site is based on previously agreed assessments (November 2008), resulting in the original design allowance of 459 EP for the site.

The development was agreed to create the following total wastewater demand:

- ADWF (180L/EP/day x 0.0088) = 1.691L/s
- PDWF (3 x ADWF) = 5.058L/s
- GWI = 0.035L/s
- IFF = 1.80/s

Design Flow (PDWF + GWI + IIF) = **6.88 L/s**

C = 0.4 & I = 50mm/h

Total Design Discharge Flow = 6.88 L/s
Allowable Discharge (as agreed) = 5.2L/s

The pumpstation previously designed limited the flow from the site by pump selection and rising main size. Detention of the flow is required and previously designed. The plan issued to council for approval addressing these requirements is attached in Appendix D.

The current proposal results in a reduction in the total number of equivalent persons (EP) to 335EP. The current proposal is for 165.6 EP. The resulting total design discharge under the current proposal has been assessed as:

- ADWF = 0.711L/s
- PDWF = 4.44L/s
- GWI = 0.029L/s
- IFF = 2.07/s

Design Flow (PDWF + GWI + IIF) = **6.53 L/s**

C = 0.5 & I = 52mm/h

Total Design Discharge Flow = 6.53 L/s

The design discharge is still greater than the allowable, thus the previous design requires are still applicable to limit the discharge rate, as required.

No change to the previously designed pump station is proposed.

Locations of the existing services are shown on the survey plan in Appendix A. Locations of the proposed works are shown on the Concept Engineering Services Plan 220450/SK15 contained within Appendix E.

10.0 WATER RETICULATION

The site is currently supplied by Councils Potable Water Reticulation being a two hundred millimetre (200mm) main within the western verge of Tweed Coast Road. An existing water service connection from Councils water supply is in place supplying Stage 1 of the development.

It should be confirmed during building hydraulics is suitable for retention to service the remaining stages.

It is understood that a private water and fire reticulation network exists supplying the Stage 1 buildings within the property. The remaining development stages will require extension of the existing internal private water reticulation network to service the new buildings.

It is noted that the development application proposes a reduction in the total number of units and therefore will result in a reduction in the overall water demand compared to the previous approval.

The expected demand has been calculated in accordance with TSC Specifications for water supply (D11) and it is shown below:

- Peak Daily Demand on main:
 - $700\text{L/day/EP} \times 335 = 248.50 \text{ kL/day} (2.71\text{L/s})$
- Peak Instantaneous Demand on main:
 - $1.2\text{L/s/ha} \times 2.43 \text{ Ha} = 2.91\text{L/s}$

The calculated peak day demand to the existing system is 2.91 L/s. The existing water mains are expected to have sufficient capacity to cater for the proposed development.

Locations of the existing services are shown on the survey plan in Appendix A. Locations of the proposed works are shown on the Concept Engineering Services Plan 220450/SK15, SK16 & SK17 contained within Appendix E.

11.0 OTHER SERVICES

Essential Energy and Telecom domestic services are underground and overhead reticulation which run in front of the site within Tweed Coast Road. The location and serviceability of these services will require confirmation during detailed design.

12.0 CONCLUSION

This civil engineering report has shown that the proposed development for this site can be serviced and constructed using suitable engineering solutions to council's requirements. All preliminary comments and assumptions are subject to confirmation by detail design.

TriCare (Hastings) Limited
Lot 1 DP 786570, 87-89 Tweed Coast Road, Hastings Point
Civil Engineering Report



APPENDIX A

Contour and Detail Survey

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NOTES

LOT AREAS AND BOUNDARY DIMENSIONS HAVE BEEN COMPILED FROM DEPOSITED PLANS AVAILABLE AT NSW LAND REGISTRY SERVICES (NSW LRS). NO BOUNDARY SURVEY OR INVESTIGATION HAS BEEN MADE AND NO BOUNDARIES HAVE BEEN MARKED. ACCORDINGLY THE POSITION OF IMPROVEMENTS RELATIVE TO BOUNDARIES SHOWN HEREON IS DIAGRAMMATIC ONLY.

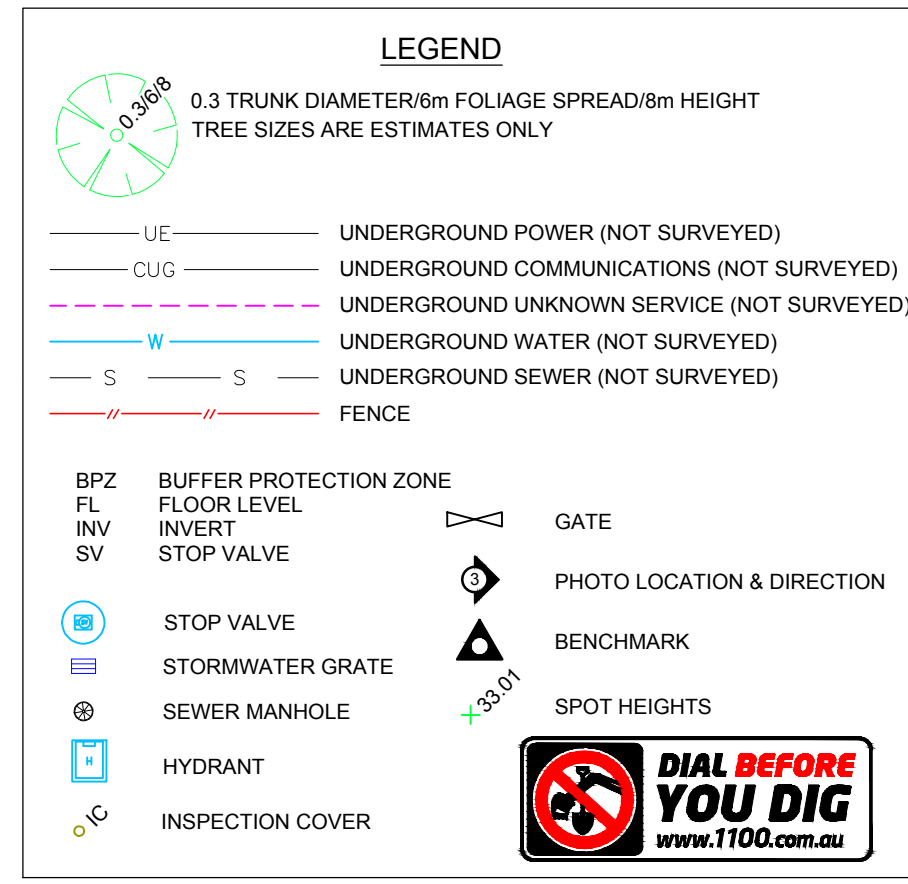
BEARINGS SHOWN ON THIS PLAN ARE ORIENTATED TO NORTH VIDE MGA. IF SHADOW DIAGRAMS ARE TO BE CALCULATED THEY MUST BE CALCULATED USING TRUE NORTH.

SERVICES & UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED BY COMBINATION OF FIELD SURVEY AND REFERENCE TO SERVICE PLANS FROM STATUTORY AUTHORITIES. ONLY VISIBLE AND APPARENT SERVICE COVERS AND POLES HAVE BEEN LOCATED BY FIELD SURVEY. SERVICE DETAILS AND LOCATIONS SHOULD BE CONFIRMED WITH THE RELEVANT SERVICE AUTHORITY DURING DESIGN & PRIOR TO ANY CONSTRUCTION. THE LOCATION OF UNDERGROUND SERVICES HAS NOT BEEN INVESTIGATED BY USHER & COMPANY PTY LTD.

WHERE THE EXACT LOCATION OF UNDERGROUND SERVICES IS CRITICAL TO THE DESIGN OR CONSTRUCTION THE RELEVANT PARTY SHOULD ARRANGE TO HAVE AN UNDERGROUND SERVICES TRACE CARRIED OUT TO CONFIRM THE SERVICES EXACT LOCATION. IN THIS REGARD ALL PARTIES SHOULD CONTACT THE 'DIAL BEFORE YOU DIG' SERVICE.

CONTOUR INTERVAL 1.0m MAJOR 0.25m MINOR

AHD HEIGHT DATUM HAS BEEN TRANSFERRED TO THE SUBJECT LOT VIA TRIG HEIGHTING. AHD LEVELS SHOWN HAVE AN ACCURACY OF 0.05m.



Notes

- This plan is prepared for the client from a combination of field survey and existing records for the purpose defined by the client and should not be used for any other purpose.
- Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services. This note is an integral part of this plan.
- Origin of MGA Coordinates and AHD Vertical datum:
Easting 556118.118
Northing 6861747.786 (AHD)
MGA (Map Grid Of Australia 1994 - Zone 56)
- This plan is on ground '11' scale coordinates orientated to MGA azimuth using GNS. To convert to MGA grid coordinates apply the scale factor of 0.99963.

UNDERGROUND SERVICES APPROXIMATE ONLY (PLOTTED USING DBYD)

20 METRE BANK OFFSET (STAKED ONSITE MARKED WITH PINK FLAGGING)

BUSH PROTECTION ZONE (WHITE TOP STAKE ONSITE WITH YELLOW)

CRITICAL NOTES:

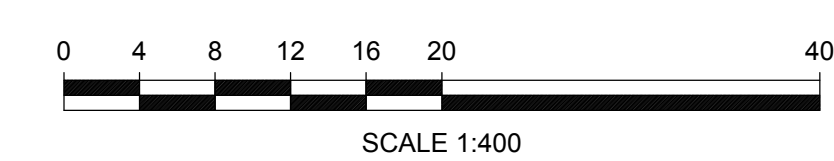
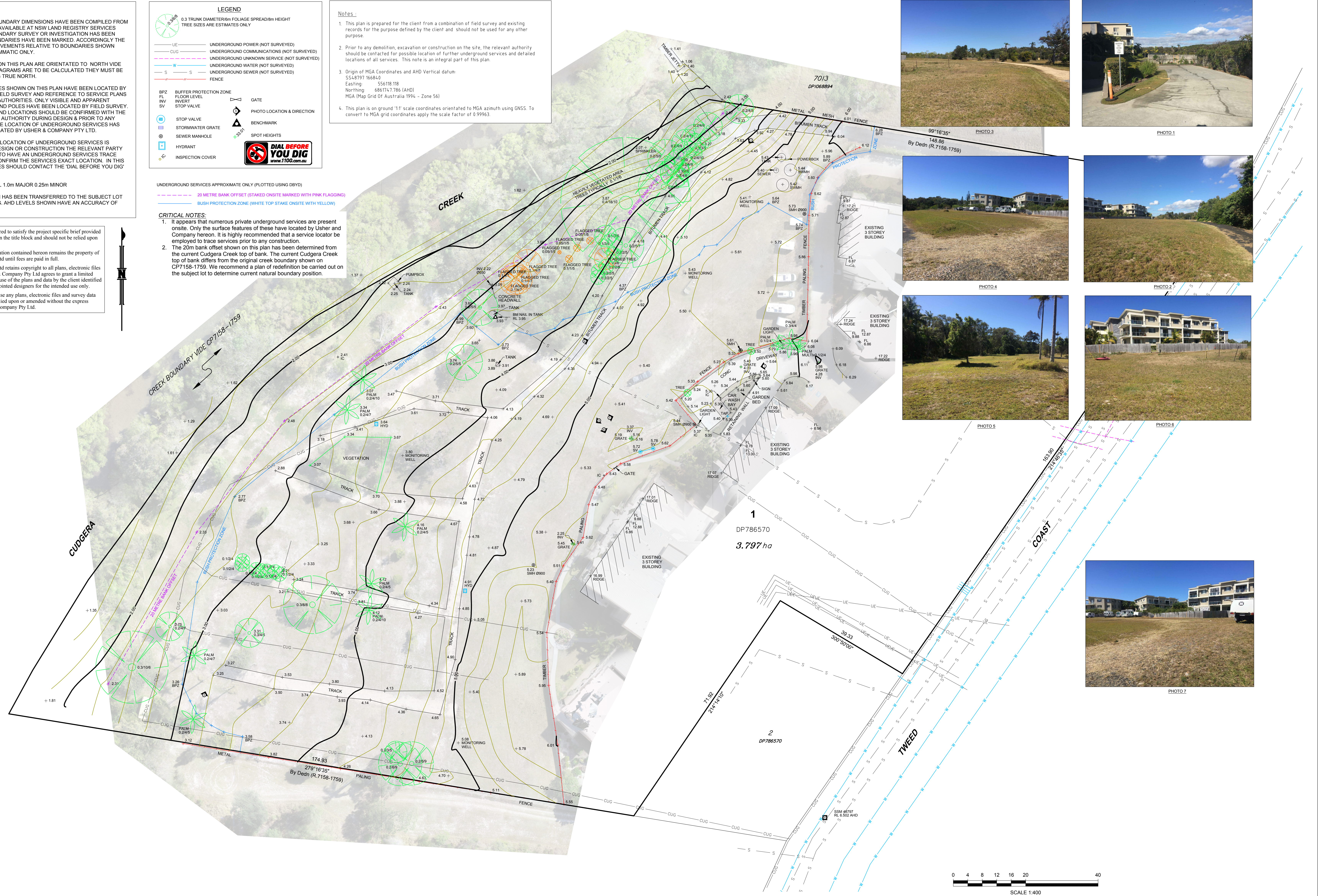
- It appears that numerous private underground services are present onsite. Only the surface features of these have been located by Usher and Company hereon. It is highly recommended that a service locator be employed to trace services prior to any construction.
- The 20m bank offset shown on this plan has been determined from the current Cudgera Creek top of bank. The current Cudgera Creek top of bank differs from the original creek boundary shown on CP7158-1759. We recommend a plan of redefinition be carried out on the subject lot to determine current natural boundary position.

This plan has been prepared to satisfy the project specific brief provided by the client nominated in the title block and should not be relied upon by any third party.

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APPROVED

Amendments		
ISSUE	DATE	DETAILS
A	16-09-2019	Original Issue

PLAN:
PLAN OF PARTIAL DETAIL AND LEVELS
AT No.85-87 TWEED COAST, HASTINGS POINT
BEING LOT 1 IN DP 786570

LGA:	TWEED	REDUCTION RATIO:	1:400
SUBURB:	HASTINGS POINT	DATUM:	AHD
ORIGIN:	SSM 48797 RL 6.502 AHD CLASS LB, ORDER L2 SCIMS 09/09/2019	DATE OF SURVEY:	12-09-2019
		SURVEYED BY:	BR / JT
		DRAWN BY:	LL

CLIENT:	TRICARE
PLAN REFERENCE:	10623

B1

ISSUE:
A

TriCare (Hastings) Limited
Lot 1 DP 786570, 87-89 Tweed Coast Road, Hastings Point
Civil Engineering Report



APPENDIX B

Architectural Plans

Integrated perspective

Arqus Design Pty Ltd
 ABN 68 135 616 303
 Level 2 15 Malt Street
 Fortitude Valley Qld 4006
 PO Box 2455
 New Farm Qld 4005

Registration:
 Nominated Architect: Scott Peabody
 QLD: 2644
 NSW: 9038
 VIC: 800111 (Arqus Design 600035)

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Detail applicable to the scale of the drawing published.

DATE	REVISION	ISSUE
24.01.22	DRAFT DA PACKAGE	A
24.08.16	DRAFT DA PACKAGE	B
24.10.09	DA PACKAGE	C

AREA SCHEDULE (SITE COVERAGE)

PROPOSED BUILDINGS	
BOWLS PAVILION	111.3m ²
POOL PAVILION	485.06m ²
BUILDING D	1315.63m ²
BUILDING E	1523.88m ²
BUILDING F	1082.70m ²
BUILDING G	580.32m ²
TOTAL BUILDING COVER	5098.88m ²

EXISTING DEVELOPMENT (AS PER R.H. FRANKLAND & ASSOCIATES PROJECT NO. 05170 DRAWING: TP00 REV E AND TP01 REV F)	
COVERED	5740m ²

PROPOSED DEVELOPMENT	
COVERED	5098.88m ²
TOTAL COVERED	10838.88m ² (approx.)
UNCOVERED	27131.12m ² (approx.)
SITE COVERAGE (TOTAL AREA = 37970m ² approx.)	28.55% (approx.)



1 OVERALL AREA PLAN - SITE COVERAGE
 1 : 500

CLIENT



PROJECT

TRICARE HASTINGS POINT
 87 TWEED COAST RD, HASTINGS POINT 2489, NSW

COUNTRY: BUNDJALUNG

DRAWING

OVERALL AREA PLAN - SITE COVERAGE

JOB NUMBER	DESIGN	DRAWN	CHECKED
23-0025	SP	KF	SP

SCALE	DATE CREATED	NORTH
1 : 500 @A1	01/12/23	
1 : 1000 @A3		

DRAWING NUMBER	ISSUE
DA-2-11	C

ISSUED FOR

DEVELOPMENT APPLICATION

Integrated perspective

Arqus Design Pty Ltd
 ABN 68 135 616 303

Level 2 15 Malt Street
 Fortitude Valley Qld 4006
 PO Box 2455
 New Farm Qld 4005

Registration:
 Nominated Architect: Scott Peabody
 QLD: 2644
 NSW: 9038
 VIC: 800111 (Arqus Design 600035)

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24.01.22	DRAFT DA PACKAGE	A
24.08.16	DRAFT DA PACKAGE	B
24.10.09	DA PACKAGE	C

AREA SCHEDULE (CAR PARK)

NAME	AREA
BUILDING D BASEMENT LEVEL	906.41 m ²
BUILDING E BASEMENT LEVEL	1218.84 m ²
BUILDING F BASEMENT LEVEL	960.38 m ²
BUILDING G BASEMENT LEVEL	490.20 m ²
TOTAL CAR PARK AREA	3575.83 m ²

AREAS BY NAME

- BUILDING D
- BUILDING E
- BUILDING F
- BUILDING G

NO. OF CAR PARKING SPACES

BUILDING D	23	
BUILDING E	37	30 REQUIRED
BUILDING F	33	21 REQUIRED
BUILDING G	12	12 REQUIRED
ABOVE GROUND VISITORS	20	
TOTAL	125	TOTAL 63 REQUIRED



1 OVERALL AREA PLAN - GFA (BASEMENT)
 1: 500
 NOTE: READ IN CONJUNCTION WITH INDIVIDUAL BUILDING AREA PLANS

CLIENT



PROJECT

TRICARE HASTINGS POINT
 87 TWEED COAST RD, HASTINGS POINT 2489, NSW

COUNTRY: BUNDJALUNG

DRAWING

OVERALL AREA PLAN - GFA (BASEMENT)

JOB NUMBER	DESIGN	DRAWN	CHECKED
23-0025	SP	KF	SP

SCALE	DATE CREATED	NORTH
1: 500 @A1 @A3	01/12/23	

DRAWING NUMBER

DA-2-12

ISSUE

C

ISSUED FOR

DEVELOPMENT APPLICATION

9/10/2024 10:20:20 AM

Integrated perspective

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 PO Box 2455
 New Farm Qld 4005

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24.08.16	DRAFT DA PACKAGE	B
24.10.03	UPDATED DRAFT DA PACKAGE	C
24.10.09	DA PACKAGE	D

AREA SCHEDULE

NAME	AREA
BOWLS PAVILION	75.68 m ²
GROUND LEVEL	75.68 m ²
BUILDING D	906.41 m ²
BASEMENT LEVEL	1068.83 m ²
GROUND LEVEL	1133.17 m ²
LEVEL 01	1133.17 m ²
LEVEL 02	4241.57 m ²
BUILDING E	1218.84 m ²
BASEMENT LEVEL	980.96 m ²
GROUND LEVEL	980.95 m ²
LEVEL 01	980.66 m ²
LEVEL 02	4161.40 m ²
BUILDING F	960.38 m ²
BASEMENT LEVEL	712.71 m ²
GROUND LEVEL	712.74 m ²
LEVEL 02	2365.84 m ²
BUILDING G	490.20 m ²
BASEMENT LEVEL	382.97 m ²
GROUND LEVEL	383.01 m ²
LEVEL 01	383.01 m ²
LEVEL 02	1639.18 m ²
POOL PAVILION	435.32 m ²
GROUND LEVEL	435.32 m ²
TOTAL GFA	12938.99 m ²

EXISTING DEVELOPMENT GFA

THIS REFERENCES SHEET 'TPO0' FROM THE EXISTING DEVELOPMENT STAMPED DA PACKAGE

BUILDING A	~4915m ²
BUILDING B	~2755m ²
BUILDING C	~8120m ²
TOTAL GFA (APPROX.)	~15790m²

EXISTING DEVELOPMENT GFA

BUILDING D	~3335m ²	BOWLS PAVILION	~75m ²
BUILDING E	~2945m ²	POOL PAVILION	~435m ²
BUILDING F	~2140m ²		
BUILDING G	~1150m ²		
TOTAL GFA (APPROX.)	~10080m²		

OVERALL FLOOR SPACE RATIO (FSR) = APPROX. 1:0.68

AREAS BY NAME

- BOWLS PAVILION
- BUILDING D
- BUILDING E
- BUILDING F
- BUILDING G
- POOL PAVILION



1 OVERALL AREA PLAN - GFA (GROUND LEVEL)
 1 : 500

NOTE: READ IN CONJUNCTION WITH INDIVIDUAL BUILDING AREA PLANS

CLIENT



PROJECT

TRICARE HASTINGS POINT
 87 TWEED COAST RD, HASTINGS POINT 2489, NSW

COUNTRY: BUNDJALUNG

DRAWING

OVERALL AREA PLAN - GFA (GROUND LEVEL)

JOB NUMBER	DESIGN	DRAWN	CHECKED
23-0025	SP	KF	SP

SCALE	DATE CREATED	NORTH
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DRAWING NUMBER

DA-2-13

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D

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DEVELOPMENT APPLICATION

Integrated perspective

Arqus Design Pty Ltd
 ABN 68 135 616 303
 Level 2 15 Malt Street
 Fortitude Valley Qld 4006
 PO Box 2455
 New Farm Qld 4005

Registration:
 Nominated Architect: Scott Peabody
 QLD: 2644
 NSW: 9038
 VIC: 800111 (Arqus Design 600035)

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 www.arqudesign.com.au Fax 07 3358 0899

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24.10.09	DA PACKAGE	D

AREA SCHEDULE

NAME	AREA
BOWLS PAVILION	75.68 m ²
GROUND LEVEL	75.68 m ²
BUILDING D	906.41 m ²
BASEMENT LEVEL	1068.83 m ²
GROUND LEVEL	1133.17 m ²
LEVEL 01	1133.17 m ²
LEVEL 02	4241.57 m ²
BUILDING E	1218.84 m ²
BASEMENT LEVEL	980.96 m ²
GROUND LEVEL	980.95 m ²
LEVEL 01	980.66 m ²
LEVEL 02	4161.40 m ²
BUILDING F	960.38 m ²
BASEMENT LEVEL	712.71 m ²
GROUND LEVEL	712.74 m ²
LEVEL 02	2365.84 m ²
BUILDING G	490.20 m ²
BASEMENT LEVEL	382.97 m ²
GROUND LEVEL	383.01 m ²
LEVEL 01	383.01 m ²
LEVEL 02	1639.18 m ²
POOL PAVILION	435.32 m ²
GROUND LEVEL	435.32 m ²
TOTAL GFA	12938.99 m ²

EXISTING DEVELOPMENT GFA

THIS REFERENCES SHEET 'TPO0' FROM THE EXISTING DEVELOPMENT STAMPED DA PACKAGE

BUILDING A	~4915m ²
BUILDING B	~2755m ²
BUILDING C	~8120m ²
TOTAL GFA (APPROX.)	~15790m²

EXISTING DEVELOPMENT GFA

BUILDING D	~3335m ²	BOWLS PAVILION	~75m ²
BUILDING E	~2945m ²	POOL PAVILION	~435m ²
BUILDING F	~2140m ²		
BUILDING G	~1150m ²		
TOTAL GFA (APPROX.)	~10080m²		
OVERALL FLOOR SPACE RATIO (FSR) = APPROX. 1:0.68			

AREAS BY NAME

- BUILDING D
- BUILDING E
- BUILDING F
- BUILDING G



1 OVERALL AREA PLAN - GFA (LEVEL 01)
 1: 500

NOTE: READ IN CONJUNCTION WITH INDIVIDUAL BUILDING AREA PLANS

CLIENT



PROJECT

TRICARE HASTINGS POINT
87 TWEED COAST RD, HASTINGS POINT 2489, NSW

COUNTRY: BUNDJALUNG

DRAWING

OVERALL AREA PLAN - GFA (LEVEL 01)

JOB NUMBER	DESIGN	DRAWN	CHECKED
23-0025	SP	KF	SP

SCALE	DATE CREATED	NORTH
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DRAWING NUMBER

DA-2-14

ISSUE

D

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DEVELOPMENT APPLICATION

AREA SCHEDULE

NAME	AREA
BOWLS PAVILION	75.68 m ²
GROUND LEVEL	75.68 m ²
BUILDING D	906.41 m ²
BASEMENT LEVEL	1068.83 m ²
GROUND LEVEL	1133.17 m ²
LEVEL 01	1133.17 m ²
LEVEL 02	4241.57 m ²
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BASEMENT LEVEL	980.96 m ²
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POOL PAVILION	435.32 m ²
GROUND LEVEL	435.32 m ²
TOTAL GFA	12938.99 m ²

EXISTING DEVELOPMENT GFA

THIS REFERENCES SHEET 'TPO0' FROM THE EXISTING DEVELOPMENT STAMPED DA PACKAGE

BUILDING A	~4915m ²
BUILDING B	~2755m ²
BUILDING C	~8120m ²
TOTAL GFA (APPROX.)	~15790m²

EXISTING DEVELOPMENT GFA

BUILDING D	~3335m ²	BOWLS PAVILION	~75m ²
BUILDING E	~2945m ²	POOL PAVILION	~435m ²
BUILDING F	~2140m ²		
BUILDING G	~1150m ²		

TOTAL GFA (APPROX.)

OVERALL FLOOR SPACE RATIO (FSR) = APPROX. 1:0.68

AREAS BY NAME

- BUILDING D
- BUILDING E
- BUILDING F
- BUILDING G



1 OVERALL AREA PLAN - GFA (LEVEL 02)

1 : 500

NOTE: READ IN CONJUNCTION WITH INDIVIDUAL BUILDING AREA PLANS

Integrated perspective

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ABN 68 135 616 303

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Fortitude Valley Qld 4006
PO Box 2455
New Farm Qld 4005

Registration:
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PROJECT

TRICARE HASTINGS POINT

87 TWEED COAST RD, HASTINGS POINT 2489, NSW

COUNTRY: BUNDJALUNG

DRAWING

OVERALL AREA PLAN - GFA (LEVEL 02)

JOB NUMBER	DESIGN	DRAWN	CHECKED
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DA-2-15 **D**

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DEVELOPMENT APPLICATION

Integrated perspective

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LANDSCAPING AREAS

DEEP PLANTING (INCLUDES ENDANGERED ECOLOGICAL COMMUNITY ZONE)	12329.862m ²
LAWN	980.65m ²
PLANTER	816.16m ²
EXISTING LANDSCAPING	5439.16m ² (approx.)
GROUND LEVEL TOTAL LANDSCAPE AREA	14126.67m ²
TOTAL AREA (WITH EXISTING)	19565.83m ² (approx.)

NOTE: AREAS TO BE READ IN CONJUNCTION WITH LANDSCAPE DA PACKAGE. REFER TO ARCADIA PROJECT NO. 24-244 DRAWING 21

LANDSCAPING LEGEND

- CURRENT RIPARIAN VEGETATION TREE LINE
- CORE REHABILITATION ZONE
- RESIDUAL OUTER REHABILITATION ZONE
- DEEP PLANTING
- LAWN
- PLANTER
- EXISTING LANDSCAPE
- REFER TO LANDSCAPE ARCHITECT'S DOCUMENTATION FOR ALL LANDSCAPE AREAS
- APZ LINE

CLIENT



PROJECT

TRICARE HASTINGS POINT
87 TWEED COAST RD, HASTINGS POINT 2489, NSW

COUNTRY: BUNDJALUNG

DRAWING

OVERALL AREA PLAN - LANDSCAPING AREAS (GROUND LEVEL)

JOB NUMBER	DESIGN	DRAWN	CHECKED
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SCALE	DATE CREATED	NORTH
1:500 @A1 @A3	01/12/23	

DRAWING NUMBER

DA-2-16

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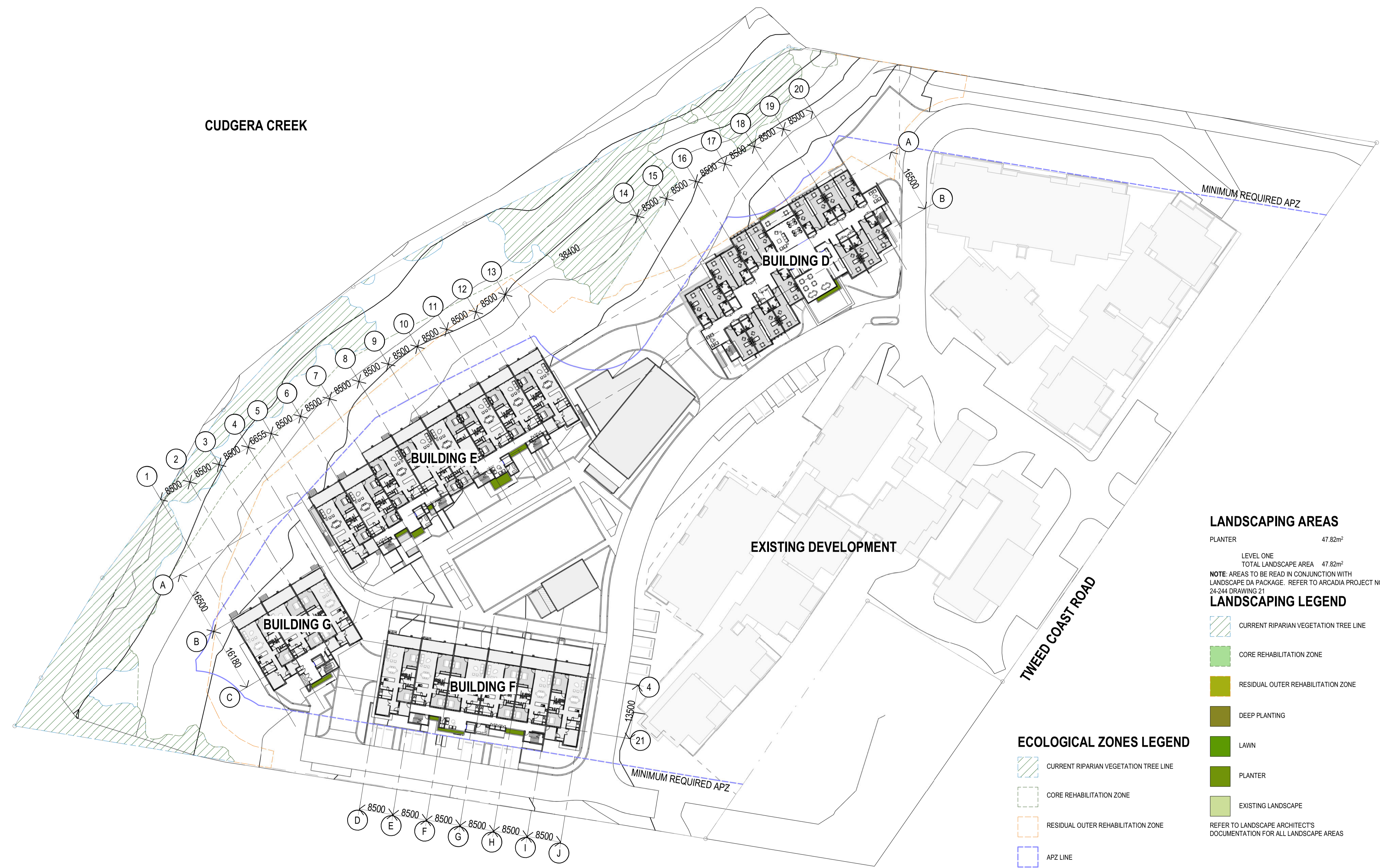
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LANDSCAPING AREAS

PLANTER 47.82m²

LEVEL ONE
 TOTAL LANDSCAPE AREA 47.82m²

NOTE: AREAS TO BE READ IN CONJUNCTION WITH LANDSCAPE DA PACKAGE. REFER TO ARCADIA PROJECT NO. 24-244 DRAWING 21

LANDSCAPING LEGEND

- CURRENT RIPARIAN VEGETATION TREE LINE
- CORE REHABILITATION ZONE
- RESIDUAL OUTER REHABILITATION ZONE
- DEEP PLANTING
- LAWN
- PLANTER
- EXISTING LANDSCAPE

REFER TO LANDSCAPE ARCHITECT'S DOCUMENTATION FOR ALL LANDSCAPE AREAS

ECOLOGICAL ZONES LEGEND

- CURRENT RIPARIAN VEGETATION TREE LINE
- CORE REHABILITATION ZONE
- RESIDUAL OUTER REHABILITATION ZONE
- APZ LINE

CLIENT



PROJECT

TRICARE HASTINGS POINT
 87 TWEED COAST RD, HASTINGS POINT 2489, NSW

COUNTRY: BUNDJALUNG

DRAWING

OVERALL AREA PLAN - LANDSCAPING AREAS (LEVEL 01)

JOB NUMBER	DESIGN	DRAWN	CHECKED
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DRAWING NUMBER **DA-2-17** ISSUE **D**

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1 OVERALL SITE AREA PLAN - LANDSCAPING AREAS (LEVEL 01)
 1: 500

Integrated perspective

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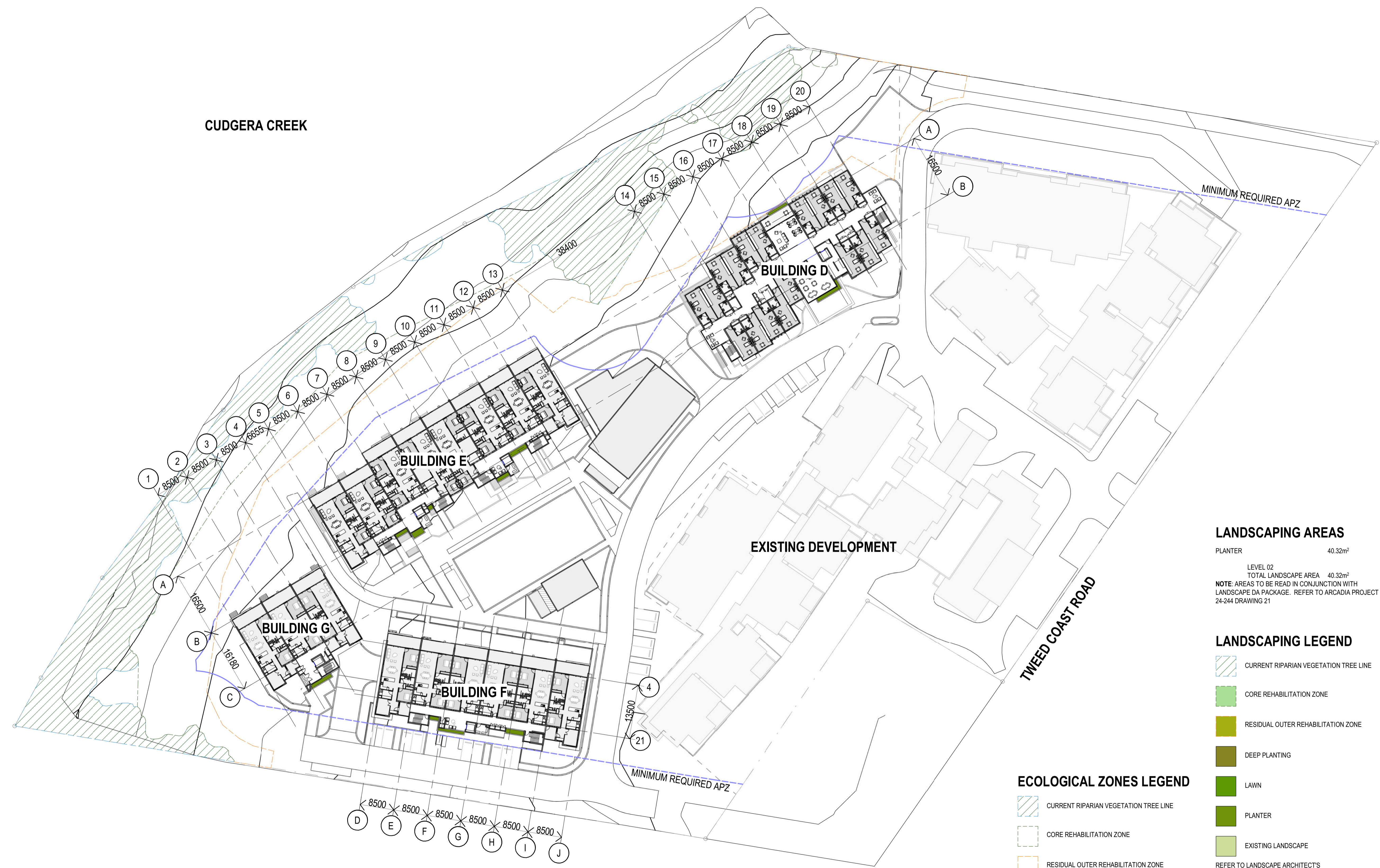
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24.10.09	DA PACKAGE	D



1 OVERALL SITE AREA PLAN - LANDSCAPING AREAS (LEVEL 02)
 1:500

LANDSCAPING AREAS

PLANTER 40.32m²

LEVEL 02
 TOTAL LANDSCAPE AREA 40.32m²

NOTE: AREAS TO BE READ IN CONJUNCTION WITH LANDSCAPE DA PACKAGE. REFER TO ARGADIA PROJECT NO. 24-244 DRAWING 21

LANDSCAPING LEGEND

- CURRENT RIPARIAN VEGETATION TREE LINE
- CORE REHABILITATION ZONE
- RESIDUAL OUTER REHABILITATION ZONE
- DEEP PLANTING
- LAWN
- PLANTER
- EXISTING LANDSCAPE

REFER TO LANDSCAPE ARCHITECT'S DOCUMENTATION FOR ALL LANDSCAPE AREAS

ECOLOGICAL ZONES LEGEND

- CURRENT RIPARIAN VEGETATION TREE LINE
- CORE REHABILITATION ZONE
- RESIDUAL OUTER REHABILITATION ZONE
- APZ LINE

CLIENT



PROJECT

TRICARE HASTINGS POINT
 87 TWEED COAST RD, HASTINGS POINT 2489, NSW

COUNTRY: BUNDJALUNG

DRAWING

OVERALL AREA PLAN - LANDSCAPING AREAS (LEVEL 02)

JOB NUMBER	DESIGN	DRAWN	CHECKED
23-0025	SP	KF	SP

SCALE	DATE CREATED	NORTH
1:500 @A1 @A3	01/12/23	

DRAWING NUMBER **DA-2-18** ISSUE **D**

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Integrated perspective

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 PO Box 2455
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Registration:
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 QLD: 2644
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24.10.09	DA PACKAGE	D



LEGEND

- EXISTING IMPERVIOUS AREA
- EXISTING PERVIOUS AREA
- PROPOSED PERVIOUS AREA
- PROPOSED IMPERVIOUS AREA

PROPOSED IMPERVIOUS/PERVIOUS AREAS

IMPERVIOUS AREA	~9373.61m ²
PERVIOUS AREA	~13805.05m ²

OVERALL SITE IMPERVIOUS/PERVIOUS AREAS

IMPERVIOUS AREA (approx.)	~18572.43m ²
PERVIOUS AREA (approx.)	~19294.05m ²

CLIENT



PROJECT

TRICARE HASTINGS POINT
 87 TWEED COAST RD, HASTINGS POINT 2489, NSW

COUNTRY: BUNDJALUNG

DRAWING

OVERALL AREA PLAN - IMPERVIOUS AREAS

JOB NUMBER	DESIGN	DRAWN	CHECKED
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DA-2-19

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DEVELOPMENT APPLICATION

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9/10/2024 10:23:36 AM

1 OVERALL SITE AREA PLAN - IMPERVIOUS AREAS
 1: 500

TriCare (Hastings) Limited
Lot 1 DP 786570, 87-89 Tweed Coast Road, Hastings Point
Civil Engineering Report



APPENDIX C

TSC Flood Mapping

Property Flood Report

This Property Flood Report tells you what you need to know about this property and its flood risk. It shows house floor and flood levels and provides information on nearby levees and river gauges, if applicable. To understand the terms used, please see the Flood Terms and Definitions section at the end of this report.

Property Address: 87-89 Tweed Coast Road HASTINGS POINT 2489

Lot/Section/Deposited Plan: 1//DP786570

Date Prepared: 17/09/2020

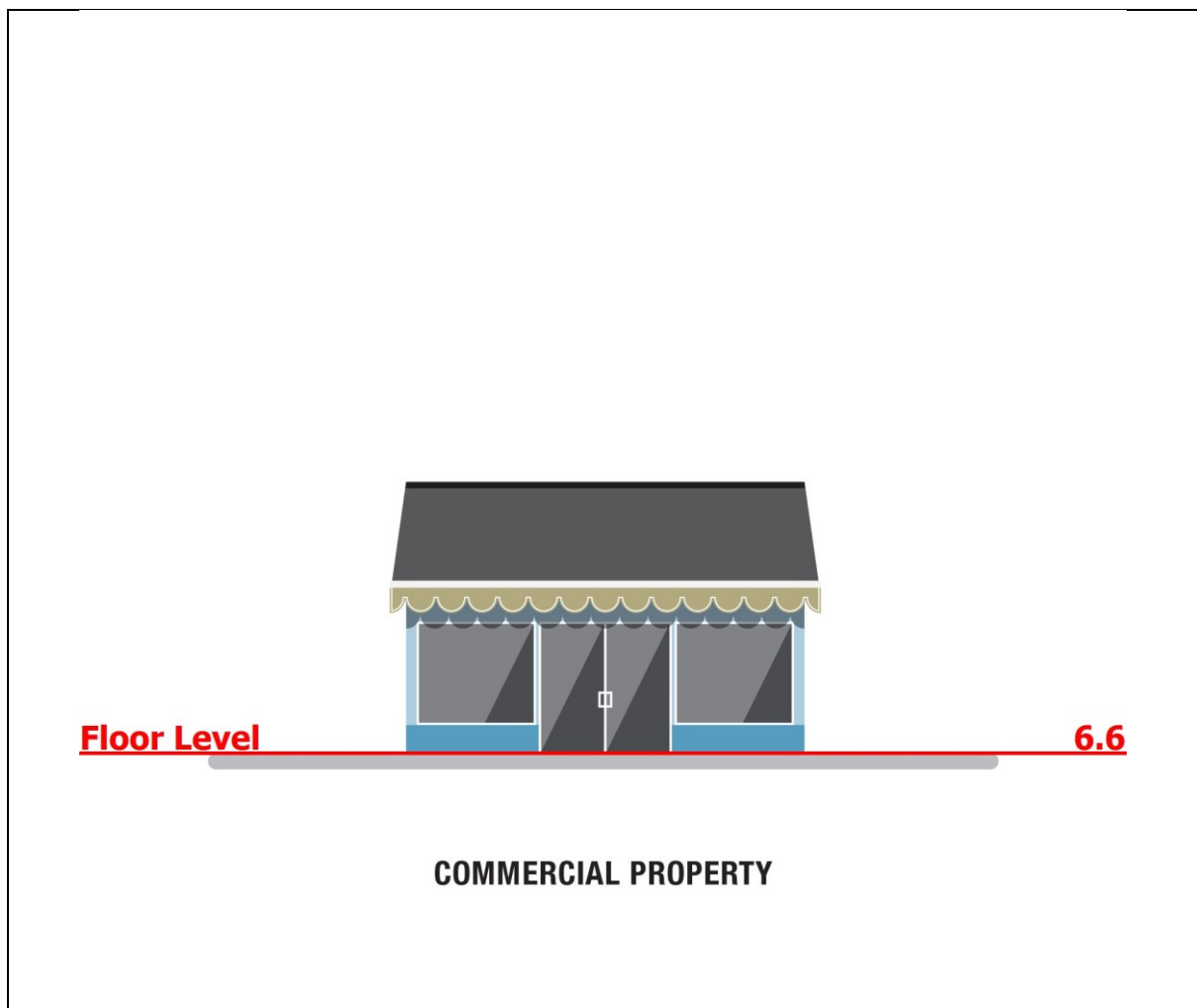


Figure 1: Flood and Floor Levels at 87-89 Tweed Coast Road HASTINGS POINT 2489

The house floor level provided above was taken in 2012 and is approximate only. If an accurate floor level is required this should be confirmed by a registered surveyor.

Be Prepared

Flood Warnings are issued by the Bureau of Meteorology (BoM). Warnings and real-time rainfall and river level information can be viewed on the BoM website (www.bom.gov.au).

NSW State Emergency Service (SES) distribute Flood Bulletins which add local consequences and safety information related to Flood Warnings. These products are distributed to community via local media and social media.

Planning now so that you know your risks and what to do if there is a flood can save your life, the lives of your family members, pets and others. It can also minimise damage to your property and possessions. The NSW State Emergency Service has tools available to assist you to prepare. Visit the SES website to start your Home Emergency Plan now.

Website: www.ses.nsw.gov.au

Flood & Storm Emergency: ☎ 132 500

Life Threatening Situations: ☎ 000



Tweed Shire Council have developed the Tweed Emergency Dashboard for all hazard emergency information. The purpose of this Emergency Dashboard is to provide Tweed residents with links, useful information and contacts in an emergency. Go to: <https://emergency.tweed.nsw.gov.au/>

Should you require any further information, please contact Council on (02) 6670 2400 or email us at tsc@tweed.nsw.gov.au

Technical Information

The below information is for those who are flood savvy or have a technical need to know more about Council's building development controls, such as surveyors, builders, certifiers, architects and engineers.

Property Address: 87-89 Tweed Coast Road HASTINGS POINT 2489

Lot/Section/Deposited Plan: 1//DP786570

Property Levels

Description	Minimum (m AHD)	Maximum (m AHD)
Approximate Ground Level	1.2	7.3
Approximate Floor Level (2012)	6.60	

Planning Levels

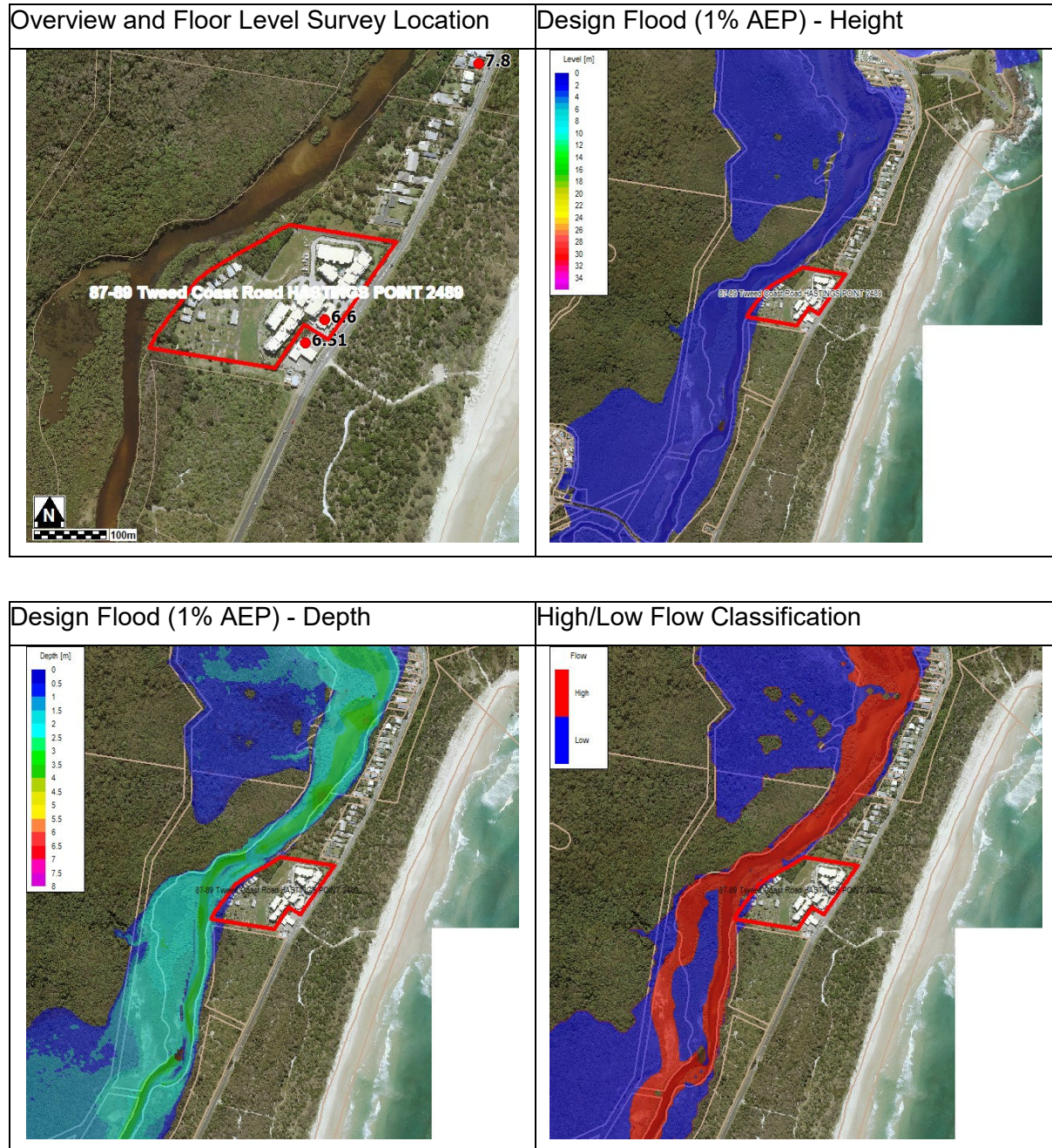
Planning Level	Level (m AHD)
Design Flood Level	2.6
Minimum Habitable Floor Level (Flood Planning Level)	3.1
Climate Change Design Flood Level*	3.0
Climate Change Habitable Floor Level*	3.5
High Flow Area	Part Lot
High Hazard Area	NA

* Climate Change Levels are compulsory in new urban land release subdivision areas

Flooding Levels

Flood Event	Minimum Level (m AHD)	Maximum Level (m AHD)
20% AEP	1.0	1.1
5% AEP	2.2	2.2
1% AEP	2.5	2.5
Climate Change 2100 1% AEP	2.9	2.9
0.2% AEP	2.5	2.6
Probable Maximum Flood (PMF)	4.1	4.2

Mapping



Detailed mapping data, including flood mapping, can be sourced at Council's open data hub: www.tweed.nsw.gov.au/Mapping

For more information on Tweed Shire Flood Planning controls see the Tweed Local Environment Plan and Development Control Plan Section A3 – Development of Flood Liable Land at www.tweed.nsw.gov.au/PlanningPolicies

Information Sources

- **Ground Levels:** 2014 Airborne Laser Survey (LiDAR)
- **Existing Floor Levels:** 2011 and 2012 Floor Level Survey (Tweed Shire Council)
- **Flooding Levels:** Tweed Valley Flood Study Update 2009 and Tweed Byron Coastal Creeks Flood Study 2010 (BMT WBM)

Flood Terms and Definitions

- **Annual Exceedance Probability (AEP):** The probability of a flood event of a given size occurring in any one year, usually expressed as a percentage annual chance.
- **Average Recurrence Interval (ARI):** Similar to AEP. The long-term average number of years between the occurrence of a flood as big as (or larger than) the selected event.
- **metres above Australian Height Datum (m AHD):** The reference level for defining ground levels in Australia. The level of 0.0m AHD is approximately mean sea level.
- **Maximum and Minimum Ground Level** – Highest and lowest ground levels on the property based on available ground level information. A Registered Surveyor can confirm exact ground levels.
- **Surveyed Floor Level** – Approximate floor levels of dwellings, usually taken from the street. These are generally the level of the front step of the habitable level of the building most visible from the street frontage
- **Design Flood Level (DFL)** – A hypothetical flood representing a specific likelihood of occurrence. In Tweed Shire, for residential property, the peak of the modelled 1% AEP (100 Year ARI) flood is the Design Flood Level
- **Minimum Habitable Floor Level** – The minimum level in metres AHD at which habitable areas of development (generally including bedrooms, living rooms, kitchen, study, family and rumpus rooms) must be constructed. In Tweed Shire, this is Design Flood Level plus 0.5m of freeboard. Also known as 'Flood Planning Level'
- **Climate Change Floor Level** – 2100 Climate Change Design Flood Level plus 0.5m of freeboard. Climate Change Design Flood Level is based on reasonable predictions of increased rainfall intensity and sea level rise. See the Tweed Valley Flood Study Update 2009 – Climate Change for more information.
- **Probable Maximum Flood.** An extreme flood deemed to be the largest flood that could conceivably occur at a specific location. It is generally not physically or economically possible to provide complete protection against this flood event, but should be considered for emergency response etc. The PMF defines the extent of flood prone land (i.e. the floodplain).

Disclaimer

This report has been automatically generated and has not been quality controlled. Therefore the information contained in this document is not endorsed by the Council as without error, omission or mis-description. Council accordingly expressly disclaims all and any liability and responsibility in respect of loss, damage or injury to person or property arising from anything done or omitted to be done by any person in reliance, whether wholly or in part, upon any part of this information.

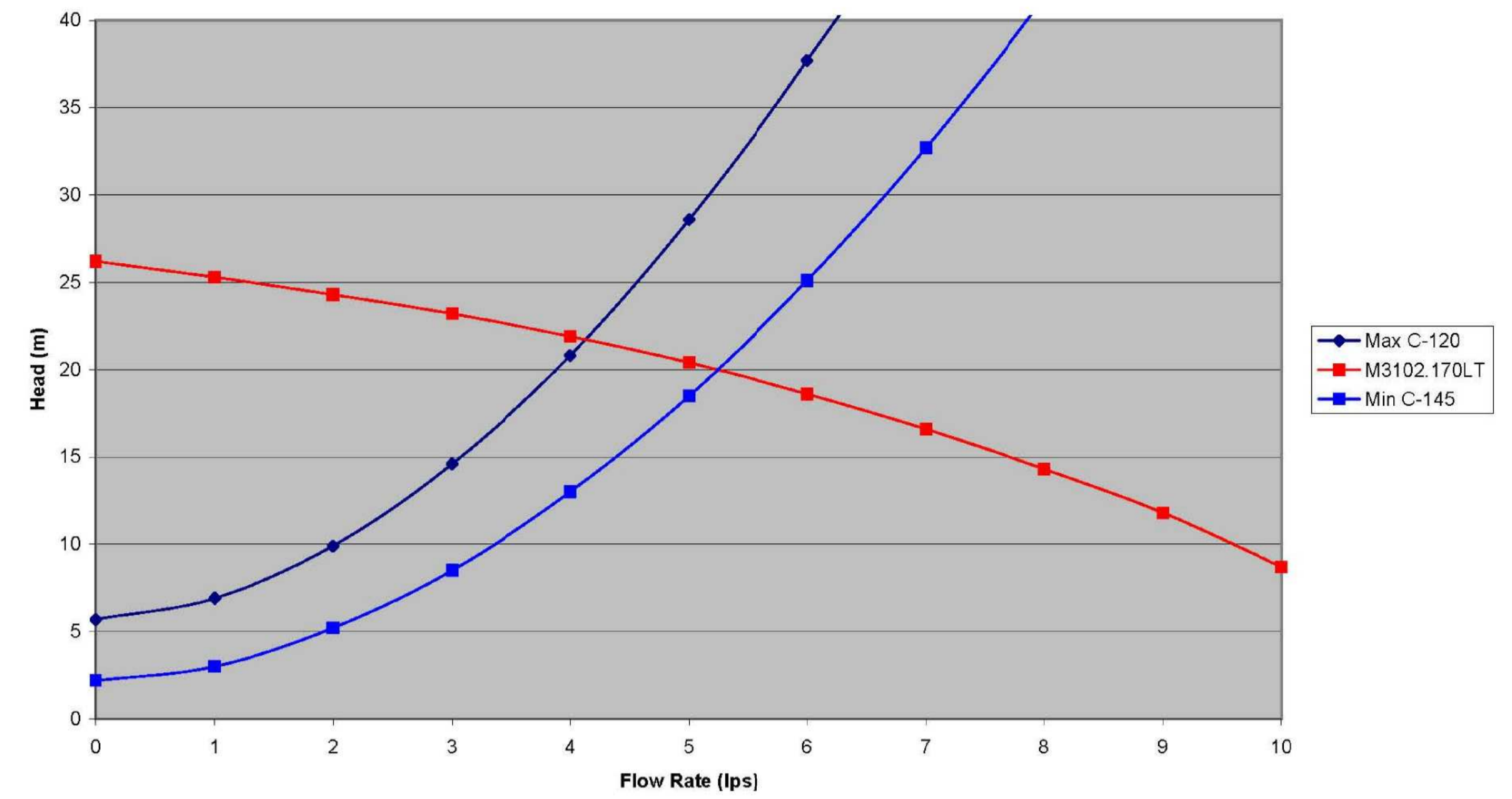
Any person having regard to the information contained in this document is encouraged to seek, at their discretion, all other sources of information on the subject matter as they consider appropriate, which may include local knowledge and/or professional advice.

TriCare (Hastings) Limited
Lot 1 DP 786570, 87-89 Tweed Coast Road, Hastings Point
Civil Engineering Report



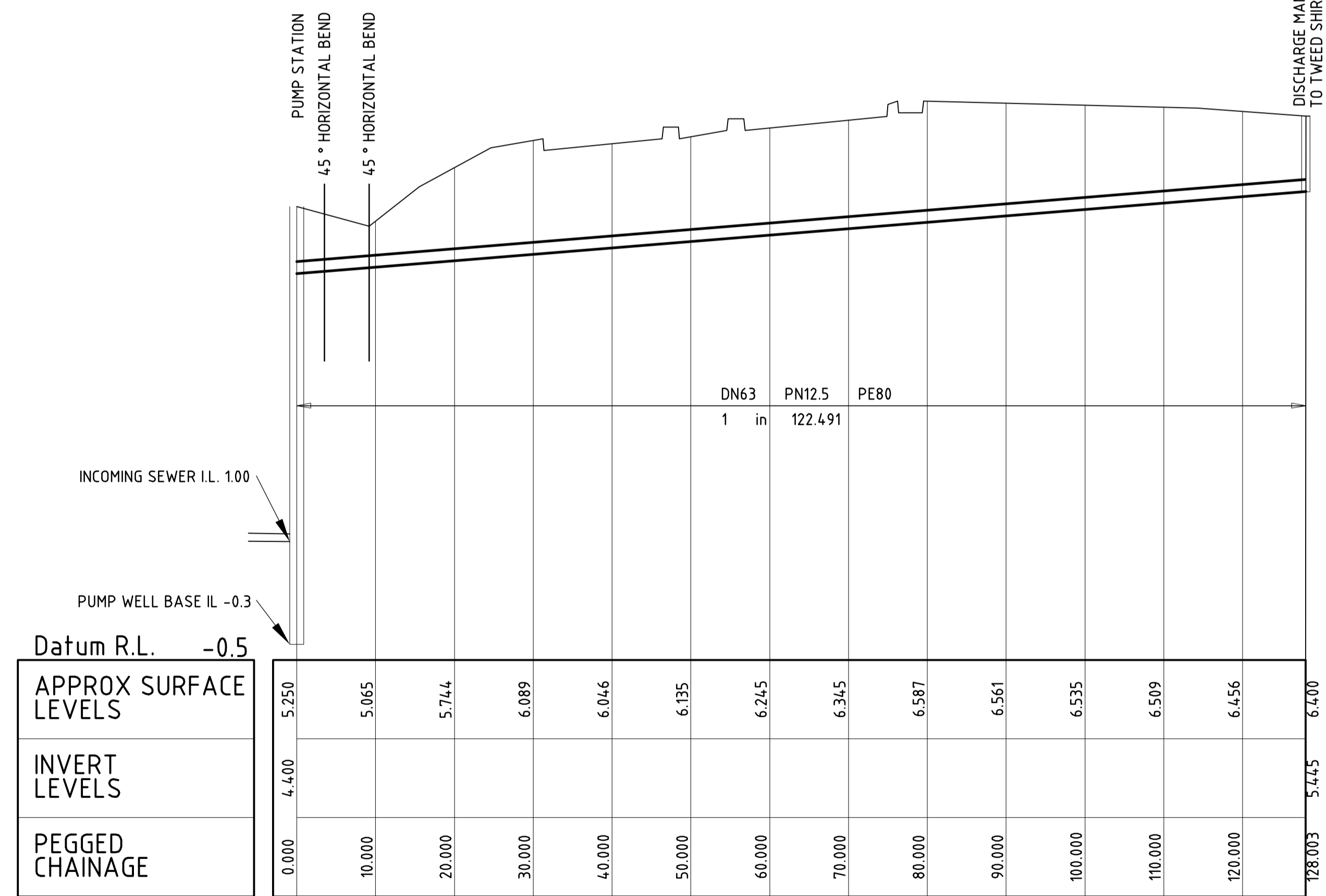
APPENDIX D

Pump Station Plan



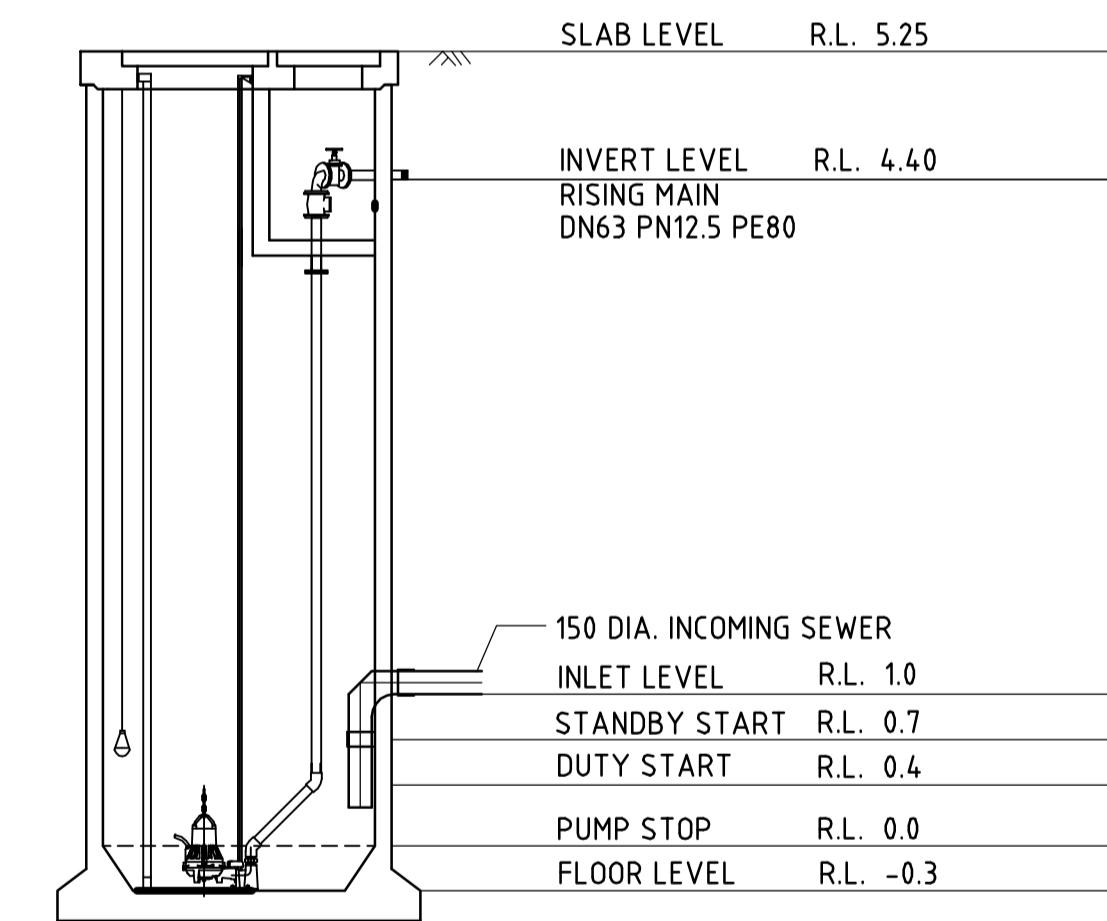
SYSTEM RESISTANCE CURVE

NTS



LONGITUDINAL SECTIONS

SCALE A HORIZONTAL
SCALE B VERTICAL



SEWAGE PUMP STATION - DIAGRAMMATIC LAYOUT

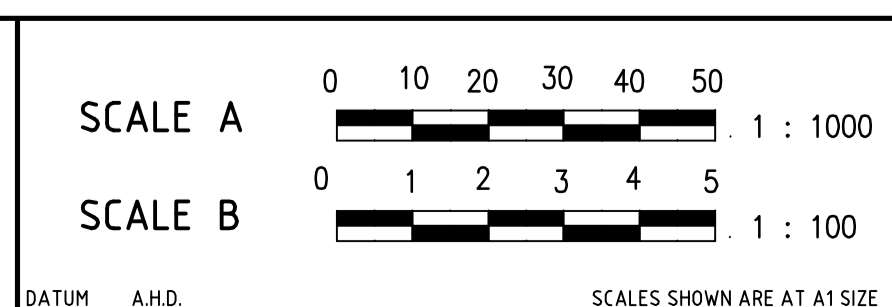
NTS

NOTE

- REFER TO TSC STD DWG. Nos S.D.220/01-04 FOR DETAILS OF PUMP STATION, AS APPROPRIATE.
- THE SUPPLY AND INSTALLATION OF PUMPS, RISER PIPES, BENDS AND OTHER FITTINGS SHALL BE IN ACCORDANCE WITH TSC STANDARD SPECIFICATION D12 AS APPROPRIATE.
- THE PUMPS SHALL BE FLYGHT MP3102 TYPE LY WITH A 168mm Ø IMPELLER, OR APPROVED EQUIVALENT. PUMP SELECTION MUST BE VERIFIED BY THE PUMP SUPPLIER PRIOR TO ORDER.
- PRE PACKAGED SEWERAGE PUMP STATION, 11CSM1800-80 BY ITT FLYGHT, OR APPROVED EQUIVALENT TO BE DESIGNED FOR BOUANCY.

No.	DATE	ISSUE	CHECKED
E	11/08	SYSTEM RESISTANCE CURVE & RISING MAIN SIZE AMENDED	J.A.W.
D	11/08	SYSTEM RESISTANCE CURVE & PUMP STATION DIAGRAMMATIC LAYOUT AMENDED	J.A.W.
C	10/08	SYSTEM RESISTANCE CURVE, DUTY FLOW AND RISING MAIN AMENDED	J.A.W.
B	10/08	SYSTEM RESISTANCE CURVE AMENDED	J.A.W.
A	09/08	ORIGINAL ISSUE	J.A.W.

IN ASSOCIATION WITH



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 SUITE 7 ADVANCE BUSINESS CENTRE
 39 LAWRENCE DRIVE NERANG
 PO BOX 2711 NERANG QLD 4211
 Telephone: (07) 5578 4100
 Facsimile: (07) 5578 4092
 Email: mail@crwp.com.au

DESIGNED	A.F.B.
DRAWN	A.F.B.
CHECKED	J.A.W.
APPROVED FOR AND ON BEHALF OF COZENS REGAN WILLIAMS PROVE PTY LTD (RPECO No 4)	

CLIENT: SEEK CHANGE PTY. LTD.
 PROJECT: PROPOSED SENIORS COMMUNITY
 AT LOT 1 COAST RD, HASTINGS POINT
 SEWER PUMP STATION AND RISING MAIN DETAILS

JOB NO.	06329
DRAWING NO.	Sk.3
ISSUE	A B C D E

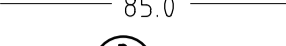






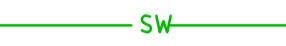




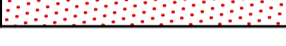

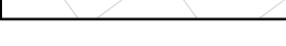

TriCare (Hastings) Limited
Lot 1 DP 786570, 87-89 Tweed Coast Road, Hastings Point
Civil Engineering Report

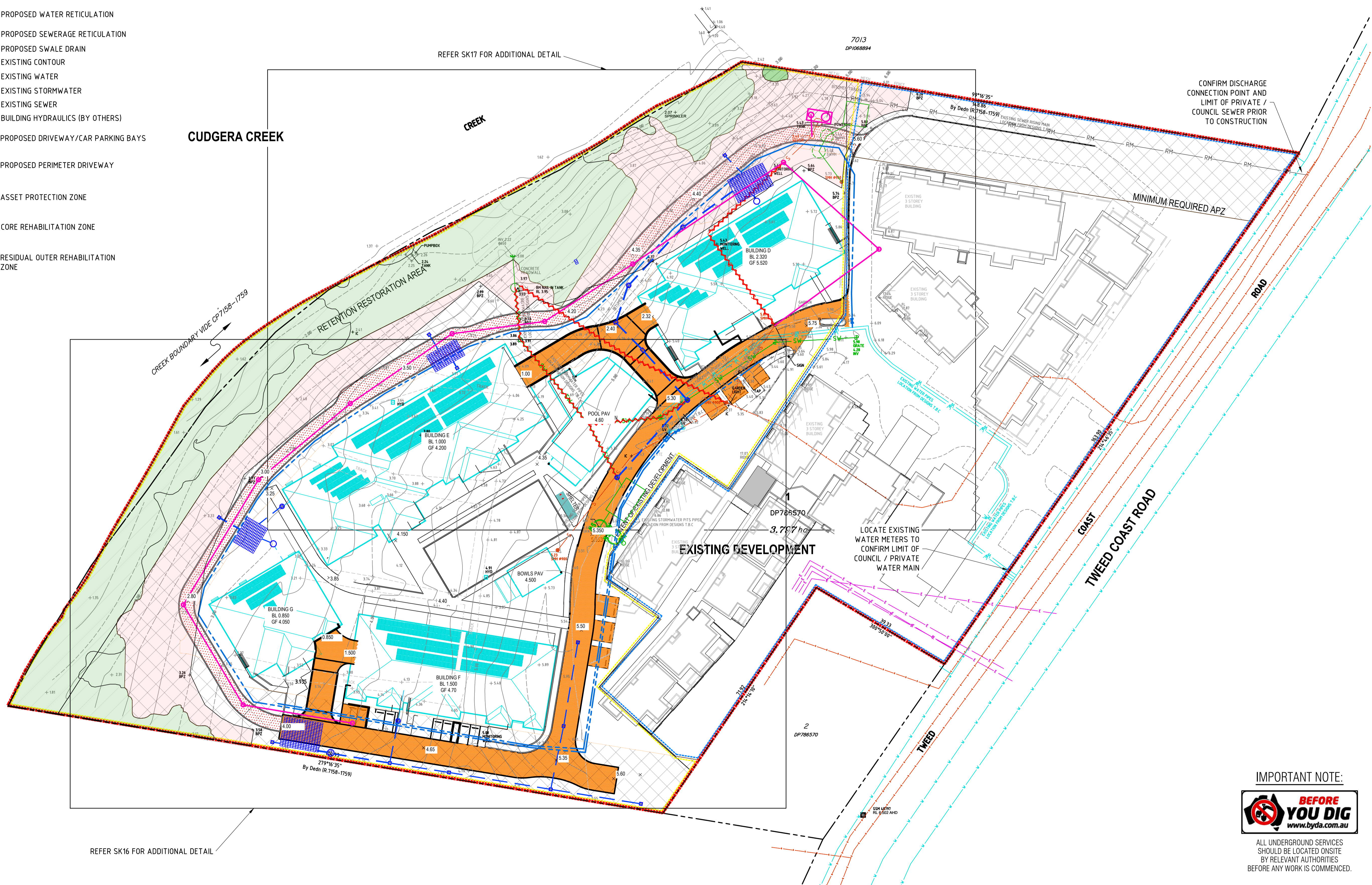


APPENDIX E

Concept Engineering Plans

LEGEND

-  FINISHED SURFACE CONTOURS
(0.5m INTERVALS 1.0m MAJOR)
-  PROPOSED STORMWATER RETICULATION
-  PROPOSED KERB
-  PROPOSED WATER RETICULATION
-  PROPOSED SEWERAGE RETICULATION
-  PROPOSED SWALE DRAIN
-  EXISTING CONTOUR
-  EXISTING WATER
-  EXISTING STORMWATER
-  EXISTING SEWER
-  BUILDING HYDRAULICS (BY OTHERS)
-  PROPOSED DRIVEWAY/CAR PARKING BAYS
-  PROPOSED PERIMETER DRIVEWAY
-  ASSET PROTECTION ZONE
-  CORE REHABILITATION ZONE
-  RESIDUAL OUTER REHABILITATION ZONE



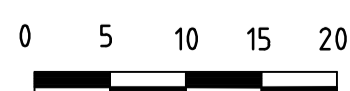
IMPORTANT NOTE:



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No.	DATE	ISSUE	REVISED	CHECKED
P1	02/25	ORIGINAL ISSUE - PRELIMINARY FOR INFORMATION ONLY		

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SCALE A  1:500
 SCALE B
 DATUM AHD (U.N.O.) SCALES SHOWN ARE AT A1 SIZE

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CONSULT AUSTRALIA
 Member Firm

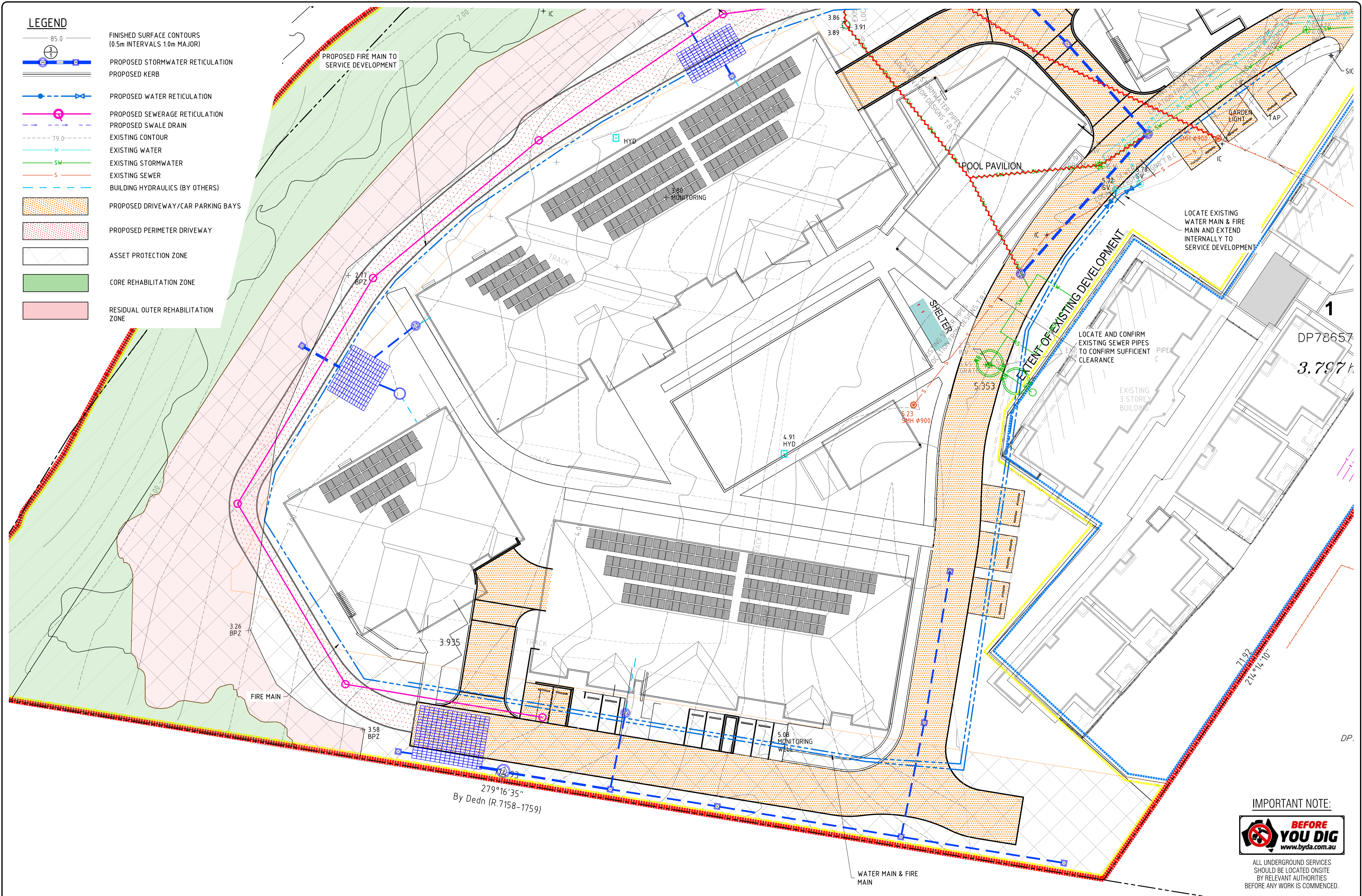
DESIGNED	J.L.
DRAWN	J.L.
CHECKED	T.W.N.
APPROVED FOR AND ON BEHALF OF COZENS REGAN WILLIAMS PROVE PTY LTD (RPECC No 4) (WER No 54,9920) (RPECC No 4536)	

CLIENT TRI CARE (HASTINGS) PTY LTD
 PROJECT PROPOSED AGED CARE FACILITY
 97-89 TWEED COAST ROAD, HASTINGS POINT
 CONCEPTUAL OVERVIEW CIVIL WORKS PLAN

JOB NO.	220450
DRAWING NO.	SK15
ISSUE	P1

LEGEND

- 85.0
- FINISHED SURFACE CONTOURS (0.5m INTERVALS 1.0m MAJOR)
- PROPOSED STORMWATER RETICULATION
- PROPOSED KERB
- PROPOSED WATER RETICULATION
- PROPOSED SEWERAGE RETICULATION
- PROPOSED SWALE DRAIN
- 79.0
- EXISTING CONTOUR
- EXISTING WATER
- EXISTING STORMWATER
- EXISTING SEWER
- BUILDING HYDRAULICS (BY OTHERS)
- PROPOSED DRIVEWAY/CAR PARKING BAYS
- PROPOSED PERIMETER DRIVEWAY
- ASSET PROTECTION ZONE
- CORE REHABILITATION ZONE
- RESIDUAL OUTER REHABILITATION ZONE



IMPORTANT NOTE:

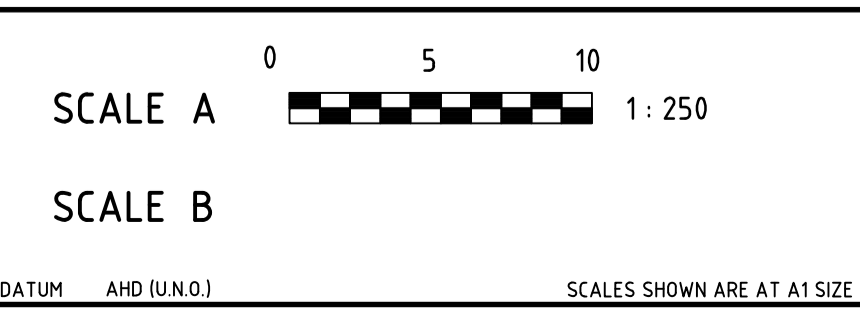


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W: www.cozreg.com.au

DESIGNED J.L.
DRAWN J.L.
CHECKED T.W.N.
APPROVED FOR AND ON BEHALF OF
COZENS REGAN WILLIAMS PROVE PTY LTD
(RPEQ No 41)
(RPEQ No 549920)
(RPEQ No 4536)

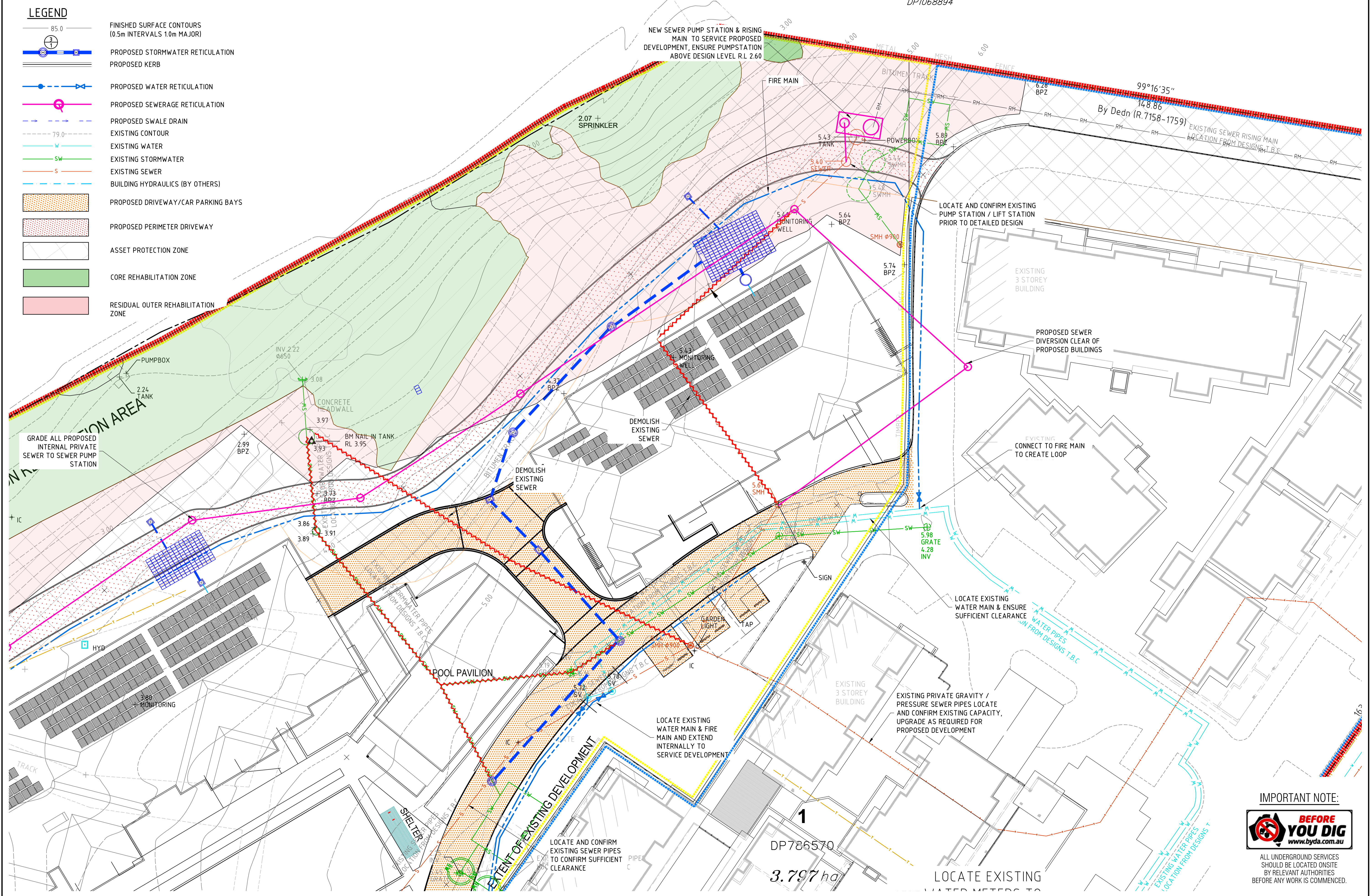
CLIENT TRI CARE (HASTINGS) PTY LTD

PROJECT PROPOSED AGED CARE FACILITY
97-89 TWEED COAST ROAD , HASTINGS POINT
CONCEPTUAL DETAIL CIVIL WORKS PLAN 1 OF 2

JOB NO. 220450
DRAWING NO. SK16
ISSUE P1

LEGEND

- 85.0 FINISHED SURFACE CONTOURS (0.5m INTERVALS 1.0m MAJOR)
- PROPOSED STORMWATER RETICULATION
- PROPOSED KERB
- PROPOSED WATER RETICULATION
- PROPOSED SEWERAGE RETICULATION
- PROPOSED SWALE DRAIN
- EXISTING CONTOUR
- EXISTING WATER
- EXISTING STORMWATER
- EXISTING SEWER
- BUILDING HYDRAULICS (BY OTHERS)
- PROPOSED DRIVEWAY / CAR PARKING BAYS
- PROPOSED PERIMETER DRIVEWAY
- ASSET PROTECTION ZONE
- CORE REHABILITATION ZONE
- RESIDUAL OUTER REHABILITATION ZONE




IMPORTANT NOTE:

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SCALE A  1: 250
 SCALE B
 DATUM AHD (U.N.O.) SCALES SHOWN ARE AT A1 SIZE

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APPROVED FOR AND ON BEHALF OF
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 (IREQ No 41)
 (IREQ No 540920)
 (IREQ No 4536)

DESIGNED	J.L.
DRAWN	J.L.
CHECKED	T.W.N.

CLIENT TRI CARE (HASTINGS) PTY LTD
 PROJECT PROPOSED AGED CARE FACILITY
 97-89 TWEED COAST ROAD, HASTINGS POINT
 CONCEPTUAL DETAIL CIVIL WORKS PLAN 2 OF 2

JOB NO.	220450
DRAWING NO.	SK17
ISSUE	P1