

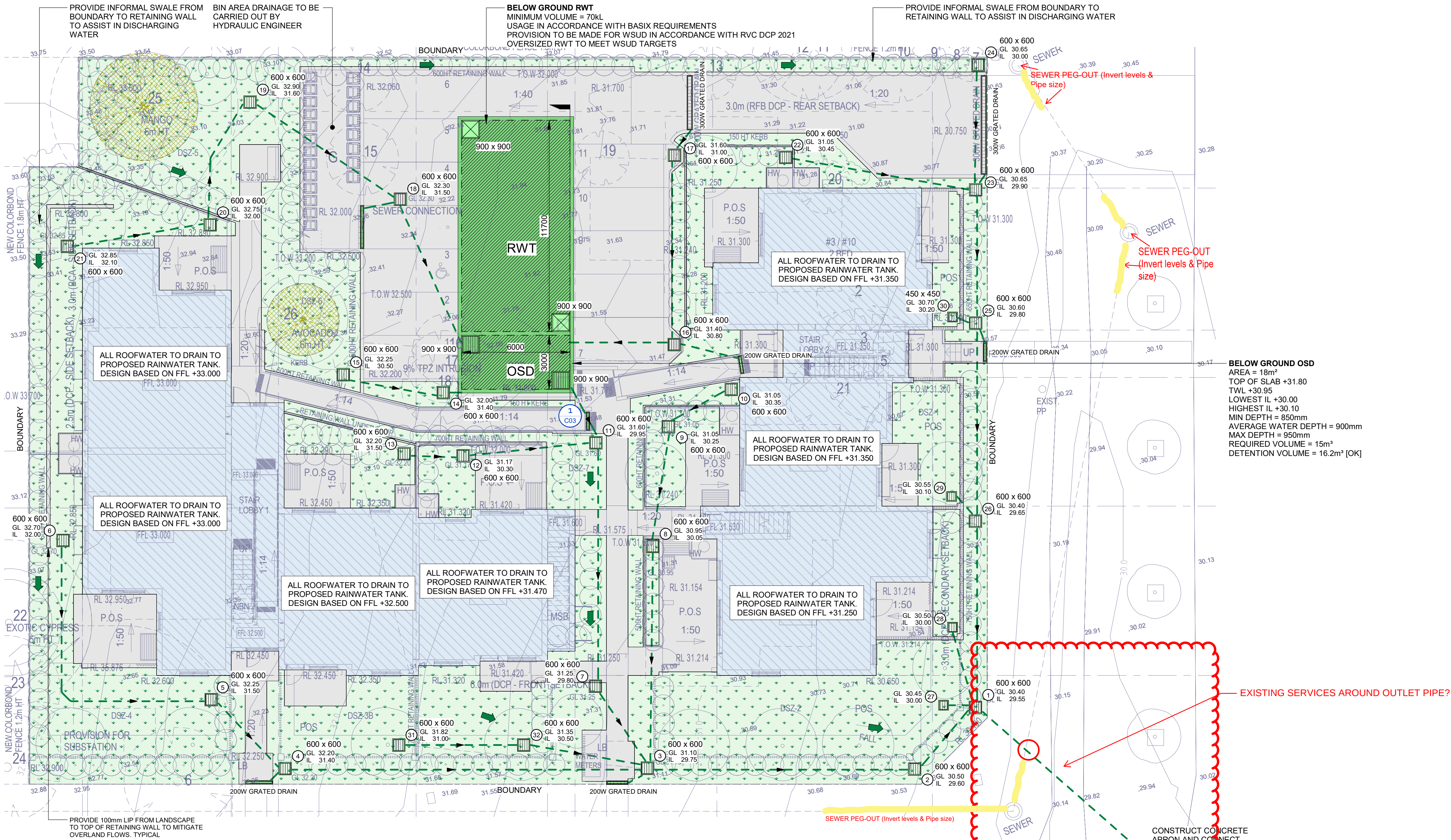
Address: 34-36 Light St, Casino NSW

Client: RPS Newcastle

Date: 31-08-2023

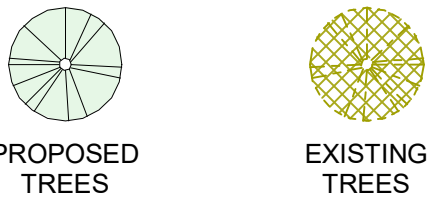
Project Number: SMS-34179

BYDA: 34915924



GENERAL LEGEND

- LANDSCAPE
- BYPASS LANDSCAPE
- LANDSCAPE ON PODIUM SLAB
- HARDSTAND
- ROOF AREA TO DRAIN
- EXISTING ROOF AREA TO DRAIN
- EASEMENT FOR DRAINAGE
- OSD



CIV - FIXTURES SCHEDULE		
	TYPE	DESCRIPTION
		GRADED STORMWATER PIT
		PERIMETER STRIP DRAIN
		SEALED STORMWATER PIT
	300W	GRADED STRIP DRAIN

CIV - STORMWATER SERVICES		
	TYPE	DESCRIPTION
	STW	STORMWATER

CIV - STANDARD SYMBOLS	
	DESCRIPTION
	OVERLAND FLOW PATH

BELOW GROUND OSD
AREA = 18m²
TOP OF SLAB +31.80
TWL +30.95
LOWEST IL +30.00
HIGHEST IL +30.10
MIN DEPTH = 850mm
AVERAGE WATER DEPTH = 900mm
MAX DEPTH = 950mm
REQUIRED VOLUME = 15m³
DETENTION VOLUME = 16.2m³ [OK]

EXISTING SERVICES AROUND OUTLET PIPE?

GROUND FLOOR DRAINAGE PLAN
Scale: 1 : 125

- ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING.
- THE BUILDER/CONTRACTOR SHALL LOCATE ALL EXISTING PUBLIC UTILITY SERVICES WITHIN THE SITE. FOOTPATH AREA AND ROAD RESERVE PRIOR TO THE COMMENCEMENT OF ANY WORKS. ALL LOCATIONS AND LEVELS OF SERVICES SHALL BE REPORTED TO THE STORMWATER ENGINEER PRIOR TO THE COMMENCEMENT OF ANY WORKS TO ENSURE THERE ARE NO OBSTRUCTIONS IN THE LINE OF THE DRAINAGE DISCHARGE PIPES.
- PRIOR TO COMMENCING ANY WORKS ON THE SITE, THE BUILDER SHALL ENSURE THAT THE INVERT LEVELS OF WHERE THE SITE STORMWATER SYSTEM CONNECTION INTO COUNCIL'S KERB/DRAINAGE SYSTEM MATCH THE DESIGN LEVELS. ANY DISCREPANCIES SHALL BE REPORTED TO THE DESIGN ENGINEER IMMEDIATELY
- ALL STORMWATER DRAINAGE WORK TO AVOID TREE ROOTS. WHERE NOT POSSIBLE, ALL EXCAVATIONS IN VICINITY OF TREE ROOTS ARE TO BE HAND DUG.
- ALL BASES OF PITS TO BE BENCHMARKED (TO HALF PIPE DEPTH) TO THE INVERT OF THE OUTLET PIPE WITH ALL PIPES CUT FLUSH WITH SIDE OF PIT. TO ALLOW SMOOTH FLOW OF STORMWATER.
- PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE WHERE IN TRAFFICABLE AREAS.
- PROVIDE 100mm GAP IN BASE OF FENCE FOR EMERGENCY OVERFLOWS.
- PROVIDE SUBSOIL DRAINAGE AND OUTLETS TO ALL ON PODIUM PLANTER BOXES. OUTLET PIPES NOT SHOWN FOR CLARITY OF DOCUMENTATION.
- ALL DOWNPIPES ARE TO BE PIPE CONNECTED INTO THE FORMAL RAINWATER OR STORMWATER LINE UNLESS SPECIFICALLY NOTED ON THE DRAWINGS OTHERWISE.
- ALL PIPES TO BE 100mmØ @ 1% MINIMUM UNLESS NOTED OTHERWISE.
- ALL BASES OF PITS TO BE BENCHMARKED TO THE INVERT OF THE OUTLET PIPE WITH ALL PIPES CUT FLUSH WITH SIDE OF PIT. TO ALLOW SMOOTH FLOW OF STORMWATER.
- PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATES IN TRAFFICABLE AREAS.

OSD CALCULATIONS

- DESIGN CRITERIA: REDUCE 100YR (1%AEP) POST-DEVELOPMENT BACK TO PRE-DEVELOPMENT FLOWRATES
- SITE AREA = 1998m²
- PRE-DEVELOPMENT IMPERVIOUS AREA: 530m² [27%]
- POST-DEVELOPMENT AREAS:
 - AREA BYPASSING OSD = 1073m² [500m² IMP] @ 47% IMP.
 - POST-DEVELOPMENT AREA TO OSD: 925m² [720m² IMP] @ 78% IMP
- LONGEST FLOW PATH = 60m @ 5% GRADE

USE DRAINS RUNOFF-ROUTING MODEL TO ARR2019 METHODOLOGY (10 PATTERNS PER DURATION)

- DRAINS PARAMETERS: IL = 0mm, CLR = 0.4*2.0 = 0.80 mm/hr, N* (HARD) = 0.015, N* (GRASS) = 0.170
- SSR100 (1%AEP) = 10.8m³
- Q5 PRE / POST = 71 / 69 L/s
- Q100 PRE / POST = 125 / 123 L/s
- ORIFICE CONTROL = D180mm BASED ON 950mm MAX. OSD DEPTH [DRAINS]



PLANNING
INDUSTRY &
ENVIRONMENT

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REV.	DATE	BY	DESCRIPTION
1	01.08.2023	JPS	ISSUED FOR APPROVAL
2	28.07.2023	JPS	ISSUED FOR APPROVAL
3	28.07.2023	JPS	FOR COORDINATION

ARCHITECT	BREWSTER MURRAY PTY LTD
PROJECT MANAGER	LAND & HOUSING CORPORATION
ELECTRICAL CONSULTANT	GREENVIEW CONSULTING PTY LTD

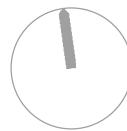
STRUCTURAL CONSULTANT	GREENVIEW CONSULTING PTY LTD
HYDRAULIC CONSULTANT	GREENVIEW CONSULTING PTY LTD
LANDSCAPE CONSULTANT	

BUSINESS PARTNER:

Family & Community Services
Land & Housing Corporation
GREATER WESTERN SYDNEY REGION

PROJECT:
PROPOSED DEVELOPMENT
AT
34-36 Light St & 42 Walker St, Casino, NSW

TITLE:
GROUND FLOOR DRAINAGE PLAN



STATUS: PRELIMINARY			
DATE:	SCALE:	PRJ:	JOB:
01.08.2023	Indicated		230192
STAGE:	DRAWN:	DESIGN:	CHECKED:
P	JPS	KP	KP
TYPE:	SHEET:		REV:
C	C02		3

LEGEND

Quality Level A:

Quality Level 'A' Pothole verification of the absolute spatial position and detailed attributes of the utility infrastructure.

Tolerance – Absolute spatial position (horizontal and vertical) $\pm 50\text{mm}$

Quality Level B: C (QL-B) C (QL-B) C (QL-B) C (QL-B) C (QL-B) C (QL-B) C (QL-B) C (QL-B) C (QL-B) C (QL-B)

Quality Level 'B' indicate the existence and location of subsurface utilities traced alignments within the works area for applicable services that induce an electromagnetic current.

Tolerance – Relative spatial position (horizontal) $\pm 300\text{mm}$, (vertical) $\pm 500\text{mm}$

Quality Level C: C (QL-C) C (QL-C) C (QL-C) C (QL-C) C (QL-C) C (QL-C) C (QL-C) C (QL-C) C (QL-C) C (QL-C)

Quality Level 'C' information is compiled from field observations and/or survey of surface features indicating that a utility of unconfirmed attributes may reside in the proximity, GPR image field verification may be used to confirm asset information.

Tolerance – Absolute spatial position (horizontal) $\pm 300\text{mm}$, (vertical) No tolerance given unknown

Quality Level D: C QL-D C QL-D C QL-D C QL-D C QL-D C QL-D C QL-D C QL-D C QL-D C QL-D

Quality Level 'D' information may be sourced through the following methods, overlayed from DBYD/historical records, anecdotal evidence, design plans, GIS database, engineering markups or cursory site inspection.

Note:

- All services will be marked in accordance with the Australian Standard Classification of Subsurface Utility Information (SUI) AS5488.1:2022.
- Please note that this plan does not exempt you from your duty of care obligations when working near buried utilities. It is essential to read and understand all duty of care information before commencing excavation. Additionally, each asset owner has their own minimum protection distance requirements for their assets.

Electrical Pits		Stormwater Pits	
Electrical Light Feature		Stormwater Grated Pit	
Electrical Pole		Stormwater Head Wall	
Communication Pits		Gas Pits	
Communications Pillar		Gas Trace Point	
Water Pits		Recycled Water Pits	
Water Valve		Recycled Water Valve	
Water Hydrant/Booster		Unknown Pits	
Sewer Pits		Pothole	
Sewer Inspection Opening		Pothole Trench	

TERMS AND CONDITIONS

Subsurface Mapping Solutions will only be engaged under the following conditions. By engaging Subsurface Mapping Solutions, the client agrees to these conditions. All underground utility service locations will be carried out according to the quality levels described in AS5488 and must be verified through potholing.

The client is solely responsible for fulfilling duty of care obligations related to the location of any underground utilities. This includes observing the "five P's" of safe digging (plan, pothole, protect, and proceed), complying with workplace health and safety legislation and statutory requirements, and visually locating the underground service through manual hand digging or hydro vacuum excavation (potholing) for verification.

The client shall be responsible for any damage caused by their equipment to public authorities, public persons, or companies. Such damages can include personal injury, property damage, and business interruption of the service provider's business. The client agrees to follow the minimum clearance guidelines specified by the relevant service provider, and a copy of these guidelines will be available with the DBYD plans provided.

Although we will take all due care with regards to the location of utilities within the areas advised by the client, the client remains solely responsible, and no warranty is given in the event that we are unable to locate a service or utilities that are damaged in any way whatsoever.

The client acknowledges that electronic detection will be carried out according to the quality levels requested in AS5488. Electromagnetic radio frequency devices may be affected by other influences, and some utilities are untraceable due to non-metallic materials, such as optic fiber cables or PVC piping.

The client agrees to indemnify and hold Subsurface Mapping Solutions harmless against any actions, suits, claims, damages, or loss sustained as a result of any breach of this agreement or any damage caused by the client to utilities or any person as a result of their actions involving utilities.

The client acknowledges receipt of these terms and conditions and has read and understood them.

<https://www.byda.com.au/before-you-dig/best-practice-guides/>