

DESIGN CONSIDERATIONS

NOTE:
THE DESIGN OF THE ELEMENTS DEPICTED ON THESE PLANS HAS BEEN CARRIED OUT IN ACCORDANCE WITH THE RELEVANT SECTIONS OF THE NCC AND AUSTRALIAN STANDARDS AS REFERENCED ON THESE PLANS.

NOTE:
THE CIVIL DESIGN HAS BEEN BASED ON THE ARCHITECTURAL PLANS BY EXPANDESIGN, DATED 17/07/2020.

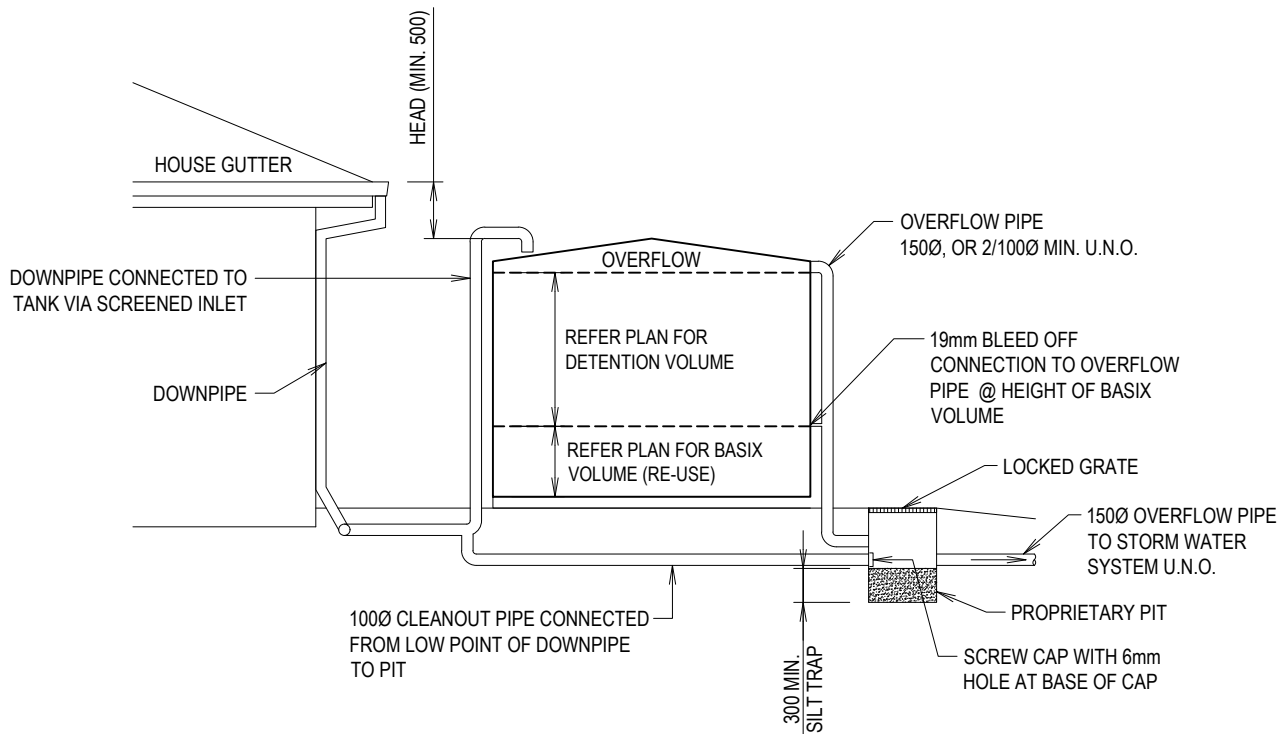
- W.H.S. NOTES
- ALL WORK IS TO COMPLY WITH WHS LEGISLATION AND RELEVANT CODES OF PRACTICE.
 - ALL WORK IS TO BE IN ACCORDANCE WITH BUILDER'S CONSTRUCTION WHS MANAGEMENT SYSTEM AND SAFE WORK METHOD STATEMENT.
 - A RISK ASSESSMENT OF EACH OF THE FOLLOWING MUST BE UNDERTAKEN FOR THIS WORKSITE:
 - SITE ACCESS.
 - TRAFFIC MANAGEMENT DURING DELIVERY OF BUILDING MATERIALS.
 - OVERHEAD & UNDERGROUND UTILITIES.
 - STABILITY OF STRUCTURES ADJACENT TO THE EXCAVATION.
 - EFFECT OF THE WORKS ON ADJACENT PROPERTIES.
 - STRUCTURAL ADEQUACY OF FORMWORK.
 - SAFE PERSONNEL ACCESS WITHIN AND AROUND THE CONSTRUCTION WORK.
 - COLLAPSE OF EXISTING & IMPROVEMENTS INTO EXCAVATIONS.

- GENERAL NOTES
- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH CURRENT ARCHITECTURAL AND ALL OTHER CONSULTANT'S DRAWINGS AND SPECIFICATIONS, AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE WORKS. ANY VARIATIONS TO ARCHITECTURAL OR OTHER CONSULTANTS DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF ALL CONSULTANTS.
 - NO BUILDING WORKS SHALL BE CONSTRUCTED ON OR OVER ANY ALLOTMENT BOUNDARY OR EASEMENT OR OTHER SIMILAR SUCH PROPERTY TITLE WITHOUT THE NECESSARY PERMITS AND/OR APPROVALS. THESE DRAWINGS DO NOT CONSTITUTE SUCH PERMITS AND/OR APPROVALS IRRESPECTIVE OF WHETHER BUILDING WORKS ARE SO INDICATED ON OR OVER SUCH PROPERTY TITLES.
 - SETTING-OUT DIMENSIONS, RL's, STEPS & SETDOWNS SHALL BE VERIFIED BY THE BUILDER PRIOR TO COMMENCEMENT OF SITE WORK. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS. DIMENSIONS ARE IN MILLIMETRES, UNLESS INDICATED OTHERWISE. DRAWING PRACTICE IS TO AS 1100.
 - ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUSTRALIAN STANDARDS, THE BUILDING CODE OF AUSTRALIA AND THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITY.
 - ALL WORKS IN ACCORDANCE WITH AS3500, COUNCIL DEVELOPMENT CONTROL PLANS, HWC REQUIREMENTS AND PROPRIETARY MANUFACTURER'S RECOMMENDATIONS.
 - ALL STORMWATER PIPES TO BE 100Ø STORMWATER GRADE, U.N.O. JOINTED & INSTALLED TO MANUFACTURER'S RECOMMENDATIONS.
 - ALL STORMWATER LINES TO HAVE ALL JOINTS, INC. DP CONNECTIONS, FULLY SOLVENT WELDED (AS LINES ARE 'CHARGED')
 - ALL LEVELS ARE DATUM AHD.
 - ALL LEVELS ARE FINISHED PAVEMENT OR LAWN LEVELS.
 - CONSULT STRUCTURAL ENGINEER WHERE STORMWATER LINES ARE PROPOSED WITHIN THE ZONE OF INFLUENCE OF PROPOSED SLAB

NOTE:
ALL STORM WATER WORK TO BE IN ACCORDANCE OF AS3500 AND ALL STATUTORY REQUIREMENTS.

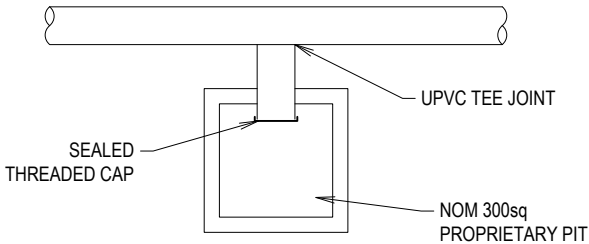
- STORMWATER DRAINAGE NOTES
- ALL WORKS TO BE IN ACCORDANCE WITH AS3500.3.
 - ALL PITS TO BE PRECAST CONCRETE, STEEL REINFORCED OR EQUIVALENT PROPRIETARY PIT.
 - ALL PIPES TO BE Ø100 UPVC U.N.O.
 - UPVC PIPES TO CONFORM TO AS1260
 - ALL PIPES TO BE LAID AT A GRADE OF 1 IN 100 MINIMUM
 - ARROWS INDICATE DIRECTION OF PIPE GRADE
 - ALL LEVELS APPROXIMATE ONLY, TO BE CONFIRMED ON SITE.
 - COVER AND GRATE LEVELS TO BE MODIFIED AS NECESSARY ON SITE TO MATCH SURROUNDINGS AND ENSURE ADEQUATE FALLS AND DRAINAGE TO GRATES.
 - MINIMUM COVER TO STORMWATER PIPES TO BE AS FOLLOWS:
TRAFFICABLE AREAS - 450mm
LANDSCAPED AREAS - 300mm
IF MINIMUM COVERS CANNOT BE OBTAINED IN TRAFFICABLE AREAS PIPES TO BE CONCRETE ENCASED. REFER TO CLAUSE 3.8 AS3500.3. ALTERNATIVELY USE UPVC SEWER GRADE PIPES UNDER ROADS AND BUILDINGS.
 - AGG DRAINS TO ALL LANDSCAPED AREAS TO BE CONNECTED INTO STORMWATER SYSTEM. PROVIDE AGG DRAINS TO ALL PLANTER BEDS BEDDED IN COARSE AGGREGATE.
 - DOWNPIPE LOCATIONS TO BE IN ACCORDANCE WITH ARCHITECTS DRAWINGS . ALLOW Ø150 UPVC PIPES TO CONNECT FROM DOWNPIPES INTO STORMWATER DRAINAGE SYSTEM SHOWN.

- STORMWATER MAINTENANCE PROGRAM
- ALL STORMWATER PIPES TO BE CLEANED ON A REGULAR BASIS AT MINIMUM 1 MONTH INTERVALS.
 - FLUSH SYSTEM ANNUALLY.
 - ALL PITS AND DETENTION TANKS TO BE CLEANED OF SEDIMENT AT MAXIMUM OF THREE MONTH INTERVALS.



TYPICAL ON-SITE STORMWATER DETENTION TANK
NTS

NOTE
INSTALL FIRST FLUSH DEVICE TO SATISFY THE BUILDING CODE OF AUSTRALIA & TO ENSURE MINIMUM "HEAD" IS MAINTAINED



CLEAN-OUT PIT DETAIL
NTS

STORMWATER CALCULATIONS:

SITE AREA = 1360m²
EXISTING ROOF AREA = 294m²
EXISTING HARDSTAND AREA = 207m²
ROOF AREA DEVELOPED : 464m²
HARDSTAND AREA DEVELOPED = 169m²
TOTAL IMPERVIOUS ARE DEVELOPED = 633m² (47%)

PREDEVELOPED CONDITION:

1% AEP, TC = 5 MIN. I = 296mm/hr.
(BOM IFD DESIGN RAINFALL INTENSITY).

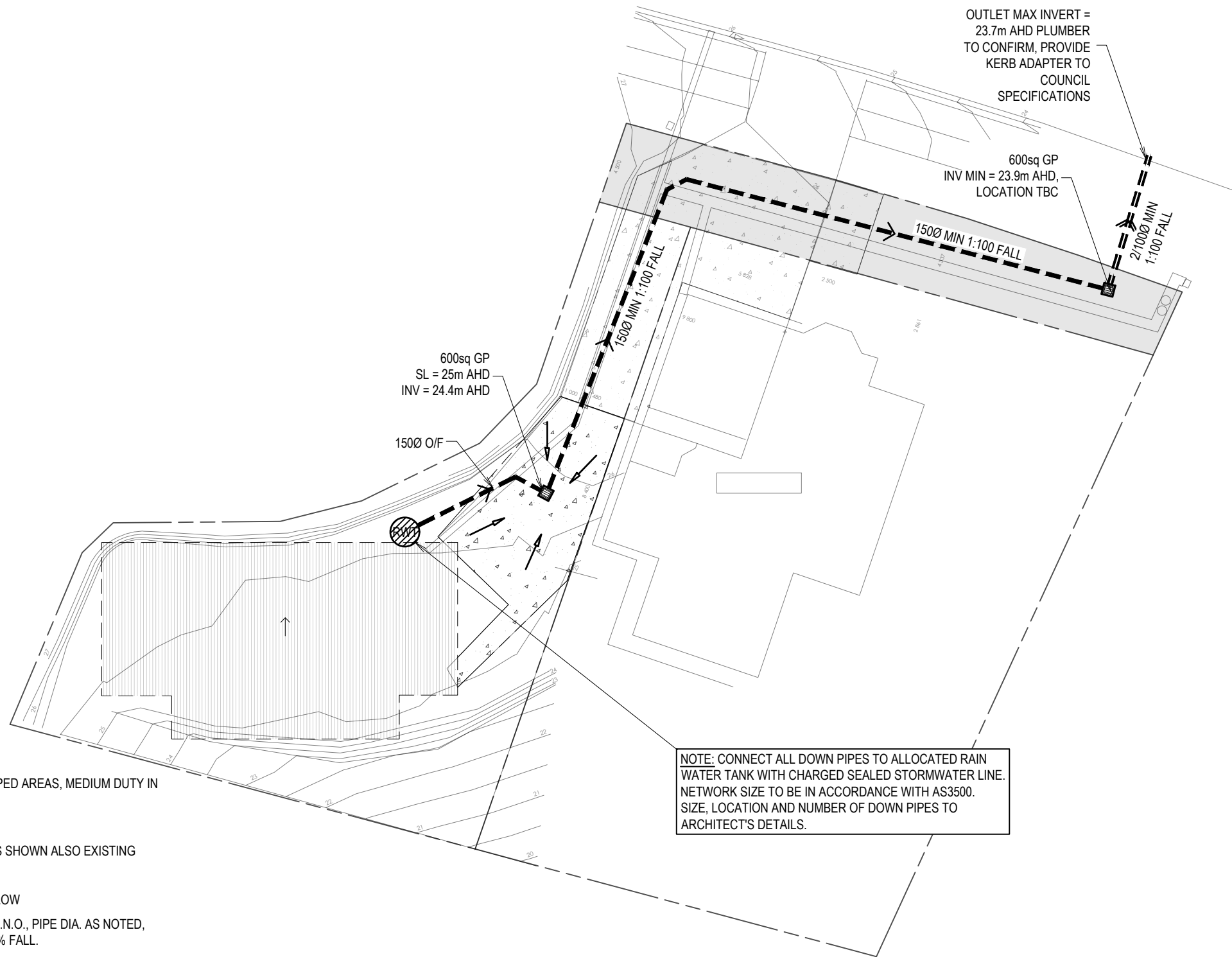
C = $\frac{(1 \times 501\text{m}^2) + (0.4 \times 859\text{m}^2)}{1360\text{m}^2}$
= 0.62
Q = CIA / 3600
= 0.62 x 296 x 1360 / 3600
= 69.3 L/sec.

POST DEVELOPED FLOW:

C = $\frac{(1 \times 633\text{m}^2) + (0.4 \times 727\text{m}^2)}{1360\text{m}^2}$
0.68
Q = CIA / 3600
= 0.68 x 296 x 1360 / 3600
= 76.0 L/sec.

RESULTANT FLOW:

= 6.7L/sec.x 300 sec
=2010L DETENTION REQUIRED



STORMWATER MANAGEMENT PLAN

1:250

LEGEND

GP	GRATED PIT, LIGHT DUTY IN LANDSCAPED AREAS, MEDIUM DUTY IN TRAFFICABLE AREAS
FFL 12.91	PROPOSED FINISHED FLOOR LEVEL
1.0	EXISTING SURFACE LEVEL, CONTOURS SHOWN ALSO EXISTING
O/F	DENOTES OVER FLOW LINE
→	INDICATES DIRECTION OF SURFACE FLOW
→	DENOTES UPVC STORM WATER LINE U.N.O., PIPE DIA. AS NOTED, PIPE FLOW DIRECTION SHOWN, MIN. 1% FALL.
→	DENOTES DIRECTION OF ROOF FALL
→	DENOTES APPROXIMATE EXTENT OF RETAINING WALLS
RWT	5KL RAINWATER TANKS
→	(3KL STORAGE, 2KL RE-USE BASIX) - REFER TO DETAIL

NOTE: CONNECT ALL DOWN PIPES TO ALLOCATED RAIN WATER TANK WITH CHARGED SEALED STORMWATER LINE. NETWORK SIZE TO BE IN ACCORDANCE WITH AS3500. SIZE, LOCATION AND NUMBER OF DOWN PIPES TO ARCHITECT'S DETAILS.



IT IS THE BUILDERS RESPONSIBILITY TO CONFIRM DEPTH & LOCATION OF ALL SERVICES PRIOR TO CONSTRUCTION AS THIS MAY AFFECT THE DESIGN.

NOTE
IT IS THE BUILDERS RESPONSIBILITY TO CONFIRM ALL SETOUT, RL's, SETDOWNS & DIMENSIONS WITH THE CONTRACT ARCHITECTURAL PLANS PRIOR TO COMMENCING ON SITE. ANY DISCREPANCY SHALL BE REFERRED TO THE ARCHITECT FOR RESOLUTION PRIOR TO CONTINUING WORKS. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING DRAWINGS.

APPROVED BY:

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REV.	BY	DESCRIPTION	DES.	DATE
0	S.P.	FOR APPROVAL	S.P.	03.10.2024

CLIENT:	SCHORR
PROJECT:	PROPOSED DEVELOPMENT 14 RAJAH ROAD OCEAN SHORES NSW
DRAWING No.	C240816 - 02 of 02
REV.	0
ISSUED FOR	APPROVAL
SHEET	A3