

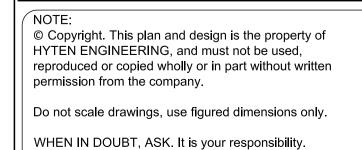
STORMWATER LAYOUT NOTES

PITS UP TO 600mm DEEP TO BE 450x450 U.N.O. PITS UP TO 900mm DEEP TO BE 600x600 U.N.O. PITS UP TO 1200mm DEEP TO BE 900x900 U.N.O.

PITS TO BE PRECAST CONCRETE OR RENDERED BRICK WITH CONCRETE HEAVY DUTY GRATES. U.N.O. LIGHT DUTY PITS & GRATES MAY BE USED ONLY IN LIGHT/FOOT TRAFFICABLE AREAS.

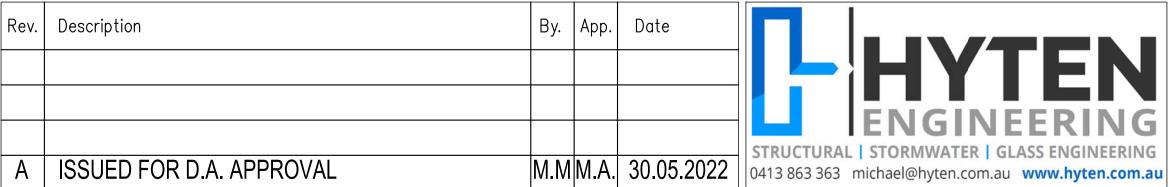
U.N.O. ALL PITS TO BE BENCHED TO DISCHARGE PIPES (U.N.O. GALVANISED STEP IRONS TO ALL PITS EXCEEDING 900 DEPTH.)

- COVER & SUMO GRATES SHALL COMPLY WITH AS2733 & AS4198
- DOWNPIPES Ø=90mm IF CHARGED AND 100x50 BOX IF GRAVITY. U.N.O. DP's SHALL BE INSTALLED IN ACCORDANCE WITH AS3500.3.2:4,11 & AS4198. MAXIMUM ROOF AREA PER DOWNPIPE IS 30m² WITH A QUAD 115 HI-FRONT GUTTER U.N.O.
- PIPES TO HAVE 1% MINIMUM GRADE U.N.O. BY PIT INVERTS, PIPES TO BE V.C. CLASS "X" OR U.P.V.C. CLASS STORMWATER PIPE TO AS1254,1260,1273,1477,2179.2 AND WHERE EXPOSED TO DIRECT SUNLIGHT TO HAVE ADEQUATE PROTECTION TO U.V. RADIATION IN ACCORDANCE WITH AS2032. SEWER GRADE/GALVANISED PIPES TO BE USED WHERE COUNCIL POLICY OR CONSENT REQUIRE SUCH.
- GUTTER OUTLETS SHALL BE FITTED VERTICALLY TO THE SOLE OF THE EAVE GUTTERS. RAINHEADS TO HAVE AN OVERFLOW DUCT OR WEIR 50mm BELOW THEIR CREST.
- PROVIDE OVERFLOW SPITTERS TO ALL COVERED BALCONIES/TERRACES. NOT TO BE DIRECTED ON TO ROOF SURFACES.
- RISING MAINS (PRESSURE PIPE) TO BE IN ACCORDANCE WITH AS3500.1:2.
- SUBSOIL DRAINS TO BE IN ACCORDANCE WITH AS2439.1 CLASS 100 TO BE USED ONLY IN SINGLE DWELLINGS.
- ALL PIPE JOINTS TO BE IN ACCORDANCE WITH AS3500.3.2:2.7
- ALL VALVES TO BE IN ACCORDANCE WITH AS3500.3.2
- EXPANSION JOINTS AND ACCESSORIES TO COMPLY WITH AS2179.2 &
- ALL TRENCHES TO BE IN ACCORDANCE WITH AS3500.3.2:7.2.8-14, EMBEDMENT MATERIAL & TRENCH FILL TO ALL PIPES & SUBSOIL DRAINS TO BE IN ACCORDANCE WITH AS3500.3.2:7, ALL WORKS TO BE IN ACCORDANCE WITH AS1254,1741,2032,2733,2865,3996,1260,1477,2179.1 & 2.2566, 6367,8301, ARR97 & BCA
- IT IS THE BUILDER'S RESPONSIBILITY TO CONFIRM THAT LEVELS AND SURVEYS ARE IN ACCORDANCE WITH LEVELS ON SITE AND ARE APPROVED BY COUNCIL & THE ARCHITECT BEFORE COMMENCING WORK.
- NO SEWER VENTS, GULLY PITS OR SIMILAR TO BE LOCATED BELOW THE MAXIMUM WATER SURFACE LEVEL IN DETENTION BASINS. ALL BASIN WALLS TO BE WATERTIGHT & STRUCTURALLY DESIGNED BY A STRUCTURAL ENGINEER.
- ALL FENCES WHICH MAY DIVERT FLOW FROM PROPOSED DIRECTION TO BE
- BUILDER TO ENSURE ALL DRAINAGE AREAS INCLUDING EXPOSED BALCONIES TO HAVE OVERFLOW MECHANISM IN PLACE IN THE EVENT OF BLOCKAGE WITH ADEQUATE OVERFLOW SECTION THROUGH PLANTERS, PARAPETS ETC.
- ALL EXTERIOR FINISHED GROUND LEVEL TO BE SLOPING AWAY FROM PERIMETER WALLS IN ALL CASES.
- ALL HEADROOM CLEARANCES TO BE COORDINATED BETWEEN THE BUILDER & THE ARCHITECT. NOTIFY ENGINEER FOR APPROVAL IF ANY CHANGES ARE TO OCCUR.
- ALL GULLY POSITIONS ARE DIAGRAMMATIC ONLY BUILDER SHOULD CONSULT ARCHITECTURALS FOR DIMENSIONS TO LOCATE STORMWATER ELEMENTS U.N.O.
- FIRE RATING TO ARCHITECT'S SPECIFICATIONS.
- ALL FINISHED FLOOR LEVELS ARE NOMINATED BY ARCHITECT.
- ALL SITE SAFTEY MEASURES AND WORK METHOD STATEMENTS PREPARED BY BUILDER/SUB-CONTRACTORS ARE TO BE IMPLEMENTED DURING CONSTRUCTION. NO WORK IS TO COMMENCE UNIT ALL WORKERS CARRY OUT SITE INDUCTION, PREPARED AND CARRIED OUT BY BUILDER. ANY HAZARD IDENTIFICATION TO BE REPORTED IMMEDIATELY TO SITE SUPERVISOR TO CARRY OUT NECESSARY PROCEDURES TO ELIMINATE HAZARD, PRIOR TO PROCEEDING WITH WORK. STRUCTURAL AND GEOTECHNICAL ADVICE SHOULD BE SOUGHT IN ALL CASES. CONFINED SPACES SIGNAGE TO BE INSTALLED IN ACCESSIBLE UNDERGROUND TANKS TO WORK COVER SPECIFICATIONS. ALL PITS EXCEEDING 600mm DEPTH TO HAVE "J" BOLTS INSTALLED TO GRATES.
- MAINTENANCE DEVICES REQUIRED BY AUTHORITIES ARE NOT TO BE ASSUMED SHOWN ON DRAWINGS.
- EARTH MOUNDING SHOWN AS TEMPORARY MEASURE UNTIL LANDSCAPING COMPLETED TO DIRECT FLOWS AS SHOWN.



If HYTEN Engineering has not been engaged to carry out

structural inspections, no certificate will be issued



MR & MRS FERRARA

Project 26 SECOND STREET, **ASHBURY**

STORM WATER DRAINAGE PLAN

Drawn Design $|\mathsf{M}.\mathsf{M}.|$ $|\mathsf{M}.\mathsf{M}.$

Drawing Number

Project Number 22 H 5004

ISSUED FOR D.A. APPROVAL

SW 01

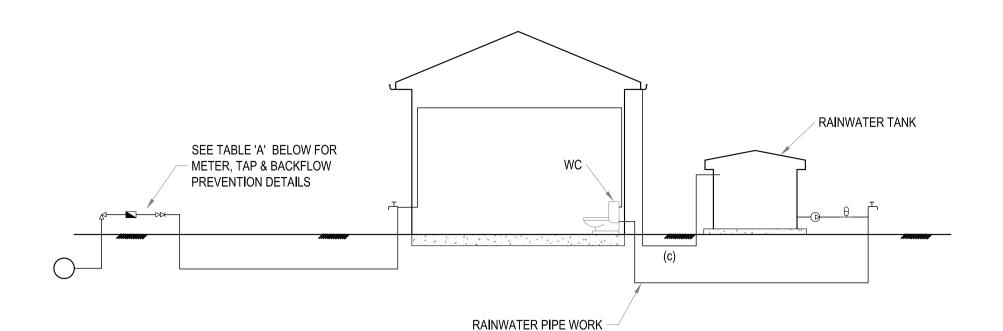


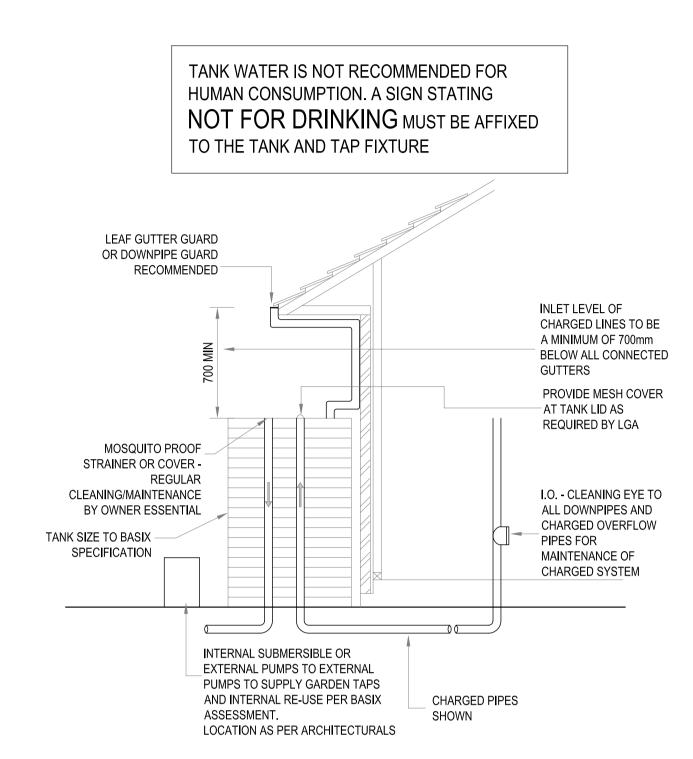
TABLE A			
RAINWATER	METER	TYPE	TYPE OF
TANK LOCATION	SIZE (mm)	OF TAP	BACKFLOW PREVENTION
ABOVE GROUND	20	BALL VALVE	DUAL CHECK VALVE
			(COMBINED WITH METER)
	25	BALL VALVE	DUAL CHECK VALVE
	≥ 32	BALL VALVE	DUAL CHECK VALVE
BELOW GROUND	20	BALL VALVE	TESTABLE DOUBLE CHECK VALVE
	25	BALL VALVE	TESTABLE DOUBLE CHECK VALVE
	≥ 32	BALL VALVE	TESTABLE DOUBLE CHECK VALVE

DIAGRAM NOTES: LEGEND DRAWING TO BE READ IN CONJUNCTION WITH SYDNEY WATER PLUMBING REQUIREMENTS FOR TANKS 10,000 LITRES OR LESS, COUNCIL DEVELOPMENT PRESSURE VESSEL CONSENT IS NOT REQUIRED, IF THEIR CONDITIONS FOR INSTALLATION ARE FOLLOWED. △ BALL VALVE RIGHT ANGLE TYPE FOR TANKS GREATER THAN 10,000 LITRES COUNCIL DUAL CHECK VALVE DEVELOPMENT CONSENT IS GENERALLY REQUIRED. FOR TANKS MORE THAN 10,000 LITRES APPROVAL IS PUMP REQUIRED FOR BUILDING OVER SEWERS. **GARDEN TAP** SYDNEY WATER'S APPROVAL IS REQUIRED FOR ANY TOP UP ----- DRINKING WATER SUPPLY PIPES FROM DRINKING WATER SUPPLY, REGARDLESS OF TANK SIZE. ----- RAINWATER SUPPLY PIPES NO DIRECT CONNECTION IS ALLOWED BETWEEN THE ---- DOWN PIPES DRINKING WATER SUPPLY AND THE RAINWATER TANK RAINWATER PIPEWORK IS SHOWN ON THE DIAGRAM AS SUPPLYING INTERNAL RAINWATER USES. ANY DESIGNED ACCESS LID INTO RAINWATER RE-USE TANK IS TO HAVE A LOCKABLE LID. IF THE LID IS DESIGNED TO BE ACCESSED BY A MAINTENANCE PERSON, IT MUST BE AT LEAST 600 mm x 900 mm IN SIZE. 8. MAINS WATER TO BYPASS TO TANK (BY PLUMBER) FOR LOW

TANK STORAGE.

DUAL WATER & RAINWATER SUPPLY DIAGRAM

THE RAINWATER TANK SHALL BE INSTALLED WITH A FIRST FLUSH DEVICE TO SUPPLIERS DETAILS



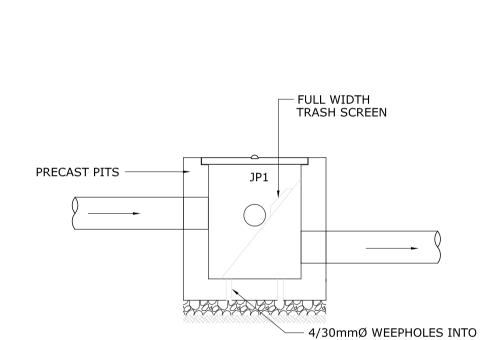
ABOVEGROUND RAINWATER TANK

OVERLAY ZONE UNCOMPACTED

COMPACTED FOUNDATION ZONE

Ø825 RCP

LOAD CLASS 2 WITH TYPE HS2 COMPACTION



DOWNPIPE

TO

TANK

WATER FLOW FROM ROOF

BALL SEAT

DIVERTER CHAMBER

DRIP OUTLET

WITH SCREW CAP

FIRST FLUSH OF CONTAMINATED WATER IS DIVERTED INTO CHAMBER.

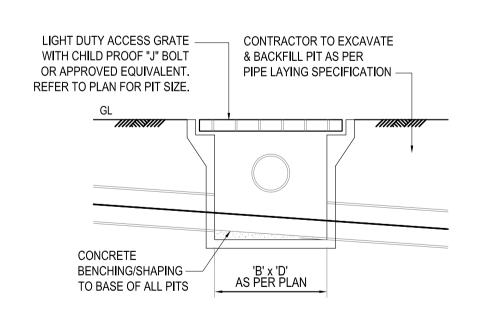
DIVERTER DESIGNED TO CAUSE MINIMUM OF 1mm OF INITIAL RUNOFF

PROPRIETARY FIRST FLUSH DIVERTER

FROM ROOF AREA TO BYPASS RAINWATER TANK(S)

SEDIMENT CONTROL PIT DETAIL (IF REQUIRED) SCALE 1:100

100mm BLUE METAL LAYER



TYPICAL SURFACE INLET PIT DETAIL (IF REQUIRED)

TYPICAL FOR ALL PITS IN NON TRAFFIC AREAS.

	PAVED	LANDSCAPED				PAVED	LANDSCAPED	
Р	PAVEMENT		FINISHED SURFACE			PAVEMENT		FINISHED SURFACE
	X		BACKFILL WITH APPROVED EXCAVATED MATERIAL OR APPROVED ORDINARY FILL, COMPACTED IN MAXIMUM 150mm LAYERS TO THE DENSITY OF THE ADJACENT SOIL. WELL TAMPED INITIAL ZONES SHALL BE 10mm CRUSHED ROCK WELL TAMPED & AT OPTIMUM MOISTURE CONTENT. BEDDING HAUNCH & OVERLAY ZONES SHALL BE 10mm CRUSHED ROCK WELL TAMPED & AT OPTIMUM MOISTURE CONTENT.	NOTE 2	BACKFILL ZONE: 20mm CRUSHED ROCK WETMIX APPROVED BY THE SUPERINTENDENT. PLACED IN 150mm THICKNESS TO 95% A.S. MODIFIED MAX. DRY DENSITY OVERLAY ZONE: 20mm CRUSHED ROCK WETMIX APPROVED BY THE SUPERINTENDENT. COMPACT BY TAMPING, ROLLING OR VIBRATION TO NOT LESS 85% A.S. MODIFIED MAX. DRY DENSITY 0.1D MINIMUM, HAUNCH	300		TOPSOIL BACKFILL ZONE: APPROVED EXCAVATED MATERIAL COMPACTED IN 150mm LAYERS TO THE DENSITY OF THE ADJACENT SOIL, OR APPROVED ORDINARY FILL COMPACTED TO THE DENSITY OF THE ADJACENT SOIL OVERLAY ZONE: APPROVED ORDINARY FILL, WELL TAMPED AT OPTIMUM MOISTURE CONTENT REINFORCED CONCRETE PIPE BED ZONE COMPACTED
NOTE:		PIPE DIA	PIPE DIA W X Y 1 REFER TO PIPE LAYING		NOTE: 1 REFER TO PIPE LAYING SPECIFIC	CIEICATION EOD DETAILS	D	W
1 REFER TO PIPE LAYING SPECIFICATIONS FOR DETAILS.		MIN		2 BACKFILL OVERLAY & BEDDING	ZONES 20mm CRUSHED RO		150	
		300 75 75 600 75 75		COMPACT BY TAMPING ROLLING THAN 85% A.S. STD. MAX. DRY		ESS 375-750 +750	300	
	<u>UPVC P</u>	IPE				REINFOR	RCED CONCRETE	PIPE

TYPICAL PIPE LAYING DETAIL
1:20

By. App.

Date



MR & MRS FERRARA

TYPICAL PIPE BEDDING SUPPORT
1:10

Project 26 SECOND STREET, **ASHBURY**

Title STORM WATER DETAILS Design Drawn M.M. M.M.

ISSUED FOR D.A. APPROVAL

Project Number 22 H 5004

Drawing Number SW 02

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Rev. Description

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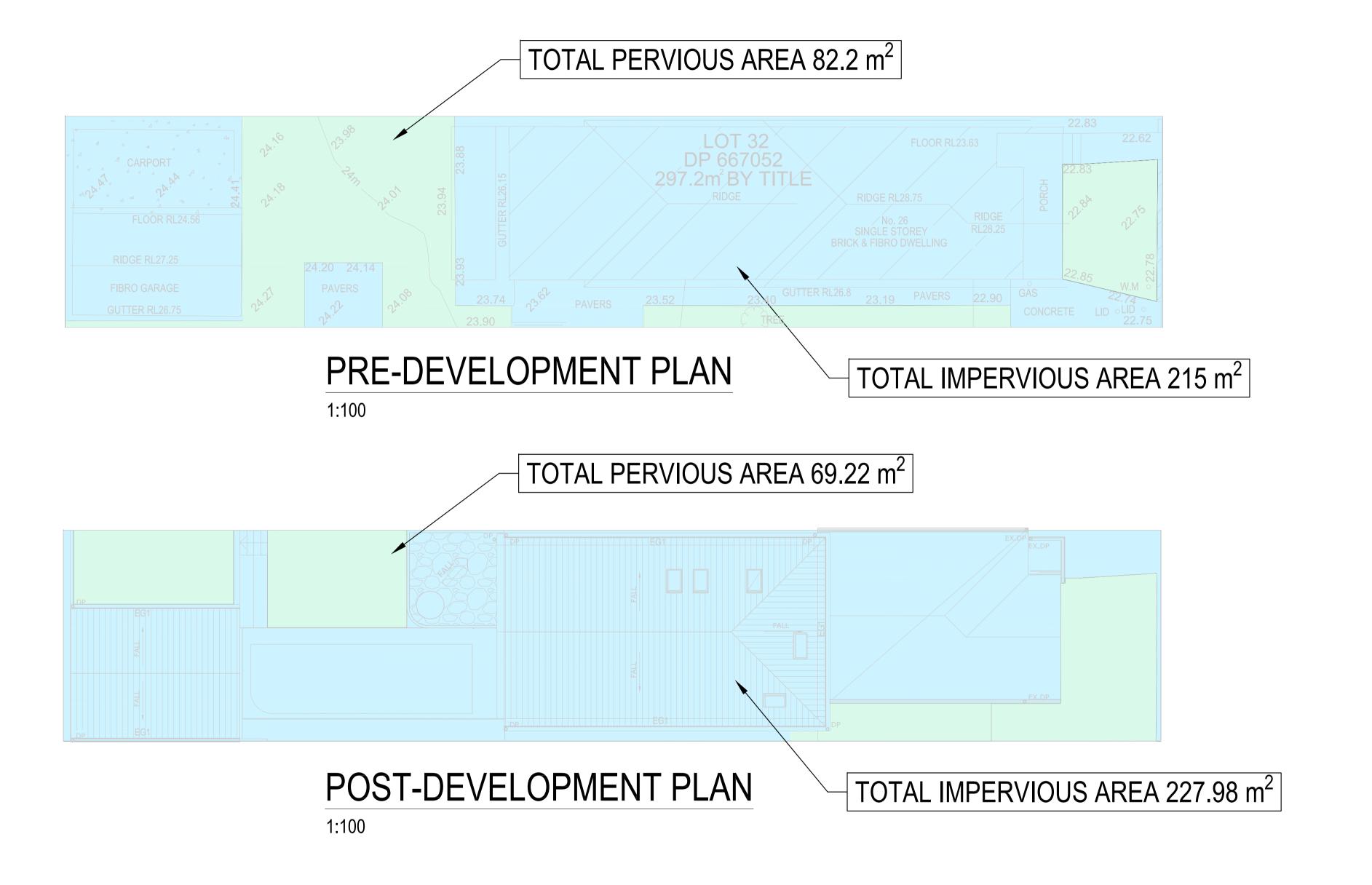
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DESIGN SUMMARY TOTAL SITE AREA = 297.2 m² PRE - DEVELOPMENT IMPERVIOUS AREA = 215 m² PRE - DEVELOPMENT IMPERVIOUS PERCENTAGE = 72.3 % POST - DEVELOPMENT IMPERVIOUS AREA = 227.98 m² POST - DEVELOPMENT IMPERVIOUS PERCENTAGE = 76.7% TOTAL IMPERIOUS AREA INCREASED = 12.98 m² TOTAL IMPERIOUS PERCENTAGE INCREASED = 4.4 % OSD NOT REQUIRED AS PER CANTERBURY COUNCIL DCP 2012 APPENDIX 1 ON-SITE STORMWATER DETENTION (OSD) CHECKLIST

On-Site Stormwater Detention (OSD) Checklist

For Dual Occupancy and Single Dwelling including Additions and Alterations

This form is to be used to determine if OSD will be required for residential developments and must be completed before the submission of any Application. Please read the reverse side of this form carefully for its applications and definitions.

Part A. Address and type of proposed development Lot...32....DP... No. 26 Street.... Suburb....ASHBURY... SECOND STREET Type of development (tick relevant boxes): Dual Occupancy Single Dwelling Extensions Garage, outbuildings and others (specify).

Part B. Exemption for flood affected areas

Is the subject site located within an established 100 year floodplain and the site also floods in 20 and 50 year storm events (tick one only):

□ Yes

✓ No If yes, OSD is not required. If no, go to Part C.

Part C. Exemption for minimum allowable size of site impervious area Refer to the back of this page for definitions and explanations. (a) Site area = 297.2 (b2) Total remaining existing impervious area = ... (C) Proposed impervious area: (C1) roofed areas =... (C2) paved areas = .. (C3) supplementary areas = (d) Total post-development impervious area (b2) + (C1 + C2 + C3) = 227.98.. (m²)

OSD will not be required if either of the following is satisfied:

(g) is less than 70%

√ (f) is greater than 70% and (e) is less than or equal to 5%.

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Do not scale drawings, use figured dimensions only.			ENGINEEDING	Project 26 SECOND STREET,	ISSUED FOR	Drainat Number	Drawing Number	
WHEN IN DOUBT, ASK. It is your responsibility. If HYTEN Engineering has not been engaged to carry out structural inspections, no certificate will be issued.	A ISSUED FOR D.A. APPROVAL	M.M.M.A. 30.05.2022	STRUCTURAL STORMWATER GLASS ENGINEERING 0413 863 363 michael@hyten.com.au www.hyten.com.au	ASHBURY	D.A. APPROVAL	Project Number 22 H 5004	Drawing Number SW 03	