Date: 07/04/2022 Ref:(1-STW.A) 048-22

STORMWATER DESIGN CERTIFICATE

PROJECT: PROPOSED CONSTRUCTION OF GRANNY FLAT WITH AN ATTACHED GARAGE
ADDRESS: 16 COSTER STREET, FRENCHS FOREST
CLIENT: RK DESIGN
DRAWINGS NUMBER: STW048-2022, REV.A

We confirm that Modular Engineers has reviewed the drawings and design for the above-mentioned address by practice and qualified stormwater engineer, the review has been performed in accordance with:

- BCA (2016)-Building Code of Australia Clause A2.2;
- AS/NZS 3500.3(2015)-Building Code of Australia;
- And Council DCP and SEPP

I, Ali Al-Obaidi from Modular Engineers Pty Ltd, I am a chartered professional engineer in both civil and structural colleges. I am a competent person in structural and civil design, being listed in the National Professional Engineering Register (NPER-5358554) and as such can certify that I am responsible for the stormwater design verification of the above elements described herein, and that the design was carried out in accordance with the provisions of the Building Code of Australia and the relevant Australian Standards.

Per:

Ali Al-Obaidi I Director
PHD, MSc, BSc, MIEAust, CPEng,
NER (No: 5358554), NPER

STORMWATER MANAGEMENT PLAN

EROSION CONTROL

BEFORE EARTHWORKS CAN COMMENCE THE EROSION & SEDIMENT CONTROL MEASURES MUST BE IN PLACE.

DURING THE CONSTRUCTION PERIOD, THESE CONTROL MEASURES WILL NEED TO BE INSPECTED & MAINTAINED REGULARLY, ESPECIALLY AFTER STORM EVENTS, BY THE CONTRACTOR.

ALL WORK IS TO BE CARRIED OUT TO PREVENT EROSION, CONTAMINATION & SEDIMENTATION OF THE STORAGE SITE, SURROUNDING AREAS & DRAINAGE SYSTEMS.

MINIMIZE DISTURBED AREA COVERED WITH NATURAL VEGETATION. ONLY THOSE AREAS DIRECTLY REQUIRED FOR CONSTRUCTION ARE TO BE DISTURBED.

INSTALL EROSION/SEDIMENT CONTROL MEASURES PRIOR TO COMMENCEMENT OF CONSTRUCTION OR EXCAVATION OPERATIONS.

PROVIDE SILT FENCE/STRAW BAIL BARRIERS TO THE LOW SIDE OF ALL EXPOSED EARTH EXCAVATIONS. 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.

ISOLATE EXISTING STORMWATER PITS WITH STRAW BALES OR SILT TRAPS TO FILTER ALL INCOMING FLOWS.

DO NOT STOCKPILE EXCAVATED MATERIAL ON THE ROAD WAY.

DIVERT CLEAN WATER FROM UNDISTURBED AREAS AROUND THE WORKING AREAS.

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 AND LEAVING THE SITE DO SO IN A FORWARD DIRECTION.

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

ADOPT TEMPORARY MEASURES AS MAY BE NECESSARY FOR EROSION & SEDIMENT CONTROL, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: –
– DRAINS: TEMPORARY DRAINS AND CATCH DRAINS.
– SPREADER BANKS OR OTHER STRUCTURES: TO DISPERSE CONCENTRATED RUNOFF.
– SILT TRAPS: CONSTRUCTION AND MAINTENANCE OF SILT TRAPS TO PREVENT DISCHARGE OF SCOURED MATERIAL TO DOWNSTREAM AREAS.

AFTER RAIN, INSPECT, CLEAN, AND REPAIR IF REQUIRED, TEMPORARY EROSION & SEDIMENT CONTROL MEASURES.

REMOVE TEMPORARY EROSION & SEDIMENT CONTROL MEASURES WHEN THEY ARE NO LONGER REQUIRED.

COMPLY WITH THE REQUIREMENTS OF LANDCOM'S MANAGING URBAN STORMWATER – SOIL AND CONSTRUCTION 'THE BLUE BOOK' LATEST EDITION

THE EROSION & SEDIMENT CONTROL PLAN PROVIDED IS ONLY INDICATIVE. THE CONTRACTOR SHOULD PREPARE A DETAILED ESCP SUITABLE FOR THE SPECIFIC SITE CONDITIONS

DIAL BEFORE YOU DIG SHOULD BE CONTACTED PRIOR TO ANY EXCAVATION ON SITE

TM: TRADE MARK OF THE ASSOCIATION OF DIAL BEFORE YOU DIG SERVICES LTD. USED UNDER LICENSE.

GENERAL NOTES

ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH COUNCIL'S REQUIREMENTS, BUILDING CODE OF AUSTRALIA, NSW CODE OF PRACTICE AND THE TO THE RELEVANT SERVICE CODES.

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DECISION BEFORE PROCEEDING WITH THE WORK.

ALL DIMENSIONS SHOWN ON THE DRAWINGS ARE IN MILLIMETERS (U.N.O.). DIMENSIONS SHALL NOT BE OBTAINED BY SCALING OF THESE DRAWINGS. USE FIGURED DIMENSIONS ONLY.

BENCHMARKS HAVE BEEN ESTABLISHED WHERE INDICATED ON THE DRAWINGS. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (A.H.D.). THE CONTRACTOR SHALL UNDERTAKE ALL NECESSARY SURVEY WORK TO ENSURE THAT THE WORKS ARE CONSTRUCTED TO DESIGN LINE AND LEVEL.

SETTING OUT DIMENSIONS AND LEVELS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR.

ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE RELEVANT SAA CODES AND THE BY–LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL SAFETY FENCES, WARNING SIGNS, TRAFFIC DIVERSIONS AND THE LIKE DURING CONSTRUCTION. ALL WORKS TO COMPLY WITH WORK HEALTH AND SAFETY REQUIREMENTS AND OTHER RELEVANT AUTHORITY SAFETY REQUIREMENTS.

NO TREES SHALL BE REMOVED, CUTBACK OR RELOCATED WITHOUT THE WRITTEN INSTRUCTION FROM THE SUPERINTENDENT.

WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.

ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS AND THESE SPECIFICATIONS.

DESIGN LEVELS GIVEN ARE TO FINISHED SURFACE LEVEL AND INCLUSIVE OF TOPSOIL. (TOPSOIL DEPTH VARIES)

THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A N.A.T.A. REGISTERED SURVEYOR.

CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER TELECOMMUNICATIONS OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS.

THE LOCATIONS OF UNDERGROUND SERVICES SHOWN ON THE DRAWING HAVE BEEN PLOTTED FROM DIAGRAMS PROVIDED BY SERVICE AUTHORITIES. THIS INFORMATION HAS BEEN PREPARED SOLELY FOR THE AUTHORITIES OWN USE AND MAY NOT NECESSARILY BE UPDATED OR ACCURATE.

THE POSITION OF SERVICES AS RECORDED BY THE AUTHORITY AT THE TIME OF INSTALLATION MAY NOT REFLECT CHANGES IN THE PHYSICAL ENVIRONMENT SUBSEQUENT TO INSTALLATION.

MODULAR ENGINEERS DOES NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THE DRAWING SHOWS MORE THAN THE PRESENCE OR ABSENCE OF SERVICES, AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN FROM THE UTILITY SERVICES AUTHORITIES A CURRENT COPY OF UNDERGROUND SERVICES SEARCH FOR THE LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF ANY WORK AND NOTIFY ANY CONFLICT WITH THE DRAWINGS IMMEDIATELY. CLEARANCE SHALL BE OBTAINED FROM THE RELEVANT REGULATORY AUTHORITY. CONTRACTOR TO KEEP COPY OF UNDERGROUND SERVICES SEARCH ON SITE AT ALL TIMES. ANY DAMAGES TO SERVICES OR SERVICES ADJUSTMENTS SHALL BE CARRIED OUT BY THE CONTRACTOR OR RELEVANT AUTHORITY AT THE CONTRACTOR'S EXPENSE.

VISIT THE SITE BEFORE SUBMITTING THE FINAL TENDER PRICE TO ASSESS 'ON SITE' CONDITIONS. FAILURE TO DO SO WILL FORFEIT ANY CLAIM FOR NOT BEING AWARE OF CONDITIONS AFFECTING THE TENDER.

THE CONTRACTOR SHALL PREPARE ACCURATE WORK–AS–EXECUTED DRAWINGS FOLLOWING THE COMPLETION OF ALL WORKS.

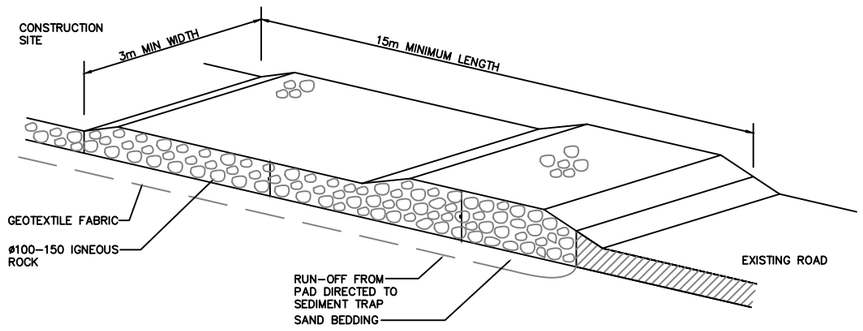
IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE IN PLACE & MAINTAIN TRAFFIC FACILITIES AT ALL TIMES DURING CONSTRUCTION.

LEGEND

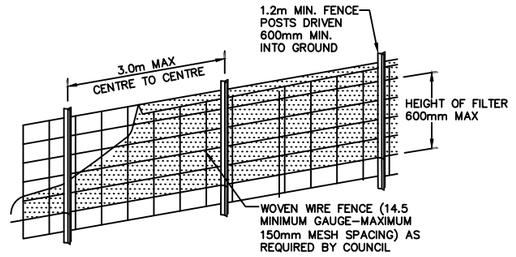
DP	DOWNPIPE
	STORMWATER GRAVITY LINE
	STORMWATER CHARGED LINE
	SUBSOIL LINE
SW SW SW	EXISTING STORMWATER LINE
S S S	AUTHORITY SEWER LINE
/	SEDIMENT FENCE
	GRATED SURFACE INLET PIT
	GRATED TRENCH DRAIN
CE	CLEANING EYE
x R.L. 51.83	PROPOSED SPOT LEVEL
	EXISTING GRATED SURFACE INLET PIT
	EXISTING JUNCTION PIT
	EXISTING KERB INLET PIT
eTEL	EXISTING TELSTRA PIT
eHYD	EXISTING HYDRANT
eSV	EXISTING STOP VALVE
eGAS	EXISTING GAS VALVE
ePP	EXISTING POWER POLE
eSMH	EXISTING SEWER MANHOLE
OFP	OVERLAND FLOW PATH

ABBREVIATIONS:

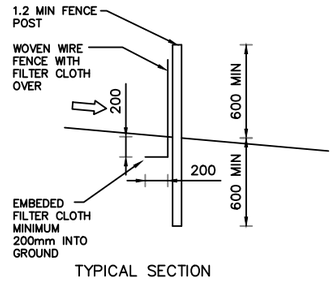
ø or DIA	DIAMETER
CBR	CALIFORNIA BEARING RATIO
CH	CHAINAGE
CL	CENTER LINE
CO	CLEAR OUT
DD	DISH DRAIN
DDO	DISH DRAIN OUTLET
DP	DOWNPIPE
e	EXISTING
FFL	FINISHED FLOOR LEVEL
GTD	GRATED TRENCH DRAIN
GSIP	GRATED SURFACE INLET PIT
HYD	HYDRANT
IJ	ISOLATING JOINT
IL	INVERT LEVEL
IP	INTERSECTION POINT
KIP	KERB INLET PIT
KO	KERB OUTLET
K&G	KERB & GUTTER
KR	KERB RETURN
LS	LONGITUDINAL SECTION
NGL	NATURAL GROUND LEVEL
OFP	OVERLAND FLOW PATH
OSD	ON–SITE DETENTION
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RL	REDUCED LEVEL
RW	RETAINING WALL
RWT	RAINWATER TANK
SJ	SAWN CONTROL JOINT
SMH	SEWER MAN HOLE
SW	STORMWATER
SWP	STORMWATER PIT
SWRM	STORMWATER RISING MAIN
SV	STOP VALVE
TOK	TOP OF KERB
TOW	TOP OF WALL
TWL	TOP WATER LEVEL
TP	TANGENT POINT
UPVC	UNPLASTICISED POLYVINYL CHLORIDE
UNO	UNLESS NOTED OTHERWISE
FF	FIRST FLUSH DEVICE
TYP	TYPICAL



TEMPORARY CONSTRUCTION EXIT (RUBBLE ALTERNATIVE)
NOT TO SCALE

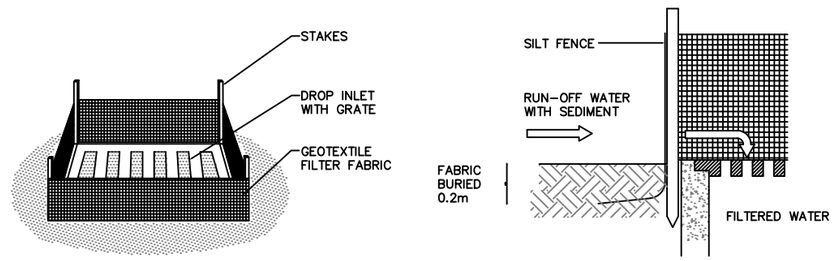


DIAGRAMMATIC VIEW



TYPICAL SECTION

SEDIMENT FENCE DETAIL
NOT TO SCALE



SUMP SEDIMENT TRAP
NOT TO SCALE

REVISIONS				
REV.	DATE	DESCRIPTION	ENG.	DFT.
A	07/04/2022	ISSUED FOR DA	A.A.	A.A.

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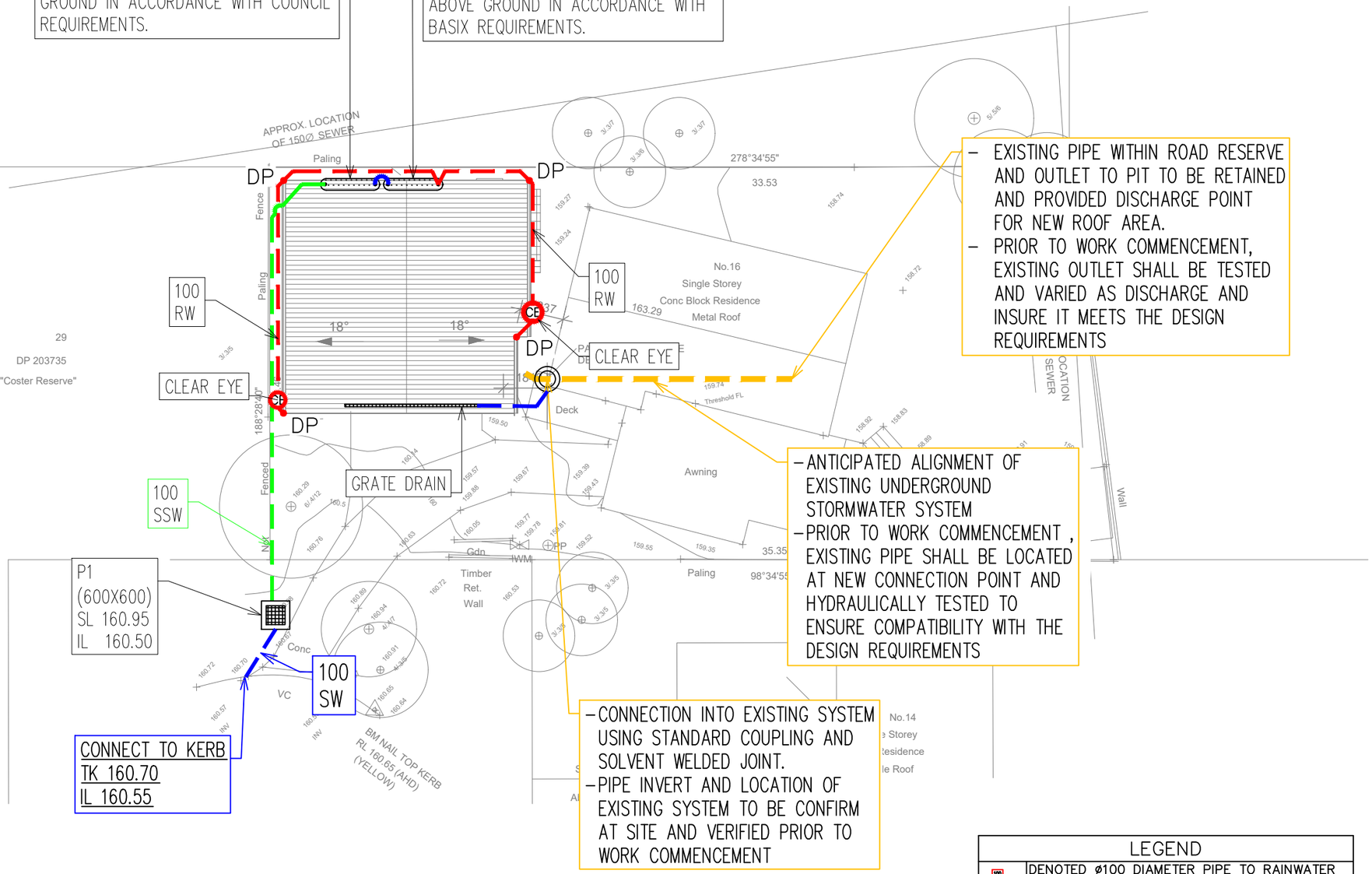
PROJECT LOCATION		16 COSTER STREET, FRENCHS FOREST			
DRAWN	ALI	DRAWING TITLE:			
DESIGNED	ALI	TITLE PAGE, NOTES & DETAILS			
CHECKED	ALI	JOB NO.	APPROVAL TYPE	DRAWN NO.	SIZE
DATE	04–APR–22	STW 048–2022	FOR CONSTRUCTION	STW001	A3

A3 0 10 20 30 40 50 60 70 80 90 100 110

OSD TANK :
PROVIDE 2000 LITERS OSD TANK ABOVE GROUND IN ACCORDANCE WITH COUNCIL REQUIREMENTS.

RAINWATER TANK (BASIX) :
PROVIDE 2000 LITERS RAINWATER TANK ABOVE GROUND IN ACCORDANCE WITH BASIX REQUIREMENTS.



- EXISTING PIPE WITHIN ROAD RESERVE AND OUTLET TO PIT TO BE RETAINED AND PROVIDED DISCHARGE POINT FOR NEW ROOF AREA.
- PRIOR TO WORK COMMENCEMENT, EXISTING OUTLET SHALL BE TESTED AND VARIED AS DISCHARGE AND INSURE IT MEETS THE DESIGN REQUIREMENTS

- ANTICIPATED ALIGNMENT OF EXISTING UNDERGROUND STORMWATER SYSTEM
- PRIOR TO WORK COMMENCEMENT , EXISTING PIPE SHALL BE LOCATED AT NEW CONNECTION POINT AND HYDRAULICALLY TESTED TO ENSURE COMPATIBILITY WITH THE DESIGN REQUIREMENTS

- CONNECTION INTO EXISTING SYSTEM USING STANDARD COUPLING AND SOLVENT WELDED JOINT.
- PIPE INVERT AND LOCATION OF EXISTING SYSTEM TO BE CONFIRM AT SITE AND VERIFIED PRIOR TO WORK COMMENCEMENT

STORMWATER ROOF FLOOR PLAN
SCALE: 1:200

LEGEND	
100 RW	DENOTED ø100 DIAMETER PIPE TO RAINWATER TANK UNLESS DENOTED
100 SW	DENOTED ø100 DIAMETER PIPE TO STORMWATER TANK UNLESS DENOTED
100 SSW	DENOTED ø100 DIAMETER SEALED CHARGE LINE PIPE TO STORMWATER TANK UNLESS DENOTED
DP TS	DENOTED DOWN PIPE SPREADER
DP	DENOTES DOWN-PIPE
	DENOTES STORMWATER CHARGED LINE
	DENOTES STORMWATER GRAVITY LINE
	DENOTES STORMWATER SEALED CHARGE LINE
	DENOTES ANTICIPATED ALIGNMENT OF EXISTING UNDERGROUND STORMWATER SYSTEM
CE	DENOTES CLEAR OUT EYE POINT
	DENOTES GRATED INLET PIT

NOTES:
DRAINAGE
A. ALL PIPES TO BE LAID ON 75mm SAND BED WITH THE BARRELS FULLY SUPPORTED
B. 100mm AND 150mm DIAMETER PIPES TO BE LAID ON MINIMUM 1% GRADE
C. MINIMUM DEPTH OF COVER FOR PIPES NOT SUBJECT TO VEHICULAR LOADING TO BE 300mm
D. ALL DRAINAGE PIPES LAID UNDER PAVEMENT SHALL BE REINFORCED CONCRETE WITH RUBBER RING JOINTS
E. BACKFILL TRENCHES WITH COMPACTED SAND OR APPROVED AGGREGATE MATERIAL
F. ALL PITS TO HAVE 600x600mm INTERNAL DIMENSIONS (U.N.O.)
G. SILT ARRESTORS TO HAVE 900x900mm INTERNAL DIMENSIONS
H. HEAVY DUTY GALV. STEEL GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS
I. HEEL & WHEELCHAIR SAFE GRATE COVERS ARE TO BE PROVIDED IN PEDESTRIAN AREAS
J. PIT GRATE TO BE TYPE WELDLOK OR APPROVED EQUIVALENT
K. ALL PITS GREATER THAN 900mm DEEP SHALL BE PROVIDED WITH A CHILD-PROOF LOCKING CLIP
L. ALL PITS SHALL BE MAINTAINED REGULARLY
M. ALL PITS TO BE BENCHED MIN. 20mm TO INVERT OF OUTLET
N. ø100 SUBSOIL DRAINAGE PIPE WRAPPED IN FABRIC SOCK TO BE PROVIDED IN ALL LANDSCAPED AREAS & BEHIND RETAINING WALLS AND CONNECTED TO THE NEAREST STORMWATER PIT.
O. COMPRESSIVE STRENGTH f'_c FOR CAST IN SITU CONCRETE TO BE A MINIMUM OF 20MPa AT 28 DAYS
P. PROVIDE CLEANING EYES TO ALL DOWNPIPES NOT DIRECTLY CONNECTED TO PITS
Q. ISOLATED JOINTS TO BE PROVIDED TO ISOLATE CONCRETE PAVEMENTS FROM PITS
R. ALL TRENCH GRATES PROVIDED SHALL HAVE A MINIMUM CLEAR WIDTH OF 200mm
S. STORMWATER DRAINAGE CONNECTIONS TO THE MAIN SYSTEM SHALL BE TO THE REQUIREMENTS AND THE SATISFACTION OF LOCAL COUNCIL

UPPER LEVEL
A. INSTALL ø65mm uPVC SPITTER PIPES 20mm ABOVE SURFACE LEVEL FOR BALCONY AND CONCRETE ROOF AREAS TO ALLOW FOR EMERGENCY OVERFLOW INCASE OF BLOCKAGES DURING HEAVY STORMS. PLUMBER TO CONFIRM LOCATION DURING CONSTRUCTION.
B. BALCONY, TERRACE & CONCRETE ROOF AREAS TO BE FITTED WITH RAINWATER OUTLETS AND CONNECTED TO NEAREST DOWNPIPE WHERE REQUIRED (TYP).
C. DOWNPIPES (DP) SHOWN ON PLAN ARE TO BE ø100mm uPVC OR 100x75 U.N.O. (TYP).
D. CHARGED DOWNPIPES SHOWN ON PLAN MUST BE SEWER GRADE ø100mm uPVC WITH ALL JOINTS SOLVENT WELDED TO A LEVEL 1200mm ABOVE THE RAINWATER TANK INLET R.L. (TYP).
E. PROPOSED DOWNPIPE LOCATIONS ARE NOMINAL AND TO BE CONFIRMED DURING CONSTRUCTION (TYP).
F. INSTALL DOWNPIPE WITH SPREADER PIPE (SP) (IF REQUIRED) TO DISPERSE STORMWATER ONTO LOWER ROOF AREAS EFFECTIVELY.

REVISIONS				
REV.	DATE	DESCRIPTION	ENG.	DFT.
A	07/04/2022	ISSUED FOR DA	A.A.	A.A.

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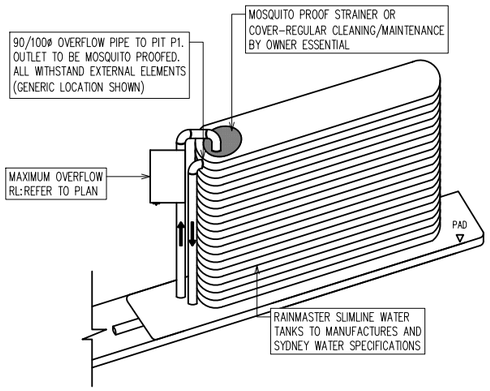
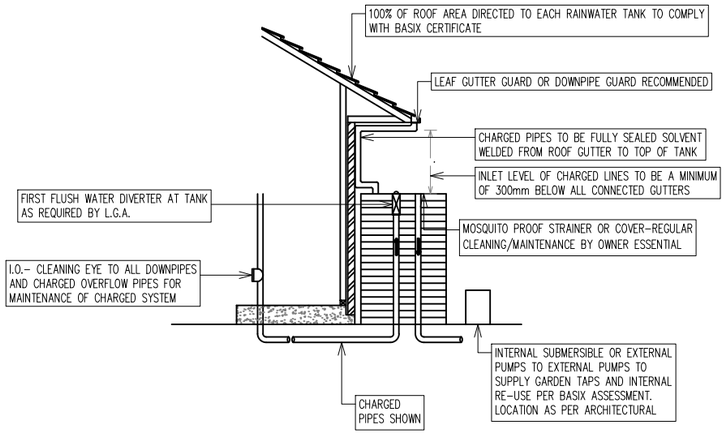
PROJECT LOCATION		16 COSTER STREET, FRENCHS FOREST			
DRAWN	ALI	DRAWING TITLE:			
DESIGNED	ALI	STORMWATER ROOF FLOOR PLAN			
CHECKED	ALI	JOB NO.	APPROVAL TYPE	DRAWN NO.	SIZE
DATE	04-APR-22	STW 048-2022	FOR CONSTRUCTION	STW002	A3

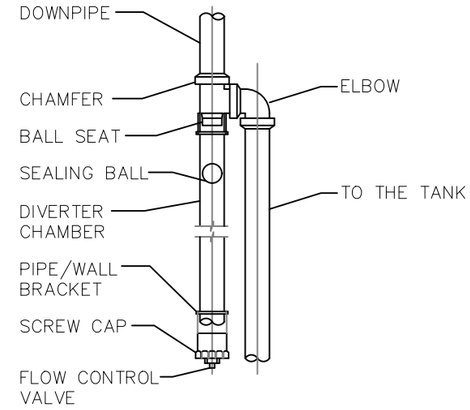
A3 0 10 20 30 40 50 60 70 80 90 100 110



TYPICAL WATER TANK
NOT TO SCALE



TYPICAL RAIN WATER TYPICAL RAINWATER RE-USE TANK CONFIGURATION
NOT TO SCALE



FIRST FLUSH DIVERTER
SCALE: 1:20

NOTES:
DRAINAGE

A. ALL PIPES TO BE LAID ON 75mm SAND BED WITH THE BARRELS FULLY SUPPORTED
B. 100mm AND 150mm DIAMETER PIPES TO BE LAID ON MINIMUM 1% GRADE
C. MINIMUM DEPTH OF COVER FOR PIPES NOT SUBJECT TO VEHICULAR LOADING TO BE 300mm
D. ALL DRAINAGE PIPES LAID UNDER PAVEMENT SHALL BE REINFORCED CONCRETE WITH RUBBER RING JOINTS
E. BACKFILL TRENCHES WITH COMPACTED SAND OR APPROVED AGGREGATE MATERIAL
F. ALL PITS TO HAVE 600x600mm INTERNAL DIMENSIONS (U.N.O.)
G. SILT ARRESTORS TO HAVE 900x900mm INTERNAL DIMENSIONS
H. HEAVY DUTY GALV. STEEL GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS
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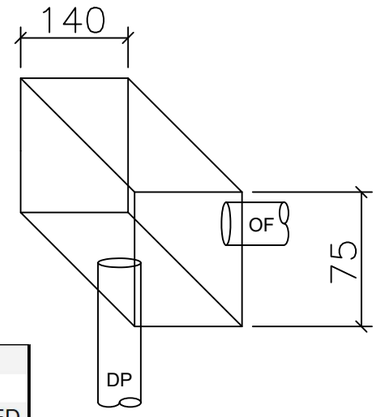
J. PIT GRATE TO BE TYPE WELDLOK OR APPROVED EQUIVALENT
K. ALL PITS GREATER THAN 900mm DEEP SHALL BE PROVIDED WITH A CHILD-PROOF LOCKING CLIP
L. ALL PITS SHALL BE MAINTAINED REGULARLY
M. ALL PITS TO BE BENCHED MIN. 20mm TO INVERT OF OUTLET
N. ø100 SUBSOIL DRAINAGE PIPE WRAPPED IN FABRIC SOCK TO BE PROVIDED IN ALL LANDSCAPED AREAS & BEHIND RETAINING WALLS AND CONNECTED TO THE NEAREST STORMWATER PIT.
O. COMPRESSIVE STRENGTH f'_c FOR CAST IN SITU CONCRETE TO BE A MINIMUM OF 20MPa AT 28 DAYS
P. PROVIDE CLEANING EYES TO ALL DOWNPIPES NOT DIRECTLY CONNECTED TO PITS
Q. ISOLATED JOINTS TO BE PROVIDED TO ISOLATE CONCRETE PAVEMENTS FROM PITS
R. ALL TRENCH GRATES PROVIDED SHALL HAVE A MINIMUM CLEAR WIDTH OF 200mm
S. STORMWATER DRAINAGE CONNECTIONS TO THE MAIN SYSTEM SHALL BE TO THE REQUIREMENTS AND THE SATISFACTION OF LOCAL COUNCIL

UPPER LEVEL

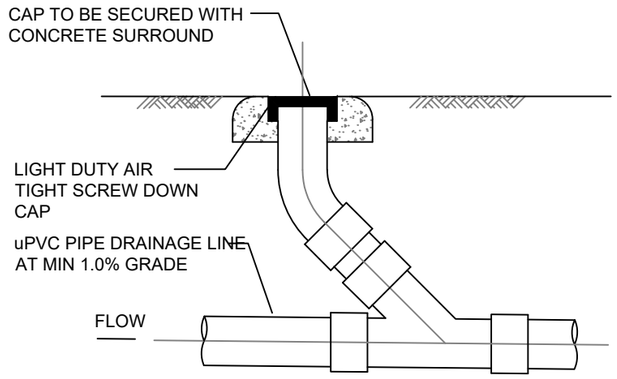
A. INSTALL ø65mm uPVC SPITTER PIPES 20mm ABOVE SURFACE LEVEL FOR BALCONY AND CONCRETE ROOF AREAS TO ALLOW FOR EMERGENCY OVERFLOW INCASE OF BLOCKAGES DURING HEAVY STORMS. PLUMBER TO CONFIRM LOCATION DURING CONSTRUCTION.
B. BALCONY, TERRACE & CONCRETE ROOF AREAS TO BE FITTED WITH RAINWATER OUTLETS AND CONNECTED TO NEAREST DOWNPIPE WHERE REQUIRED (TYP).
C. DOWNPIPES (DP) SHOWN ON PLAN ARE TO BE ø100mm uPVC OR 100x75 U.N.O. (TYP).
D. CHARGED DOWNPIPES SHOWN ON PLAN MUST BE SEWER GRADE ø100mm uPVC WITH ALL JOINTS SOLVENT WELDED TO A LEVEL 1200mm ABOVE THE RAINWATER TANK INLET R.L. (TYP).
E. PROPOSED DOWNPIPE LOCATIONS ARE NOMINAL AND TO BE CONFIRMED DURING CONSTRUCTION (TYP).
F. INSTALL DOWNPIPE WITH SPREADER PIPE (SP) (IF REQUIRED) TO DISPERSE STORMWATER ONTO LOWER ROOF AREAS EFFECTIVELY.

RAINWATER RECYCLING TANKS

A. TANK SHAPE AND DEVICES ARE DIGRAMATIC ONLY
B. ANY MODIFICATIONS TO TANK VOLUME, INLET, OUTLET, OR OTHER DETAILS MUST BE APPROVED BY ENGINEER
C. STORMWATER LINES FROM DOWNPIPES FROM ROOF AREAS ONLY TO RAINWATER TANKS
D. TANK TO COMPLY WITH AS1546.1, AND INSTALLED IN ACCORDANCE WITH MANUFACTURES INSTALLATION
E. FIRST FLUSH WATER DIVERTER TO COMPLY WITH SYDNEY WATER & COUNCIL DCP'S.
F. AN APPROVED SWITCH SYSTEM SIMILAR TO "RAINBANK' TO BE USED VIA MAINS. PUMPS TO MANUFACTURES SPECIFICATIONS
G. ALL JOINTS TO BE SOLVANT WELDED
H. ALL EXPOSED PIPEWORK TO BE PAINTED TO WITHSTAND EXTERNAL ELEMENTS
I. CLIENT TO BE RESPONSIBLE FOR MAINTENANCE SYSTEM OF CHARGED PIPELINES
J. STRUCTURAL DETAILS FOR TANKS BASE BY QUALIFIED STRUCTURAL ENGINEER, AS REQUIRED BY MANUFACTURER
K. ENSURE ALL DRAINAGE WORKS ARE AWAY FROM TREE ROOTS



TYPICAL BOX GUTTER DETAIL
N.T.S



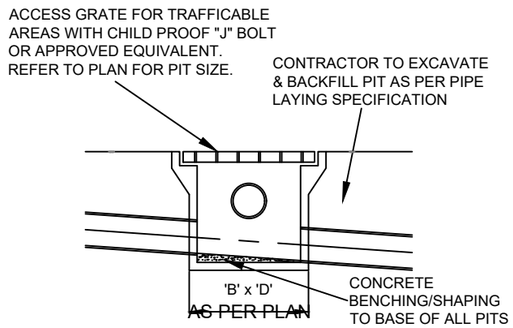
CLEANING EYE PIT
N.T.S

OSD STORAGE:

SITE AREA	566.9	m2	OSD TANK REQOUIRED
EXISTING AREA	183	m2	
NEW PROPUSE AERA	85	m2	
total existing and proposed impervious areas	47.27%		OSD TANK REQOUIRED
REQUIRED VOLUME (V):	1560	LITERS	
ROOF AREA (A):	78	m2	
Minimum Site Storage Required	200	m3 per Ha	
MINIMUM SITE STORAGE REQUIRED:	1560	LITERS	
GIVEN VOLUME	2000	LITERS	

OSD ORIFICE SIZE:

Maximum Permissible Site Discharge for all storms up to and including 1 % AEP design storm	400	L/s per Ha
h=	0.92	m
Permissible Site Discharge(PSD)=Q=	3.12	L/s
$\sqrt{2}*G*h$=	0.134352	mm
Q= Cd*A*$\sqrt{2}*G*h$	3.12	
Discharge coefficient Cd=	0.6	
A=∏/4*D^2	38.70436	
DIAMETER(D)	39.49794	mm
ORIFICE SIZE=	40	mm



TYPICAL SURFACE INLET PIT DETAIL
N.T.S
TYPICAL FOR ALL PITS IN NON TRAFFIC AREAS.

REVISIONS				
REV.	DATE	DESCRIPTION	ENG.	DFT.
A	07/04/2022	ISSUED FOR DA	A.A.	A.A.

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E info@modularengineers.com.au
ABN 66 646 960 929

PROJECT LOCATION		16 COSTER STREET, FRENCHS FOREST			
DRAWN	ALI	DRAWING TITLE:			
DESIGNED	ALI	STORMWATER DETAILS AND NOTES-1			
CHECKED	ALI	JOB NO.	APPROVAL TYPE	DRAWN NO.	SIZE
DATE	04-APR-22	STW 048-2022	FOR CONSTRUCTION	STW003	A3

A3 0 10 20 30 40 50 60 70 80 90 100 110