

PROPOSED ALTERATIONS & ADDITIONS

4 HEATH STREET, BANKSTOWN

STORMWATER MANAGEMENT PLANS

LEGEND

	SW	STORMWATER DRAINAGE PIPE
	RWT	PIPE TO RAINWATER TANK
	OF	OVERFLOW PIPE FROM RAINWATER TANK
	AG	Ø100 SUBSOIL PIPE
	RM	RISING MAIN
	ESL	EXISTING STORMWATER LINE
	DP	PROPOSED DOWN PIPE
	KO	PROPOSED KERB OUTLET
	CO	CLEAN OUT
		STORMWATER PIT - SOLID COVER
		STORMWATER PIT - GRATED INLET
		KERB INLET PIT
	eDP	EXISTING DOWNPIPE
	eKO	EXISTING KERB OUTLET
	RL	PIT SURFACE LEVEL
	IL	INVERT LEVEL
	TK	TOP OF KERB
	TOW	TOP OF WALL
		RAINWATER TANK
	FF	FIRST FLUSH DEVICE
	VD	VERTICAL DROP
	VR	VERTICAL RISER
	DP	DOWNPIPE SPREADER
	RWO	RAINWATER OUTLET 300Ø
		GRATED DRAIN
	SWR	AUTHORITY SEWER LINE
	WTR	AUTHORITY WATER LINE
		OTHER AUTHORITY/SERVICES LINE
	OFP	OVERLAND FLOW PATH

GENERAL NOTES

- THESE ENGINEERING DRAWINGS ARE TO BE READ IN CONJUNCTION WITH PROJECT SPECIFICATIONS AND OTHER CONSULTANTS DRAWINGS ON THE PROJECT. THESE DRAWINGS ARE BASED ON INFORMATION AVAILABLE AT THE TIME OF ISSUE. AS THIS IS SUBJECT TO CHANGE OVER THE COURSE OF THE PROJECT, THE CONTRACTOR MUST REFER ANY OBSERVED DISCREPANCIES TO TCSM BEFORE BEGINNING ANY WORK ON THE AFFECTED ELEMENTS
- WHERE THESE PLANS ARE NOTED FOR DEVELOPMENT APPLICATION (DA) PURPOSES, THEY SHALL NOT BE USED FOR OBTAINING A CONSTRUCTION CERTIFICATE NOR USED FOR CONSTRUCTION PURPOSES
- THESE PLANS ARE TO BE READ IN CONJUNCTION WITH THE CONDITIONS OF THE DEVELOPMENT CONSENT, PLANNING CERTIFICATE AND CONSTRUCTION CERTIFICATE/CDC REQUIREMENTS. WHERE DISCREPANCIES ARE FOUND, TCSM ENGINEERING CONSULTANTS MUST BE CONTACTED FOR REVIEW.
- ALL DIMENSIONS ARE IN MILLIMETERS AND ALL REDUCED LEVELS ARE IN METERS UNLESS NOTED OTHERWISE
- THE APPROVAL OF ANY SUBSTITUTION/ALTERATION SHALL BE SOUGHT FROM TCSM ENGINEERING CONSULTANTS
- CONTRACTOR TO COORDINATE ALL SERVICES TO AVOID CLASHES WITH PROPOSED/EXISTING ELEMENTS. WHERE CLASHES ARE UNAVOIDABLE, TCSM ENGINEERING CONSULTANTS ARE TO BE CONTACTED FOR DESIGN REVIEW

DRAINAGE NOTES

- LOCATION OF DOWN PIPES AND FLOOR WASTES ARE INDICATIVE ONLY. DOWN PIPE AND FLOOR WASTE SIZE, LOCATION AND QUANTITY TO BE DETERMINED BY CONTRACTOR IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS
- ALL GUTTERS SHALL BE FITTED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEANED TO ENSURE LEAF LITTER CANNOT ENTER THE DOWN PIPES
- ALL PIPES TO BE 100Ø MIN. AND ON 75mm SAND BED WITH THE BARRELS FULLY SUPPORTED. PIPES TO BE LAID ON MINIMUM GRADE 1%
- MINIMUM DEPTH OF COVER FOR PIPES NOT SUBJECT TO VEHICULAR LOADING TO BE 300mm
- ALL DRAINAGE PIPES LAID UNDER PAVEMENT SHALL BE REINFORCED CONCRETE WITH RUBBER RING JOINTS
- BACKFILL TRENCHES WITH COMPACTED SAND OR APPROVED AGGREGATE MATERIAL
- SILT ARRESTORS TO HAVE 900x900mm AND PITS TO HAVE 600x600 INTERNAL DIMENSIONS U.N.O
- HEAVY DUTY GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS. SURFACE FLOW TO BE DIRECTED TO ALL GRATED SURFACE INLET PITS AND DRAINS
- PIT GRATES TO BE TYPE WELDLOK OR APPROVED EQUIVALENT. ALL TRENCH GRATES SHALL HAVE A MIN. CLEAR WIDTH OF 200mm.
- ALL PITS SHALL BE PROVIDED WITH A LOCKING CLIP AND MAINTAINED REGULARLY
- 100mm DIAMETER SUBSOIL DRAINAGE PIPE 3000mm LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES
- PROVIDE CLEANING EYES TO ALL DOWN PIPES NOT DIRECTLY CONNECTED TO PITS
- ISOLATION JOINTS TO BE PROVIDED TO ISOLATE CONCRETE PAVEMENTS FROM PITS
- STORM WATER DRAINAGE CONNECTIONS TO THE MAIN SYSTEM SHALL BE TO THE REQUIREMENTS AND SATISFACTION OF LOCAL COUNCIL
- ALL MILD STEEL FIXTURES INCLUDING GRATES, FRAMES, STEP IRONS, LADDERS AND ETC. SHALL BE HOT DIP GALVANIZED

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- ALL MILD STEEL FIXTURES INCLUDING GRATES, FRAMES, STEP IRONS, LADDERS AND ETC. SHALL BE HOT DIP GALVANIZED
- EXISTING STORM WATER PIPES AND DOWN PIPES TO BE RETAINED (IF ANY) SHALL HAVE THEIR CONDITION AND/OR STATE OF REPAIR ASSESSED BY A QUALIFIED PLUMBER, AND SHALL BE REPLACED WHERE DEEMED NECESSARY. CONNECTION MAY BE MADE INTO EXISTING SYSTEMS THAT ARE FOUND TO BE IN GOOD CONDITION.
- IF AN EXISTING STORM WATER SYSTEM IS CONNECTED TO THE SEWER, CONTRACTOR IS TO RECTIFY THE STORM WATER DESIGN AND CREATE A NEW CONNECTION AS PER COUNCIL AND AUSTRALIAN STANDARD SPECIFICATIONS. CONTRACTOR MUST CONTACT TCSM ENGINEERING CONSULTANTS PRIOR TO THE COMMENCEMENT OF ANY WORKS
- CONTRACTOR TO ENSURE LOCATION OF ANY NEW DWELLINGS/STRUCTURES DO NOT ADVERSELY IMPACT EXISTING STORM WATER SYSTEMS. ANY CLASHES/DISCREPANCIES ARE TO BE REFERRED TO TCSM ENGINEERING CONSULTANTS FOR REVIEW AND DECISION
- FINISHED GROUND LEVELS SHOULD BE IN ACCORDANCE WITH ARCHITECTURAL DRAWINGS. DISCREPANCIES BETWEEN THESE LEVELS AND THE SURFACE LEVELS SHOWN FOR DRAINAGE STRUCTURES SHOWN ON THESE DRAWINGS SHOULD BE REFERRED TO THE ENGINEER FOR ADVICE
- THE HEIGHT OF ANY SLAB-ON-GROUND ABOVE EXTERNAL FINISHED SURFACES SHALL BE IN ACCORDANCE WITH ARCHITECTURAL DOCUMENTATION, BUT MUST NOT BE LESS THAN 50mm ABOVE IMPERMEABLE (PAVED/CONCRETE) AREAS THAT SLOPE AWAY FROM THE BUILDING (50mm OVER THE FIRST 1m FROM THE BUILDING), 100mm ABOVE SANDY/WELL-DRAINED AREAS, OR 150mm IN ANY OTHER CASE. THE GROUND BENEATH SUSPENDED FLOORS MUST BE HIGHER THAN THE ADJACENT EXTERNAL FINISHED GROUND LEVEL, AND GRADED TO PREVENT PONDING UNDER THE BUILDING
- DOWNPIPE SPREADERS NOT BE TO BE USED OVER TILE ROOFS UNLESS SARKING IS PROVIDED UNDER TILES. IF REQUIRED, TILES SHOULD BE REMOVED AND ROOF SARKED AS REQUIRED BY BUILDER.
- DOWNPIPE SPREADERS USED OVER CORRUGATED METAL ROOFS REQUIRE A MINIMUM WIDTH OF 1800mm ON EITHER SIDE OF THE POINT OF DISCHARGE TO BE SEALED FOR THE FULL LENGTH OF SIDE LAPS
- ALL RAINWATER TANK INLET PIPES TO FITTED WITH A FIRST FLUSH DEVICE
- RAINWATER TANK SUPPLY PLUMBING TO BE CONNECTED TO OUTLETS WHERE REQUIRED BY BASIX CERTIFICATE (BY OTHERS)
- ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH AS/NZS 3500.3.2:1998 AND COUNCIL SPECIFICATIONS
- PRIOR TO THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR IS TO CARRY OUT A "BEFORE YOU DIG", IDENTIFY, LOCATE ANY EXISTING SERVICES, AND ENGAGE A REGISTERED SURVEYOR TO PEG OUT ALL EXISTING SERVICES. ANY DAMAGE TO EXISTING SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS EXPENSE. SERVICES SHOWN ON THE STORMWATER DRAWINGS ARE INDICATIVE ONLY AND NOT ALL SERVICES MAY BE SHOWN.
- PROVIDE STEP IRONS FOR ALL PITS OVER 1.2m DEEP

FOOTPATH REINSTATEMENT NOTES

- REMOVE ALL SAND FILL WITHIN THE FOOTPATH AREA TO EXISTING SUBGRADE
- SUPPORT ALL AUTHORITY SERVICES TO STRUCTURAL ENGINEERS DETAILS DURING EXCAVATION
- REINSTATE FOOT PATH SUBGRADE
- THE CONTRACTOR SHALL PROVIDE CERTIFICATION OF COMPACTION FROM A NATA REGISTERED TESTING AUTHORITY, MINIMUM THREE TESTS PER LAYER AS FOLLOWS:

- SELECT FILL	95% MODIFIED
- SELECT FILL (<300mm BELOW BASE COURSE)	98% MODIFIED
- BASE COURSE	100% MODIFIED

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ABBREVIATIONS

DIA or Ø	DIAMETER	NGL	NATURAL GROUND LEVEL
CH	CHAINAGE		
CL	CENTER LINE	OFF	OVERLAND FLOW PATH
CO	CLEAN OUT	OSD	ON-SITE DETENTION
DD	DISH DRAIN	RCP	REINFORCED CONCRETE PIPE
DDO	DISH DRAIN OUTLET		
DP	DOWN PIPE	RL	REDUCED LEVEL
e	EXISTING	RTW	RETAINING WALL
FFL	FINISHED FLOOR LEVEL	RWT	RAINWATER TANK
GD	GRATED DRAIN	SMH	SEWER MAN HOLE
GSIP	GRATED SURFACE INLET PIT	SW	STORMWATER
		SWP	STORMWATER PIPE
IL	INVERT LEVEL	TWL	TOP WATER LEVEL
TOK	TOP OF KERB	uPVC	UNPLASTICISED POLYVINYL CHLORIDE
BOK	BOTTOM OF KERB		
BOW	BOTTOM OF WALL	UNO	UNLESS NOTED OTHERWISE
TOW	TOP OF WALL		
KO	KERB OUTLET	FF	FIRST FLUSH
K&G	KERB & GUTTER	TYP	TYPICAL
		BM	BENCH MARK

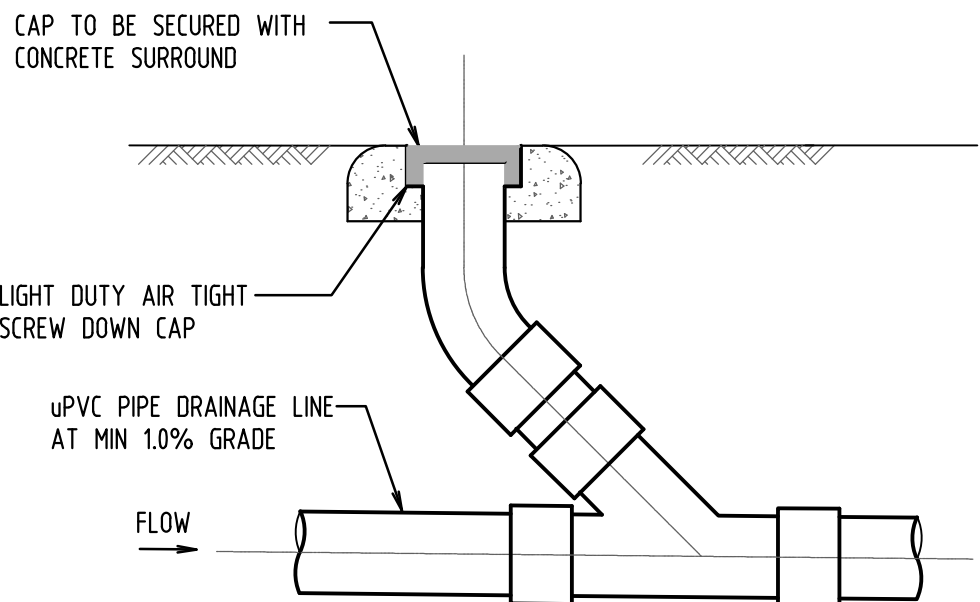
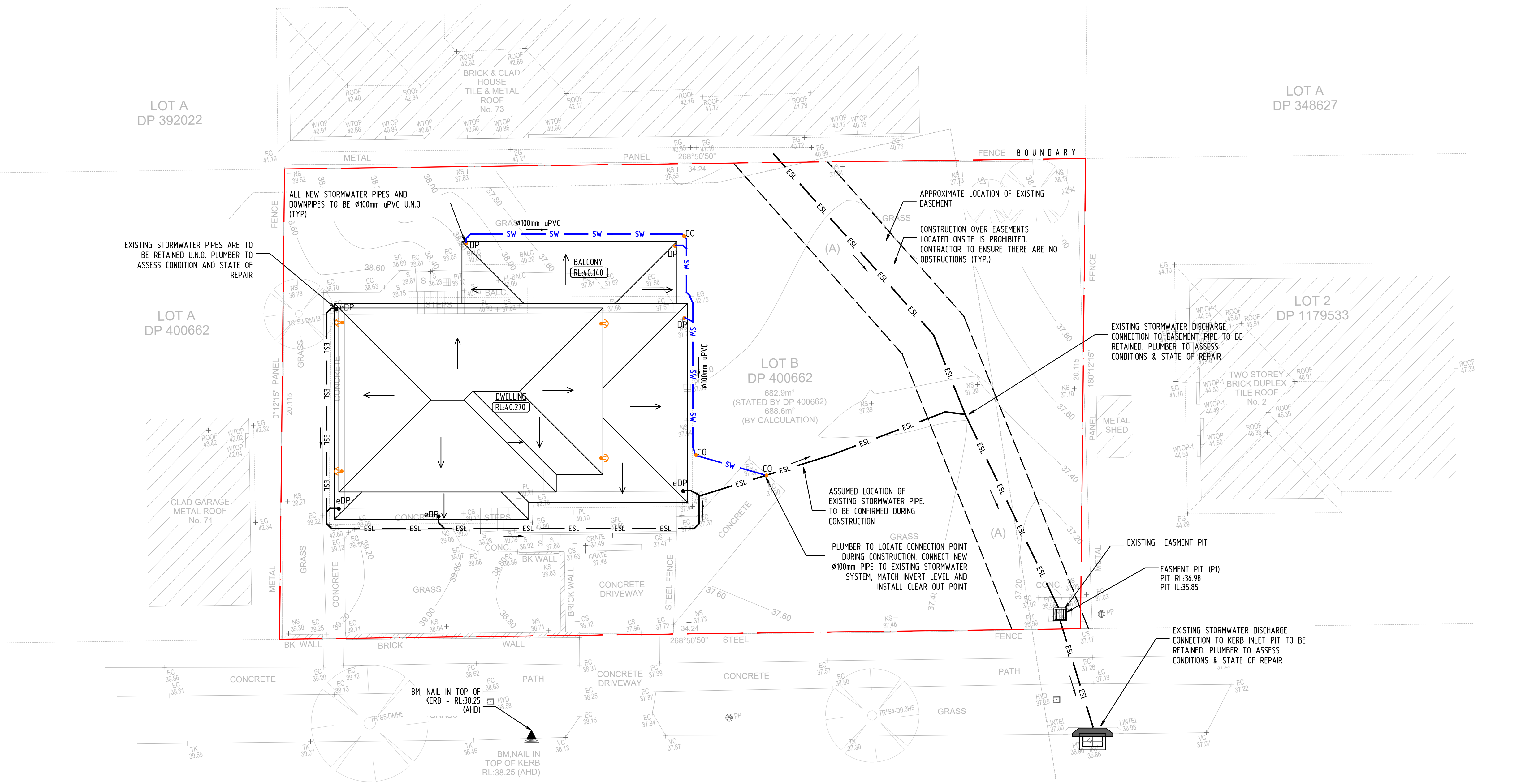
STORMWATER DRAINAGE PLAN
SCALE: 1:100

DESIGN NOTES:

- THE SITE IS GOVERNED BY CANTERBURY-BANKSTOWN COUNCIL & THE CANTERBURY-BANKSTOWN DCP 2023
- THE PROPOSED DEVELOPMENT IS A ALTERATIONS & ADDITIONS
- THE SITE AREA IS 682.9m² (BY DP)
- THE POST-DEVELOPMENT IMPERVIOUS AREA IS 226.5m² (33.2%)
- IN ACCORDANCE WITH COUNCIL'S STORMWATER GUIDELINES, OSD IS NOT REQUIRED FOR SUBJECT DEVELOPMENT
- ENSURE THAT ALL STORMWATER PIPES ARE A MINIMUM OF 600mm AWAY FROM SYDNEY WATER ASSETS (TYP.)
- INSTALL CLEAR OUTS FOR INSPECTION AND MAINTENANCE PURPOSES (TYP.)
- THE LOCATIONS OF DOWNPIPES SHOWN ON THIS DRAWINGS ARE INDICATIVE AND WILL NEED TO BE SITE VERIFIED BY THE BUILDER. ALL DOWNPIPES TO BE 100mm MIN. DIA U.N.O

LEGEND

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|-----|--------------------------|-----|-----------------------|
| SW | STORMWATER DRAINAGE PIPE | eDP | EXISTING DOWNPIPE |
| RWT | PIPE TO RAINWATER TANK | eKO | EXISTING KERB OUTLET |
| OF | OVERFLOW FROM RWT | RL | PIT SURFACE LEVEL |
| AG | Ø100 SUBSOIL PIPE | IL | INVERT LEVEL |
| RM | RIISING MAIN | TK | TOP OF KERB |
| ESL | EXISTING STORMWATER LINE | | RAINWATER TANK |
| DP | PROPOSED DOWN PIPE | FF | FIRST FLUSH DEVICE |
| KO | PROPOSED KERB OUTLET | VD | VERTICAL DROP |
| CO | CLEAN OUT | VR | VERTICAL RISER |
| | CONC. COVER JUNCTION PIT | DP | DOWNPIPE SPREADER |
| | GRATED INLET PIT | RWO | RAINWATER OUTLET 300Ø |
| | KERB INLET PIT | | GRATED DRAIN |



DETAIL
CLEANING EYE
SCALE 1:20

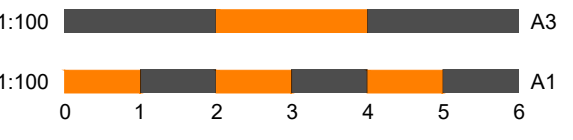


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EROSION & SEDIMENT CONTROL PLAN

SCALE: 1:100

- NOTES:
- THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS AND ANY OTHER PLANS OR WRITTEN INSTRUCTIONS THAT MAY BE ISSUED AND RELATING TO THE DEVELOPMENT AT THE SUBJECT SITE
 - THE CONTRACTOR MUST ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS INSTRUCTED IN THIS SPECIFICATION
 - ALL BUILDERS AND SUB-CONTRACTORS SHALL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMIZING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWN SLOPE LANDS AND WATERWAYS
 - DURING WINDY CONDITIONS, LARGE, UNPROTECTED AREAS SHALL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL
 - FINAL SITE LANDSCAPING SHALL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES
 - WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE BY FILTERING THROUGH AN APPROVED STRUCTURE
 - TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES SHALL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING HAVE BEEN REHABILITATED
 - EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AFTER RAINFALL EVENTS TO ENSURE THEY HAVE OPERATED EFFECTIVELY AND REMAIN IN WORKING CONDITION
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH PREVENTS TACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITHIN ADDITIONAL GRAVEL AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANTOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY
 - PROVIDE SILT FENCE/HAY BALE BARRIERS TO THE LOW SIDE OF ALL EXPOSED EARTH EXCAVATIONS (TYPICAL)
 - ISOLATE EXISTING STORMWATER PITS WITH HAY BALES TO FILTER ALL INCOMING FLOWS
 - DO NOT STOCK PILE EXCAVATED MATERIAL ON THE ROAD WAY

LEGEND

- FENCE LINE
- STOCK-PILE AREA
- RUBBLE ENTRY/EXIT
- GEO-TEXTILE SAUSAGE

