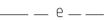
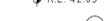
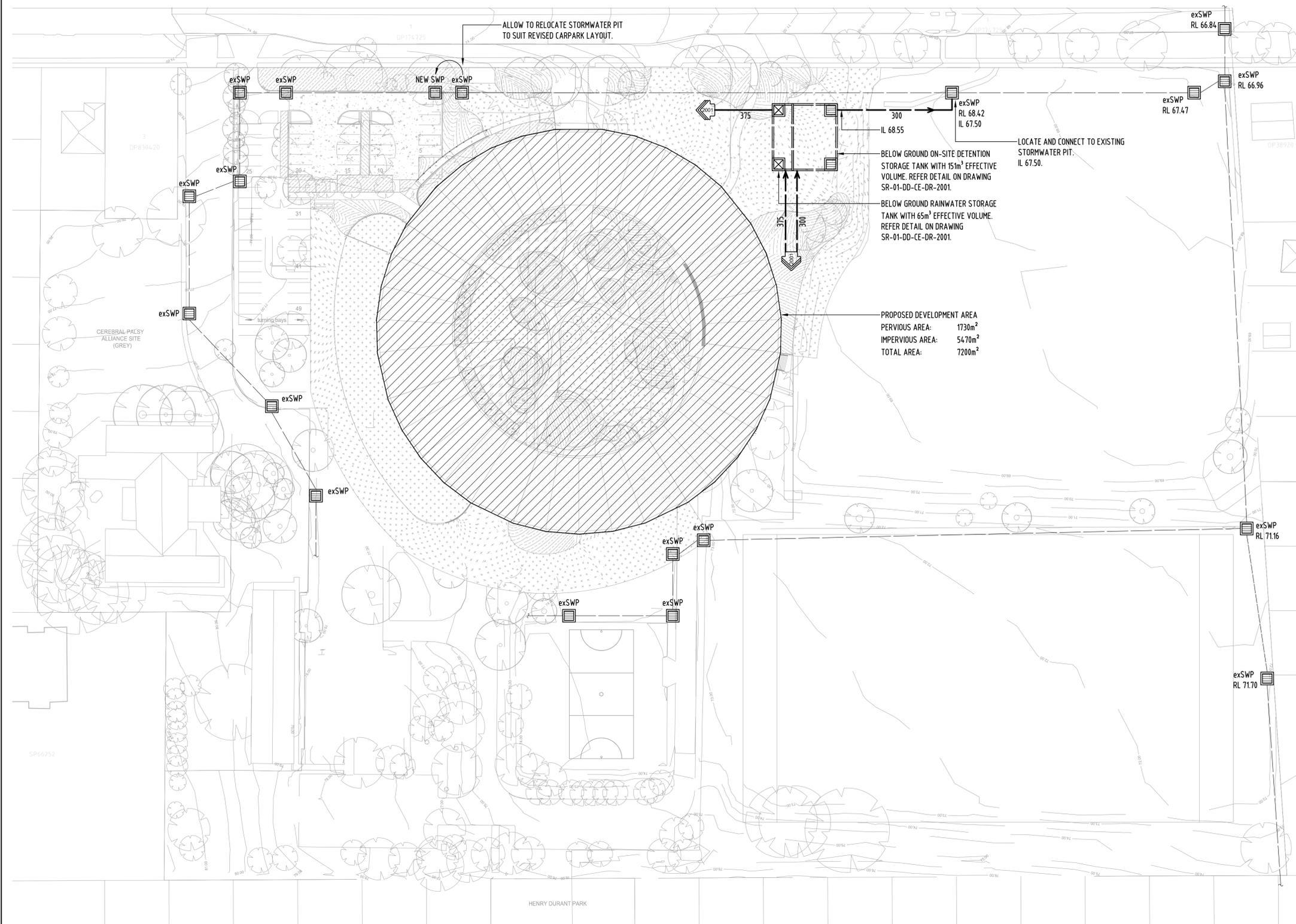


STORMWATER NOTES:

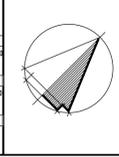
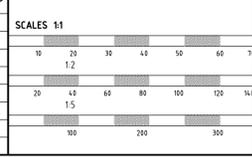
1. ORIGIN OF LEVELS SHOWN ARE TO 'AUSTRALIAN HEIGHT DATUM' (AHD) U.N.O.
2. ALL LEVELS TO BE CONFIRMED WITH ARCHITECTURAL DWGS AND SURVEY DWGS
3. ALL INLET AND OUTLET LEVELS ARE FROM BOTTOM OF THE PIPES.
4. ALL EXISTING LEVELS AND FINAL LEVELS TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF WORK.
5. CARE TO BE TAKEN WITH LEVELS ON STORM WATER LINES AND GRADES SHOWN ARE NOT TO BE REDUCED. LEVELS ARE NOT TO BE ALTERED WITHOUT THE APPROVAL OF THE DESIGNER.
6. LOCATION OF THE EXISTING SERVICES IS APPROXIMATE ONLY. CONTRACTOR SHALL CHECK LOCATIONS OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORK AND ACCEPT FULL RESPONSIBILITY FOR THE COST OF REPAIR AND CONSEQUENCES OF ANY DAMAGE WHICH MAY OCCUR TO THESE SERVICES AS A RESULT OF CONSTRUCTION WORKS.
7. ALL DISTURBED AREAS SHALL BE REINSTATED TO EXISTING CONDITION BY THE CONTRACTOR AT COMPLETION OF THE WORK.
8. ALL STORM WATER PITS TO BE PRECAST CONCRETE CONSTRUCTED AS PER LOCAL COUNCIL SPECIFICATION (STANDARD DETAILS) AND RELEVANT AUSTRALIAN STANDARD.
9. SUB-SOIL DRAINAGE TO BE INSTALLED AS REQUIRED, INCLUDING BEHIND ALL RETAINING STRUCTURES, PLANTERS AND WHERE GROUND WATER IS ENCOUNTERED. SHALL BE 90mm SLOTTED UPVC PIPE WRAPPED IN CLOTH SOCK AND SURROUNDED WITH 150mm THICKNESS OF 20mm DIAMETER BLUE METAL AND SURROUNDED IN GEOTEXTILE FABRIC.
10. ALL DOWNPIPES TO BE MINIMUM Ø150mm. REFER HYDRAULIC DRAWINGS FOR FINAL LOCATIONS.
11. PIPEWORK SHALL BE LAID AT 1:100 MINIMUM GRADE UNLESS NOTED OTHERWISE. PIPEWORK MAY BE LAID AT STEEPER GRADES AS REQUIRED TO MEET COVER REQUIREMENTS OR AS NOMINATED BY PIPEWORK INVERT LEVELS.
12. ALL EXTERNAL LEVELS TO FALL AWAY FROM BUILDING. BUILDER TO ENSURE THRESHOLD REQUIREMENTS. OVERLAND FLOW PATHS TO BE MAINTAINED AROUND BUILDING TO PREVENT WATER INGRESS.
13. PIPEWORK UP TO 300mm DIAMETER SHALL BE UPVC DRAINAGE WASTE GRADE WITH SOLVENT WELDED JOINTS. 375mm AND LARGER SHALL BE FRC PIPEWORK WITH RUBBER RING JOINTS.

LEGEND:

-  DENOTES NEW STORMWATER PIPE LINE
-  DENOTES EXISTING STORMWATER PIPE LINE
-  DENOTES NEW SUB-SOIL PIPE LINE
-  DENOTES NEW PUMP-OUT LINE
-  DENOTES EXISTING LEVEL
-  DENOTES PROPOSED LEVEL
-  DENOTES NEW LEVEL
RL DENOTES PROPOSED LEVEL
INV DENOTES PIT INVERT LEVEL
-  DENOTES EXIST CONTOUR LEVEL
-  DENOTES NEW DOWN PIPES
-  DENOTES DOWN PIPE WITH SPREADER
-  DENOTES STORMWATER PIT
-  DENOTES STORMWATER PIT (COVER)
-  DENOTES RAIN WATER OUTLET
-  DENOTES OVERFLOW POINT
-  DENOTES CLEAR OUT POINT
-  DENOTES LONGITUDINAL TRENCH GRATE
-  DENOTES OVERLAND FLOW PATH
-  DENOTES KERB INLET PIT



REV.	NOTES	DATE	ISSUED BY	CHECKED BY	REV.	NOTES	DATE	ISSUED BY	CHECKED BY
A	PRELIMINARY ISSUE	07.08.17	PC	DA					
DA	ISSUED FOR DA	27.09.17							



ARCHITECT

CONRAD GARGETT | ANCHER MORTLOCK WOOLLEY

myd MYD Consulting Engineers Pty Ltd
 consulting engineers
 Level 2, 19 Harris Street, Pyrmont, NSW 2009
 Structural Civil Stormwater Telecommunications
 Tel: 02 9817 2611 Fax: 02 9817 2633 Email: info@mydconsulting.com www.mydconsulting.com

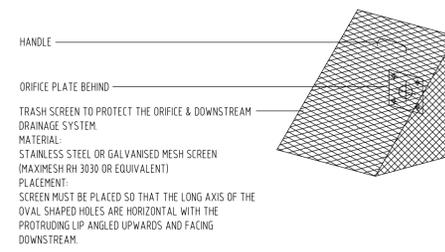
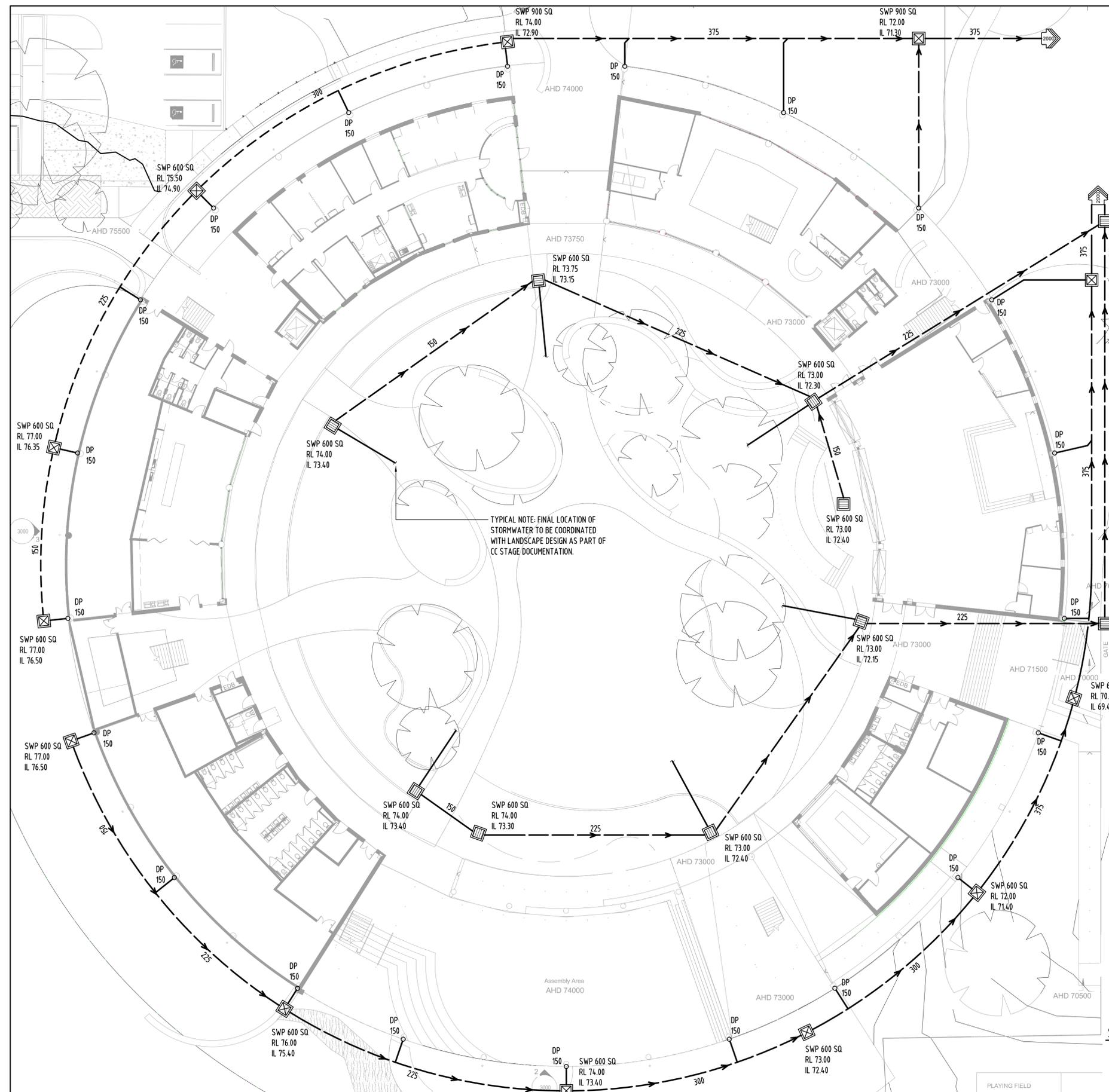
CLIENTS

NSW GOVERNMENT | Education & Communities

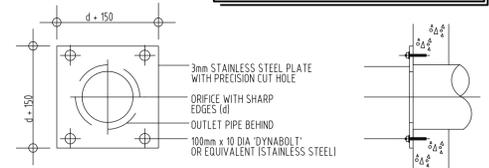
PROJECT	SECONDARY SCHOOLS RENEWAL PROGRAM GROUP 5A 38 SMALLS ROAD, RYDE PUBLIC SCHOOL	NUMBER IN SET	P2345
DRAWING TITLE	SITE STORMWATER PLAN	SHEET NUMBER	SR-01-DD-CE-DR-2000-DA
ISSUED BY	PC	CHECKED BY	PM
DRAWN BY		DATE	27.09.17

DO NOT SCALE OFF DRAWINGS
FIGURED DIMENSIONS TO BE USED, ALL DIMENSIONS TO BE CHECKED ON SITE

NOT FOR CONSTRUCTION PURPOSES



TRASH SCREEN DETAIL
SCALE = NTS



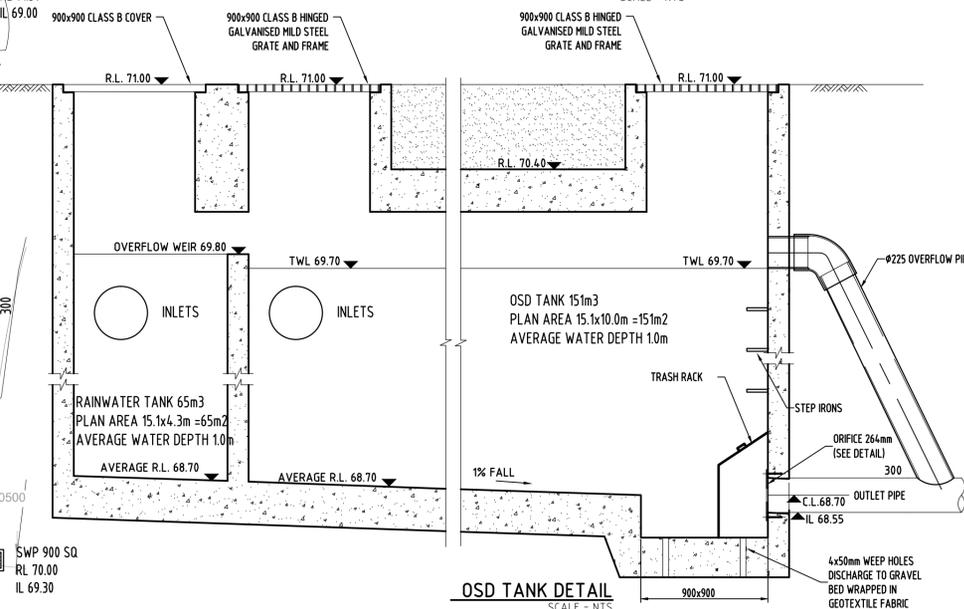
CALCULATION OF ORIFICE SIZE

PSD = PERMISSIBLE SITE DISCHARGE IN (m³/s)
 A = CROSS SECTIONAL AREA OF ORIFICE PLATE IN (m²)
 C = DISCHARGE CO-EFFICIENT (0.6 FOR ORIFICE PLATE)
 G = ACCELERATION DUE TO GRAVITY = 9.81 (m/s²)
 H = MAX. HEIGHT / HEAD OF WATER ABOVE THE CENTRE LINE OF THE ORIFICE PLATE IN (m)
 D = ORIFICE DIAMETER IN (mm)

$$A = \frac{PSD}{C \times \sqrt{2 \times G \times H}} = \frac{0.145}{0.6 \times \sqrt{2 \times 9.81 \times 1.00}}$$

$$D = \sqrt{\frac{A \times 4}{\pi}} = \sqrt{\frac{0.0545 \times 4}{\pi}} \times 1000 \text{ mm/m} = 264 \text{ mm}$$

ORIFICE PLATE DETAIL
SCALE = NTS

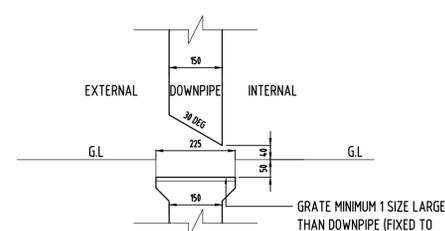


OSD TANK DETAIL
SCALE = NTS

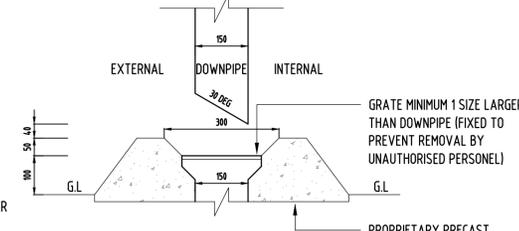
OSD CALCULATIONS:

CALCULATION BASED ON RYDE COUNCIL STORMWATER MANAGEMENT TECHNICAL MANUAL - OSD SIMPLIFIED DESIGN METHOD

ZONE 1		
PSD =	0.0265L/sec/m ²	
SSR =	0.0275 m ² /m ²	
TOTAL PERVIOUS AREA =	1730m ²	
TOTAL IMPERVIOUS AREA =	5470m ²	
TOTAL AREA =	7200m ²	
CALCULATED PSD =	5470m ² x 0.0265L	145L/sec
CALCULATED SSR =	5470m ² x 0.0275 m ²	150.4 m ²



SECTION- CONCRETE AREAS

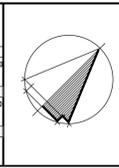
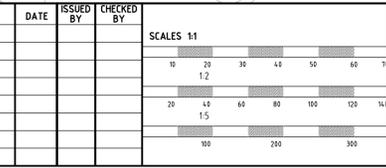


SECTION- LANDSCAPE AREAS

STORMWATER DRAIN DOWNPIPE CONNECTION
SCALE = NTS

REV.	NOTES	DATE	ISSUED BY	CHECKED BY	REV.	NOTES	DATE	ISSUED BY	CHECKED BY
A	PRELIMINARY ISSUE	07.08.17							
DA	ISSUED OR DA	27.09.17	PC	DD					

DATE	ISSUED BY	CHECKED BY



ARCHITECT

CONRAD GARGETT | ANCHER MORTLOCK WOOLLEY

myd MYD Consulting Engineers Pty Ltd

Level 2, 19 Harris Street, Pyrmont, NSW 2009

Structural Civil Stormwater Telecommunications

Tel: 02 9817 2611
 Fax: 02 9817 2633
 Email: info@mydconsulting.com
 www.mydconsulting.com

CLIENTS

NSW GOVERNMENT | Education & Communities

PROJECT

SECONDARY SCHOOLS RENEWAL PROGRAM GROUP 5A
 38 SMALLS ROAD, RYDE PUBLIC SCHOOL

DRAWING TITLE

SITE STORMWATER PLAN

NUMBER IN SET	MYD JOB NUMBER
SCALE	P2345
1:200	
ISSUED BY	SHEET NUMBER
PC	SR-01-DD-CE-DR-2001-DA
DRAWN BY	CHECKED BY
	PM
	REV.
	DA
	DATE
	27.09.17

DO NOT SCALE OFF DRAWINGS
 FIGURED DIMENSIONS TO BE USED, ALL DIMENSIONS TO BE CHECKED ON SITE

EROSION & SEDIMENT CONTROL NOTES

MINIMUM REQUIREMENTS
 GENERAL
 PROVIDE ON SITE CONTROLS THROUGHOUT THE ENTIRE WORKS TO ENSURE MINIMUM EROSION AND SEDIMENT LOSS.
 ENSURE LEAST DISTURBANCE TO SITE.

AS EACH AREA IS COMPLETED, THAT AREA IS TO BE IMMEDIATELY/PROGRESSIVELY SEEDED AND FERTILISED. SILT FENCES, STRAW BALES OR OTHER CONTROLS NEED TO BE PROVIDED UNTIL THE SITE IS STABLE. SHOULD THIS APPROACH NOT BE PRACTICAL THE PROGRESSIVE REVEGETATION OF INDIVIDUAL AREAS WILL BE REQUIRED.

WHERE THERE IS GRADE ON OTHER AREAS OF THE SITE THAT MAY LEAD TO EROSION, FURTHER APPROPRIATE TREATMENT IS TO BE LOCATED TO CONTROL EROSION I.E. STRAW BALES

THE PROVISION AND MAINTENANCE OF (SEDIMENT) SILT FENCES WILL BE NECESSARY DURING THE CONSTRUCTION PHASE. WHEN INSTRUCTED BY THE COUNCIL PROGRESSIVELY REMOVE INDIVIDUAL SECTIONS OF SILT FENCES FOR CLEANING. CLEANING OF FENCES TO BE CARRIED OUT DURING PERIODS OF DRY WEATHER.

FILL AREAS
 RUN-OFF AND SEDIMENT LOSS FROM THE AREAS OF FILL MUST BE CONTROLLED DURING AND AFTER CONSTRUCTION, BEFORE REVEGETATION TAKES PLACE USING SILT FENCES AND OR STRAW BALES AS INSTRUCTED BY THE PROJECT MANAGER/COUNCIL TO DIRECT WATER FROM THE DISTURBED AREA. OTHER MEASURES SHALL BE CARRIED OUT AS DIRECTED BY THE COUNCIL AND/OR AS SHOWN ON THE PLANS.

STOCK PILES
 THE STOCK PILE LOCATION SHOWN ON THE PLAN IS PRELIMINARY. SHOULD THE BUILDER WISH TO RELOCATE THE STOCKPILE, HE SHALL OBTAIN APPROVAL FROM COUNCIL PRIOR TO COMMENCEMENT OF WORKS. THE BUILDER SHALL PRODUCE DRAWINGS INDICATING THE LOCATION OF STOCK PILES.

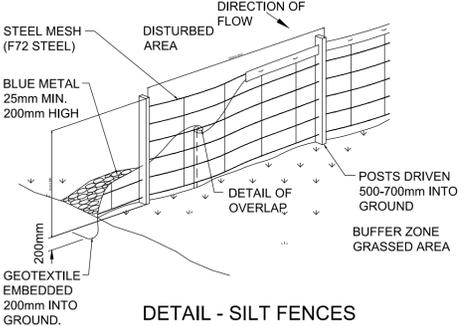
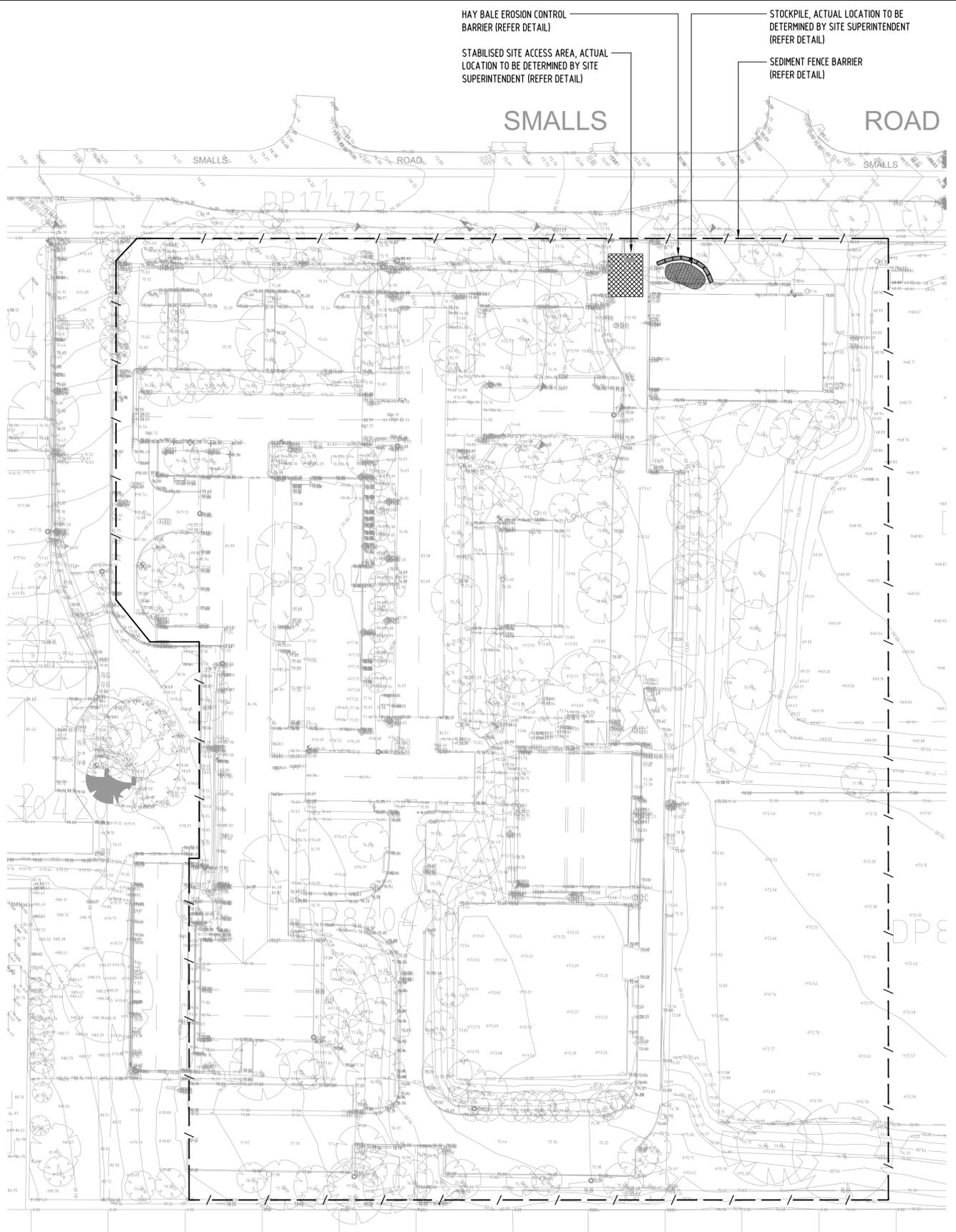
STOCK PILE SITES SHALL BE LOCATED AWAY FROM EXISTING OR PROPOSED DRAINAGE LINES OR AREAS LIKELY TO BE DISTURBED DURING CONSTRUCTION. STOCK PILE SITES SHALL NOT BE LOCATED WITHIN THE DRIP ZONE OF TREES.

STOCK PILE SITES MUST BE PROTECTED FROM EROSION AND SEDIMENT LOSS BY THE INSTALLATION OF SILT FENCES/STRAW BALES OR OTHER CONTROLS APPROVED BY COUNCIL.

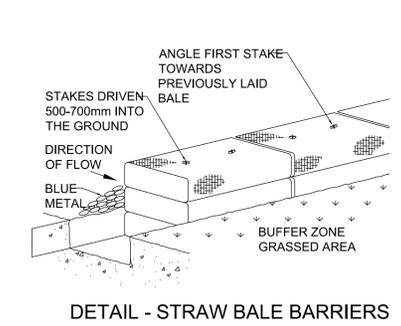
WIND EROSION
 TO MINIMISE WIND EROSION DURING CONSTRUCTION, THE GROUND SURFACE SHOULD BE KEPT DAMP (NOT WET). THE SURFACE SHOULD BE LEFT IN A ROUGH CLODDY CONDITION TO INCREASE ROUGHNESS AND SLOW SURFACE WIND SPEED.

LOCATION
 LOCATION OF SEDIMENT CONTROL METHODS I.E. SILT FENCES ARE SHOWN DIAGRAMMATICALLY ONLY ON DRAWING. FINAL LOCATION, EXTENT AND TYPE OF SEDIMENT CONTROL METHODS SHALL BE TO THE SATISFACTION OF COUNCIL.

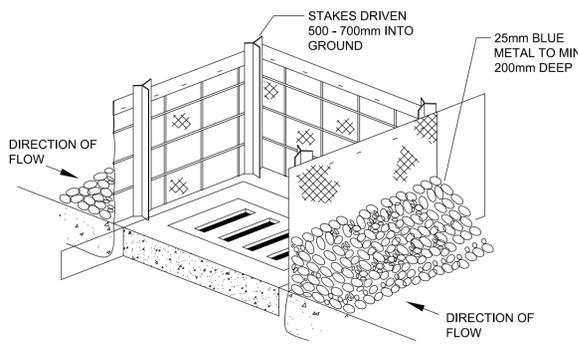
THE CONTRACTOR, UNDER SECTION 16 OF THE CLEAN WATERS ACT, IS LIABLE FOR THE DEPOSITION OF ANY CONTAMINANTS DEPOSITED ON ROADWAYS AFTER LEAVING THE CONSTRUCTION SITE.



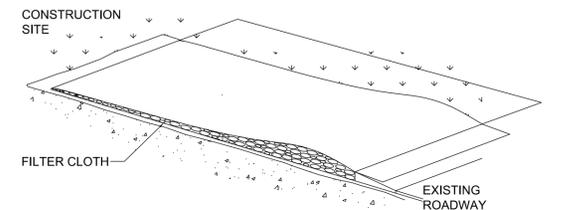
SILT FENCES
DESCRIPTION
 SILT FENCES ARE TEMPORARY BARRIERS MADE FROM A COMBINATION OF FILTER CLOTH AND BLUE METAL.
USAGE
 SILT FENCES FILTER RUN-OFF LEAVING THE SITE TRAPPING THE SEDIMENT AND ALLOWING CLEAN FILTERED WATER TO PASS. SILT FENCES ARE TO BE PLACED ON THE CONTOUR OR SLIGHTLY CONVEX TO THE CONTOUR. IF ON THE CONTOUR, EACH END OF THE FENCE SHOULD BE TURNED UP TO CREATE A 'STILLING POND' UP SLOPE OF THE FENCE. WHERE POSSIBLE, A SILT FENCE SYSTEM SHOULD BE NO LONGER THAN ABOUT 20 METRES. THEY SHOULD NOT INTERCEPT LARGE CONCENTRATED OR CHANNELISED FLOWS.
INSTALLATION
 THE AREA BELOW A SILT FENCE MUST BE UNDISTURBED ON STABILISED GROUND.
MAINTENANCE
 SILT FENCES REQUIRE REGULAR MAINTENANCE. TRAPPED SEDIMENTS SHOULD BE REMOVED, PICKETS STRAIGHTENED, FILTER CLOTH RESECUED AND TIGHTENED AND BLUE METAL REPLACED WHEN HEAVILY CONTAMINATED WITH SILT.
NOTE
 FILTER FABRIC SHALL BE EQUIVALENT TO 'GEOLAB' AND BE CAPABLE OF INTERCEPTING SILT PARTICLES DOWN TO 2 MICRON IN SIZE.



STRAW BALE BARRIERS
DESCRIPTION
 A TEMPORARY BARRIER OF STRAW BALES PLACED AROUND THE PERIMETER OF A DISTURBED AREA.
USAGE
 STRAW BALE BARRIERS ARE USED TO DESILT CONTAMINATED WATER
INSTALLATION
 STRAW BALES ARE ONLY EFFECTIVE ON SITES OF LESS THAN HALF A HECTARE. THE BALES SHOULD BE PLACED LENGTHWISE IN 100mm DEEP TRENCHES WITH THEIR BINDING ROPE HORIZONTAL TO THE GROUND.
 THE BALES SHOULD BE CONNECTED AND ANCHORED TO THE GROUND BY DRIVING TWO STAR PICKETS OR POSTS THROUGH EACH BALE. THE FIRST STAKE MUST BE DRIVEN TOWARDS THE ADJOINING BALE AT A 45° ANGLE TO FORCE THE BALES TOGETHER.
MAINTENANCE
 AFTER RAINFALL STRAW BALE BARRIERS SHOULD BE INSPECTED AND SEDIMENT REMOVED. DAMAGED BALES SHOULD BE REPAIRED OR REPLACED BALES HAVE A LIFE EXPECTANCY OF THREE TO SIX MONTHS.
NOTE
 THE LOCATION OF STRAW BALES ON THE ABOVE SITE PLAN IS DIAGRAMMATIC ONLY. THE REQUIREMENT FOR THE USAGE OF STRAW BALES IS TO BE AS A SUPPLEMENTARY MEASURE TO ASSIST THE SILT FENCES. FINAL LOCATIONS AND EXTENT OF STRAW BALES TO BE DETERMINED BY THE COUNCIL.



STORM INLET SEDIMENT TRAP
DESCRIPTION
 THESE ARE TEMPORARY DE-SILTING STRUCTURES.
USAGE
 SUCH SEDIMENT TRAPS ARE USED AT STORMWATER INLETS AND OUTLETS, CULVERT ENTRIES AND POINTS WHERE RUN-OFF FROM DISTURBED CATCHMENTS SUCH AS CONSTRUCTION SITES IS DISCHARGED.
GENERAL REQUIREMENTS
 SEDIMENT TRAPS ARE BUILT FROM STRAW BALES, WASHED GRAVEL, GABIONS OR SANDBAGS (OR SARLON TYPE MATERIALS) FILLED WITH BLUE METAL. THE CHOICE OF MATERIAL OR TYPE OF STRUCTURE DEPENDS ON THE SIZE OF THE DRAINAGE AREA AND THE PHYSICAL STRUCTURE SURROUNDING THE SEDIMENT TRAP. CONSTRUCTION MATERIALS TO BE CONFIRMED BY COUNCIL.
MAINTENANCE
 SEDIMENT TRAPS SHOULD BE REGULARLY MAINTAINED AND RESTORED TO THEIR ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO HALF OF THE DESIGNED CAPACITY. THE OUTLET SHOULD BE CONSTRUCTED AND MAINTAINED TO ENSURE EROSION DOES NOT OCCUR. MAINTENANCE PROGRAM SHALL BE AS REQUESTED BY COUNCIL.



SHAKE DOWN AREAS/ACCESS STABILISATION
DESCRIPTION
 STABILISED ACCESS SHALL BE A BED OF AGGREGATE ON FILTER CLOTH. GRADE THE ENTRANCE SO THAT IT IS AT LEAST 15 METRES LONG WITH A MINIMUM WIDTH OF 3 METRES FOR A ONE WAY ENTRANCE AND 6 METRES FOR A TWO WAY ENTRANCE. PLACE FILTER CLOTH OVER THE ENTIRE AREA AND COVER IT WITH 150mm MINIMUM THICKNESS OF 50mm AGGREGATE RIVER GRAVEL OR A RECYCLED OR RECLAIMED CONCRETE EQUIVALENT.
USAGE
 SUCH STRUCTURES SHALL BE USED AT ALL POINTS WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE THE SITE AND EXISTING ROADWAYS.
TREATMENT/MAINTENANCE
 SURFACE WATER FLOWING TO THE ENTRANCE MUST BE PIPED UNDER THE ENTRANCE, OR A BERM CONSTRUCTED TO DIRECT SURFACE FLOW AWAY FROM THE ROAD.
 ALL DEPOSITS ARE TO BE REGULARLY CLEARED FROM SITE ACCESS. THE DRAWBAR, TAILGATE ETC OF ANY VEHICLE INVOLVED IN THE TRANSPORT OF GRAVEL ETC TO A CONSTRUCTION SITE MUST BE MANUALLY CLEANED OF MATERIAL BEFORE THE VEHICLE LEAVES THE SITE.
 SHOULD THE MATERIAL BE DEPOSITED ON THE ROADWAY ETC, SUCH MATERIAL SHALL BE SWEEPED AND REMOVED FROM THE ROADWAY.

REV.	NOTES	DATE	ISSUED BY	CHECKED BY	REV.	NOTES	DATE	ISSUED BY	CHECKED BY
A	PRELIMINARY ISSUE	07.08.17	PC	DA					
DA	ISSUED FOR DA	27.09.17							

SCALES	1:1
0	10 20 30 40 50 60 70
1:2	0 10 20 30 40 50 60 70
1:5	0 20 40 60 80 100 120 140
1:10	0 20 40 60 80 100 120 140

ARCHITECT

MYD Consulting Engineers Pty Ltd

Level 2, 19 Harris Street, Pyrmont, NSW 2009

Tel: 02 9817 2611
 Fax: 02 9817 2633
 Email: info@mydconsulting.com
 www.mydconsulting.com

CLIENTS

PROJECT	NUMBER IN SET	MYD JOB NUMBER
SECONDARY SCHOOLS RENEWAL PROGRAM GROUP 5A 38 SMALLS ROAD, RYDE PUBLIC SCHOOL	1500	P2345
DRAWING TITLE	ISSUED BY	CHECKED BY
EROSION & SEDIMENT CONTROL PLAN	PC	PM
SCALE	DATE	REV.
1500	27.09.17	DA