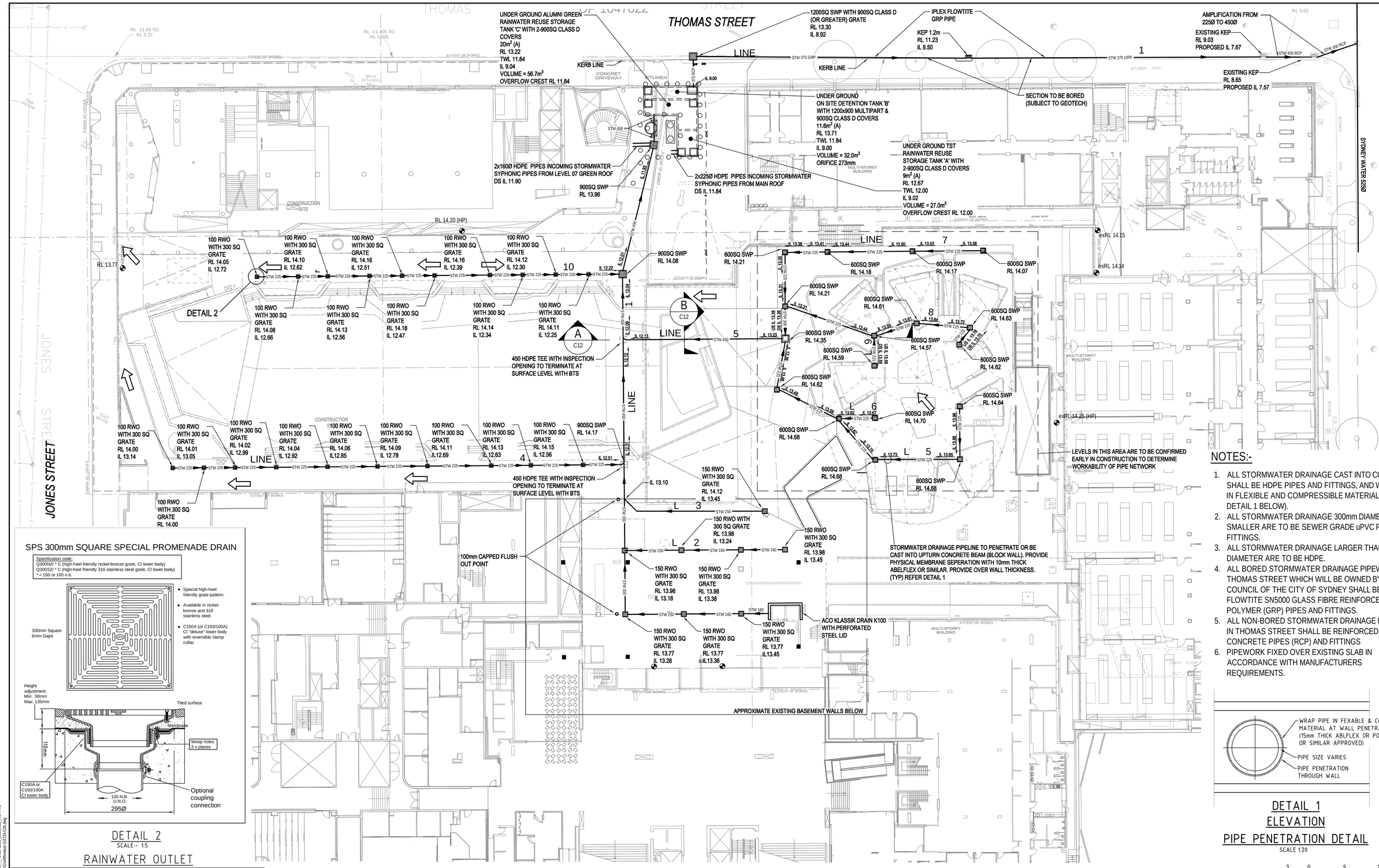

SPS 300mm SQUARE SPECIAL PROMENADE DRAIN

Specification code:
Q300N2/ * C (high-heel friendly nickel-bronze grate, CI lower body)
Q300S2/ * C (high-heel friendly 316 stainless steel grate, CI lower body)
* = 150 or 100 n.b.

DETAIL 2
SCALE:- 1:5

RAINWATER OUTLET

AUSTRALIAN HEIGHT DATUM

NOTES:-

1. ALL STORMWATER DRAINAGE CAST INTO CONCRETE SHALL BE HDPE PIPES AND FITTINGS, AND WRAPPED IN FLEXIBLE AND COMPRESSIBLE MATERIAL (SEE DETAIL 1 BELOW).
2. ALL STORMWATER DRAINAGE 300mm DIAMETER OR SMALLER ARE TO BE SEWER GRADE uPVC PIPES AND FITTINGS.
3. ALL STORMWATER DRAINAGE LARGER THAN 300mm DIAMETER ARE TO BE HDPE.
4. ALL BORED STORMWATER DRAINAGE PIPEWORK IN THOMAS STREET WHICH WILL BE OWNED BY THE COUNCIL OF THE CITY OF SYDNEY SHALL BE FLOWTITE SN5000 GLASS FIBRE REINFORCED POLYMER (GRP) PIPES AND FITTINGS.
5. ALL NON-BORED STORMWATER DRAINAGE PIPEWORK IN THOMAS STREET SHALL BE REINFORCED CONCRETE PIPES (RCP) AND FITTINGS
6. PIPEWORK FIXED OVER EXISTING SLAB IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.

DETAIL 1
ELEVATION
PIPE PENETRATION DETAIL
SCALE 1:20

3 0 5 10 15m
SCALE 1:250

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NORTH POINT

NOTES
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ISSUE	AMENDMENT	DATE	ISSUE	AMENDMENT	DATE
A	PRELIMINARY ISSUE	01/03/13			
B	REVISED PRELIMINARY ISSUE	27/03/13			
C	FOR TENDER REVIEW	17/05/13			
D	FOR TENDER REVIEW	16/07/13			
E	FOR TENDER	16/09/13			
F	FOR TENDER (TANK RECONFIGURATION)	14/10/13			
G	FOR TENDER	03/12/13			

CLIENT
University of Technology, Sydney

PROJECT
UTS ALUMNI GREEN
67 THOMAS STREET
ULTIMO, NSW 2007

Warren Smith & Partners Pty Ltd
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T 02 9299 1312 F 02 9290 1295 E wsp@warrensmith.com.au
ABN 36 300 430 126

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Consulting Engineers
Hydraulic Services I Civil Engineering I Fire Protection I Sydney Water Accredited • Water Servicing Co-ordinator • Design and Project Management

Lic:QAC/8610771

TITLE
SITE PLAN
PROPOSED STORMWATER SYSTEM

SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
1:250	M.H.	A.M.	L.P.	L.P.

DATE: FEBRUARY 2013
JOB No.: 3724000
DRAWING No.: C-05
ISSUE: G
ISSUED FOR TENDER

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
SHEET SIZE: A1

THOMAS STREET

JONES STREET

AREA 159.7m²
AREA 118.7m²
AREA 320.9m²
AREA 106.9m²
AREA 84.7m²
AREA 119.3m²
AREA 92.9m²
AREA 92.9m²
AREA 79.7m²
AREA 80.2m²
AREA 94.1m²
AREA 95.8m²
AREA 108.3m²
AREA 109.9m²
AREA 111.5m²
AREA 115.5m²
AREA 89.1m²
AREA 122.7m²
AREA 51.9m²
AREA 40.7m²
AREA 42.9m²
AREA 407.6m²
AREA 105.2m²
AREA 61.5m²
AREA 83.4m²
AREA 275.5m²
AREA 35.8m²
AREA 47.3m²
AREA 53.2m²
AREA 226.0m²
AREA 70.1m²
AREA 82.5m²
AREA 90.6m²
AREA 65.4m²
AREA 44.6m²
AREA 45.2m²
AREA 39.0m²
AREA 74.3m²
AREA 400.8m²
AREA 248.4m²
AREA 71.5m²
AREA 58.7m²
AREA 52.7m²
AREA 173.0m²
AREA 152.4m²
AREA 252.5m²

SCALE 1:250

AUSTRALIAN HEIGHT DATUM

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PROJECT
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67 THOMAS STREET
ULTIMO, NSW 2007

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LicQAC/R61/0771

TITLE
SITE PLAN
CATCHMENT AREAS

SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
1:250	M.H.	A.M.	L.P.	L.P.

DATE: FEBRUARY 2013
JOB No.: 3724000
DRAWING No.: C-06
ISSUE: G

ISSUED FOR TENDER

SHEET SIZE: A1

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Plot Date: 03.12.2013@16:58:16 Login Name: AMarshall
Cad File: T:\3724\CAD\Civil\Revision G\3724-C06.dwg

THOMAS STREET

JONES STREET

LEGEND

- DIVERSION DRAIN
- SAND BAGS OR ROCK FACED WITH GEOTEXTILE CHECK DAMS
- SEDIMENT CONTROL FENCE (GEOTEXTILE FILTER OR HAY BALE)
- STORMWATER PIT SEDIMENT TRAP (GEOTEXTILE FILTER OR HAY BALE OR SAND BAGS)
- GEOTEXTILE FILTER BAGS AROUND EXISTING STORMWATER PIT
- TEMPORARY CONSTRUCTION VEHICLE EXIT
- SPOIL STOCKPILE (LOCATIONS TO BE AGREED ON SITE)

3 0 5 10 15m

SCALE 1:250

AUSTRALIAN HEIGHT DATUM

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QUALITY ASSURED to ISO/NZS 9001 Lic:QAC/8614/0771

TITLE
EROSION AND SEDIMENT CONTROL PLAN

SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
1:250	M.H.	A.M.	L.P.	L.P.

DATE FEBRUARY 2013
JOB No. 3724000
DRAWING No. C-07
ISSUE G
ISSUED FOR TENDER

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SHEET SIZE: A1

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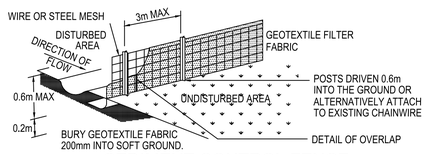
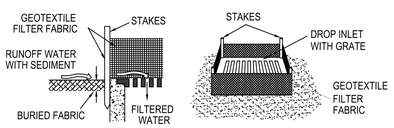


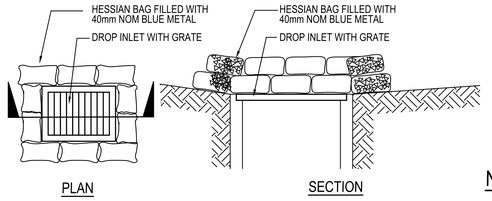
SEDIMENT CONTROL FENCE

NTS



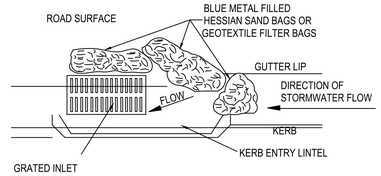
GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP

NTS



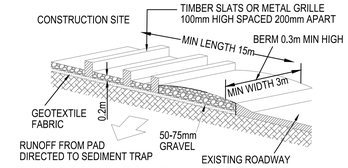
HESSIAN BAG DROP INLET SEDIMENT TRAP

N.T.S.



NEW/EXISTING GRATED KERB ENTRY PIT SEDIMENT CONTROL BARRIER

NTS

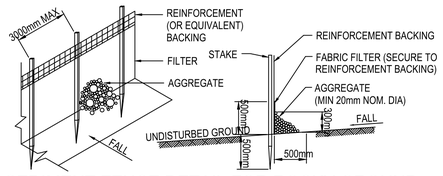


STABILIZED CONSTRUCTION SITE VEHICLE ENTRY/EXIT

NTS

SITE ENTRY/EXIT NOTES:-

1. ALL VEHICLE ENTRANCES & EXITS TO THE CONSTRUCTION SITE MUST BE STABILIZED TO PREVENT THEM BECOMING A SOURCE OF SEDIMENT, BY PROVIDING A VEHICLE SHAKE AREA. THIS MAY CONSIST OF A TIMBER, CONCRETE OR STEEL SHAKER GRID OR RUBBLE AREA.
2. THE VEHICLE EXIT AREA IS TO BE MAINTAINED IN A CLEAN & SERVICEABLE CONDITION DURING THE TOTAL TIME OF USAGE.
3. ANY UNSEALED ROAD BETWEEN THE DEVICE AND COUNCILS ROADWAY IS TO BE TOPPED WITH 100mm THICK, 40mm NOMINAL SIZE AGGREGATE.
4. PUBLIC ROADS MUST BE KEPT FREE OF DIRT AND MUD. SEDIMENT TRACKED ONTO THE PUBLIC ROADWAY BY VEHICLES LEAVING THE CONSTRUCTION SITE IS TO BE SWEPT UP IMMEDIATELY.
5. FENCES SHOULD BE ERECTED TO ENSURE VEHICLES CAN NOT BYPASS THE STABILIZED ACCESS POINTS, UNLESS COMING FROM A STABILIZED AREA.

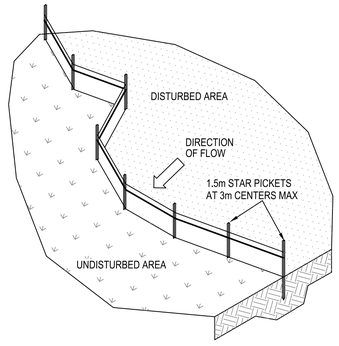


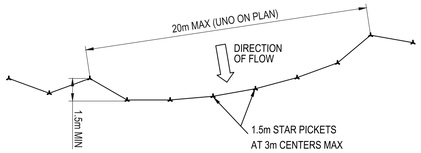
SEDIMENT FENCE DETAIL FOR ROCKY GROUND

NTS

SEDIMENT FENCE NOTES:-

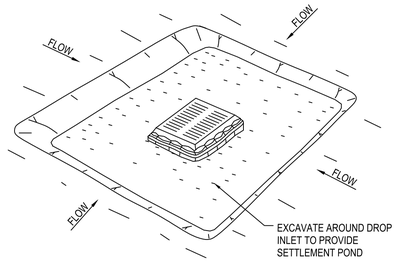
1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR AT THE TOE OF A SLOPE.
2. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND SUFFICIENT TO PROVIDE RIGID SUPPORT, 3 METERS APART. WHERE THERE IS INSUFFICIENT SOIL DEPTH OVER ROCK, HOLES ARE TO BE DRILLED INTO ROCK TO ACCEPT THE STAR PICKETS.
3. ON SOFT GROUND MATERIALS, DIG A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
4. BACKFILL TRENCH OVER BASE OF FABRIC & COMPACT.
5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY THE GEOTEXTILE MANUFACTURER, USE A REINFORCEMENT BACKING WITH NON SELF-SUPPORTING GEOTEXTILE FABRIC.
6. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
7. ON HARD OR ROCKY GROUND, SMOOTH A 500mm WIDE STRIP UPSLOPE OF THE FENCE LINE. TURN THE BOTTOM 500mm OF THE FABRIC UPSLOPE AND ANCHOR IN PLACE WITH SUITABLE AGGREGATE.
8. WHERE A SEDIMENT FENCE IS CONSTRUCTED DOWN SLOPE FROM A DISTURBED BATTER THE FENCE SHOULD BE LOCATED 1.5 TO 2.0 METERS DOWN SLOPE FROM THE TOE OF THE BATTER.





SEDIMENT FENCE LAYOUT PLAN

NTS

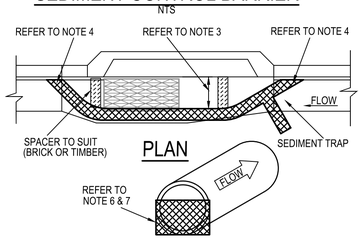


EXCAVATED SEDIMENT TRAP

NTS

EXCAVATED SEDIMENT TRAP NOTES:-

1. REMOVE THE SEDIMENT WHEN IT HAS ACCUMULATED TO HALF THE DESIGN DEPTH OF THE TRAP AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS.
2. PROVIDE 50 cu.m/Ha OF SEDIMENT STORAGE VOLUME.
3. REFER TO THE MAINTENANCE REQUIREMENTS.

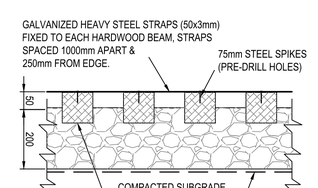


GEOTEXTILE FILTER BAGS

NTS

SEDIMENT BARRIER FOR PITS & PIPES, NOTES:-

1. SLEEVES ARE TO BE MADE FROM GEOTEXTILE FABRIC LONGER THEN THE LENGTH OF THE INLET PIT.
2. FILL SLEEVE WITH 5 OR 10mm CLEAN GRAVEL.
3. PLACE THE SLEEVE AT THE OPENING OF THE KERB INLET LEAVING A 100mm GAP TO ACT AS AN EMERGENCY OVERFLOW.
4. SLEEVE MUST BE PLACED AGAINST THE KERB TO PREVENT BYPASS.
5. FIT SLEEVE TO ALL INLETS DOWNSTREAM OF THE WORKS.
6. FOR DRAINAGE WORKS FIT GEOTEXTILE FABRIC OR GEO BAGS TO UPSTREAM FACE OF ALL OPEN PIPES.
7. MAINTAIN AN OPENING AT THE TOP OF THE PIPE OF 1/3 OF THE PIPE DIAMETER.
8. THE FILTERS ARE TO BE CLEANED AND MAINTAINED DAILY.
9. ALL CARE SHOULD BE TAKEN TO MINIMIZE SEDIMENT REACHING THE STORMWATER SYSTEM BY MINIMIZING EXCAVATION WORKS AND PREVENTING EXCESS WATER FLOW THROUGH WORKS.

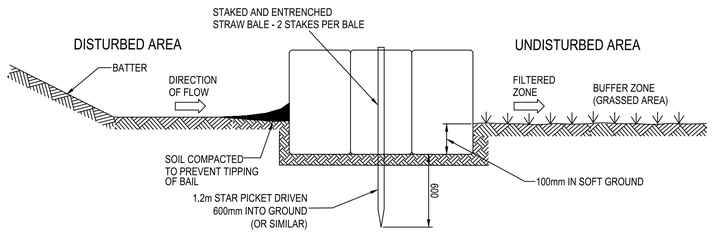


VEHICLE SHAKER GRID

NTS

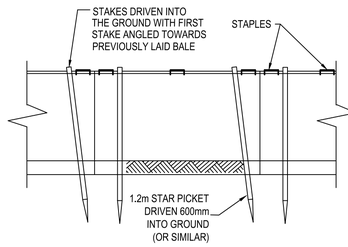
SITE ENTRY/EXIT CONSTRUCTION NOTES:-

1. STRIP TOP SOIL & LEVEL SITE. PROVIDE CATCH DRAIN AT SIDES TO DIRECT RUNOFF WATER TO SEDIMENT TRAPS.
2. COMPACT SUBGRADE AND REMOVE ANY HIGH POINTS.
3. COVER AREA WITH GEOTEXTILE FABRIC. THIS MAY BE WOVEN OR NEEDLE PUNCHED PRODUCT WITH A MINIMUM CBR BURST STRENGTH (AS3706.4-90) OF 2500 N.
4. CONSTRUCT 200mm THICK RUBBLE PAD OVER GEOTEXTILE USING ROAD BASE OR 30-40mm AGGREGATE. MINIMUM LENGTH 15 METRES OR TO BUILDING ALIGNMENT. MINIMUM WIDTH 3 METRES. CONSTRUCT 300mm HIGH HUMP IMMEDIATELY WITHIN BOUNDARY TO DIVERT WATER TO A SEDIMENT TRAP.
5. WHERE GRIDS ARE USED FIRST CONSTRUCT A 150 THICK PAD OVER GEOTEXTILE FABRIC. LEVEL THIS IN BOTH DIRECTIONS. LOWER GRID ON TO THE PREPARED BASE AND ENSURE THAT NO PART IS SITTING ON ANY HIGH POINTS. BACKFILL THE SPACES BETWEEN THE GRIDS TO WITHIN 50mm OF THE TOP.
6. PROVIDE RAMPS AT ENDS AND SIDE OF GRIDS. IF DEPRESSIONS OCCUR IN THE RAMPS DURING USE, ADD ADDITIONAL MATERIAL.



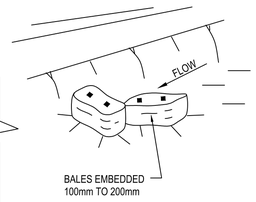
TYPICAL STRAW BALE SECTION

NTS

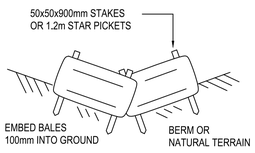


TYPICAL STRAW BALE DETAIL

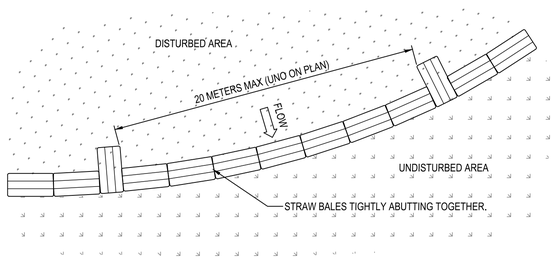
NTS



VIEW OF CHECK DAM



CHECK DAM SECTION

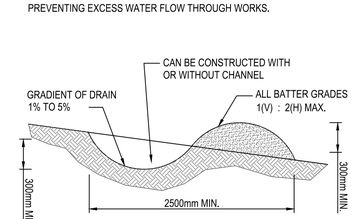


TYPICAL STRAW BALE LAYOUT PLAN

NTS

STRAW BALE NOTES:-

1. CONSTRUCT STRAW BALE FILTER AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR AT THE TOE OF A SLOPE.
2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS TO BE PLACED PARALLEL TO GROUND.
3. MAXIMUM HEIGHT OF FILTER IS ONE BALE.
4. ON SOFT MATERIALS, EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2 METRE STAR PICKETS. ANGLE THE FIRST STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BAIL. DRIVE STAKES 600mm INTO THE GROUND AND FLUSH WITH THE TOP OF THE BALES.
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWN SLOPE FROM A DISTURBED BATTER THE BALES SHOULD BE LOCATED 1.5 TO 2.0 METERS DOWN SLOPE FROM THE TOE OF THE BATTER.
6. WHERE REQUIRED WRAP GEOTEXTILE FILTER FABRIC AROUND BALES AND STAPLE IN POSITION.



DIVERSION DRAIN (LOW FLOW)

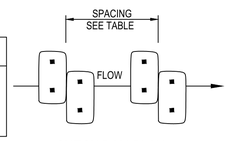
NTS

DIVERSION DRAIN NOTES:-

1. CONSTRUCT WITH GRADIENT OF 1 PER CENT TO 5 PER CENT.
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE.
3. DRAINS TO BE OF CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTION NOT V-SHAPED.
4. EARTH BANKS TO BE ADEQUATELY COMPACTED IN ORDER TO PREVENT FAILURE.
5. PERMANENT OR TEMPORARY STABILIZATION OF THE EARTH BANK TO BE COMPLETED WITHIN 10 DAYS OF CONSTRUCTION.
6. ALL OUTLETS FROM DISTURBED LANDS ARE TO FEED INTO A SEDIMENT BASIN OR SIMILAR.
7. DISCHARGE RUN OFF COLLECTED FROM UNDISTURBED LANDS ONTO EITHER A STABILIZED OR AN UNDISTURBED DISPOSAL SITE WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED.
8. COMPACT BANK WITH A SUITABLE IMPLEMENT IN SITUATIONS WHERE THEY ARE REQUIRED TO FUNCTION FOR MORE THAN FIVE DAYS.
9. EARTH BANKS TO BE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT WILL IMPEDE NORMAL FLOW.

CHECK DAM SPACING TABLE

LONGITUDINAL GRADE (%)	SPACING (METERS)
0 - 5	40
5 -10	30
10 - 15	20
GREATER THAN 15	10



CHECK DAM PLAN

STRAW BALE CHECK DAM DETAILS

NTS

MAINTENANCE REQUIREMENTS:-

1. ACCUMULATED SILT & SEDIMENT MUST BE REMOVED AT REGULAR INTERVALS AND AFTER EACH MAJOR STORM.
2. SILT & SEDIMENT MUST BE REMOVED FROM OFF THE SITE OR TO A COUNCIL APPROVED LOCATION WITHIN THE SITE, WHERE IT WILL NOT ERODE.
3. THE SEDIMENT FENCES, BALES & TRAPS SHALL BE REGULARLY INSPECTED, ESPECIALLY AFTER RAIN AND KEPT IN GOOD REPAIR AND FUNCTIONING CONDITION AT ALL TIMES.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT SEDIMENT, EROSION & WATER POLLUTION SHALL BE MINIMIZED.
5. THE SEDIMENT TRAPS SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONSTRUCTION AREA HAS BEEN PROPERLY STABILIZED.

AUSTRALIAN HEIGHT DATUM

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NOTES
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ISSUE	AMENDMENT	DATE	ISSUE	AMENDMENT	DATE
A	PRELIMINARY ISSUE	01/03/13			
B	REVISED PRELIMINARY ISSUE	27/03/13			
C	FOR TENDER REVIEW	17/05/13			
D	FOR TENDER REVIEW	16/07/13			
E	FOR TENDER	16/09/13			
F	FOR TENDER (TANK RECONFIGURATION)	14/10/13			
G	FOR TENDER	03/12/13			

CLIENT
University of Technology, Sydney

PROJECT
UTS ALUMNI GREEN
67 THOMAS STREET
ULTIMO, NSW 2007

Warren Smith & Partners Pty Ltd
A 1st Floor, 123 Clarence Street, Sydney 2000 NSW Australia
T 02 9299 1312 F 02 9290 1295 E wsp@warrensmith.com.au
ABN 36 300 430 126

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QUALITY ASSURED COMPANY AS3910 Lic:QAC/8614/0771

TITLE
EROSION AND SEDIMENT CONTROL DETAILS

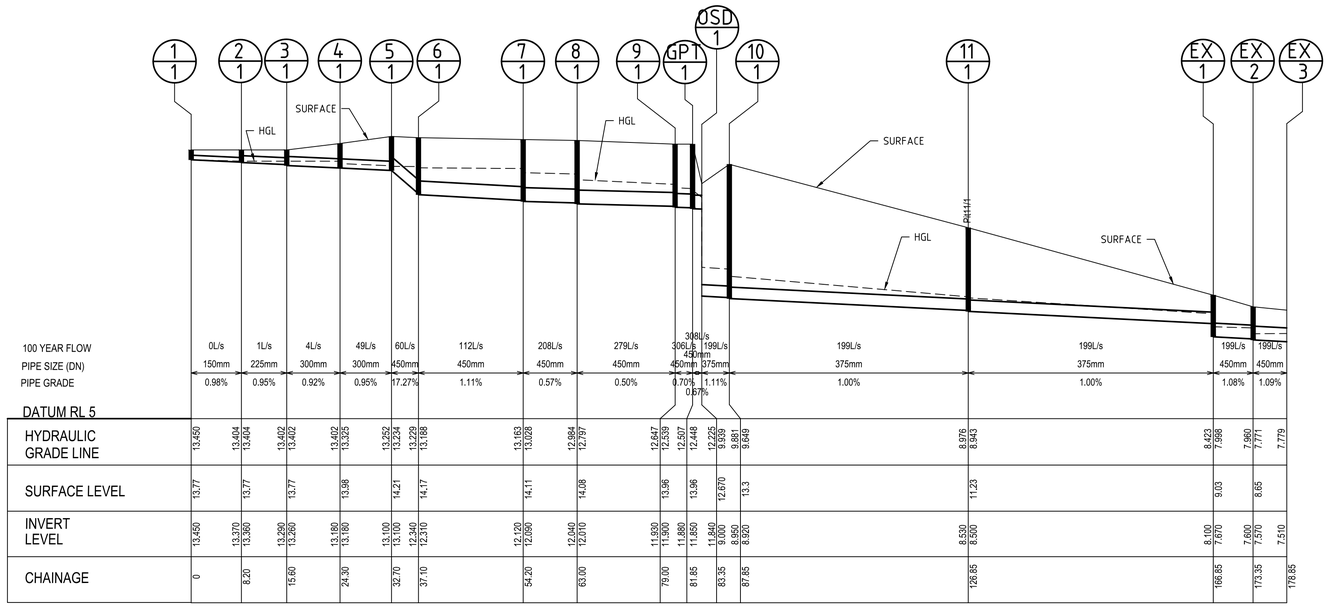
SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
NTS	M.H.	A.M.	L.P.	L.P.

DATE: FEBRUARY 2013
JOB No.: 3724000
DRAWING No.: C-08
ISSUE: G
ISSUED FOR TENDER

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

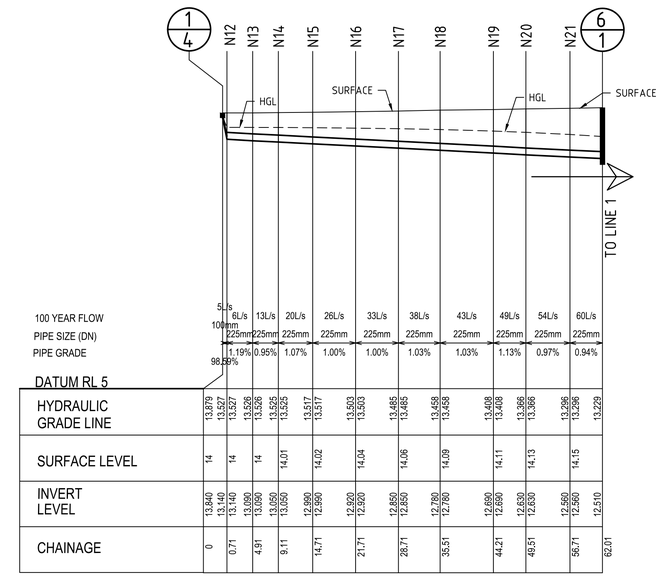
SHEET SIZE: A1

Xrefs: X:\3724-A1H_Civil
Plot Date: 03.12.2013@16:58:46 Login Name: AMarshall Cad File: T:\3724\CAD\Civil\Revision G\3724-C08.dwg



LINE 1

SCALE: HORIZONTAL 1:500
VERTICAL 1:100



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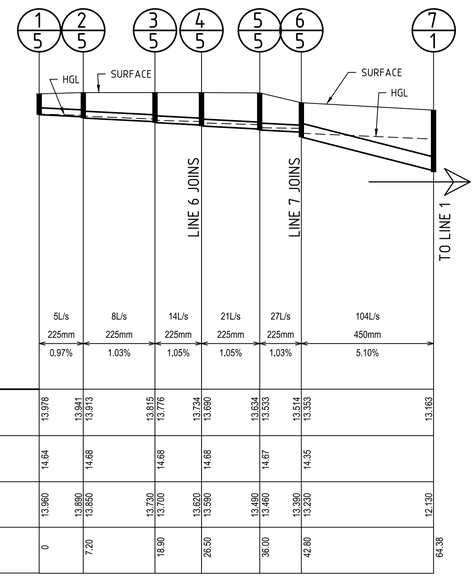
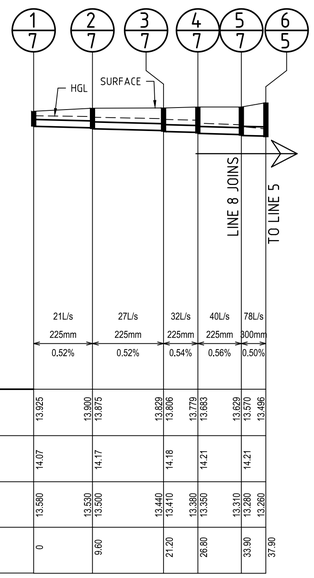
SCALE: HORIZONTAL 1:500
VERTICAL 1:100



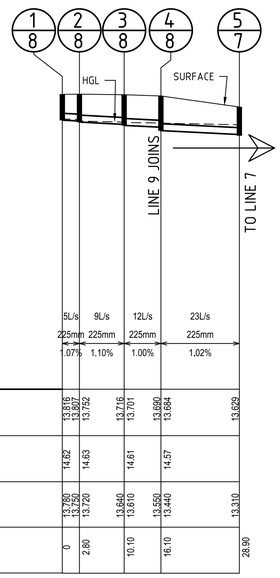
LINE 5

SCALE: HORIZONTAL 1:500
VERTICAL 1:100



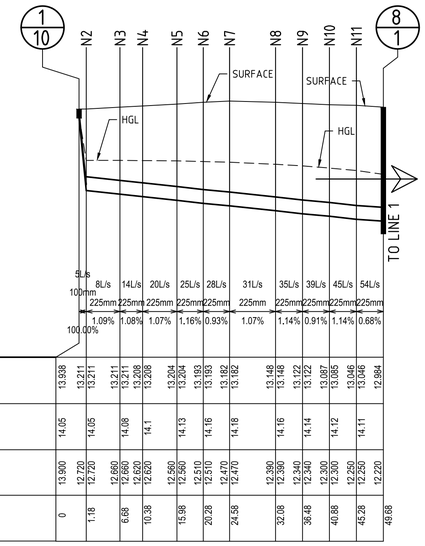
LINE 7

SCALE: HORIZONTAL 1:500
VERTICAL 1:100



LINE 8

SCALE: HORIZONTAL 1:500
VERTICAL 1:100



LINE 10

SCALE: HORIZONTAL 1:500
VERTICAL 1:100

1 0 2 4 6m
SCALE 1:100

6 0 10 20 30m
SCALE 1:500

AUSTRALIAN HEIGHT DATUM

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67 THOMAS STREET
ULTIMO, NSW 2007

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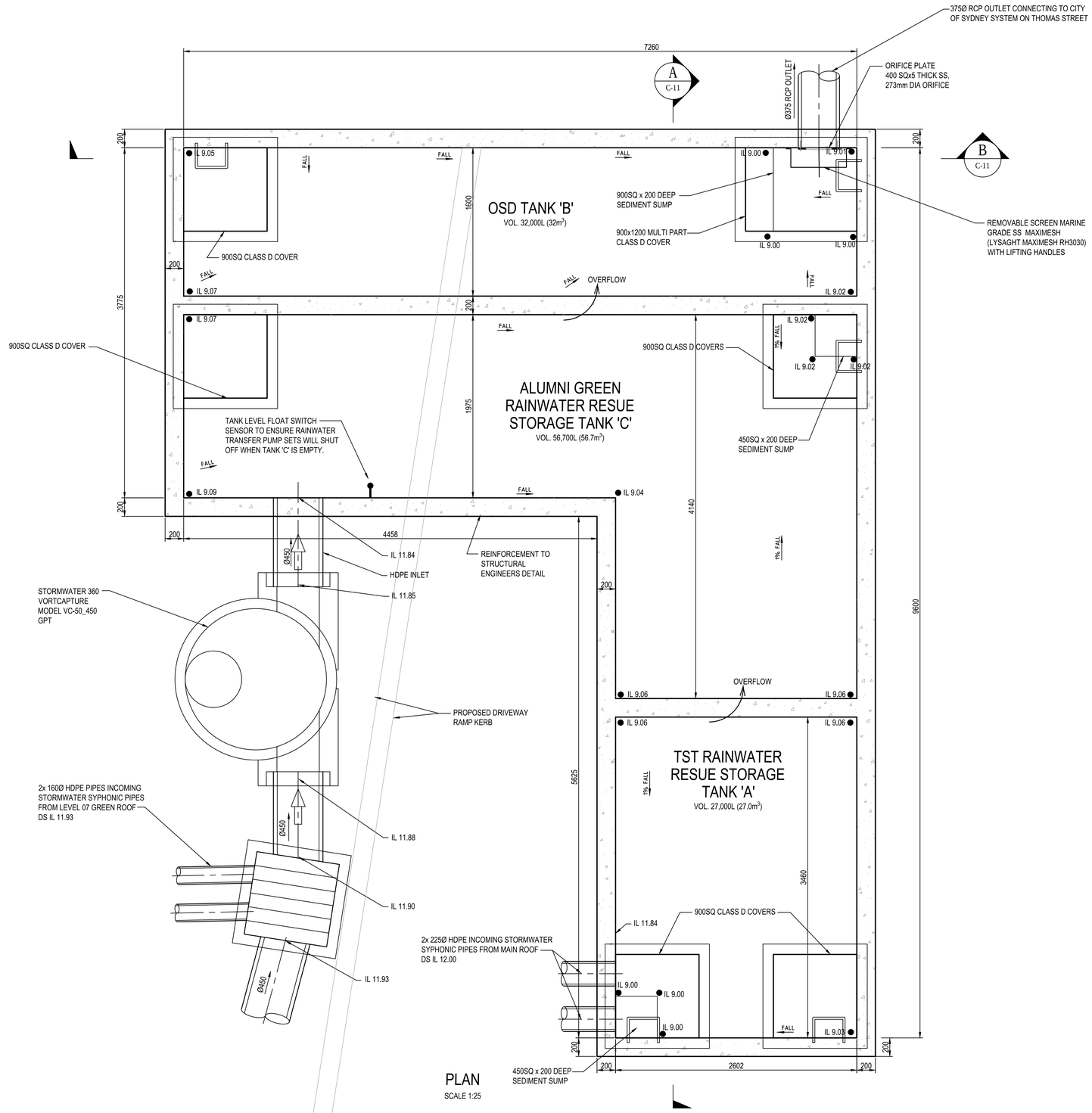
TITLE
STORMWATER DRAINAGE LONGSECTIONS

SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
1:500 (H)	M.H.	A.M.	L.P.	L.P.

DATE FEBRUARY 2013
JOB No. 3724000
DRAWING No. C-09
ISSUE G
ISSUED FOR TENDER

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
SHEET SIZE: A1

Xrefs: X-3724-LHL.Civil
Plot Date: 03.12.2013@16:58:53 Login Name: MJanshall Cad File: T:\3724\CAD\Civil\Revision G\3724-C09.dwg



PLAN
SCALE 1:25

0.3 0 0.5 1 1.5m
SCALE 1:25

AUSTRALIAN HEIGHT DATUM

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TITLE
OSD & RAINWATER REUSE TANK LAYOUT PLAN

SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
1:25	M.H.	A.M.	L.P.	L.P.

DATE	DRAWING No.	ISSUE
FEBRUARY 2013	C-10	G
JOB No. 3724000	ISSUED FOR TENDER	

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SHEET SIZE: A1

Xrefs: X-3724-A1H_Civil
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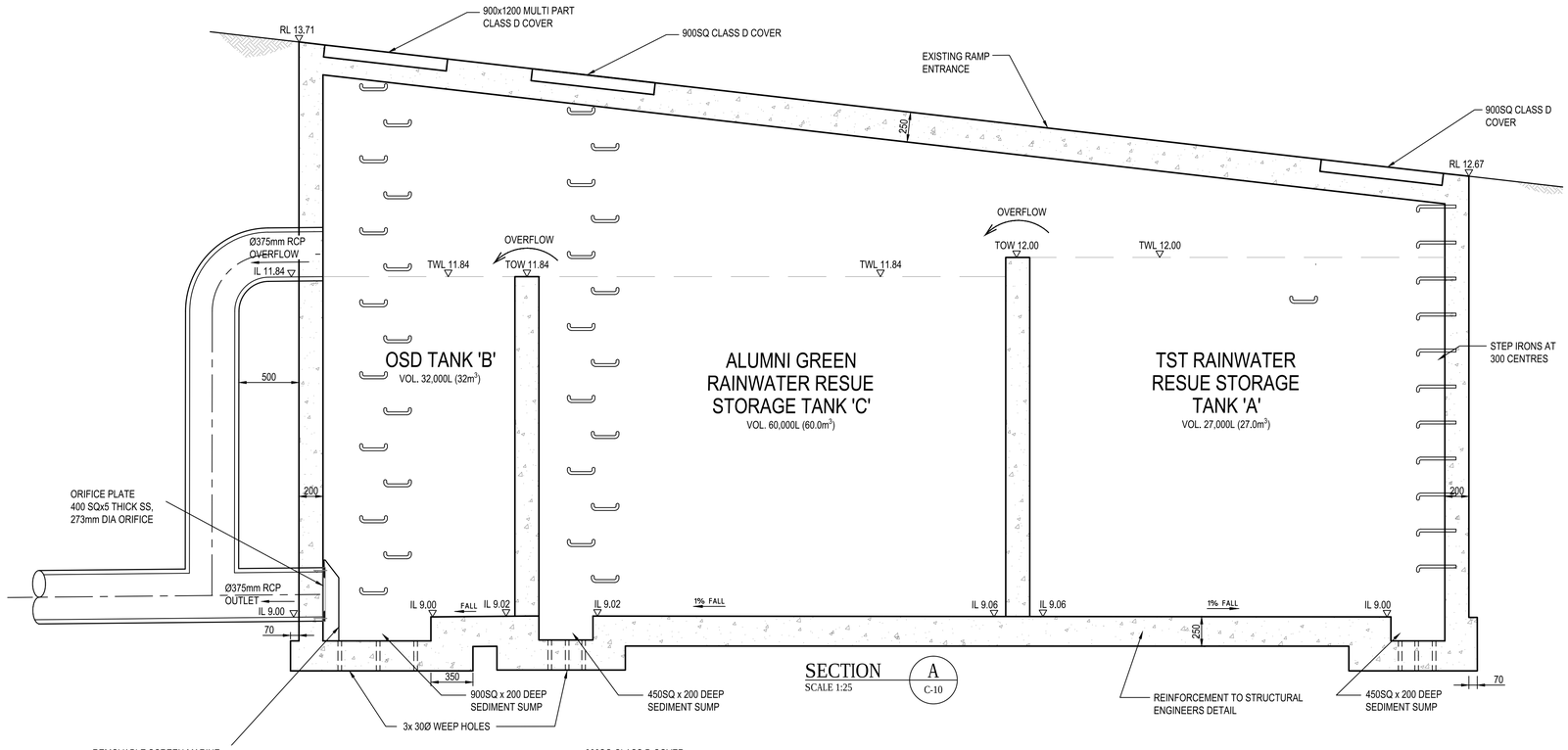

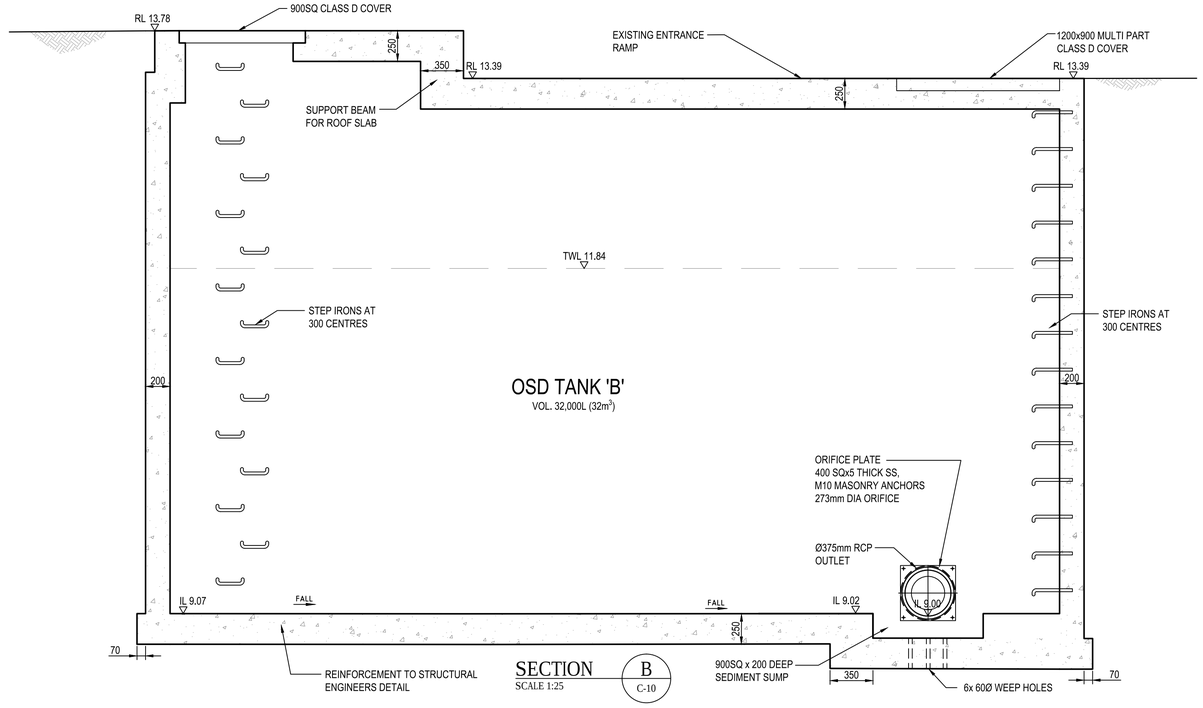

0.3 0 0.5 1 1.5m

SCALE 1:25

AUSTRALIAN HEIGHT DATUM

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TITLE
OSD & RAINWATER REUSE TANK SECTIONS

SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
1:25	M.H.	A.M.	L.P.	L.P.

DATE	DRAWING No.	ISSUE
FEBRUARY 2013	C-11	G
JOB No. 3724000	ISSUED FOR TENDER	

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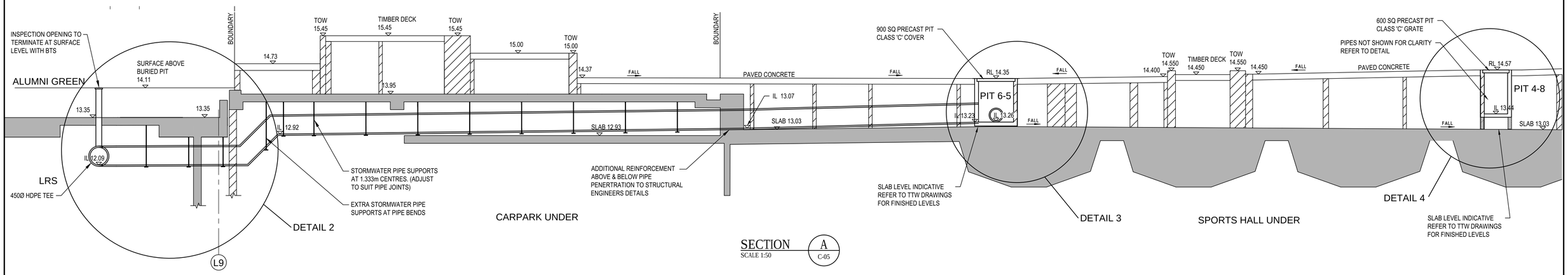
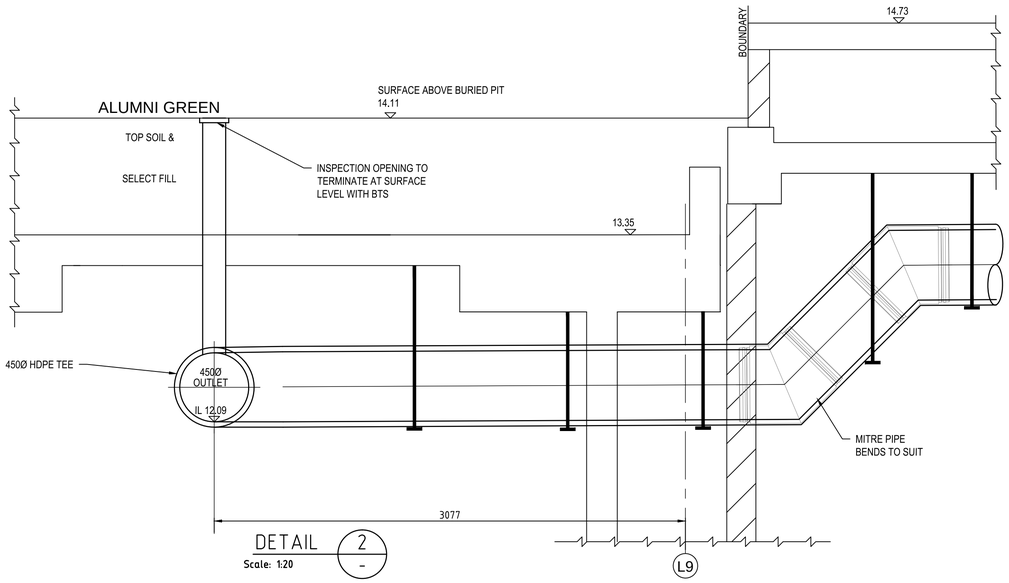
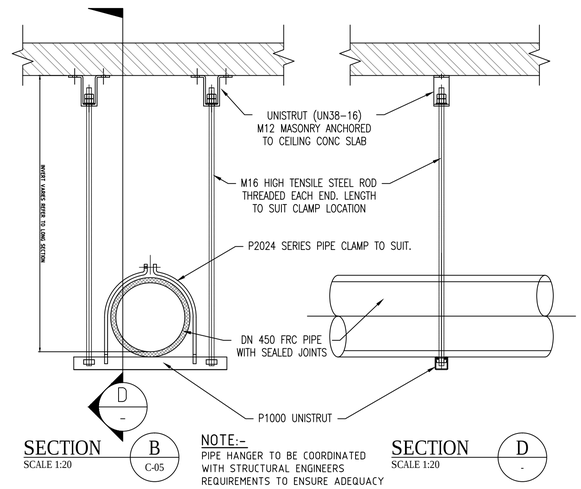
SHEET SIZE: A1



SECTION A
SCALE 1:50
C-05



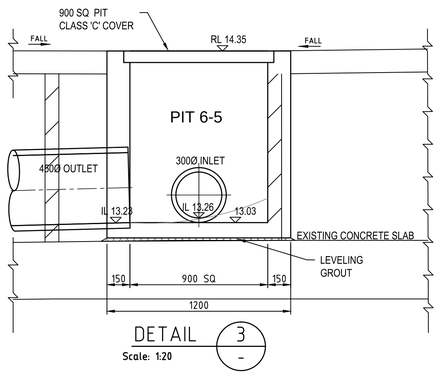
DETAIL 2
Scale: 1:20



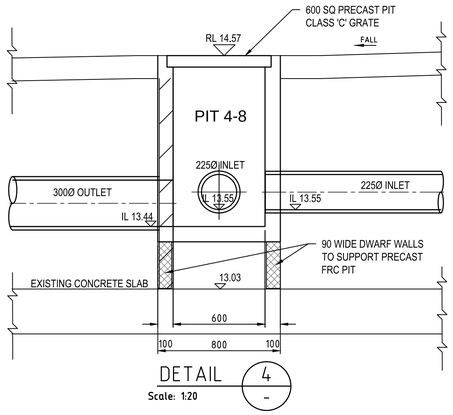
SECTION B
SCALE 1:20
C-05

SECTION D
SCALE 1:20

NOTE:-
PIPE HANGER TO BE COORDINATED WITH STRUCTURAL ENGINEERS REQUIREMENTS TO ENSURE ADEQUACY



DETAIL 3
Scale: 1:20



DETAIL 4
Scale: 1:20

NOTES:-

1. ALL STORMWATER DRAINAGE CAST INTO CONCRETE SHALL BE HDPE PIPES AND FITTINGS, AND WRAPPED IN FLEXIBLE AND COMPRESSIBLE MATERIAL (SEE DETAIL 1 BELOW).
2. ALL STORMWATER DRAINAGE 300mm DIAMETER OR SMALLER ARE TO BE SEWER GRADE uPVC PIPES AND FITTINGS.
3. ALL STORMWATER DRAINAGE LARGER THAN 300mm DIAMETER ARE TO BE HDPE.
4. ALL BORED STORMWATER DRAINAGE PIPEWORK IN THOMAS STREET WHICH WILL BE OWNED BY THE COUNCIL OF THE CITY OF SYDNEY SHALL BE FLOWTITE SN5000 GLASS FIBRE REINFORCED POLYMER (GRP) PIPES AND FITTINGS.
5. ALL NON-BORED STORMWATER DRAINAGE PIPEWORK IN THOMAS STREET SHALL BE REINFORCED CONCRETE PIPES (RCP) AND FITTINGS
6. PIPEWORK FIXED OVER EXISTING SLAB IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.

100 0 200 400 600mm
SCALE 1:10

0.6 0 1 2 3m
SCALE 1:50

AUSTRALIAN HEIGHT DATUM

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PROJECT
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67 THOMAS STREET
ULTIMO, NSW 2007

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TITLE
SECTION THROUGH LRS THROUGH TO SPORTS HALL

SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
1:50	M.H.	A.M.	L.P.	L.P.

DATE: FEBRUARY 2013
JOB No.: 3724000
DRAWING No.: C-12
ISSUE: G
ISSUED FOR TENDER

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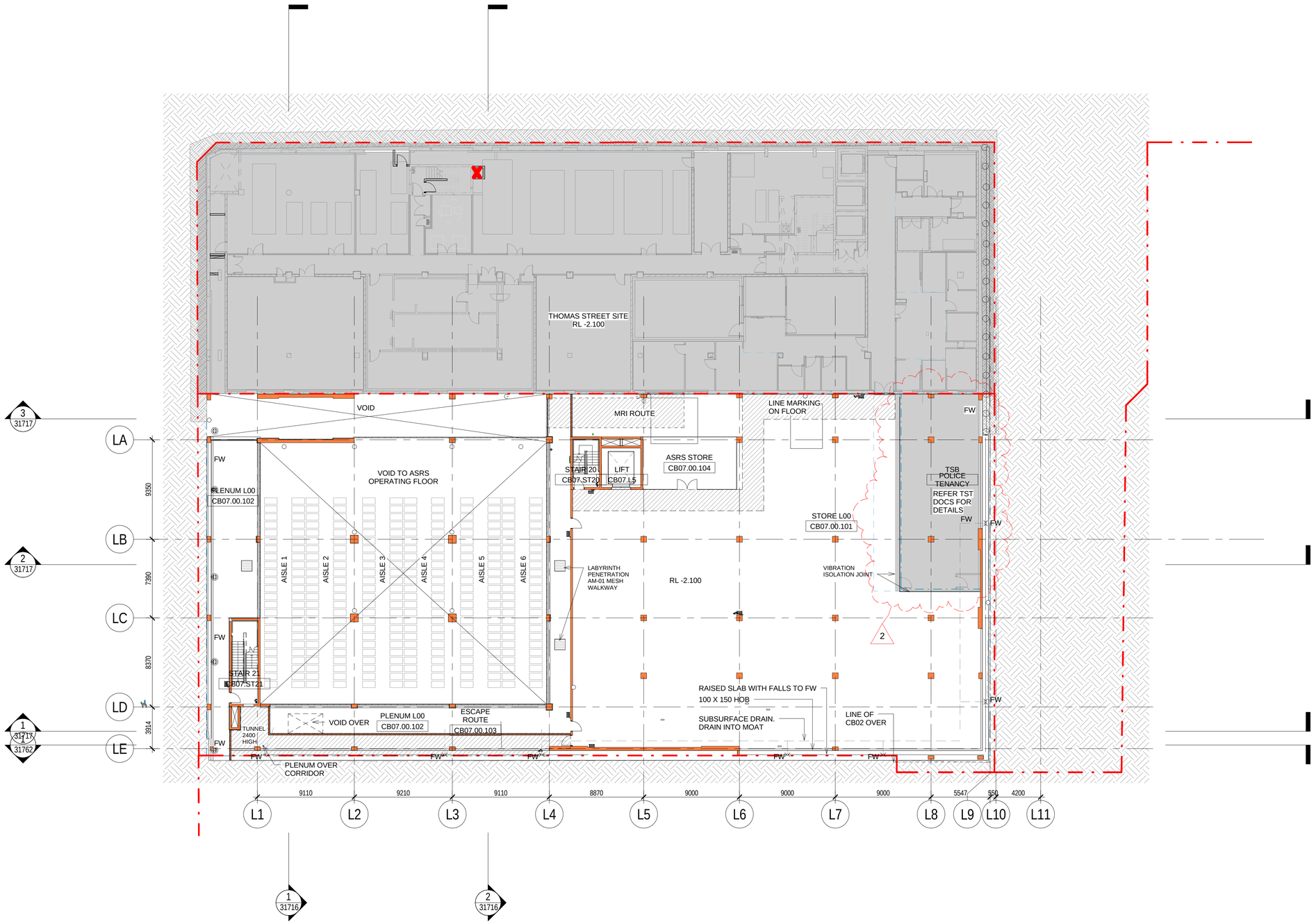
SHEET SIZE: A1

Xrefs: X:\3724-A1H_Civil
Plot Date: 04.12.2013@16:17:37 Login Name: AMarshall Cad File: T:\3724\CAD\Civil\Revision G\3724-C12.dwg

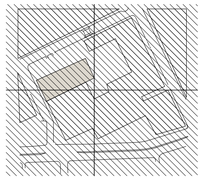
SCHEDULE 2 HASSELL - CITY CAMPUS BROADWAY BUILDING LEVEL 00 LRS –GA PLAN DRAWING



LEVEL 00 (RL -2.100)

1 : 200

REFERENCE MAP



NORTH

0 4 8 16m

1:200

NOTES

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2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. HASSELL SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.
4. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS AND DRAWINGS.

REV	DESCRIPTION	DATE
1	ISSUE FOR CONSTRUCTION PACKAGE 2, 2A	14/12/12
2	REISSUE FOR CONSTRUCTION	07/03/13

CONSULTANT

HASSELL LTD ACN 007 711 435
LEVEL 2
88 CUMBERLAND STREET
SYDNEY NSW 2000 AUSTRALIA
SYDNEY@HASSELL.COM.AU
T +61 2 9101 2000 F +61 2 9101 2100

HASSELL

PROJECT

LIBRARY RETRIEVAL SYSTEM

67 THOMAS STREET
ULTIMO NSW 2007

University of Technology, Sydney
FACILITES MANAGEMENT UNIT
Building 01, Level 19,
15 Broadway, Ultimo NSW 2007
Ph: 9514 - 2830 Fax: 9514 - 4690

DRAWING TITLE

CITY CAMPUS BROADWAY

BUILDING 7

LEVEL 00 ARCHITECTURAL

LRS - GA PLAN - LEVEL 00 (RL -2.100)

UTS PROJECT NUMBER	HASSELL PROJECT NUMBER		
01999-S-08	AX002858		
DRAWN	REVIEWED	APPROVED	DATE APP
TM/LW	CC	RdM	07/03/13
SCALE @ A1	STATUS		
1 : 200	FOR CONSTRUCT	A1	
UTS DRG FILE NAME	UTS DRG FILE NO	REV NO	
CB0700AP	31711	2	

C:_Revit Projects\AX002858_UTS-ASRS_file.rvt
7/03/2013 12:54:52 PM

Original Sheet Size A1 - 841 x 594mm

SCHEDULE 3 UTS PROPOSED RAINWATER REUSE SYSTEM SCHEMATIC SKETCHES

THOMAS STREET

JONES STREET

TANK B

TANK C

TANK A

375 RCP

STW 450

STORMWATER 360 VORTCAPTURE VC 50 GPT

2m SQ SEWER PUMPOUT PIT WITH FRAME. INSTALL 2x900 SQ HINGED CLASS 'D' BOLT DOWN COVERS. POSITIONED OVER PUMPS. SURFACE RL=-5.00, IL=-7.00

OVERFLOW PIPE TO BE PUMPED BACK TO OSD TANK

STW 450

OFRM DN 50

STW DN 65

STW 225

ASRS STORE CB07.00.104

AIR 20 CB07.ST20

LIFT CB07.L5

TSB POLICE TENANCY

RISER PIPE TO PENETRATE UPPER SLAB TO LEVEL 2 BASEMENT RL8.5m

STW 450

STW 450

PLENUM L00 CB07.00.102

SEWER DROPPER FROM HIGH LEVEL TO IN GROUND

RISER PIPE TO PENETRATE SLAB UP TP LEVEL 00 RL-2.1

STORE L00 CB07.00.101

OFRM DN 50 @ 2.5L/s

3200x150x2000 DEEP SUB-SOIL PUMPOUT PIT WITH TRIPLEX SUBMERCIABLE PUMPS. PUMPS TO OPERATE IN DUTY/ASSIST/STANDBY MODE WITH ALTERATING OPERATIONS, BASE IL -8.00 DUTY 2.5 L/s EACH PUMP @44m HEAD, 3.8 kw EACH.

OVERFLOW PIPE TO BE PLUMPED BACK TO OSD TANK

SUB-SOIL PUMPOUT PIT IL-8.00

DN 150

DROPPER TO PENETRATE FLOOR SLAB TO LEVEL OA RL-5.00

OVERFLOW PIPE TO FALL TO SUB-SOIL PUMPOUT PIT

TUNDISH TO DISCHARGE TO SEWER PUMPOUT PIT

OF DN 150

OF DN 150

ELECTRO CHLORINATION UNIT WITH RE-CIRCULATION PUMP

STAR 20 CB07.ST21

PLENUM L00 CB07.00.102

ROUTE CB07.00.103

STW 225

S 100

BUFFER TANK 10m3

STW DN 65

SINGLE RAINWATER TRANSFER PUMP SET

DN 40

IRRRM DN 40 @ 1.5L/s

SEWER DROPPER TO PENETRATE FLOOR SLAB TO LEVEL OA RL-5.00

PLUMBER TO PROVIDE POTABLE WATER TOP-UP PIPEWORK & APPROPRIATE BACKFLOW PREVENTION.

UV DISINFECTION

25ℓm FILTER BAG

DUAL VARIABLE SPEED PRESSURE PUMPSET

SOLENOID VALVE ON INLET

POLYPROPYLENE BUFFER TANK 10m3 (HEIGHT 2.5m DIAMATER 2.26m) NOTE: APPROX. 2m OF HEAD ROOM ABOVE TANK)

50mm FLOAT BALL VALVE

100ℓm AUTOMATIC BACKWASH FILTER

RISER PIPE TO PENETRATE UPPER SLAB ONTO ALUMNI GREEN FOR IRRIGATION

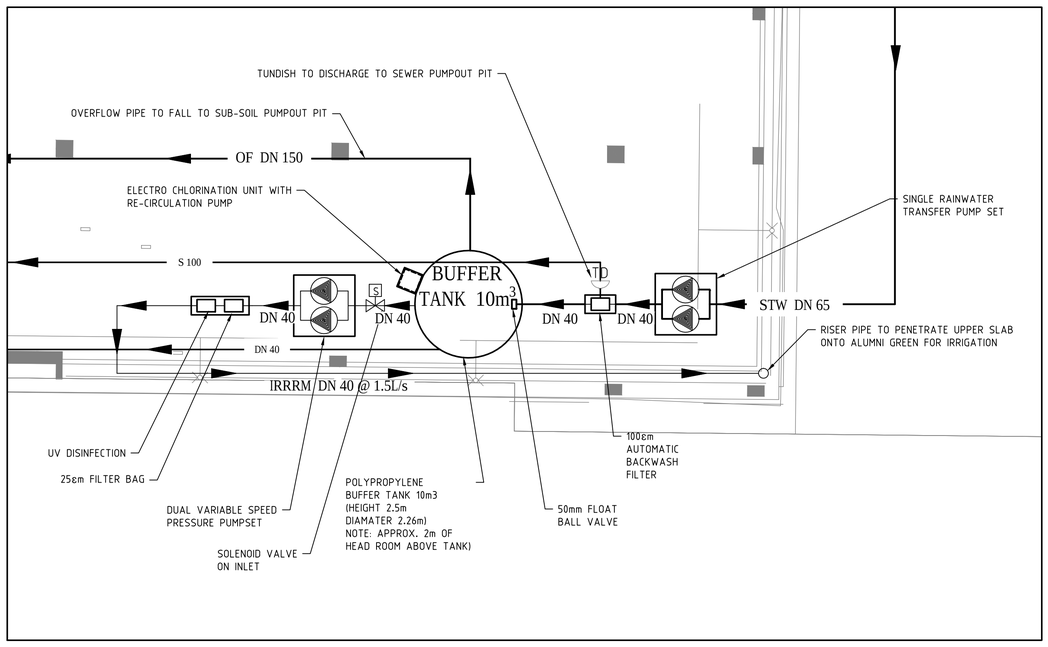
STW 250

STW 160

STW 300

RAINWATER RESUE & TREATMENT SYSTEM PLAN

SCALE:- 1:200



RAINWATER TANK PLAN

SCALE:- 1:100

1 0 2 4 6m

SCALE 1:100

2 0 4 8 12m

SCALE 1:200

AUSTRALIAN HEIGHT DATUM

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EC4474 ASSESSED ISO 9001 Lic:QAC/R61/0771

TITLE

ALUMNI GREEN
RAINWATER REUSE & TREATMENT SYSTEM PLAN

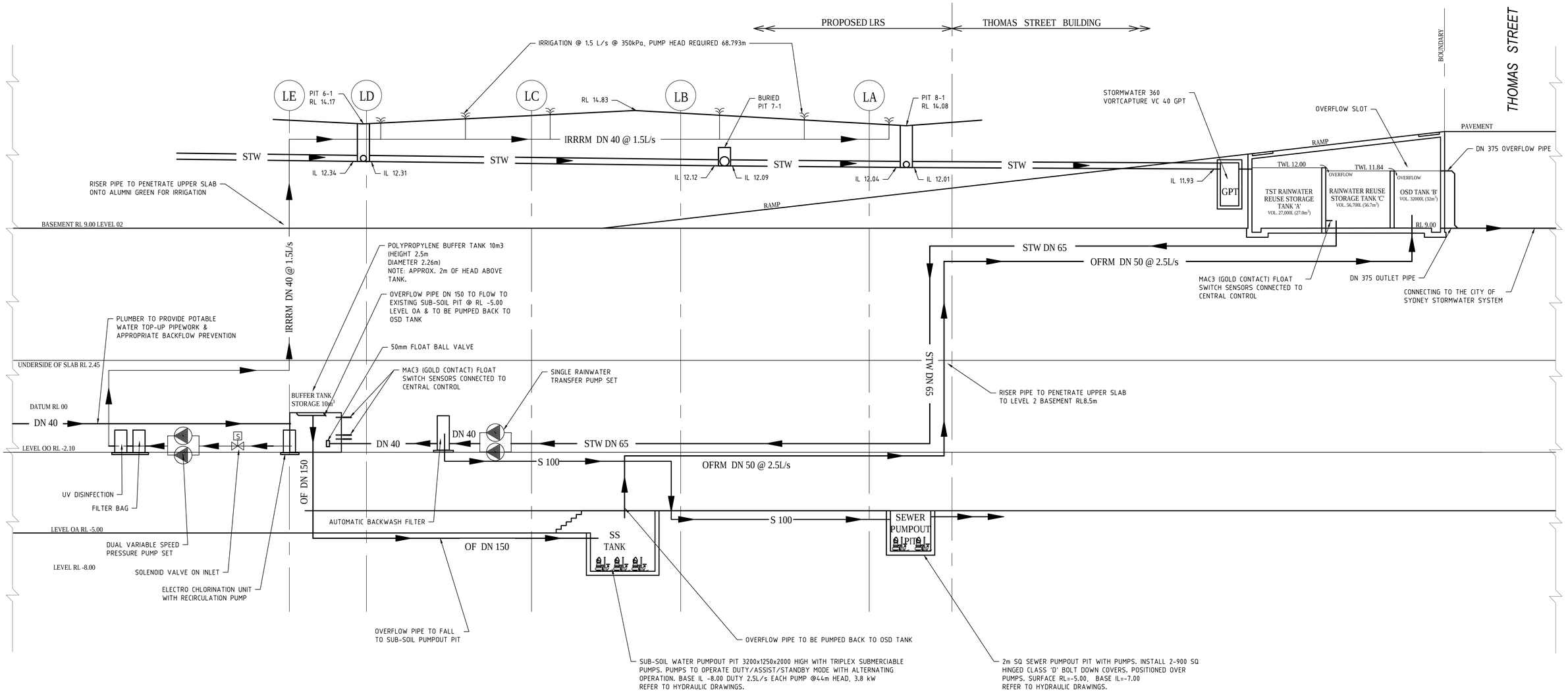
SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
1:200	C.J.N.	L.S.	L.P.	L.P.

DATE	DRAWING No.	ISSUE
JULY 2013	SK-01	C
JOB No. 3724000	ISSUED FOR TENDER	

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

SHEET SIZE: A1

Xrefs: X-SURV, X-ARCH, X-STW, X-UTIL, XL-PLot-ref-00
Plot Date: 04.12.2013@10:43:16 Login Name: Ahmihail
Cad File: T:\3724\CAD\Civil\Revision G\3724-SK-01.dwg



RAINWATER REUSE & TREATMENT SYSTEM SECTION

SCALE:- 1:100

NOTES:

FLOAT SWITCH OPERATION
HH - ALARM SENT
H - SHUT DOWN OF TRANSFER PUMPS
L - START UP OF TRANSFER PUMPS
LL - SWITCHOVER TO POTABLE WATER TOP UP

1 0 2 4 6m
SCALE 1:100

2 0 4 8 12m
SCALE 1:200

AUSTRALIAN HEIGHT DATUM

DO NOT SCALE FROM DRAWINGS, CHECK & VERIFY ALL DIMENSIONS & LEVELS BEFORE COMMENCEMENT OF ANY WORK.

THIS DRAWING IS NOT TO BE COPIED IN PART OR WHOLE WITHOUT WRITTEN PERMISSION FROM WARREN SMITH AND PARTNERS.

NORTH POINT

NOTES
1. FOR TITLE, DRAWING LIST, LEGEND, ABBREVIATIONS & NOTES REFER TO DRAWING C-01 & C-02

ISSUE	AMENDMENT	DATE	ISSUE	AMENDMENT	DATE
A	FOR TENDER REVIEW	24/07/13			
B	FOR TENDER	16/09/13			
C	FOR TENDER	03/12/13			

CLIENT
University of Technology, Sydney

PROJECT
UTS ALUMNI GREEN
67 THOMAS STREET
ULTIMO, NSW 2007

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TITLE
ALUMNI GREEN
RAINWATER REUSE & TREATMENT
SYSTEM SECTION

SCALE	DRAWN	DESIGNED	CHECKED	APPROVED
1:100	C.J.N.	L.S.	L.P.	L.P.

DATE: JULY 2013
JOB No.: 3724000
DRAWING No.: SK-02
ISSUE: C
ISSUED FOR TENDER

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

SHEET SIZE: A1

Cad File: T:\3724CAD\Cad\Revision C\3724-SK-02.dwg
Xrefs: Y:\SIRV_SAR\CIR_XSTW_XUTILS_XLAP_d.mm(400
Plot Date: 04.12.2013@16:57:52 Login Name: Mkashali

Appendix C

Correspondence with Sydney Water

Andrew Crouch

From: Stormwater <Stormwater@sydneywater.com.au>
Sent: Friday, August 17, 2018 11:10 AM
To: Andrew Crouch
Subject: [External] RE: UTS Project PSD and SSR Requirements

Follow Up Flag: Follow up
Flag Status: Flagged

Andrew,

If the stormwater discharge from the development site is directed to Harris Street, then On Site Detention is not required.

Best Regards

Jeya Jeyadevan | **Senior Capability Assessor**

Customer Delivery | Sydney Water
Level 7, 1 Smith St Parramatta NSW 2150
PO Box 399 Parramatta NSW 2124
T 8849 6118 | **Mobile** 0409 318 827 | **Email** jeya.jeyadevan@sydneywater.com.au
sydneywater.com.au

From: Andrew Crouch [mailto:Andrew.Crouch@arup.com]
Sent: Wednesday, 15 August 2018 10:03 AM
To: Stormwater <Stormwater@sydneywater.com.au>
Subject: UTS Project PSD and SSR Requirements

Good morning,

We are currently working on a project for UTS involving planning for the future redevelopment of a portion of the Ultimo Campus at Harris Street. The study area is shown in the figure below and is approximately 8,250m^2 in size.

The proposal involves the construction of new, taller buildings. As the site is already fully covered by buildings, there would not be an increase in the site impervious area.

We are seeking clarification regarding the potential need for on-site detention for the project. If OSD is required, are you able to provide information regarding the Permitted Site Discharge (PSD) and Site Storage Requirement (SSR)?

Regards,

Andrew Crouch
Senior Civil Engineer | NSW & ACT Transport
BEng (Hons-1) CPEng NER MIEAust

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