

**RAILWAY LANE, WICKHAM. N.S.W. 2293.**

## - CIVIL DA DRAWINGS -



### DRAWING SCHEDULE

DRG No.	DRAWING TITLE
C00 DA	COVER SHEET AND DRAWING SCHEDULE
C01 DA	EROSION AND SEDIMENT CONTROL PLAN
C02 DA	BASEMENT LEVEL 2 STORMWATER MANAGEMENT PLAN
C03 DA	GROUND LEVEL STORMWATER MANAGEMENT PLAN
C04 DA	CIVIL DETAILS



VERIFIER: A.BROWN

JOB MANAGER: C. SMITH

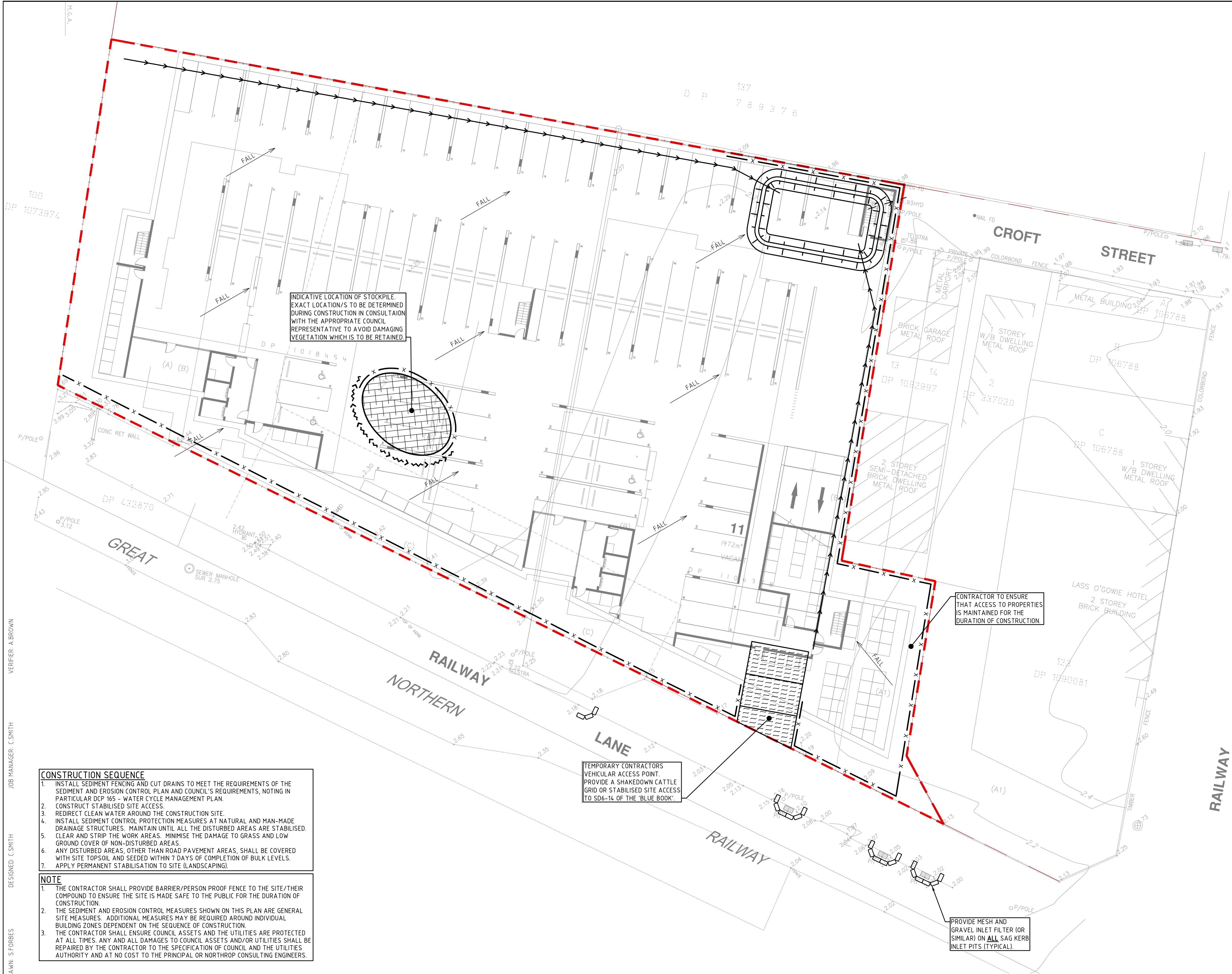
DESIGNED: C.SMITH

DRAWN: S.FORBES

**DA APPROVAL - NOT FOR CONSTRUCTION**

REVISION		DESCRIPTION		ISSUED	VER'D	APP'D	DATE	CLIENT <div>PETER BLAKE</div>	ARCHITECT <div></div>	ALL SETOUT TO ARCHITECT'S DRAWINGS. DIMENSIONS TO BE VERIFIED WITH THE ARCHITECT AND ON SITE BEFORE MAKING SHOP DRAWINGS OR COMMENCING WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.	 <div>Newcastle Suite 4, 215 Pacific Hwy, Charlestown NSW 2290 P.O. Box 180, Charlestown NSW 2290 Ph (02) 4943 1777 Fax (02) 4943 1577 Email newcastle@northrop.com.au ABN 81 094 433 100</div>	PROJECT <div>RAILWAY LANE, WICKHAM. N.S.W. 2293.</div>	DRAWING TITLE <div>COVDER SHEET AND DRAWING SCHEDULE</div>	JOB NUMBER <div>NL161497</div>	
A	ISSUED FOR DA APPROVAL		SF		CS	01.04.16	DRAWING NUMBER							REVISION	
B	RE-ISSUED FOR DA APPROVAL		AG		CS	07.10.16	C00 DA							B	
							DRAWING SHEET SIZE - A1								
DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN OBTAINED								THE COPYRIGHT OF THIS DRAWING REMAINS WITH NORTHROP							





- LEGEND**
- DENOTES PROPOSED SITE BOUNDARY.
  - DENOTES 2m WIDE x 0.15m DEEP CUT EARTH BANK (LOW FLOW).
  - DENOTES 2m WIDE GEOFABRIC LINED OVERFLOW WEIR.
  - DENOTES CLEAN WATER TURFED SWALE. (2m WIDE x 0.2m DEEP)
  - DENOTES SEDIMENT CONTROL FENCE.
  - DENOTES MESH AND GRAVEL INLET FILTER.
  - DENOTES STABILISED SITE ACCESS.
  - DENOTES PROPOSED STOCKPILE LOCATION.
  - DENOTES PROPOSED DIRECTION OF FALL IN STRIPPED SURFACE.
  - DENOTES PROPOSED SANDBAG OR GEOTEXTILE SOCK FILLED WITH NO FINES GRAVEL, PLACED IN INVERT OF DISH DRAIN.

- EROSION AND SEDIMENTATION CONTROL NOTES**
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES MUST BE APPROPRIATE FOR THE SEDIMENT TYPE(S) OF THE SOILS ON-SITE, IN ACCORDANCE WITH THE 'BLUE BOOK' (MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION, LANDCOM, 2004), OR OTHER CURRENT RECOGNISED INDUSTRY STANDARDS FOR EROSION AND SEDIMENT CONTROL FOR AUSTRALIAN CONDITIONS. THIS INCLUDES SEDIMENT TRAPS AND LINING OF CHANNELS.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING A DETAILED WRITTEN RECORD OF ALL EROSION AND SEDIMENT CONTROLS ON-SITE DURING THE CONSTRUCTION PERIOD. THIS RECORD SHALL BE UPDATED ON A DAILY BASIS AND SHALL CONTAIN DETAILS ON THE CONDITION OF CONTROLS AND ANY FALL MAINTENANCE, CLEANING AND BREACHES. THIS RECORD SHALL BE KEPT ON-SITE AT ALL TIMES AND SHALL BE MADE AVAILABLE FOR INSPECTION BY THE PRINCIPAL CERTIFYING AUTHORITY AND THE SUPERINTENDENT DURING NORMAL WORKING HOURS.
  - INSTALL SEDIMENT PROTECTION FILTERS ON ALL NEW AND EXISTING STORMWATER INLET PITS IN ACCORDANCE WITH EITHER THE MESH AND GRAVEL INLET FILTER DETAIL SD6-11 OR THE GEOTEXTILE INLET FILTER DETAIL SD6-12 OF THE 'BLUE BOOK'.
  - ESTABLISH ALL REQUIRED SEDIMENT FENCES IN ACCORDANCE WITH DETAIL SD6-8 OF THE 'BLUE BOOK'.
  - INSTALL SEDIMENT FENCING OR OTHER SEDIMENT CONTROL DEVICES, AROUND INDIVIDUAL BUILDING ZONES/AREAS AS REQUIRED AND AS DIRECTED BY THE SUPERINTENDENT OR APPROPRIATE COUNCIL OFFICER.
  - ALL TRENCHES INCLUDING ALL SERVICE TRENCHES AND SWALE EXCAVATION SHALL BE SIDE-CAST TO THE HIGH SIDE AND CLOSED AT THE END OF EACH DAYS WORK.
  - THE CONTRACTOR SHALL ENSURE THAT ALL VEGETATION (TREE, SHRUB & GROUND COVER) WHICH IS TO BE RETAINED SHALL BE PROTECTED DURING THE DURATION OF CONSTRUCTION.
  - ALL VEGETATION TO BE REMOVED SHALL BE MULCHED ON-SITE AND SPREAD/STOCKPILED AS DIRECTED BY THE SUPERINTENDENT.
  - STRIP TOPSOIL IN AREAS DESIGNATED FOR STRIPPING AND STOCKPILE FOR RE-USE AS REQUIRED. ANY SURPLUS MATERIAL SHALL BE SPREAD ON-SITE AS DIRECTED BY THE SUPERINTENDENT OR REMOVED FROM SITE AND DISPOSED OF IN ACCORDANCE WITH EPA GUIDELINES.
  - CONSTRUCT AND MAINTAIN ALL MATERIAL STOCKPILES IN ACCORDANCE WITH DETAIL SD4-1 OF THE 'BLUE BOOK' (INCLUDING CUT-OFF SWALES TO THE HIGH SIDE AND SEDIMENT FENCES TO THE LOW SIDE).
  - ENSURE STOCKPILES DO NOT EXCEED 2.0m HIGH. PROVIDE WIND AND RAIN EROSION PROTECTION AS REQUIRED IN ACCORDANCE WITH THE 'BLUE BOOK'.
  - PROVIDE WATER TRUCKS OR SPRINKLER DEVICES DURING CONSTRUCTION AS REQUIRED TO SUPPRESS DUST.
  - ONCE CUT/FILL OPERATIONS HAVE BEEN FINALIZED ALL DISTURBED AREAS THAT ARE NOT BEING WORKED ON SHALL BE RE-VEGETATED AS SOON AS IS PRACTICAL.

- BASIN MANAGEMENT NOTES**
- PRIOR TO ANY FORECAST WEATHER EVENT, LIKELY TO RESULT IN SEDIMENT LADEN RUNOFF ON THE SITE, ANY EXISTING DETENTION BASINS/TRAPS SHALL BE DEWATERED TO PROVIDE SUFFICIENT CAPACITY TO CAPTURE SEDIMENT LADEN WATER FROM THE SITE.
  - ANY SEDIMENT LADEN WATER CAPTURED ON-SITE MUST BE TREATED TO ENSURE IT WILL ACHIEVE COUNCIL'S WATER QUALITY OBJECTIVES PRIOR TO ITS RELEASE FROM SITE. A SAMPLE OF THE RELEASED TREATED WATER MUST BE KEPT ON-SITE IN A CLEAR CONTAINER WITH THE SAMPLE DATE RECORDED.
  - NO ALUMINIUM BASED PRODUCTS MAY BE USED TO TREAT TURBID WATER (FLOCCULATING/COAGULANTS) ON-SITE WITHOUT THE PRIOR WRITTEN PERMISSION FROM AN APPROPRIATE COUNCIL OFFICER. THE APPLICANT MUST HAVE DEMONSTRATED ABILITY TO USE SUCH PRODUCTS CORRECTLY AND WITHOUT ENVIRONMENTAL HARM PRIOR TO ANY APPROVAL.
  - THE CHEMICAL/AGENT (FLOCCULATING/COAGULANTS) USED IN TYPE D AND TYPE F BASINS TO TREAT TURBID WATER CAPTURED IN THE BASIN MUST BE APPLIED IN CONCENTRATIONS SUFFICIENT TO ACHIEVE COUNCIL'S WATER QUALITY OBJECTIVES (TSS < 50mg/L, TURBIDITY < 60 NTU, 6.5 < pH < 8.5) WITHIN THE 5-DAY RAINFALL DEPTH USED TO CALCULATE THE CAPACITY OF THE BASIN, AFTER A RAINFALL EVENT.
  - ALL MANUFACTURERS INSTRUCTIONS MUST BE FOLLOWED FOR THE USE OF ANY CHEMICALS/AGENTS USED ON-SITE, EXCEPT WHERE APPROVED BY THE RESPONSIBLE PERSON OR AN APPROPRIATE COUNCIL OFFICER.
  - SUFFICIENT QUANTITIES OF CHEMICALS/AGENTS TO TREAT TURBID WATER (FLOCCULATING/COAGULANTS) MUST BE PLACED SUCH THAT WATER ENTERING THE BASINS/SEDIMENT TRAP MIXES WITH THE CHEMICALS/AGENTS AND IS CARRIED INTO THE BASIN/TRAP.
  - ANY BASIN MUST BE DEWATERED AS SOON AS PRACTICAL, ONCE WATER CAPTURED IN THE BASIN ACHIEVES COUNCIL'S WATER QUALITY OBJECTIVES.
  - INSPECT THE SEDIMENT BASINS AFTER EACH RAINFALL EVENT AND/OR WEEKLY. ENSURE THAT ALL SEDIMENT IS REMOVED ONCE THE SEDIMENT STORAGE ZONE IS FULL. ENSURE THAT OUTLET AND EMERGENCY SPILLWAY WORKS ARE MAINTAINED IN A FULLY OPERATIONAL CONDITION AT ALL TIMES.

**CONSTRUCTION SEQUENCE**

- INSTALL SEDIMENT FENCING AND CUT DRAINS TO MEET THE REQUIREMENTS OF THE SEDIMENT AND EROSION CONTROL PLAN AND COUNCIL'S REQUIREMENTS, NOTING IN PARTICULAR DCP 165 - WATER CYCLE MANAGEMENT PLAN.
- CONSTRUCT STABILISED SITE ACCESS.
- REDIRECT CLEAN WATER AROUND THE CONSTRUCTION SITE.
- INSTALL SEDIMENT CONTROL PROTECTION MEASURES AT NATURAL AND MAN-MADE DRAINAGE STRUCTURES. MAINTAIN UNTIL ALL THE DISTURBED AREAS ARE STABILISED.
- CLEAR AND STRIP THE WORK AREAS. MINIMISE THE DAMAGE TO GRASS AND LOW GROUND COVER OF NON-DISTURBED AREAS.
- ANY DISTURBED AREAS, OTHER THAN ROAD PAVEMENT AREAS, SHALL BE COVERED WITH SITE TOPSOIL AND SEEDED WITHIN 7 DAYS OF COMPLETION OF BULK LEVELS.
- APPLY PERMANENT STABILISATION TO SITE (LANDSCAPING).

**NOTE**

- THE CONTRACTOR SHALL PROVIDE BARRIER/PERSON PROOF FENCE TO THE SITE/THEIR COMPOUND TO ENSURE THE SITE IS MADE SAFE TO THE PUBLIC FOR THE DURATION OF CONSTRUCTION.
- THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN ON THIS PLAN ARE GENERAL SITE MEASURES. ADDITIONAL MEASURES MAY BE REQUIRED AROUND INDIVIDUAL BUILDING ZONES DEPENDENT ON THE SEQUENCE OF CONSTRUCTION.
- THE CONTRACTOR SHALL ENSURE COUNCIL ASSETS AND THE UTILITIES ARE PROTECTED AT ALL TIMES. ANY AND ALL DAMAGES TO COUNCIL ASSETS AND/OR UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SPECIFICATION OF COUNCIL AND THE UTILITIES AUTHORITY AND AT NO COST TO THE PRINCIPAL OR NORTHPROP CONSULTING ENGINEERS.

DRAWN: S. FORBES  
DESIGNED: C. SMITH  
JOB MANAGER: C. SMITH  
VERIFIER: A. BROWN

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
A	ISSUED FOR DA APPROVAL	SF		CS	01.04.16
B	RE-ISSUED FOR DA APPROVAL	AG		CS	07.10.16

CLIENT	PETER BLAKE
ARCHITECT	EJE architecture
DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED	

ARCHITECT	EJE architecture
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PLANS 1:200
0 2 4 6 8 10m

<b>NORTHPROP</b> Newcastle Suite 4, 215 Pacific Hwy, Charlestown NSW 2290 P.O. Box 180, Charlestown NSW 2290 Ph (02) 4943 1777 Fax (02) 4943 1577 Email newcastle@northprop.com.au ABN 81 094 433 100
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PROJECT	RAILWAY LANE, WICKHAM. N.S.W. 2293.
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DRAWING TITLE	EROSION AND SEDIMENT CONTROL PLAN
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JOB NUMBER	NL161497
DRAWING NUMBER	C01 DA
REVISION	B
DRAWING SHEET SIZE = A1	





- LEGEND**
- Denotes proposed site boundary.
- Denotes approximate extent of proposed building. Refer to architect's drawings for exact location and details.
- Denotes extent of proposed AC vehicular pavement. Detail to be provided at CC stage.
- Denotes extent of proposed concrete vehicular pavement. Detail to be provided at CC stage.
- FFL -3.90**

Denotes proposed finished floor level.
- FW**  
CL -3.80

Denotes proposed 150 floor waste cast into carpark slab with cover level. Refer to drawing C140 for details.
- PIT.1**  
CL -3.80

Denotes proposed stormwater pit and cover level. Detail to be provided at CC stage.
- Denotes proposed stormwater drainage pipe.  
- Fixed to underside of slab for basement level 1 using proprietary fixings. (Pump out pit not required)  
- Stormwater laid conventionally in basement level 2. (GTD not required)
- Denotes proposed HDPE stormwater pump pipe.
- GTD**

Denotes precast grated trench drain (ACO or similar) with heel guard class C galvanised steel grate and frames. (Basement level 1 only).
- FALL**

Denotes proposed finished surface level.
- Denotes existing surface level.

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JOB MANAGER: C. SMITH  
DESIGNED: C. SMITH  
DRAWN: S. FORBES

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PROJECT	RAILWAY LANE, WICKHAM. N.S.W. 2293.
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DRAWING TITLE	BASEMENT LEVEL 2 STORMWATER MANAGEMENT PLAN
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JOB NUMBER	NL161497
DRAWING NUMBER	C02 DA
REVISION	B
DRAWING SHEET SIZE = A1	

DA APPROVAL - NOT FOR CONSTRUCTION







DA APPROVAL - NOT FOR CONSTRUCTION													
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A		ISSUED FOR DA APPROVAL		SF		CS	01.04.16	PETER BLAKE			RAILWAY LANE, WICKHAM. N.S.W. 2293.	GROUND FLOOR STORMWATER MANAGEMENT PLAN	NL161497
B		RE-ISSUED FOR DA APPROVAL		AG		CS	07.10.16						
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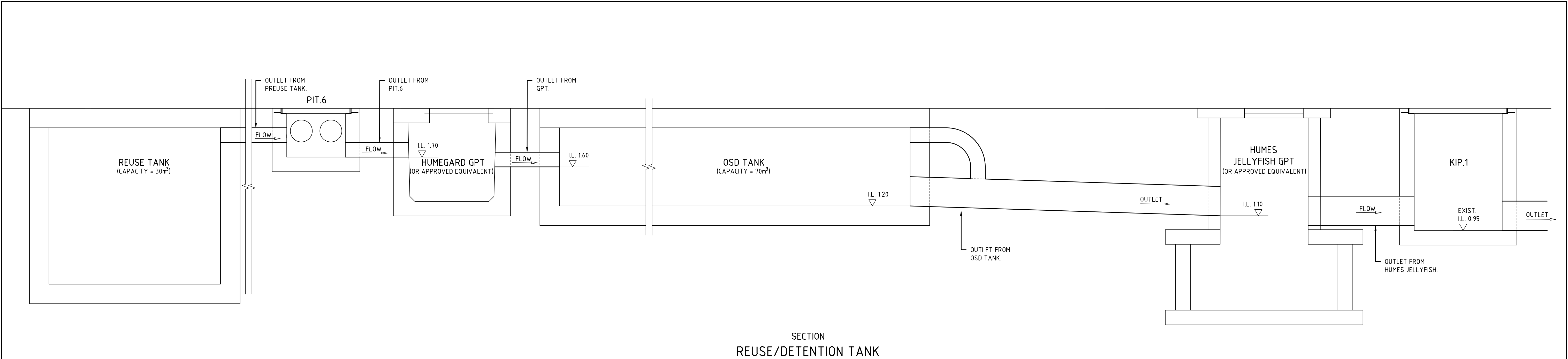


PLANS 1:200



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SECTION  
REUSE/DETENTION TANK

VERIFIER: A. BROWN  
JOB MANAGER: C. SMITH  
DESIGNED: C. SMITH  
DRAWN: S. FORBES

DA APPROVAL - NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE	CLIENT	ARCHITECT	DETAILS 1:20		PROJECT	DRAWING TITLE	JOB NUMBER	
A	ISSUED FOR DA APPROVAL	SF		CS	01.04.16	PETER BLAKE		ALL SETOUT TO ARCHITECT'S DRAWINGS. DIMENSIONS TO BE VERIFIED WITH THE ARCHITECT AND ON SITE BEFORE MAKING SHOP DRAWINGS OR COMMENCING WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.	 Newcastle Suite 4, 215 Pacific Hwy, Charlestown NSW 2290 P.O. Box 180, Charlestown NSW 2290 Ph (02) 4943 1777 Fax (02) 4943 1577 Email newcastle@northrop.com.au ABN 81 094 433 100	RAILWAY LANE, WICKHAM. N.S.W. 2293.	CIVIL DETAILS	NL161497	
B	RE-ISSUED FOR DA APPROVAL	AG		CS	07.10.16							DRAWING NUMBER	REVISION
												C06 DA	B
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