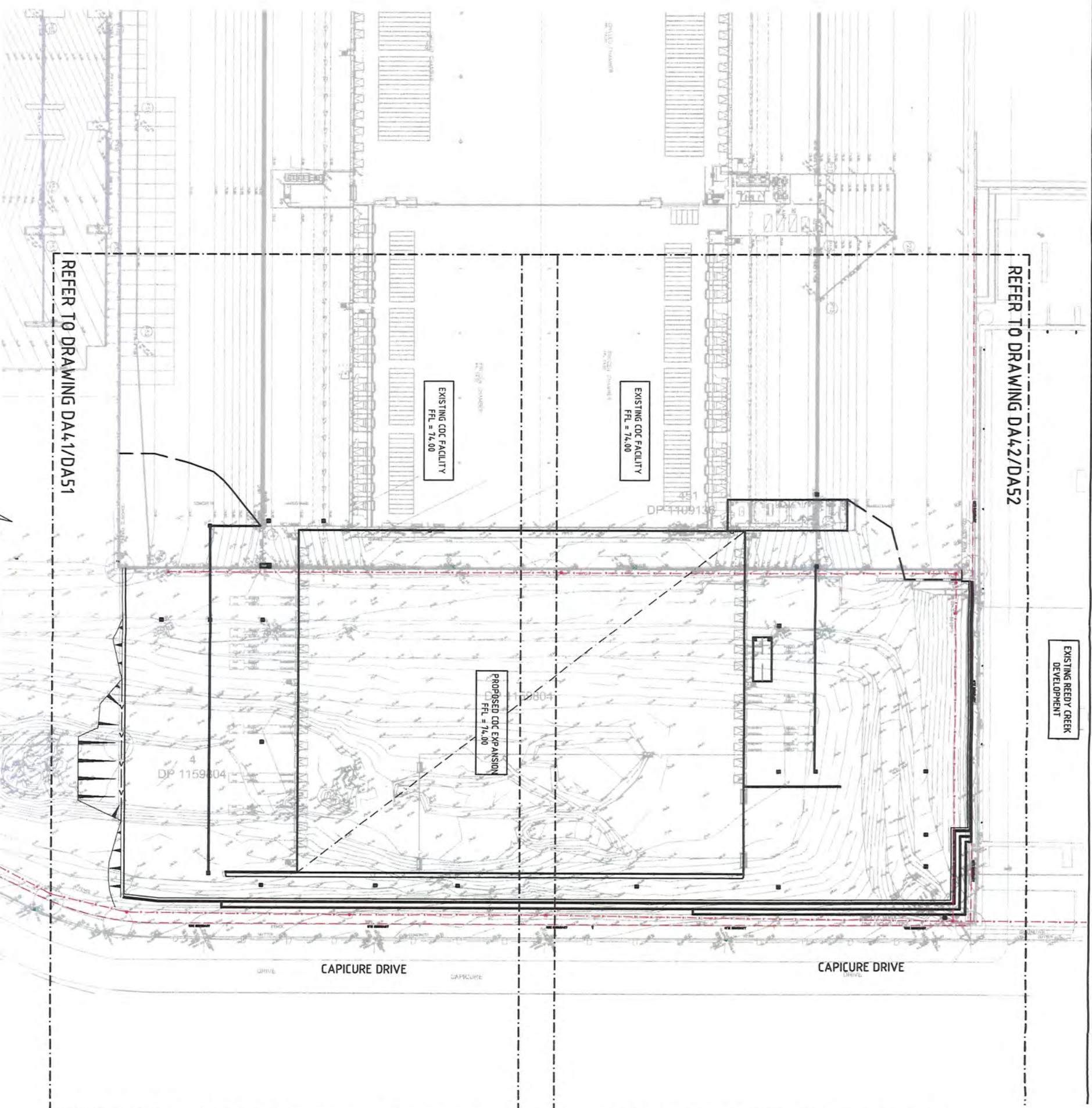




REFER TO DRAWING DA42/DA52

EXISTING REEDY CREEK
DEVELOPMENT

EXISTING CDC FACILITY
FFL = 74.00

EXISTING CDC FACILITY
FFL = 74.00

PROPOSED CDC EXPANSION
FFL = 74.00

REFER TO DRAWING DA41/DA51

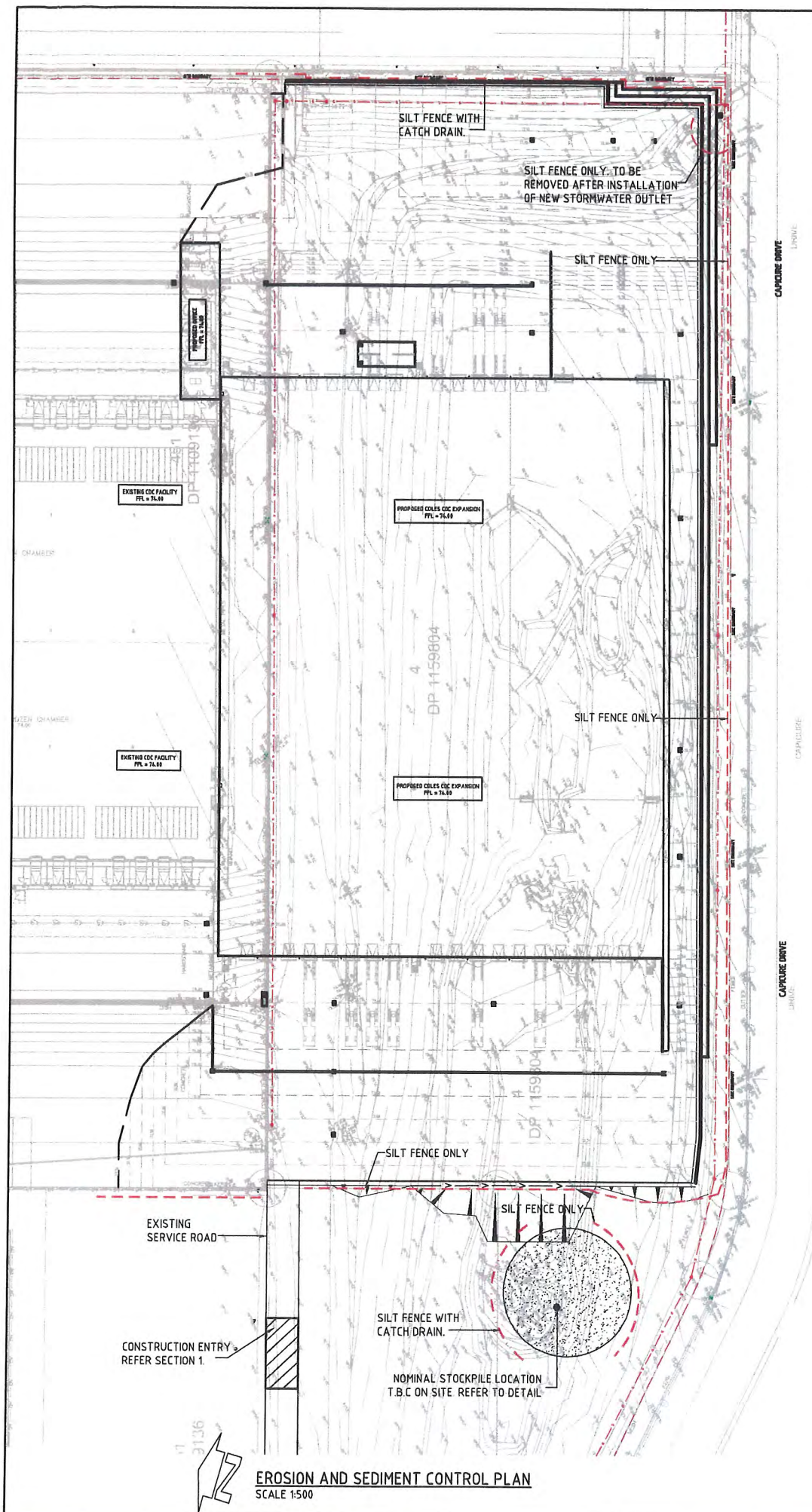
CAPICURE DRIVE

CAPICURE DRIVE


SITE MASTER PLAN
SCALE 1:500

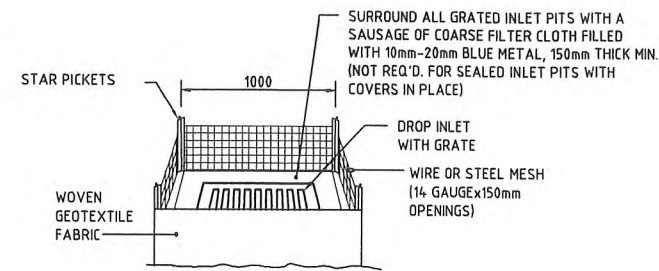
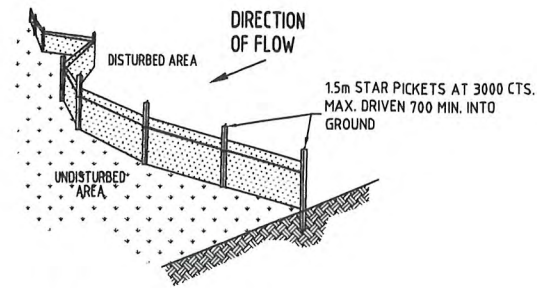
FOR DEVELOPMENT APPLICATION

FOR DEVELOPMENT APPLICATION	06.02.13	C	ARCHITECT	SB ARCHITECTS	CLIENT	Goodman	PROJECT	PROPOSED COLES CDC EXPANSION	Costin Roe Consulting Pty Ltd	Value in Engineering and Management	FORMING THE SITE MASTER PLAN
PRELIMINARY - FOR INFORMATION	06.02.13	B	ARCHITECT	SB ARCHITECTS	CLIENT	Goodman	PROJECT	PROPOSED COLES CDC EXPANSION	Costin Roe Consulting Pty Ltd	Value in Engineering and Management	FORMING THE SITE MASTER PLAN
PRELIMINARY - FOR INFORMATION	22.01.13	A	ARCHITECT	SB ARCHITECTS	CLIENT	Goodman	PROJECT	PROPOSED COLES CDC EXPANSION	Costin Roe Consulting Pty Ltd	Value in Engineering and Management	FORMING THE SITE MASTER PLAN
ARCHITECTS	DATE	ISSUE	ARCHITECTS	DATE	ISSUE	ARCHITECTS	PROJECT	PROPOSED COLES CDC EXPANSION	Costin Roe Consulting Pty Ltd	Value in Engineering and Management	FORMING THE SITE MASTER PLAN

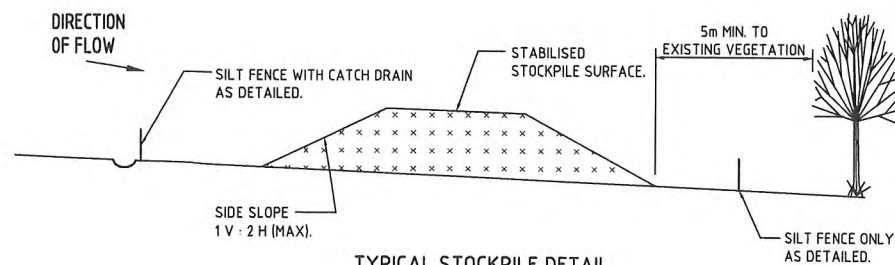
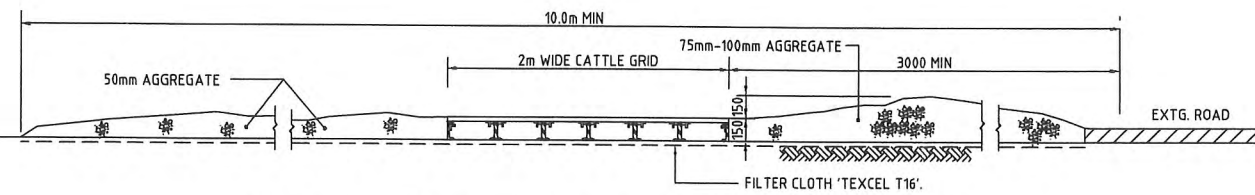
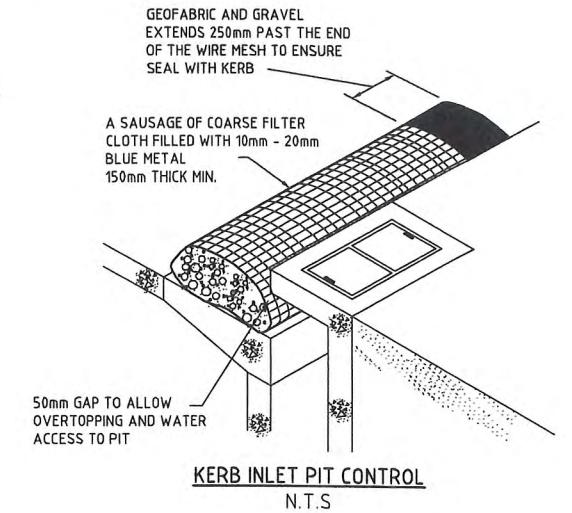
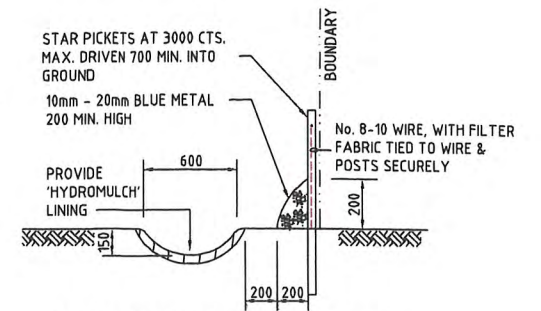


EROSION CONTROL NOTES

1. ALL CONTROL WORK INCLUDING DIVERSION BANKS AND CATCH DRAINS, V-DRAINS AND SILT FENCES SHALL BE COMPLETED DIRECTLY FOLLOWING THE COMPLETION OF THE EARTHWORKS.
2. SILT FENCES AND SILT FENCE RETURNS SHALL BE ERECTED CONVEX TO THE CONTOUR TO POND WATER.
3. HAY BALE BARRIERS AND GEOTEXTILE FENCES ARE TO BE CONSTRUCTED TO TOP OF BATTER, PRIOR TO COMMENCEMENT OF EARTHWORKS, IMMEDIATELY AFTER CLEARING OF VEGETATION AND BEFORE REMOVAL OF TOP SOIL.
4. ALL TEMPORARY EARTH BERM, DIVERSION AND SILT DAM ENHANCEMENTS ARE TO BE MACHINE COMPACTED, SEEDED AND MULCHED FOR TEMPORARY VEGETATION COVER AS SOON AS THEY HAVE BEEN FORMED.
5. CLEAR WATER IS TO BE DIVERTED AWAY FROM DISTURBED GROUND AND INTO THE DRAINAGE SYSTEM.
6. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROVIDING ON GOING ADJUSTMENT TO EROSION CONTROL MEASURES AS REQUIRED DURING CONSTRUCTION.
7. ALL SEDIMENT TRAPPING STRUCTURES AND DEVICES ARE TO BE INSPECTED AFTER STORMS FOR STRUCTURAL DAMAGE OR CLOGGING, TRAPPED MATERIAL IS TO BE REMOVED TO A SAFE, APPROVED LOCATION.
8. ALL FINAL EROSION PREVENTION MEASURES INCLUDING THE ESTABLISHMENT OF GRASSING ARE TO BE MAINTAINED UNTIL THE END OF THE DEFECTS LIABILITY PERIOD.
9. ALL EARTHWORKS AREAS SHALL BE ROLLED ON A REGULAR BASIS TO SEAL THE EARTHWORKS.
10. ALL FILL AREAS ARE TO BE LEFT WITH A BUND AT THE TOP OF THE SLOPE AT THE END OF EACH DAY'S EARTHWORKS. THE HEIGHT OF THE BUND SHALL BE A MINIMUM OF 200MM.
11. ALL CUT AND FILL SLOPES ARE TO BE SEEDED AND MULCHED WITHIN 10 DAYS OF COMPLETION OF FORMATION.
12. AFTER REVEGETATION OF THE SITE IS COMPLETE AND THE SITE IS STABLE IN THE OPINION OF A SUITABLY QUALIFIED PERSON ALL TEMPORARY WORK SUCH AS SILT FENCE, DIVERSION DRAINS ETC SHALL BE REMOVED.
13. ALL TOPSOIL STOCKPILES ARE TO BE SUITABLY COVERED TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR TO PREVENT WIND AND WATER EROSION.
14. ANY AREA THAT IS NOT APPROVED BY THE CONTRACT ADMINISTRATOR FOR CLEARING OR DISTURBANCE BY THE CONTRACTOR'S ACTIVITIES SHALL BE CLEARLY MARKED AND SIGN POSTED, FENCED OFF OR OTHERWISE APPROPRIATELY PROTECTED AGAINST ANY SUCH DISTURBANCE.
15. ALL STOCKPILE SITES SHALL BE SITUATED IN AREAS APPROVED FOR SUCH USE BY THE CONTRACT ADMINISTRATOR. A 6m BUFFER ZONE SHALL EXIST BETWEEN STOCKPILE SITES AND ANY STREAM OR FLOW PATH. ALL STOCKPILES SHALL BE ADEQUATELY PROTECTED FROM EROSION AND CONTAMINATION OF THE SURROUNDING AREA BY USE OF THE MEASURES APPROVED IN THE EROSION AND SEDIMENTATION CONTROL PLAN.
16. ACCESS AND EXIT AREAS SHALL INCLUDE SHAKE-DOWN OR OTHER METHODS APPROVED BY THE CONTRACT ADMINISTRATOR FOR THE REMOVAL OF SOIL MATERIALS FROM MOTOR VEHICLES.
17. THE CONTRACTOR IS TO ENSURE RUNOFF FROM ALL AREAS WHERE THE NATURAL SURFACE IS DISTURBED BY CONSTRUCTION, INCLUDING ACCESS ROADS, DEPOT AND STOCKPILE SITES, SHALL BE FREE OF POLLUTANTS BEFORE IT IS EITHER DISPERSED TO STABLE AREAS OR DIRECTED TO NATURAL WATERCOURSES.
18. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SLOPES, CROWN AND DRAINS AT ALL EXCAVATIONS AND ENHANCEMENTS TO ENSURE SATISFACTORY DRAINAGE AT ALL TIMES WATER SHALL NOT BE ALLOWED TO POND ON THE WORKS UNLESS SUCH PONDING IS PART OF AN APPROVED ESCP / SWMP.
19. THE CONTRACTOR SHALL INCORPORATE THE MEASURES ON THIS PLAN WITHIN THE CONTRACTOR'S CONSTRUCTION MANAGEMENT PLAN.



NOTE: ADOPT ABOVE DETAILS AROUND ALL PITS WITHIN AREA ENCOMPASSED BY SILT FENCE & TO PITS ON THE ROAD ADJACENT TO SITE BOUNDARY.



STOCKPILE NOTES

1. PLACE ALL STOCKPILES IN LOCATIONS MORE THAN 5m FROM EXISTING VEGETATION, ROADS & HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT ELONGATED MOUNDS. SIDE SLOPE TO BE 1 V: 2 H MAX.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2m IN HEIGHT.
4. WHERE STOCKPILES ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE USING WOOD CHIP MULCH - 16 TONNE/HA.
5. CONSTRUCT SILT FENCE WITH CATCH DRAIN ON UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES & SILT FENCE ONLY 1 TO 2m DOWNSLOPE AS SHOWN.

LEGEND:

- PROVIDE 1m RETURNS TO SILT FENCE AT 30m MAX. INTERVALS. TYPICAL (N.S.O.P.)
- SILT FENCE WITH CATCH DRAIN.
 - SILT FENCE ONLY

FOR DEVELOPMENT



Planning

Project Number: **MP 06_0164** approved on **30 April 2013** by the Director, Metropolitan and Regional Projects North under delegation of the Minister for Planning and Infrastructure, in accordance with Section 75W of the Environmental Planning & Assessment Act 1979, subject to conditions of approval.

Signed:

Costin Roe Consulting Pty Ltd.
Consulting Engineers
Level 1, 8 Windmill Street
Wahia Bay, Sydney NSW 2000
Tel: (02) 9581-7000 Fax: (02) 9581-3711
email: mail@costinroeconsulting.com.au

Costin Roe Consulting

DRAWING TITLE
EROSION AND SEDIMENT CONTROL PLAN & DETAILS

DRAWING No **Co8487.21 - DA20**

FOR DEVELOPMENT APPLICATION	06.02.13	B			
PRELIMINARY - FOR INFORMATION	22.01.13	A			
AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE



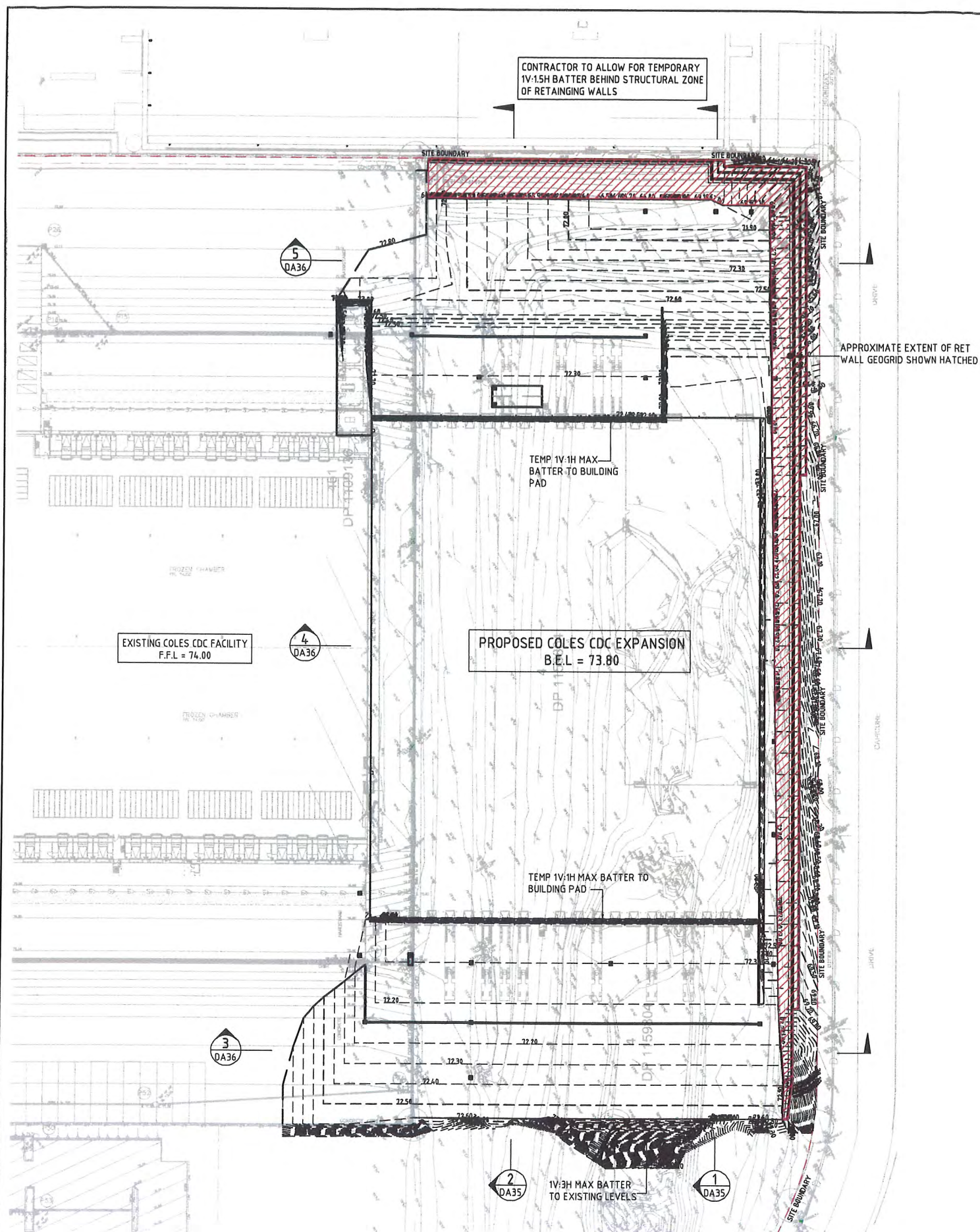
PROJECT
PROPOSED COLES CDC EXPANSION
M7 BUSINESS HUB
WALLGROVE ROAD, MINCHINBURY, NSW



Value in Engineering and Management

Project Number: **MP 06_0164** approved on **30 April 2013** by the Director, Metropolitan and Regional Projects North under delegation of the Minister for Planning and Infrastructure, in accordance with Section 75W of the Environmental Planning & Assessment Act 1979, subject to conditions of approval.

Signed: **BD**



BULK EARTHWORKS PLAN
SCALE 1:500

EARTHWORKS VOLUMES

VOLUMES:

TOPSOIL = 1,750 m³
CUT = -13,900 m³
FILL = 29,700 m³

GROSS BALANCE = 15,800 m³
TOLL IMPORT = 15,000 m³
NET BALANCE = 800 m³ (TO BE IMPORTED)

RET WALLS:

APPROX 15,000 m³ OF CRUSHED SANDSTONE TO BE IMPORTED T.B.C UPON DETAILED STRUCTURAL DESIGN OF WALLS.

EARTHWORK VOLUMES ARE APPROXIMATE ONLY & ARE CALCULATED BASED ON A NOMINAL TOPSOIL STRIP OF 40mm. NO ALLOWANCE HAS BEEN MADE FOR EROSION AND SEDIMENT CONTROL, BULKING, COMPACTION OF FILLED SOILS.

REFER TO DRAWING DA20 FOR EROSION AND SEDIMENT CONTROL PLAN.

THE EXISTING SURFACE IS BASED ON SURVEY INFORMATION PROVIDED. THIS SURVEY IS MOST CURRENT HOWEVER IT MAY NOT ACCURATELY REFLECT ACTUAL GROUND LEVELS OR STOCKPILES ETC ON SITE. IT IS THE CONTRACTORS RESPONSIBILITY TO CONFIRM VOLUMES AND ALLOWANCES FOR EARTHWORKS.

SITE PREPARATION NOTES:

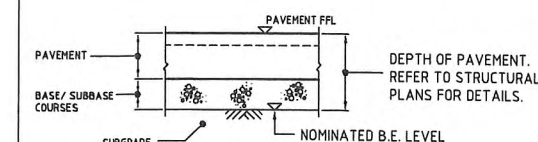
- ALL EARTHWORKS SHALL BE COMPLETED GENERALLY IN ACCORDANCE WITH THE GUIDELINES SPECIFIED BY THE GEOTECHNICAL REPORT AND NOTES PROVIDED BY - DATED -.
- EXISTING LEVELS ARE BASED ON SURVEY INFORMATION PROVIDED BY CARDNO HARD & FORESTER DATED JANUARY 2013.
- STRIP ANY TOP SOIL OR DELETERIOUS MATERIAL AND DISPOSE OF FROM SITE OR STORE AS DIRECTED.
- COMPLETE CUT TO FILL EARTHWORKS TO ACHIEVE THE REQUIRED LEVELS AS INDICATED ON THE DRAWINGS WITHIN A TOLERANCE OF +0mm/-20mm THROUGH BUILDING PADS AND +0mm/-50mm ELSEWHERE.
- PREPARE STEEP BATTERS TO RECEIVE FILL BY CONSTRUCTING BENCHING TO FACILITATE FILL PLACEMENT AND COMPACTION.
- AREAS TO RECEIVE FILL (THAT ARE NOT ON BENCHMARKED BATTERS) AND AREAS IN CUT SHALL BE PROOF ROLLED TO IDENTIFY ANY SOFT HEAVING MATERIAL. SOFT MATERIAL SHALL BE BOXED OUT AND REMOVED PRIOR TO FILL PLACEMENT.
- SITE WON FILL TO BE PLACED IN MAXIMUM 300mm LOOSE LAYERS AND COMPACTED TO 98% STANDARD AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT.
- IMPORTED FILL SHALL BE PLACED IN MAXIMUM 300mm LOOSE LAYERS AND COMPACTED TO 98% STANDARD AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT.
- MAXIMUM PARTICLE SIZE TO BE THE SMALLER OF 150mm OR HALF THE (LOOSE) LAYER THICKNESS AND/OR TWO THIRDS THE LAYER THICKNESS AFTER COMPACTION.
- ALL EARTHWORKS SHALL BE COMPLETED UNDER LEVEL 1 CONTROL IN ACCORDANCE WITH AS 3798-2007.
- AT COMPLETION OF EARTHWORKS SITE SHALL BE CLEARED AND MADE READY FOR INSTALLATION OF EROSION CONTROL AS OUTLINED IN THE EROSION AND SEDIMENTATION CONTROL PLAN.
- EXISTING ROCK SHALL BE REMOVED BY HEAVY ROCK BREAKING OR RIPPING.

LEGEND

LEVELS DATUM IS AHD.

EXISTING SITE DETAIL AND LEVELS BASED ON PLAN OF SURVEY BY ROSE ATKINS AND ASSOCIATES PTY LTD.
REF. #: 21/3798
DATED: JULY 2005

- EXISTING CONTOUR
- EXISTING SPOT HEIGHT
- B.E.L. CONTOUR (MAJOR - 0.5m)
- B.E.L. CONTOUR (MINOR - 0.1m)



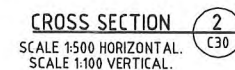
NOMINATED B.E.L. DETAIL
N.T.S.

5m 0 10 20 30 40 50m
SCALE 1:500 AT B1 SIZE PLOT

FOR DEVELOPMENT APPLICATION

FOR DEVELOPMENT APPLICATION			08.02.13	C	ARCHITECT			CLIENT			PROJECT			Costin Roe Consulting Pty Ltd.			DRAWING TITLE BULK EARTHWORKS PLAN	
PRELIMINARY - FOR INFORMATION			06.02.13	B	ARCHITECT			CLIENT			PROPOSED COLES CDC EXPANSION			Consulting Engineers				
PRELIMINARY - FOR INFORMATION			04.02.13	A	ARCHITECT			CLIENT			M7 BUSINESS HUB			Level 1, 8 Windmill Street				
AMENDMENTS			DATE	ISSUE	AMENDMENTS			DATE			DESIGNED			M.V.				
			DATE	ISSUE							CHECKED			M.C.			Value in Engineering and Management	ISSUE
			DATE	ISSUE							SCALE			AS SHOWN				
			DATE	ISSUE							CAD REF.			C8487.21 - DA30				

Signed: BD

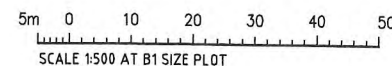


5m 0 10 20 30 40 50m
SCALE 1:500 AT B1 SIZE PLOT

FOR DEVELOPMENT APPLICATION

[illegible]

Signed: RD



FOR DEVELOPMENT APPLICATION

FOR DEVELOPMENT APPLICATION	08.02.13	C		
PRELIMINARY - FOR INFORMATION	06.02.13	B		
PRELIMINARY - FOR INFORMATION	04.02.13	A		
AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE

ARCHITECT

SBA 
ARCHITECTS

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PROJECT						
PROPOSED COLES CDC EXPANSION						
M7 BUSINESS HUB						
WALLGROVE ROAD, MINCHINBURY, NSW						
DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	C

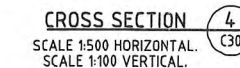
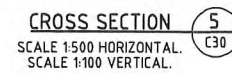
Costin Roe Consulting Pty Ltd.
Consulting Engineers
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Tel: (02) 9281-7490 Fax: (02) 9241-3731
email: mail@costinroe.com.au www.costinroe.com.au

Value In Engineering and Management

Costin Roe Consulting

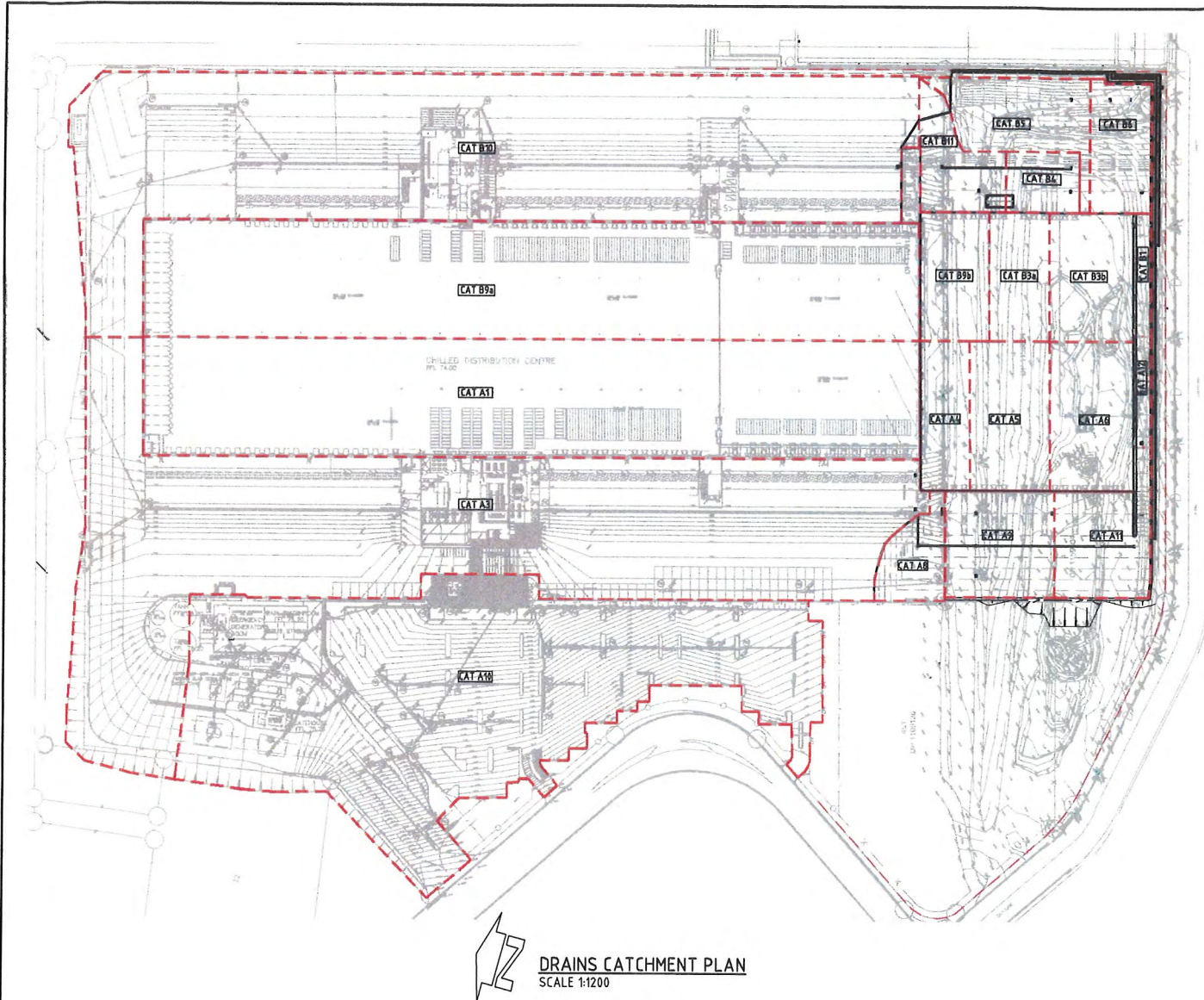
DRAWING TITLE
BULK EARTHWORKS SECTIONS
SHEET 2

Signed: BE



FOR DEVELOPMENT APPLICATION

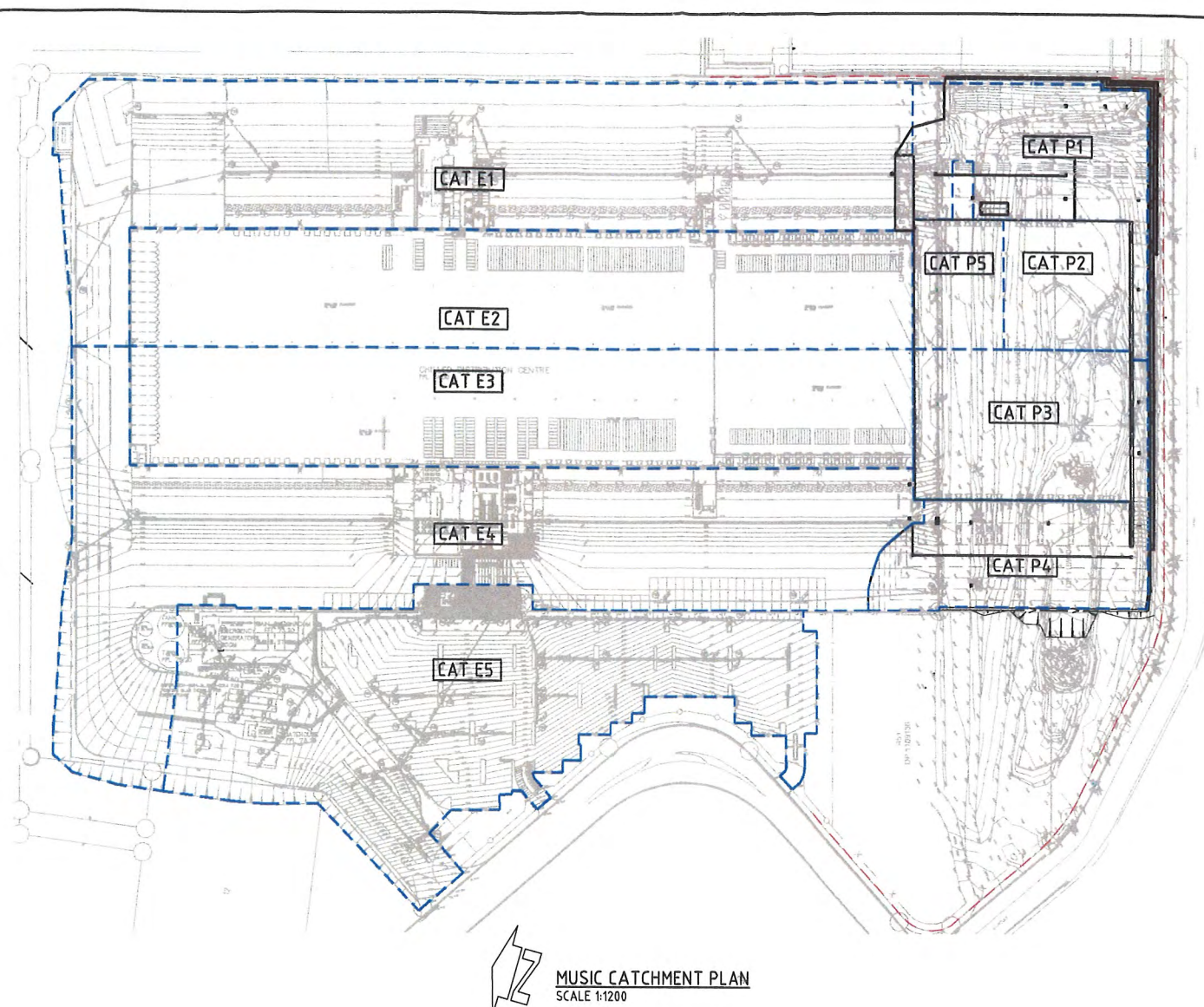
FOR DEVELOPMENT APPLICATION				08.02.13	C	PROJECT				ARCHITECT				CLIENT				PROJECT				CONSULTING				Costin Roe Consulting Pty Ltd. Consulting Engineers Level 1, 8 Windmill Street Wahbi Bay, Sydney NSW 2000 Tel: (02) 8661-7000 Fax: (02) 8661-3721 email: mail@costinroe.com.au ©				DRAWING TITLE BULK EARTHWORKS SECTIONS SHEET 2																			
PRELIMINARY - FOR INFORMATION				06.02.13	B	AMENDMENTS				DATE				ISSUE				DESIGNED MLW				DRAWN M.C.				DATE				CHECKED				SIZE B1				SCALE AS SHOWN				DWO REF: C08487.21 - DA36				Value in Engineering and Management			
PRELIMINARY - FOR INFORMATION				04.02.13	A	AMENDMENTS				DATE				ISSUE																								DRAWING No C08487.21 - DA36				ISSUE							
AMENDMENTS				DATE	ISSUE	AMENDMENTS				DATE				ISSUE																																			



 **DRAINS CATCHMENT PLAN**
SCALE 1:1200

SUB-CATCHMENT AREAS - DRAINS

No	CATCHMENT AREA (Ha)
CAT A1	1.878
CAT A3	2.862
CAT A4	0.152
CAT A5	0.242
CAT A6	0.254
CAT A8	0.113
CAT A9	0.237
CAT A10	2.310
CAT A11	0.224
CAT A12	0.038
CAT B1	0.042
CAT B3a	0.155
CAT B3b	0.216
CAT B3c	0.088
CAT B5	0.219
CAT B6	0.159
CAT B9a	1.850
CAT B9b	0.210
CAT B10	2.608
CAT B11	0.146
TOTAL	14.003



 **MUSIC CATCHMENT PLAN**
SCALE 1:1200

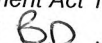
SUB-CATCHMENT AREAS - MUSIC

No.	CATCHMENT AREA (Ha)	% IMPERVIOUS	COMMENT
E1	2.644	90	EXISTING HARDSTAND
E2	1.850	100	EASTERN ROOF EXISTING CDC
E3	1.878	100	WESTERN ROOF EXISTING CDC
E4	2.862	90	EXISTING HARDSTAND
E5	2.310	90	EXISTING CARPARK
P1	0.637	90	EASTERN HARDSTAND
P2	0.320	100	EASTERN ROOF
P3	0.650	100	WESTERN ROOF
P4	0.605	90	WESTERN HARDSTAND
P5	0.255	100	ROOF TO RW TANK
TOTAL	14.003		



Planning

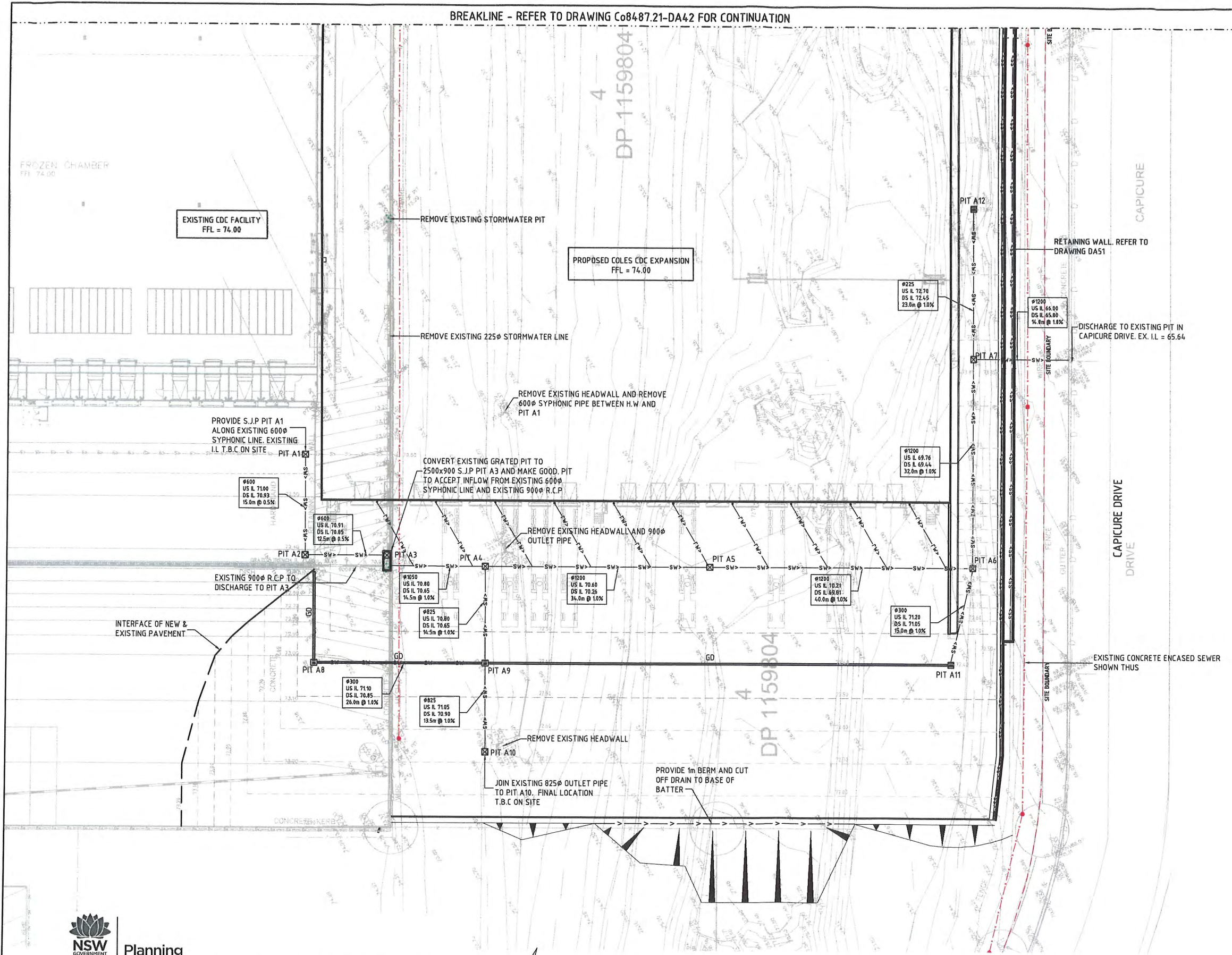
Project Number: **MP 06_0164** approved on **30 April 2013** by the Director, Metropolitan and Regional Projects North under delegation of the Minister for Planning and Infrastructure, in accordance with Section 75W of the Environmental Planning & Assessment Act 1979, subject to conditions of approval.

Signed: 

FOR DEVELOPMENT APPLICATION

FOR DEVELOPMENT APPLICATION		 ARCHITECTS Suite 101, 43 Macleay Street, North Sydney NSW 2060 Tel: (02) 9339 8888 Fax: (02) 9339 8889 www.sba.com.au	CLIENT  LEVEL 10, 80 Cliff Street SYDNEY NSW, 2008, Australia Tel: (02) 9239 7400 Fax: (02) 9239 7444	PROJECT PROPOSED COLES CDC EXPANSION M7 BUSINESS HUB WALLGROVE ROAD, MINCHINBURY, NSW	 Costin Roe Consulting Pty Ltd. Consulting Engineers Level 1, 8 Windmill Street Wahlab Bay, Sydney NSW 2000 Tel: (02) 9551-7000 Fax: (02) 9551-0721 email: mail@costinroe.com.au	 Costin Roe Consulting	DRAWING TITLE CONCEPT STORMWATER CATCHMENT PLAN			
PRELIMINARY - FOR INFORMATION	06.02.13									
AMENDMENTS	DATE									
08.02.13	C	ARCHITECT		DESIGNED		DRAWN				
22.01.13	A	DATE		CHECKED		SCALE				
		AMENDMENTS		DATE		AS SHOWN				
						CAD REF:				
						Co8487.21-DA40				
						Value in Engineering and Management				
						DRAWING No				
						Co8487.21 - DA40				
						ISSUE				
						1				

BREAKLINE - REFER TO DRAWING Co8487.21-DA4.2 FOR CONTINUATION



STORMWATER DRAINAGE NOTES:

- ALL FINISHED PAVEMENT LEVELS SHALL BE AS INDICATED ON FINISHED LEVELS PLAN.
- PIT SIZES SHALL BE AS INDICATED IN THE SCHEDULE WHILE PIPE SIZES AND DETAILS ARE PROVIDED ON PLAN.
- EXISTING STORMWATER PIT LOCATIONS AND INVERT LEVELS TO BE CONFIRMED BY SURVEY PRIOR TO COMMENCING WORKS ON SITE.
- ALL STORMWATER PIPES Ø375 OR GREATER SHALL BE CLASS 2 REINFORCED CONCRETE WITH RUBBER RING JOINTS UNLESS NOTED OTHERWISE.
- ALL PIPES UP TO AND INCLUDING 300mm TO BE uPVC GRADE SN8.
- ALL CONCRETE PITS GREATER THAN 1000mm DEEP SHALL BE REINFORCED USING N12-200 EACH WAY CENTRED IN WALL AND BASE. LAP MINIMUM 300mm WHERE REQUIRED. ALL CONCRETE FOR PITS SHALL BE F'c 25 MPA. PRECAST PITS MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
- IN ADDITION TO ITEM 6 ABOVE, ALL CONCRETE PITS GREATER THAN 3000mm DEEP SHALL HAVE WALLS AND BASE THICKNESS INCREASED TO 200mm.
- PIPES SHALL BE LAID AS PER PIPE LAYING DETAILS. PARTICULAR CARE SHALL BE TAKEN TO ENSURE THAT THE PIPE IS FULLY AND EVENLY SUPPORTED. RAM AND PACK FILLING AROUND AND UNDER BACK OF PIPES AND PIPE FAUCETS, WITH NARROW EDGED RAMMERS OR OTHER SUITABLE TAMPING DETAILS.
- WHERE PIPE LINES ENTER PITS, PROVIDE 2m LENGTH OF STOCKING WRAPPED SLOTTED Ø100 uPVC TO EACH SIDE OF PIPE.
- ALL SUBSOIL DRAINAGE LINES SHALL BE Ø100 SLOTTED uPVC WITH APPROVED FILTER WRAP LAID IN 300mm WIDE GRANULAR FILTER UNLESS NOTED OTHERWISE. LAY SUBSOIL LINES TO MATCH FALLS OF LAND AND/OR 1 IN 200 MINIMUM. PROVIDE CAPPED CLEANING EYE (RODDING POINT) AT UPSTREAM END OF LINE AND AT 30m MAX. CTS. PROVIDE SUBSOIL LINES TO ALL PAVEMENT / LANDSCAPED INTERFACES, TO REAR OF RETAINING WALLS (AS NOMINATED BY STRUCTURAL ENGINEER) AND AS SHOWN ON PLAN.
- ALL PIPE GRADES 1 IN 100 MINIMUM UNDO.
- PROVIDE STEP IRONS IN PITS DEEPER THAN 1000mm.
- MIN. 600 COVER TO PIPE OBVERT BENEATH ROADS & MIN. 400 COVER BENEATH LANDSCAPED AND PEDESTRIAN AREAS.
- PIT COVERS IN TRAFFICABLE PAVEMENT SHALL BE CLASS D 'HEAVY DUTY', THOSE LOCATED IN NON-TRAFFICABLE AREAS SHALL BE CLASS B 'MEDIUM DUTY' U.N.O.
- PROVIDE CLEANING EYES (RODDING POINTS) TO PIPES AT ALL CORNERS AND T-JUNCTIONS WHERE NO PITS ARE PRESENT.
- DOWN PIPES TO BE AS PER HYDRAULIC ENGINEERS DETAILS WITH CONNECTOR TO MATCH DP SIZE U.N.O. ON PLAN. PROVIDE CLEANING EYE AT GROUND LEVEL.
- PIPE LENGTHS NOMINATED ON PLAN OR LONGSECTIONS ARE MEASURED FROM CENTER OF PITS TO THE NEAREST 0.5m AND DO NOT REPRESENT ACTUAL LENGTH. THE CONTRACTOR IS TO ALLOW FOR THIS.

PIT SCHEDULE - SYSTEM A

PIT No.	GRATE RL	DEPTH	TYPE	SIZE	COMMENT
PIT A1	72.58	1580	S.J.P	900x900	
PIT A2	72.40	1490	S.J.P	900x900	
PIT A3	72.60	1800	S.J.P	2500x900	
PIT A4	72.60	2000	S.J.P	1500x1500	
PIT A5	72.60	2390	S.J.P	1500x1500	
PIT A6	73.00	3240	S.J.P	1500x1500	
PIT A7	73.93	7930	S.J.P	1500x1500	
PIT A8	72.40	1300	S.G.G.P	900x900	⊗
PIT A9	72.40	1600	S.G.G.P	1200x1200	⊗
PIT A10	72.67	1620	S.J.P	1200x1200	
PIT A11	72.40	1200	S.G.G.P	900x900	⊗
PIT A12	73.70	1000	S.G.G.P	900x900	⊗

⊗ - DENOTES PIT TO BE FITTED WITH STORMWATER 360 ENVIPOD UNIT

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON A PLAN OF SURVEY BY HARD & FORESTER.

- SGGP, SINGLE GRATED GULLY PIT
- SJP, SEALED JUNCTION PIT
- GRATED DRAIN (200 WIDE)
- OVERLAND FLOW PATH
- DOWNPIPE (INDICATIVE ONLY). REFER TO HYDRAULIC ENGINEERS DRAWINGS
- DRAINAGE LINE
- SUBSOIL LINE
- ROOFWATER LINE
- FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
- FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS
- EXISTING SEWER LINE

2m 0 5 10 15 20 25m
SCALE 1:250 AT B1 SIZE PLOT



Project Number: **MP 06_0164** approved on **30 April 2013** by the Director, Metropolitan and Regional Projects North under delegation of the Minister for Planning and Infrastructure, in accordance with Section 75W of the Environmental Planning & Assessment Act 1979, subject to conditions of approval.

Signed:



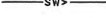
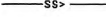
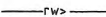
CONCEPT STORMWATER PLAN - SHEET 1
SCALE 1:250

FOR DEVELOPMENT APPLICATION

FOR DEVELOPMENT APPLICATION		08.02.13	C	ARCHITECT		 ARCHITECTS Sydney, New South Wales, Australia Unit 102, 83 Macleay Street, North Sydney NSW 2060 Tel: (02) 9230 7400 Fax: (02) 9230 7444 www.sba.com.au		CLIENT		 LEVEL 10, 40 Castlereagh Street SYDNEY NSW, 2000, Australia Tel: (02) 9230 7400 Fax: (02) 9230 7444		PROJECT		PROPOSED COLES CDC EXPANSION M7 BUSINESS HUB WALLGROVE ROAD, MINCHINBURY, NSW		 Costin Roe Consulting Pty Ltd. Consulting Engineers Level 1, 8 Windmill Street Walsh Bay, Sydney NSW 2000 Tel: (02) 6001-7600 Fax: (02) 6001-3701 email: mail@costinroe.com.au		 Costin Roe Consulting Value in Engineering and Management		DRAWING TITLE CONCEPT STORMWATER PLAN SHEET 1							
PRELIMINARY - FOR INFORMATION	06.02.13	B		DATE		ISSUE		DATE		ISSUE		DESIGNED		DRAWN		CHECKED		SCALE		CHD REF.		DRAWING No		ISSUE			
PRELIMINARY - FOR INFORMATION	22.01.13	A												M.W		PLC		09.01.13		AS SHOWN		Co8487.21 - DA4.1		Co8487.21 - DA4.1		ISSUE	
AMENDMENTS																											

1. ALL FINISHED PAVEMENT LEVELS SHALL BE AS INDICATED ON FINISHED LEVELS PLAN.
2. PIT SIZES SHALL BE AS INDICATED IN THE SCHEDULE WHILE PIPE SIZES AND DETAILS ARE PROVIDED ON PLAN.
3. EXISTING STORMWATER PIT LOCATIONS AND INVERT LEVELS TO BE CONFIRMED BY SURVEY PRIOR TO COMMENCING WORKS ON SITE.
4. ALL STORMWATER PIPES Ø375 or GREATER SHALL BE CLASS 2 REINFORCED CONCRETE WITH RUBBER RING JOINTS UNLESS NOTED OTHERWISE.
5. ALL PIPES UP TO AND INCLUDING 300Ø TO BE uPVC GRADE S8.
6. ALL CONCRETE PITS GREATER THAN 1000mm DEEP SHALL BE REINFORCED USING N12-200 EACH WAY CENTRED IN WALL AND BASE. LAP MINIMUM 300mm WHERE REQUIRED. ALL CONCRETE FOR PITS SHALL BE F'c 25 MPa. PRECAST PITS MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
7. IN ADDITION TO ITEM 6 ABOVE, ALL CONCRETE PITS GREATER THAN 3000mm DEEP SHALL HAVE WALLS AND BASE THICKNESS INCREASED TO 200mm.
8. PIPES SHALL BE LAID AS PER PIPE LAYING DETAILS. PARTICULAR CARE SHALL BE TAKEN TO ENSURE THAT THE PIPE IS FULLY AND EVENLY SUPPORTED. RAM AND PACK FILLING AROUND AND UNDER BACK OF PIPES AND PIPE FAUCETS, WITH NARROW EDGED RAMMERS OR OTHER SUITABLE TAMPING DETAILS.
9. WHERE PIPE LINES ENTER PITS, PROVIDE 2m LENGTH OF STOCKING WRAPPED SLOTTED Ø100 uPVC TO EACH SIDE OF PIPE.
10. ALL SUBSOIL DRAINAGE LINES SHALL BE Ø100 SLOTTED uPVC WITH APPROVED FILTER WRAP LAID IN 300mm wide GRANULAR FILTER UNLESS NOTED OTHERWISE. LAY SUBSOIL LINES TO MATCH FALLS OF LAND AND/OR 1 IN 200 MINIMUM. PROVIDE CAPPED CLEANING EYE (RODDING POINT) AT UPSTREAM END OF LINE AND AT 30m MAX. CTS. PROVIDE SUBSOIL LINES TO ALL PAVEMENT/ LANDSCAPED INTERFACES, TO REAR OF RETAINING WALLS (AS NOMINATED BY STRUCTURAL ENGINEER) AND AS SHOWN ON PLAN
11. ALL PIPE GRADES 1 IN 100 MINIMUM UNO.
12. PROVIDE STEP IRONS IN PITS DEEPER THAN 1000mm.
13. MIN. 600 COVER TO PIPE OBVERT BENEATH ROADS & MIN. 400 COVER BENEATH LANDSCAPED AND PEDESTRIAN AREAS.
14. PIT COVERS IN TRAFFICABLE PAVEMENT SHALL BE CLASS D 'HEAVY DUTY', THOSE LOCATED IN NON-TRAFFICABLE AREAS SHALL BE CLASS B 'MEDIUM DUTY' U.N.O.
15. PROVIDE CLEANING EYES (RODDING POINTS) TO PIPES AT ALL CORNERS AND T-JUNCTIONS WHERE NO PITS ARE PRESENT.
16. DOWN PIPES TO BE AS PER HYDRAULIC ENGINEERS DETAILS WITH CONNECTOR TO MATCH DP SIZE U.N.O. ON PLAN. PROVIDE CLEANING EYE AT GROUND LEVEL.
17. PIPE LENGTHS NOMINATED ON PLAN OR LONGSECTIONS ARE MEASURED FROM CENTER OF PITS TO THE NEAREST 0.5m AND DO NOT REPRESENT ACTUAL LENGTH. THE CONTRACTOR IS TO ALLOW FOR THIS.

PIT No.	GRATE RL	DEPTH	TYPE	SIZE	COMMENT
PIT A1	72.58	1580	S.J.P	900x900	
PIT A2	72.40	1490	S.J.P	900x900	
PIT A3	72.60	1800	S.J.P	2500x900	
PIT A4	72.60	2000	S.J.P	1500x1500	
PIT A5	72.60	2390	S.J.P	1500x1500	
PIT A6	73.00	3240	S.J.P	1500x1500	
PIT A7	73.93	7930	S.J.P	1500x1500	
PIT A8	72.40	1300	S.G.G.P	900x900	⊗
PIT A9	72.40	1600	S.G.G.P	1200x1200	⊗
PIT A10	72.67	1620	S.J.P	1200x1200	
PIT A11	72.40	1200	S.G.G.P	900x900	⊗
PIT A12	73.70	1000	S.G.G.P	900x900	⊗

-  - SGPP, SINGLE GRATED GULLY PIT
-  - SJP, SEALED JUNCTION PIT
-  - GRATED DRAIN (200 WIDE)
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