PORT BOTANY INDUSTRIAL ESTATE

PROPOSED CIVIL WORKS

STAGE 1

DRAWING LIST

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DAC60 BULK EARTHWORKS CUT AND FILL PLAN

LOCALITY PLAN
N.T.S

Issue	Description	Date
P6	RE-ISSUED FOR SECTION 75W	12-01-15
P5	RE-ISSUED FOR SECTION 75W	17-12-14
P4	RE-ISSUED FOR SECTION 75W	08-12-14
P3	ISSUED FOR SECTION 75W	03-10-14
P2	RE-ISSUED FOR INFORMATION	25-09-14
P1	ISSUED FOR INFORMATION	05-09-14

100mm on Original

Bar Scales

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Client: Goodman+

Scales	NTS	Drawn	GB
		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project: PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title: COVER SHEET AND LOCALITY PLAN

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A1

Drawing No.	Project No.	Issue
DAC001	14-213	P6

Date Plotted: 12 Jan 2015 - 12:53PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC001.dwg

SURVEY NOTES

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY AAMHATCH Pty Ltd, BEING REGISTERED SURVEYORS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. AT & L DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.

SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT AT & L.

EXISTING UNDERGROUND SERVICES NOTES

THE LOCATIONS OF UNDERGROUND SERVICES SHOWN IN THIS SET OF DRAWINGS HAVE BEEN PLOTTED FROM SURVEY INFORMATION AND SERVICE AUTHORITY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE.
AT & L CAN NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THESE DRAWINGS ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.

CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ONSITE INCLUDING HAND EXCAVATION WHERE NECESSARY.

CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.

CONTRACTORS ARE TO UNDERTAKE A SERVICES SEARCH, PRIOR TO COMMENCEMENT OF WORKS ON SITE. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.

BULK EARTHWORKS NOTES

1. ORIGIN OF LEVELS: REFER SURVEY NOTES
2. STRIP ALL TOPSOIL/ORGANIC MATERIAL FROM CONSTRUCTION AREA AND REMOVE FROM SITE OR STOCK PILE AS DIRECTED BY SUPERINTENDENT.
3. EXCAVATED MATERIAL TO BE USED AS STRUCTURAL FILL PROVIDED THE PLACEMENT MOISTURE CONTENT OF THE MATERIAL IS +/- 2% OF THE OPTIMUM MOISTURE CONTENT.
4. COMPACT FILL AREAS AND SUBGRADE TO NOT LESS THAN:

LOCATION	STANDARD DRY DENSITY (AS 1289 E 5.1.1.)
UNDER BUILDING SLABS ON GROUND	98%
UNDER ROADS AND CARPARKS	98%
LANDSCAPED AREAS UNLESS NOTED OTHERWISE	98%

5. FOR NON COHESIVE MATERIAL, COMPACT TO 75% DENSITY INDEX.
6. BEFORE PLACING FILL, PROOF ROLL EXPOSED SUBGRADE WITH AN 8 TONNE (MIN) DEADWEIGHT SMOOTH DRUM VIBRATORY ROLLER TO DETECT THEN REMOVE SOFT SPOTS (AREAS WITH MORE THAN 2mm MOVEMENT UNDER ROLLER).
7. FREQUENCY OF COMPACTION TESTING SHALL BE NOT LESS THAN :-
   (A) 1 TEST PER 200m^2 OF FILL PLACED PER 300 LAYER OF FILL.
   (B) 3 TESTS PER VISIT
   (C) 1 TEST PER 1000m^2 OF EXPOSED SUBGRADE
   TESTING SHALL BE "LEVEL 1" TESTING IN ACCORDANCE WITH AS 3798 (1996).
8. FILLING TO BE PLACED AND COMPACTED IN MAXIMUM 150mm LAYERS
9. NO FILLING SHALL TAKE PLACE TO EXPOSE SUBGRADE UNTIL THE AREA HAS BEEN PROOF ROLLED IN THE PRESENCE OF AT & L AND APPROVAL GIVEN IN WRITING THAT FILLING CAN PROCEED.

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SITEWORKS NOTES

1. ORIGIN OF LEVELS:- REFER SURVEY NOTES.
2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK. ANY DISCREPANCIES TO BE REPORTED TO AT & L.
3. MAKE SMOOTH CONNECTION WITH EXISTING WORKS.
4. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
5. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)
6. PROVIDE 10mm WIDE EXPANSION JOINTS BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVEMENTS.
7. ASPHALTIC CONCRETE SHALL CONFORM TO RMS. SPECIFICATION R116.
8. ALL BASECOURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH RMS. FORM 3051 (UNBOUND), RMS. FORM 3052 (BOUND) COMPACTED TO MINIMUM 98% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 5.2.1
   FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m^3 OF BASECOURSE MATERIAL PLACED.
9. ALL SUB-BASE COURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH RMS. FORM 3051, 3051.1 AND COMPACTED TO MINIMUM 95% MODIFIED DENSITY IN ACCORDANCE WITH A.S 1289 5.2.1
   FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m^3 OF SUB-BASE COURSE MATERIAL PLACED.
10. AS AN ALTERNATIVE TO THE USE OF IGNEOUS ROCK AS A SUB-BASE MATERIAL IN (9) A CERTIFIED RECYCLED CONCRETE MATERIAL COMPLYING WITH RMS. FORM 3051 AND 3051.1 WILL BE CONSIDERED. SUBJECT TO MATERIAL SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF AT & L.
11. SHOULD THE CONTRACTOR WISH TO USE A RECYCLED PRODUCT THIS SHALL BE CLEARLY INDICATED IN THEIR TENDER AND THE PRICE DIFFERENCE BETWEEN AN IGNEOUS PRODUCT AND A RECYCLED PRODUCT SHALL BE CLEARLY INDICATED.
12. WHERE NOTED ON THE DRAWINGS THAT WORKS ARE TO BE CARRIED BY OTHERS, (eg. ADJUSTMENT OF SERVICES), THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CO-ORDINATION OF THESE WORKS.

KERBING NOTES

1. ALL CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF25 MPa U.N.O IN REINFORCED CONCRETE NOTES.
2. ALL KERBS, GUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON 100mm GRANULAR BASECOURSE COMPACTED TO MINIMUM 95% MODIFIED DRY DENSITY (AS 1289 5.2.1).
3. EXPANSION JOINTS (E.J) TO BE FORMED FROM 10mm COMPRESSIBLE CORK FILLER BOARD FOR THE FULL DEPTH OF THE SECTION AND CUT TO PROFILE. EXPANSION JOINTS TO BE LOCATED AT DRAINAGE PITS, ON TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX 12m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE EXPANSION JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLABS.
4. WEAKENED PLANE JOINTS TO BE MIN 3mm WIDE AND LOCATED AT 3m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE WEAKENED PLANE JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLABS.
5. BROOMED FINISH TO ALL RAMPED AND VEHICULAR CROSSINGS. ALL OTHER KERBING OR DISH DRAINS TO BE STEEL FLOAT FINISHED.
6. IN THE REPLACEMENT OF KERB AND GUTTER :-
   EXISTING ROAD PAVEMENT IS TO BE SAWCUT 900mm U.N.O FROM THE LIP OF GUTTER. UPON COMPLETION OF THE NEW KERB AND GUTTER NEW BASECOURSE AND SURFACE TO BE LAID 600mm WIDE U.N.O.

   EXISTING ALLOTMENT DRAINAGE PIPES ARE TO BE BUILT INTO THE NEW KERB AND GUTTER WITH 100mm DIA HOLE.

   EXISTING KERB AND GUTTER IS TO BE COMPLETELY REMOVED WHERE NEW KERB AND GUTTER IS SHOWN.

CONCRETE NOTES

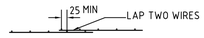
1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
2. CONCRETE QUALITY
   ALL REQUIREMENTS OF THE CURRENT ACSE CONCRETE SPECIFICATION DOCUMENT 1 SHALL APPLY TO THE FORMWORK, REINFORCEMENT AND CONCRETE UNLESS NOTED OTHERWISE.

ELEMENT	AS 3600 F'c MPa AT 28 DAYS	SPECIFIED SLUMP	NOMINAL AGG. SIZE
VEHICULAR BASE	32	60	20
KERBS, PATHS, AND PITS	25	80	20

   - CEMENT TYPE SHALL BE (ACSE SPECIFICATION) TYPE SL
   - PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 1379.
3. NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING BY AT & L.
4. CLEAR CONCRETE COVER TO ALL REINFORCEMENT FOR DURABILITY SHALL BE 40mm TOP AND 70mm FOR EXTERNAL EDGES UNLESS NOTED OTHERWISE.
5. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT NOT GREATER THAN 1m CENTRES BOTH WAYS. BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS.
6. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK, THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED AND CURED IN ACCORDANCE WITH R.T.A. SPECIFICATION R83.
7. REINFORCEMENT SYMBOLS:
   N DENOTES GRADE 450 N BARS TO AS 1302 GRADE N
   R DENOTES 230 R HOT ROLLED PLAIN BARS TO AS 1302
   SL DENOTES HARD-DRAWN WIRE REINFORCING FABRIC TO AS 1304

   NUMBER OF BARS IN GROUP — BAR GRADE AND TYPE
   17 N 20 250
   NOMINAL BAR SIZE IN mm — SPACING IN mm

   THE FIGURE FOLLOWING THE FABRIC SYMBOL SL IS THE REFERENCE NUMBER FOR FABRIC TO AS 1304.
8. FABRIC SHALL BE LAPPED IN ACCORDANCE WITH THE FOLLOWING DETAIL:



SERVICES LEGEND

EXISTING SERVICES

— — g — — g —	EXISTING GAS
— — t — — t —	EXISTING TELSTRA
— — w — — w —	EXISTING WATER
— — e — — e —	EXISTING ELECTICAL
— — sw — — sw —	EXISTING STORMWATER DRAINAGE PIPE
	EXISTING STORMWATER DRAINAGE PIT

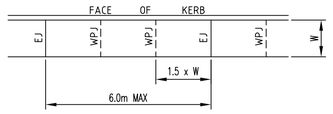
STORMWATER DRAINAGE NOTES

1. STORMWATER DESIGN CRITERIA:
   (A) AVERAGE RECURRENCE INTERVAL:
   1:100 YEARS ROOFED AREAS TO SURCHARGE PIT
   1:20 YEARS EXTERNAL PAVEMENTS
   (B) RAINFALL INTENSITIES:
   TIME OF CONCENTRATION-5 MINUTES
   1:100 YEARS= 269 mm/hr
   1:20 YEARS= 210 mm/hr
   (C) RUNOFF COEFFICIENTS:
   ROOF AREAS: C_{100} =1.0
   EXTERNAL PAVEMENTS: C_{20} =1.0
2. PIPES 300 DIA. AND LARGER TO BE REINFORCED CONCRETE CLASS '2' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS. U.N.O.
3. PIPES UP TO 300 DIA SHALL BE SEWER GRADE uPVC WITH SOLVENT WELDED JOINTS.
4. EQUIVALENT STRENGTH VCP OR FRC PIPES MAY BE USED.
5. ALL STORMWATER DRAINAGE LINES UNDER PROPOSED BUILDING SLABS TO BE uPVC PRESSURE PIPE GRADE 6. ENSURE ALL VERTICALS AND DOWNPIPES ARE uPVC PRESSURE PIPE, GRADE 6 FOR A MIN OF 3.0m IN HEIGHT.
6. PIPES TO BE INSTALLED TO TYPE HS3 (ROAD) HS2 (LOTS) SUPPORT IN ACCORDANCE WITH AS 3725 (2007) IN ALL CASES BACKFILL TRENCH WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)
7. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS 3500 3.1 (1998) AND AS/NZS 3500 3.2 (1998).
8. PRECAST PITS MAY BE USED EXTERNAL TO THE BUILDING SUBJECT TO APPROVAL BY AT & L.
9. ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300 DIA.
10. WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS, UNSLOTTED uPVC SEWER GRADE PIPE IS TO BE USED.
11. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.
12. GRATES AND COVERS SHALL CONFORM TO AS 3996.
13. ALL INTERNAL PIT DIMENSIONS TO CONFORM TO AS3500.3 TABLE 8.2.
14. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
15. ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN ARE TO BE INSPECTED AND CLEANED. DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDENT/ENGINEER FOR FURTHER DIRECTIONS.

JOINTING NOTES

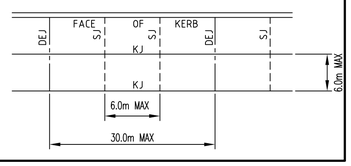
PEDESTRIAN PAVEMENT JOINTS

1. ALL PEDESTRIAN PAVEMENTS ARE TO BE JOINTED AS FOLLOWS. (U.N.O)
2. EXPANSION JOINTS ARE TO BE LOCATED WHERE POSSIBLE AT TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX. 6.0m CENTRES.
3. WEAKENED PLANE JOINTS ARE TO BE LOCATED AT A MAX. SPACING OF 1.5 x WIDTH OF THE PAVEMENT.
4. WHERE POSSIBLE JOINTS SHOULD BE LOCATED TO MATCH KERBING AND OR ADJACENT PAVEMENT JOINTS.
5. PEDESTRIAN PAVEMENT JOINT DETAIL.



VEHICULAR PAVEMENT JOINTS

6. ALL VEHICULAR PAVEMENTS TO BE JOINTED AS FOLLOWS. (U.N.O)
7. KEYED CONSTRUCTION JOINTS SHOULD GENERALLY BE LOCATED AT A MAX OF 6.0m CENTRES
8. SAWN JOINTS SHOULD GENERALLY BE LOCATED AT A MAX OF 6.0m CENTRES WITH DOWELED EXPANSION JOINTS AT MAX 30.0m CENTRES
9. VEHICULAR PAVEMENT JOINT DETAIL.



EROSION AND SEDIMENT CONTROL NOTES

GENERAL INSTRUCTIONS

1. THE SITE SUPERINTENDENT/ENGINEER WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS DOCUMENTED.
2. ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH
   a. LOCAL AUTHORITY REQUIREMENTS
   b. EPA REQUIREMENTS
   c. NSW DEPARTMENT OF HOUSING MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION", 4th EDITION, MARCH 2004.
3. MAINTAIN THE EROSION CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY.
4. WHEN STORMWATER PITS ARE CONSTRUCTED, PREVENT SITE RUNOFF ENTERING UNLESS SEDIMENT FENCES ARE ERECTED AROUND PITS.
5. CONTRACTOR IS TO ENSURE ALL EROSION & SEDIMENT CONTROL DEVICES ARE MAINTAINED IN GOOD WORKING ORDER AND OPERATE EFFECTIVELY. REPAIRS AND OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED, PARTICULARLY FOLLOWING STORM EVENTS.

LAND DISTURBANCE

6. WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:
   (A) INSTALL A WIND FENCE ALONG THE BOUNDARIES AS SHOWN ON PLAN. REFER DETAIL.
   (B) INSTALL A SEDIMENT FENCE ALONG THE BOUNDARIES AS SHOWN ON PLAN. REFER DETAIL.
   (C) CONSTRUCT STABILISED CONSTRUCTION ENTRANCE TO LOCATION AS DETERMINED BY SUPERINTENDENT/ENGINEER. REFER DETAIL.
   (D) INSTALL SEDIMENT BASIN AS SHOWN ON PLAN
   (E) INSTALL SEDIMENT TRAPS AS SHOWN ON PLAN.
   (F) UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.

EROSION CONTROL

7. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
8. FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.

SEDIMENT CONTROL

9. STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES OF HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS. WHERE THEY ARE BETWEEN 2 AND 5 METRES FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSLOPE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.
10. ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
11. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE, I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE.
12. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

OTHER MATTERS

13. ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.
14. ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY:
   (A) PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE
   (B) ENSURING THAT NOTHING IS NAILED TO THEM
   (C) PROHIBITING PAVING, GRADING, SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS.
      (I) ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5 METRES OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICH EVER IS THE GREATER
      (II) A DRAINAGE SYSTEM THAT ALLOWS AIR AND WATER TO CIRCULATE THROUGH THE ROOT ZONE (E.G. A GRAVEL BED) IS PLACED UNDER ALL FILL LAYERS OF MORE THAN 300 MILLIMETRES DEPTH
      (III) CARE IS TAKEN NOT TO CUT ROOTS UNNECESSARILY NOR TO COMPACT THE SOIL AROUND THEM.

SITEWORKS LEGEND

	EXISTING BOUNDARY
F5.00	FINISHED PAVEMENT LEVEL
4.0	PROPOSED CONTOUR
4.0	EXISTING CONTOUR
K&G	KERB AND GUTTER. REFER DRAWING C020 FOR DETAILS.
KO	KERB ONLY. REFER DRAWING C020 FOR DETAILS.
IK	INTEGRAL KERB. REFER DRAWING C020 FOR DETAILS.
	CHAINWIRE FENCE. REFER LANDSCAPE ARCHITECTS DRAWINGS FOR DETAILS.
	PALISADE FENCE. REFER LANDSCAPE ARCHITECTS DRAWINGS FOR DETAILS.
	HANDRAIL REFER LANDSCAPE ARCHITECTS DRAWINGS FOR DETAILS.
	PRAM RAMP. REFER DRAWING C020 FOR DETAILS.
VC	VEHICULAR CROSSING. REFER DRAWING C020 FOR DETAILS.
	RCP STORMWATER PIPE (U.N.O)
	uPVC STORMWATER PIPE (U.N.O)
A\1	STORMWATER PIT REFERENCE NUMBER
	KERB INLET PIT. REFER DRAWING C025 FOR DETAILS.
	SURFACE INLET PIT. REFER DRAWING C025 FOR DETAILS.
	JUNCTION PIT. REFER DRAWING C025 FOR DETAILS.
DP	STORMWATER DOWNPIPE
GD	GRATED DRAIN. REFER DRAWING C025 FOR DETAILS.
	SUBSOIL DRAINAGE LINE. REFER DRAWING C025 FOR DETAILS.
FP	FLUSHING POINT. REFER DRAWING C025 FOR DETAILS.
IR	INTERMEDIATE RISER. REFER DRAWING C025 FOR DETAILS.
	PROPOSED TREE. REFER LANDSCAPE ARCHITECTS DRAWINGS FOR DETAILS.

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P4	RE-ISSUED FOR SECTION 75W	12-01-15
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Project: PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title: NOTES AND LEGENDS

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Status: FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

A1

Drawing No.	Project No.	Issue
DAC002	14-213	P4

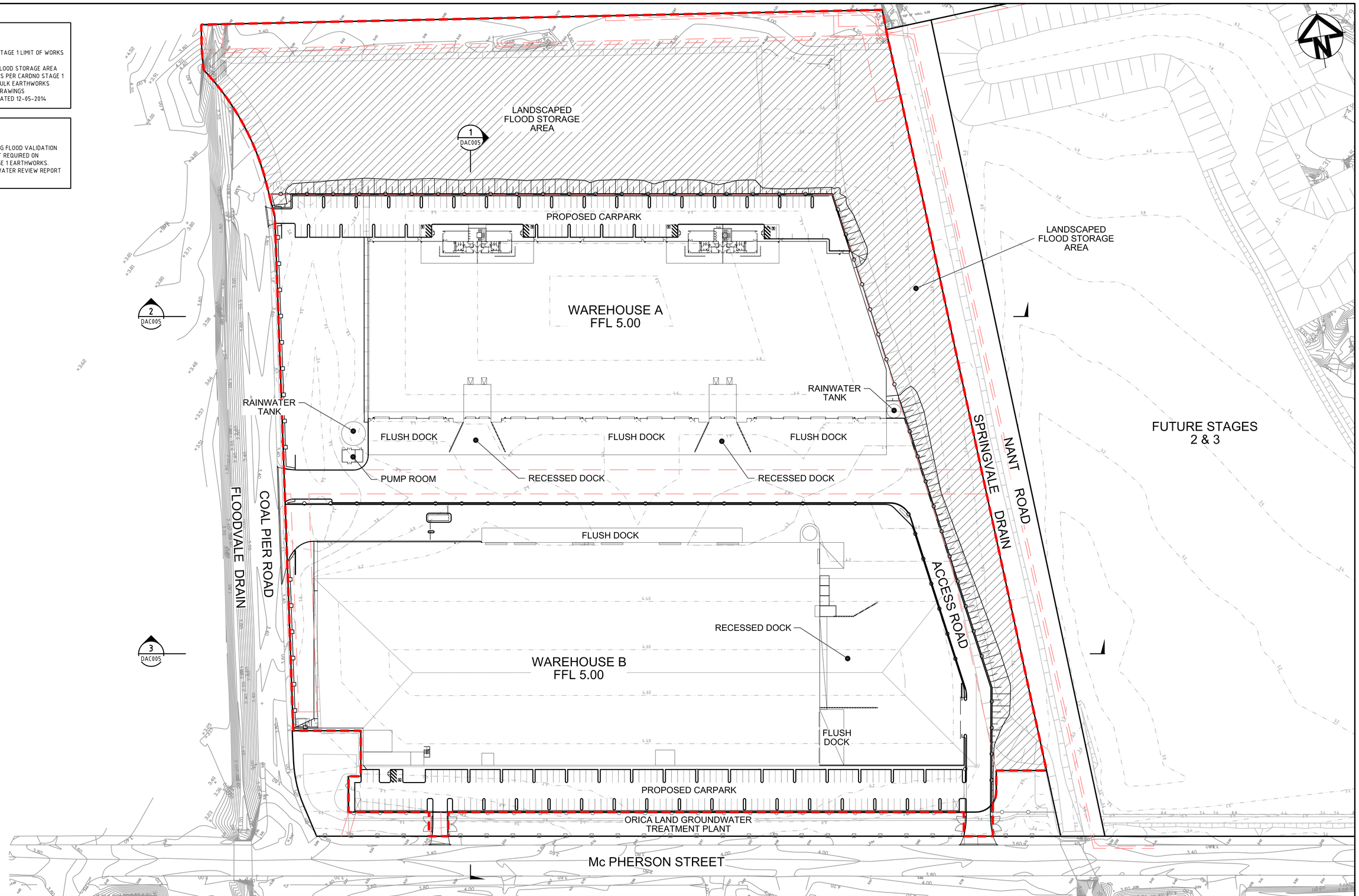
LEGEND

STAGE 1 LIMIT OF WORKS

FLOOD STORAGE AREA AS PER CARDNO STAGE 1 BULK EARTHWORKS DRAWINGS DATED 12-05-2014

NOTE:

HYDRAULIC MODELLING FLOOD VALIDATION ASSESSMENT REPORT REQUIRED ON COMPLETION OF STAGE 1 EARTHWORKS. REFER TO DPI/WMA WATER REVIEW REPORT DATED AUGUST 2011.



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P2	RE-ISSUED FOR INFORMATION	25-09-14
P1	ISSUED FOR INFORMATION	05-09-14

Bar Scales

0 15 30 45 60 75m

1 : 750 @ A1 1 : 1500 @ A3

THIS DRAWING CANNOT BE COPIED OR REPRODUCED IN ANY FORM OR USED FOR ANY OTHER PURPOSE OTHER THAN THAT ORIGINALLY INTENDED WITHOUT THE WRITTEN PERMISSION OF AT&L

Client: Goodman

Scales			
1 : 750 @ A1		Drawn	GB
		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project: PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title: GENERAL ARRANGEMENT PLAN

Civil Engineers and Project Managers
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info@atl.net.au

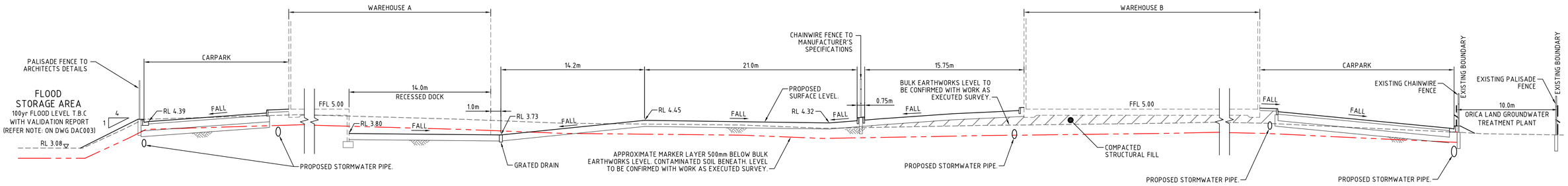
Status: FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

A1

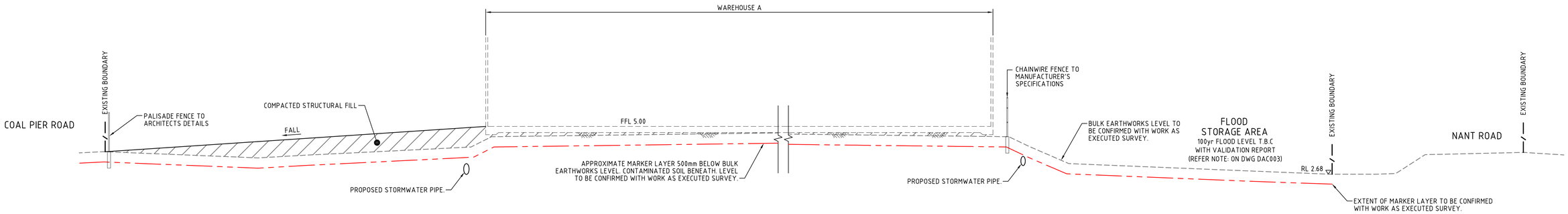
Drawing No.	Project No.	Issue
DAC003	14-213	P6

100mm on Original

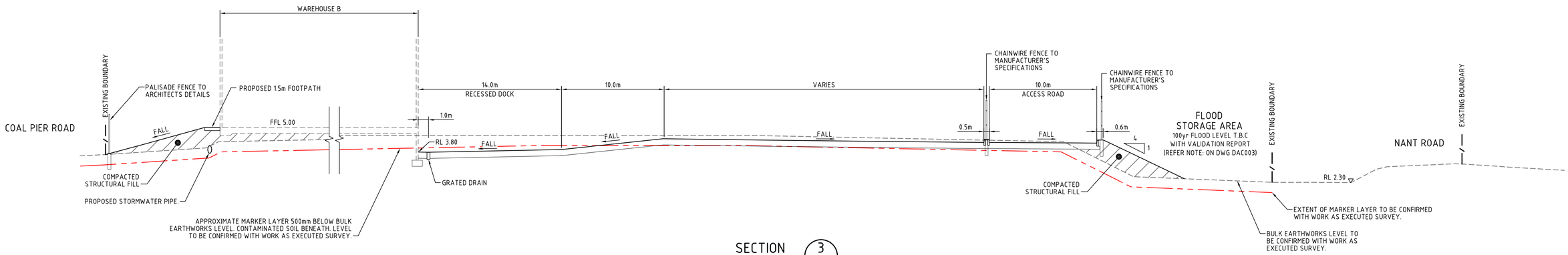
Date Plotted: 12 Jan 2015 - 12:53PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC003.dwg



SECTION 1 (DAC003)
1 : 200 (H)
1 : 100 (V)



SECTION 2 (DAC003)
1 : 200 (H)
1 : 100 (V)



SECTION 3 (DAC003)
1 : 200 (H)
1 : 100 (V)

Issue	Description	Date
P6	RE-ISSUED FOR SECTION 75W	12-01-15
P5	RE-ISSUED FOR SECTION 75W	17-12-14
P4	RE-ISSUED FOR SECTION 75W	08-12-14
P3	ISSUED FOR SECTION 75W	03-10-14
P2	RE-ISSUED FOR INFORMATION	25-09-14
P1	ISSUED FOR INFORMATION	05-09-14

Bar Scales

0 2 4 6 8 10m
1 : 100 @ A1 1 : 200 @ A3

0 5 10 15 20m
1 : 200 @ A1 1 : 400 @ A3

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Client: Goodman

Scales	1 : 200 (H) 1 : 100 (V)	Drawn	GB
		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project: PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title: SITE SECTIONS

Civil Engineers and Project Managers
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info@atl.net.au

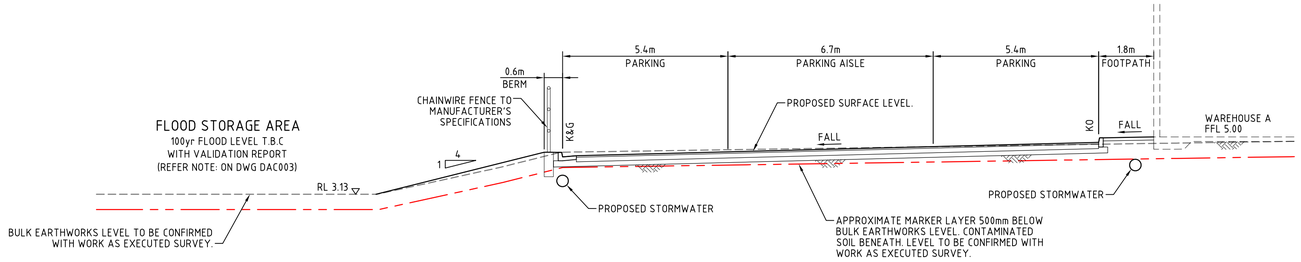
Status: FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

A1

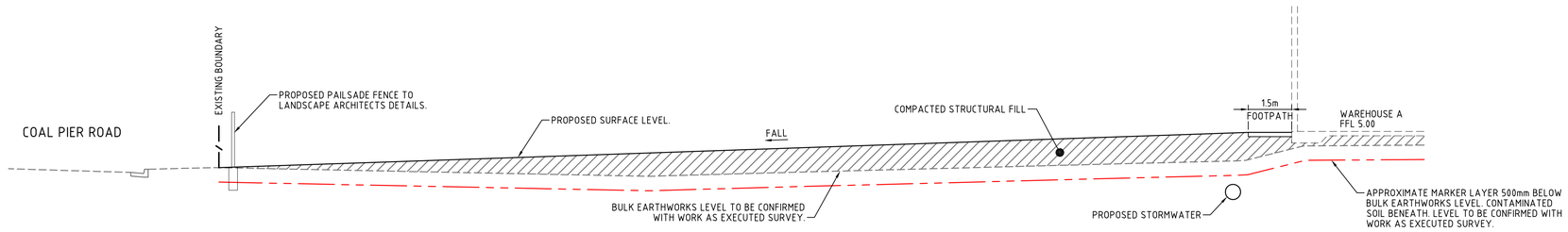
Drawing No.	Project No.	Issue
DAC005	14-213	P6

100mm on Original

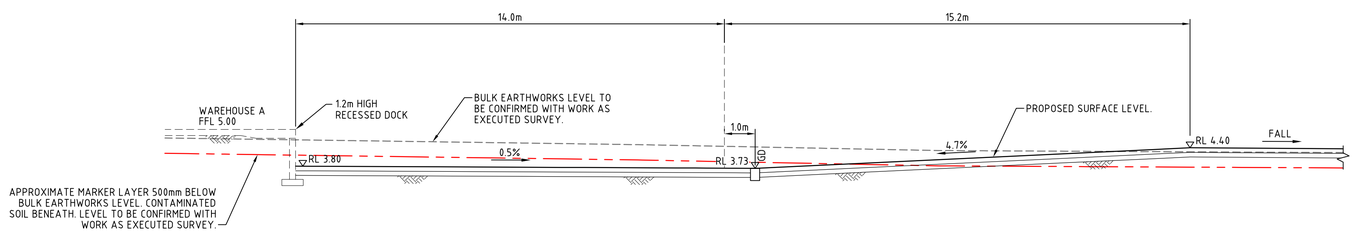
Date Plotted: 12 Jan 2015 - 12:54PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC005.dwg



SECTION 4 (DAC010)
1 : 100



SECTION 5 (DAC012)
1 : 100



SECTION 6 (DAC012)
1 : 100

Issue	Description	Date
P5	RE-ISSUED FOR SECTION 75W	12-01-15
P4	RE-ISSUED FOR SECTION 75W	17-12-14
P3	RE-ISSUED FOR SECTION 75W	08-12-14
P2	ISSUED FOR SECTION 75W	03-10-14
P1	ISSUED FOR INFORMATION	25-09-14

Bar Scales

0 2 4 6 8 10m

1 : 100 @ A1 1 : 200 @ A3

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Client: Goodman

Scales: 1 : 100 @ A1
Grid: MGA
Height Datum: AHD

Drawn	GB
Designed	GB
Checked	AMcL
Approved	AT

Project: PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title: TYPICAL CROSS SECTIONS SHEET 1

Civil Engineers and Project Managers
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info@atl.net.au

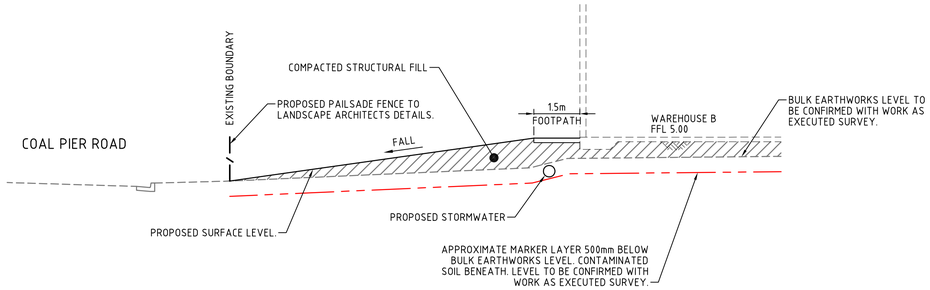
Status: FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

A1

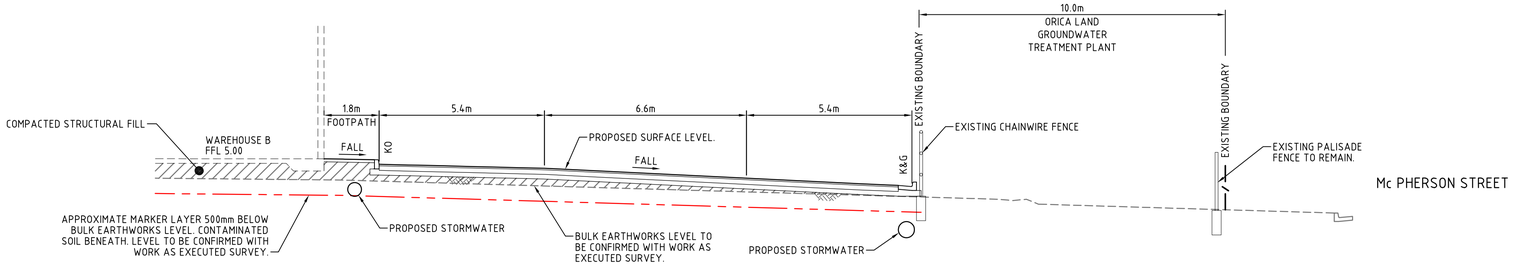
Drawing No.	Project No.	Issue
DAC007	14-213	P5

100mm on Original

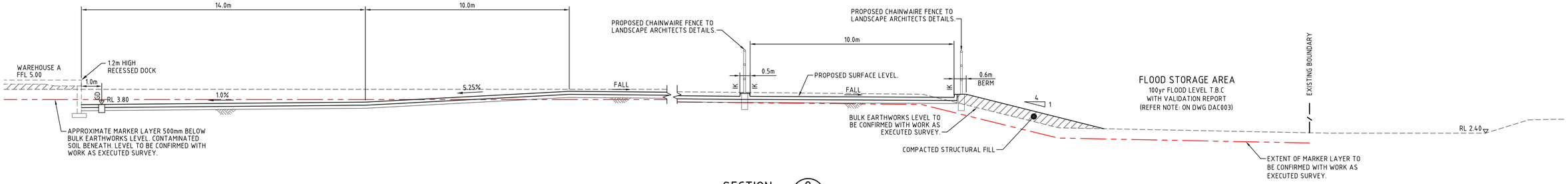
Date Plotted: 12 Jan 2015 - 12:54PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC007.dwg



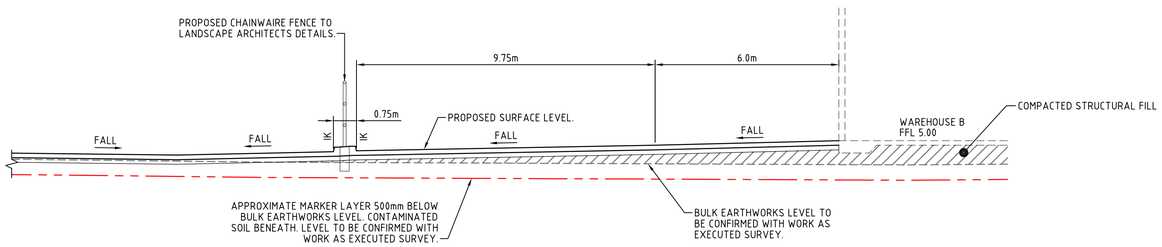
SECTION 7
1 : 100
DAC014



SECTION 8
1 : 100
DAC014



SECTION 9
1 : 100
DAC015



SECTION 10
1 : 100
DAC012

Issue	Description	Date
P5	RE-ISSUED FOR SECTION 75W	12-01-15
P4	RE-ISSUED FOR SECTION 75W	17-12-14
P3	RE-ISSUED FOR SECTION 75W	08-12-14
P2	ISSUED FOR SECTION 75W	03-10-14
P1	ISSUED FOR INFORMATION	25-09-14

100mm on Original

Bar Scales

0 2 4 6 8 10m

1 : 100 @ A1 1 : 200 @ A3

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Client

Goodman

Scales	1 : 100 @ A1
Grid	MGA
Height Datum	AHD
Drawn	GB
Designed	GB
Checked	AMcL
Approved	AT

Project

PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title

TYPICAL CROSS SECTIONS SHEET 2

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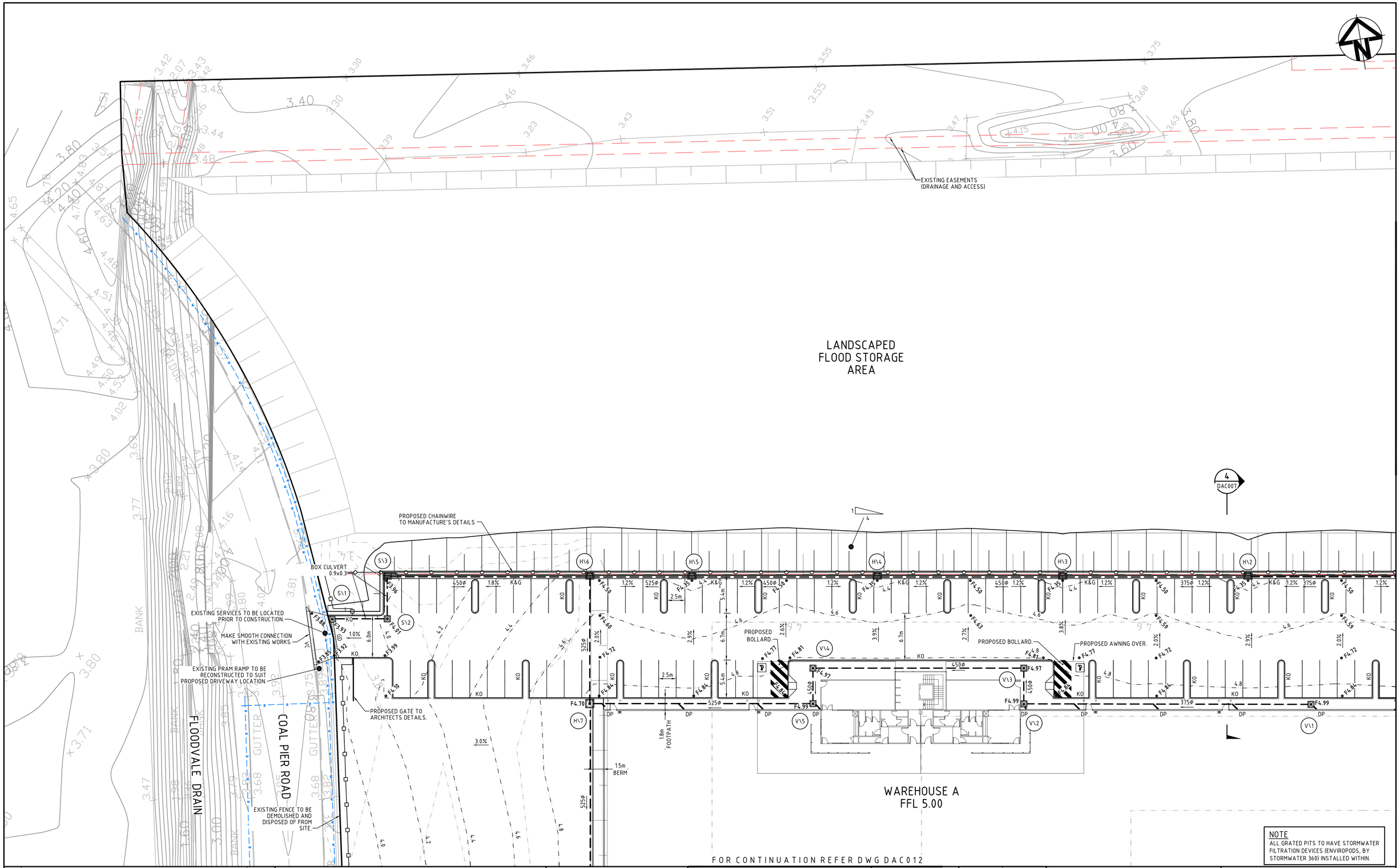
Status
FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

A1

Drawing No.	Project No.	Issue
DAC008	14-213	P5

Date Plotted: 12 Jan 2015 - 12:54PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC008.dwg



NOTE
ALL GRATED PITS TO HAVE STORMWATER FILTRATION DEVICES (ENVIROPODS, BY STORMWATER 360) INSTALLED WITHIN.

Issue	Description	Date
P7	RE-ISSUED FOR SECTION 75W	12-01-15
P6	RE-ISSUED FOR SECTION 75W	17-12-14
P5	RE-ISSUED FOR SECTION 75W	16-12-14
P4	RE-ISSUED FOR SECTION 75W	08-12-14
P3	ISSUED FOR SECTION 75W	03-10-14
P2	RE-ISSUED FOR INFORMATION	25-09-14
P1	ISSUED FOR INFORMATION	05-09-14

100mm on Original

Bar Scales

0 5 10 15 20 25m

1 : 250 @ A1 1 : 500 @ A3

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Client: Goodman

Scales	1 : 250 @ A1	Drawn	GB
		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project
PORT BOTANY
INDUSTRIAL ESTATE
STAGE 1

Title
SITEWORKS AND
STORMWATER DRAINAGE
PLAN
SHEET 1

Civil Engineers and Project Managers
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Status
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A1

Drawing No.	Project No.	Issue
DAC010	14-213	P7

Date Plotted: 12 Jan 2015 - 12:54PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC010.dwg

FOR CONTINUATION REFER DWG DAC010

EXISTING EASEMENTS (DRAINAGE AND ACCESS)

LANDSCAPED FLOOD STORAGE AREA

SPRINGVALE DRAIN

NANT ROAD

PROPOSED CHAINWIRE TO MANUFACTURE'S DETAILS

PROPOSED BOLLARD.

PROPOSED AWNING OVER.

LANDSCAPED FLOOD STORAGE AREA

WAREHOUSE A
FFL 5.00

PROPOSED CHAINWIRE TO MANUFACTURE'S DETAILS

EXISTING EASEMENTS

FOR CONTINUATION REFER DWG DAC013

NOTE
ALL GRATED PITS TO HAVE STORMWATER FILTRATION DEVICES (ENVIROPODS, BY STORMWATER 360) INSTALLED WITHIN.

Issue	Description	Date
P7	RE-ISSUED FOR SECTION 75W	12-01-15
P6	RE-ISSUED FOR SECTION 75W	17-12-14
P5	RE-ISSUED FOR SECTION 75W	16-12-14
P4	RE-ISSUED FOR SECTION 75W	08-12-14
P3	ISSUED FOR SECTION 75W	03-10-14
P2	RE-ISSUED FOR INFORMATION	25-09-14
P1	ISSUED FOR INFORMATION	05-09-14

100mm on Original

Bar Scales

0 5 10 15 20 25m

1 : 250 @ A1 1 : 500 @ A3

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Client

Goodman

Scales	1 : 250 @ A1	Drawn	GB
		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project

PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title

SITEWORKS AND STORMWATER DRAINAGE PLAN SHEET 2

Civil Engineers and Project Managers

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info@atl.net.au

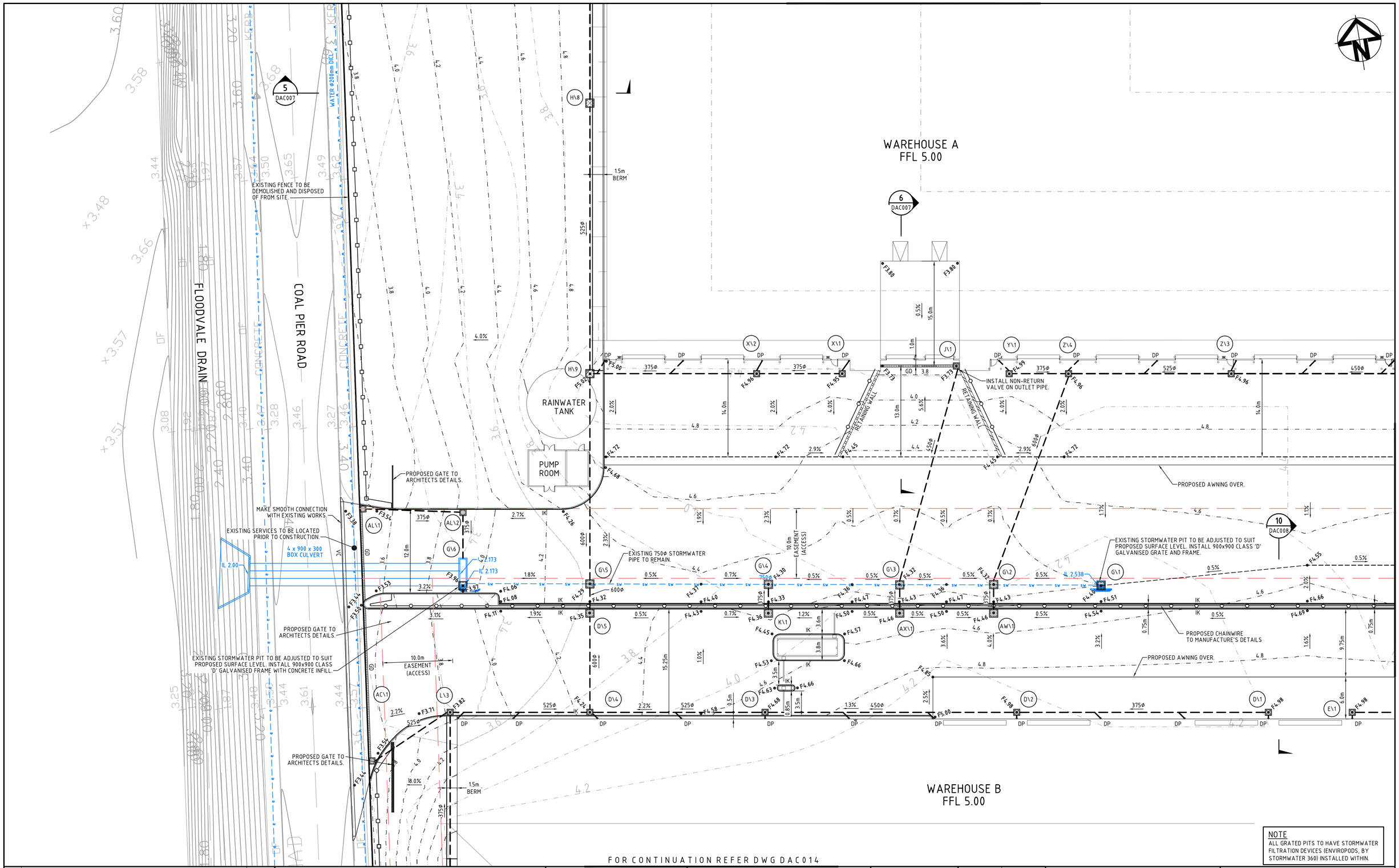
Status: FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

A1

Drawing No.	Project No.	Issue
DAC011	14-213	P7

Date Plotted: 12 Jan 2015 - 12:55PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC011.dwg

FOR CONTINUATION REFER DWG DAC010



FOR CONTINUATION REFER DWG DAC014

FOR CONTINUATION REFER DWG DAC013

NOTE
ALL GRATED PITS TO HAVE STORMWATER FILTRATION DEVICES (ENVIROPODS, BY STORMWATER 360) INSTALLED WITHIN.

Issue	Description	Date
P7	RE-ISSUED FOR SECTION 75W	12-01-15
P6	RE-ISSUED FOR SECTION 75W	17-12-14
P5	RE-ISSUED FOR SECTION 75W	16-12-14
P4	RE-ISSUED FOR SECTION 75W	08-12-14
P3	ISSUED FOR SECTION 75W	03-10-14
P2	RE-ISSUED FOR INFORMATION	25-09-14
P1	ISSUED FOR INFORMATION	05-09-14

Bar Scales

0 5 10 15 20 25m

1 : 250 @ A1 1 : 500 @ A3

THIS DRAWING CANNOT BE COPIED OR REPRODUCED IN ANY FORM OR USED FOR ANY OTHER PURPOSE OTHER THAN THAT ORIGINALLY INTENDED WITHOUT THE WRITTEN PERMISSION OF AT&L

Client: Goodman

Scales	1 : 250 @ A1	Drawn	GB
		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project: PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title: SITEWORKS AND STORMWATER DRAINAGE PLAN SHEET 3

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info@atl.net.au

Status: FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

A1

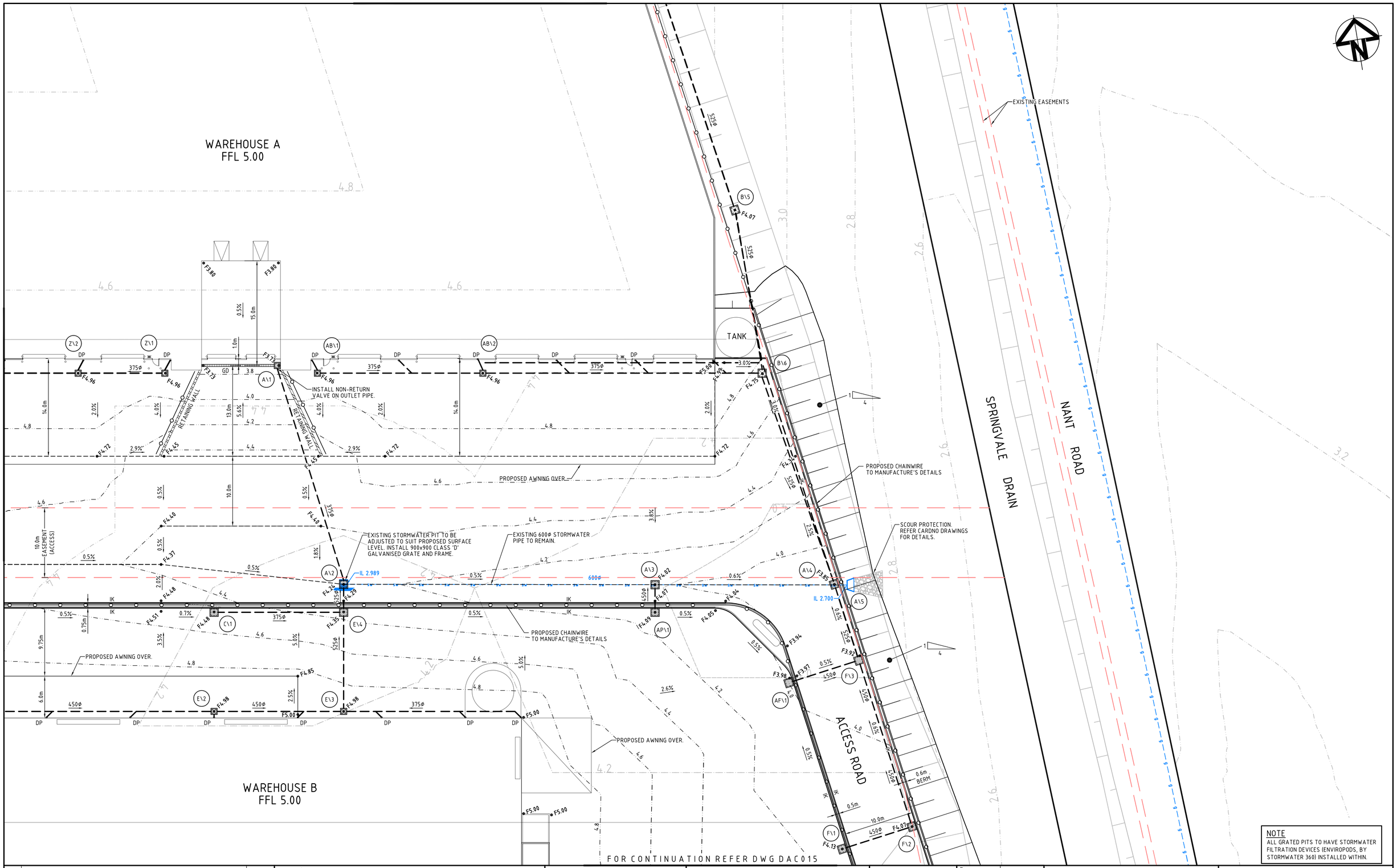
Drawing No.	Project No.	Issue
DAC012	14-213	P7

100mm on Original

Date Plotted: 12 Jan 2015 - 12:55PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC012.dwg

FOR CONTINUATION REFER DWG DAC011

FOR CONTINUATION REFER DWG DAC012



FOR CONTINUATION REFER DWG DAC015

NOTE
ALL GRATED PITS TO HAVE STORMWATER FILTRATION DEVICES (ENVIROPODS, BY STORMWATER 360) INSTALLED WITHIN.

Issue	Description	Date
P7	RE-ISSUED FOR SECTION 75W	12-01-15
P6	RE-ISSUED FOR SECTION 75W	17-12-14
P5	RE-ISSUED FOR SECTION 75W	16-12-14
P4	RE-ISSUED FOR SECTION 75W	08-12-14
P3	ISSUED FOR SECTION 75W	03-10-14
P2	RE-ISSUED FOR INFORMATION	25-09-14
P1	ISSUED FOR INFORMATION	05-09-14

Bar Scales

0 5 10 15 20 25m

1 : 250 @ A1 1 : 500 @ A3

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Client: Goodman

Scales		Drawn	GB
1 : 250 @ A1		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project
PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title
SITEWORKS AND STORMWATER DRAINAGE PLAN SHEET 4

Civil Engineers and Project Managers
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www.atl.net.au
info@atl.net.au

Status: FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

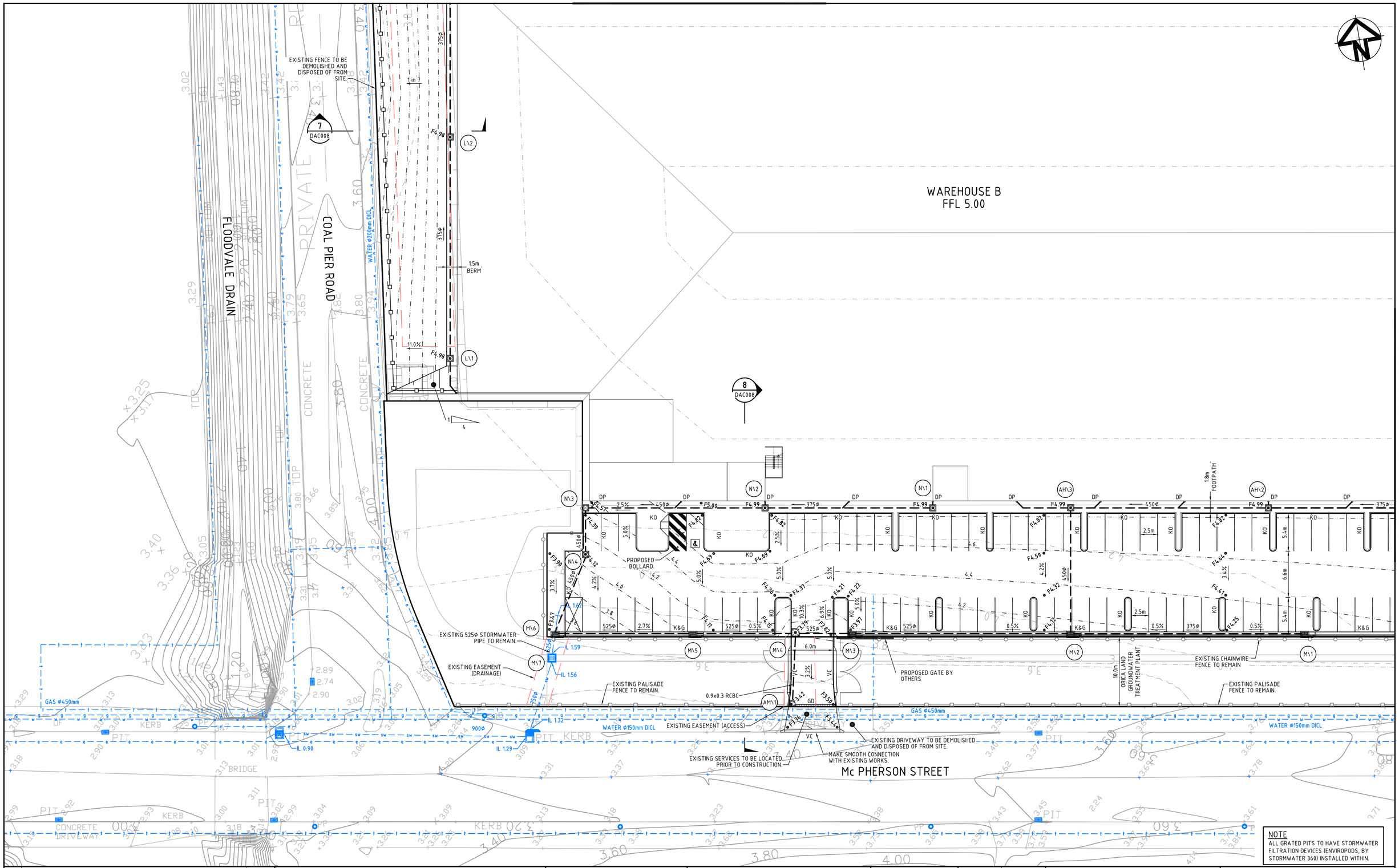
A1

Drawing No.	Project No.	Issue
DAC013	14-213	P7

100mm on Original

Date Plotted: 12 Jan 2015 - 12:55PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC013.dwg

FOR CONTINUATION REFER DWG DAC012



FOR CONTINUATION REFER DWG DAC015

NOTE
ALL GRATED PITS TO HAVE STORMWATER FILTRATION DEVICES (ENVIROPODS, BY STORMWATER 360) INSTALLED WITHIN.

Issue	Description	Date
P7	RE-ISSUED FOR SECTION 75W	12-01-15
P6	RE-ISSUED FOR SECTION 75W	17-12-14
P5	RE-ISSUED FOR SECTION 75W	16-12-14
P4	RE-ISSUED FOR SECTION 75W	08-12-14
P3	ISSUED FOR SECTION 75W	03-10-14
P2	RE-ISSUED FOR INFORMATION	25-09-14
P1	ISSUED FOR INFORMATION	05-09-14

Bar Scales

0 5 10 15 20 25m

1 : 250 @ A1 1 : 500 @ A3

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Client: Goodman

Scales		Drawn	GB
1 : 250 @ A1		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project
PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title
SITEWORKS AND STORMWATER DRAINAGE PLAN SHEET 5

Civil Engineers and Project Managers
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Status: FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

A1

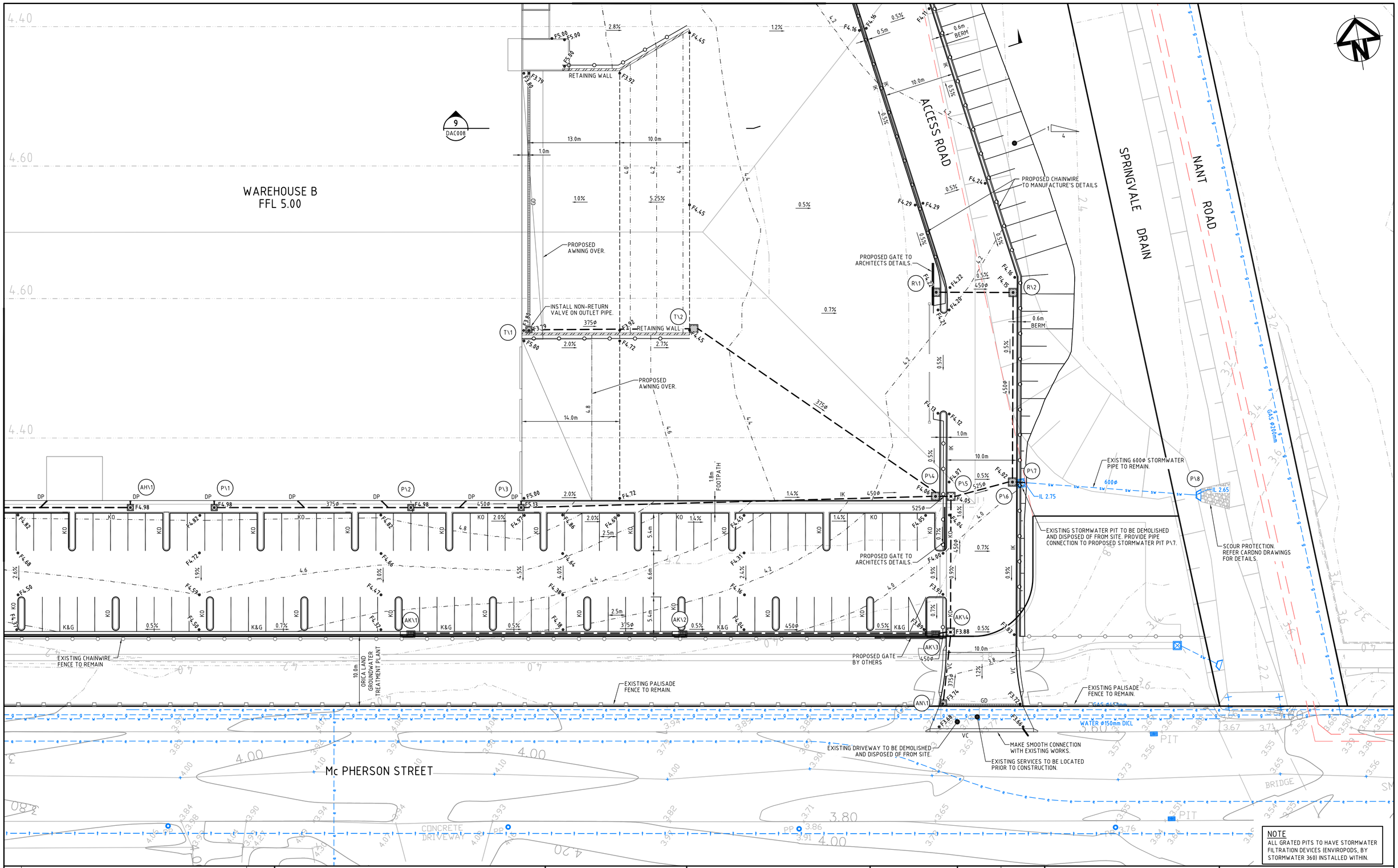
Drawing No.	Project No.	Issue
DAC014	14-213	P7

100mm on Original

Date Plotted: 12 Jan 2015 - 12:56PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC014.dwg

FOR CONTINUATION REFER DWG DAC013

FOR CONTINUATION REFER DWG DAC014



NOTE
ALL GRATED PITS TO HAVE STORMWATER FILTRATION DEVICES (ENVIROPODS, BY STORMWATER 360) INSTALLED WITHIN.

Issue	Description	Date
P7	RE-ISSUED FOR SECTION 75W	12-01-15
P6	RE-ISSUED FOR SECTION 75W	17-12-14
P5	RE-ISSUED FOR SECTION 75W	16-12-14
P4	RE-ISSUED FOR SECTION 75W	08-12-14
P3	ISSUED FOR SECTION 75W	03-10-14
P2	RE-ISSUED FOR INFORMATION	25-09-14
P1	ISSUED FOR INFORMATION	05-09-14

Bar Scales

0 5 10 15 20 25m

1 : 250 @ A1 1 : 500 @ A3

THIS DRAWING CANNOT BE COPIED OR REPRODUCED IN ANY FORM OR USED FOR ANY OTHER PURPOSE OTHER THAN THAT ORIGINALLY INTENDED WITHOUT THE WRITTEN PERMISSION OF AT&L

Client: Goodman

Scales		Drawn	GB
1 : 250 @ A1		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project
PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title
SITEWORKS AND STORMWATER DRAINAGE PLAN SHEET 6

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info@atl.net.au

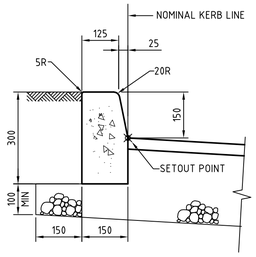
Status: FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

Drawing No.	Project No.	Issue
DAC015	14-213	P7

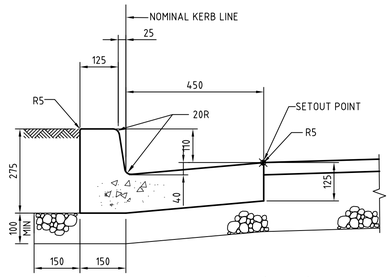
A1

100mm on Original

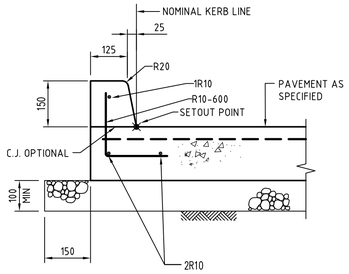
Date Plotted: 12 Jan 2015 - 12:56PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC015.dwg



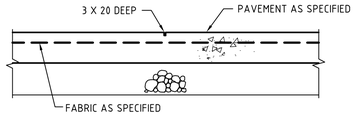
KERB ONLY (KO)
SCALE 1:10



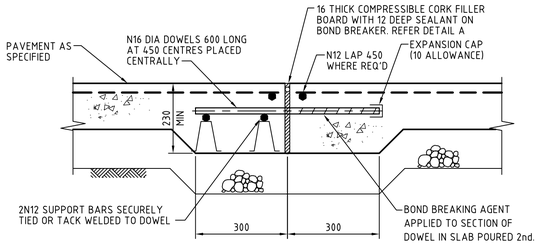
KERB AND GUTTER (K&G)
SCALE 1:10



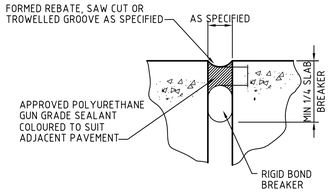
INTEGRAL KERB (IK)
SCALE 1:10



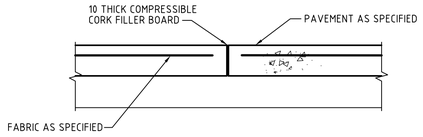
FOOTPATH WEAKENED PLANE JOINT (WPJ)
SCALE 1:10



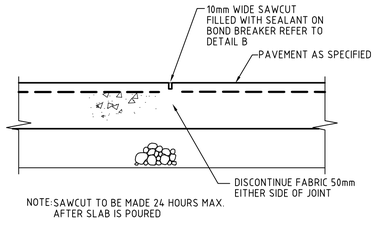
DOWELLED EXPANSION JOINT (DEJ)
SCALE 1:10



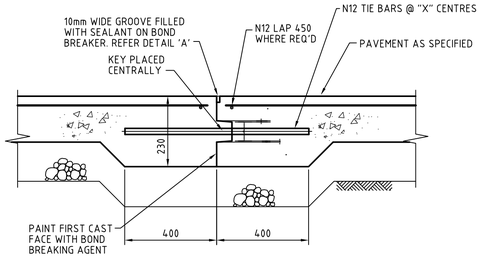
DETAIL A
N.T.S.



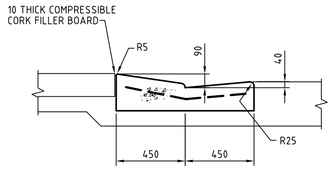
FOOTPATH EXPANSION JOINT (EJ)
SCALE 1:10



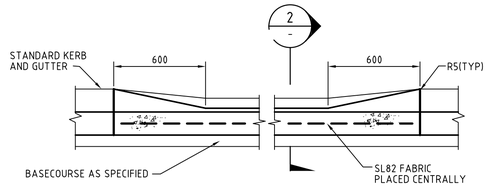
SAWN JOINT (SJ)
SCALE 1:10



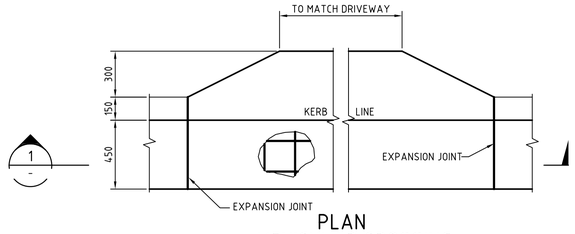
KEYED CONSTRUCTION JOINT (KJ)
SCALE 1:10
(X = 650,000/(BASE THICKNESS (mm) x JOINT SPACING (m)))



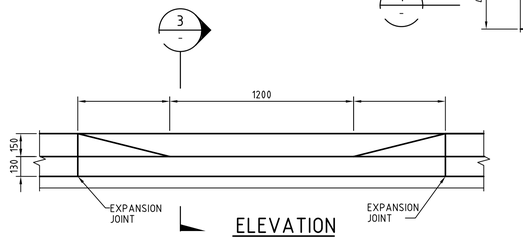
SECTION 2
1 : 20



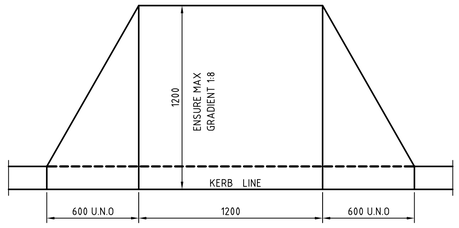
SECTION 1
1 : 20



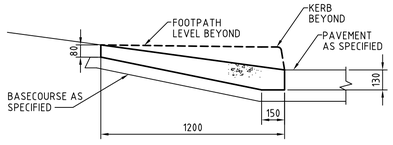
PLAN
VEHICULAR CROSSING
SCALE 1:20



ELEVATION



PLAN
RAMPED CROSSING
SCALE 1:20



SECTION 3
1 : 20

Issue	Description	Date
P4	RE-ISSUED FOR SECTION 75W	12-01-15
P3	RE-ISSUED FOR SECTION 75W	08-12-14
P2	ISSUED FOR SECTION 75W	03-10-14
P1	ISSUED FOR INFORMATION	25-09-14

Bar Scales

0 100 200 400 600 800 1000mm
1 : 10 @ A1 1 : 20 @ A3

0 500 1000 1500 2000mm
1 : 20 @ A1 1 : 40 @ A3

THIS DRAWING CANNOT BE COPIED OR REPRODUCED IN ANY FORM OR USED FOR ANY OTHER PURPOSE OTHER THAN THAT ORIGINALLY INTENDED WITHOUT THE WRITTEN PERMISSION OF AT&L

Client: Goodman

Scales	AS SHOWN	Drawn	GB
		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project: PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title: SITEWORKS DETAILS

Civil Engineers and Project Managers
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Suite 702, 154 Pacific Hwy
St Leonards NSW 2065
ABN 96 130 882 405
Tel: 02 9439 1777
Fax: 02 9460 8413
www.atl.net.au
info@atl.net.au

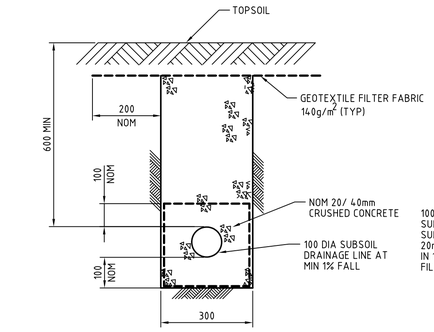
Status: FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

A1

Drawing No.	Project No.	Issue
DAC020	14-213	P4

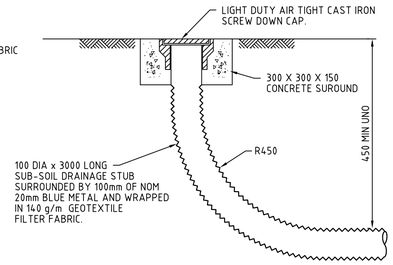
100mm on Original

Date Plotted: 12 Jan 2015 - 12:56PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC020.dwg



SUBSOIL IN LANDSCAPED AREAS

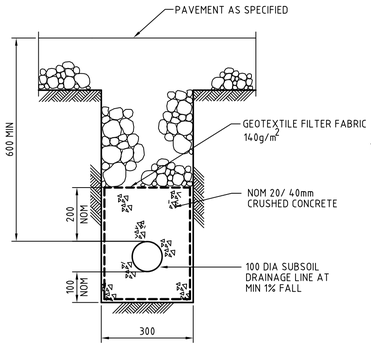
SCALE 1:10



FLUSHING POINT

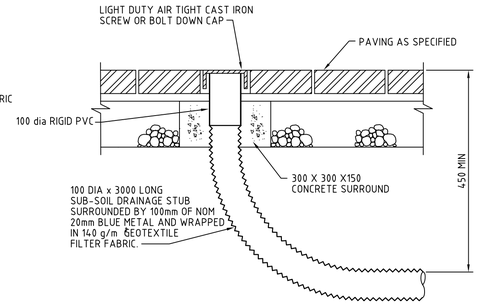
SCALE 1:10

NOTE: SLOTTED RIGID PVC PIPE AND FITTINGS MAY BE USED



SUBSOIL IN PAVED AREAS

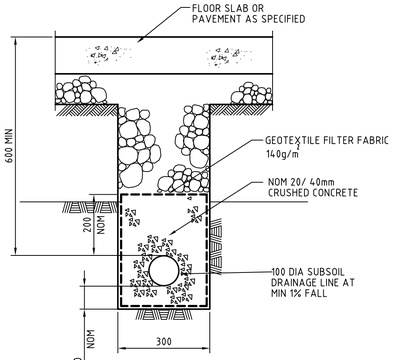
SCALE 1:10



FLUSHING POINT IN PAVING

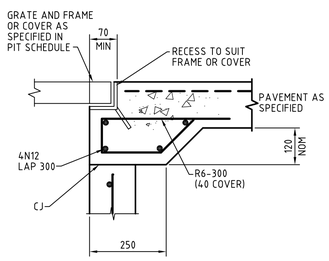
SCALE 1:10

NOTE: SLOTTED RIGID PVC PIPE AND FITTINGS MAY BE USED



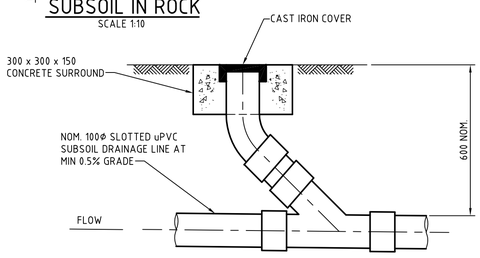
SUBSOIL IN ROCK

SCALE 1:10



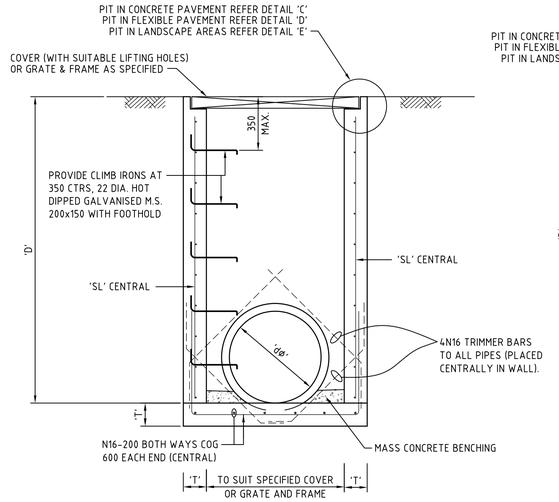
DETAIL "C"

SCALE 1:10



INTERMEDIATE RISER

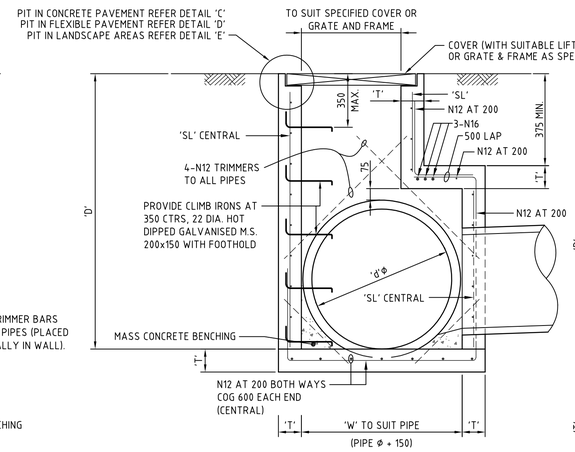
SCALE 1:10



PIT TYPE 'A' DETAIL
SURFACE INLET PIT
FOR PIPES UP TO 525Ø

SCALE: 1:20

PIPE DIA. 'dø'	WIDTH 'W'	DEPTH 'D'	WALL 'T'	FABRIC/COV 'SL'
375	650	800	150	SL72
	650	1200	150	SL72
	650	1600	150	SL72
	650	2000	150	SL72
	650	2400	150	SL72
450	650	800	150	SL72
	650	1200	150	SL72
	650	1600	150	SL72
	650	2000	150	SL72
	650	2400	150	SL72
525	650	800	150	SL72
	650	1200	150	SL72
	650	1600	150	SL72
	650	2000	150	SL72
	650	2400	150	SL72

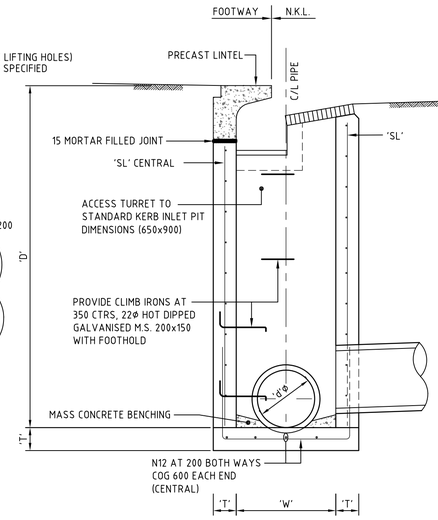


PIT TYPE 'B' DETAIL
SURFACE INLET PIT
FOR PIPES FROM 600Ø TO 1200Ø

(ENLARGED CHAMBER)

SCALE: 1:20

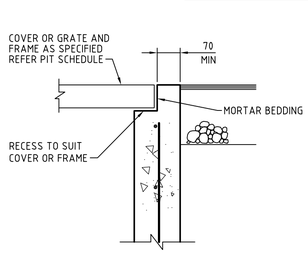
PIPE DIA. 'dø'	WIDTH 'W'	DEPTH 'D'	WALL 'T'	FABRIC/COV 'SL'
600	850	1200	150	SL72
	850	1600	150	SL72
	850	2000	150	SL72
	850	2400	150	SL72
675	940	1200	150	SL72
	940	1600	150	SL72
	940	2000	150	SL72
	940	2400	150	SL72
750	1020	1200	150	SL72
	1020	1600	150	SL72
	1020	2000	150	SL72
	1020	2400	150	SL72
825	1100	1600	150	SL72
	1100	2000	150	SL72
	1100	2400	150	SL72
900	1180	1600	150	SL72
	1180	2000	150	SL72
	1180	2400	150	SL72
1050	1345	1600	150	SL92
	1345	2000	150	SL92
	1345	2400	150	SL92
1200	1510	2000	150	SL102
	1510	2400	150	SL102
	1510	2800	150	SL102



PIT TYPE 'D' DETAIL
STANDARD GRATED KERB INLET PIT
FOR PIPES UPTO 525Ø

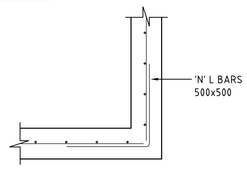
SCALE: 1:20

PIPE DIA. 'dø'	WIDTH 'W'	DEPTH 'D'	WALL 'T'	FABRIC/COV 'SL'
375	650	800	150	SL72
	650	1200	150	SL72
	650	1600	150	SL72
	650	2000	150	SL72
	650	2400	150	SL72
450	650	800	150	SL72
	650	1200	150	SL72
	650	1600	150	SL72
	650	2000	150	SL72
	650	2400	150	SL72
525	650	800	150	SL72
	650	1200	150	SL72
	650	1600	150	SL72
	650	2000	150	SL72
	650	2400	150	SL72



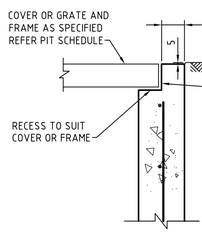
DETAIL "D"

SCALE 1:10



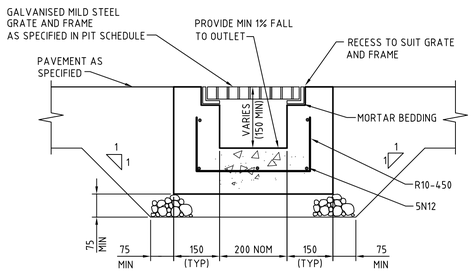
TYPICAL CORNER DETAIL

SCALE 1:20



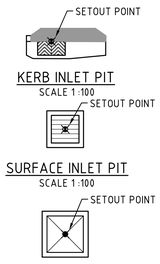
DETAIL "E"

SCALE 1:10



GRATED DRAIN (GD)

SCALE 1:10



KERB INLET PIT
SCALE 1:100

SURFACE INLET PIT
SCALE 1:100

JUNCTION PIT
SCALE 1:100

STORMWATER PIT SETOUT POINTS

NOTE

1. FOR PIT SIZE REFER TO TABLE (900 MIN LONG).
2. REINFORCING MESH IS TO BE BENT TO LAP 300 AROUND ALL CORNERS. VERTICAL BARS ARE NOT TO BE CUT. ALTERNATLY PROVIDE N12 "L" BARS (500x500) AT 400 VERTICAL CTS.
3. COMPRESSIVE STRENGTH (F'c) FOR CAST IN SITU CONCRETE SHALL BE A MINIMUM 32 MPa AT 28 DAYS.
4. TOP OF BENCHING SHALL BE ¾ OF OUTLET PIPE DIAMETER.
5. 100mm SUBSOIL DRAINAGE PIPE 3000 LONG WRAPPED IN FABRIC SOCK TO BE PROVIDE ADJACENT TO INLET PIPES.
6. ALL PITS SHALL BE PROVIDED WITH A LOCKING CLIP.
7. PIT GRATE TO BE 'WELDLOK' GULLY GRATE GG 78-50 OR APPROVED EQUIVALENT.
8. DURING INSTALLATION OF GRATE AND FRAME CONTRACTOR IS TO ENSURE CLEARANCE BETWEEN LINTEL AND OPENED GRATE (REFER TO INSTALLATION TOLERANCE).
9. PROVIDE STEP IRONS AS INDICATED FOR PITS DEEPER THAN 1200.
10. N12 AT 200 CENTRAL MAY BE USED IN LEIU OF MESH. LAP 500 AT CORNERS
11. CONCRETE STRENGTH - UNLESS NOTED OTHERWISE

ELEMENT	f'c MPa (28 DAYS)	SLUMP	MAX AGG SIZE	CEMENT TYPE
PITS	32	80mm	20mm	GP

12. COVER - UNLESS NOTED OTHERWISE

ELEMENT	INTERIOR	EXTERIOR
PITS		45mm
SLAB TOP	45mm	45mm
SLAB BOTTOM	45mm	45mm
BEAM TOP		
BEAM BOTTOM		
BEAM SIDE		
COLUMNS		

Issue	Description	Date
P4	RE-ISSUED FOR SECTION 75W	12-01-15
P3	RE-ISSUED FOR SECTION 75W	08-12-14
P2	ISSUED FOR SECTION 75W	03-10-14
P1	ISSUED FOR INFORMATION	25-09-14

Bar Scales

0 100 200 400 600 800 1000mm
1 : 10 @ A1 1 : 20 @ A3

0 500 1000 1500 2000mm
1 : 20 @ A1 1 : 40 @ A3

0 2 4 6 8 10m
1 : 100 @ A1 1 : 200 @ A3

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Client: Goodman

Scales		Drawn	GB
	AS SHOWN	Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project: PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title: STORMWATER DRAINAGE DETAILS

Civil Engineers and Project Managers
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Suite 702, 154 Pacific Hwy
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www.atl.net.au
info@atl.net.au

Status: FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

A1

Drawing No.	Project No.	Issue
DAC025	14-213	P4

100mm on Original

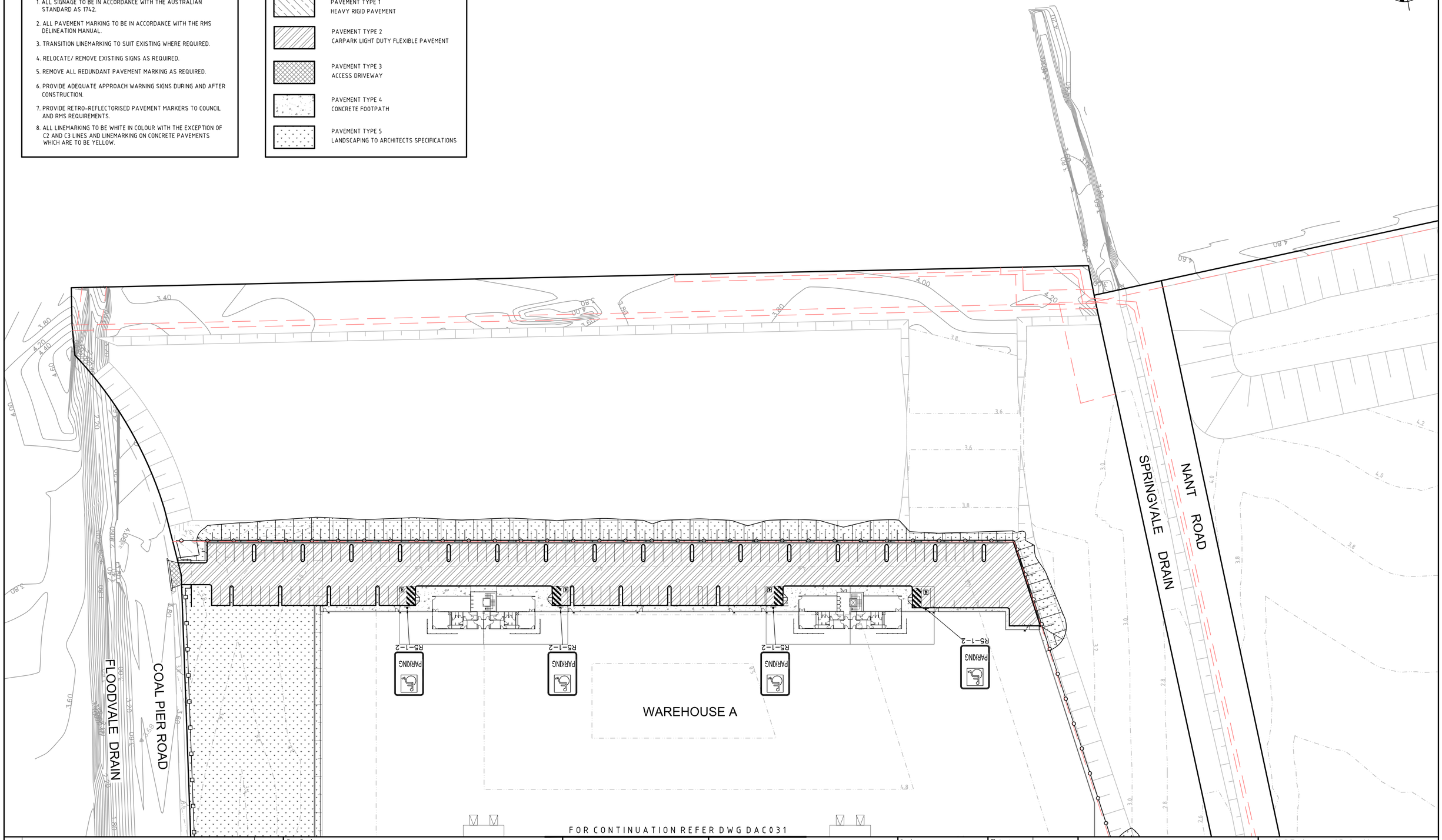
Date Plotted: 12 Jan 2015 - 12:57PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC025.dwg

PAVEMENT MARKING NOTES

1. ALL SIGNAGE TO BE IN ACCORDANCE WITH THE AUSTRALIAN STANDARD AS 1742.
2. ALL PAVEMENT MARKING TO BE IN ACCORDANCE WITH THE RMS DELINEATION MANUAL.
3. TRANSITION LINEMARKING TO SUIT EXISTING WHERE REQUIRED.
4. RELOCATE/ REMOVE EXISTING SIGNS AS REQUIRED.
5. REMOVE ALL REDUNDANT PAVEMENT MARKING AS REQUIRED.
6. PROVIDE ADEQUATE APPROACH WARNING SIGNS DURING AND AFTER CONSTRUCTION.
7. PROVIDE RETRO-REFLECTORISED PAVEMENT MARKERS TO COUNCIL AND RMS REQUIREMENTS.
8. ALL LINEMARKING TO BE WHITE IN COLOUR WITH THE EXCEPTION OF C2 AND C3 LINES AND LINEMARKING ON CONCRETE PAVEMENTS WHICH ARE TO BE YELLOW.

PAVEMENT LEGEND

- PAVEMENT TYPE 1 — HEAVY RIGID PAVEMENT
- PAVEMENT TYPE 2 — CARPARK LIGHT DUTY FLEXIBLE PAVEMENT
- PAVEMENT TYPE 3 — ACCESS DRIVEWAY
- PAVEMENT TYPE 4 — CONCRETE FOOTPATH
- PAVEMENT TYPE 5 — LANDSCAPING TO ARCHITECTS SPECIFICATIONS



Issue	Description	Date
P5	RE-ISSUED FOR SECTION 75W	12-01-15
P4	RE-ISSUED FOR SECTION 75W	17-12-14
P3	RE-ISSUED FOR SECTION 75W	08-12-14
P2	ISSUED FOR SECTION 75W	03-10-14
P1	ISSUED FOR INFORMATION	25-09-14

Bar Scales

0 10 20 30 40 50m

1 : 500 @ A1 1 : 1000 @ A3

THIS DRAWING CANNOT BE COPIED OR REPRODUCED IN ANY FORM OR USED FOR ANY OTHER PURPOSE OTHER THAN THAT ORIGINALLY INTENDED WITHOUT THE WRITTEN PERMISSION OF AT&L

Client: Goodman

Scales			
1 : 500 @ A1		Drawn	GB
		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project: PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title: PAVEMENT, SIGNAGE AND LINEMARKING PLAN SHEET 1

Civil Engineers and Project Managers
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Suite 702, 154 Pacific Hwy
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ABN 96 130 882 405
Tel: 02 9439 1777
Fax: 02 9460 8413
www.atl.net.au
info@atl.net.au

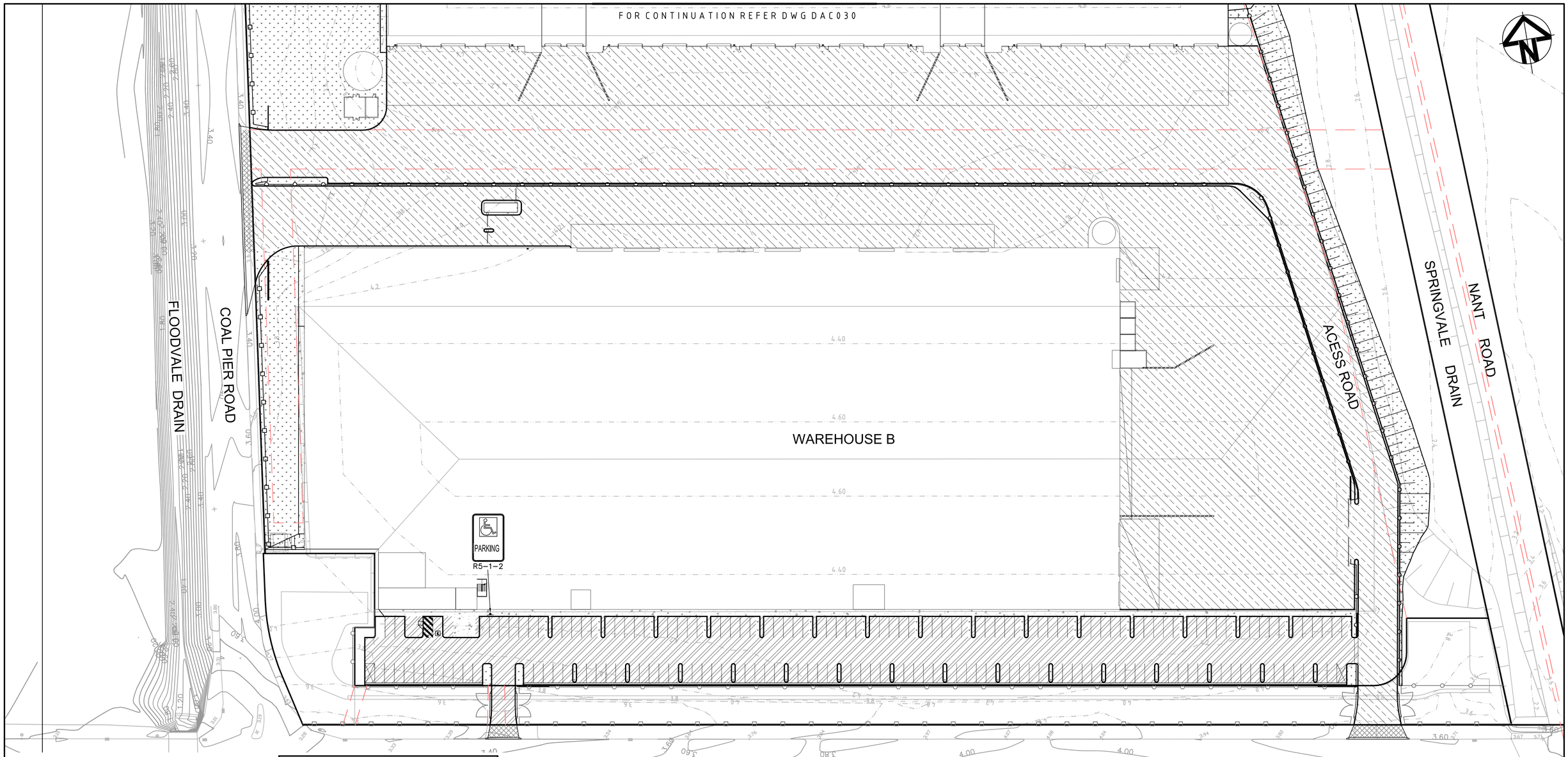
Status: FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION

A1

Drawing No.	Project No.	Issue
DAC030	14-213	P5

100mm on Original

Date Plotted: 12 Jan 2015 - 12:57PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC030.dwg



PAVEMENT MARKING NOTES

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2. ALL PAVEMENT MARKING TO BE IN ACCORDANCE WITH THE RMS DELINEATION MANUAL.
3. TRANSITION LINEMARKING TO SUIT EXISTING WHERE REQUIRED.
4. RELOCATE/ REMOVE EXISTING SIGNS AS REQUIRED.
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6. PROVIDE ADEQUATE APPROACH WARNING SIGNS DURING AND AFTER CONSTRUCTION.
7. PROVIDE RETRO-REFLECTORISED PAVEMENT MARKERS TO COUNCIL AND RMS REQUIREMENTS.
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PAVEMENT LEGEND

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Issue	Description	Date
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P4	RE-ISSUED FOR SECTION 75W	17-12-14
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P2	ISSUED FOR SECTION 75W	03-10-14
P1	ISSUED FOR INFORMATION	25-09-14

Bar Scales

0 10 20 30 40 50m

1 : 500 @ A1 1 : 1000 @ A3

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Client: Goodman

Scales	1 : 500 @ A1	Drawn	GB
		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project: PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title: PAVEMENT, SIGNAGE AND LINEMARKING PLAN SHEET 2

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Status: FOR APPROVAL
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A1

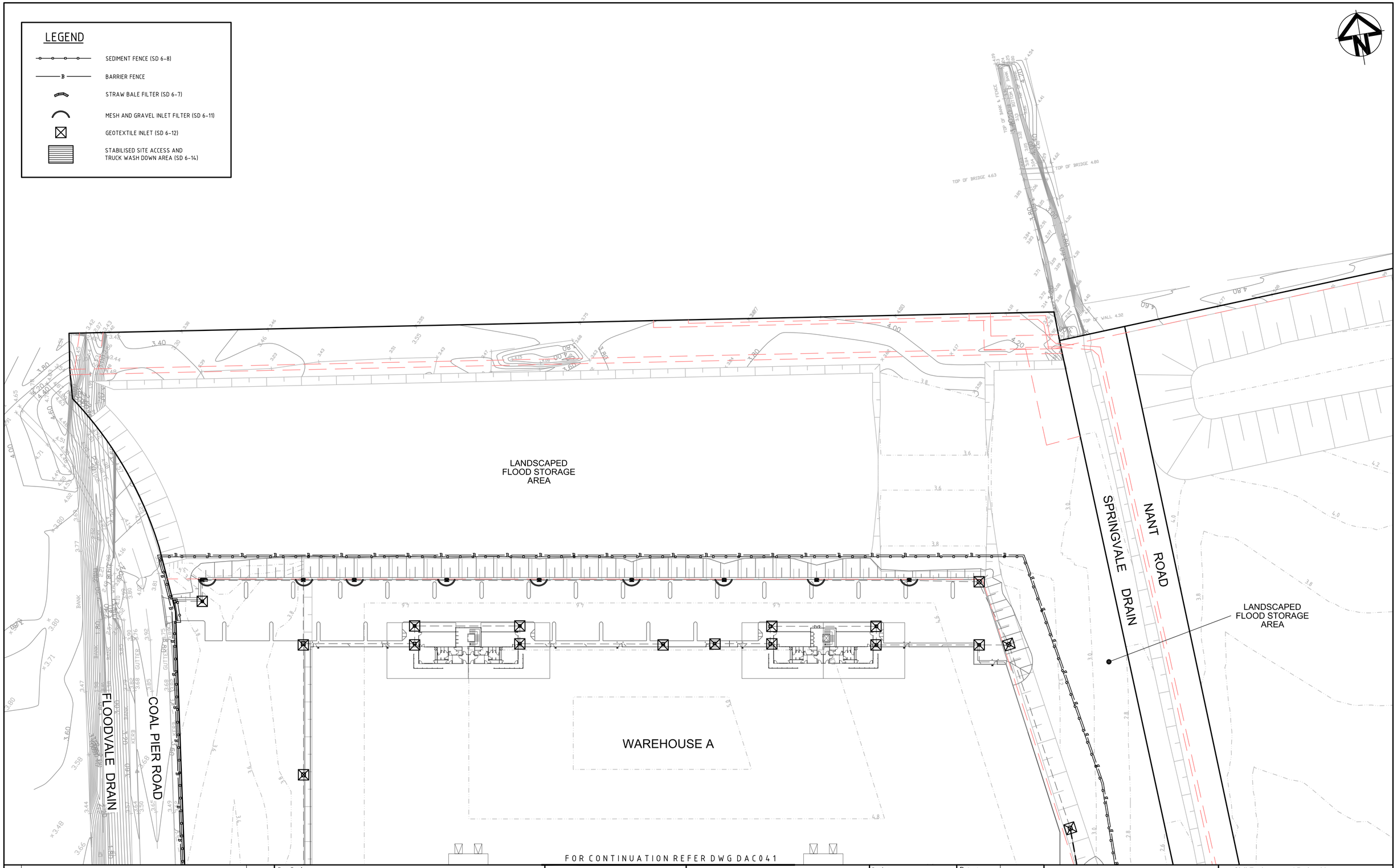
Drawing No.	Project No.	Issue
DAC031	14-213	P5

100mm on Original

Date Plotted: 12 Jan 2015 - 12:57PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC031.dwg

LEGEND

- SEDIMENT FENCE (SD 6-8)
- BARRIER FENCE
- STRAW BALE FILTER (SD 6-7)
- MESH AND GRAVEL INLET FILTER (SD 6-11)
- GEOTEXTILE INLET (SD 6-12)
- STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA (SD 6-14)



Issue	Description	Date
P4	RE-ISSUED FOR SECTION 75W	12-01-15
P3	RE-ISSUED FOR SECTION 75W	08-12-14
P2	ISSUED FOR SECTION 75W	03-10-14
P1	ISSUED FOR INFORMATION	25-09-14

100mm on Original

Bar Scales

0 10 20 30 40 50m

1 : 500 @ A1 1 : 1000 @ A3

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Client: Goodman

Scales			
1 : 500 @ A1		Drawn	GB
		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project: PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title: SEDIMENTATION AND EROSION CONTROL PLAN SHEET 1

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A1

Drawing No.	Project No.	Issue
DAC040	14-213	P4

Date Plotted: 12 Jan 2015 - 12:58PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC040.dwg

FOR CONTINUATION REFER DWG DAC040

WAREHOUSE B

FLOODVALE DRAIN

COAL PIER ROAD

PRIVATE ROAD

ACESS ROAD

SPRINGVALE DRAIN

NANT ROAD

Mc PHERSON STREET

PROVIDE TEMPORARY ACCESS GATE.

LEGEND

- SEDIMENT FENCE (SD 6-8)
- BARRIER FENCE
- STRAW BALE FILTER (SD 6-7)
- MESH AND GRAVEL INLET FILTER (SD 6-11)
- GEOTEXTILE INLET (SD 6-12)
- STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA (SD 6-14)

Issue	Description	Date
P4	RE-ISSUED FOR SECTION 75W	12-01-15
P3	RE-ISSUED FOR SECTION 75W	08-12-14
P2	ISSUED FOR SECTION 75W	03-10-14
P1	ISSUED FOR INFORMATION	25-09-14

100mm on Original

Bar Scales

0 10 20 30 40 50m

1 : 500 @ A1 1 : 1000 @ A3

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Client: Goodman

Scales	1 : 500 @ A1	Drawn	GB
		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project: PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title: SEDIMENTATION AND EROSION CONTROL PLAN SHEET 2

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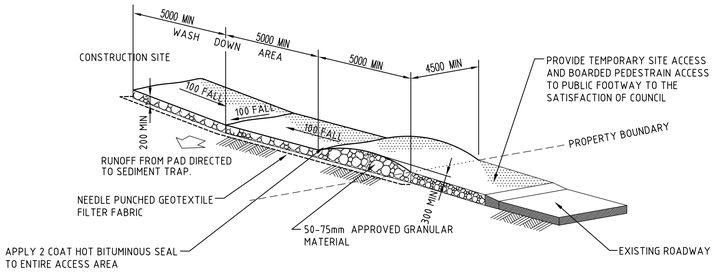
A1

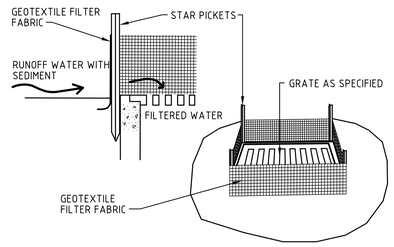
Drawing No.	Project No.	Issue
DAC041	14-213	P4

Date Plotted: 12 Jan 2015 - 12:58PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC041.dwg



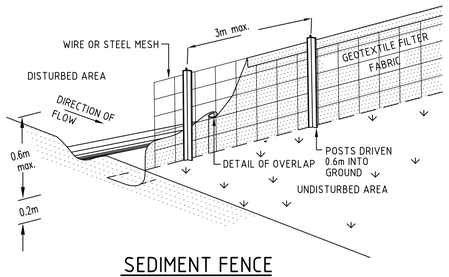
STABILISED SITE ACCESS AND TRUCK WASH DOWN AREA

NTS



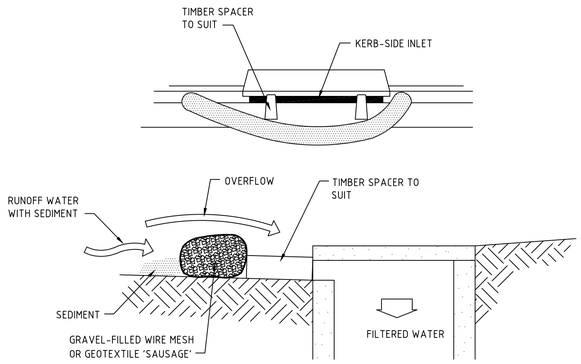
GEOTEXTILE FILTER PIT SURROUND

NTS



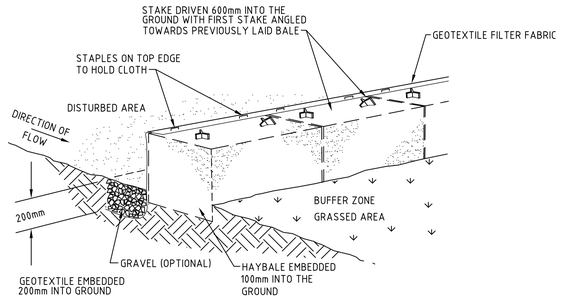
SEDIMENT FENCE

NTS



MESH AND GRAVEL INLET FILTER

NTS



HAYBALE AND GEOTEXTILE SEDIMENT FILTER

NTS

Issue	Description	Date
P4	RE-ISSUED FOR SECTION 75W	12-01-15
P3	RE-ISSUED FOR SECTION 75W	08-12-14
P2	ISSUED FOR SECTION 75W	03-10-14
P1	ISSUED FOR INFORMATION	25-09-14

Bar Scales

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Client

Goodman

Scales	AS SHOWN	Drawn	GB
		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project

PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title

SEDIMENTATION AND EROSION CONTROL DETAILS

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Status: FOR APPROVAL
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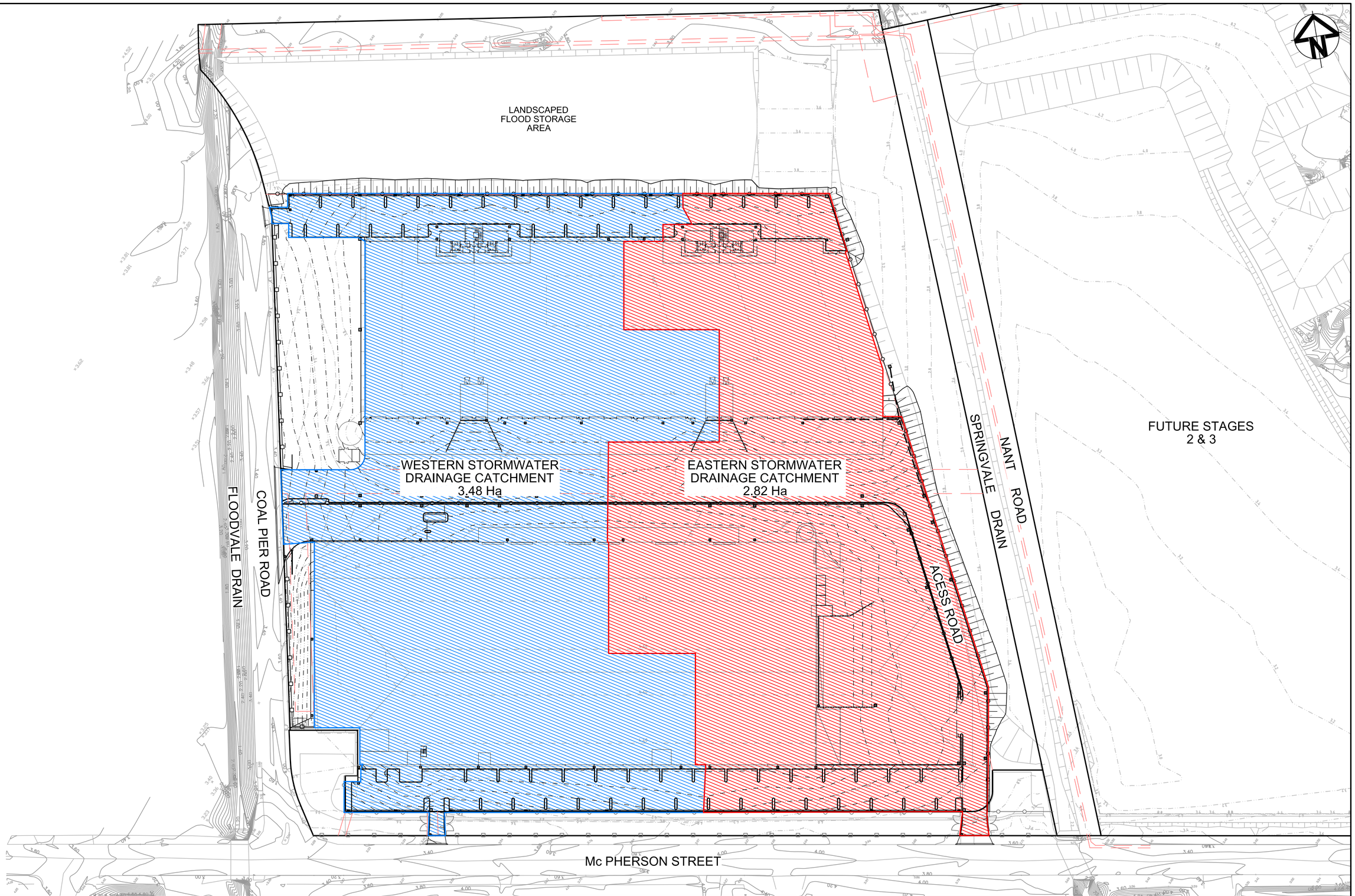
A1

Drawing No.	Project No.	Issue
DAC042	14-213	P4

100mm on Original

Date Plotted: 12 Jan 2015 - 12:58PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC042.dwg



Issue	Description	Date
P4	RE-ISSUED FOR SECTION 75W	12-01-15
P3	RE-ISSUED FOR SECTION 75W	08-12-14
P2	ISSUED FOR SECTION 75W	03-10-14
P1	ISSUED FOR INFORMATION	25-09-14

Bar Scales

0 15 30 45 60 75m

1 : 750 @ A1 1 : 1500 @ A3

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Client

Goodman

Scales		Drawn	GB
1 : 750 @ A1		Designed	GB
Grid	MGA	Checked	AMcL
Height Datum	AHD	Approved	AT

Project

PORT BOTANY
INDUSTRIAL ESTATE
STAGE 1

Title

STORMWATER CATCHMENT
PLAN

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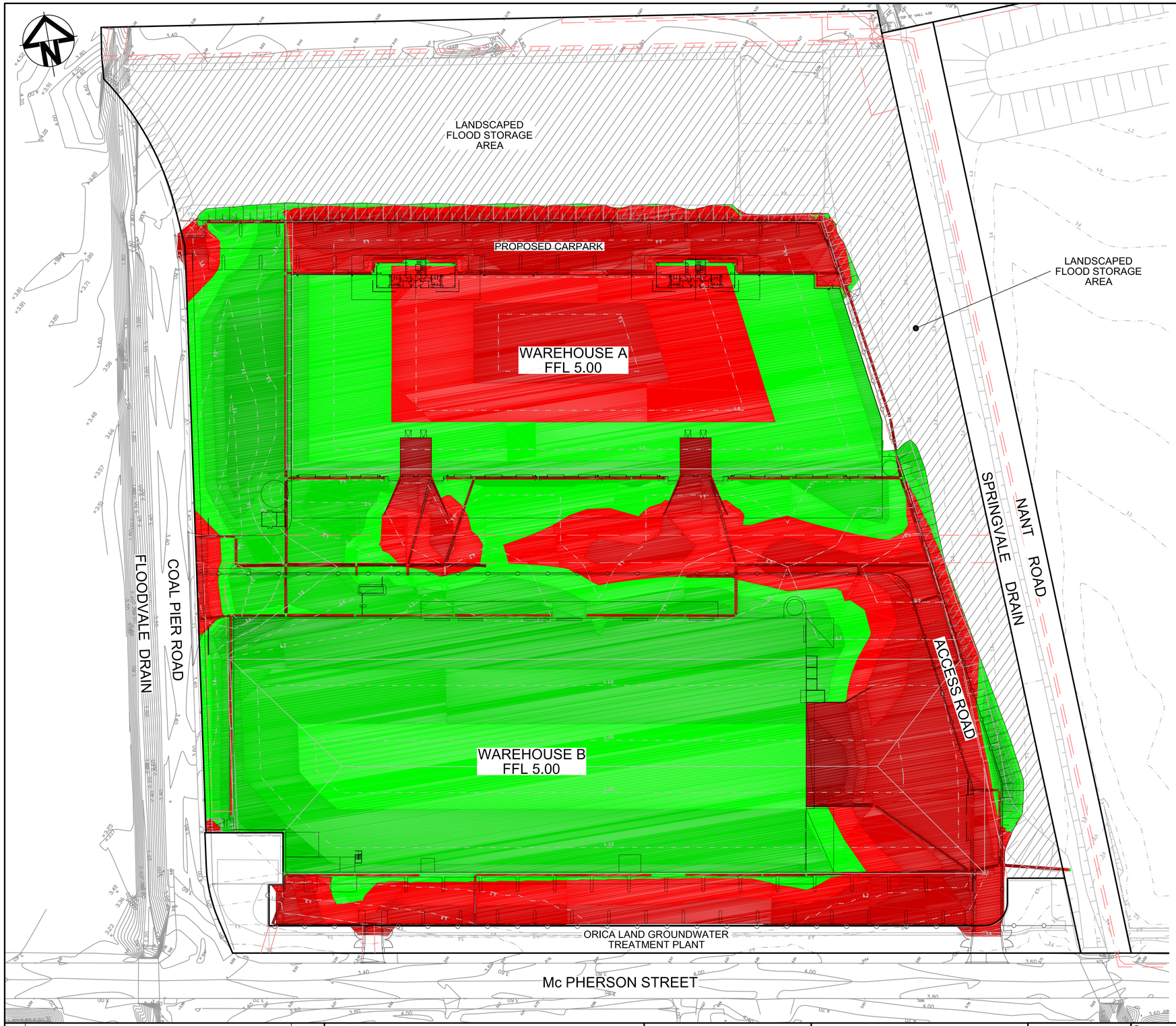
A1

Drawing No.	Project No.	Issue
DAC050	14-213	P4

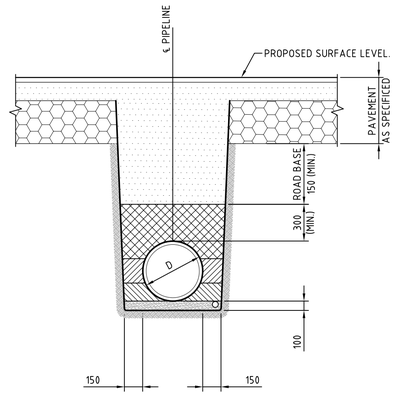
100mm on Original

Date Plotted: 12 Jan 2015 - 12:58PM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC050.dwg



CUT & FILL LEGEND

Lower value		Upper value		Colour
-2.0	to	-1.8	m	
-1.8	to	-1.6	m	
-1.6	to	-1.4	m	
-1.4	to	-1.2	m	
-1.2	to	-1.0	m	
-1.0	to	-0.8	m	
-0.8	to	-0.6	m	
-0.6	to	-0.4	m	
-0.4	to	-0.2	m	
-0.2	to	0.0	m	
0.0	to	0.2	m	
0.2	to	0.4	m	
0.4	to	0.6	m	
0.6	to	0.8	m	
0.8	to	1.0	m	
1.0	to	1.2	m	
1.2	to	1.4	m	
1.4	to	1.6	m	
1.6	to	1.8	m	
1.8	to	2.0	m	



TYPICAL PIPE TRENCH DETAIL BELOW PAVEMENT (HS3)

N.T.S.

TOTAL CUT/FILL

CUT TO MARKER LAYER (CLEAN)	7,800m³
CUT HYDRANT RING MAIN (CLEAN)	240m³
CUT SEWER TRENCH (CLEAN 50%)	330m³
CUT FOOTINGS WAREHOUSE A AND B (CLEAN)	426m³
TOTAL CLEAN CUT	8800m³
CUT BELOW MARKER LAYER (CONTAMINATED)	1,843m³
CUT SEWER TRENCH (CONTAMINATED, 50%)	330m³
CUT FOOTINGS WAREHOUSE A (CONTAMINATED)	17m³
TOTAL CONTAMINATED CUT	2190m³
FILL	10,700m³
EXPORT OFFSITE	290m³

NOTE:

1. ASSUMED CONTAMINATED MATERIAL 500mm BELOW BULK EARTHWORKS SURVEY PROVIDED BY "CARDNO", SURVEY LEVELS T.B.C. WITH WAE
2. ALL CONTAMINATED MATERIAL TO REMAIN ONSITE AS COMPACTED FILL WITH 500mm CAPPING LAYER
3. VOLUMES INCLUDES STORMWATER DRAINAGE TRENCHING TO TYPICAL DETAIL
4. ASSUMED ALL CLEAN EXCAVATED MATERIAL CAN BE USED AS FILL
5. FOOTING SIZES SUPPLIED BY COSTIN ROE STRUCTURAL DRAWINGS

ASSUMED PAVEMENT BUILD UP

WAREHOUSE SLAB AND BASE	= 260mm
EXTERNAL CONCRETE PAVEMENT (HARDSTAND)	= 295mm
LIGHT DUTY FLEXIBLE PAVEMENT (CAR PARKING)	= 500mm

Issue	Description	Date
P2	RE-ISSUED FOR SECTION 75W	12-01-15
P1	ISSUED FOR SECTION 75W	17-12-14

Bar Scales

0 15 30 45 60 75m

1 : 750 @ A1 1 : 1500 @ A3

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Client: Goodman

Scales	1 : 750 @ A1
Grid	MGA
Height Datum	AHD

Drawn	GB
Designed	GB
Checked	AMcL
Approved	AT

Project: PORT BOTANY INDUSTRIAL ESTATE STAGE 1

Title: BULK EARTHWORKS CUT AND FILL PLAN

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A1

Drawing No.	Project No.	Issue
DAC060	14-213	P2

100mm on Original

Date Plotted: 14 Jan 2015 - 10:17AM File Name: F:\14-213 Orica Site Southlands\Drgs\Civil\DA-Drawings\DAC060.dwg