A1

PROPOSED BUNNINGS WAREHOUSE
CNR ELIZABETH DRIVE & BONNYRIGG AVE

CIVIL ENGINEERING WORKS FOR DEVELOPMENT APPLICATION

DRAWING INDEX:

DRAWING No.	DRAWING TITLE
01291_100	COVER SHEET, DRAWING INDEX & GENERAL NOTES
01291_201	GENERAL ARRANGEMENT PLAN UNDERCROFT LEVEL SHEET 1
01291_202	GENERAL ARRANGEMENT PLAN UNDERCROFT LEVEL SHEET 2
01291_203	GENERAL ARRANGEMENT PLAN WAREHOUSE LEVEL SHEET 1
01291_204	GENERAL ARRANGEMENT PLAN WAREHOUSE LEVEL SHEET 2
01291_231	BULK-EARTHWORKS PLAN
01291_301	RAMP LONGITUDINAL SECTIONS
01291_351	TYPICAL SECTIONS
01291_601	OSD CATCHMENT PLAN
01291_651	STORMWATER DRAINAGE OSD TANK & GENERAL DETAILS
01291_701	SEDIMENT & EROSION CONTROL - DETAILS

GENERAL NOTES:

1. ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FAIRFIELD CITY COUNCIL'S TECHNICAL SPECIFICATION.
2. THE CONSTRUCTOR SHALL PREPARE A DILAPIDATION REPORT FOR THE EXISTING INFRASTRUCTURE WITHIN THE ROAD RESERVE, INCLUDING BUT NOT LIMITED TO KERBS, GUTTERS, FOOTPATHS, VEHICULAR CROSSINGS, STREET SIGNS, SERVICE FITTING COVERS, ETC.
3. THE CONSTRUCTOR SHALL REVIEW, BE AWARE AND AT ALL TIMES COMPLY WITH THE SPECIFIC REQUIREMENTS FOR THIS DEVELOPMENT AS SET OUT IN THE DEVELOPMENT APPROVAL FOR THE PROJECT.
4. ANY CHANGES MADE BY THE CONSTRUCTOR TO ANY LEVEL, DIMENSION, LOCATION, POSITION, ALIGNMENT ETC., OF ANY OF THE WORKS SHOWN ON THE DRAWINGS WITHOUT THE WRITTEN CONSENT OF C&M CONSULTING ENGINEERS PTY. LTD. AND OR THE PRINCIPAL CERTIFYING AUTHORITY IS DONE SO AT THE CONSTRUCTORS OWN RISK.
5. THE CONSTRUCTOR SHALL ALLOW TO LIAISE WITH AND PROVIDE SUFFICIENT NOTICE TO THE PRINCIPAL CERTIFYING AUTHORITY TO ENSURE THAT ALL WORKS ARE INSPECTED TO ENABLE COMPLIANCE CERTIFICATES TO BE ISSUED THROUGHOUT THE CONSTRUCTION PERIOD. THE CONSTRUCTOR SHALL LIAISE WITH THE PRINCIPAL CERTIFYING AUTHORITY PRIOR TO ANY CONSTRUCTION WORKS COMMENCING AND PREPARE AN INSPECTION AND TEST PLAN WITH A MUTUALLY AGREED WITNESS AND HOLD POINTS FOR THE CONSTRUCTION WORKS.
6. IF THE PRINCIPAL CERTIFYING AUTHORITY IS NOT FAIRFIELD CITY COUNCIL'S COUNCIL, THEN THE CONSTRUCTOR MUST CONTACT FAIRFIELD CITY COUNCIL'S COUNCIL'S WORKS DIVISION TO ENABLE THEIR INSPECTION OF ALL WORKS (INCLUDING EROSION AND SEDIMENT CONTROL MEASURES) WITHIN THE ROAD RESERVE AREA.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL ACCESS TO THE SITE. THE ACCESS SHALL BE ALL WEATHER SAFE ACCESS TO THE CONTRACTOR'S SITE FACILITIES AT ALL TIMES FOR THE DURATION OF THE CONTRACT.
8. A TEMPORARY HOARDING OR FENCE OF MINIMUM 1.5m HIGH IS TO BE PROVIDED AROUND THE SITE TO PROTECT THE PUBLIC PRIOR TO COMMENCEMENT OF WORKS. HOARDINGS OR FENCES ARE TO BE STRUCTURALLY ADEQUATE. THE CONTRACTOR SHALL OBTAIN AN APPROVAL FROM COUNCIL PRIOR TO ERECTING THE HOARDING OR FENCE.
9. ALL NEW WORKS SHALL MAKE A SMOOTH CONNECTION WITH ANY FORMATIONS, STRUCTURES, ETC.
10. ALL ALTERATIONS AND/OR ADDITIONS TO EXISTING WORK, THE CONTRACTOR SHALL VERIFY THE DIMENSIONS OF THE EXISTING WORK BEFORE PROCEEDING AND NOTIFY THE SUPERINTENDENT OF DISCREPANCIES.
11. THE CONTRACTOR SHALL USE MANUFACTURED ITEMS IN THE WORK ONLY IN ACCORDANCE WITH THE CURRENT PUBLISHED
12. THE WORKS SHALL BE CONSTRUCTED IN SUCH A MANNER THAT THERE IS MINIMUM DISTURBANCE TO EXISTING TREES AND VEGETATION.
13. THE PUBLIC FOOTWAY AND ROADWAY FRONTING THE SITE SHALL BE MAINTAINED IN A SAFE AND UNOBSTRUCTED MANNER AT ALL TIMES DURING THE CONSTRUCTION WORKS.
14. THE CONSTRUCTOR SHALL BE RESPONSIBLE FOR REPAIRING TO THE SATISFACTION OF THE ASSET OWNER, ANY DAMAGE CAUSED TO ANY EXISTING INFRASTRUCTURE WITHIN THE ROAD RESERVE, INCLUDING BUT NOT LIMITED TO KERBS, GUTTERS, FOOTPATHS, VEHICULAR CROSSINGS, STREET SIGNS, SERVICE FITTING COVERS, ETC.
15. THE SITE SHALL BE KEPT IN A TIDY CONDITION AT ALL TIMES. LITTER RUBBISH AND BUILDING RUBBLE SHALL BE PLACED IN CONTAINERS OR BINS AND REGULARLY REMOVED FROM SITE AS REQUIRED.

STORMWATER NOTES:

1. STORMWATER DESIGN CRITERIA:
   MINOR STORM ARI: 20 YEARS
   MAJOR STORM ARI: 100 YEARS
2. PIPES DN375 AND LARGER TO BE STEEL REINFORCED CONCRETE PIPES CLASS '2' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS U.N.O.
3. PIPES DN300 AND SMALLER SHALL BE GRADE SH (SEWER GRADE) uPVC WITH RUBBER RING JOINTS.
4. EQUIVALENT STRENGTH FIBRE REINFORCED CONCRETE PIPES MAY BE USED UP TO DN450.
5. PIPES FOR SUB-SOIL DRAINS SHALL BE SLOTTED 100MM DIAMETER CLASS 1000 WRAPPED IN GEOFABRIC, U.O.N, COMPLYING WITH THE REQUIREMENTS OF AS 2439.
6. PRECAST PITS, WHERE ALLOWED, AND THE INSITU BASE SHALL COMPLY WITH THE REQUIREMENT OF THE MANUFACTURER.
7. ALL MILD STEEL FIXTURES INCLUDING GRATES, FRAMES, STEP IRONS, LADDERS, ETC., SHALL BE HOT DIP GALVANISED. GALVANISING SHALL COMPLY WITH THE REQUIREMENTS OF AS 1214 OR AS 1650, AS APPROPRIATE.
8. GEOFABRIC FILTER SHALL BE PERMEABLE, NON-WOVEN FABRIC MANUFACTURED FROM A POLYMER SUCH AS POLYPROPYLENE OR POLYESTER OF MASS NOT LESS THAN 135G/M2.
9. THE MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:
   CONCRETE AND FRC PIPES: EXTERNAL PIPE DIAMETER PLUS 400MM.
   uPVC PIPE: EXTERNAL DIAMETER OF PIPE PLUS 200MM.
   SUBSOIL PIPE: 250MM.
10. ALL PIPES SHALL BE PLACED CENTRALLY WITHIN THE TRENCH WITH EQUAL CLEARANCE EACH SIDE.
11. PIPE BEDDING MATERIAL SHALL BE CLEAN COARSE RIVER SAND WITH DEPTH AS FOLLOWS:
    CONCRETE AND FRC PIPES: 100MM (175MM IN ROCK)
    UPVC PIPE: 75MM (100MM IN ROCK)
    SUBSOIL DRAINS: 50MM
12. ALL PIPES SHALL BE BACKFILLED WITH GRANULAR MATERIAL SUCH AS QUARRY FINES OR COARSE RIVER SAND TO A MINIMUM OF 150MM ABOVE THE PIPE. THE GRANULAR MATERIAL SHALL BE PLACED IN 150MM THICK MAXIMUM LAYERS AND COMPACTED TO ACHIEVE A DENSITY INDEX (ID) OF 70%. FREQUENCIES OF COMPACTION TESTS FOR TRENCHES SHALL BE 1 TEST PER 2 LAYERS PER 40 LINEAR METRE.
13. BACKFILL THE REMAINDER OF THE TRENCH ABOVE THE SAND TO SUBGRADE LEVEL WITH TRENCH MATERIAL. PLACE AND COMPACT MATERIALS IN LAYERS NOT EXCEEDING 150MM LOOSE THICKNESS. MATERIAL LOWER THAN 500MM BELOW SUBGRADE LEVEL SHALL BE COMPACTED TO AT LEAST 95% OF STANDARD MAXIMUM DRY DENSITY. THE TOP 500MM BELOW PAVEMENT SUBGRADE LEVELS SHALL BE COMPACTED TO AT LEAST 100% STANDARD MAXIMUM DRY DENSITY.
14. FILTER MATERIAL FOR SUBSOIL SHALL BE COARSE SAND OR CRUSHED STONE COMPLYING WITH ONE OF THE GRADINGS IN THE TABLE BELOW. WHERE NOTED ON THE DRAWINGS THE 7MM CRUSHED ROCK FILTER MATERIAL SHALL BE ENCLOSED WITHIN FILTER FABRIC SHEET AS SPECIFIED. FILTER MATERIAL SHALL BE PLACED IN 250MM LAYERS AND COMPACTED TO DENSITY INDEX (ID) OF 60%.

AS SIEVE SIZE (mm)	SAND	7mm ROCK
9.5	100	100
6.7	-	75-100
4.75	90-100	20-55
2.36	75-100	0-15
1.18	50-90	
0.6	20-60	
0.3	10-30	
0.15	2-10	
0.075	0-3	0-2

15. UNLESS OTHERWISE DETAILED OR PERMITTED, THE MINIMUM GRADE OF ALL PIPE WORKS SHALL BE 1.0%, AND HAVE MINIMUM 300mm COVER.

EARTHWORKS NOTES:

1. THE CONTRACTOR SHALL STRIP THE MATERIAL CLASSIFIED AS TOPSOIL OR MATERIAL CONTAINING ORGANIC MATTER TO A LEVEL APPROVED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER AND THE SUPERINTENDENT. THE STRIPPED TOPSOIL SHOULD BE REMOVED AND STOCKPILED PRIOR TO ANY EARTHWORKS OPERATIONS.
2. THE CONTRACTOR SHALL STRIP THE MATERIAL CLASSIFIED AS TOPSOIL OR MATERIAL CONTAINING ORGANIC MATTER TO A LEVEL APPROVED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER AND THE SUPERINTENDENT. THE STRIPPED TOPSOIL SHOULD BE REMOVED AND STOCKPILED PRIOR TO ANY EARTHWORKS OPERATIONS.
3. THE MAXIMUM HEIGHT OF TOPSOIL STOCKPILES SHALL NOT EXCEED 2.5M AND THE MAXIMUM BATTER SLOPE SHALL NOT EXCEED 2H : 1V.
4. ALL EARTHWORKS OPERATIONS SHALL BE CARRIED OUT TO LEVEL 1 SUPERVISION IN ACCORDANCE WITH AS3798 - 2007. THE CONTRACTOR SHALL ISSUE A WRITTEN LETTER FROM THE GEOTECHNICAL CONSULTANT THAT THEY HAVE BEEN ENGAGED ACCORDINGLY AND TAKES FULL RESPONSIBILITY OF THE EARTHWORKS OPERATION.
5. THE CONTRACTOR SHALL OVER-EXCAVATE TO REMOVE ALL UNACCEPTABLE FILL MATERIAL CONTAINING DELETERIOUS MATERIALS SUCH AS ORGANIC MATTER AND CONSTRUCTION MATERIALS. ALL OVER-EXCAVATED AREAS SHALL BE REPLACED WITH SUITABLE MATERIAL WITH A CBR AT LEAST EQUAL TO THE SPECIFIED SUBGRADE CBR, SOURCED FROM ON SITE, IF AVAILABLE, OR IMPORTED.
6. WET MATERIAL WILL NOT BE REGARDED AS UNSUITABLE. SHOULD WET MATERIAL BE ENCOUNTERED, THE CONTRACTOR SHALL DRY THE MATERIAL SUFFICIENTLY BY RE-WORKING, OR SPREADING IT TO ALLOW DRYING. ALL ASSOCIATED COSTS SHALL BE BORNE BY THE CONTRACTOR.
7. ALL EXCESS EARTHWORKS MATERIALS, INCLUDING EXCESS MATERIALS FROM THE STORMWATER AND SERVICE TRENCH EXCAVATIONS SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE BY THE CONTRACTOR AT THE CONTRACTOR'S COST.
8. ALL BATTER SLOPES SHALL BE A MAXIMUM OF 1V:5H (U.N.O.)
9. UNLESS NOTED OTHERWISE OR APPROVED ALL FILL MUST BE CONSTITUTED OF VIRGIN EXCAVATED NATURAL MATERIAL (VENM).
10. THE CONTRACTOR SHALL EXCAVATE AND/OR PLACE AND COMPACT FILL TO CONFORM TO THE LINES, GRADES, CROSS SECTIONS, AND DIMENSIONS SHOWN ON THE DRAWINGS, ALLOWING FOR PAVEMENT/SLAB AND TOPSOIL LAYERS.
11. FREQUENCIES OF COMPACTION TESTS FOR EARTHWORKS SHALL BE AS FOLLOWS (WHICHEVER IS GREATER NUMBER).
    a. 1 TEST PER 500 M3 DISTRIBUTED AREA, OR
    b. 1 TEST PER LAYER OR 200MM THICKNESS, OR
    c. 3 TESTS PER VISIT.
12. COMPACTION REQUIREMENTS FOR EARTHWORKS SHALL BE AS FOLLOWS:
    a. GENERAL FILL : 95% OF SMDD
    b. TOP 500MM UNDER PAVEMENT OR STRUCTURE: 100% OF SMDD
    c. BACKFILL WITHIN 2M OF STRUCTURES: 100% OF SMDD
13. MOISTURE CONTENT TO BE IN THE RANGE OF - 2% TO +2% OF THE OPTIMUM MOISTURE CONTENT.
14. ALL COMPACTION TEST RESULTS SHALL BE PROVIDED TO THE SUPERINTENDENT.
15. ALL SITE REGRADED AREAS AFTER FORMATION, SHALL BE COVERED WITH A 150MM SELECT TOPSOIL LAYER. TOPSOIL STOCKPILED PRIOR TO EARTHWORKS OPERATIONS CAN BE REUSED FOR THIS PURPOSE PROVIDED ANY DELETERIOUS MATERIAL IS REMOVED PRIOR TO PLACING.
16. ALL DISTURBED AND DENUDED AREAS SHALL BE REGRASSED WITHIN 7 DAYS AFTER THE COMPLETION OF EARTHWORKS FORMATION.

SERVICES NOTES:

1. IT IS THE CONSTRUCTORS RESPONSIBILITY TO NOTIFY THE RELEVANT SERVICES AUTHORITIES OF THE WORKS AND VERIFY THE LOCATION OF ALL EXISTING SERVICES PRIOR TO ANY CONSTRUCTION ACTIVITIES COMMENCING.
2. THE CONSTRUCTOR SHALL LIAISE AND COORDINATE THE TIMING OF THE CONSTRUCTION OF THE WORKS WITH THE RELEVANT SERVICES AUTHORITIES AND/OR OTHER CONSTRUCTORS INSTALLING SERVICES CONCURRENTLY AT THIS SITE.
3. THE LOCATION OF ALL EXISTING SERVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY AND HAVE BEEN TAKEN FROM INFORMATION PROVIDED BY THE RELEVANT SERVICE AUTHORITIES.
4. THE CONSTRUCTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE CAUSED TO EXISTING SERVICES AS A RESULT OF THE CONSTRUCTION WORKS.

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REV.	DES.	DATE	VER.	DATE	DESCRIPTION
01	T.T.	06/02/15	W.W.	06/02/15	ISSUE FOR DA APPROVAL

CLIENT

BUNNINGS warehouse

C&M CONSULTING ENGINEERS

CIVIL AND HYDRAULIC ENGINEERING DESIGN AND PROJECT MANAGEMENT

SUITE 26
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ABN 21 118 134 240

DESIGNED	W.WEBB	DATE	02/02/15
VERIFIED	A.MANCONE	DATE	02/02/15
DRAWN	T.TOMIC	SCALE @ A1	N/A

BUNNINGS WAREHOUSE, BONNYRIGG

COVER SHEET, DRAWING INDEX & GENERAL NOTES

STATUS	DRAWING No.	REVISION
DEVELOPMENT APP.	01291_100	01

A1

NOTE:
FENCE & WALLS TO ALLOW EMERGENCY OVERLAND FLOWS THROUGH INTO CREEK - DETAILS AS PER ARCHITECTURAL DRAWINGS

WATER BALANCE TABLE

ROOF AREA (m2)	STORAGE PROVIDED (m3)
4000	75
3500	80
3000	95
2500	115
2000	145

CONNECT SITE STORMWATER DRAINAGE TO EXISTING STORMWATER PIT

ON-SITE-DETENTION TANK OUTLET

RAINWATER TANK
REFER TO WATER BALANCE RATIO BALANCE TABLE ABOVE

WELDLOK BALL AND TUBE TYPE HANDRAIL AROUND OSD TANK

ON-SITE DETENTION TANK
REFER TO DRG.651 FOR DETAIL

CHAIN WIRE MESH FENCING ALONG BASEMENT PERIMETER (TYPICAL)

REFER TO DRG. 202 FOR CONTINUATION OF PAVEMENT / RAMP LEVELS

RAMP No.2

BASEMENT GENERALLY GRADED AT 1% TO ALL PITS (TYP)

BUNNINGS WAREHOUSE UNDERCROFT LEVEL FFL 45.30

CONNECT STORMWATER DRAINAGE FROM ABOVE LEVEL TO OSD TANK (TYP.)

RAMP No.3

RAMP No.1

DRIVEWAY No.1

DRIVEWAY No.2

COMMERCIAL VEHICULAR CROSSING AND LAYBACK IN ACCORDANCE WITH FAIRFIELD CITY COUNCIL'S CIVIL WORKS SPECIFICATION (TYP.)

GRADE AREA TO MATCH LEVELS ACROSS BOUNDARY (MAX. SLOPE 1 IN 3)

PROPOSED ROADWORK TO FUTURE DESIGN

BONNYRIGG AVENUE

'C' – EASEMENT FOR PADMOUNT SUBSTATION 2.75 WIDE (VIDE AG616051)

LEGEND

- BOUNDARY
- RAMP CONTROL LINE
- INTEGRAL KERB
- VEHICULAR CROSSING (V.C.)
- TOP OF BATTER
- BOTTOM OF BATTER
- RETAINING WALL
- LIMIT OF PAVEMENT WORK
- FINISHED SURFACE CONTOUR
- EXISTING SURFACE CONTOUR
- STORMWATER DRAINAGE LINE
- EXISTING STORMWATER DRAINAGE LINE
- STORMWATER DRAINAGE PITS
- UPSTREAM INVERT LEVEL / PIPE DIAMETER, TYPE & CLASS / PIPE LENGTH & GRADE / DOWNSTREAM INVERT LEVEL
- FINISHED SURFACE LEVEL
- FINISHED STORMWATER PIT LID/GRATE LEVEL
- TOP OF WALL LEVEL / BOTTOM OF WALL LEVEL

SCALE 1:2

NOT FOR CONSTRUCTION

FOR CONTINUATION REFER DRAWING DA201

FOR CONTINUATION REFER DRAWING DA201

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05	T.T.	09/11/15	W.W.	09/11/15	REVISED TO SUIT REVISED ARCHITECTURAL DRAWINGS
04	T.T.	08/07/15	W.W.	08/07/15	REVISED TO SUIT REVISED ARCHITECTURAL DRAWINGS
03	T.T.	25/06/15	W.W.	25/06/15	REVISED TO SUIT REVISED ARCHITECTURAL DRAWINGS
02	T.T.	13/04/15	W.W.	13/04/15	AMMENDED STORMWATER PIPE SIZING
01	T.T.	06/02/15	W.W.	06/02/15	ISSUE FOR DA APPROVAL

CLIENT: BUNNINGS warehouse

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DRAWN	T.TOMIC	SCALE @ A1	1:250

BUNNINGS WAREHOUSE, BONNYRIGG

GENERAL ARRANGEMENT PLAN UNDERCROFT LEVEL SHEET 1

STATUS	DRAWING No.	REVISION
DEVELOPMENT APP.	01291_201	05

A1

FOR CONTINUATION REFER DRAWING DA201

FOR CONTINUATION REFER DRAWING DA201

PITS (TYP)

RAMP NG

BUNNINGS WAREHOUSE UNDERCROFT LEVEL FFL 45.30

BASEMENT GENERALLY GRADED AT 1% TO ALL PITS (TYP)

GRADE AREA TO MATCH LEVELS ACROSS BOUNDARY (MAX. SLOPE 1 IN 3)

DRIVEWAY No.3

ELIZABETH DRIVE

AVENUE

BONNYRIGG

CONCRETE PATH

TRAFFIC ISLAND

GUTTER

CONCRETE KERB & GUTTER

CHAINWIRE FENCE

RETAINING WALL

BUS PARKING

UP INV. 44.48
DN225 - uPVC
10.0m @ 1.0%
DN INV. 44.38

UP INV. 44.35
DN375 - uPVC
29.0m @ 2.8%
DN INV. 43.54

UP INV. 43.51
DN300 - uPVC
19.7m @ 3.8%
DN INV. 42.77

UP INV. 42.74
DN300 - uPVC
16.7m @ 2.1%
DN INV. 42.38

UP INV. 42.33
DN300 - uPVC
16.9m @ 2.0%
DN INV. 41.99

UP INV. W1.96
DN300 - RCP
20.4m @ 5.9%
DN INV. 40.75

900SQ GSIP GRL45.10

Φ375 RCP @ 1.0%

Φ300 uPVC @ 1.0%

Φ450 RCP @ 2.0%

CONNECT TO EXISTING RMS STORMWATER DRAINAGE PIT - FINAL LOCATION & DETAIL SUBJECT TO FUTURE APPROVAL BY RMS

COMMERCIAL VEHICULAR CROSSING AND LAYBACK IN ACCORDANCE WITH FAIRFIELD CITY COUNCIL'S CIVIL WORKS SPECIFICATION (TYP.)

SIGNPOSTING AND ASSOCIATED WORKS INDICATING "LEFT-ONLY" MOVEMENT EXITING DRIVEWAY TO FUTURE DETAIL

LEGEND

- BOUNDARY
- RAMP CONTROL LINE (CONTROL 10)
- INTEGRAL KERB (IK)
- VEHICULAR CROSSING (V.C.)
- TOP OF BATTER
- BOTTOM OF BATTER
- RETAINING WALL
- LIMIT OF PAVEMENT WORK
- FINISHED SURFACE CONTOUR (88.4)
- EXISTING SURFACE CONTOUR (88.4)
- STORMWATER DRAINAGE LINE
- EXISTING STORMWATER DRAINAGE LINE
- STORMWATER DRAINAGE PITS (GSIP, JP, GGP, GGP (SAG))
- UP INV. 52.653 / Φ300 uPVC 58° / 12.683m @ 2.4% / DN INV. 52.349 — UPSTREAM INVERT LEVEL, PIPE DIAMETER, TYPE & CLASS, PIPE LENGTH & GRADE, DOWNSTREAM INVERT LEVEL
- ✖RL91.86 FINISHED SURFACE LEVEL
- ✖GRL91.86 FINISHED STORMWATER PIT LID/GRATE LEVEL
- ✖TOW84.20 / BOW84.00 TOP OF WALL LEVEL / BOTTOM OF WALL LEVEL

SCALE 1:250

NOT FOR CONSTRUCTION

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05	T.T.	09/11/15	W.W.	09/11/15	REVISED TO SUIT REVISED ARCHITECTURAL DRAWINGS
04	T.T.	02/10/15	W.W.	02/10/15	REVISED STORMWATER LOCATION AT DRIVEWAY 3
03	T.T.	08/07/15	W.W.	08/07/15	REVISED TO SUIT REVISED ARCHITECTURAL DRAWINGS
02	T.T.	13/04/15	W.W.	13/04/15	AMMENDED STORMWATER PIPE SIZING
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DRAWN	T.TOMIC	SCALE @ A1	1:250

BUNNINGS WAREHOUSE, BONNYRIGG

GENERAL ARRANGEMENT PLAN
UNDERCROFT LEVEL
SHEET 2

STATUS	DRAWING No.	REVISION
DEVELOPMENT APP.	01291_202	05

A1

PROVIDE OPENINGS IN CONCRETE PARAPET FOR EMERGENCY OVERLAND FLOWS (TYPICAL)

RWO GRL49.05

RWO GRL49.05

DROP STORMWATER LINE TO UNDERCROFT LEVEL AGAINST STRUCTURE

RWO GRL49.05

DROP STORMWATER LINE TO UNDERCROFT LEVEL AGAINST STRUCTURE

SUSPENDED GOODS RECEIVING AREA GRADED AT MINIMUM 1% TO ALL RWO'S (TYP)

RWO GRL49.05

DROP STORMWATER LINE TO UNDERCROFT LEVEL AGAINST STRUCTURE

RWO GRL49.05

60.07

RAMP No.3

49.0
48.8
48.6
48.4
48.2

50
30
20

REFER TO DRG. 202 FOR CONTINUATION OF PAVEMENT / RAMP LEVELS

A 351

B 351

C 351

RWO GRL49.05

40.990
49.7
49.0
48.8
48.6
48.4
48.2
30

RAMP No.2

20
10
00

REFER TO DRG. 202 FOR CONTINUATION OF PAVEMENT / RAMP LEVELS

00
10

39.546

49.0
48.8
48.6
48.4
48.2

RAMP No.1

BUNNINGS WAREHOUSE LEVEL FFL 49.20

AVENUE

BONNYRIGG

FOR CONTINUATION REFER DRAWING DA204

FOR CONTINUATION REFER DRAWING DA204

LEGEND

- BOUNDARY
- CONTROL 10 — RAMP CONTROL LINE
- IK — INTEGRAL KERB
- V.C. — VEHICULAR CROSSING (V.C.)
- TOP OF BATTER
- BOTTOM OF BATTER
- RETAINING WALL
- LIMIT OF PAVEMENT WORK
- 88.4 — FINISHED SURFACE CONTOUR
- 88.4 — EXISTING SURFACE CONTOUR
- STORMWATER DRAINAGE LINE
- EXISTING STORMWATER DRAINAGE LINE
- GSP, JP, GGP, GGP (SAG) — STORMWATER DRAINAGE PITS
- UP INV. 52.653 / ø300 uPVC 'SR' / 12.683m @ 2.4% / DN INV. 52.349 — UPSTREAM INVERT LEVEL, PIPE DIAMETER, TYPE & CLASS, PIPE LENGTH & GRADE, DOWNSTREAM INVERT LEVEL
- ✖RL91.86 — FINISHED SURFACE LEVEL
- ✖GRL91.86 — FINISHED STORMWATER PIT LID/GRATE LEVEL
- ✖TOW84.20 / BOW84.00 — TOP OF WALL LEVEL, BOTTOM OF WALL LEVEL

SCALE 1:2

0 40 80 120 160 200mm

NOT FOR CONSTRUCTION

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VERIFIED	A.MANCONE	DATE	02/02/15
DRAWN	T.TOMIC	SCALE @ A1	1:250

BUNNINGS WAREHOUSE, BONNYRIGG

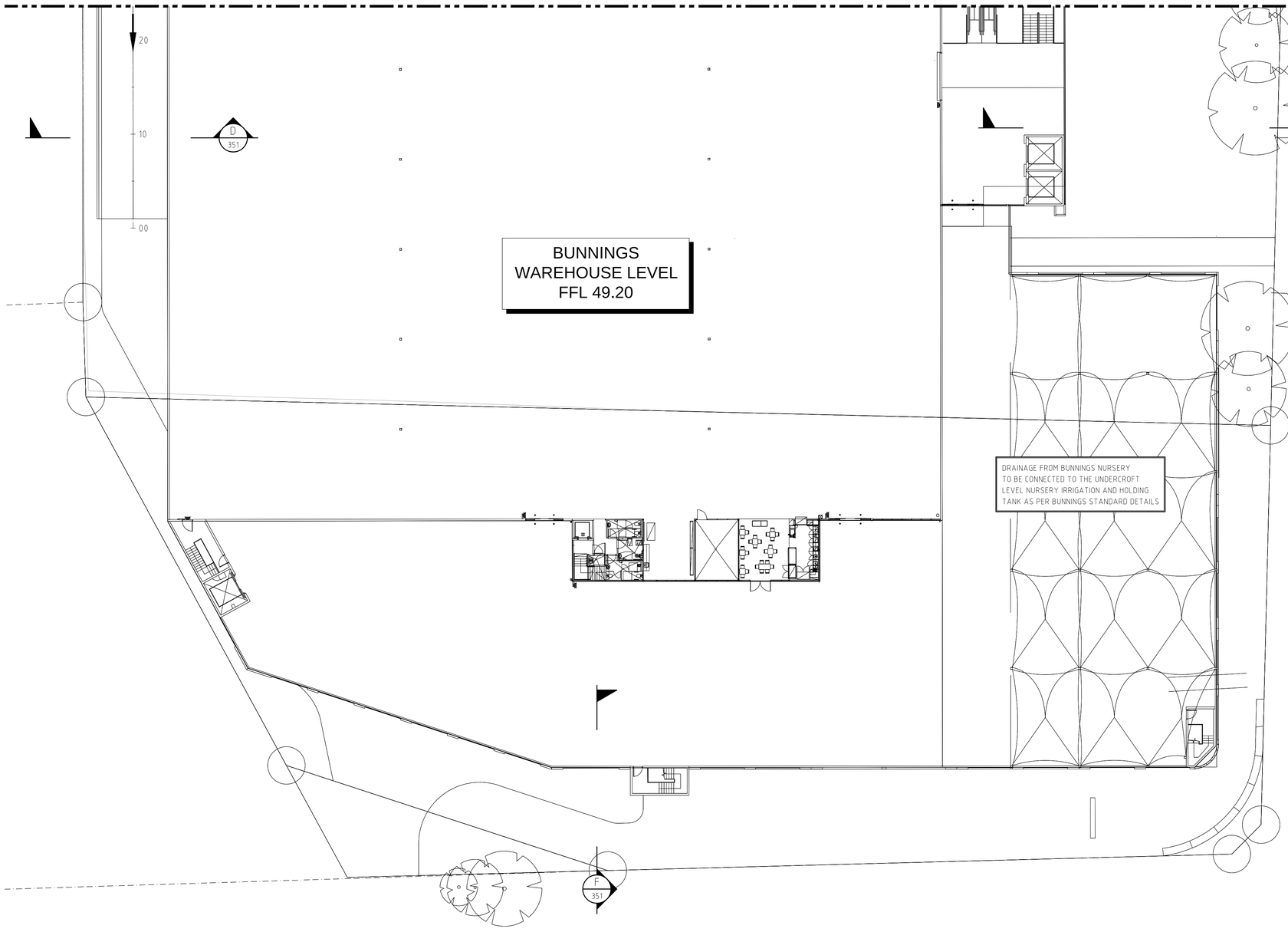
GENERAL ARRANGEMENT PLAN WAREHOUSE LEVEL SHEET 1

STATUS	DRAWING No.	REVISION
DEVELOPMENT APP.	01291_203	03

A1

FOR CONTINUATION REFER DRAWING DA203

FOR CONTINUATION REFER DRAWING DA203



LEGEND

- BOUNDARY
- CONTROL — RAMP CONTROL LINE
- IK — INTEGRAL KERB
- V.C. — VEHICULAR CROSSING (V.C.)
- TOP OF BATTER
- BOTTOM OF BATTER
- RETAINING WALL
- LIMIT OF PAVEMENT WORK
- 88.4 — FINISHED SURFACE CONTOUR
- 88.4 — EXISTING SURFACE CONTOUR
- STORMWATER DRAINAGE LINE
- EXISTING STORMWATER DRAINAGE LINE
- GSIP, JP, GGP, GGP (SAG) — STORMWATER DRAINAGE PITS
- UP INV. 52.653 / ø300 uPVC 'SB' / 12.683m @ 2.4% / DN INV. 52.349 — UPSTREAM INVERT LEVEL, PIPE DIAMETER, TYPE & CLASS, PIPE LENGTH & GRADE, DOWNSTREAM INVERT LEVEL
- RL91.86 — FINISHED SURFACE LEVEL
- GRL91.86 — FINISHED STORMWATER PIT LID/GRATE LEVEL
- TOW84.20 / BOW84.00 — TOP OF WALL LEVEL, BOTTOM OF WALL LEVEL

SCALE 1:250

NOT FOR CONSTRUCTION

CAD FILENAME: Q:\C&M\Projects\01201-01300\PN-01291 - Bunnings Warehouse, Bonnyrigg\ACAD\01291_203.dwg

REV.	DES.	DATE	VER.	DATE	DESCRIPTION
03	T.T.	09/11/15	W.W.	09/11/15	REVISED TO SUIT REVISED ARCHITECTURAL DRAWINGS
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01	T.T.	06/02/15	W.W.	06/02/15	ISSUE FOR DA APPROVAL

CLIENT

BUNNINGS warehouse

C&M CONSULTING ENGINEERS

CIVIL AND HYDRAULIC ENGINEERING DESIGN AND PROJECT MANAGEMENT

SUITE 26
11 - 13 BROOKHOLLOW AVE
BAULKHAM HILLS NSW 2153

PHONE: (02) 9680 3100
FAX: (02) 9634 6989

ABN 21 118 134 240

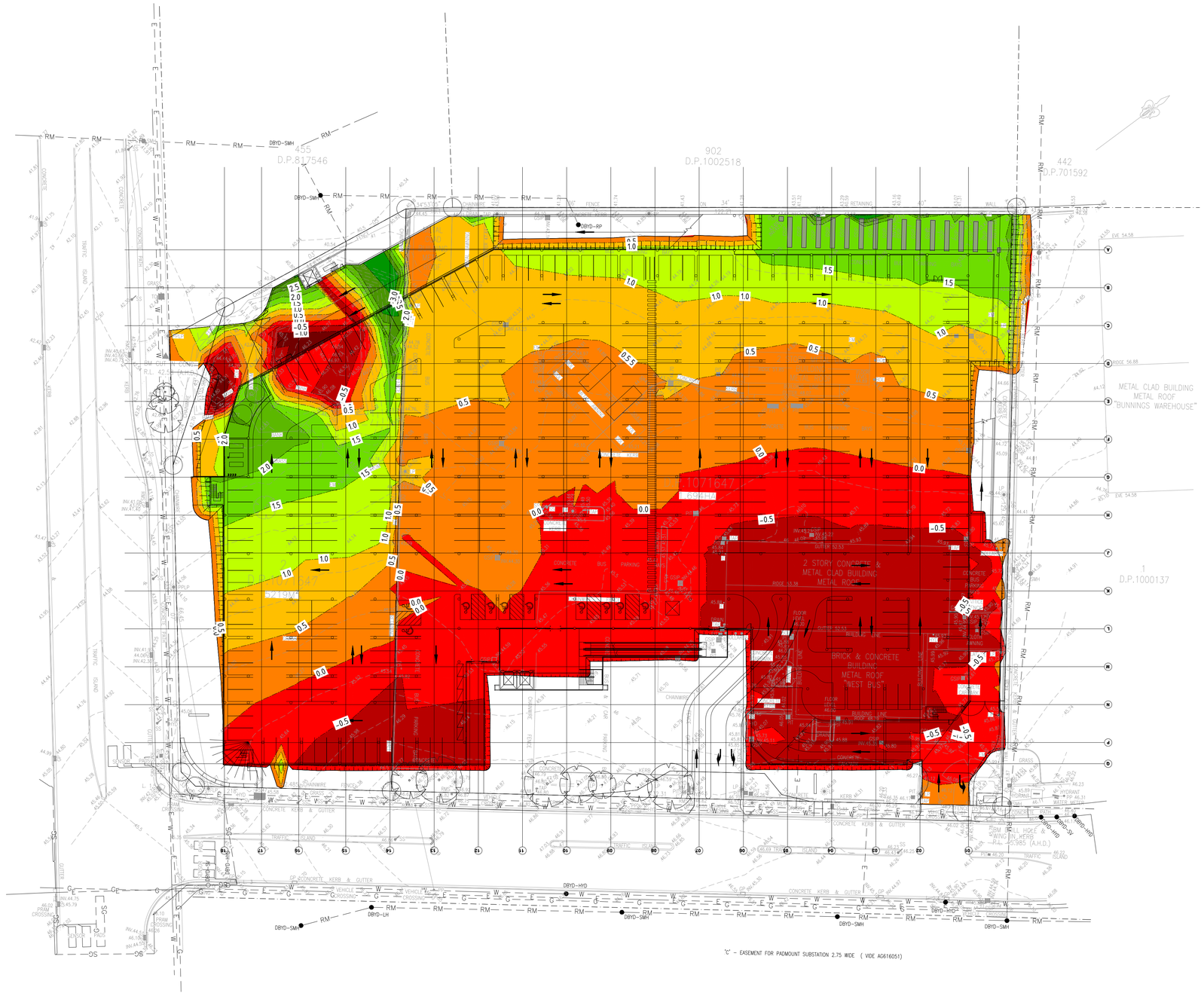
DESIGNED	W.WEBB	DATE	02/02/15
VERIFIED	A.MANCONE	DATE	02/02/15
DRAWN	T.TOMIC	SCALE @ A1	1:250

BUNNINGS WAREHOUSE, BONNYRIGG

GENERAL ARRANGEMENT PLAN
WAREHOUSE LEVEL
SHEET 2

STATUS	DRAWING No.	REVISION
DEVELOPMENT APP.	01291_204	03

A1



Levels Table

No.	From Depth	To Depth	Colour	Depth Range Volume	
1	-1.344	-1.000		5m³	CUT
2	-1.000	-0.500		361m³	CUT
3	-0.500	0.000		2586m³	CUT
4	0.000	0.500		4391m³	FILL
5	0.500	1.000		2515m³	FILL
6	1.000	1.500		1223m³	FILL
7	1.500	2.000		501m³	FILL
8	2.000	2.500		140m³	FILL
9	2.500	3.000		46m³	FILL
10	3.000	3.500		7m³	FILL
11	3.500	3.680		0m³	FILL

PRELIMINARY CUT VOLUME = 2,952m³

PRELIMINARY FILL VOLUME = 8,823m³

PRELIMINARY NET VOLUME = 5,871m³ (IMPORT)

EARTHWORKS NOTES:

PRELIMINARY BULK EARTHWORKS VOLUMES ARE BASED ON:
- EARTHWORKS AREAS STRIPPED OF EXISTING PAVEMENTS & TOPSOIL (310mm) PRIOR TO EARTHWORKS.
- ALL SITE REGRADED AREAS BOXED OUT TO SUBGRADE LEVEL (ASSUMED DEPTH OF 300mm).
- MATERIAL GENERATED FROM STORMWATER, SEWER & SERVICE TRENCHES HAVE NOT BEEN INCLUDED IN THIS QUANTITY.

EARTHWORKS QUANTITIES ARE FOR INFORMATION ONLY AND DO NOT FORM PART OF THE CONTRACT

CUT FILL CONTOUR LEGEND

0.50 — DEPTH CONTOUR (FILL)

-0.50 — DEPTH CONTOUR (CUT)

SCALE 1:2

0 20 40 80 120 160 200mm

NOT FOR CONSTRUCTION

CAD FILENAME: D:\C&M\Projects\01201-01300\PN-01291 - Bunnings Warehouse, Bonnyrigg\ACAD\01291_231.dwg

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ABN 21 118 134 240

C&M CONSULTING ENGINEERS

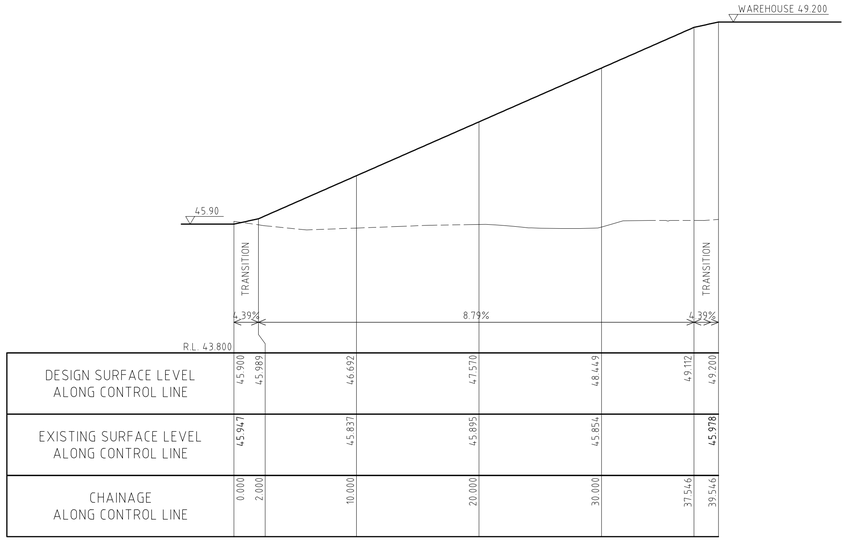
DESIGNED	W.WEBB	DATE	02/02/15
VERIFIED	A.MANCONE	DATE	02/02/15
DRAWN	T.TOMIC	SCALE @ A1	1:500

BUNNINGS WAREHOUSE, BONNYRIGG

BULK-EARTHWORKS PLAN

STATUS	DRAWING No.	REVISION
DEVELOPMENT APP.	01291_231	02

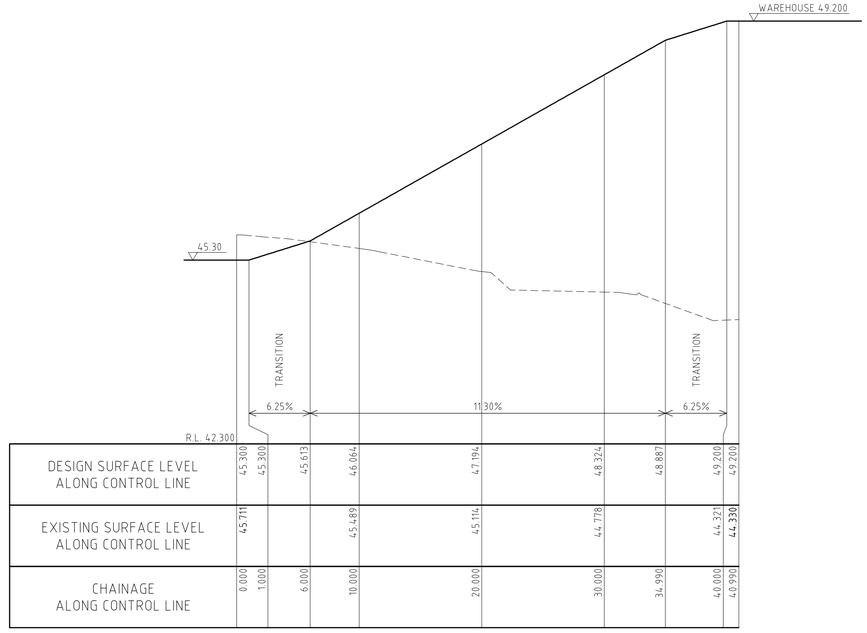
A1



DESIGN SURFACE LEVEL ALONG CONTROL LINE	45.900	45.989	46.692	47.570	48.449	49.112	49.200
EXISTING SURFACE LEVEL ALONG CONTROL LINE	**45.947**		45.837	45.895	45.854		**45.978**
CHAINAGE ALONG CONTROL LINE	0.000	2.000	10.000	20.000	30.000	37.546	39.546

LONGITUDINAL SECTION ALONG RAMP 1

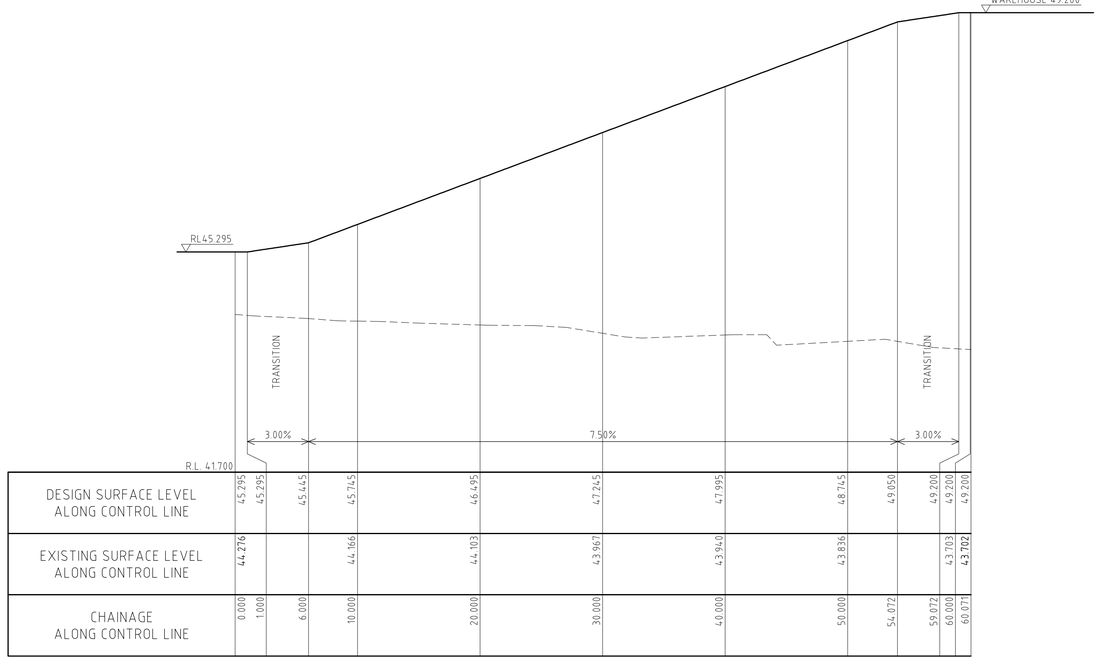
SCALE 1:250 (H) & 1:50 (V)



DESIGN SURFACE LEVEL ALONG CONTROL LINE	45.300	45.300	45.613	46.064	47.194	48.324	48.887	49.200	49.200
EXISTING SURFACE LEVEL ALONG CONTROL LINE	45.711			45.489	45.114	44.778		44.321	**44.330**
CHAINAGE ALONG CONTROL LINE	0.000	1.000	6.000	10.000	20.000	30.000	34.990	40.000	40.990

LONGITUDINAL SECTION ALONG RAMP 2

SCALE 1:250 (H) & 1:50 (V)



DESIGN SURFACE LEVEL ALONG CONTROL LINE	45.295	45.295	45.445	45.745	46.695	47.245	47.995	48.745	49.050	49.200	49.200
EXISTING SURFACE LEVEL ALONG CONTROL LINE	**44.276**		44.166		44.103	43.967	43.940	43.836		43.703	**43.702**
CHAINAGE ALONG CONTROL LINE	0.000	1.000	6.000	10.000	20.000	30.000	40.000	50.000	54.072	59.072	60.000	60.071

LONGITUDINAL SECTION ALONG RAMP 3

SCALE 1:250 (H) & 1:50 (V)

25m 20 15 10 5 0 5 2.5

SCALE 1:250

1000 500 0 1000 2000 3000 4000 5000mm

SCALE 1:50

NOT FOR CONSTRUCTION

CAD FILENAME Q:\C&M\Projects\01201-01300\PN-01291 - Bunnings Warehouse, Bonnyrigg\ACAD\01291_301.dwg

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ABN 21 118 134 240

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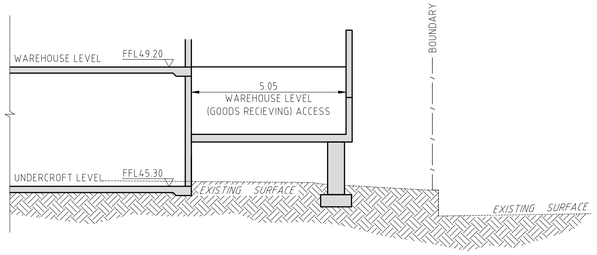
DRAWN	T.TOMIC	SCALE @ A1	AS NOTED

BUNNINGS WAREHOUSE, BONNYRIGG

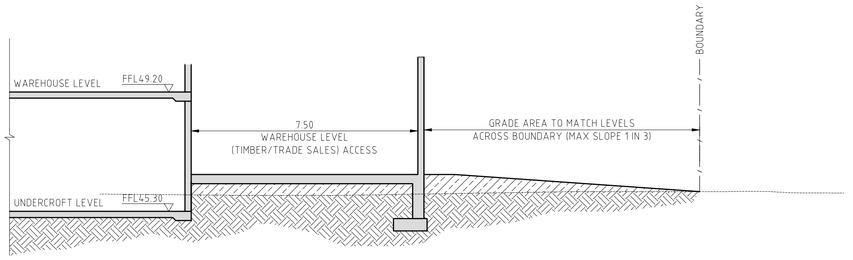
RAMP LONGITUDINAL SECTIONS

STATUS	DRAWING No.	REVISION
DEVELOPMENT APP.	01291_301	02

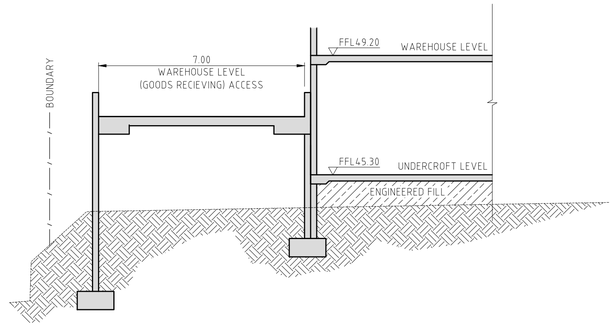
A1



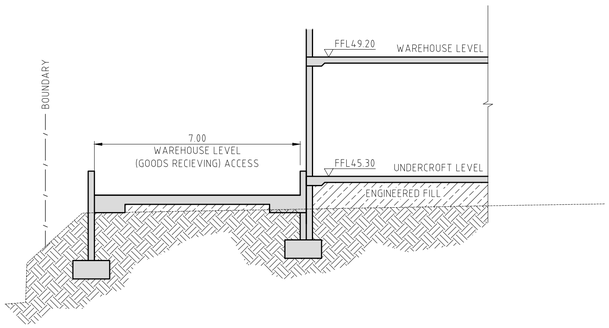
SECTION A (201 / 203)
SCALE 1:100



SECTION B (201 / 203)
SCALE 1:100

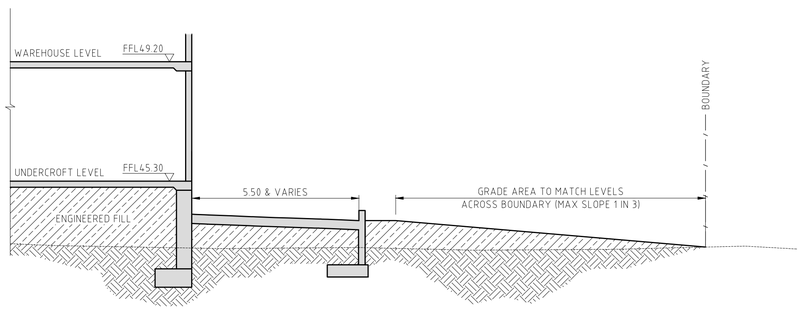


SECTION C (201 / 203)
SCALE 1:100

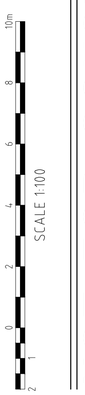


SECTION D (202 / 204)
SCALE 1:100

SECTION E (201 / 204)
SCALE 1:100



SECTION F (202 / 204)
SCALE 1:100



NOT FOR CONSTRUCTION

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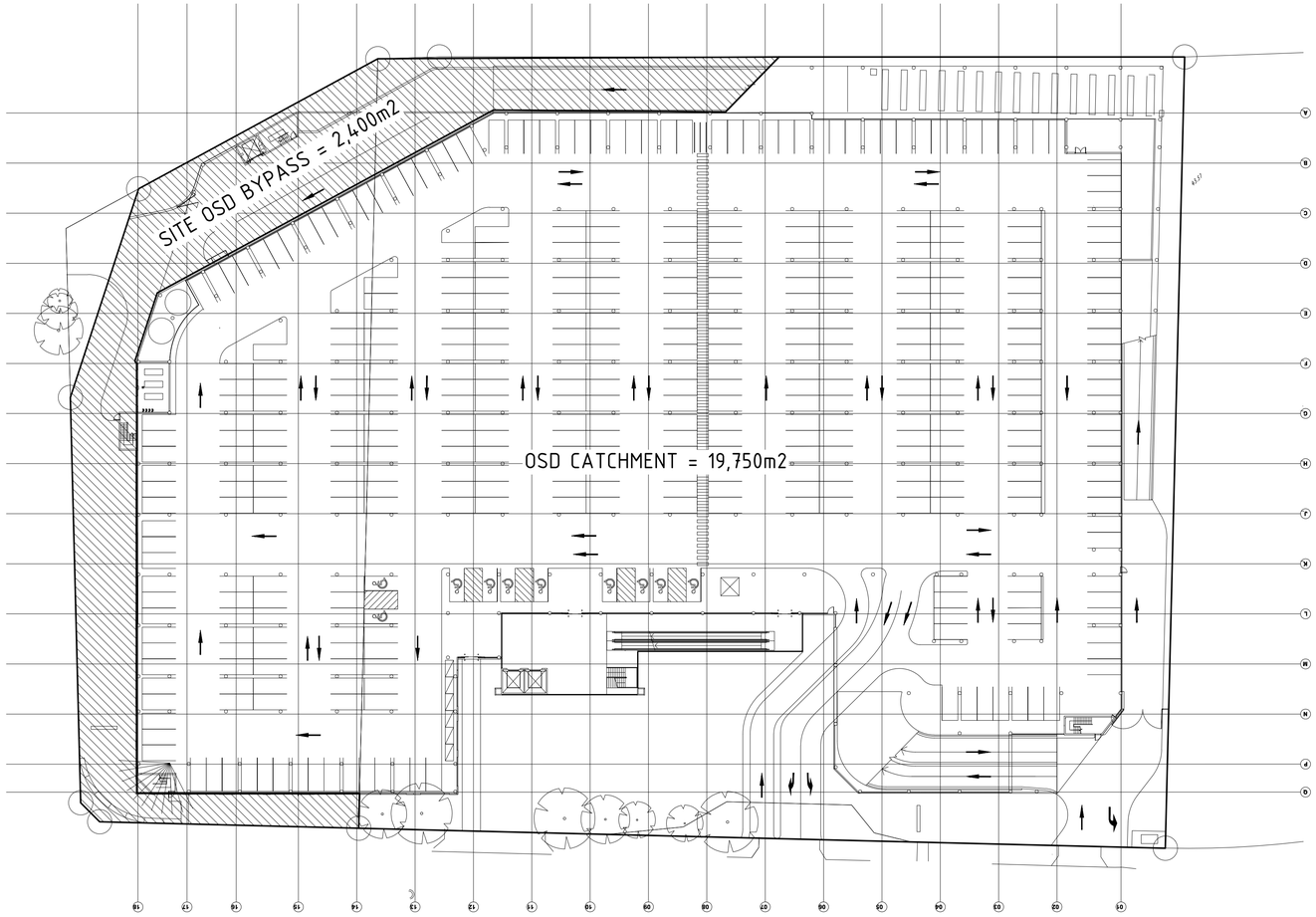
VERIFIED	A.MANCONE	DATE	02/02/15
DRAWN	T.TOMIC	SCALE @ A1	1:100

BUNNINGS WAREHOUSE, BONNYRIGG

TYPICAL SECTIONS

STATUS	DRAWING No.	REVISION
DEVELOPMENT APP.	01291_351	02

A1



NOT FOR CONSTRUCTION

SCALE 1:2

0 40 80 120 160 200mm

0 20 40

REV.	DES.	DATE	VER.	DATE	DESCRIPTION
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DRAWN	T.TOMIC	SCALE @ A1	1:500

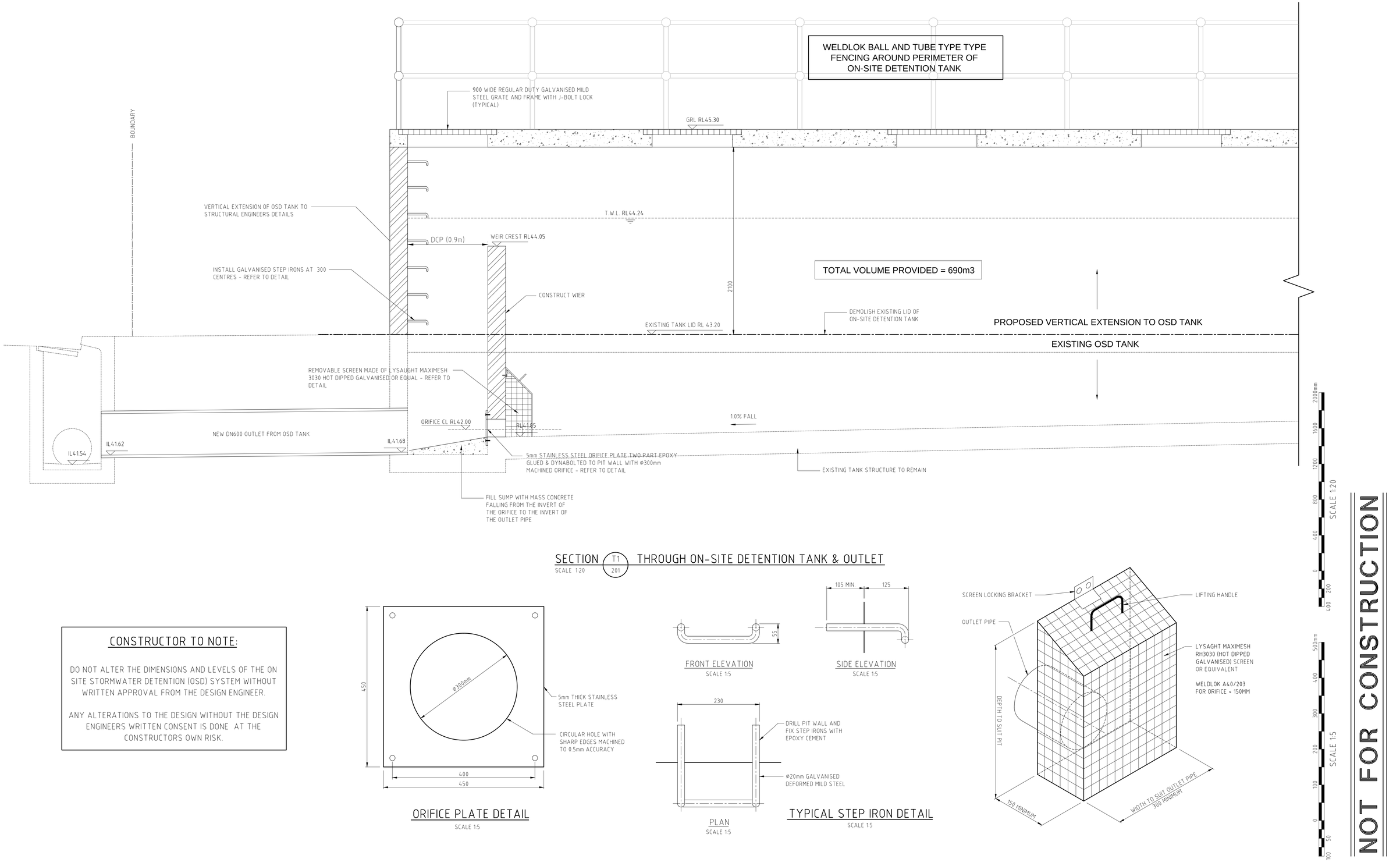
BUNNINGS WAREHOUSE, BONNYRIGG

OSD CATCHMENT PLAN

STATUS	DRAWING No.	REVISION
DEVELOPMENT APP.	01291_601	01

CAD FILENAME: Q:\C&M\Projects\01201-01300\PN-01291 - Bunnings Warehouse, Bonnyrigg\ACAD\01291_601.dwg

A1



SECTION T1 / 201 THROUGH ON-SITE DETENTION TANK & OUTLET
SCALE 1:20

CONSTRUCTOR TO NOTE:

DO NOT ALTER THE DIMENSIONS AND LEVELS OF THE ON SITE STORMWATER DETENTION (OSD) SYSTEM WITHOUT WRITTEN APPROVAL FROM THE DESIGN ENGINEER.

ANY ALTERATIONS TO THE DESIGN WITHOUT THE DESIGN ENGINEERS WRITTEN CONSENT IS DONE AT THE CONSTRUCTORS OWN RISK.

ORIFICE PLATE DETAIL
SCALE 1:5

TYPICAL STEP IRON DETAIL
SCALE 1:5

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DRAWN	T.TOMIC	SCALE @ A1	AS NOTED

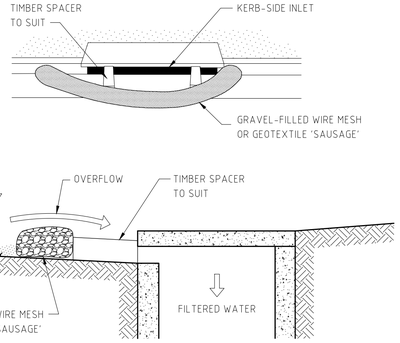
BUNNINGS WAREHOUSE, BONNYRIGG

STORMWATER DRAINAGE
OSD TANK & GENERAL DETAILS

STATUS	DRAWING No.	REVISION
DEVELOPMENT APP.	01291_651	02

CAD FILENAME: Q:\C&M\Projects\01201-01300\PN-01291 - Bunnings Warehouse, Bonnyrigg\ACAD\01291_651.dwg

A1

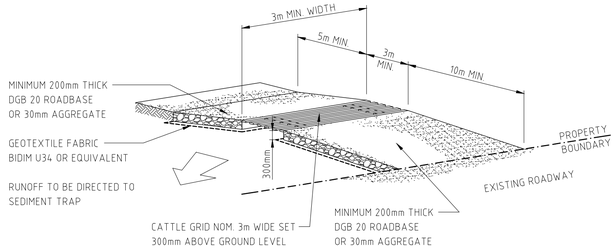


CONSTRUCTION NOTES:

1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

MESH AND GRAVEL INLET FILTER DETAIL

NOT TO SCALE



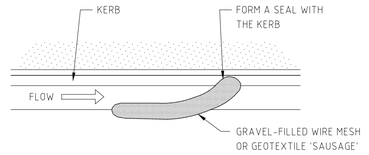
GEOFABRIC MAY BE A WOVEN OR NEEDLE-PUNCHED PRODUCT WITH A MINIMUM CBR BURST STRENGTH (AS3706.4-90) OF 2500 N

CONSTRUCTION NOTES:

1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 15m LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3m WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.

STABILISED SITE ACCESS WITH SHAKER GRID DETAIL

NOT TO SCALE

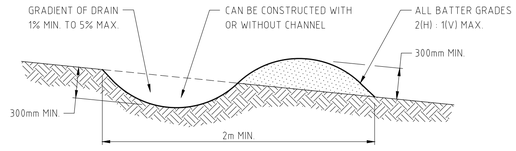


CONSTRUCTION NOTES:

1. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH APPROXIMATELY 1.0m IN LENGTH AND FILL IT WITH 25mm TO 50mm GRAVEL.
2. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
3. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE KERB.
4. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

MESH AND GRAVEL KERB FILTER DETAIL

NOT TO SCALE



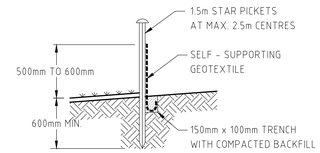
NOTE: ONLY TO BE USED AS TEMPORARY BANK WHERE UPSLOPE LENGTH IS 80 METRES.

CONSTRUCTION NOTES:

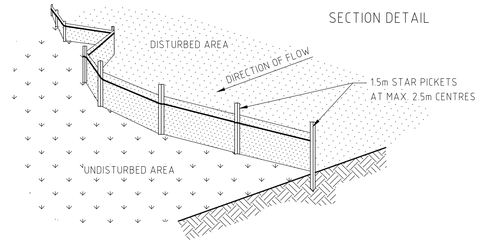
1. BUILD WITH GRADIENTS BETWEEN 1% AND 5%.
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.
3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V SHAPED.
5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE.
6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION.

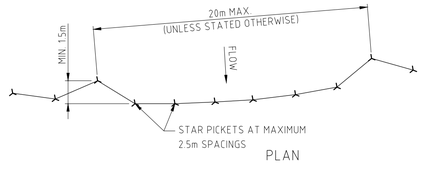
TEMPORARY DIVERSION CHANNEL (LOW FLOW)

NOT TO SCALE

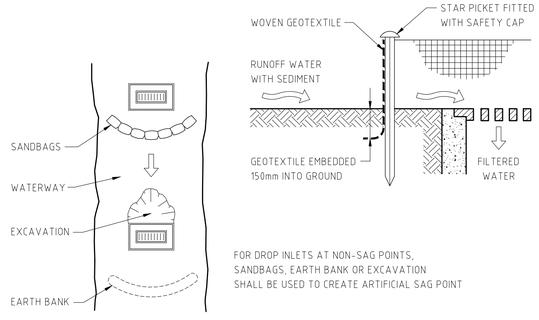


SECTION DETAIL





PLAN



FOR DROP INLETS AT NON-SAG POINTS, SANDBAGS, EARTH BANK OR EXCAVATION SHALL BE USED TO CREATE ARTIFICIAL SAG POINT

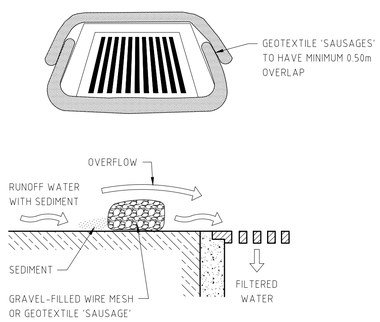
CONSTRUCTION NOTES:

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
3. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

GEOTEXTILE INLET FILTER DETAIL

FOR PITS WITHIN LANDSCAPED AREAS

NOT TO SCALE



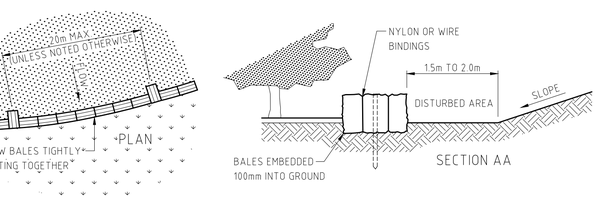
CONSTRUCTION NOTES:

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

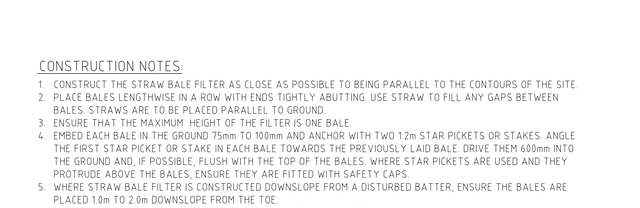
GEOTEXTILE INLET FILTER DETAIL

FOR PITS WITHIN PAVEMENT AREAS

NOT TO SCALE



ELEVATION



CONSTRUCTION NOTES:

1. CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE.
2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS ARE TO BE PLACED PARALLEL TO GROUND.
3. ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.
4. EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2m STAR PICKETS OR STAKES. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE THEM 600mm INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
5. WHERE STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE THE BALES ARE PLACED 1.0m TO 2.0m DOWNSLOPE FROM THE TOE.
6. ESTABLISH A MAINTENANCE PROGRAMME THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED - THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.

STRAW BALE FILTER DETAIL

NOT TO SCALE

CONSTRUCTION NOTES:

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5 METRE LONG STAR PICKETS INTO THE GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150-mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

SEDIMENT FENCE DETAIL

NOT TO SCALE

CAD FILENAME: Q:\C&M\Projects\01201-01300\PN-01291 - Bunnings Warehouse, Bonnyrigg\ACAD\01291_701.dwg

REV.	DES.	DATE	VER.	DATE	DESCRIPTION
01	T.T.	06/02/15	W.W.	06/02/15	ISSUE FOR DA APPROVAL

CLIENT

BUNNINGS warehouse

C&M CONSULTING ENGINEERS

CIVIL AND HYDRAULIC ENGINEERING DESIGN AND PROJECT MANAGEMENT

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ABN 21 118 134 240

DESIGNED	W.WEBB	DATE	02/02/15
VERIFIED	A.MANCONE	DATE	02/02/15
DRAWN	T.TOMIC	SCALE @ A1	NTS

BUNNINGS WAREHOUSE, BONNYRIGG

SEDIMENT & EROSION CONTROL - DETAILS

STATUS	DRAWING No.	REVISION
DEVELOPMENT APP.	01291_701	01