A1

1 VILLAWOOD PLACE, VILLAWOOD
STORMWATER DRAINAGE

GENERAL NOTES:

1. ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 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, THEN THE CONSTRUCTOR MUST CONTACT FAIRFIELD CITY 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
   IFD DATA LOCALITY: VILLAWOOD
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. 100mm DIA. SUBSOIL DRAINAGE PIPE 3m LONG WRAPPED IN FILTER SOCK TO BE PROVIDED IN PIPE TRENCHES UPSTREAM OF ALL PITS.
12. 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
13. 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.
14. 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.
15. 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

16. UNLESS OTHERWISE DETAILED OR PERMITTED, THE MINIMUM GRADE OF ALL PIPE WORKS SHALL BE 1.0%.

BLOCKWORK NOTES:

1. ALL WORKMANSHIP AND MATERIALS IN ACCORDANCE WITH AS 3700 AND AS 2733.
2. BLOCKS SHALL BE BORAL SPLIT FACE CHARCOAL WITH MATCHING CAPPING
3. MORTAR SHALL BE FRESHLY PREPARED, UNIFORMLY MIXED IN THE FOLLOWING RATION: 1:1/10:3 CEMENT, LIME SAND, IN ACCORDANCE WITH ASA 123 AND AS 3700 CLAUSE 2.2.2.
4. BOTTOM COURSE OF BLOCKS TO HAVE INSPECTION OPENINGS TO ALL CORES TO BE GROUTED. THOROUGHLY CLEAN ALL CORES PRIOR TO REINFORCEMENT PLACING.
5. STOP POUR 50 BELOW TOP OF BLOCK. MINIMUM GROUT STRENGTH 20MPA. SLUMP - 230MM. MAX AGGREGATE SIZE = 10MM
6. PROVIDE VERTICAL CONTROL JOINTS IN WALLS AT 8 METRE MAX. CENTRES. U.N.O.
7. TIE ALL VERTICAL REINFORCEMENT TO STARTER BARS AND TOP HORIZONTAL REINFORCEMENT.
8. MAXIMUM POUR HEIGHT TO BE 2400.
9. OPEN ENDED DOUBLE U - BLOCKS TO BE USED FOR ALL REINFORCED BLOCKWORK.

CONCRETE NOTES:

1. ALL WORKMANSHIP, MATERIALS AND TESTING FOR CONCRETE WORKS SHALL COMPLY WITH THE REQUIREMENTS OF AS3600.
2. ALL WORKMANSHIP AND MATERIALS FOR FORMWORK SHALL COMPLY WITH THE REQUIREMENTS OF AS3610.
3. THE CONSTRUCTOR SHALL ENSURE THAT ALL REINFORCEMENT IS SECURELY TIED AND SUPPORTED IN IT'S CORRECT POSITION AND WITHIN ACCEPTABLE TOLERANCES SO AS NOT TO BE DISPLACED DURING CONCRETE POURING.
4. PROVIDE CONCRETE WITH A MAXIMUM SLUMP OF 80, TYPE SL CEMENT, MAXIMUM AGGREGATE SIZE 20, APPROVED ADMIXTURES AND STRENGTH GRADE AS FOLLOWS:

ELEMENT	EXPOSURE CLASSIFICATION	STRENGTH (MPA)
PAVEMENT	A2	32MPA
KERB (ALL TYPES)	A2	25MPA
FOOTPATH	A2	25MPA
RETAINING WALL FOOTING	A1/B1	20MPA

PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 3600.

5. PROVIDE LAPS ONLY AT LOCATIONS SHOWN AND OF DIMENSIONS AS FOLLOWS UNLESS DETAILED OTHERWISE OR APPROVED IN WRITING BY THE ENGINEER.

BAR SIZE	N12	N16	N20
LAP	500	750	1000

6. OVERLAP FIRST AND SECOND CROSS WIRES OF EACH SHEET OF FABRIC BY 25 AT LAPS.
7. DO NOT WELD REINFORCEMENT UNLESS SHOWN OR APPROVED BY THE ENGINEER
8. TIE ALL UNSUPPORTED BARS TO N12.350.B OR N12.450.T CROSSRODS, LAPPED 450 WHERE REQUIRED.
9. PROP, CURE AND STRIP IN ACCORDANCE WITH AS3600, AS3610 AND THE SPECIFICATION.
10. CONCRETE SAWN JOINTS MUST BE DONE WITHIN 8 HOURS OF CONCRETE POUR.
11. JOINT SEALANT MUST BE SILICONE SEALANT FOR CASTING IN-SITU AS SPECIFIED ON DRAWINGS.
12. CONCRETE FINISH SHALL BE AS FOLLOWS:

ENVIRONMENTAL CONTROL NOTES:

EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONTROL OF EROSION AND SEDIMENTATION TO THE SATISFACTION OF COUNCIL, THE RELEVANT STATE AUTHORITIES AND THE SUPERINTENDENT. TO THIS END, THE EROSION AND SEDIMENTATION CONTROLS SHOWN ON THE DRAWINGS SHALL ONLY BE USED AS A GUIDE BY THE CONTRACTOR, AND SHALL REPRESENT THE MINIMUM REQUIREMENT ONLY.
2. NO CONSTRUCTION WORKS ARE TO COMMENCE ON SITE UNTIL ALL EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AND HAVE BEEN INSPECTED AND APPROVED BY THE COUNCIL ENGINEER AND/OR SUPERINTENDENT.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REGULARLY INSPECTED, IN PARTICULAR AFTER STORMS, AND REPAIRED OR MAINTAINED AS REQUIRED TO ENSURE THE MEASURES CORRECT AND EFFICIENT FUNCTION THROUGHOUT THE DURATION OF THE WORKS, UNTIL SUCH TIME AS THE COUNCIL ENGINEER AND/ORSUPERINTENDENT AUTHORISES THE REMOVAL OF SUCH MEASURES.
4. ALL STOCKPILES SHALL BE CLEAR OF ALL TREES AND DRAINAGE LINES (INCLUDING OVERLAND FLOW PATHS) AND PROTECTED FROM EROSION.
5. N THE CASE OF THE TEMPORARY CONSTRUCTION EXIT, THE CONTRACTOR SHALL UNDERTAKE WEEKLY SURFACE CLEANING BY DRAG BROOM OR EQUIVALENT, TO REMOVE ALL BUILD UP OF FOREIGN MATERIAL TO THE SATISFACTION OF THE SUPERINTENDENT.

TRAFFIC CONTROLS

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONTROL OF TRAFFICS INCLUDING VEHICLES AND PEDESTRIANS TO THE SATISFACTION OF COUNCIL, THE RELEVANT STATE AUTHORITIES AND THE SUPERINTENDENT.
2. THE CONTRACTOR IS TO PREPARE A TRAFFIC MANAGEMENT PLAN TO THE REQUIREMENTS OF THE RMS - TRAFFIC CONTROL AT WORK SITE, AS 1742 - AUSTRALIAN STANDARD MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND LOCAL COUNCIL STANDARDS.

OTHER ENVIRONMENTAL CONTROLS

1. OTHER ENVIRONMENTAL CONTROLS LIKE NOISE, DUST, VIBRATION, FLORA & FAUNA, FIRE, HAZMAT, AND CONTAMINATIONS MUST BE CONTROLLED TO THE REQUIREMENT OF THE COUNCIL AND THE RELEVANT STATE AUTHORITIES.

DRAWING INDEX

NOT FOR CONSTRUCTION

CAD FILENAME: C:\WAZ\Wollongong Projects\01282\CIVIL\01282_100.dwg

REV.	DES.	DATE	VER.	DATE	DESCRIPTION
03	W.M.	22/10/15	W.W.	22/10/15	DRAWING 209 ADDED
02	J.W.	27/10/14	G.C.	27/10/14	ISSUE FOR DEVELOPMENT APPLICATION
01	J.W.	15/10/14	G.C.	15/10/14	PRELIMINARY

C&M CONSULTING ENGINEERS

CIVIL AND HYDRAULIC ENGINEERING DESIGN AND PROJECT MANAGEMENT

SUITE 26
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BAULKHAM HILLS NSW 2153

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

ABN 21 118 134 240

DESIGNED	J. WANG	DATE	27/10/14
VERIFIED	G. CHAN	DATE	27/10/14
DRAWN	J. WANG	SCALE @ A1	N/A

1 VILLAWOOD PLACE, VILLAWOOD

COVER SHEET, GENERAL NOTES, DRAWING INDEX & LOCALITY SKETCH

STATUS	DRAWING No.	REVISION
DEVELOPMENT APPLICATION	01282_100	03

A1

KAMIRA COURT

ROAD

VILLAWOOD

BOUNDARY

BASEMENT TO BE GENERALLY GRADED TOWARD PITS AT 1.0% FALL

600SQ GSIP GRL11.35

IL11.00

Ø100 SW

DN100

BASEMENT LEVEL 3
FFL11.40

STORMWATER PUMPSTATION TO FUTURE SIZING AND DETAIL

IL10.39

IL10.69

IL10.76

200mm WIDE HEAVY DUTY GRATED TRENCH DRAIN

GTD

IL10.79

IL10.46

IL10.83

IL10.64

IL10.61

SWRM

RM

FOR CONTINUATION REFER DRAWING 202

LEGEND

- BOUNDARY
- STORMWATER DRAINAGE LINE
- SS — F.P — SS — STORMWATER SUBSOIL DRAINAGE LINE WITH FLUSHING POINT
- RM — RM — STORMWATER RISING MAIN
- DP — DOWNPIPE
- RM — STORMWATER RISING MAIN
- RWO — RAINWATER OUTLET
- GSIP JP GGP — STORMWATER DRAINAGE PITS
- RL91.86 — FINISHED SURFACE LEVEL
- GRL91.86 — FINISHED STORMWATER PIT LID/GRATE LEVEL

0 2 4 6 8 10m
2 1
SCALE 1:100

NOT FOR CONSTRUCTION

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05	W.M.	22/10/15	W.W.	22/10/15	AMENDED PLAN TO NEW ARCHITECTURALS
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DRAWN	J. WANG	SCALE @ A1	1:100

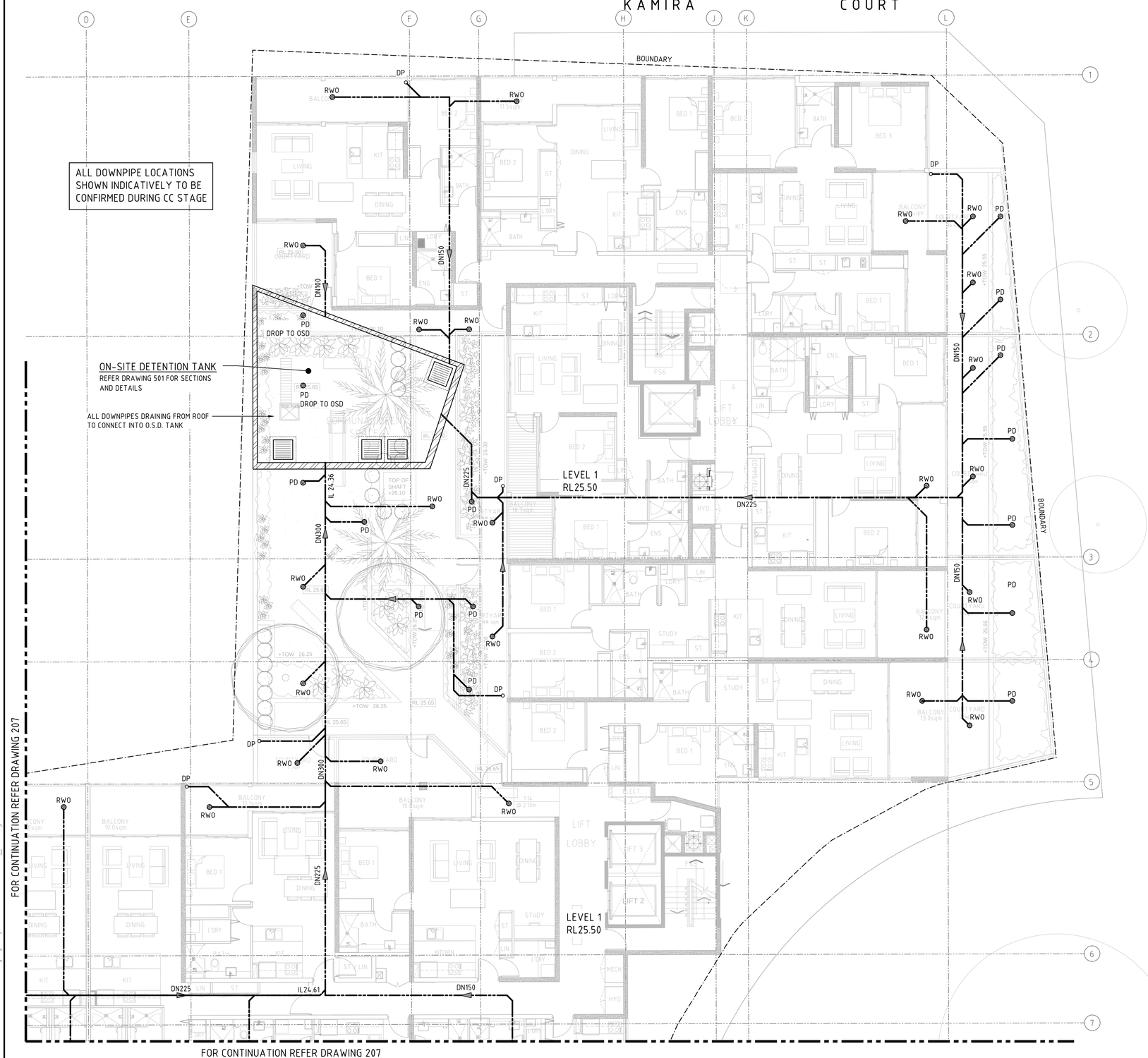
1 VILLAWOOD PLACE, VILLAWOOD

STORMWATER DRAINAGE
BASEMENT LEVEL 3 - SHEET 1

STATUS DEVELOPMENT APPLICATION | DRAWING No. 01282_201 | REVISION 05

CAD FILENAME: C:\WAZ\Wollongong Projects\01282\CIVIL\01282_201.dwg

A1



LEGEND

- BOUNDARY
- STORMWATER DRAINAGE LINE
- SS — F.P. — SS — STORMWATER SUBSOIL DRAINAGE LINE WITH FLUSHING POINT
- RM — RM — STORMWATER RISING MAIN
- DP — DOWNPIPE
- RM — STORMWATER RISING MAIN
- RWO — RAINWATER OUTLET
- PD — PLANTER DRAIN
- GSIP JP GGP — STORMWATER DRAINAGE PITS
- RL91.86 — FINISHED SURFACE LEVEL
- GRL91.86 — FINISHED STORMWATER PIT LID/GRATE LEVEL

0 2 4 6 8 10m

SCALE 1:100

NOT FOR CONSTRUCTION

CAD FILENAME: C:\WA2\Wollongong Projects\01282\CIVIL\01282_206.dwg

REV.	DES.	DATE	VER.	DATE	DESCRIPTION
05	J.C.	22/10/15	G.C.	22/10/15	AMENDED PLAN TO NEW ARCHITECTURALS
04	J.C.	26/08/15	G.C.	26/08/15	AMENDED PLAN TO NEW ARCHITECTURALS
03	J.C.	29/07/15	G.C.	29/07/15	AMENDED PLAN TO NEW ARCHITECTURALS
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VERIFIED	G. CHAN	DATE	27/10/14
DRAWN	J. WANG	SCALE @ A1	1:100

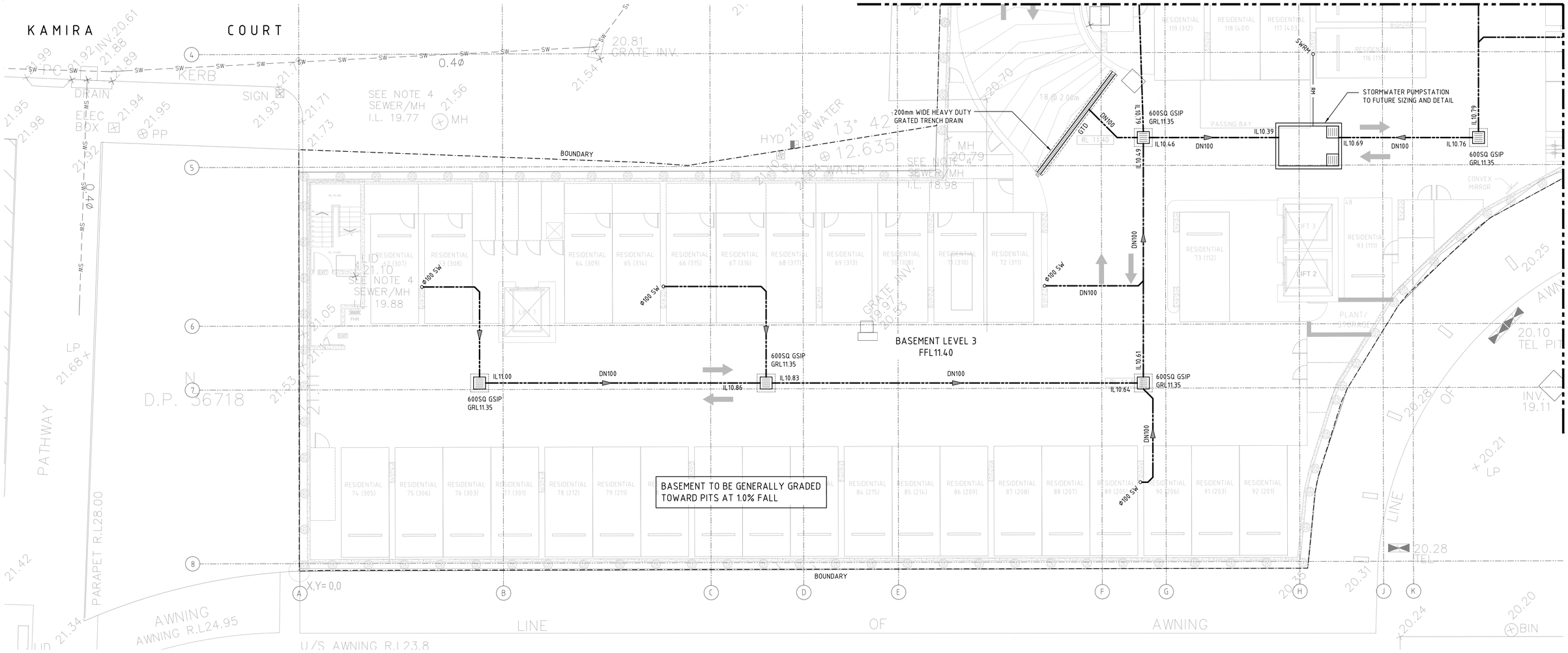
1 VILLAWOOD PLACE, VILLAWOOD

STORMWATER DRAINAGE
LEVEL 1 PLAN - SHEET 1

STATUS	DRAWING No.	REVISION
DEVELOPMENT APPLICATION	01282_206	05

A1

FOR CONTINUATION REFER DRAWING 201



FOR CONTINUATION REFER DRAWING 201

LEGEND

- BOUNDARY
- STORMWATER DRAINAGE LINE
- SS — F.P. — SS — STORMWATER SUBSOIL DRAINAGE LINE WITH FLUSHING POINT
- RM — RM — STORMWATER RISING MAIN
- DP — DOWNPIPE
- RM — STORMWATER RISING MAIN
- RWO — RAINWATER OUTLET
- GSIP JP GGP — STORMWATER DRAINAGE PITS
- RL91.86 — FINISHED SURFACE LEVEL
- GRL91.86 — FINISHED STORMWATER PIT LID/GRATE LEVEL

SCALE 1:100

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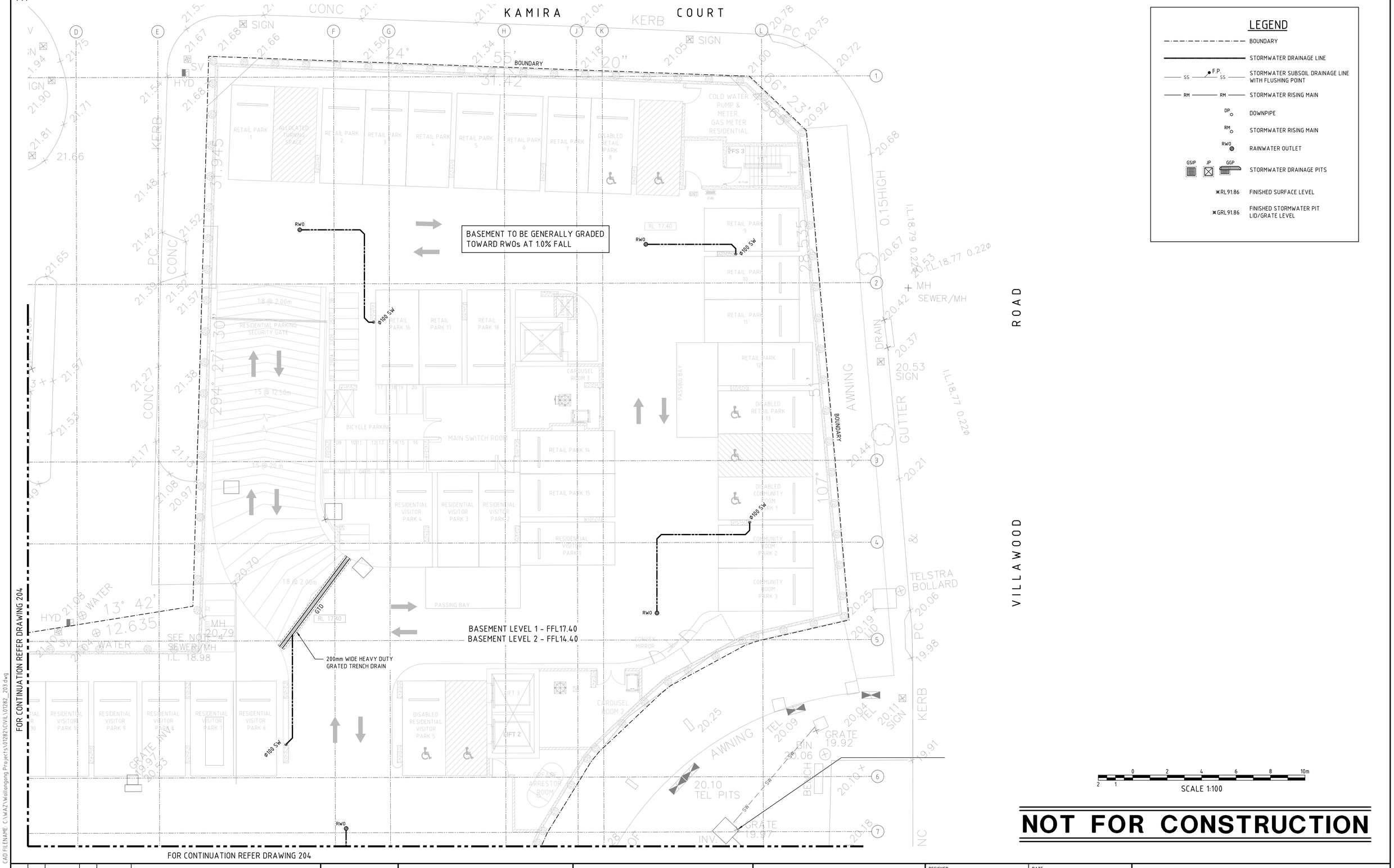
DRAWN	J. WANG	SCALE @ A1	1:100

1 VILLAWOOD PLACE, VILLAWOOD

STORMWATER DRAINAGE BASEMENT LEVEL 3 - SHEET 2

STATUS	DRAWING No.	REVISION
DEVELOPMENT APPLICATION	01282_202	05

A1



LEGEND

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- GSIP JP GGP — STORMWATER DRAINAGE PITS
- RL91.86 — FINISHED SURFACE LEVEL
- GRL91.86 — FINISHED STORMWATER PIT LID/GRATE LEVEL

SCALE 1:100

NOT FOR CONSTRUCTION

CAD FILENAME C:\WAZ\Wollongong Projects\01282\CIVIL\01282_203.dwg

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05	W.M.	22/10/15	W.W.	22/10/15	AMENDED PLAN TO NEW ARCHITECTURALS
04	J.C.	26/08/15	G.C.	26/08/15	AMENDED PLAN TO NEW ARCHITECTURALS
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DRAWN	J. WANG	SCALE @ A1	1:100

1 VILLAWOOD PLACE, VILLAWOOD

STORMWATER DRAINAGE
BASEMENT LEVEL 1 & 2 - SHEET 1

STATUS	DRAWING No.	REVISION
DEVELOPMENT APPLICATION	01282_203	05

A1

FOR CONTINUATION REFER DRAWING 203

KAMIRA COURT

BASEMENT LEVEL 1 - FFL17.40
BASEMENT LEVEL 2 - FFL14.40

200mm WIDE HEAVY DUTY GRATED TRENCH DRAIN

BASEMENT TO BE GENERALLY GRADED TOWARD RWOs AT 1.0% FALL

BOUNDARY

D.P. 36718

PATHWAY

PARAPET R.L28.00

AWNING
AWNING R.L24.95

U/S AWNING R.L23.8
TOP AWNING R.L24.1

LINE OF AWNING

X,Y= 0,0

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1 VILLAWOOD PLACE, VILLAWOOD

STORMWATER DRAINAGE
BASEMENT LEVEL 1 & 2 - SHEET 2

STATUS	DRAWING No.	REVISION
DEVELOPMENT APPLICATION	01282_204	05

A1

KAMIRA COURT

ROAD

VILLAWOOD

PROPOSED AWNING ABOVE SHOWN DASHED

PROPOSED VEHICLE CROSSING

BOUNDARY

UP INV. 19.64
Ø450 RCP '3'
8.0m @ 1.0%
DN INV. 19.56

GGP WITH 1.8m EKI
GRL21.48

UP INV. 19.54
Ø450 RCP '3'
27.0m @ 1.0%
DN INV. 19.27

GGP WITH 1.8m EKI
GRL20.80

UP INV. 19.25
Ø450 RCP '3'
13.0m @ 1.0%
DN INV. 19.12

GGP WITH 1.8m EKI
GRL21.54

CONSTRUCT GGP WITH 1.8m EKI OVER EXISTING STORMWATER DRAINAGE LINE. MAKE SMOOTH CONNECTION GRL20.67

UP INV. 19.86
Ø450 RCP '3'
20.0m @ 1.0%
DN INV. 19.66

UP INV. 19.10
Ø450 RCP '3'
9.0m @ 1.0%
DN INV. 19.01

ON-SITE DETENTION TANK
REFER DRAWING 501 FOR SECTIONS AND DETAILS

OSD TANK
54sqm

HOT WATER HEATERS

SUBSTATION

1500kva TRF

COMMUNITY ROOM
273 Sqm

RL21.40

LINE OF EXISTING EASEMENT TO BE REMOVED

ALL DOWNPIPES DRAINING FROM ROOF TO CONNECT INTO O.S.D. TANK

COMMERCIAL GARBAGE ROOM
18.5sqm

LOBBY 2
20.2sqm

MAIL BOX

LIFT 4

DIESEL PUMP & SPRINKLER VALVE PUMP ROOM

EXISTING AUTHORITY SEWER MAIN TO BE DIVERTED - REFER WATER SERVICING COORDINATORS' DRAWINGS FOR DETAIL

GGP WITH 1.8m EKI
GRL21.17

DN300 uPVC

GARBAGE HOLDING AREA

UP INV. 19.96
Ø450 RCP '3'
8.0m @ 1.0%
DN INV. 19.88

8.8M TRUCK MAXIMUM LOADING DOCK

200mm WIDE HEAVY DUTY GRATED DRAIN

RL20.40

PIPEWORK RUNS ALONG BASEMENT CEILING

RETAIL 1
255sqm

STORMWATER RISING MAIN FROM BASEMENT PUMP OUT BELOW

GGP WITH 3.0m EKI
GRL20.97

EXISTING DISUSED DRAINAGE LINE TO BE DECOMMISIONED

IL19.77

DN300 uPVC

IL19.67

LOBBY 3

LIFT 3

LIFT 2

RETAIL 06
128sqm

DN300 uPVC

IL19.54

GRL19.97

LOCATE AND CONNECT INTO EXISTING PIT AND MAKE GOOD. CONTRACTOR TO CONFIRM LOCATION OF ALL EXISTING SERVICES WITHIN PROXIMITY OF CONNECTION PRIOR TO ANY CONSTRUCTION OF WORKS.

EXISTING ELECTRICAL EASEMENT AND SUBSTATION TO BE REMOVED

EXISTING STORMWATER DRAIN IL 18.92
(based on site measurements)

LEGEND

- BOUNDARY
- STORMWATER DRAINAGE LINE
- SS — F.P. — SS — STORMWATER SUBSOIL DRAINAGE LINE WITH FLUSHING POINT
- RM — RM — STORMWATER RISING MAIN
- DP — DOWNPIPE
- RM — STORMWATER RISING MAIN
- RWO — RAINWATER OUTLET
- PD — PLANTER DRAIN
- GSIP, JP, GGP — STORMWATER DRAINAGE PITS
- RL91.86 — FINISHED SURFACE LEVEL
- GRL91.86 — FINISHED STORMWATER PIT LID/GRATE LEVEL
- UP INV. 52.653 / Ø300 uPVC 'S8' / 12.683m @ 2.4% / DN INV. 52.349 — UPSTREAM INVERT LEVEL, PIPE DIAMETER, TYPE & CLASS, PIPE LENGTH & GRADE, DOWNSTREAM INVERT LEVEL

0 2 4 6 8 10m
2 1
SCALE 1:100

NOT FOR CONSTRUCTION

CAD FILENAME: C:\WAZ\Wollongong Projects\01282\CIVIL\01282_205.dwg

REV.	DES.	DATE	VER.	DATE	DESCRIPTION
07	W.M.	15/01/16	W.W.	15/01/16	STORMWATER DRAINAGE LINE AMENDED
06	W.M.	25/11/15	W.W.	25/11/15	STORMWATER DRAINAGE LINE ADDED TO ROAD
05	W.M.	22/10/15	W.W.	22/10/15	AMENDED PLAN TO NEW ARCHITECTURALS
04	J.C.	26/08/15	G.C.	26/08/15	AMENDED PLAN TO NEW ARCHITECTURALS
03	J.C.	29/07/15	G.C.	17/07/15	AMENDED PLAN TO NEW ARCHITECTURALS
02	J.W.	27/10/14	G.C.	27/10/14	ISSUE FOR DEVELOPMENT APPLICATION

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	J. WANG	DATE	27/10/14
VERIFIED	G. CHAN	DATE	27/10/14
DRAWN	J. WANG	SCALE @ A1	1:100

1 VILLAWOOD PLACE, VILLAWOOD

STORMWATER DRAINAGE GROUND FLOOR PLAN

STATUS: DEVELOPMENT APPLICATION | DRAWING No. 01282_205 | REVISION 07

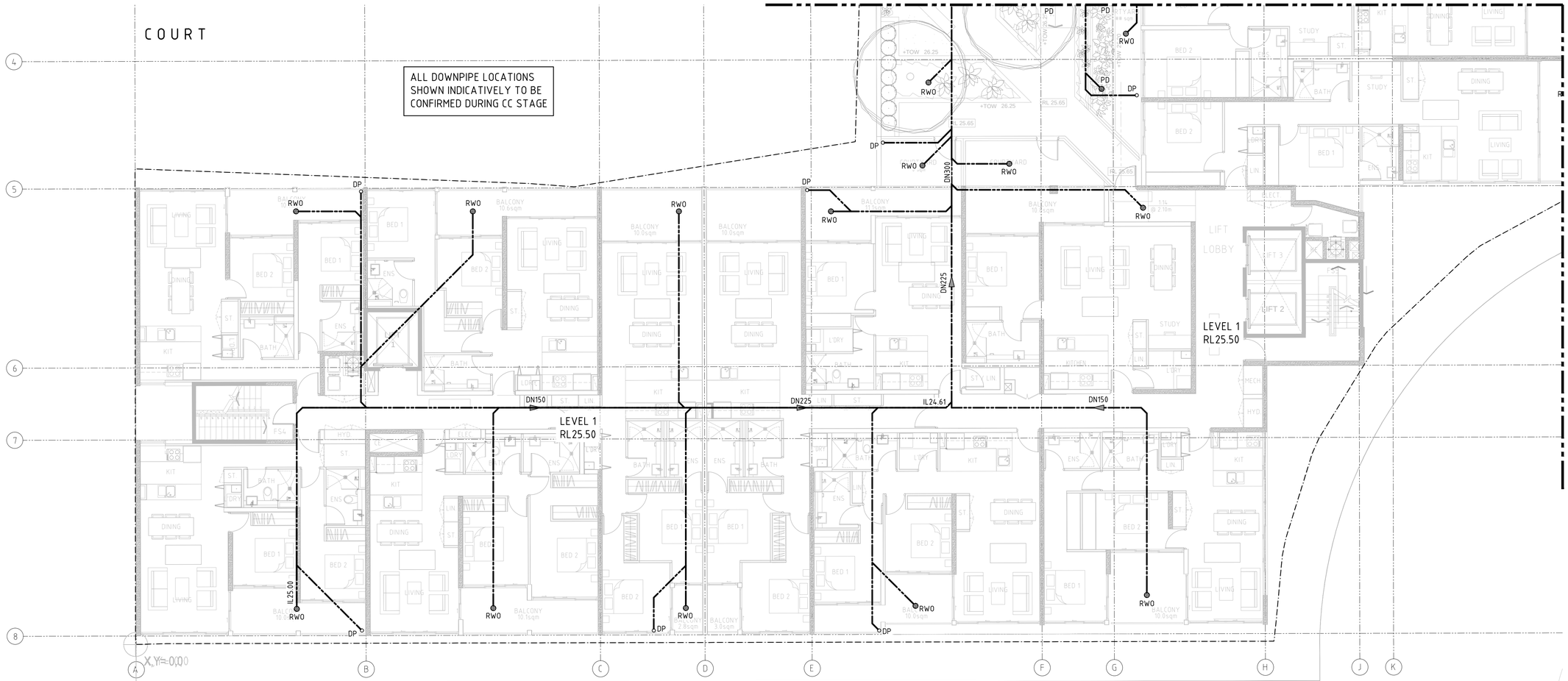
A1

KAMIRA COURT

FOR CONTINUATION REFER DRAWING 206

FOR CONTINUATION REFER DRAWING 206

ALL DOWNPIPE LOCATIONS SHOWN INDICATIVELY TO BE CONFIRMED DURING CC STAGE



LEGEND

- BOUNDARY
- STORMWATER DRAINAGE LINE
- SS — F.P. — SS — STORMWATER SUBSOIL DRAINAGE LINE WITH FLUSHING POINT
- RM — RM — STORMWATER RISING MAIN
- DP — DOWNPIPE
- RM — STORMWATER RISING MAIN
- RWO — RAINWATER OUTLET
- PD — PLANTER DRAIN
- GSIP, JP, GGP — STORMWATER DRAINAGE PITS
- RL91.86 — FINISHED SURFACE LEVEL
- GRL91.86 — FINISHED STORMWATER PIT LID/GRATE LEVEL

0 2 4 6 8 10m

SCALE 1:100

NOT FOR CONSTRUCTION

REV.	DES.	DATE	VER.	DATE	DESCRIPTION
05	J.C.	22/10/15	G.C.	22/10/15	AMENDED PLAN TO NEW ARCHITECTURALS
04	J.C.	26/08/15	G.C.	26/08/15	AMENDED PLAN TO NEW ARCHITECTURALS
03	J.C.	29/07/15	G.C.	29/07/15	AMENDED PLAN TO NEW ARCHITECTURALS
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DESIGNED	J. WANG	DATE	27/10/14
VERIFIED	G. CHAN	DATE	27/10/14
DRAWN	J. WANG	SCALE @ A1	1:100

1 VILLAWOOD PLACE, VILLAWOOD

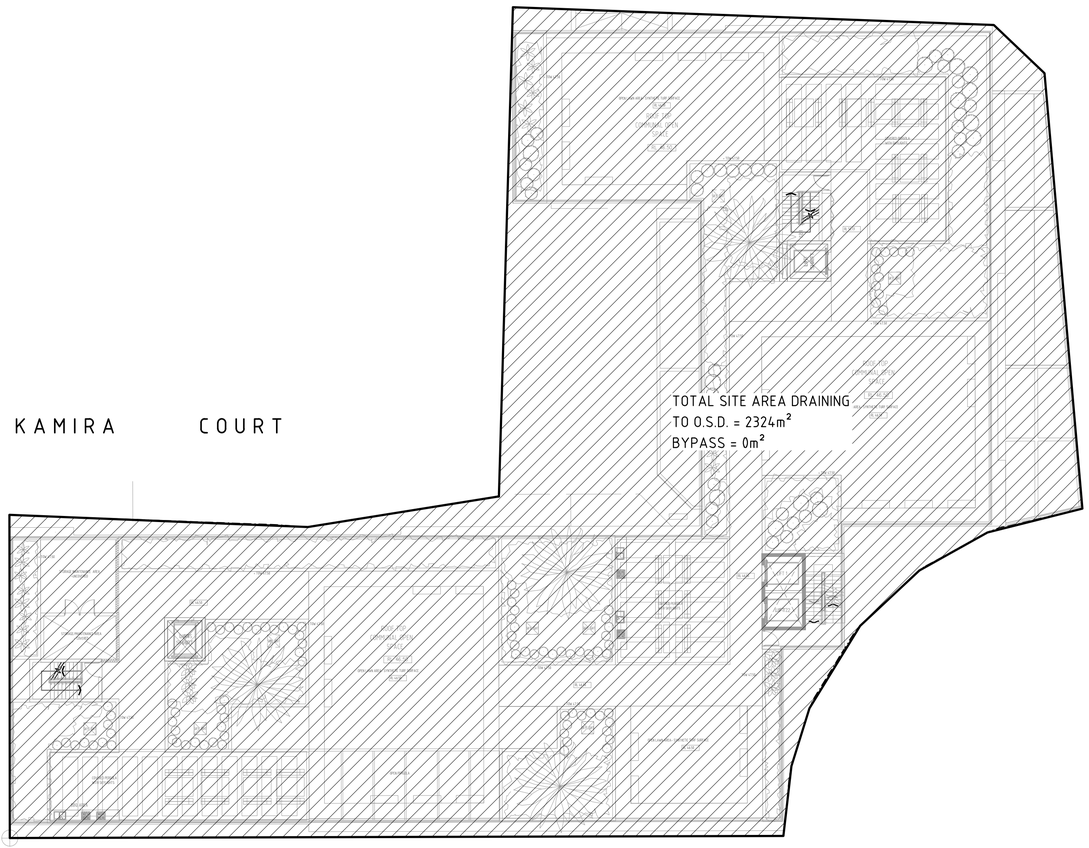
STORMWATER DRAINAGE
LEVEL 1 PLAN - SHEET 2

STATUS	DRAWING No.	REVISION
DEVELOPMENT APPLICATION	01282_207	05

CAD FILENAME: C:\WAZ\Wollongong Projects\01282\CIVIL\01282_206.dwg

A1

KAMIRA COURT



KAMIRA COURT

VILLAWOOD ROAD

CATCHMENT PLAN
SCALE 1:200

0 4 8 12 16 20m
4 2
SCALE 1:200

NOT FOR CONSTRUCTION

CAD FILENAME: C:\WAZ\Wollongong Projects\01282\CIVIL\01282_208.dwg

REV.	DES.	DATE	VER.	DATE	DESCRIPTION
04	W.M.	22/10/15	W.W.	22/10/15	AMENDED PLAN
03	J.C.	29/07/15	G.C.	29/07/15	AMENDED PLAN TO NEW ARCHITECTURALS
02	J.W.	27/10/14	G.C.	27/10/14	ISSUE FOR DEVELOPMENT APPLICATION
01	J.W.	15/10/14	G.C.	15/10/14	PRELIMINARY

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ABN 21 118 134 240

DESIGNED	J. WANG	DATE	27/10/14
VERIFIED	G. CHAN	DATE	27/10/14
DRAWN	J. WANG	SCALE @ A1	AS SHOWN

1 VILLAWOOD PLACE, VILLAWOOD

STORMWATER DRAINAGE
CATCHMENT PLAN

STATUS	DRAWING No.	REVISION
DEVELOPMENT APPLICATION	01282_208	04

A1

PIT / NODE DETAILS Version 12

Name	Type	Family	Size	Ponding Volume (cu.m)	Pressure Change Coeff. Ku	Surface Elev (m)	Max Pond Depth (m)	Base Inflow (cu.m/s)	Blocking Factor	x	y	Bolt-down lid	id	Part Full Shock Loss	Inflow Hydrograph	Pit is
N Pre	Node							0		449	-339		7		No	
Dummy D	OnGrade	Sutherlan	Sutherland GP 0.9 m		0.3	24		0	0	1230.833	-362.5	No	646	1 x Ku	No	New
N Post	Node					19.97		0		1355.833	-493.333		25		No	

DETENTION BASIN DETAILS

Name	Elev	Surf. Area	Not Used	Outlet Type	K	Dia(mm)	Centre RL	Pit Family	Pit Type	x	y	HED	Crest RL	Crest Length	id
OSD	23	0		Orifice		140	23.3			1123	-322	No		28	
	23.3	0.81													
	23.4	54													
	24.5	54													

SUB-CATCHMENT DETAILS

Name	Pit or Node	Total Area (ha)	Paved Area %	Grass Area %	Supp Area %	Paved Time (min)	Grass Time (min)	Supp Time (min)	Paved Length (m)	Grass Length (m)	Supp Length (m)	Paved Slope(%) %	Grass Slope %	Supp Slope %	Paved Rough	Grass Rough	Supp Rough	Lag Time or Factor	Gutter Length (m)	Gutter Slope %	Gutter FlowFactc	Rainfall Multiplier
Pre-Dev	N Pre	0.2324	0	100	0	0	0	0	0	50	0	0	3	0	0	0.1	0	0			1
Post-Dev	OSD	0.2324	100	0	0	0	0	0	40	0	0	1	0	0	0.013	0	0	0			1

PIPE DETAILS

Name	From	To	Length (m)	U/S IL (m)	D/S IL (m)	Slope (%)	Type	Dia (mm)	I.D. (mm)	Rough	Pipe Is	No. Pipes	Chg From	At Chg	Chg (m)	Rl (m)	Chg (m)	RL (m)	etc (m)
Outlet	OSD	Dummy D	3	23	22.97		1 uPVC, not	300	303	0.06	New	Fixed	1	OSD	0				
UPVC	Dummy D	N Post	40	19.98	19.58		1 uPVC, not	300	303	0.06	New	Fixed	1	Dummy D	0				

DETAILS of SERVICES CROSSING PIPES

Pipe	Chg (m)	Bottom Elev (m)	Height of (m)	Chg (m)	Bottom Elev (m)	Height of (m)	Chg (m)	Bottom Elev (m)	Height of (m)	etc	etc

CHANNEL DETAILS

Name	From	To	Type	Length (m)	U/S IL (m)	D/S IL (m)	Slope (%)	Base Width (m)	L.B. Slope (1:?)	R.B. Slope (1:?)	Manning n	Depth (m)	Roofed

OVERFLOW ROUTE DETAILS

Name	From	To	Travel Time (min)	Spill Level (m)	Crest Length (m)	Weir Coeff. C	Cross Section	Safe Dept Major Sto (m)	Safe Depth Minor Sto (m)	Safe DxV (sq.m/sec)	Bed Slope (%)	D/S Area Contributing %	id
Overflow	OSD	Dummy D	0.1	24.5	1.8	1.7	4 m wide	0.3	0.15	0.4	0.1	0	236725

DRAINS results prepared 13 October, 2015 from Version 2015.11

PIT / NODE DETAILS Version 8

Name	Max HGL	Max Pond HGL	Max Surface Flow Arriv (cu.m/s)	Max Pond Volume (cu.m)	Min Freeboard (m)	Overflow (cu.m/s)	Constraint
Dummy D	20.1		0		3.9		None
N Post	19.82		0				

SUB-CATCHMENT DETAILS

Name	Max Flow Q (cu.m/s)	Paved Max Q (cu.m/s)	Grassed Max Q (cu.m/s)	Paved Tc (min)	Grassed Tc (min)	Supp. Tc (min)	Due to Storm
Pre-Dev	0.034	0	0.034	0	9.21		0 AR&R 5 year, 20 minutes storm, average 76.5 mm/h, Zone 1
Post-Dev	0.088	0.088	0	2.61	0		0 AR&R 5 year, 5 minutes storm, average 137 mm/h, Zone 1

Outflow Volumes for Total Catchment (0.23 impervious + 0.23 pervious = 0.46 total ha)

Storm	Total Rain cu.m	Total Runo cu.m (Run	Impervio cu.m (Run	Pervious Runoff cu.m (Runoff %)
AR&R 5 ye	53.06	26.27 (49.!	24.21 (91.:	2.06 (7.8%)
AR&R 5 ye	81.34	46.94 (57.:	38.35 (94.:	8.60 (21.1%)
AR&R 5 ye	118.52	74.15 (62.(	56.94 (96.:	17.21 (29.0%)
AR&R 5 ye	196.61	124.56 (63	95.98 (97.(	28.58 (29.1%)
AR&R 5 ye	258.42	160.60 (62	126.89 (98	33.71 (26.1%)

PIPE DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
Outlet	0.034	1.62	23.101	23.071	AR&R 5 year, 1 hour storm, average 42.3 mm/h, Zone 1
UPVC	0.034	1.62	20.081	19.82	AR&R 5 year, 1 hour storm, average 42.3 mm/h, Zone 1

CHANNEL DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Due to Storm

OVERFLOW ROUTE DETAILS

Name	Max Q	U/S	Max Q	D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm
Overflow	0		0		0.287	0	0	0	0	

DETENTION BASIN DETAILS

Name	Max WL	MaxVol	Max Q Total	Max Q Low Level	Max Q High Level
OSD	23.91	29.6	0.034	0.034	0

CONTINUITY CHECK for AR&R 5 year, 20 minutes storm, average 76.5 mm/h, Zone 1

Node	Inflow (cu.m)	Outflow (cu.m)	Storage Cl (cu.m)	Difference %
N Pre	17.21	17.21	0	0
OSD	56.94	56.9	0.04	0
Dummy D	56.9	56.93	0	0
N Post	56.93	56.93	0	0

Run Log for 01282_Villawood Place_Drains run at 15:43:20 on 13/10/2015

No water upwelling from any pit. Freeboard was adequate at all pits.
Flows were safe in all overflow routes.

DRAINS results prepared 13 October, 2015 from Version 2015.11

PIT / NODE DETAILS Version 8

Name	Max HGL	Max Pond HGL	Max Surface Flow Arriv (cu.m/s)	Max Pond Volume (cu.m)	Min Freeboard (m)	Overflow (cu.m/s)	Constraint
Dummy D	20.28		0		3.72		None
N Post	20.2		0				

SUB-CATCHMENT DETAILS

Name	Max Flow Q (cu.m/s)	Paved Max Q (cu.m/s)	Grassed Max Q (cu.m/s)	Paved Tc (min)	Grassed Tc (min)	Supp. Tc (min)	Due to Storm
Pre-Dev	0.093	0	0.093	0	7.54		0 AR&R 100 year, 20 minutes storm, average 126 mm/h, Zone 1
Post-Dev	0.145	0.145	0	2.14	0		0 AR&R 100 year, 5 minutes storm, average 224 mm/h, Zone 1

Outflow Volumes for Total Catchment (0.23 impervious + 0.23 pervious = 0.46 total ha)

Storm	Total Rain cu.m	Total Runo cu.m (Run	Impervio cu.m (Run	Pervious Runoff cu.m (Runoff %)
AR&R 100	86.76	59.77 (68.!	41.06 (94.(	18.72 (43.1%)
AR&R 100	134.02	99.35 (74.:	64.68 (96.!	34.67 (51.7%)
AR&R 100	195.22	149.25 (76	95.28 (97.(	53.97 (55.3%)
AR&R 100	324.9	248.18 (76	160.12 (98	88.06 (54.2%)
AR&R 100	431.34	327.16 (75	213.34 (98	113.81 (52.8%)
AR&R 100	782.26	556.22 (71	388.81 (99	167.41 (42.8%)

PIPE DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
Outlet	0.046	1.76	23.119	23.09	AR&R 100 year, 2 hours storm, average 46.4 mm/h, Zone 1
UPVC	0.046	0.65	20.279	20.2	AR&R 100 year, 2 hours storm, average 46.4 mm/h, Zone 1

CHANNEL DETAILS

Name	Max Q (cu.m/s)	Max V (m/s)	Due to Storm

OVERFLOW ROUTE DETAILS

Name	Max Q	U/S	Max Q	D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm
Overflow	0		0		0.954	0	0	0	0	

DETENTION BASIN DETAILS

Name	Max WL	MaxVol	Max Q Total	Max Q Low Level	Max Q High Level
OSD	24.48	60.3	0.046	0.046	0

CONTINUITY CHECK for AR&R 100 year, 20 minutes storm, average 126 mm/h, Zone 1

Node	Inflow (cu.m)	Outflow (cu.m)	Storage Cl (cu.m)	Difference %
N Pre	53.97	53.97	0	0
OSD	95.28	95.25	0.04	0
Dummy D	95.25	95.23	0	0
N Post	95.23	95.23	0	0

Run Log for 01282_Villawood Place_Drains run at 15:43:56 on 13/10/2015

No water upwelling from any pit. Freeboard was adequate at all pits.
Flows were safe in all overflow routes.

NOT FOR CONSTRUCTION

CAD FILENAME: C:\WAZ\Wollongong Projects\01282\CIVIL\01282_208.dwg

REV.	DES.	DATE	VER.	DATE	DESCRIPTION
01	W.W.	22/10/15	G.C.	22/10/15	ISSUED FOR DA APPROVAL

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

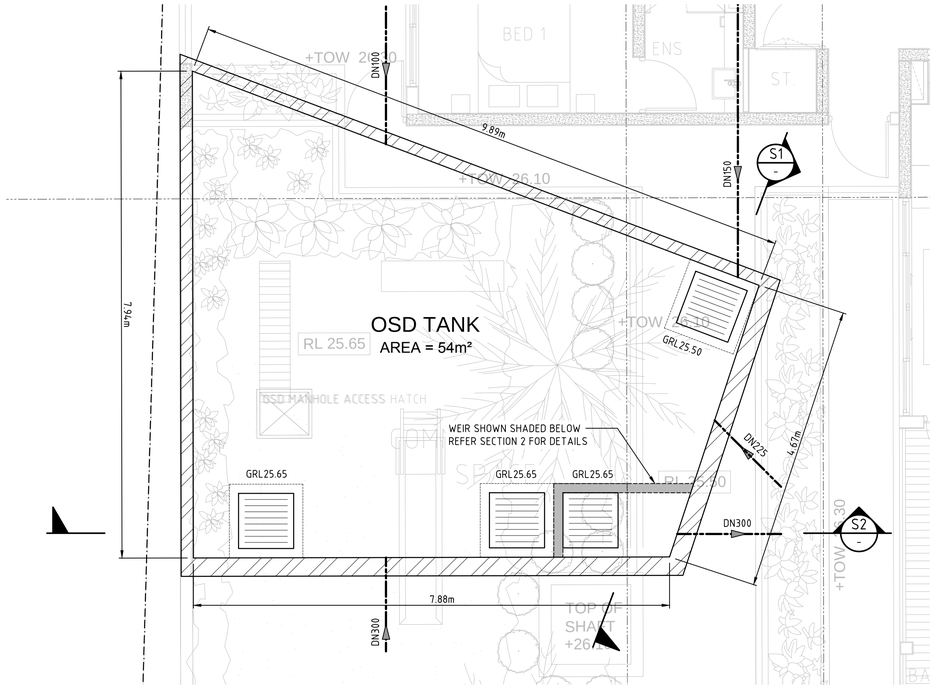
DESIGNED	W.WEBB	DATE	22/10/15
VERIFIED	G. CHAN	DATE	22/10/15
DRAWN	W/MARTIN	SCALE @ A1	N/A

1 VILLAWOOD PLACE, VILLAWOOD

STORMWATER DRAINAGE CALCULATION SHEETS

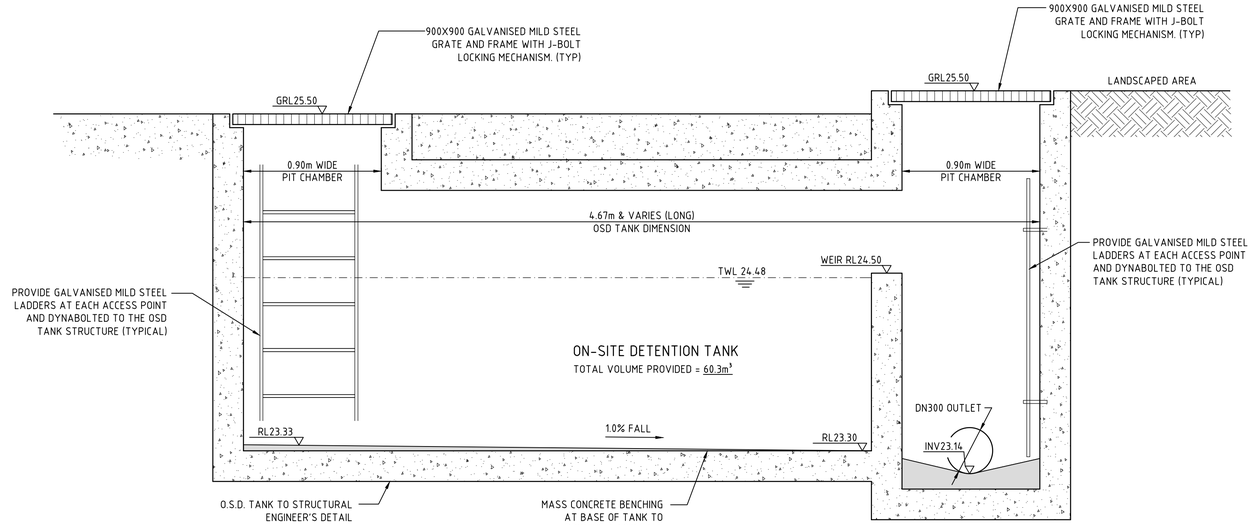
STATUS	DRAWING No.	REVISION
DEVELOPMENT APPLICATION	01282_209	01

A1



ON-SITE DETENTION TANK PLAN

SCALE 1:50



SECTION S1

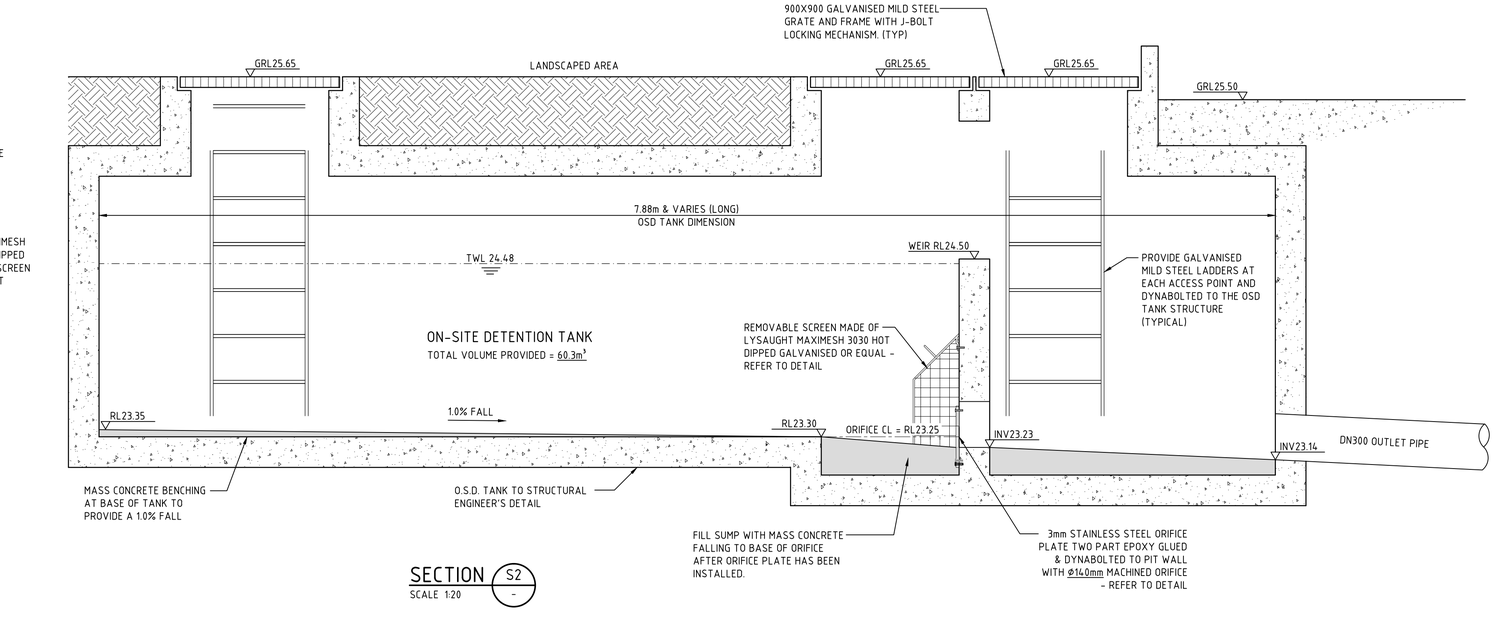
SCALE 1:20

ORIFICE PLATE DETAIL

SCALE 1:5

TRASH SCREEN DETAIL (TYPICAL)

SCALE 1:5



SECTION S2

SCALE 1:20

0 400 800 1200 1600 2000mm
400 200
SCALE 1:20

0 2 4 6 8 10m
2 1
SCALE 1:100

NOT FOR CONSTRUCTION

REV.	DES.	DATE	VER.	DATE	DESCRIPTION
05	W.M.	22/10/15	W.W.	22/10/15	AMENDED OSD TO SUIT NEW ARCHITECTURALS
04	J.C.	26/08/15	G.C.	26/08/15	AMENDED OSD TO SUIT NEW ARCHITECTURALS
03	J.C.	29/07/15	G.C.	29/07/15	AMENDED PLAN TO NEW ARCHITECTURALS
02	J.W.	27/10/14	G.C.	27/10/14	ISSUE FOR DEVELOPMENT APPLICATION
01	J.W.	15/10/14	G.C.	15/10/14	PRELIMINARY

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BAULKHAM HILLS NSW 2153

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

ABN 21 118 134 240

DESIGNED	J. WANG	DATE	27/10/14
VERIFIED	G. CHAN	DATE	27/10/14
DRAWN	J. WANG	SCALE @ A1	1:100

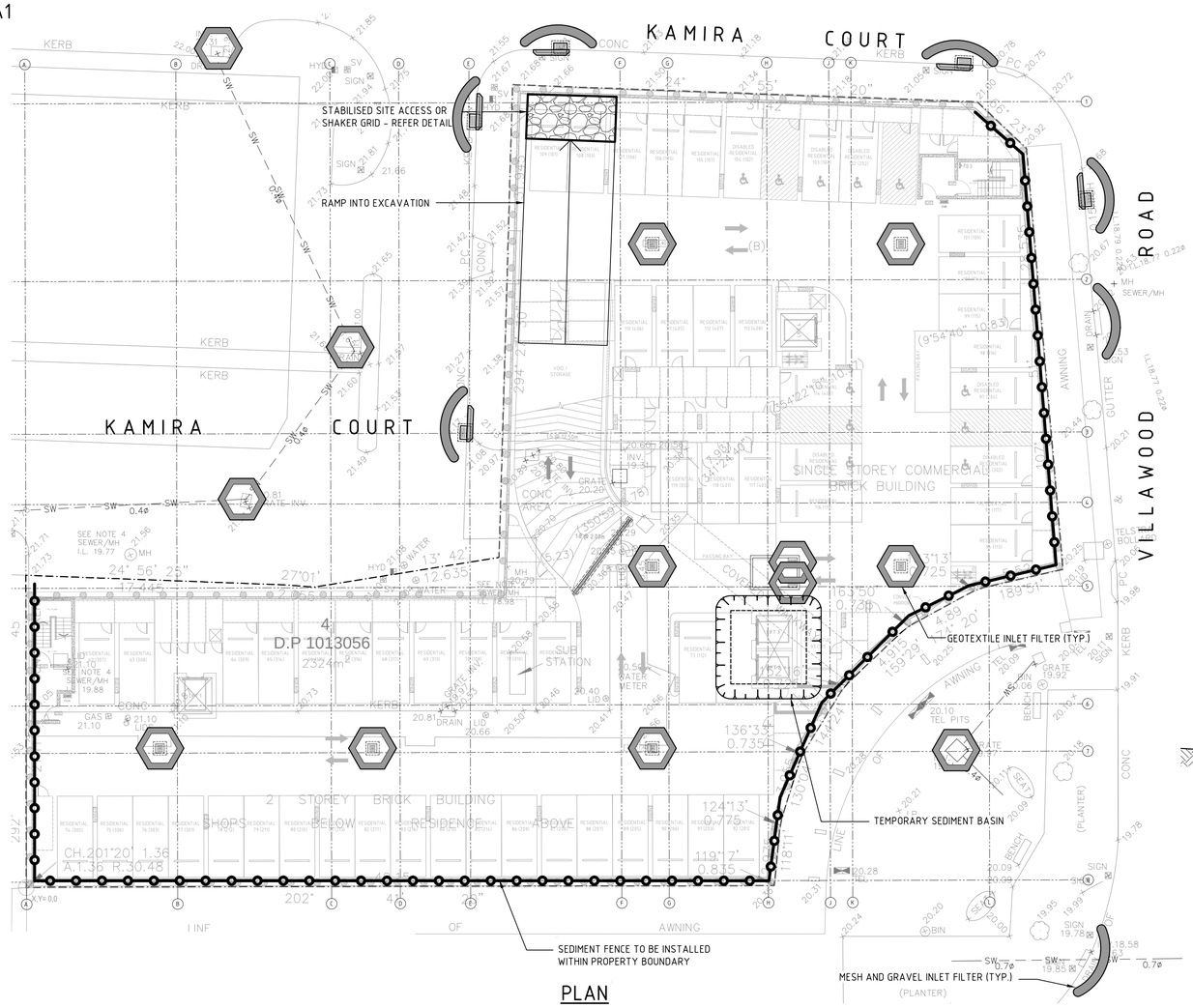
1 VILLAWOOD PLACE, VILLAWOOD

ON-SITE DETENTION TANK
SECTIONS AND DETAILS

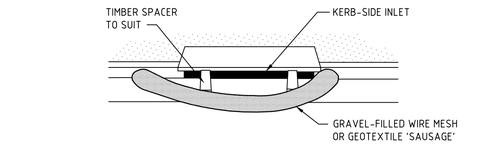
STATUS	DRAWING No.	REVISION
DEVELOPMENT APPLICATION	01282_501	05

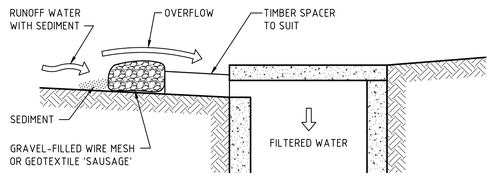
CAD FILENAME: C:\WAZ\Wollongong Projects\01282\CIVIL\01282_501.dwg

A1



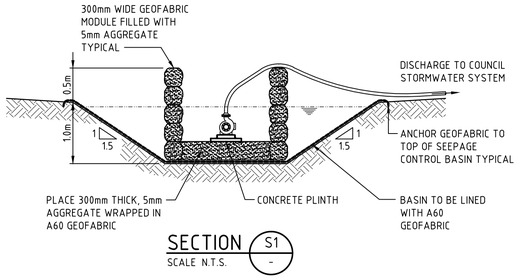
PLAN
SCALE 1:200



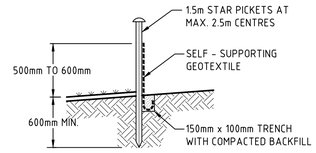


CONSTRUCTION NOTES:
1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
4. PLACE THE FILTER AT THE 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



SECTION
SCALE N.T.S. S1 -



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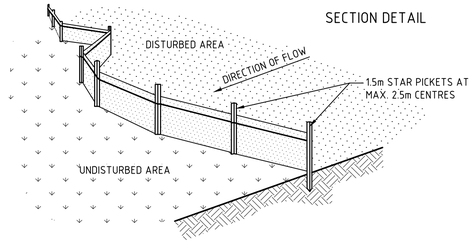
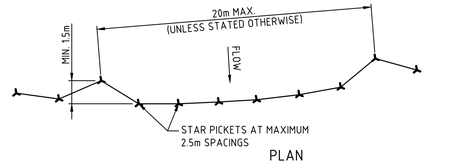




PLAN

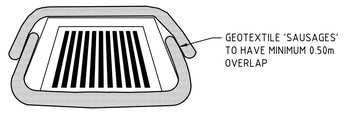
CONSTRUCTION NOTES:
1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT 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.

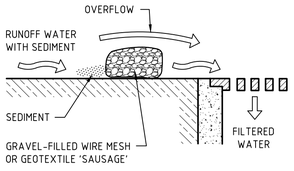
SEDIMENT FENCE DETAIL
NOT TO SCALE

LEGEND
- SEDIMENT FENCE
- GEOTEXTILE INLET FILTER (FOR PITS WITHIN LANDSCAPED AREAS)
- GEOTEXTILE INLET FILTER (FOR PITS WITHIN PAVEMENT AREAS)
- MESH & GRAVEL INLET FILTER
- STABILISED SITE ACCESS

0 4 8 12 16 20m
4 2
SCALE 1:200

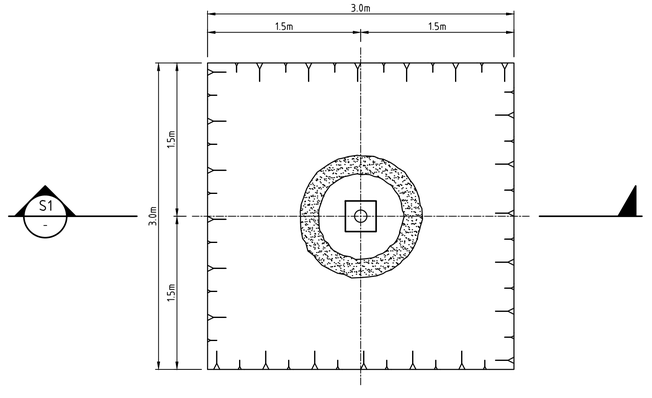
NOT FOR CONSTRUCTION



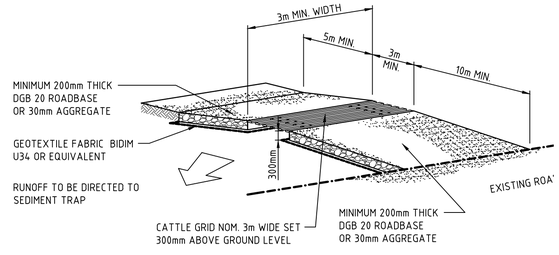


CONSTRUCTION NOTES:
1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

GEOTEXTILE INLET FILTER DETAIL
FOR PITS WITHIN PAVEMENT AREAS
NOT TO SCALE



TEMPORARY SEDIMENT BASIN DETAIL - PLAN
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 STABILI ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.

STABILISED SITE ACCESS WITH SHAKER GRID DETAIL
NOT TO SCALE

REV.	DES.	DATE	VER.	DATE	DESCRIPTION
05	J.C.	25/11/15	G.C.	25/11/15	AMENDED PLAN TO NEW ARCHITECTURALS
04	J.C.	26/08/15	G.C.	26/08/15	AMENDED PLAN TO NEW ARCHITECTURALS
03	J.C.	29/07/15	G.C.	29/07/15	AMENDED PLAN TO NEW ARCHITECTURALS
02	J.W.	27/10/14	G.C.	27/10/14	ISSUE FOR DEVELOPMENT APPLICATION
01	J.W.	15/10/14	G.C.	15/10/14	PRELIMINARY

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ABN 21 118 134 240

DESIGNED	J. WANG	DATE	27/10/14
VERIFIED	G. CHAN	DATE	27/10/14
DRAWN	J. WANG	SCALE @ A1	AS SHOWN

1 VILLAWOOD PLACE, VILLAWOOD

SEDIMENT & EROSION CONTROL PLAN AND DETAILS

STATUS	DRAWING No.	REVISION
DEVELOPMENT APPLICATION	01282_701	05

CAD FILENAME: C:\WAZ\Wollongong Projects\01282\CIVIL\01282_701.dwg