

191 MILLER ROAD, CHESTER HILL STORMWATER DRAINAGE



LOCATION OF SITE

LOCALITY PLAN
NOT TO SCALE

DEVELOPMENT APPLICATION

DO NOT SCALE FROM DRAWINGS, CHECK & VERIFY ALL DIMENSIONS & LEVELS BEFORE COMMENCEMENT OF ANY WORK.	<div>NORTH POINT</div> <div></div> <div>SHEET SIZE: A1</div>	<div>NOTES</div> <div>1. REFER TO DRAWING STW-002 FOR DRAWING LIST.</div> <div>2. CONTRACTOR TO CHECK AND CONFIRM ALL LEVELS ON SITE.</div> <div>3. CONTRACTOR TO INVESTIGATE ALL EXISTING SERVICES, SUCH AS APPLY FOR "DIAL BEFORE YOU DIG" SERVICES PRIOR TO START OF WORKS ON SITE.</div>	<div>ISSUE</div> <div>A B C D</div>	<div>AMENDMENT</div> <div>DRAFT ISSUE FOR CLIENT REVIEW FOR AUTHORITY SUBMISSION FOR AUTHORITY SUBMISSION FOR AUTHORITY SUBMISSION</div>	<div>DATE</div> <div>22.05.2018 23.05.2018 13.09.2018 16.11.2018</div>	<div>PROJECT</div> <div>191 MILLER ROAD CHESTER HILL</div>	<div>CLIENT</div> <div>BUILDING RECYCLING OPERATIONS PTY LTD</div> <div>PLANNER</div> <div>COEUR DE LION PLANNING</div>	<div>CONSULTANT</div> <div><div>LP CONSULTING AUSTRALIA PTY LTD</div><div>A: Suite 9.04, Level 9, 15 Pitt Street Sydney NSW Australia 2000 P: PO Box 814 Kensington NSW 1465 E: info@lp-consulting.com.au</div><div>T: +61 (2) 9223 4444 W: www.lp-consulting.com.au</div></div>	<div>TITLE</div> <div>STORMWATER DRAINAGE TITLE SHEET AND LOCALITY PLAN</div>	<table><tr><td>SCALE</td><td>DRAWN</td><td>DESIGNED</td><td>CHECKED</td><td>APPROVED</td></tr><tr><td>N.T.S.</td><td>CA</td><td>LP</td><td>LP</td><td></td></tr><tr><td>DATE</td><td colspan="2">DRAWING No.</td><td colspan="2">ISSUE</td></tr><tr><td>Nov 16, 2018</td><td colspan="2">DA-STW-001</td><td colspan="2">D</td></tr><tr><td>JOB No.</td><td colspan="4">2016-0932</td></tr><tr><td colspan="5">DEVELOPMENT APPLICATION</td></tr></table>	SCALE	DRAWN	DESIGNED	CHECKED	APPROVED	N.T.S.	CA	LP	LP		DATE	DRAWING No.		ISSUE		Nov 16, 2018	DA-STW-001		D		JOB No.	2016-0932				DEVELOPMENT APPLICATION				
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LEGEND

LINETYPES	
	OVERFLOW
	RAINWATER RE-USE
	SIPHONIC DRAINAGE
	SUBSOIL DRAINAGE
	SUBSOIL RISING MAIN
	STORMWATER DRAINAGE
	STORMWATER RISING MAIN
	STORMWATER DRAINAGE
	FILTERED RAINWATER RE-USE
	IRRIGATION
	RECYCLED COLD WATER
	ELECTRICAL WIRING
	ELECTRICAL CONDUIT

SERVICES & UTILITIES	
	EXISTING ELECTRICAL
	EXISTING ELECTRICAL OVERHEAD
	EXISTING ELECTRICAL UNDERGROUND
	EXISTING GAS
	EXISTING TELSTRA
	EXISTING SEWER
	EXISTING STORMWATER
	EXISTING WATER
	EXISTING SERVICE TO BE ABANDONED

NOTE:
'e' ON SERVICE LINE DENOTES EXISTING SERVICE.
'x' ON SERVICE LINE DENOTES SERVICE TO BE ABANDONED.

EROSION & SEDIMENT SYMBOLS

	BARRIER FENCE
	SILT FENCE
	STABILISED CONSTRUCTION SITE VEHICLE ENTRY/EXIT GRID
	STRAW BALE SEDIMENT FILTER

DRAWING INFORMATION SYMBOLS

SCALE BAR 1:100

PIPEWORK SHOWN IN STRATA
UNLESS NOTED OTHERWISE

PIPEWORK SHOWN OUT OF STRATA
UNLESS NOTED OTHERWISE

SECTION No.
DRAWING REFERENCE No.

DETAIL No.
DRAWING REFERENCE No.

AMENDMENT REFERENCE

HYDRAULIC SERVICES SYMBOLS

	VERTICAL RISER IN DRAINAGE
	CLEAROUT OR INSPECTION OPENING
	DRAINAGE TURN-UP
	FLOW DIRECTION ARROW
	PENETRATION CORE THROUGH STRUCTURAL ELEMENT
	DOWNPIPE (150mm DIAMETER)
	RISER
	DROPPER
	DROPS TO BELOW / RISES FROM BELOW
	CAPPED OFF SERVICE
	CONTINUATION OF SERVICE NOT SHOWN
	CONTINUATION OF SERVICE SHOWN ELSEWHERE
	FLANGED CONNECTION
	SERVICE CAST IN SLAB
	SERVICE CONCRETE ENCASED
	ISOLATION VALVE
	BALANCING VALVE (STAD)
	CHECK VALVE
	BACKFLOW PREVENTION DEVICE
	PRESSURE LIMITING VALVE
	PRESSURE REDUCTION VALVE
	STRAINER
	FILTER
	PUMP
	HOSE TAP
	COLD WATER POINT
	THRUST BLOCK
	TUNDISH
	REFLUX VALVE
	RAINWATER OUTLET
	SQUARE RAINWATER OUTLET
	SPREADER
	RAINWATER HEAD
	STORMWATER PIT (ACCESS ONLY)
	STORMWATER PIT (INLET)
	KERB ENTRY PIT
	GRATED TRENCH DRAIN
	FALL ARROW
	OVERLAND FLOW PATH DIRECTIONAL ARROW
	STORMWATER HEADWALL
	SWALE OR SPEED HUMP
	ELECTRICAL CONTROL PANEL
	DIRECTION OF FLOW
	SERVICE
	SIZE
	CONTINUED ON DWG XX

GENERAL ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE
AB	ACCESSIBLE BASIN
AC	AIR CONDITIONING
AV	AIR RELEASE VALVE
AWC	ACCESSIBLE TOILET (WATER CLOSET)
B	BASIN
BG	BOX GUTTER
BGO	BOX GUTTER OUTLET
BT	BOUNDARY TRAP
BTFW	BUCKET TRAP FLOOR WASTE
BTH	BATH
BWU	BOILING WATER UNIT
CAC	CIRCULAR ACCESS CHAMBER
CHVP	CHAMBER VENT PIPE
CTS	CENTRES
CL	CENTRE LINE
CI	CAST IRON
CIc	CAST IN COLUMN
CIS	CAST IN SLAB
CO	CLEAR OUT
Cu	COPPER
CW	COLD WATER
DI	DUCTILE IRON
DIA	DIAMETER
DP	DOWN PIPE
DPFH	DOUBLE PILLAR FIRE HYDRANT
DST	DRAINAGE STACK
DTU	DRAINAGE TURN-UP
DWG	DRAWING
ED	ELEVATED DRAINAGE
EGL	EXISTING GROUND LEVEL
EGO	EAVES GUTTER OUTLET
EJ	EXPANSION JOINT
Ex	EXISTING
FFL	FINISHED FLOOR LEVEL
FH	FIRE HYDRANT
FHR	FIRE HOSE REEL
FSC	FIRE STOP COLLAR
FW	FLOOR WASTE
GALV	GALVANISED
GDO	GRATED DRAIN OUTLET
GMS	GALVANISED MILD STEEL
GVP	GREASE VENT PIPE
HD	HEAVY DUTY
HDC	HEAVY DUTY COVER
HDG	HEAVY DUTY GRATE
HDPE	HIGH DENSITY POLYETHYLENE
H/L	HIGH LEVEL
HP	HIGH POINT
HT	HOSE TAP
HW	HOT WATER
HWU	HOT WATER UNIT
ID	INTERNAL DIAMETER
IL	INVERT LEVEL
IO	INSPECTION OPENING
IPMF	INDUCT PIPE MICA FLAP
KEP	KERB ENTRY PIT
KFW	KITCHEN FLOOR WASTE
KO	KEY OPERATED
LDC	LIGHT DUTY COVER
LDG	LIGHT DUTY GRATE
LL	LOW LEVEL
L.O.C.	LIMIT OF CONTRACT
MAX.	MAXIMUM
MIN.	MINIMUM
NB	NOMINAL BORE
NG	NATURAL GAS
N.I.C	NOT IN CONTRACT
NOM	NOMINAL
No	NUMBER
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
O/F	OVERFLOW
ORG	OVERFLOW RELIEF GULLY
P	PENETRATION
PDO	PLANTER DRAIN OUTLET
PLV	PRESSURE LIMITING VALVE
PRV	PRESSURE REDUCING VALVE
REV	REVISION
RL	REDUCED LEVEL
RO	RAINWATER OUTLET
RPZD	REDUCED PRESSURE ZONE DEVICE
RST	RECESSED STOP TAP
RTD	RECESSED TUNDISH
RV	REFLUX VALVE
RWH	RAINWATER HEAD
RWO	RAINWATER OUTLET

GENERAL ABBREVIATIONS CONT.

S	SINK
SHR	SHOWER
SMH	SEWER MANHOLE
SQ	SQUARE
SST	SOIL STACK
ST	STOP TAP
STD	STANDARD
STW	STORMWATER
SV	STOP VALVE (ISOLATION VALVE)
SWP	STORMWATER PIT
TBC	TO BE CONFIRMED
TD	TUNDISH
TG	TRENCH GRATE
TMV	THERMOSTATIC MIXING VALVE
TOK	TOP OF KERB
TTD	TRAPPED TUNDISH
TWL	TOP WATER LEVEL
TWVP	TRADE WASTE VENT PIPE
U.N.O.	UNLESS NOTED OTHERWISE
uPVC	UNPLASTICISED POLYVINYL CHLORIDE
UW	UTENSIL WASHING MACHINE
VB	VANITY BASIN / VACCUM BREAKER
VERT	VERTICAL
VP	VENT PIPE
WC	TOILET SUITE (WATER CLOSET)
WST	WASTE STACK

CIVIL ABBREVIATIONS

DRAINAGE LEVELS	
BWL	BOTTOM WATER LEVEL
IL	INVERT LEVEL
OL	OBVERT LEVEL
RL	REDUCED LEVEL
SL	SURFACE LEVEL
TWL	TOP WATER LEVEL
GRATES & COVERS	
LD	LIGHT DUTY CLASS 'B'
MD	MEDIUM DUTY CLASS 'C'
HD	HEAVY DUTY CLASS 'D'
EHD	EXTRA HEAVY DUTY CLASS 'E'
MP	MULTI PART COVER OR GRATE
PITS	
DCP	DISCHARGE CONTROL PIT
JP	JUNCTION PIT
KEP	KERB ENTRY PIT
SWP	STORMWATER PIT
DRAINAGE LINES	
SS	SUBSOIL DRAINAGE
STW	STORMWATER DRAIN
FEATURES	
CO	CLEAROUT
DP	DOWN PIPE
FP	FLUSHING POINT
IO	INSPECTION OPENING
OF	GUTTER OVERFLOW PIPE
RWO	RAINWATER OUTLET
DTU	DRAINAGE TURNUP

CATCHMENT ABBREVIATIONS

L/s	LITRES PER SECOND
m/s	METRES PER SECOND
CUMECs	CUBIC METRES PER SECOND
Q	QUANTITY OF FLOW

DRAWING NOTES

- DRAWINGS ARE DIAGRAMMATIC ONLY. FOR DIMENSIONS AND CONSTRUCTION DETAILS OF BUILDING REFER ARCHITECTURAL DRAWINGS AND SITE.
- PIPEWORK SIZES ARE NOMINAL BORE FOR COPPER AND CAST IRON AND INTERNAL BORE FOR POLYMER BASED PIPEWORK. REFER SPECIFICATION FOR MATERIAL TYPE.
- ALL PIPEWORK ON DRAWINGS IS SHOWN BELOW SLAB (OR GROUND) UNLESS NOTED OTHERWISE.

DRAWING LIST

DA-STW-001	TITLE SHEET AND LOCALITY PLAN
DA-STW-002	LEGEND, ABBREVIATIONS AND DRAWING LIST
DA-STW-003	GENERAL NOTES
DA-STW-004	SURVEY PLAN
DA-STW-005	EROSION AND SEDIMENT CONTROL PLAN
DA-STW-006	EROSION AND SEDIMENT CONTROL DETAILS
DA-STW-101	STORMWATER DRAINAGE SITE PLAN
DA-STW-102	STORMWATER DRAINAGE GROUND FLOOR PLAN - SHEET 1 OF 4
DA-STW-103	STORMWATER DRAINAGE GROUND FLOOR PLAN - SHEET 2 OF 4
DA-STW-104	STORMWATER DRAINAGE GROUND FLOOR PLAN - SHEET 3 OF 4
DA-STW-105	STORMWATER DRAINAGE GROUND FLOOR PLAN - SHEET 4 OF 4
DA-STW-106	STORMWATER DRAINAGE ROOF PLAN - SHEET 1 OF 2
DA-STW-107	STORMWATER DRAINAGE ROOF PLAN - SHEET 2 OF 2
DA-STW-201	STORMWATER DRAINAGE DETAIL SHEET

ABBREVIATIONS, SYMBOLS AND LINETYPES IN THE LEGEND MAY NOT APPEAR ELSEWHERE ON THE DRAWINGS. THIS LEGEND SHOULD BE USED AS A GUIDE ONLY

DO NOT SCALE FROM DRAWINGS, CHECK & VERIFY ALL DIMENSIONS & LEVELS BEFORE COMMENCEMENT OF ANY WORK.

NOTES

GENERAL

1. DESIGN HEREIN HAS BEEN PREPARED BY LP CONSULTING AUSTRALIA PTY LTD.
TEL: 9223 4444 MOB: 0416 256 955
PO BOX 814 KENSINGTON NSW 1465
EMAIL: louis@lp-consulting.com.au
2. N/A
3. ALL DIMENSIONS IN MILLIMETRES UNO. REDUCED LEVELS AND CHAINAGES ARE IN METRES. DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS.
4. THE PROPOSED WORKS DETAILED HEREIN SHALL BE CONSTRUCTED TO THE REQUIREMENTS OF COUNCIL GENERALLY AS DETAILED HEREUNDER.
5. ALL RELEVANT EXISTING SERVICES SHALL BE VERIFIED FOR DEPTH AND HORIZONTAL POSITION BY PHYSICAL MEANS PRIOR TO EXCAVATION. ANY DISCREPANCIES SHALL BE BROUGHT FORTHWITH TO THE PROJECT MANAGER'S ATTENTION.

STORMWATER AND SUBSOIL DRAINAGE

MATERIALS:

1. PIPES AND FITTINGS FOR STORMWATER DRAINAGE SHALL BE AS FOLLOWS UNO ON THE DRAWINGS:

A. SEWER GRADE POLYVINYL CHLORIDE (PVC) WITH SOLVENT WELDED JOINTS FOR SUSPENDED AND BELOW GROUND DRAINAGE UP TO 225mm.

B. REINFORCED CONCRETE WITH RUBBER RINGS FOR PIPE DIA'S GREATER THAN 225mm UNO.

C. REINFORCED CONCRETE WHERE REQUIRED BY AS.3500 FOR EXCESSIVE DEPTH.

D. INSTALL IN ACCORDANCE WITH AUSTRALIAN STANDARD AS.3500 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
2. PIPES & FITTINGS FOR SUBSOIL DRAINAGE SHALL BE SLOTTED POLYVINYL CHLORIDE (PVC) WITH SOLVENT WELDED JOINTS, MIN. 100mm DIAMETER WITH FILTER SOCK, LAID IN PART DRAINING GRANULAR MATERIAL.
3. IN GROUND DRAINAGE PIPEWORK SERVING DP's SHALL BE MINIMUM 100mm DIA. UNO.
4. GRATED DRAINS SHALL BE.

A. 150mm NOM. WIDTH IN NON TRAFFICABLE AREAS.

B. 225mm NOM. WIDTH IN TRAFFICABLE AREAS.
5. STORMWATER PITS ARE AS SHOWN & SPECIFIED ON THE PLANS . PRECAST TYPE ACCEPTABLE FOR DEPTH. BENCH ALL PITS MIN. 50mm & FORM SMOOTH TRANSITION FROM INLET TO OUTLET UP TO 1000mm. PROVIDE STEP RUNGS WHERE DEPTH EXCEEDS 1200mm.
6. SELECT FILL SHALL BE MATERIAL OBTAINED FROM EXCAVATION OF THE PIPE TRENCH OR IMPORTED WITH A PARTICLE SIZE FOR ROCK NOT GREATER THAN 75mm OR FOR OTHER THAN ROCK NOT GREATER THAN 150mm.
7. IMPORTED FILL SHALL BE EITHER, AND GENERALLY CONSIST OF SINGLE SIZED AGGREGATE WITH PARTICLE SIZE NOT GREATER THAN 5mm WRAPPED ALL ROUND WITH GEOTEXTILE FILTER FABRIC OR APPROVED HIGH COMPACTION SAND OR APPROVED CRUSHED ROAD GRAVEL CONFORMING TO RTA FORM 3051 OR SIMILAR.
8. STORMWATER PITS AND GRATES TO CONFORM WITH STANDARD COUNCIL REQUIREMENTS, WHERE ON PUBLIC LAND. GRATES TO BE SUPPLIED IN CLASS SHOWN ON THE DRAWINGS. ADOPT HEELPROOF STYLE WHERE APPLICABLE.

INSTALLATION REQUIREMENTS:

9. PIPES SHALL BE TRUE TO GRADES SHOWN AND ALIGNED SO THAT THE CENTRES OF THE INLET PIPES INTERSECT WITH THE CENTRE OF THE OUTLET PIPE AT THE DOWNSTREAM FACE OF THE PIT.
10. MINIMUM GRADES FOR GRAVITY STORMWATER DRAINAGE SHALL CONFORM TO AS3500 PART3 AS FOLLOWS, UNO:
1% FOR 100 AND 150 mm DIA.
0.5% FOR 225 mm DIA
0.4% FOR 300 mm DIA
0.35% FOR 375 mm DIA
11. MINIMUM DEPTH OF COVER SHALL BE :-
- 300mm IN PRIVATE PROPERTY (NON VEHICULAR TRAFFIC).
- 450mm IN PUBLIC AREAS.
- 600mm IN VEHICULAR TRAFFICABLE AREAS (FOOTWAY/ROADWAY).
12. BED ALL PIPES FIRMLY AND EVENLY ONTO IMPORTED BEDDING FILL MATERIAL.
13. LAY AND JOINT ALL PIPES IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND:
AS 3725-1989 LOADS ON BURIED CONCRETE PIPES
AS 2566-1998 BURIED FLEXIBLE PIPELINES
AS 1597.2-1996 PRECAST REINFORCED CONCRETE BOX CULVERTS.
AS 3500-2015 NATIONAL PLUMBING & DRAINAGE CODE.
SYDNEY WATER REQUIREMENTS.
14. ALLOW TO TEST ALL PIPES AND PITS TO MANUFACTURERS REQUIREMENTS.
15. ALL RAINWATER OUTLETS TO BE Ø100mm FLAT GRATE EQUAL TO SPECIALITY PLUMBING SUPPLIES TRUFLO SERIES.
16. ALL DOWNPIPE DRAINAGE TO THE STORAGE SYSTEM SHALL BE MADE WATERTIGHT BELOW THE MAXIMUM STORAGE LEVEL.
17. CONTRACTOR SHALL PROVIDE WORKS AS-EXECUTED DRAWINGS OF FINAL DRAINAGE LAYOUT AS REQUIRED FOR CERTIFICATION AND REFERENCE PURPOSES IN SOME CASES COUNCIL MAY REQUIRE APPROVED PLANS TO BE MARKED WITH RED INK TO INDICATE CHANGES, STORAGE TANK OR DRAIN VOLUMES SHALL BE CONFIRMED BY A REGISTERED SURVEYOR.
18. ALL REQUIRED EASEMENTS, POSITIVE COVENANTS OR OTHER LEGAL INSTRUMENTS SHALL BE ARRANGED AND REGISTERED BY SURVEYOR OR OTHER APPROVED AGENT.
19. WHERE APPLICABLE, CONTRACTOR SHALL PAY ALL ROAD OPENING AND AUTHORITY FEES ASSOCIATED WITH REQUIRED CONSTRUCTION.

CONCRETE WORKS

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600, THE STANDARDS ASSOCIATION AUSTRALIA, STANDARDS CITED IN AS3600, THE DRAWINGS AND THE SPECIFICATION
2. ALL CONCRETE SHALL BE 80mm NOMINAL SLUMP, 20mm MAXIMUM AGGREGATE WITH NO ADMIXTURES OR FLY ASH, UNLESS OTHERWISE APPROVED.

ALL CONCRETE WORK IN CONTACT WITH SEWER TO HAVE TYPE SL PORTLAND CEMENT, OTHERWISE TYPE A CEMENT.

FOR BRIDGE WORKS, A MAXIMUM 56 DAYS SHRINKAGE OF 600 MICROSTRAIN, A MINIMUM CEMENT CONTENT 350kg/m3 AND MAXIMUM WATER:CEMENT RATIO OF 0.40
3. STRENGTH GRADE OF CONCRETE SHALL BE:

25 MPa (KERBS, EDGE STRIPS & CONCRETE ENCASEMENT) AND 32 MPa ELSEWHERE.
4. CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN OR APPROVED. GENERALLY FOR HAND PLACED KERB & GUTTER 6mm THICK APPROVED BITUMINOUS MASTIC JOINTING MATERIAL SHALL BE PROVIDED AT INTERVALS NOT EXCEEDING 6m. FOR MACHINE PLACED KERB & GUTTER 6mm THICK APPROVED BITUMINOUS MASTIC JOINTING MATERIAL SHALL BE PROVIDED AT INTERVALS NOT EXCEEDING 12m & GUILLOTINED DUMMY GROOVED JOINTS, 25mm IN DEPTH, SHALL BE FORMED EVERY 3m OF GUTTER. JOINTS ARE ALSO REQUIRED AT EACH END OF GUTTER CROSSING AND GULLY PITS. JOINTS SHALL BE SET VERTICAL AND SQUARE TO THE KERB.
5. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
6. WELDING OR SPLICES IN REINFORCEMENT SHALL BE USED ONLY IN POSITIONS APPROVED BY THE ENGINEER.
7. CONCRETE CURING SHALL BE IN ACCORDANCE WITH AS3600. CURING SHALL BE COMMENCED WITHIN TWO HOURS OF FINISHING OPERATIONS AND SHALL BE CONTINUED FOR A MINIMUM OF SEVEN DAYS BY AN APPROVED PROPRIETARY COMPOUND OR BY KEEPING CONTINUOUSLY WET.
8. FORMWORK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS3610. FORMWORK SHALL NOT BE STRIPPED NOR PROPS REMOVED WITHOUT APPROVAL.
9. FABRIC LAP DETAILS SHALL BE IN ACCORDANCE WITH FIG.13.2.4 OFAS3600.
10. HOOKS, LAPS AND BENDS SHALL BE IN ACCORDANCE WITH AS3600 UNO.
11. ALL CHEMICAL ANCHORS SHALL BE EITHER 'CHEMSET' BY 'RAMSET' WITH THE GLASS CAPSULE SYSTEM INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS OR HILTI HVU ADHESIVE ANCHOR WITH FOIL CAPSULE SYSTEM INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTION. ALL CHEMICAL ANCHORS SHALL BE HOT DIPPED GALVANIZED AND BE MIN M16 DIA. U.N.O.

GENERAL EARTHWORKS, SITEWORKS & FILLING:

FILLING:

1. THESE CLAUSES SHALL BE READ IN CONJUNCTION WITH "REPORT ON GEOTECHNICAL INVESTIGATION BY: PROJECT REF. No: DATED: N/A
2. THE RECOMMENDATIONS CONTAINED IN THE GEOTECH REPORT SHALL OVERRIDE THE CLAUSES PRESENTED HEREIN.
3. STRIP ALL TOPSOIL AND UNDERLYING FILL AND STOCKPILE TOPSOIL FOR LATER REUSE FOR LANDSCAPING PURPOSES.
4. NEW FILL REQUIRED TO REINSTATE CUT LEVELS TO PROPOSED BENCHING LEVELS SHALL BE SOURCED FROM OTHER PARTS OF THE EXCAVATION AS SELECT FILL OR IMPORTED FILL AS SPECIFIED BELOW IN NOTES 5 AND 6.
5. SELECT FILL SHALL CONSIST OF LOCALLY DERIVED OR CUT NATURAL CLAYS.
6. IMPORTED FILL SHALL CONSIST OF RIPPED SANDSTONE OR SHALE OR SIMILAR MATERIAL WITH MAXIMUM PARTICLE SIZE NOT GREATER THAN 120mm AND A MOISTURE CONTENT WITHIN 2-3% OF STANDARD OPTIMUM.
7. ALL FILL (COHESIVE SOIL) SHALL BE PLACED IN LAYERS OF 200mm MAXIMUM THICKNESS, COMPACTED BY MACHINE ROLLING TO ACHIEVE A DRY DENSITY RATIO OF NOT LESS THAN 98% STANDARD MAXIMUM AT A CORRESPONDING MOISTURE CONTENT WITHIN 2-3% OF STANDARD OPTIMUM.
8. IN AREAS WHERE HIGH IMPACT ROLLING IS USED TEST EACH FINAL LAYER OF NOT GREATER THAN 300mm TO 400mm TO ACHIEVE A DRY DENSITY RATIO OF NOT LESS THAN 98% STANDARD MAXIMUM AT A CORRESPONDING MOISTURE CONTENT WITHIN 2-3% OF STANDARD OPTIMUM.

EXCAVATION BATTERS:

9. ALL TEMPORARY BATTERS CUT IN CLAY SUBSTRATE SHALL BE 1 HORIZ : 1 VERT. ALL LONG TERM EXPOSED BATTERS CUT IN CLAY SUBSTRATE SHALL BE 2 HORIZ : 1 VERT. ALL DETENTION BASIN BATTERS IN CLAY SUBSTRATE SHALL BE 3 HORIZ : 1 VERT. ALL DETENTION BASIN BATTERS IN ROCK SUBSTRATE SHALL BE NEAR VERTICAL.
10. GEOTECHNICAL TESTING IS TO BE UNDERTAKEN TO AT LEAST LEVEL 1 CONTROL OF FILL COMPACTION STANDARD, AS DEFINED IN AS. 3738 AS FOLLOWS:

FOR GENERAL FILL OR CUT AREAS OVER THE AREA PROVIDE ONE (1) TEST PER 200mm LAYER, OVER AN AREA NOT GREATER THAN 500 m².

FOR GENERAL FILL AREAS IN CONCENTRATED AREAS ADJACENT TO AND BEHIND THE STRUCTURE AND ADJACENT TO AND BEHIND RETAINING WALLS PROVIDE ONE (1) TEST PER 200mm LAYER, OVER AN AREA NOT GREATER THAN 50m².
11. SUBMIT ALL GEOTECHNICAL TEST RESULTS TO LP CONSULTING AUSTRALIA FOR REVIEW PRIOR TO CONTINUATION WITH SUBSEQUENT SECTION OF WORK.

EARTHWORKS FOR SERVICES

1. EXCAVATE TRENCHES AND STOCKPILE ALL MATERIAL FOR INSPECTION WITH REGARD TO RE-USE FOR TRENCH BACKFILL. REMAINING MATERIAL TO BE REMOVED FROM SITE.
2. BEDDING MATERIAL SHALL CONSIST OF IMPORTED FILL ONLY. THICKNESS OF BEDDING LAYER SHALL BE 75mm IN O.T.R. AND 200mm IN ROCK.
3. EMBED ALL PIPES WITH IMPORTED FILL. PROVIDE 200mm SIDE SUPPORT AND 150mm OVERLAY ABOVE PIPE CROWN.
4. TRENCH FILL ABOVE THE EMBEDMENT ZONE TO THE UNDERSIDE OF THE ROAD PAVEMENT OR FOOTWAY FILL MATERIAL SHALL BE AS FOLLOWS :

UNDER ROADWAY:

TRENCH FILL MATERIAL SHALL CONSIST OF IMPORTED FILL AS SPECIFIED HEREIN OF EITHER HIGH GRADE COMPACTION SAND OR APPROVED CRUSHED ROAD GRAVEL CONFORMING TO RTA FORM 3051 OR SIMILAR.

OTHER THAN ROADWAY:

TRENCH FILL MATERIAL EXCAVATED SHALL CONSIST OF SELECT FILL AS SPECIFIED HEREIN AND SHALL NOT CONTAIN MORE THAN 20% OF STONES OF SIZE BETWEEN 75mm & 150mm AND NONE LARGER THAN 150mm. PRIOR TO THE USE OF THE EXCAVATED MATERIAL IT SHALL BE INSPECTED AND APPROVED BY THE CONSULTANT.

5. COMPACT BEDDING, EMBEDMENT AND TRENCH FILL MATERIALS AS FOLLOWS:

EMBEDMENT:-

FOR GRANULAR FILL MATERIAL (NON-COHESIVE SOILS) EG. COARSE AGGREGATE FILL, HIGH GRADE COMPACTION SAND, THE DENSITY INDEX (ID) SHALL BE NOT LESS THAN 70%.

TRENCH FILL:-

FOR GRANULAR MATERIAL (NON-COHESIVE SOILS), THE DENSITY INDEX (ID) SHALL BE NOT LESS THAN 70%.

FOR NON-GRANULAR FILL MATERIAL (COHESIVE SOILS), THE DRY DENSITY RATIO (RD) SHALL BE NOT LESS THAN 95%.

6. MEASURE OF COMPACTION:-

THE DEGREE OF COMPACTION SHALL BE MEASURED BY ONE OF THE FOLLOWING PARAMETERS :-

GRANULAR FILL (NON-COHESIVE SOILS). THE DENSITY INDEX (ID) DETERMINED IN ACCORDANCE WITH AS 1289.E6.1 BASED ON THE MAXIMUM AND MINIMUM DRY DENSITIES IN ACCORDANCE WITH AS 1289.E5.1 AND THE FIELD DRY DENSITY IN ACCORDANCE WITH AS 1289.5.3.2, AS 1289.E3.5 OR AS 1289.E8.1.

NON-GRANULAR FILL (COHESIVE SOILS). THE DRY DENSITY RATION (RD) DETERMINED IN ACCORDANCE WITH AS 1289.5.4.1 BASED ON THE FIELD DRY DENSITY IN ACCORDANCE WITH AS 1289.5.3.2 AND THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289.5.1.1.

7. GEOTECHNICAL TESTING IS TO BE UNDERTAKEN TO AT LEAST LEVEL 1 CONTROL OF FILL COMPACTION STANDARD, AS DEFINED IN AS. 3738 AS FOLLOWS:

TEST EACH 300mm LAYER ABOVE PIPE CROWN.

TEST BASE & SUB-BASE LAYERS WHERE APPLICABLE.

TESTS SHALL BE REQUIRED AT EACH 50m CENTRES WHERE THE LENGTH OF TRENCH IS WITHIN THE 50m REQUIREMENT.

8. SUBMIT ALL GEOTECHNICAL TEST RESULTS TO LP CONSULTING AUSTRALIA FOR REVIEW PRIOR TO CONTINUATION WITH SUBSEQUENT SECTION OF WORK.

RESTORATION

1. RESTORE ALL TRAFFIC AREAS TO PRE EXISTING CONDITION.
2. FOR ALL SURFACES OTHER THAN IN TRAFFIC AREAS RESTORE DISTURBED SURFACES TO PRE-EXISTING CONDITIONS AND COMPACT AS SPECIFIED.
3. RESTORE ALL AUTHORITY OWNED AREAS TO COUNCIL STANDARDS.

APPROVALS

1. THE AS CONSTRUCTED WORKS SHALL BE INSPECTED BY DESIGN CONSULTANT, MINIMUM 48 HOURS NOTICE SHALL APPLY TO ALL INSPECTIONS AND FEE ARRANGEMENTS CONFIRMED PRIOR TO INSPECTION.
2. THE DESIGN PLANS HEREIN ARE SUBJECT TO COUNCIL APPROVAL PRIOR TO CONSTRUCTION. OBTAIN EXPRESS (WRITTEN) ADVICE TO PROCEED FROM PROJECT MANAGER PRIOR TO COMMENCEMENT.
3. SUBMIT WORK-AS-EXECUTED DRAWINGS IN CIVILCAD OR DXF DIGITAL FORMAT AND HARD COPY FORMAT. VERIFY ALL CONSTRUCTION WORKS SHOWN HEREON.
4. CERTIFY THAT THE AS CONSTRUCTED SYSTEM HAS BEEN BUILT IN ACCORDANCE WITH THE APPROVED PLANS ISSUED FOR CONSTRUCTION.

SERVICES UNDER ROAD SURFACES

1. ALL OTHER SERVICES INCLUDING BUT NOT LIMITED TO WATER, HYDRANT, GAS, SEWER, ELECTRICAL AND COMMUNICATIONS CONDUITS OR CABLES SHALL BE LAID WITH MINIMUM 600mm U.N.O. COVER BELOW PROPOSED ROAD SURFACE OR APPROVED OTHER MEANS TO PROTECT DURING CONSTRUCTION.

HYDRAULIC SERVICES

1. ALL WORKS CARRIED OUT SHALL COMPLY WITH AS-3500, SYDNEY WATER & COUNCIL REQUIREMENTS. OBTAIN NECESSARY AUTHORITIES APPROVALS PRIOR TO COMMENCING WORKS.
2. PRIOR TO COMMENCING WORKS SURVEY & INSPECT SITE & CONFIRM LOCATION & LEVELS OF ALL HYDRAULIC SERVICES PIPEWORK. NO CLAIMS FOR ADDITIONAL COSTS RESULTING FROM THE LACK OF KNOWLEDGE OF SITE CONDITIONS RELATING TO WORKS TO BE DONE OR LOCATIONS AND LEVELS OF EXISTING AND NEW SERVICES WILL BE ACCEPTED.
3. PRIOR TO CAPPING OFF & REMOVAL OF REDUNDANT SERVICES CONFIRM ON SITE THAT SERVICE IS NOT SUPPLYING EXISTING BUILDINGS OR AMENITIES.
4. COLD WATER PIPEWORK SHALL CONSIST OF COPPER TUBE & FITTINGS IN ACCORDANCE WITH AS 1432 TYPE B. PIPES AND FITTINGS SHALL BE JOINTED WITH 15% SILVER SOLDER.
5. ALL NEW UNDERGROUND METAL PIPEWORK SHALL BE INSTALLED WITH POLYETHYLENE SLEEVING OBTAINED FROM "TYCO WATER AUST" AND INSTALLED TO MANUFACTURE'S REQUIREMENTS.
6. LANDSCAPE IRRIGATION WATERING PIPEWORK SHALL CONSIST OF MEDIUM DENSITY POLYETHYLENE PIPE CLASS PN16 WITH ELECTRO FUSION JOINTS OR EQUAL TO EXISTING PIPEWORK.

Xref: 2016-0932_XA-UTL-ERL-K-41
Prel Date: 16.11.2018@10:27:03 Cof File: 2-Registat-00160932-00RAWINGS-DRAWINGS - WORKINGSTORMWATER2016-0932_STW-003.dwg User Name: Terry

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NORTH POINT
SHEET SIZE: A1

NOTES
1. REFER TO DRAWING STW-002 FOR DRAWING LIST.
2. CONTRACTOR TO CHECK AND CONFIRM ALL LEVELS ON SITE.
3. CONTRACTOR TO INVESTIGATE ALL EXISTING SERVICES, SUCH AS APPLY FOR "DIAL-BEFORE YOU DIG" SERVICES PRIOR TO START OF WORKS ON SITE.

ISSUE	AMENDMENT	DATE
A	DRAFT ISSUE FOR CLIENT REVIEW	22.05.2018
B	FOR AUTHORITY SUBMISSION	23.05.2018
C	FOR AUTHORITY SUBMISSION	13.09.2018
D	FOR AUTHORITY SUBMISSION	16.11.2018

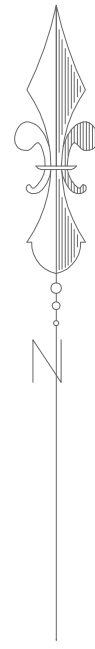
PROJECT
191 MILLER ROAD CHESTER HILL

CLIENT
BUILDING RECYCLING OPERATIONS PTY LTD
PLANNER
COEUR DE LION PLANNING

CONSULTANT

A: Suite 9.04, Level 9, 15 Pitt Street Sydney NSW Australia 2000 P: PO Box 814 Kensington NSW 1465 E: info@lp-consulting.com.au
T: +61 (2) 9223 4444 W: www.lp-consulting.com.au

TITLE					
STORMWATER DRAINAGE GENERAL NOTES					
SCALE	N.T.S.	DRAWN CA	DESIGNED LP	CHECKED LP	APPROVED
DATE	Nov 16, 2018	DRAWING No.		ISSUE	
JOB No.		DA-STW-003		D	
2016-0932		DEVELOPMENT APPLICATION			



NOTES:

- * The position of features are indicative only.
- * No Services have been located, including those which may be underground.
- * 20.50 indicates natural surface level.
- * Contours shown depict the general topography. They do not represent exact levels other than at spot levels shown.
- * Relationship of improvements to boundaries is diagrammatic only. Where offsets are critical they should be confirmed by further survey.
- * Bearings and distances are by title only. No boundary investigation has been carried out.
- * No trees have been located.

DRAINAGE CHANNEL
NO ACCESS
DROP INTO DRAINAGE CHANNEL

450mm RCP
KERB INLET PIT
RL 20.23
INV 19.24

375mm RCP
KERB INLET PIT
RL 20.13
INV BLOCKED

450mm RCP
KERB INLET PIT
RL 20.31
INV 19.36

375mm RCP
KERB INLET PIT
RL 20.21
INV BLOCKED WITH
DIRT CANT SEE PIPES

PIT
RL 20.75
INV 19.12
NO ACCESS

KERB INLET PIT
RL 20.67
INV 17.91

KERB INLET PIT
RL 20.78
INV 18.42
DROP INTO DRAINAGE CHANNEL

AREA
NOT
SURVEYED

LOT 8
DP 1039882

AREA
NOT
SURVEYED

GROUND SURFACE
UNDER STOCKPILES
TAKEN FROM
SURVEY
SEPTEMBER 2009

AREA
NOT
SURVEYED

LOT 102
DP 851138

LOT 7
DP 1039882

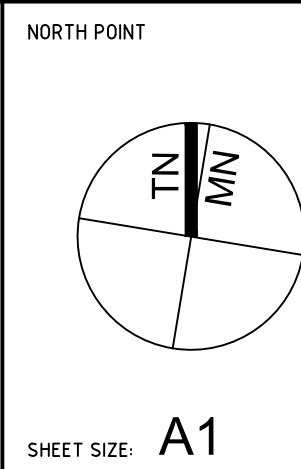
LOT 1
DP 700896

LEVELS ARE BASED ON PM 32127 RL 30.339 AHD

LOT 8 IN DP 1039882 IS SUBJECT TO SEVERAL EASEMENTS.
PLEASE REFER TO DP 1039882 FOR EASEMENT LOCATIONS

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SHEET SIZE: A1

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ISSUE

A
B
C
D

DRAFT ISSUE FOR CLIENT REVIEW
FOR AUTHORITY SUBMISSION
FOR AUTHORITY SUBMISSION
FOR AUTHORITY SUBMISSION

DATE

22.05.2018
23.05.2018
13.09.2018
16.11.2018

PROJECT

191 MILLER ROAD
CHESTER HILL

CLIENT

BUILDING RECYCLING
OPERATIONS PTY LTD

PLANNER

COEUR DE LION PLANNING

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TITLE

STORMWATER DRAINAGE
SURVEY PLAN

SCALE 1:1500 @ A3
1:750 @ A1

DATE Nov 16, 2018

JOB No. 2016-0932

DRAWN CA

DESIGNED LP

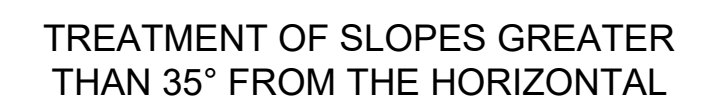
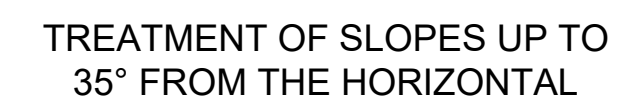
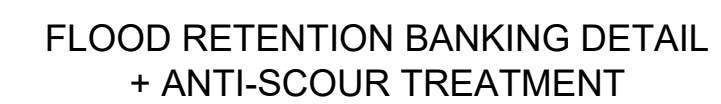
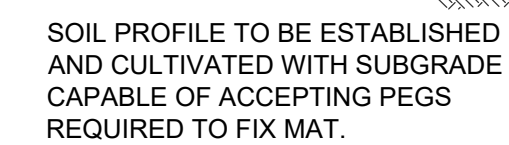
DRAWING No. DA-STW-004

DEVELOPMENT APPLICATION

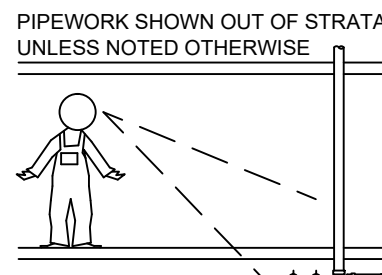
CHECKED LP

APPROVED

ISSUE D



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			<div>PLANNER</div> <div>COEUR DE LION PLANNING</div>	<div>SCALE</div> <div>N.T.S @ A1</div>	<div>DRAWN</div> <div>CA</div>	<div>DESIGNED</div> <div>LP</div>	<div>CHECKED</div> <div>LP</div>		<div>APPROVED</div>
			<div>DATE</div> <div>Nov 16, 2018</div>	<div>DRAWING No.</div> <div>DA-STW-006</div>	<div>ISSUE</div> <div>D</div>	<div>JOB No.</div> <div>2016-0932</div>	<div>DEVELOPMENT APPLICATION</div>		



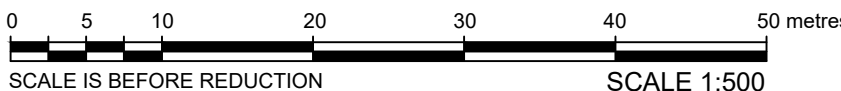
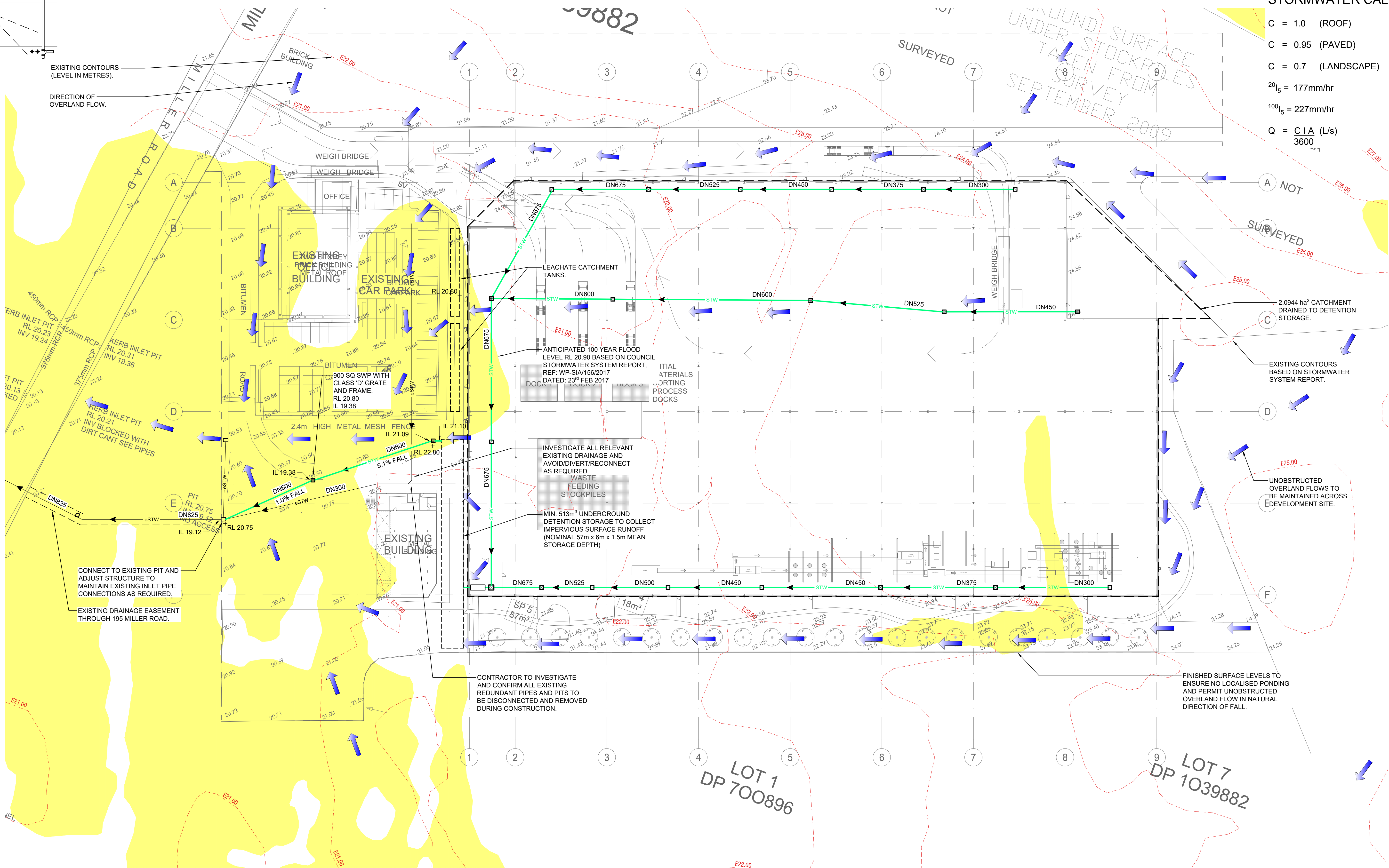
PIPEWORK SHOWN OUT OF STRATA
UNLESS NOTED OTHERWISE

EXISTING CONTOURS
(LEVEL IN METRES).

DIRECTION OF
OVERLAND FLOW.

STORMWATER CALCS:

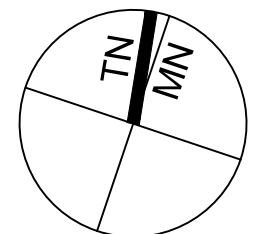
C = 1.0 (ROOF)
C = 0.95 (PAVED)
C = 0.7 (LANDSCAPE)
 $20 I_5 = 177\text{mm/hr}$
 $100 I_5 = 227\text{mm/hr}$
 $Q = \frac{C \cdot I \cdot A}{3600} \text{ (L/s)}$



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NORTH POINT



SHEET SIZE: A1

NOTES

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ISSUE

A DRAFT ISSUE FOR CLIENT REVIEW
B FOR AUTHORITY SUBMISSION
C FOR AUTHORITY SUBMISSION
D FOR AUTHORITY SUBMISSION

DATE

22.05.2018
23.05.2018
13.09.2018
16.11.2018

PROJECT

191 MILLER ROAD
CHESTER HILL

CLIENT

BUILDING RECYCLING
OPERATIONS PTY LTD

PLANNER

COEUR DE LION PLANNING

CONSULTANT



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TITLE

STORMWATER DRAINAGE
SITE PLAN

SCALE

1:1000 @ A3
1:500 @ A1

DATE

Nov 16, 2018

JOB No.

2016-0932

DRAWN

CA

DESIGNED

LP

CHECKED

LP

APPROVED

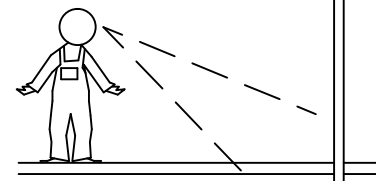
D

DRAWING No.

DA-STW-101

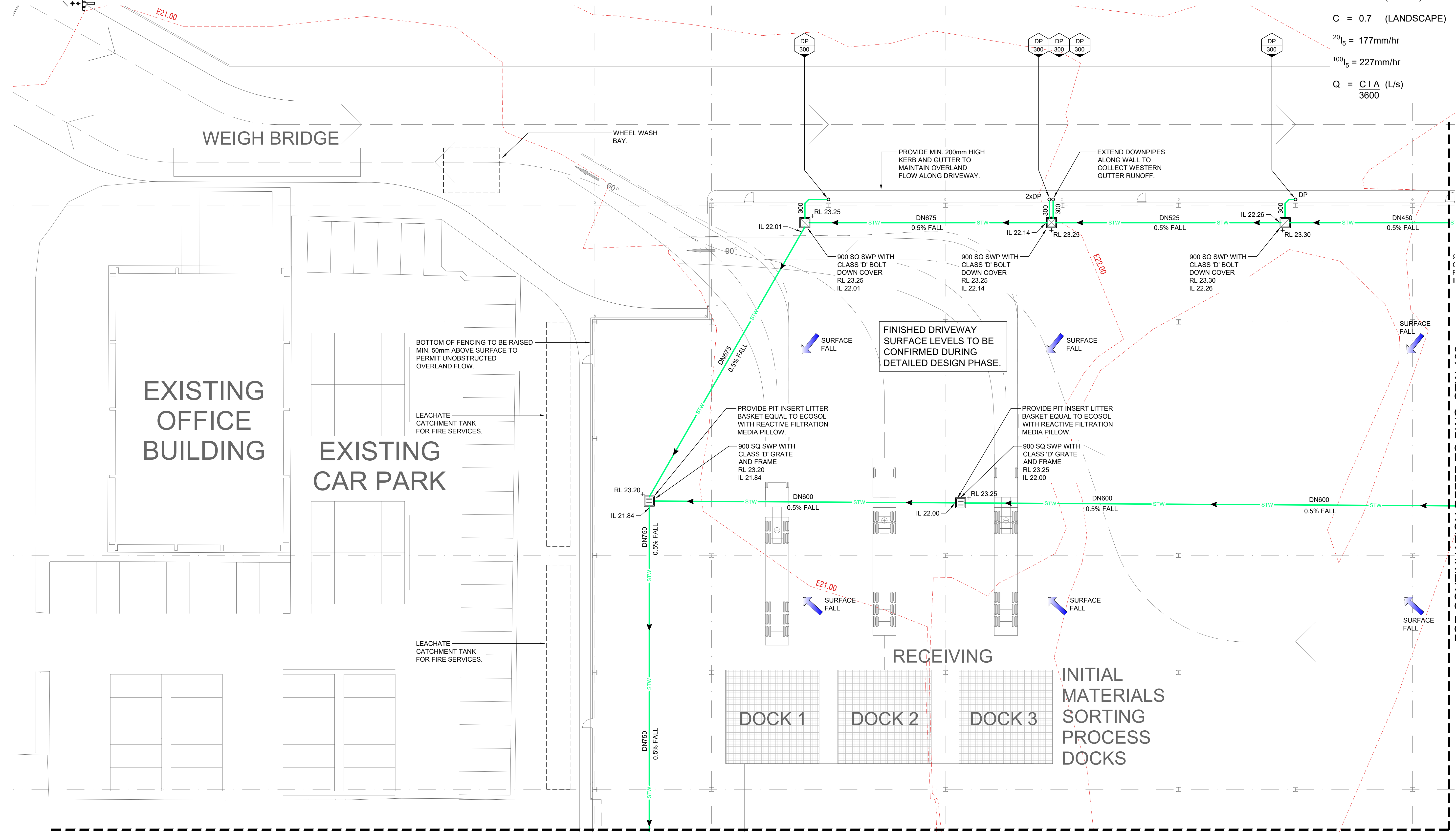
DEVELOPMENT APPLICATION

PIPEWORK SHOWN OUT OF STRATA
UNLESS NOTED OTHERWISE



STORMWATER CALCS:

C = 1.0 (ROOF)
C = 0.95 (PAVED)
C = 0.7 (LANDSCAPE)
 $20 I_5 = 177\text{mm/hr}$
 $100 I_5 = 227\text{mm/hr}$
 $Q = \frac{C \cdot I \cdot A}{3600} \text{ (L/s)}$



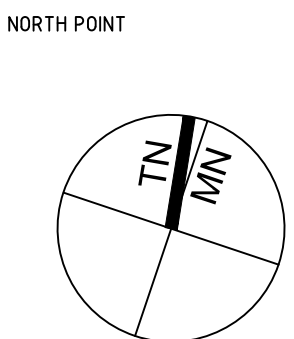
FOR CONTINUATION REFER TO DWG. STW-104

FOR CONTINUATION REFER TO DWG. STW-103



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SHEET SIZE: A1

- NOTES
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ISSUE	AMENDMENT	DATE
A	DRAFT ISSUE FOR CLIENT REVIEW	22.05.2018
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PROJECT
191 MILLER ROAD
CHESTER HILL

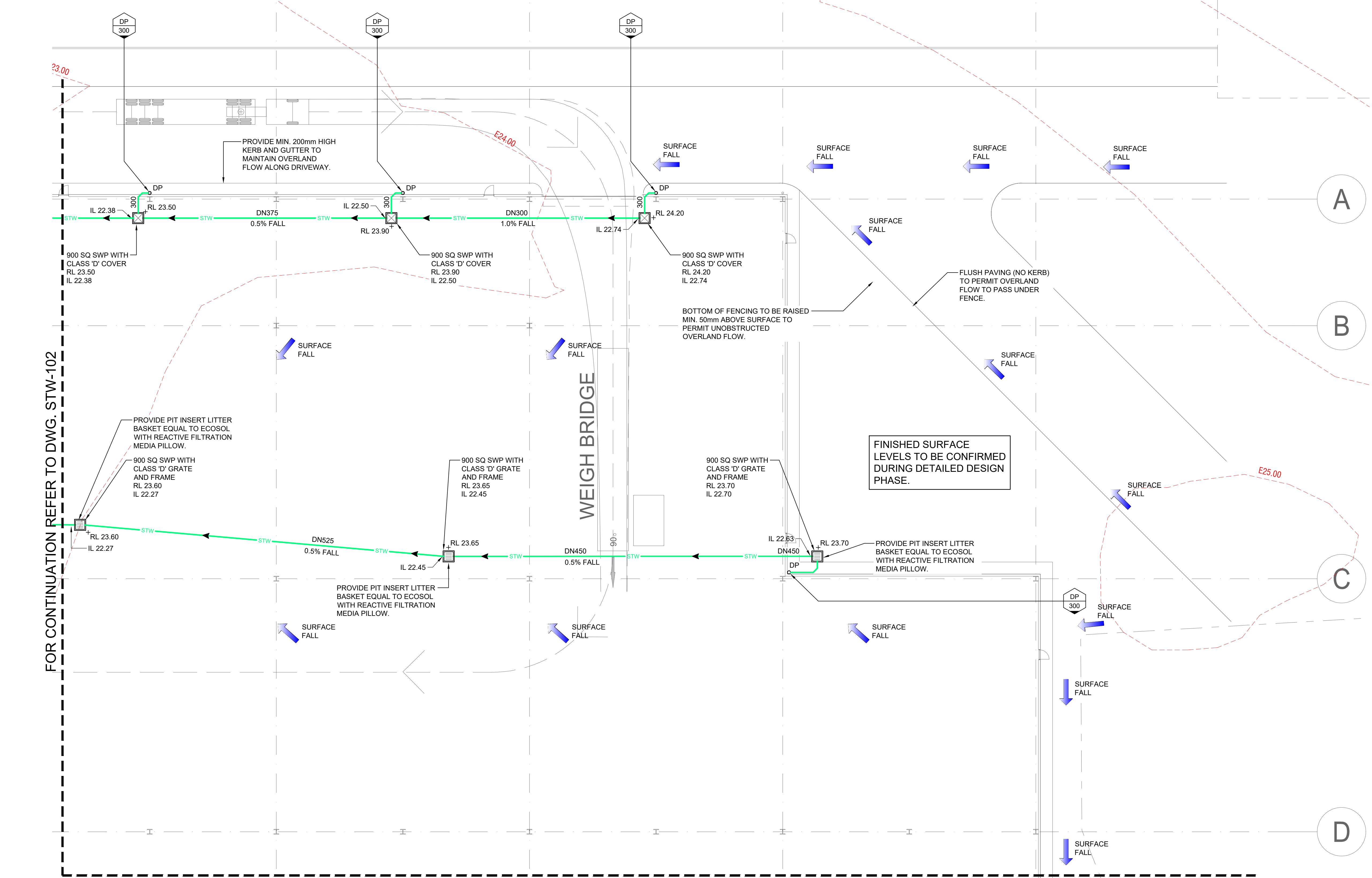
CLIENT
BUILDING RECYCLING
OPERATIONS PTY LTD
PLANNER
COEUR DE LION PLANNING

CONSULTANT

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W: www.lp-consulting.com.au

TITLE				
STORMWATER DRAINAGE				
GROUND FLOOR PLAN				
SHEET 1 OF 4				
SCALE 1:400 @ A3 1:200 @ A1	DRAWN CA	DESIGNED LP	CHECKED LP	APPROVED
DATE Nov 16, 2018	DRAWING No. DA-STW-102			ISSUE D
JOB No. 2016-0932	DEVELOPMENT APPLICATION			




C = 1.0 (ROOF)
C = 0.95 (PAVED)
C = 0.7 (LANDSCAPE)
 $^{20}I_5 = 177\text{mm/hr}$
 $^{100}I_5 = 227\text{mm/hr}$
 $Q = \frac{C \cdot I \cdot A}{3600} \text{ (L/s)}$



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NORTH POINT



SHEET SIZE: **A1**

NOTES

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ISSUE

A

B

C

D

DRAFT ISSUE FOR CLIENT REVIEW

FOR AUTHORITY SUBMISSION

FOR AUTHORITY SUBMISSION

FOR AUTHORITY SUBMISSION

DATE

22.05.2018

23.05.2018

13.09.2018

16.11.2018

PROJECT

191 MILLER ROAD
CHESTER HILL


CLIENT

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TITLE

STORMWATER DRAINAGE
GROUND FLOOR PLAN
SHEET 2 OF 4

SCALE

1:400 @ A3
1:200 @ A1

DRAWN

CA

DESIGNED

LP

CHECKED

LP

APPROVED

DATE

Nov 16, 2018

DRAWING No.

DA-STW-103

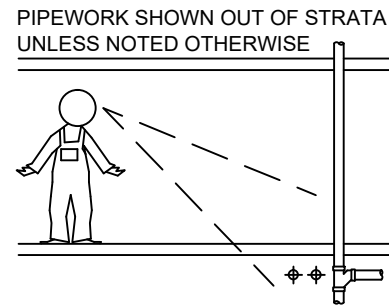
ISSUE

D

JOB No.

2016-0932

DEVELOPMENT APPLICATION

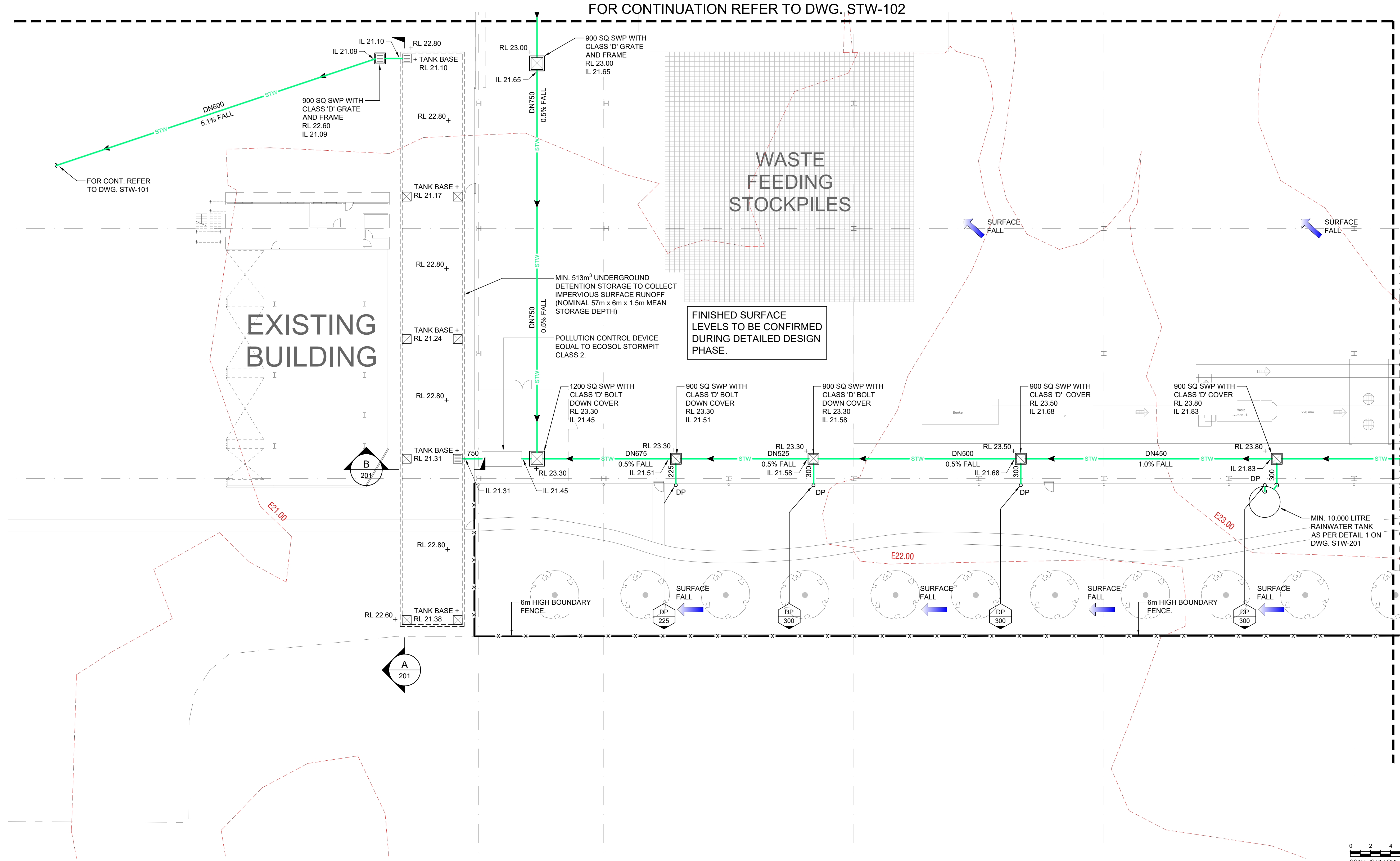


PIPEWORK SHOWN OUT OF STRATA
UNLESS NOTED OTHERWISE

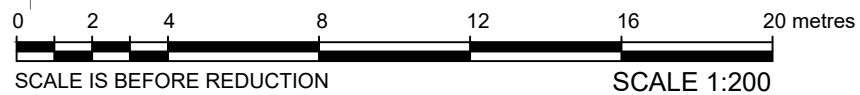
STORMWATER CALCS:

C = 1.0 (ROOF)
C = 0.95 (PAVED)
C = 0.7 (LANDSCAPE)
 $20I_5 = 177\text{mm/hr}$
 $100I_5 = 227\text{mm/hr}$
 $Q = \frac{C \cdot I \cdot A}{3600} \text{ (L/s)}$

FOR CONTINUATION REFER TO DWG. STW-102




FOR CONTINUATION REFER TO DWG. STW-105



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NORTH POINT



SHEET SIZE: A1

NOTES

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ISSUE

AMENDMENT

DATE

A

DRAFT ISSUE FOR CLIENT REVIEW

22.05.2018

B

FOR AUTHORITY SUBMISSION

23.05.2018

C

FOR AUTHORITY SUBMISSION

13.09.2018

D

FOR AUTHORITY SUBMISSION

16.11.2018

PROJECT

191 MILLER ROAD
CHESTER HILL


CLIENT

BUILDING RECYCLING
OPERATIONS PTY LTD

PLANNER

COEUR DE LION PLANNING

CONSULTANT



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TITLE

STORMWATER DRAINAGE
GROUND FLOOR PLAN
SHEET 3 OF 4

SCALE

1:400 @ A3
1:200 @ A1

DRAWN

CA

DESIGNED

LP

CHECKED

LP

APPROVED

DATE

Nov 16, 2018

DRAWING No.

DA-STW-104

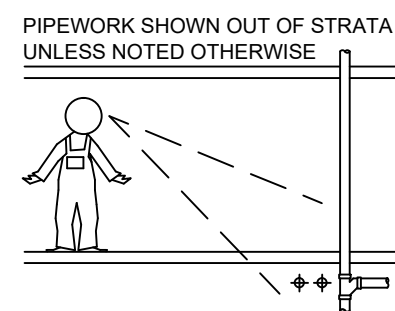
ISSUE

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JOB No.

2016-0932

DEVELOPMENT APPLICATION



STORMWATER CALCS:

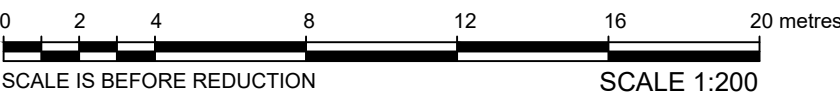
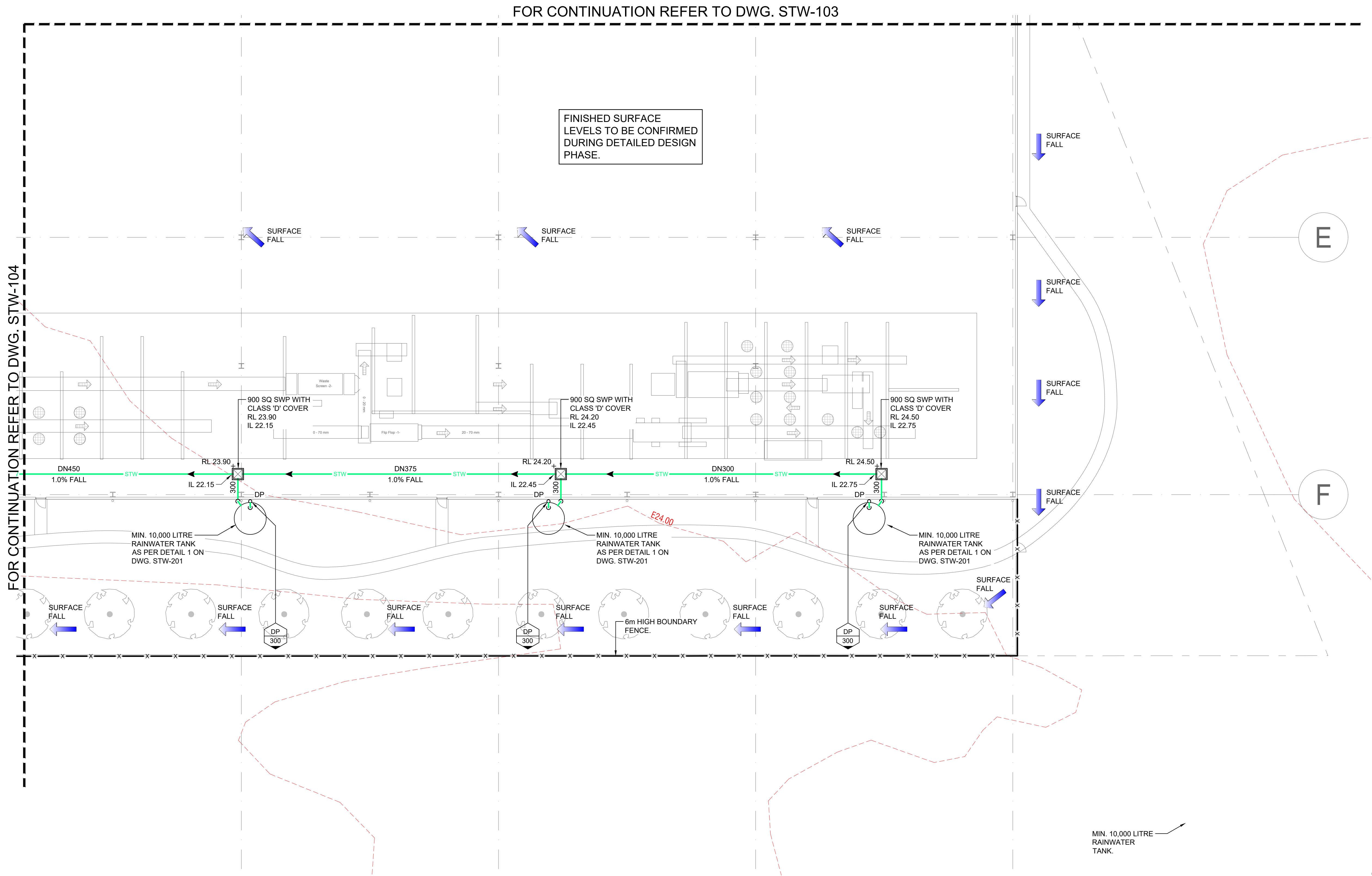
C = 1.0 (ROOF)

C = 0.95 (PAVED)

C = 0.7 (LANDSCAPE)

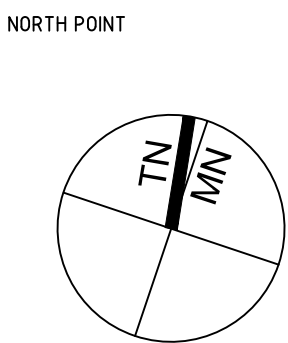
$$^{20}I_5 = 177 \text{ mm/hr}$$
$$^{100}\text{I}_5 = 227\text{mm/hr}$$

$$Q = \frac{C I A}{3600} \text{ (L/s)}$$



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SHEET SIZE: A1

- NOTES
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PROJECT

191 MILLER ROAD
CHESTER HILL

CLIENT

**BUILDING RECYCLING
OPERATIONS PTY LTD**

PLANNER

COEUR DE LION PLANNING

CONSULTANT

 **LP CONSULTING**
AUSTRALIA PTY LTD

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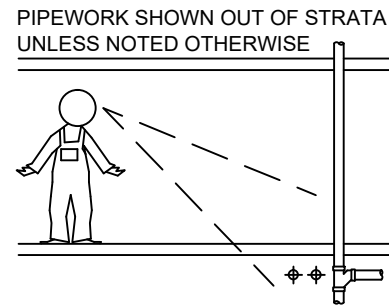
TITLE

STORMWATER DRAINAGE

GROUND FLOOR PLAN

SHEET 4 OF 4

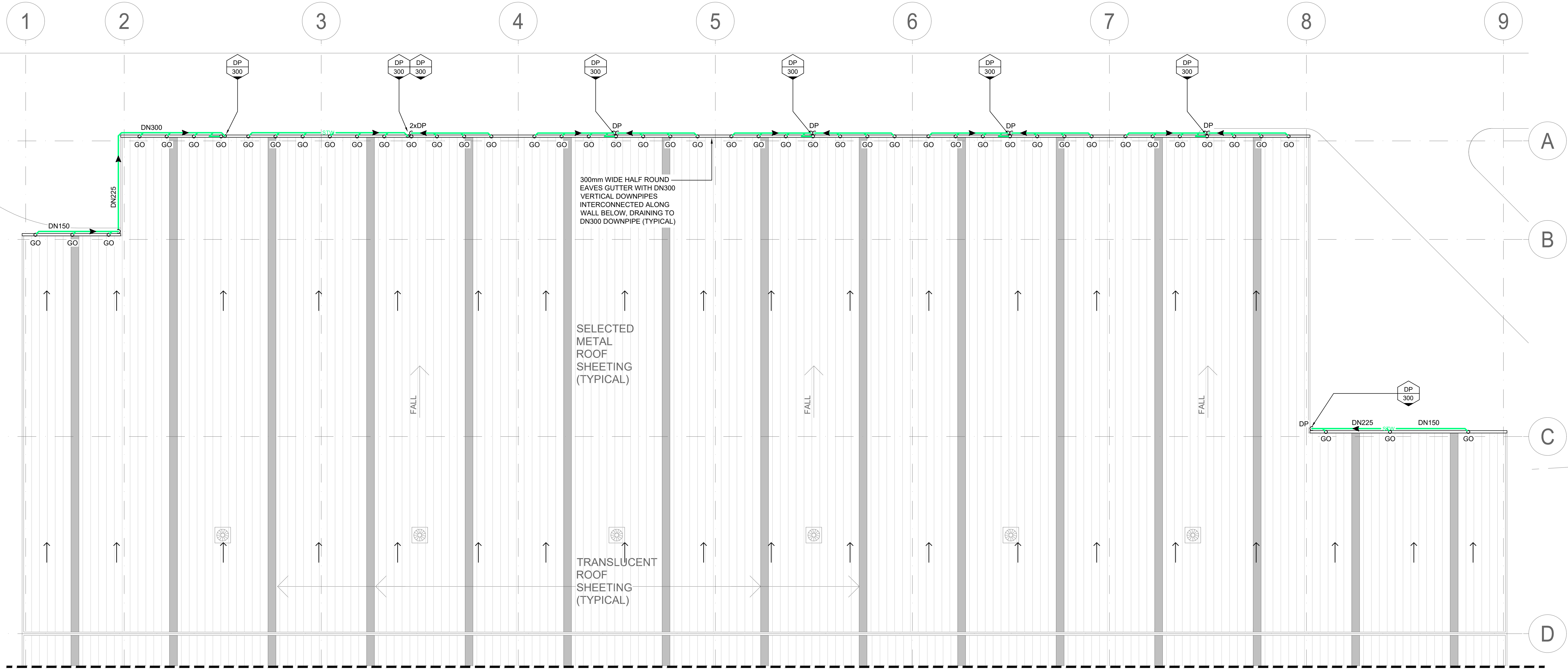
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DATE	Nov 16, 2018	DRAWING No.		ISSUE	
JOB No.	2016-0932	DA-STW-105		D	
DEVELOPMENT APPLICATION					



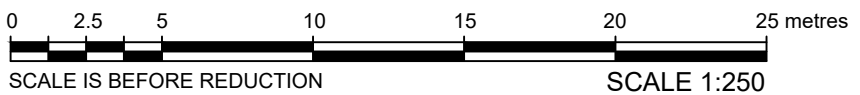
PIPEWORK SHOWN OUT OF STRATA
UNLESS NOTED OTHERWISE

STORMWATER CALCS:

C = 1.0 (ROOF)
C = 0.95 (PAVED)
C = 0.7 (LANDSCAPE)
 $20I_5 = 177\text{mm/hr}$
 $100I_5 = 227\text{mm/hr}$
 $Q = \frac{C \cdot I \cdot A}{3600} \text{ (L/s)}$




FOR CONTINUATION REFER TO DWG. STW-107



NOT SCALE FROM DRAWINGS.
CHECK & VERIFY ALL
DIMENSIONS & LEVELS BEFORE
COMMENCEMENT OF ANY WORK.

THIS DRAWING IS NOT TO BE
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AUSTRALIA PTY LTD

NORTH POINT



SHEET SIZE: A1

NOTES

1. REFER TO DRAWING STW-002 FOR DRAWING LIST.

2. CONTRACTOR TO CHECK AND CONFIRM ALL LEVELS ON SITE.

3. CONTRACTOR TO INVESTIGATE ALL EXISTING SERVICES, SUCH AS
APPLY FOR "DIAL BEFORE YOU DIG" SERVICES PRIOR TO START
OF WORKS ON SITE.

ISSUE

AMENDMENT

DATE

A

DRAFT ISSUE FOR CLIENT REVIEW

22.05.2018

B

FOR AUTHORITY SUBMISSION

23.05.2018

C

FOR AUTHORITY SUBMISSION

13.09.2018

D

FOR AUTHORITY SUBMISSION

16.11.2018

PROJECT

191 MILLER ROAD
CHESTER HILL


CLIENT

BUILDING RECYCLING
OPERATIONS PTY LTD

PLANNER

COEUR DE LION PLANNING

CONSULTANT



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TITLE

STORMWATER DRAINAGE
ROOF PLAN
SHEET 1 OF 2

SCALE

1:500 @ A3
1:250 @ A1

DRAWN

CA

DESIGNED

LP

CHECKED

LP

APPROVED

DATE

Nov 16, 2018

DRAWING No.

DA-STW-106

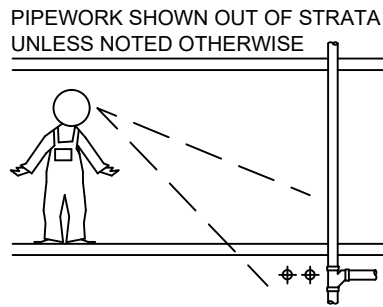
ISSUE

D

JOB No.

2016-0932

2016-0932 DEVELOPMENT APPLICATION

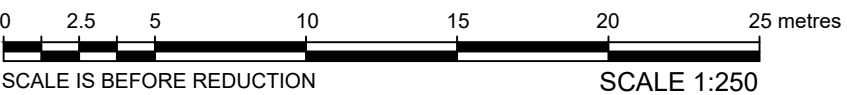
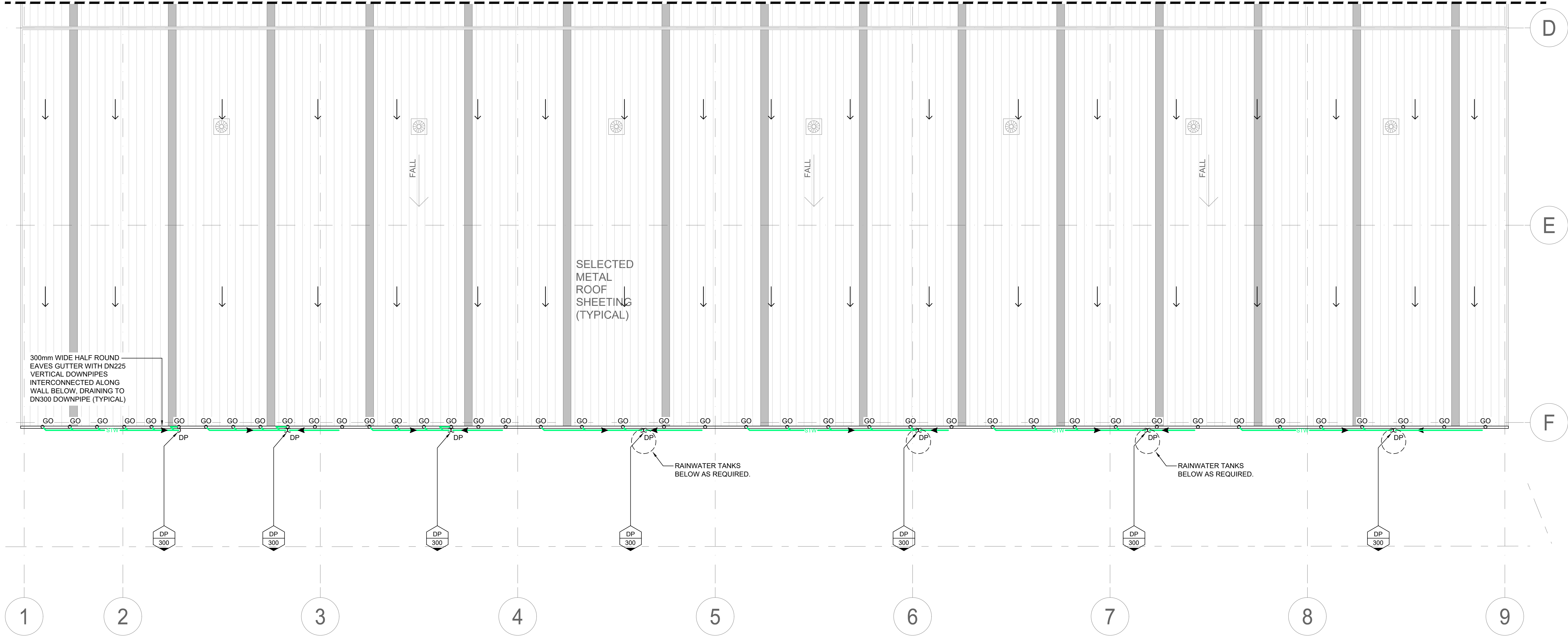




PIPEWORK SHOWN OUT OF STRATA
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