14-38 COWPER ST,
21-41 EAST ST, 5-5A ROWELL ST
GRANVILLE NSW 2142
PUBLIC DOMAIN CIVIL WORKS

LOCATION OF SITE

LOCALITY PLAN
NOT TO SCALE

DEVELOPMENT APPLICATION

IMPORTANT NOTES:
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DEVELOPMENT APPLICATION

REVISION	DATE	DESCRIPTION	BY
A	2016.11.15	PRELIMINARY ISSUE FOR COORDINATION	LP
B	2016.11.16	DEVELOPMENT APPLICATION	LP
C	2016.11.17	DEVELOPMENT APPLICATION	LP
D	2017.02.03	DEVELOPMENT APPLICATION	LP

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NTS NW

CLIENT
DPG PROJECT 7 PTY LTD

DRAWING TITLE
TITLE SHEET & LOCALITY PLAN

PROJECT
14-38 COWPER ST, 21-41 EAST ST, 5-5A ROWELL ST GRANVILLE NSW 2142

SCALE	DATE	DRAWN	CHECKED
NTS@A1 NTS@A3	10.11.2016	TF	LP

JOB	DRAWING	REVISION
0991	DA-C-001	D

LEGEND

LINETYPES

- BOUNDARY
- EASEMENT
- FENCE
- OF — OVERFLOW
- RR — RAINWATER RE-USE
- SIPH — SIPHONIC DRAINAGE
- SS — SUBSOIL DRAINAGE
- SSRM — SUBSOIL RISING MAIN
- STW — STORMWATER DRAINAGE
- SWRM — STORMWATER RISING MAIN
- STORMWATER DRAINAGE
- GW — GREASE WASTE
- GWV — GREASE WASTE VENT
- SCV — SEWER CHAMBER VENT
- S — GRAVITY SEWER / SANITARY DRAINAGE
- SPO — SEWER PUMPOUT
- SRM — SEWER RISING MAIN
- TW — TRADE WASTE DRAINAGE
- TWV — TRADE WASTE VENT
- DE — DIESEL EXHAUST
- FH — FIRE HYDRANT
- FHPG — FIRE HYDRANT PRESSURE GAUGE
- FHR — FIRE HOSE REEL
- FS — FIRE SPRINKLER
- COLD WATER
- FRR — FILTERED RAINWATER RE-USE
- HOT WATER FLOW
- HOT WATER RETURN
- IR — IRRIGATION
- NPCW — NON-POTABLE COLD WATER
- R — RECYCLED COLD WATER
- WARM WATER FLOW
- WARM WATER RETURN
- NG — NATURAL GAS
- AIR — MEDICAL GASES - COMPRESSED AIR
- CO2 — MEDICAL GASES - CARBON DIOXIDE
- N2O — MEDICAL GASES - NITROUS OXIDE
- O2 — MEDICAL GASES - OXYGEN
- E — ELECTRICAL WIRING
- C — ELECTRICAL CONDUIT

SERVICES & UTILITIES

- eE — EXISTING ELECTRICAL
- eG — EXISTING GAS
- eO — EXISTING OIL
- eTel — EXISTING TELSTRA
- eS — EXISTING SEWER
- eSTW — EXISTING STORMWATER
- eW — EXISTING WATER
- e — 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

- B — BARRIER FENCE
- X — SILT FENCE
- TOP OF BATTER
- BOTTOM OF BATTER
- STABALISED CONSTRUCTION SITE VEHICLE ENTRY/EXIT GRID
- STRAW BALE SEDIMENT FILTER

DRAWING INFORMATION SYMBOLS

0 1 2 4 6 8 10 metres

SCALE IS BEFORE REDUCTION — SCALE 1:100

- A / 101 — SECTION No. / DRAWING REFERENCE No.
- 1 / 401 — DETAIL No. / DRAWING REFERENCE No.
- X — AMENDMENT REFERENCE

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

HYDRAULIC SERVICES SYMBOLS

- VERT — VERTICAL RISER IN DRAINAGE
- CO L.O. — CLEAROUT OR INSPECTION OPENING
- DTU — DRAINAGE TURN-UP
- FLOW DIRECTION ARROW
- P — PENETRATION CORE THROUGH STRUCTURAL ELEMENT
- DP 150 — 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
- GAS REGULATOR
- VENTED GAS REGULATOR
- UTILITY REGULATOR
- SOLENOID VALVE
- ISOLATION VALVE
- BALANCING VALVE (STAD)
- CHECK VALVE
- BACKFLOW PREVENTION DEVICE
- PRESSURE LIMITING VALVE
- PRESSURE REDUCTION VALVE
- STRAINER
- METER
- THEMOSTATIC MIXING VALVE
- F — FILTER
- PUMP
- HT — HOSE TAP
- COLD WATER POINT
- HOT WATER POINT
- FH — FIRE HYDRANT
- DPFH — DOUBLE PILLAR FIRE HYDRANT STANDPIPE
- FHR — FIRE HOSE REEL
- P — PRESSURE GAUGE
- T — TEMPERATURE GAUGE
- THRUST BLOCK
- BT — BOUNDARY TRAP
- IPMF — INDUCT PIPE MICA FLAP
- ORG — OVERFLOW RELIEF GULLY
- TD — TUNDISH
- WC — WATER CLOSET (S-TRAP)
- WC — WATER CLOSET (P-TRAP)
- B — BASIN
- S — SINK
- DW — DISHWASHER
- FW — FLOOR WASTE
- BTFW — BUCKET TRAP FLOOR WASTE
- RV — REFLUX VALVE
- AIR ADMITTANCE VALVE
- SMH — SEWER MANHOLE (CAC)
- GREASE ARRESTOR
- RWO — RAINWATER OUTLET
- RWO — SQUARE RAINWATER OUTLET
- SPREADER
- RWH — RAINWATER HEAD
- SWP — STORMWATER PIT (ACCESS ONLY)
- SWP — STORMWATER PIT (INLET)
- KERB ENTRY PIT
- GTD — GRATED TRENCH DRAIN
- FALL ARROW
- OVERLAND FLOW PATH DIRECTIONAL ARROW
- STORMWATER HEADWALL
- SWALE OR SPEED HUMP
- CP — ELECTRICAL CONTROL PANEL
- DIRECTION OF FLOW
- SERVICE
- SIZE

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
℄	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 DIAMTER
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
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

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

DRAWING LIST

DA-C-001	TITLE SHEET & LOCALITY PLAN
DA-C-002	LEGEND, ABBREVIATIONS & DRAWING LIST
DA-C-003	GENERAL NOTES
DA-C-004	SURVEY PLAN - SHEET 1
DA-C-005	SURVEY PLAN - SHEET 2
DA-C-006	EROSION AND SEDIMENT CONTROL PLAN - SHEET 1
DA-C-007	EROSION AND SEDIMENT CONTROL PLAN - SHEET 2
DA-C-008	EROSION AND SEDIMENT CONTROL DETAILS
DA-C-101	PUBLIC DOMAIN CIVIL WORKS LEVELS PLAN - SHEET 1
DA-C-102	PUBLIC DOMAIN CIVIL WORKS LEVELS PLAN - SHEET 2
DA-C-103	PUBLIC DOMAIN CIVIL WORKS SITE FRONTAGE CROSS SECTIONS - SHEET 1
DA-C-104	PUBLIC DOMAIN CIVIL WORKS SITE FRONTAGE CROSS SECTIONS - SHEET 2
DA-C-111	PUBLIC DOMAIN CIVIL WORKS DRIVEWAY No. 1 PLAN
DA-C-112	PUBLIC DOMAIN CIVIL WORKS DRIVEWAY No. 1 LONGITUDINAL SECTION A
DA-C-113	PUBLIC DOMAIN CIVIL WORKS DRIVEWAY No. 2 PLAN
DA-C-114	PUBLIC DOMAIN CIVIL WORKS DRIVEWAY No. 2 LONGITUDINAL SECTION B
DA-C-115	PUBLIC DOMAIN CIVIL WORKS DRIVEWAY No. 3 PLAN
DA-C-116	PUBLIC DOMAIN CIVIL WORKS DRIVEWAY No. 3 LONGITUDINAL SECTION C
DA-C-117	PUBLIC DOMAIN CIVIL WORKS DRIVEWAY No. 4 PLAN
DA-C-118	PUBLIC DOMAIN CIVIL WORKS DRIVEWAY No. 4 LONGITUDINAL SECTION D
DA-C-301	PUBLIC DOMAIN CIVIL WORKS DRAINAGE PLAN - SHEET 1
DA-C-302	PUBLIC DOMAIN CIVIL WORKS DRAINAGE PLAN - SHEET 2
DA-C-321	PUBLIC DOMAIN CIVIL WORKS STORMWATER LONG SECTIONS - SHEET 1
DA-C-322	PUBLIC DOMAIN CIVIL WORKS STORMWATER LONG SECTIONS - SHEET 2
DA-C-323	PUBLIC DOMAIN CIVIL WORKS STORMWATER LONG SECTIONS - SHEET 3
DA-C-324	PUBLIC DOMAIN CIVIL WORKS STORMWATER LONG SECTIONS - SHEET 4
DA-C-601	PUBLIC DOMAIN CIVIL WORKS PAVEMENT PLAN - SHEET 1
DA-C-602	PUBLIC DOMAIN CIVIL WORKS PAVEMENT PLAN - SHEET 2
DA-C-603	PUBLIC DOMAIN CIVIL WORKS DETAIL SHEET 1

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REVISION	DATE	DESCRIPTION	BY
A	2016.11.15	PRELIMINARY ISSUE FOR COORDINATION	LP
B	2016.11.16	DEVELOPMENT APPLICATION	LP
C	2016.11.17	DEVELOPMENT APPLICATION	LP
D	2017.02.03	DEVELOPMENT APPLICATION	LP

DEVELOPMENT APPLICATION

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CLIENT	DPG PROJECT 7 PTY LTD
DRAWING TITLE	LEGEND, ABBREVIATIONS & DRAWING LIST
PROJECT	14-38 COWPER ST, 21-41 EAST ST, 5-5A ROWELL ST GRANVILLE NSW 2142
SCALE	NTS@A1 NTS@A3
DATE	10.11.2016
DRAWN	TF
CHECKED	LP
JOB	0991
DRAWING	DA-C-002
REVISION	D

NOTES

GENERAL

1. N/A
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 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. POLYVINYL CHLORIDE (PVC) WITH SOLVENT WELDED JOINTS FOR 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. 150mm DIAMETER.
3. IN GROUND DRAINAGE PIPEWORK SERVING DP's SHALL BE MINIMUM 150mm DIA. UNO.
4. GRATED DRAINS SHALL BE 150mm NOM.
   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 WITH STEP IRONS FOR DEPTH GREATER THAN 1000. BENCH ALL PITS MIN. 50mm & FORM SMOOTH TRANSITION FROM INLET TO OUTLET.
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.

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 3500-1990 NATIONAL PLUMBING & DRAINAGE CODE.
    PART 2, SANITARY PLUMBING AND SANITARY DRAINAGE.
    SYDNEY WATER REQUIREMENTS.
14. ALLOW TO TEST ALL PIPES AND PITS TO MANUFACTURERS REQUIREMENTS.

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 _____ _____
   REPORT No. _____
   PH 9___ ____ FAX: 9___ ____ 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.
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.

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DEVELOPMENT APPLICATION

REVISION	DATE	DESCRIPTION	BY
A	2016.11.15	PRELIMINARY ISSUE FOR COORDINATION	LP
B	2016.11.16	DEVELOPMENT APPLICATION	LP
C	2016.11.17	DEVELOPMENT APPLICATION	LP
D	2017.02.03	DEVELOPMENT APPLICATION	LP

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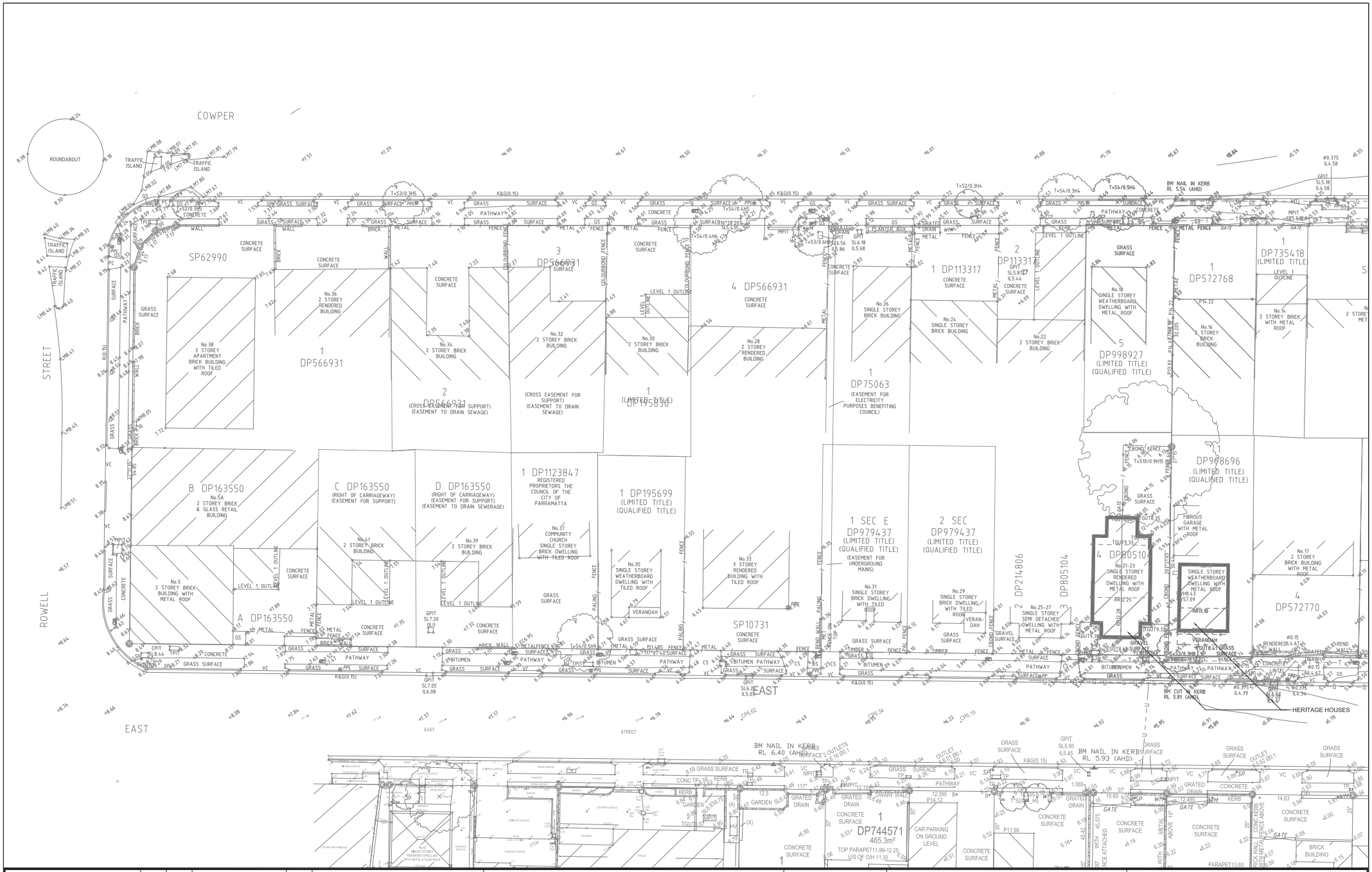
ABN 32 604 104 378

CLIENT	DPG PROJECT 7 PTY LTD
DRAWING TITLE	GENERAL NOTES
PROJECT	14-38 COWPER ST, 21-41 EAST ST, 5-5A ROWELL ST GRANVILLE NSW 2142
SCALE	NTS@A1 NTS@A3
DATE	10.11.2016
DRAWN	TF
CHECKED	LP
JOB	0991
DRAWING	DA-C-003
REVISION	D



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DRAWING TITLE
SURVEY PLAN - SHEET 1

PROJECT
14-38 COWPER ST, 21-41 EAST ST,
5-5A ROWELL ST GRANVILLE NSW 2142

SCALE	DATE	DRAWN	CHECKED
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JOB	DRAWING	REVISION
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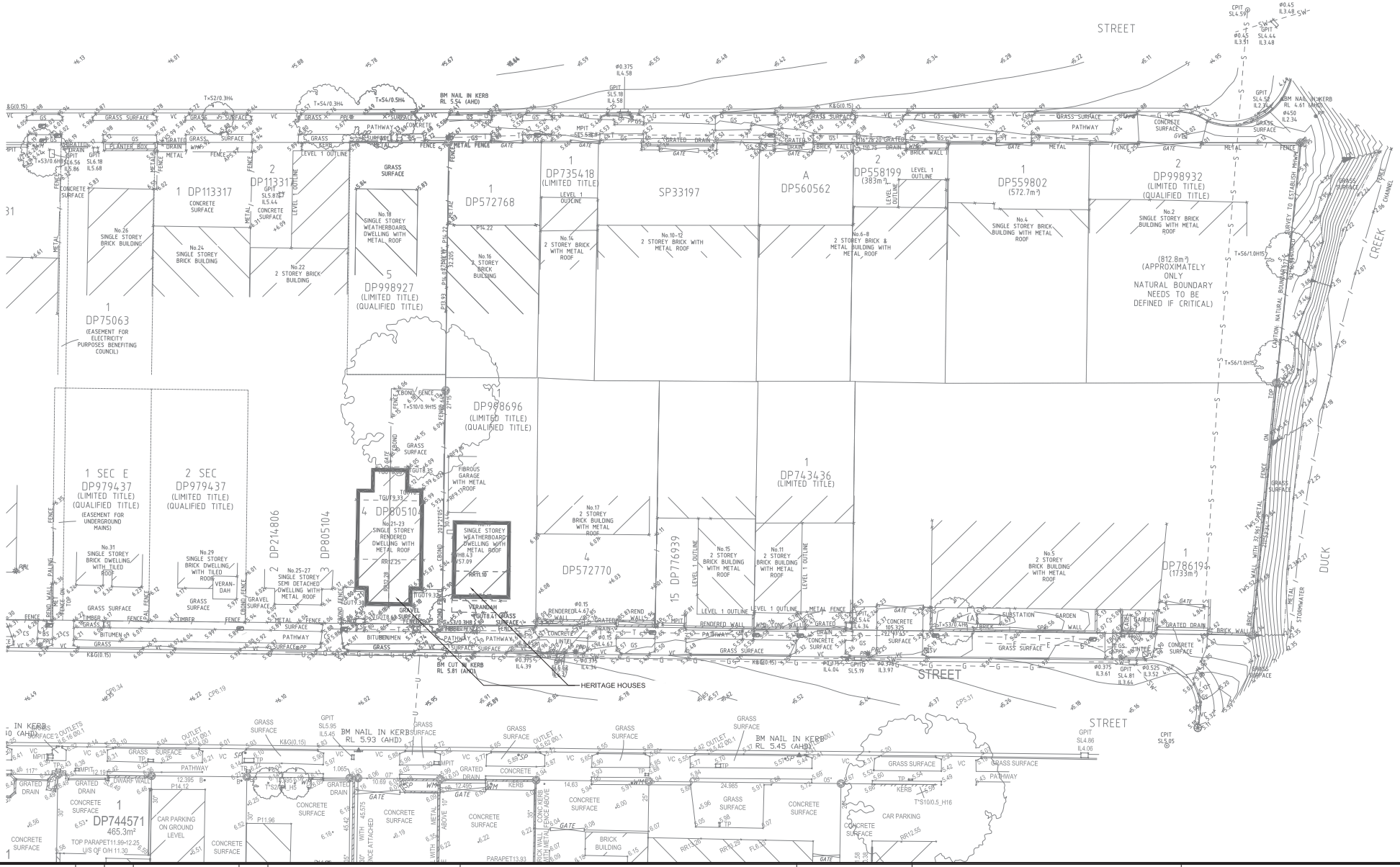

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DRAWING TITLE
SURVEY PLAN - SHEET 2

PROJECT
14-38 COWPER ST, 21-41 EAST ST, 5-5A ROWELL ST GRANVILLE NSW 2142

SCALE	DATE	DRAWN	CHECKED
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JOB	DRAWING		REVISION
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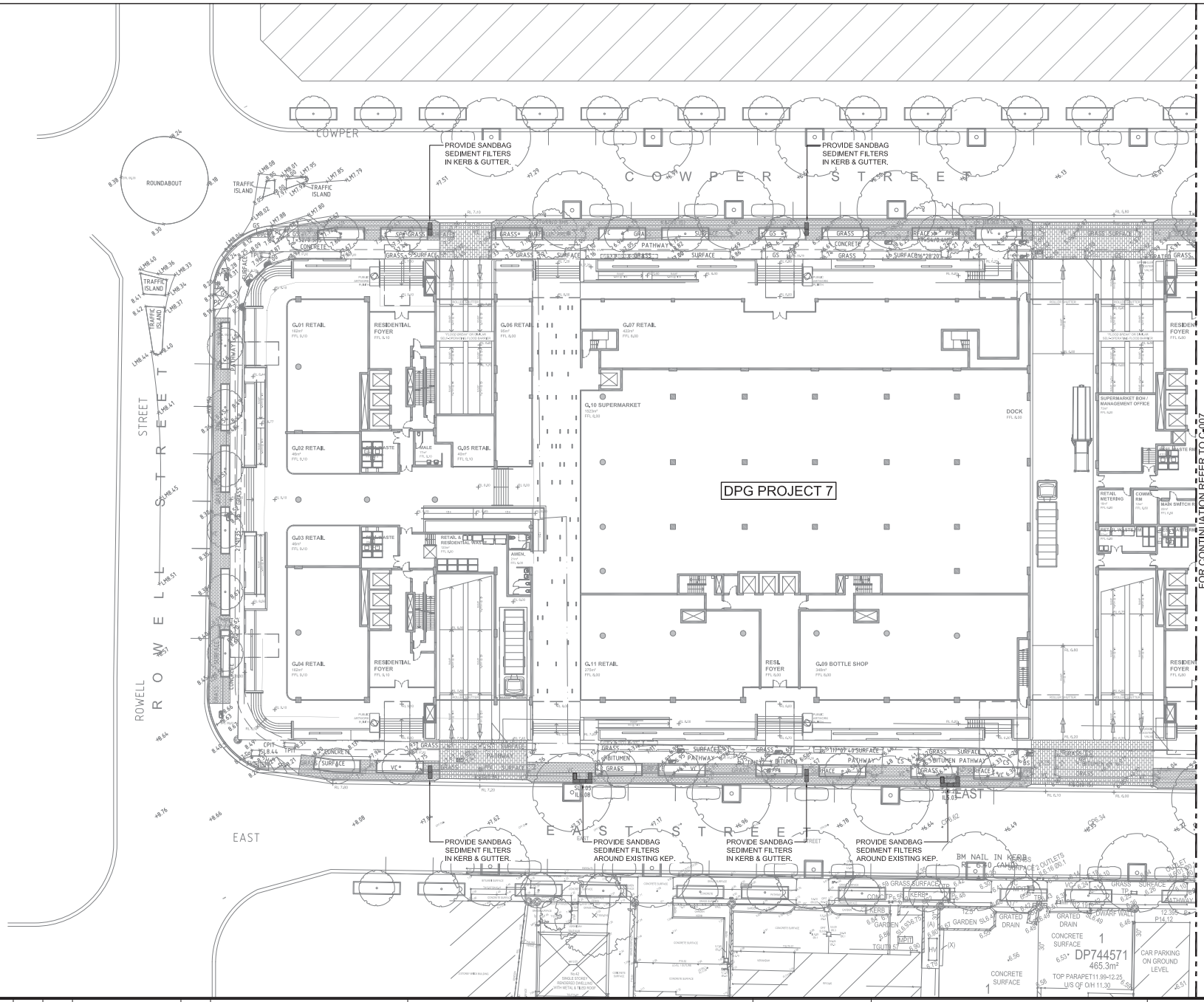

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PROJECT
14-38 COWPER ST, 21-41 EAST ST, 5-5A ROWELL ST GRANVILLE NSW 2142

DRAWING TITLE
EROSION AND SEDIMENT CONTROL PLAN - SHEET 1

SCALE	DATE	DRAWN	CHECKED
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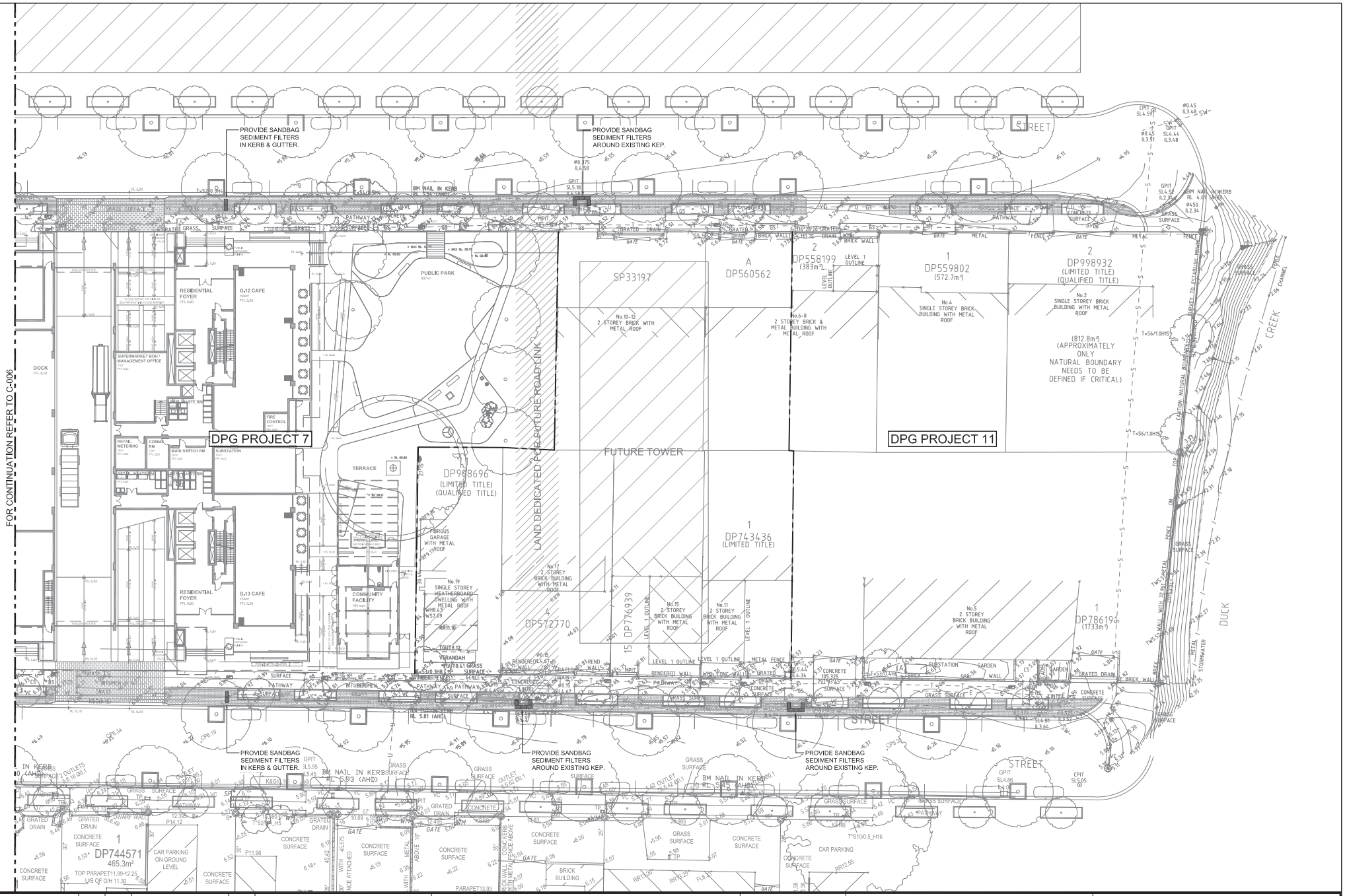
JOB 0991	DRAWING DA-C-006		REVISION D



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DRAWING TITLE
EROSION AND SEDIMENT CONTROL PLAN - SHEET 2

PROJECT
14-38 COWPER ST, 21-41 EAST ST, 5-5A ROWELL ST GRANVILLE NSW 2142

SCALE	DATE	DRAWN	CHECKED
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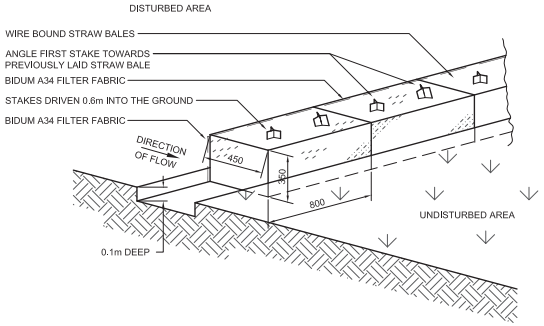

STRAW BALE SEDIMENT FILTER
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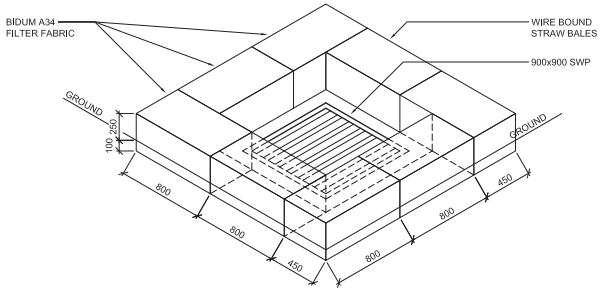

SWP WITH STRAW BALE SEDIMENT FILTER
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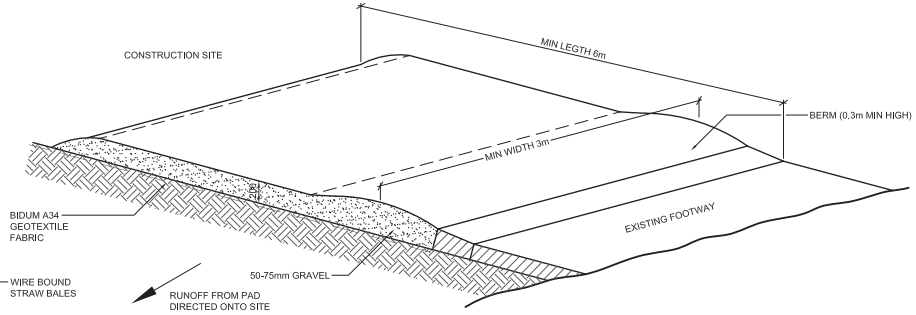

TEMPORARY CONSTRUCTION EXIT
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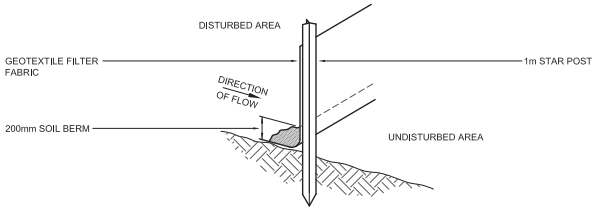

SEDIMENT FILTER FENCE
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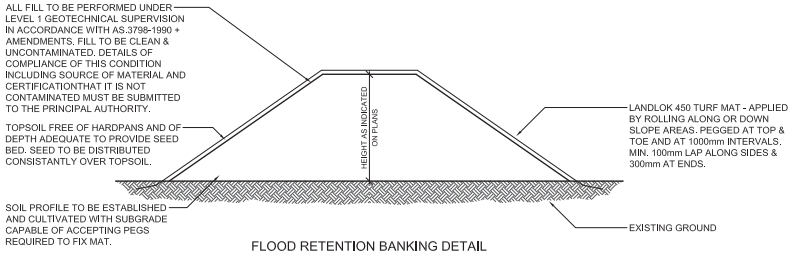
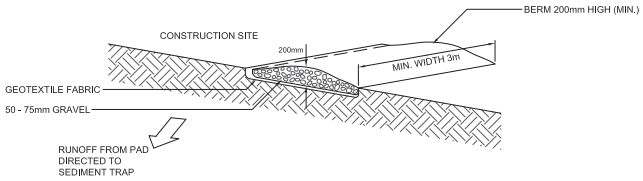


FLOOD RETENTION BANKING DETAIL
+ ANTI-SOUR TREATMENT



VEHICLE ACCESS TO SITE
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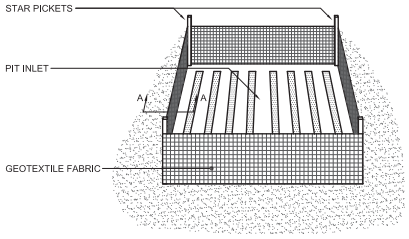
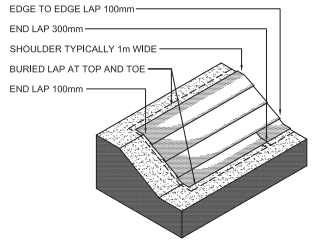
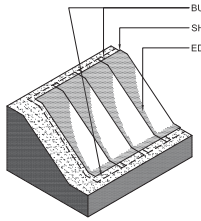
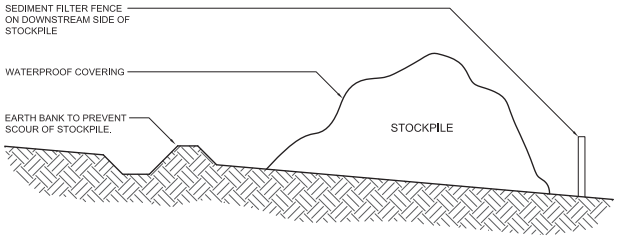




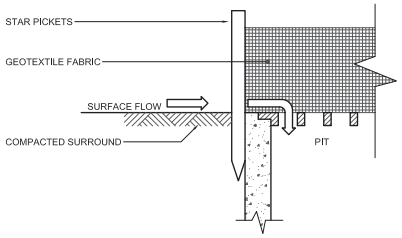
TREATMENT OF SLOPES UP TO 35° FROM THE HORIZONTAL



TREATMENT OF SLOPES GREATER THAN 35° FROM THE HORIZONTAL

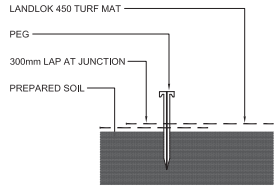


BUILDING MATERIALS STOCKPILE
N.T.S

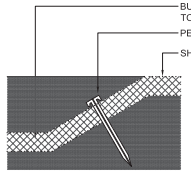


SECTION A-A
TYPICAL DETAIL

GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP
N.T.S



TYPICAL CROSS SECTION
THROUGH INSTALLED LANDLOK 450



TYPICAL CROSS SECTION
SHOWING EDGE TREATMENT

FLOOD RETENTION BANKING
N.T.S

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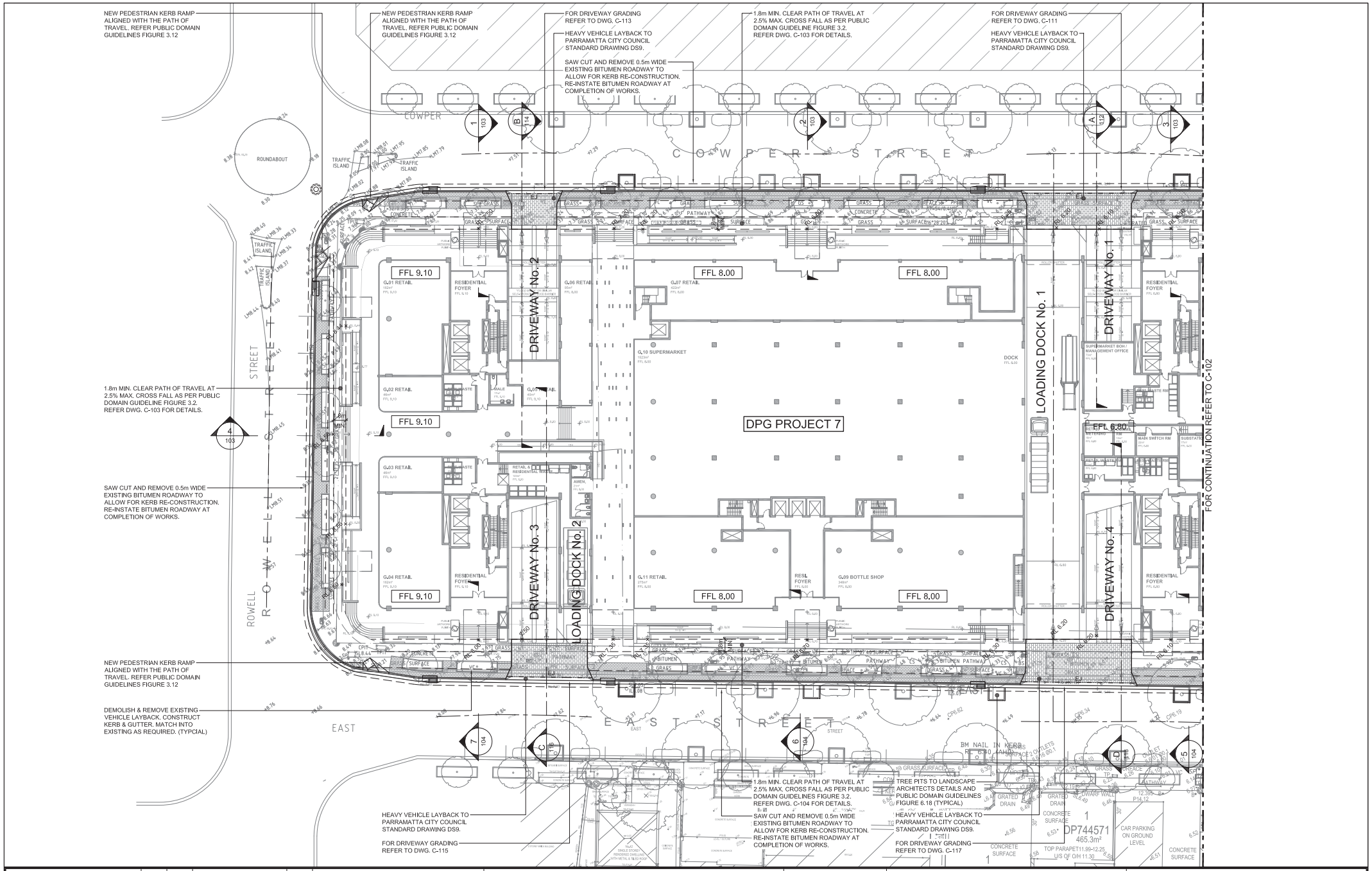
DRAWING TITLE
EROSION AND SEDIMENT CONTROL DETAILS

PROJECT
14-38 COWPER ST, 21-41 EAST ST, 5-5A ROWELL ST GRANVILLE NSW 2142

SCALE	DATE	DRAWN	CHECKED
NTS@A1 NTS@A3	10.11.2016	TF	LP

JOB	DRAWING	REVISION
0991	DA-C-008	D



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DEVELOPMENT APPLICATION

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PROJECT
14-38 COWPER ST, 21-41 EAST ST, 5-5A ROWELL ST GRANVILLE NSW 2142

DRAWING TITLE
PUBLIC DOMAIN CIVIL WORKS
LEVELS PLAN - SHEET 1

SCALE	DATE	DRAWN	CHECKED
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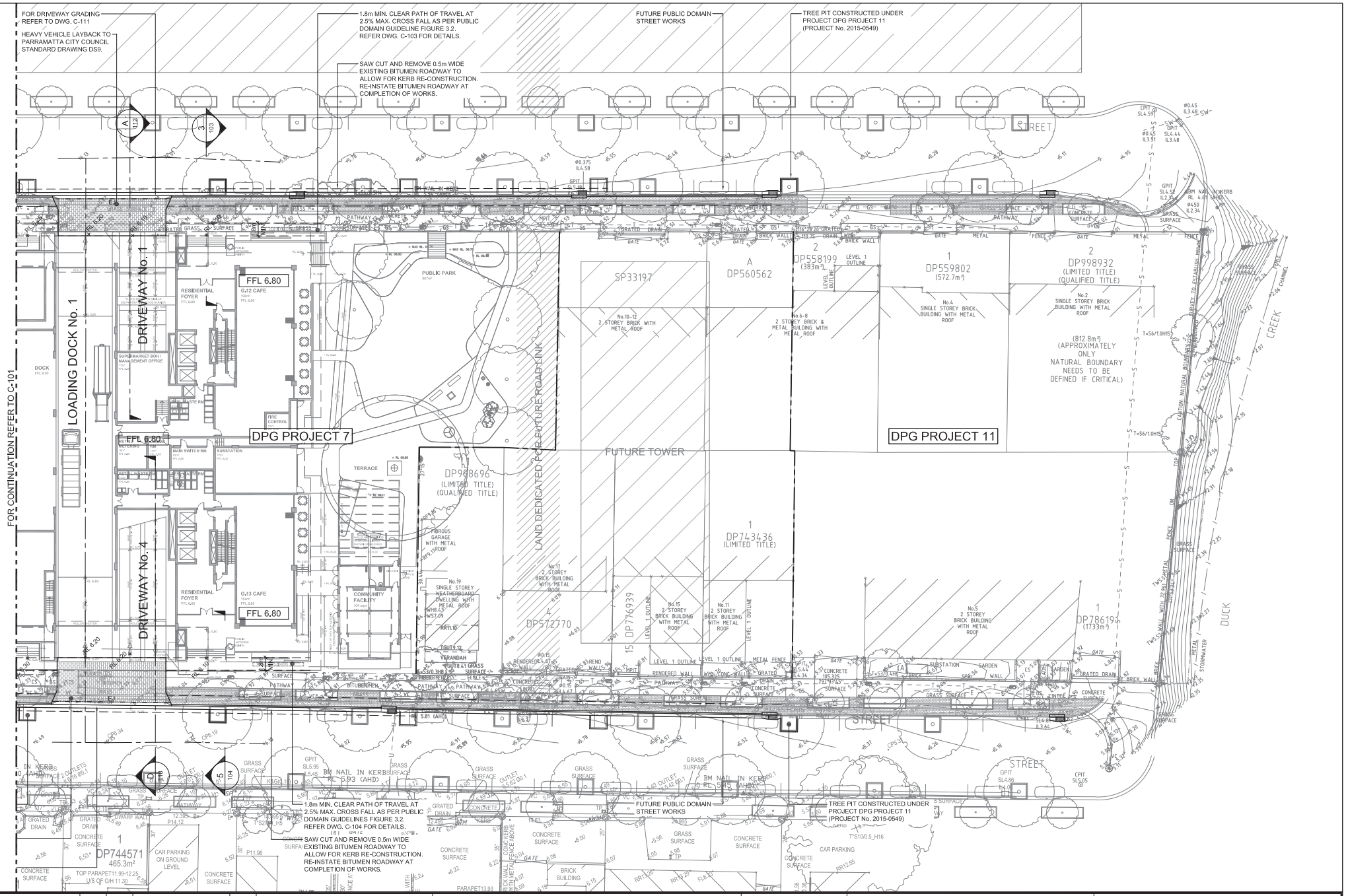
JOB 0991	DRAWING DA-C-101		REVISION D



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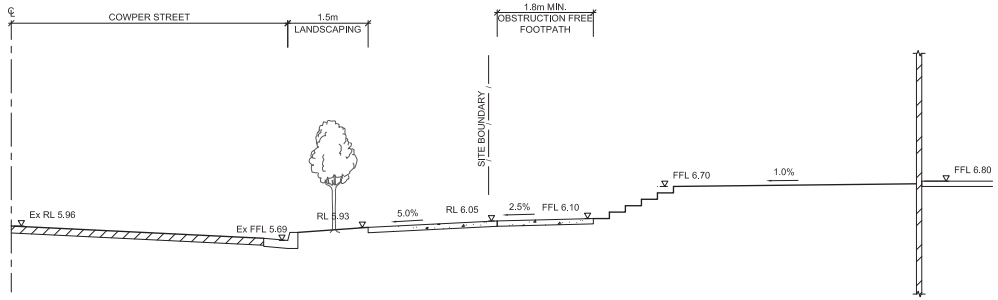
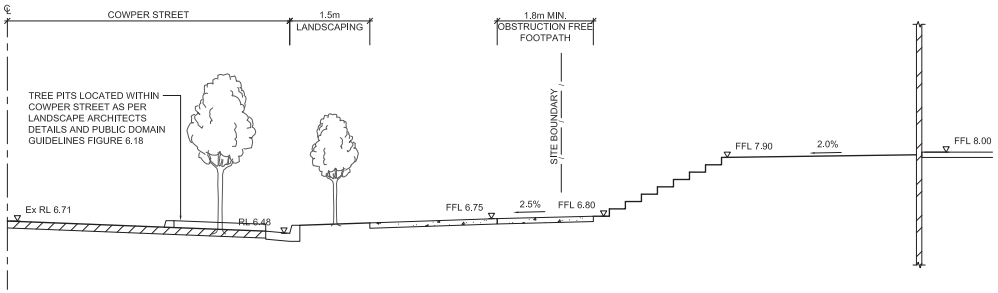
DRAWING TITLE
PUBLIC DOMAIN CIVIL WORKS
LEVELS PLAN - SHEET 2

PROJECT
14-38 COWPER ST, 21-41 EAST ST,
5-5A ROWELL ST GRANVILLE NSW 2142

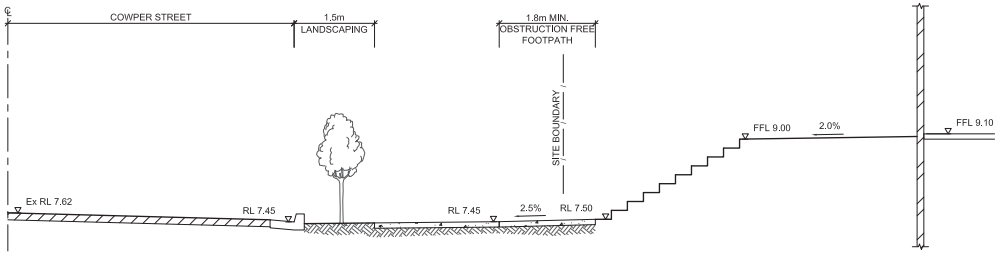
SCALE	DATE	DRAWN	CHECKED
1:250@A1 1:500@A3	10.11.2016	TF	LP
JOB 0991	DRAWING DA-C-102		REVISION D



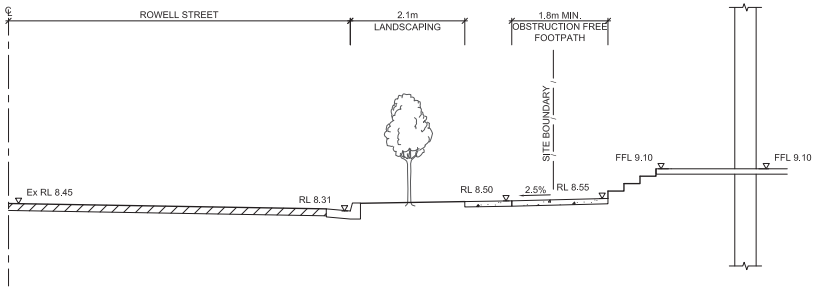
SECTION 3/101
COWPER STREET FRONTAGE
SCALE: 1:50



SECTION 2/101
COWPER STREET FRONTAGE
SCALE: 1:50



SECTION 1/101
COWPER STREET FRONTAGE
SCALE: 1:50



SECTION 4/101
ROWELL STREET FRONTAGE
SCALE: 1:50

0 0.5 1 2 3 4 5 metres
SCALE IS BEFORE REDUCTION
SCALE 1:50

IMPORTANT NOTES:
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DEVELOPMENT APPLICATION

REVISION	DATE	DESCRIPTION	BY
A	2016.11.15	PRELIMINARY ISSUE FOR COORDINATION	LP
B	2016.11.16	DEVELOPMENT APPLICATION	LP
C	2016.11.17	DEVELOPMENT APPLICATION	LP
D	2017.02.03	DEVELOPMENT APPLICATION	LP

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0 1 2
1:50

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DPG PROJECT 7 PTY LTD

DRAWING TITLE
PUBLIC DOMAIN CIVIL WORKS - SITE FRONTAGE CROSS SECTIONS-SHEET 1

PROJECT
14-38 COWPER ST, 21-41 EAST ST, 5-5A ROWELL ST GRANVILLE NSW 2142

SCALE	DATE	DRAWN	CHECKED
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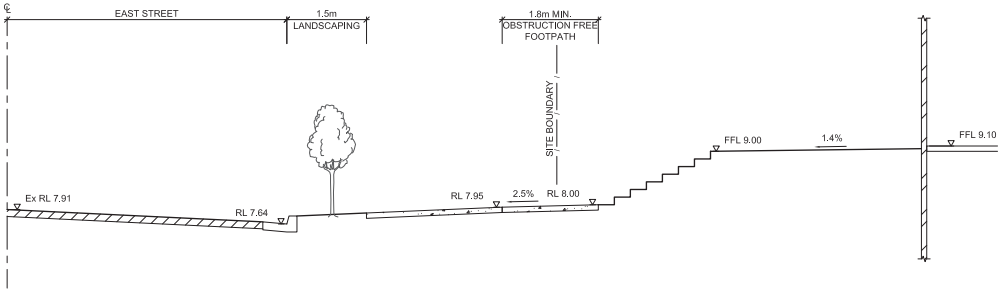
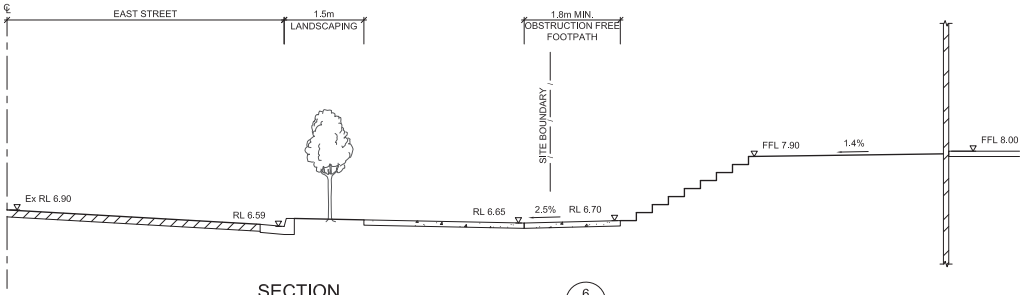
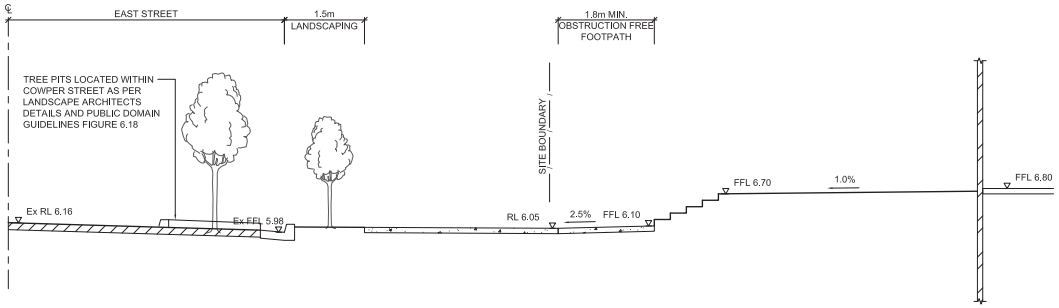
JOB	DRAWING	REVISION
0991	DA-C-103	D



SECTION 7/101
EAST STREET FRONTAGE
SCALE: 1:50



SECTION 6/101
EAST STREET FRONTAGE
SCALE: 1:50



SECTION 5/101
EAST STREET FRONTAGE
SCALE: 1:50

0 0.5 1 2 3 4 5 metres
SCALE IS BEFORE REDUCTION SCALE 1:50

IMPORTANT NOTES:
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DEVELOPMENT APPLICATION

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C	2016.11.17	DEVELOPMENT APPLICATION	LP
D	2017.02.03	DEVELOPMENT APPLICATION	LP

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0 1 2
1:50

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DRAWING TITLE
PUBLIC DOMAIN CIVIL WORKS - SITE FRONTAGE CROSS SECTIONS-SHEET 2

PROJECT
14-38 COWPER ST, 21-41 EAST ST, 5-5A ROWELL ST GRANVILLE NSW 2142

SCALE	DATE	DRAWN	CHECKED
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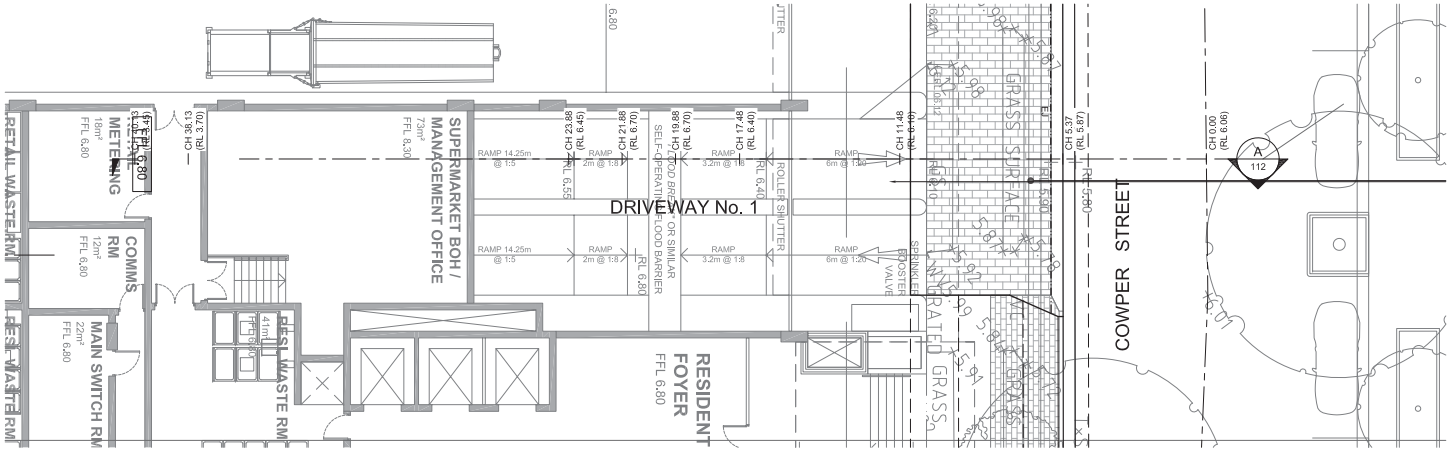
JOB	DRAWING	REVISION
0991	DA-C-104	D



DRIVEWAY No. 1 PLAN

SCALE 1:100

IMPORTANT NOTES:

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DEVELOPMENT APPLICATION

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C	2016.11.17	DEVELOPMENT APPLICATION	LP
D	2017.02.03	DEVELOPMENT APPLICATION	LP

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0 1 2 3 4 5
1:100

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DRAWING TITLE
PUBLIC DOMAIN CIVIL WORKS
DRIVEWAY No. 1 PLAN

PROJECT
14-38 COWPER ST, 21-41 EAST ST,
5-5A ROWELL ST GRANVILLE NSW 2142

SCALE	DATE	DRAWN	CHECKED
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JOB	DRAWING	REVISION
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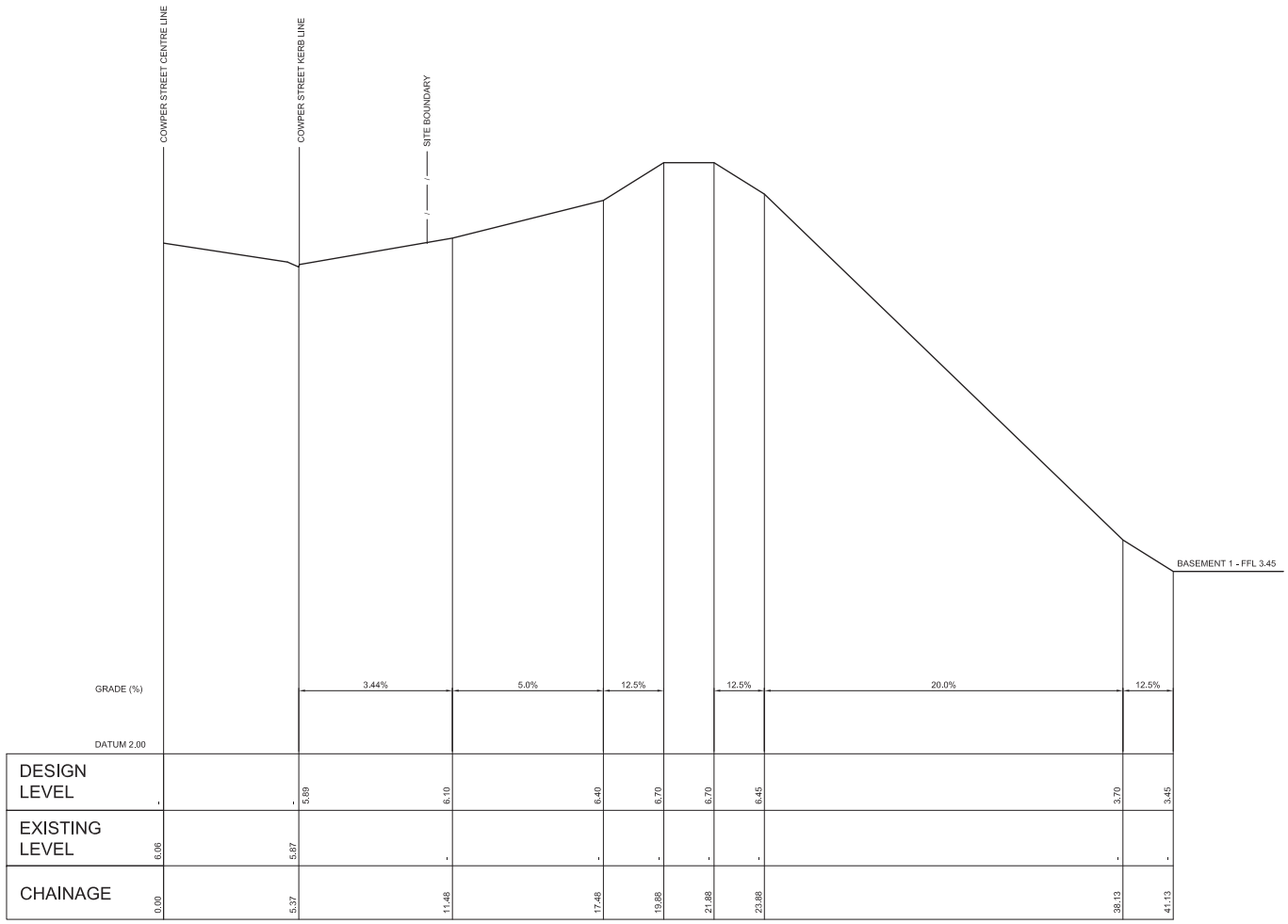

DRIVEWAY No.1 LONGITUDINAL SECTION - A

SCALE 1:100 HORIZONTAL
1:20 VERTICAL

IMPORTANT NOTES:
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C	2016.11.17	DEVELOPMENT APPLICATION	LP
D	2017.02.03	DEVELOPMENT APPLICATION	LP

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0 1 2 3 4 5
1:100

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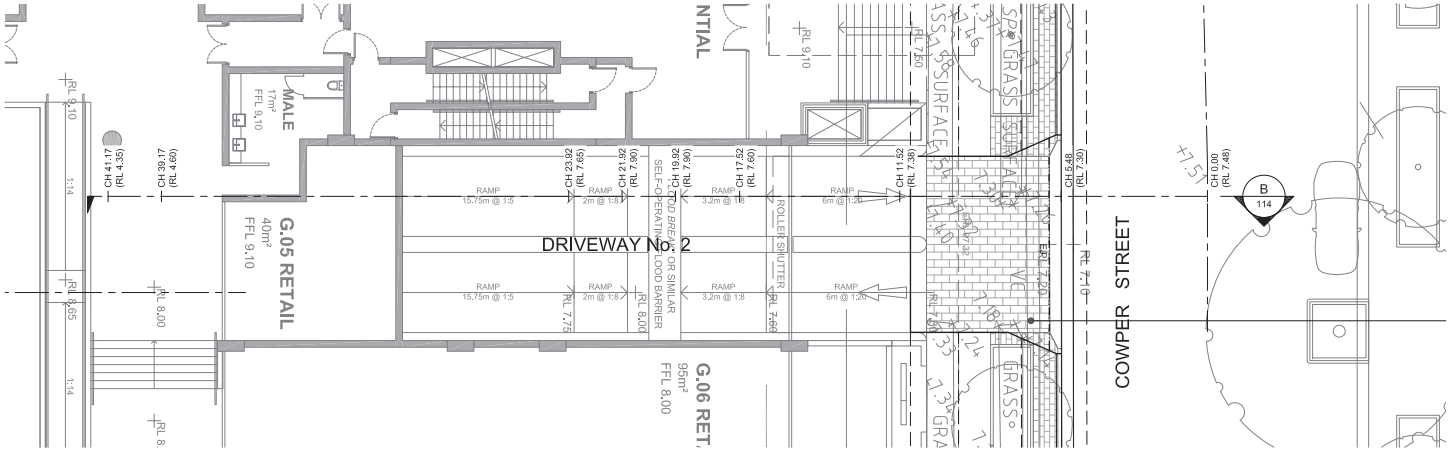
DRAWING TITLE
PUBLIC DOMAIN CIVIL WORKS
DRIVEWAY No. 1 LONG SECTION A

SCALE	DATE	DRAWN	CHECKED
AS SHOWN @ A1	10.11.2016	TF	LP
JOB	DRAWING		REVISION
0991	DA-C-112		D



DRIVEWAY No. 2 PLAN

SCALE 1:100

IMPORTANT NOTES:

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DEVELOPMENT APPLICATION

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A	2016.11.15	PRELIMINARY ISSUE FOR COORDINATION	LP
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C	2016.11.17	DEVELOPMENT APPLICATION	LP
D	2017.02.03	DEVELOPMENT APPLICATION	LP

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1:100

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DRAWING TITLE
PUBLIC DOMAIN CIVIL WORKS
DRIVEWAY No. 2 PLAN

PROJECT
14-38 COWPER ST, 21-41 EAST ST,
5-5A ROWELL ST GRANVILLE NSW 2142

SCALE	DATE	DRAWN	CHECKED
1:100@A1 1:200@A3	10.11.2016	TF	LP

JOB	DRAWING	REVISION
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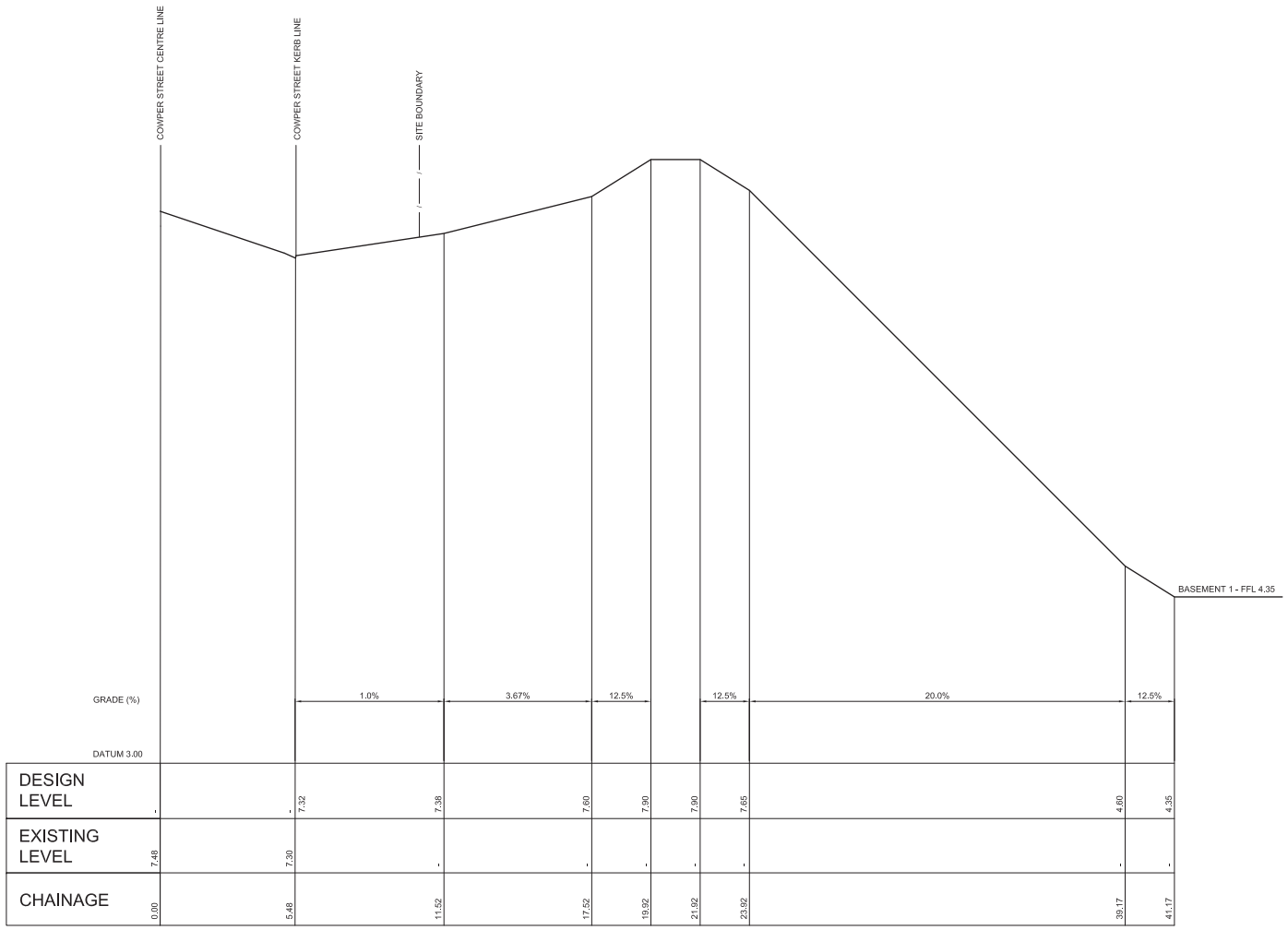

DRIVEWAY No.2 LONGITUDINAL SECTION - B

SCALE 1:100 HORIZONTAL
1:20 VERTICAL

IMPORTANT NOTES:
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DEVELOPMENT APPLICATION

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B	2016.11.16	DEVELOPMENT APPLICATION	LP
C	2016.11.17	DEVELOPMENT APPLICATION	LP
D	2017.02.03	DEVELOPMENT APPLICATION	LP

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0 1 2 3 4 5
1:100

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DRAWING TITLE
PUBLIC DOMAIN CIVIL WORKS
DRIVEWAY No. 2 LONG SECTION B

PROJECT
14-38 COWPER ST, 21-41 EAST ST,
5-5A ROWELL ST GRANVILLE NSW 2142

SCALE	DATE	DRAWN	CHECKED
AS SHOWN @ A1	10.11.2016	TF	LP
JOB	DRAWING		REVISION
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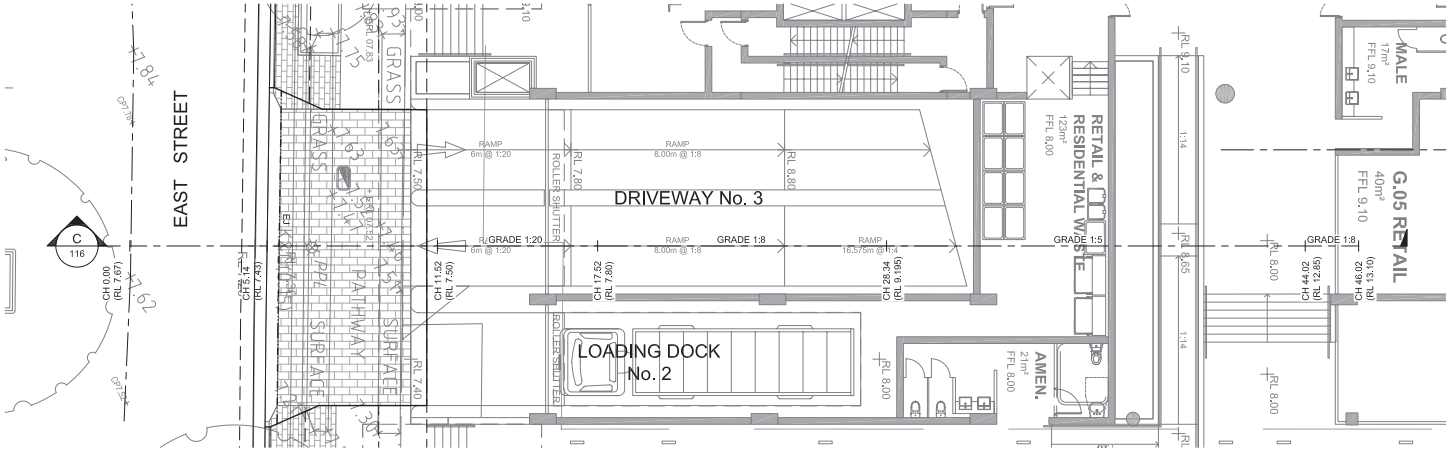

DRIVEWAY No.3 PLAN

SCALE 1:100

IMPORTANT NOTES:
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DEVELOPMENT APPLICATION

REVISION	DATE	DESCRIPTION	BY
A	2016.11.15	PRELIMINARY ISSUE FOR COORDINATION	LP
B	2016.11.16	DEVELOPMENT APPLICATION	LP
C	2016.11.17	DEVELOPMENT APPLICATION	LP
D	2017.02.03	DEVELOPMENT APPLICATION	LP

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1:100

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DRAWING TITLE
PUBLIC DOMAIN CIVIL WORKS
DRIVEWAY No. 3 PLAN

PROJECT
14-38 COWPER ST, 21-41 EAST ST,
5-5A ROWELL ST GRANVILLE NSW 2142

SCALE	DATE	DRAWN	CHECKED
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JOB	DRAWING	REVISION
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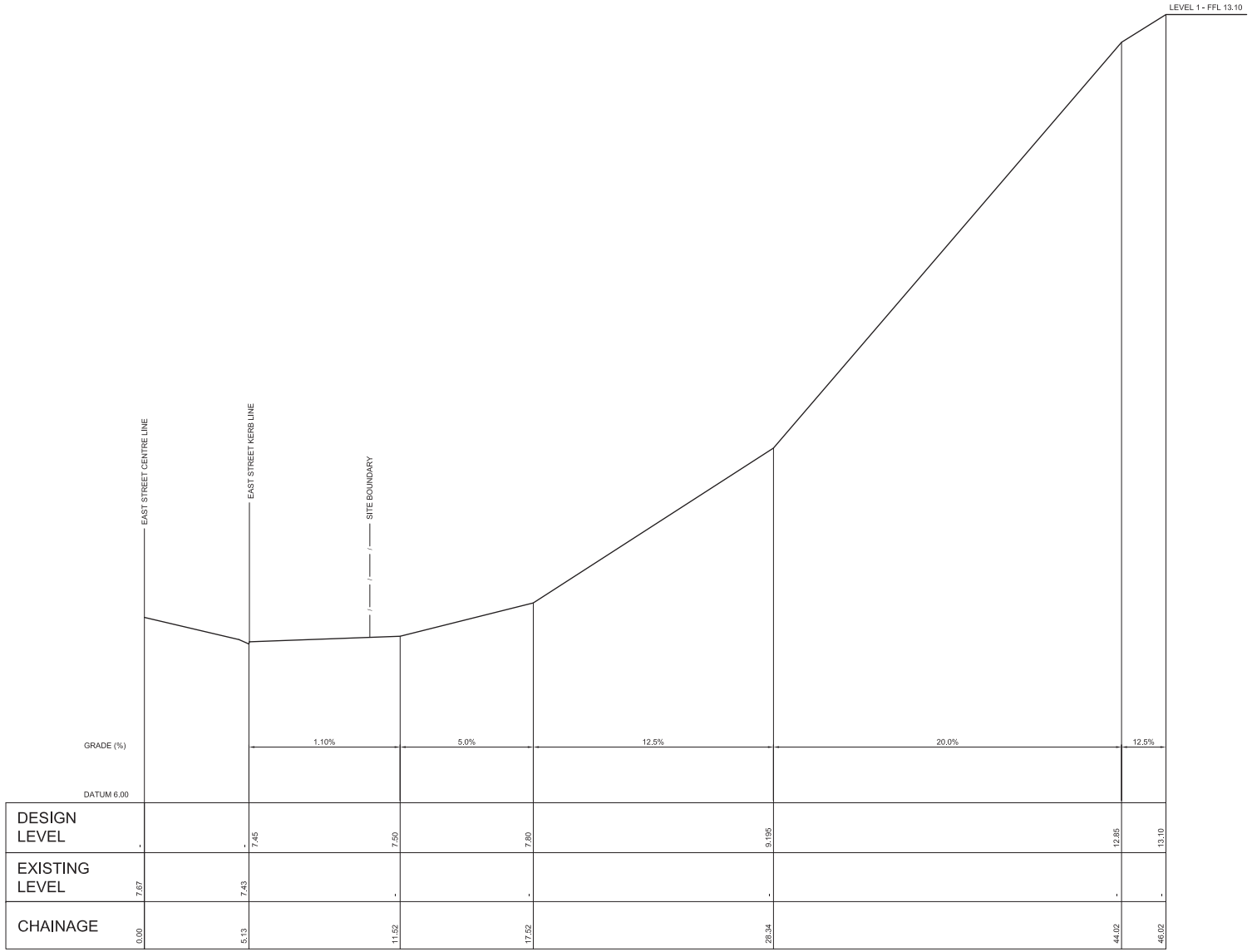

DRIVEWAY No.3 LONGITUDINAL SECTION - C

SCALE 1:100 HORIZONTAL
1:20 VERTICAL

IMPORTANT NOTES:
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DEVELOPMENT APPLICATION

REVISION	DATE	DESCRIPTION	BY
A	2016.11.15	PRELIMINARY ISSUE FOR COORDINATION	LP
B	2016.11.16	DEVELOPMENT APPLICATION	LP
C	2016.11.17	DEVELOPMENT APPLICATION	LP
D	2017.02.03	DEVELOPMENT APPLICATION	LP

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0 1 2 3 4 5
1:100

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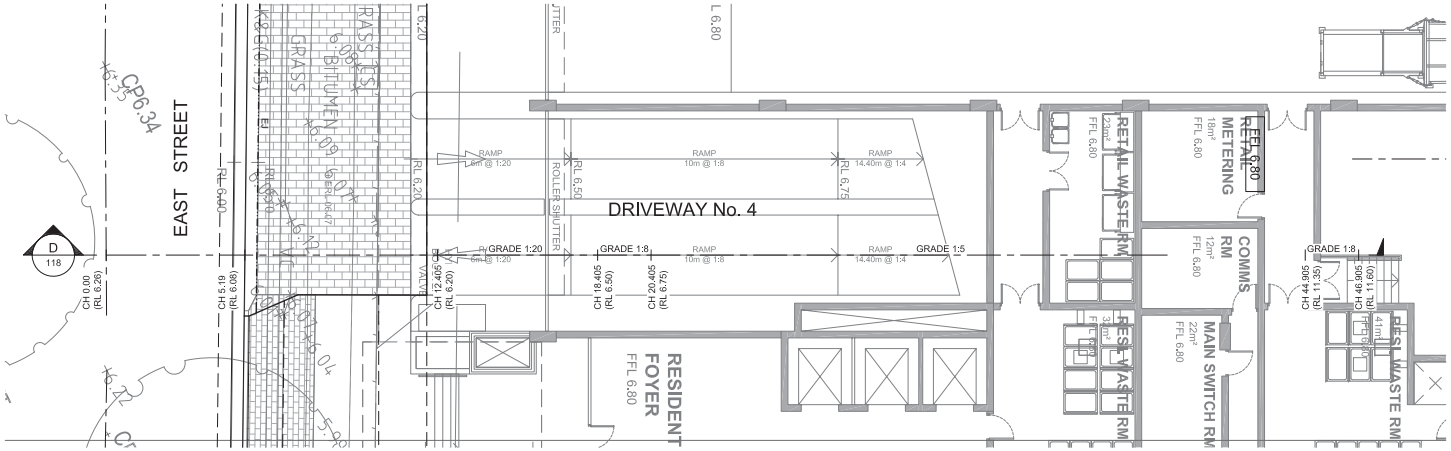
PROJECT
14-38 COWPER ST, 21-41 EAST ST,
5-5A ROWELL ST GRANVILLE NSW 2142

DRAWING TITLE
PUBLIC DOMAIN CIVIL WORKS
DRIVEWAY No. 3 LONG SECTION C

SCALE	DATE	DRAWN	CHECKED
AS SHOWN @ A1	10.11.2016	TF	LP
JOB	DRAWING		REVISION
0991	DA-C-116		D



DRIVEWAY No.4 PLAN

SCALE 1:100

IMPORTANT NOTES:

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DEVELOPMENT APPLICATION

REVISION	DATE	DESCRIPTION	BY
A	2016.11.15	PRELIMINARY ISSUE FOR COORDINATION	LP
B	2016.11.16	DEVELOPMENT APPLICATION	LP
C	2016.11.17	DEVELOPMENT APPLICATION	LP
D	2017.02.03	DEVELOPMENT APPLICATION	LP

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1:100

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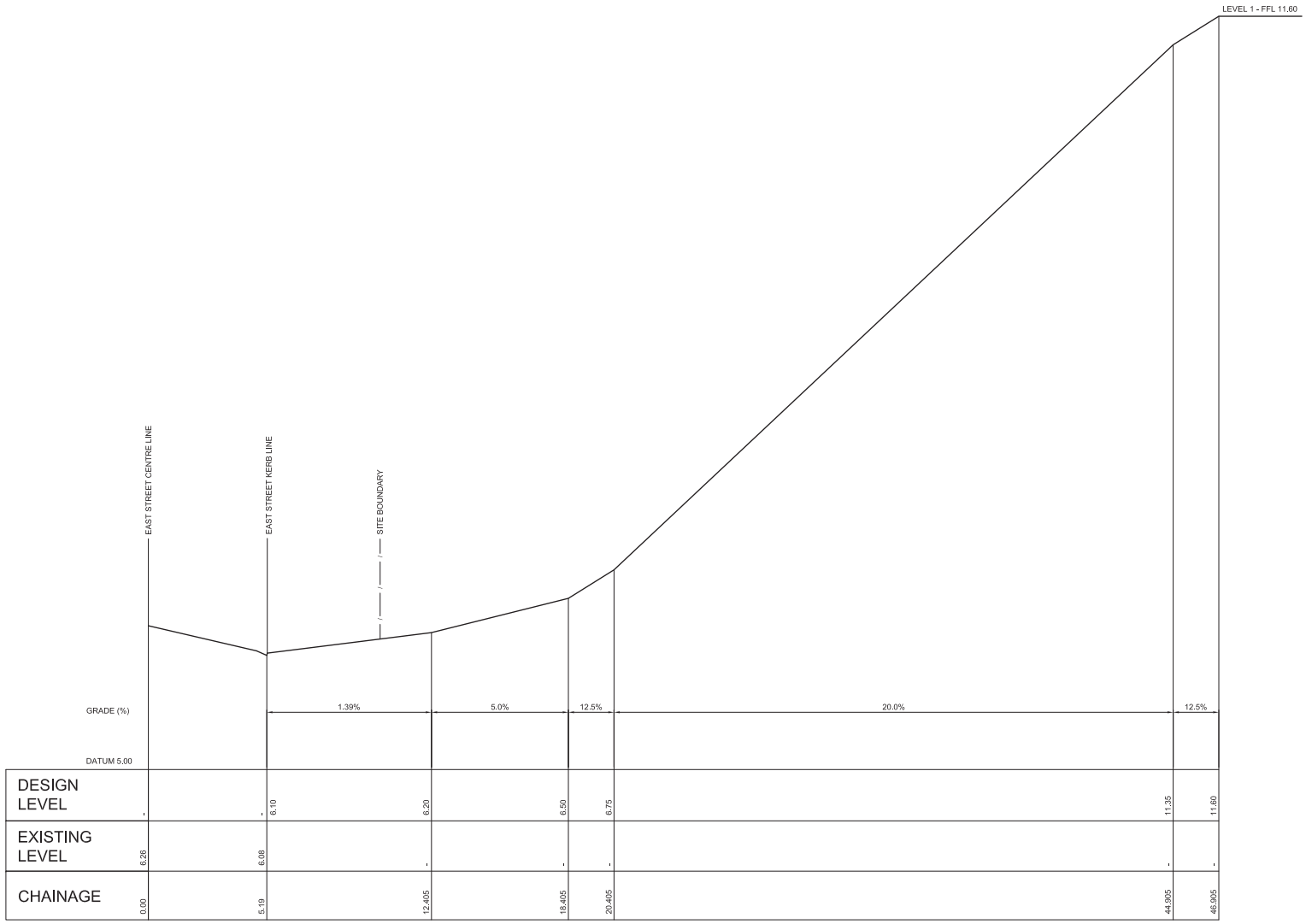
PROJECT
14-38 COWPER ST, 21-41 EAST ST,
5-5A ROWELL ST GRANVILLE NSW 2142

DRAWING TITLE
PUBLIC DOMAIN CIVIL WORKS
DRIVEWAY No. 4 PLAN

SCALE	DATE	DRAWN	CHECKED
1:100@A1 1:200@A3	10.11.2016	TF	LP
JOB	DRAWING		REVISION
0991	DA-C-117		D



DRIVEWAY No.4 LONGITUDINAL SECTION - D

SCALE 1:100 HORIZONTAL
1:20 VERTICAL

IMPORTANT NOTES:
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DEVELOPMENT APPLICATION

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C	2016.11.17	DEVELOPMENT APPLICATION	LP
D	2017.02.03	DEVELOPMENT APPLICATION	LP

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PROJECT
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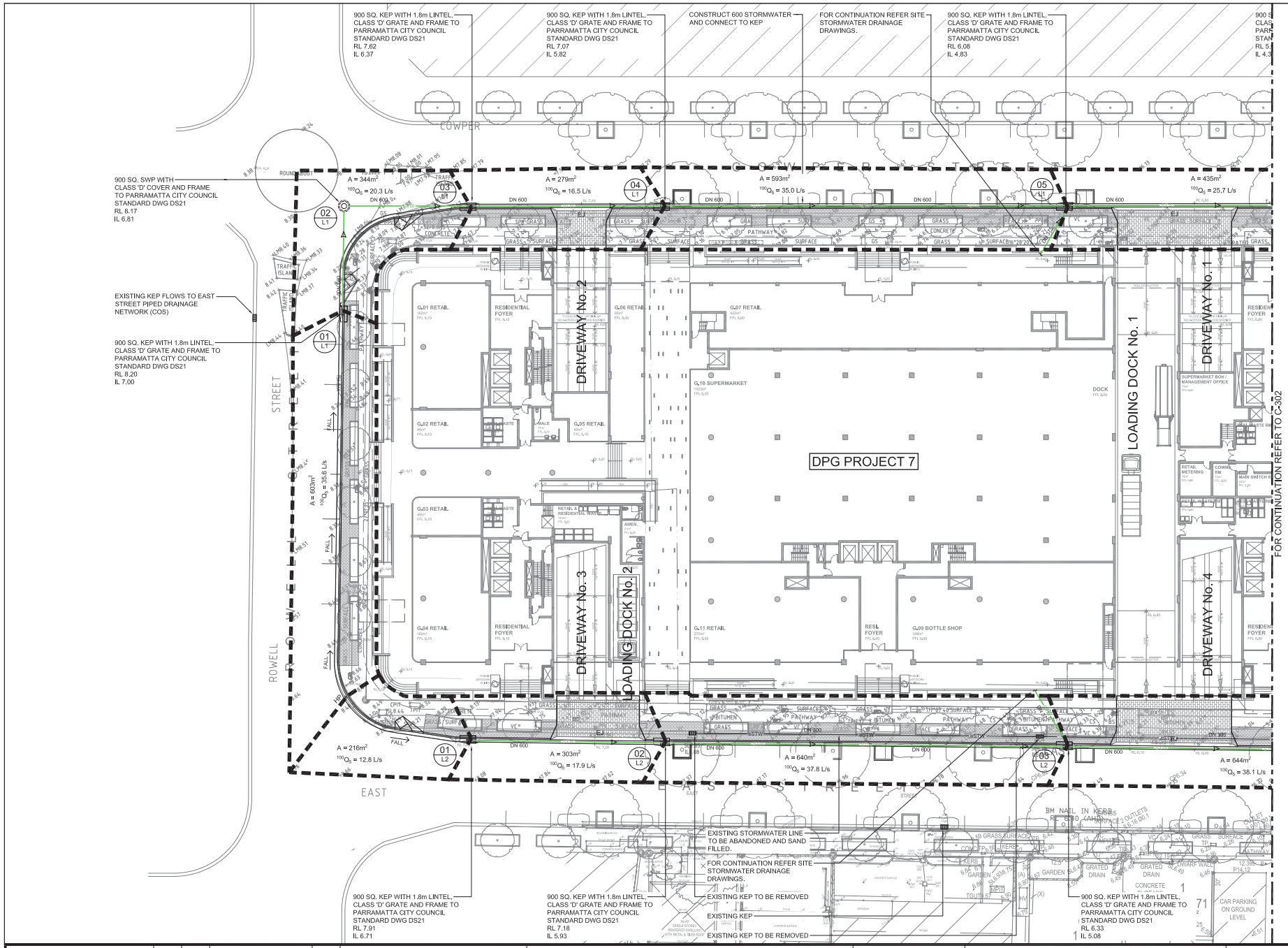
5-5A ROWELL ST GRANVILLE NSW 2142

DRAWING TITLE
PUBLIC DOMAIN CIVIL WORKS
DRIVEWAY No. 4 LONG SECTION D

SCALE	DATE	DRAWN	CHECKED
AS SHOWN @ A1	10.11.2016	TF	LP
JOB	DRAWING		REVISION
0991	DA-C-118		D



STORMWATER CALCS:

C = 1.0 (ROOF)

C = 0.95 (PAVED)

C = 0.7 (LANDSCAPE)

$^{20}I_5$ = 174mm/hr

$^{100}I_5$ = 224mm/hr

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

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C	2016.11.20	DEVELOPMENT APPLICATION - DRAFT REVIEW	LP
D	2017.02.03	DEVELOPMENT APPLICATION	LP

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PROJECT
14-38 COWPER ST, 21-41 EAST ST, 5-5A ROWELL ST GRANVILLE NSW 2142

DRAWING TITLE
PUBLIC DOMAIN CIVIL WORKS
DRAINAGE PLAN - SHEET 1

SCALE	DATE	DRAWN	CHECKED
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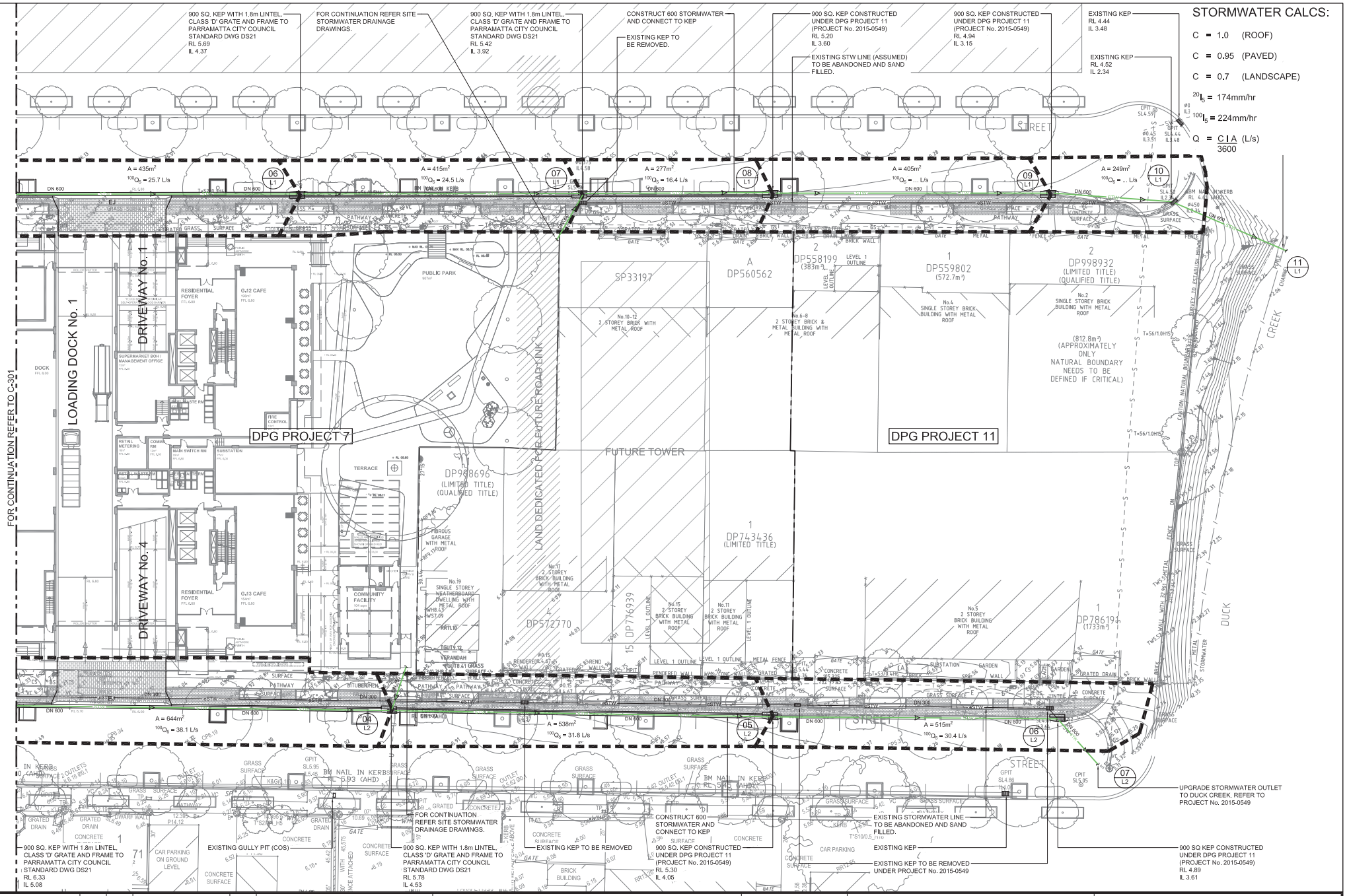
JOB 0991	DRAWING DA-C-301		REVISION D



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0 1 2 3 4 5 10
1:250

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DRAINAGE PLAN - SHEET 2

PROJECT
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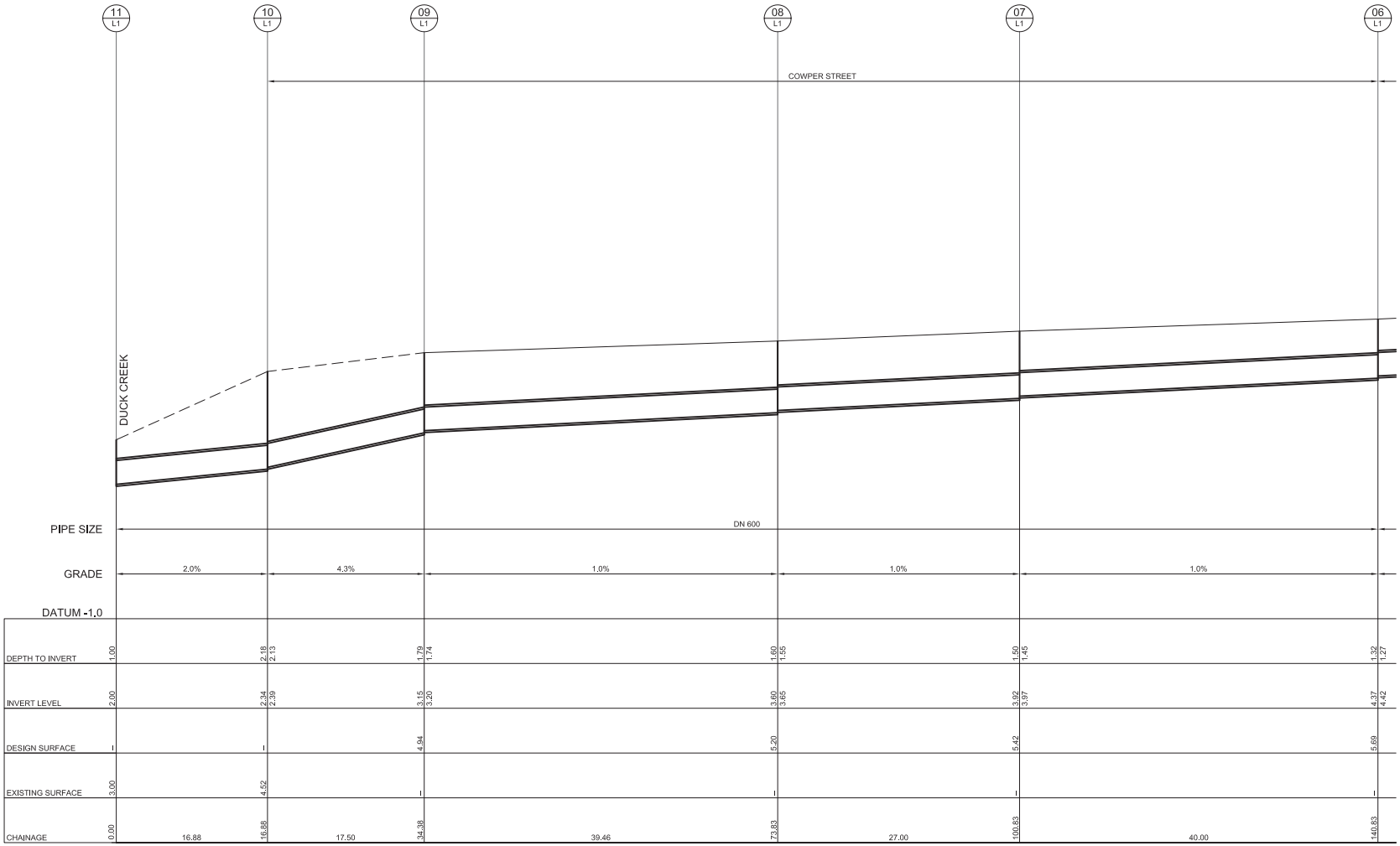

STORMWATER LONGITUDINAL SECTION

SCALE 1:250 (HORIZONTAL)
SCALE 1:50 (VERTICAL)

0 0.5 1 2 3 4 5 metres
SCALE IS BEFORE REDUCTION SCALE 1:50

0 2.5 5 10 15 20 25 metres
SCALE IS BEFORE REDUCTION SCALE 1:250

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0 1 2 3 4 5 10
1:250

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STORMWATER LONG SECTIONS - SHEET 1

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5-5A ROWELL ST GRANVILLE NSW 2142

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JOB	DRAWING		REVISION
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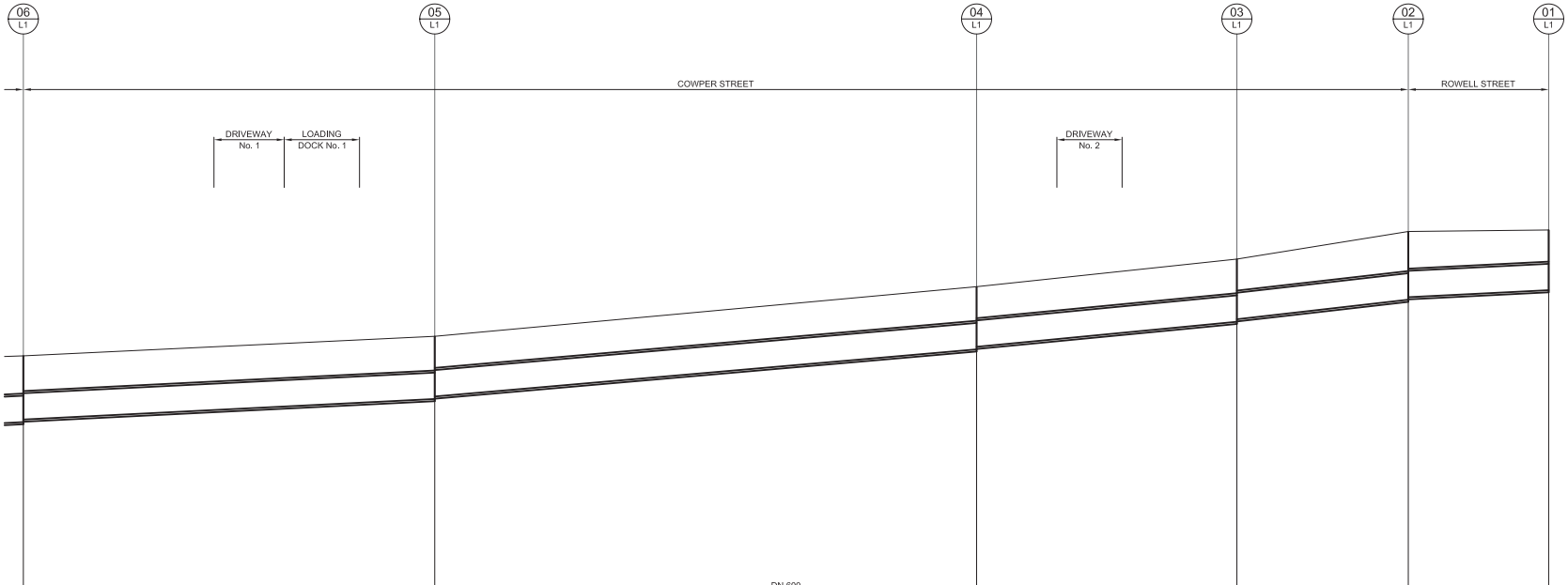

PIPE SIZE — DN 600

GRADE — 1.0% | 1.7% | 1.9% | 2.3% | 1.0%

DATUM -1.0

DEPTH TO INVERT	1.32	1.27		1.25	1.20		1.25	1.20		1.25	1.20		1.36	1.31		1.20
INVERT LEVEL	4.37	4.42		4.83	4.88		5.82	5.87		6.37	6.42		6.81	6.86		7.00
DESIGN SURFACE	5.69			6.08			7.07			7.62			8.17			8.20
EXISTING SURFACE	I			I			I			I			I			I
CHAINAGE	140.83		41.00	181.83		54.00	235.83		25.94	261.77		17.08	278.85		14.00	292.84

STORMWATER LONGITUDINAL SECTION

SCALE 1:250 (HORIZONTAL)
SCALE 1:50 (VERTICAL)

0 0.5 1 2 3 4 5 metres
SCALE IS BEFORE REDUCTION — SCALE 1:50

0 2.5 5 10 15 20 25 metres
SCALE IS BEFORE REDUCTION — SCALE 1:250

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0 1 2 3 4 5 10
1:250

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5-5A ROWELL ST GRANVILLE NSW 2142

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JOB	DRAWING		REVISION
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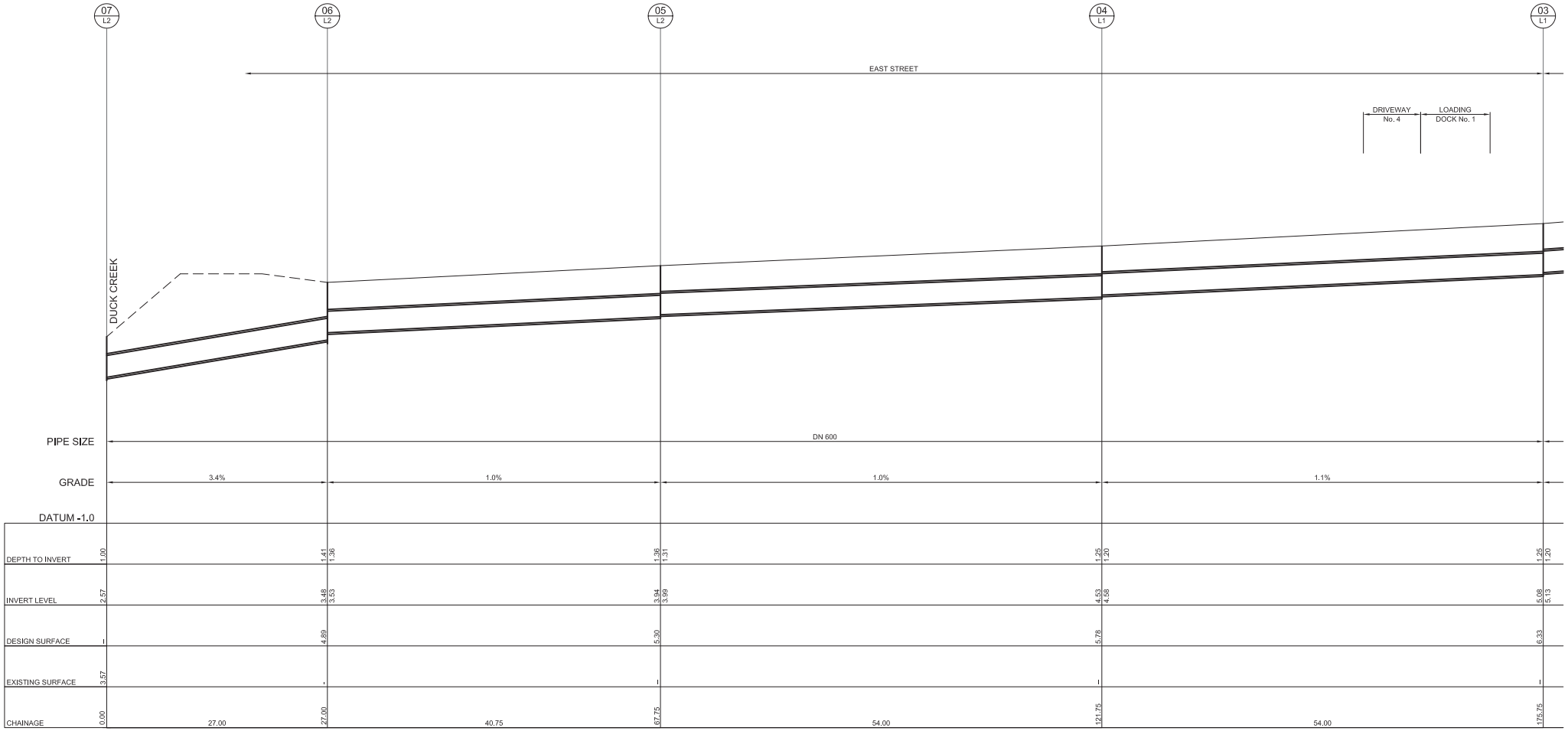

STORMWATER LONGITUDINAL SECTION

SCALE 1:250 (HORIZONTAL)
SCALE 1:50 (VERTICAL)

0 0.5 1 2 3 4 5 metres
SCALE IS BEFORE REDUCTION — SCALE 1:50

0 2.5 5 10 15 20 25 metres
SCALE IS BEFORE REDUCTION — SCALE 1:250

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0 1 2 3 4 5 10
1:250

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PROJECT
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5-5A ROWELL ST GRANVILLE NSW 2142

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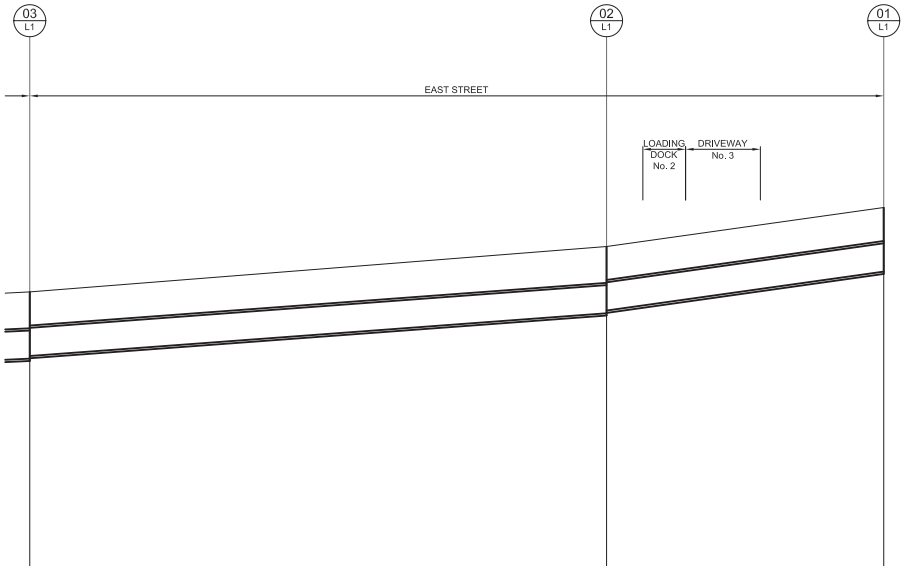

PIPE SIZE	DN 600		
GRADE	1.5%	2.8%	
DATUM -1.0			
DEPTH TO INVERT	1.25 / 1.20	1.25 / 1.20	1.20
INVERT LEVEL	5.08 / 5.13	5.93 / 5.98	6.71
DESIGN SURFACE	6.33	7.18	7.91
EXISTING SURFACE	-	-	-
CHAINAGE	175.75	229.75	255.70
	54.00	25.95	

STORMWATER LONGITUDINAL SECTION

SCALE 1:250 (HORIZONTAL)
SCALE 1:50 (VERTICAL)

0 0.5 1 2 3 4 5 metres
SCALE IS BEFORE REDUCTION SCALE 1:50

0 2.5 5 10 15 20 25 metres
SCALE IS BEFORE REDUCTION SCALE 1:250

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0 1 2 3 4 5 10
1:250

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STORMWATER LONG SECTIONS - SHEET 4

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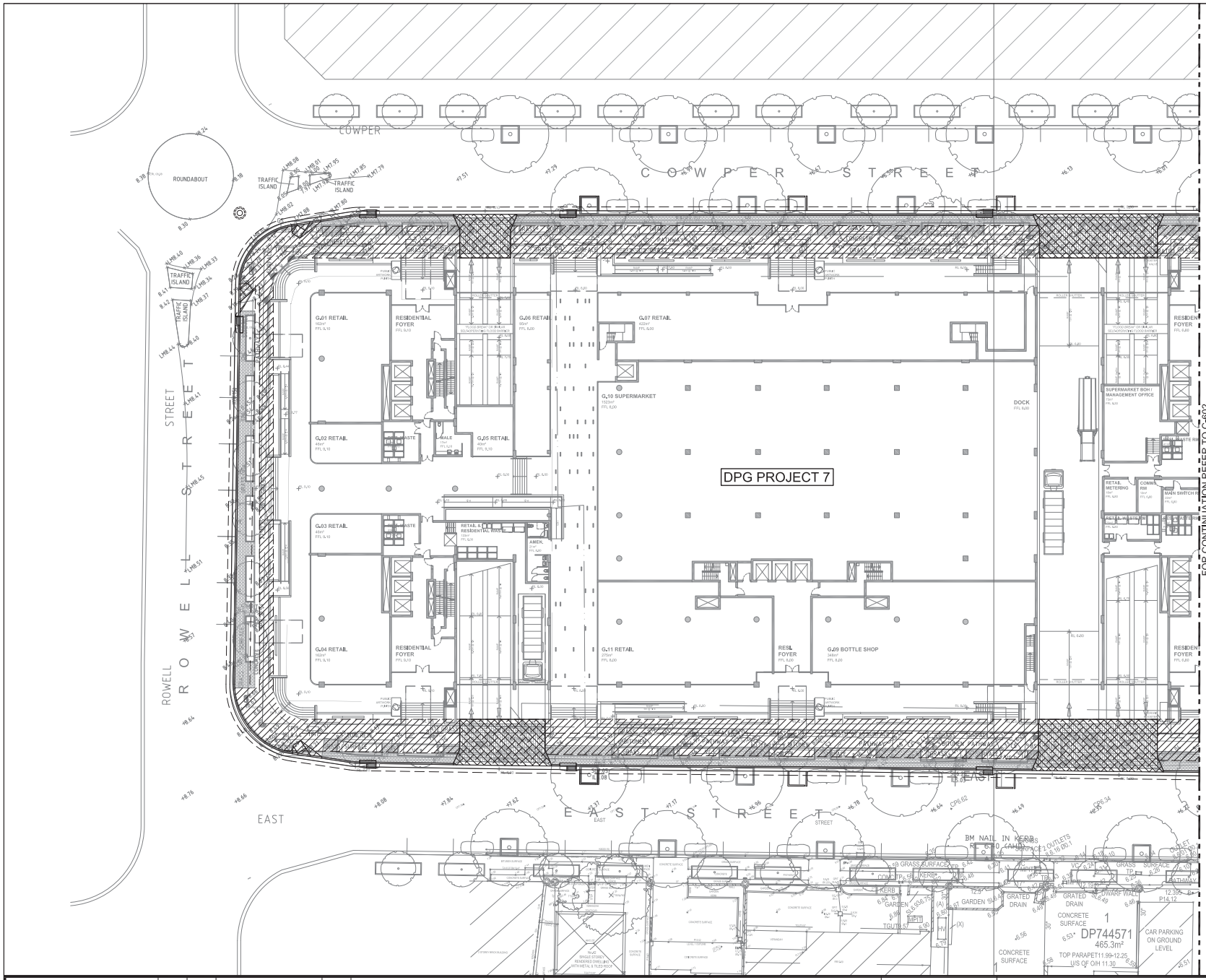

PAVEMENT LEGEND

PAVEMENT TYPE 1
FOOTPATH PAVING

DESIGN FINISHED SURFACE LEVEL
- PAVERS TO LANDSCAPE ARCHITECTS DETAILS
- 50mm THICK COMPACTED BASE COURSE (DGB20)
- COMPACTED SUBGRADE TO 100% MAXIMUM DRY DENSITY

PAVEMENT TYPE 2
HEAVY VEHICLE CROSSING

DESIGN FINISHED SURFACE LEVEL
- 200mm THICK CONCRETE WITH SL82 MESH TOP.
- 150mm THICK BASE COURSE (DGB20) TO 100% MAXIMUM DRY DENSITY
- COMPACTED SUBGRADE TO 100% MAXIMUM DRY DENSITY

NOTE

1. NO WORKS ARE TO BE CARRIED OUT ON ADJOINING PROPERTIES WITHOUT EXPRESS WRITTEN OWNERS CONSENT AND DIRECTION OF SUPERINTENDENT
2. THIS PAVEMENT DESIGN IS SUBJECT TO GEOTECHNICAL PAVEMENT INVESTIGATION AND ADVICE ON CBR (%) CAPACITY OF THE SUBGRADE WITH LIME STABILISATION.
3. THE SELECTION OF PRIMER SEAL MUST TAKE INTO ACCOUNT THE TIME AFTER WHICH THE FINAL ASPHALT SURFACING WILL BE PLACED.
4. ALL GRANULAR MATERIAL MUST COMPLY WITH RMS SPECIFICATION 3051 AND DEVELOPER NEEDS TO PROVIDE EVIDENCE OF COMPLIANCE (TEST RESULTS)
5. ALL CONSTRUCTION WORKS MUST COMPLY WITH RELEVANT RMS SPECIFICATIONS (R106, R71, R117 ETC). THE DEVELOPER WILL NEED TO CONDUCT ALL TESTING REQUIRED BY SPECIFICATIONS AND PROVIDE EVIDENCE TO COUNCIL THAT SUCH TESTING HAS BEEN CONDUCTED AND RESULTS COMPLY WITH SPECIFICATION REQUIREMENTS.

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NW NE
0 1 2 3 4 5 10
1:250

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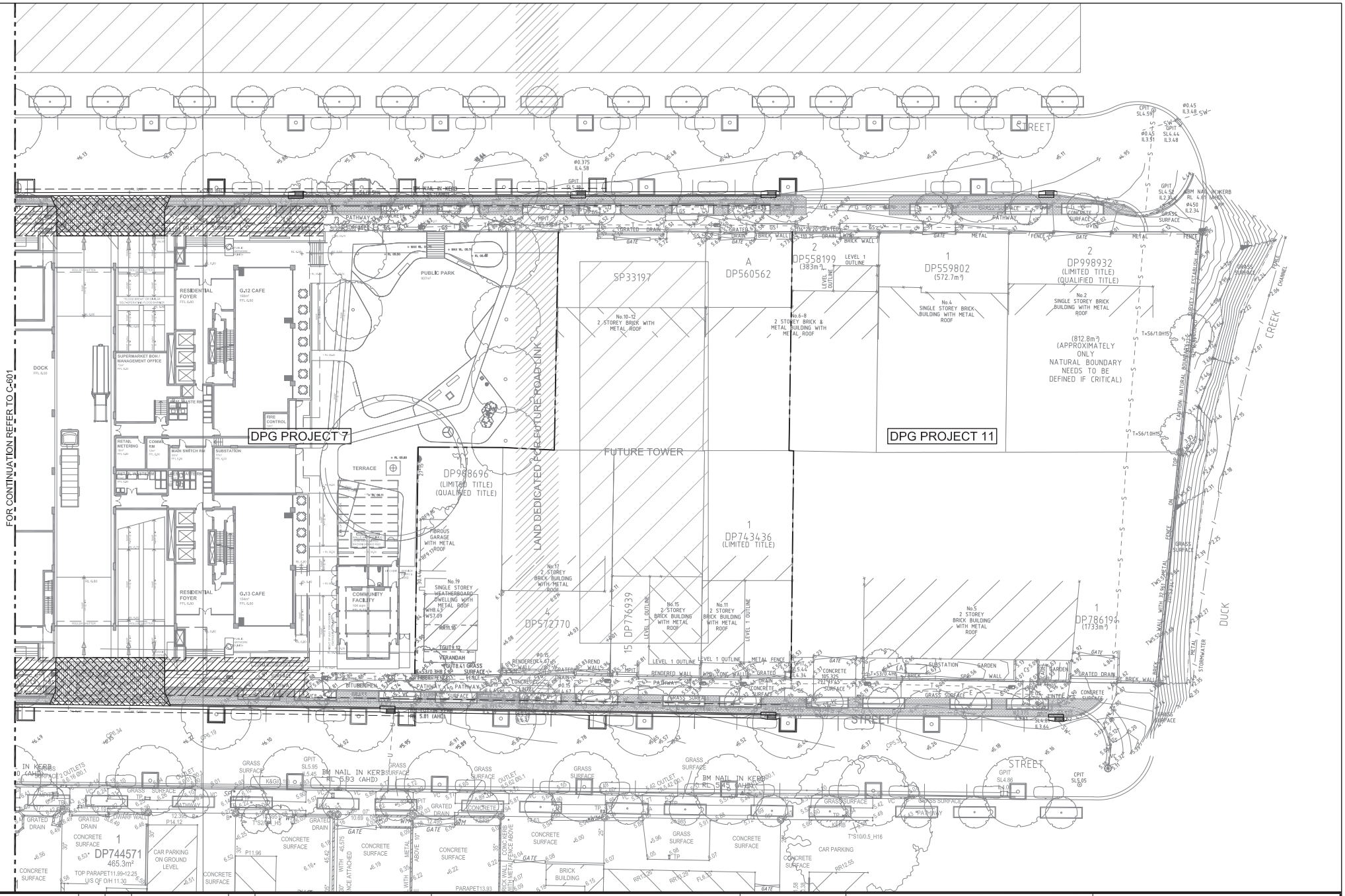

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1:250

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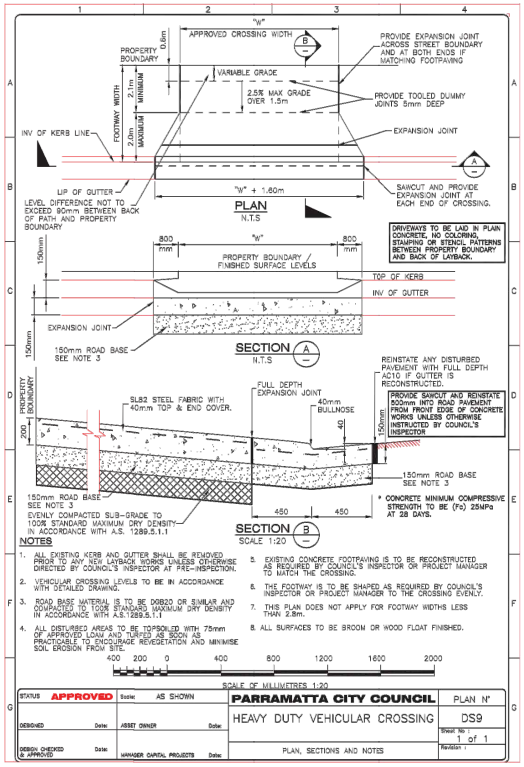


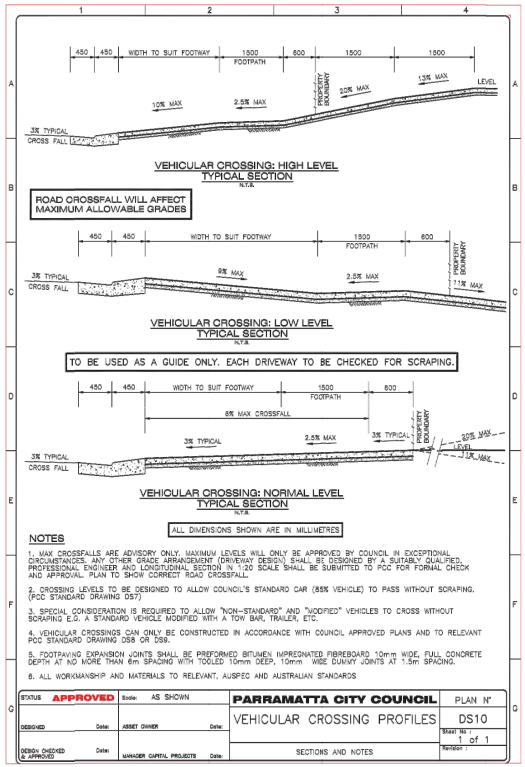


Figure 3.2 Typical Cross Fall Diagram: Priority B

Preferred where maximum allowable slope has to be achieved by providing maximum 2.5% cross fall for 1800 wide clear path of travel and 5% cross fall for the rest.

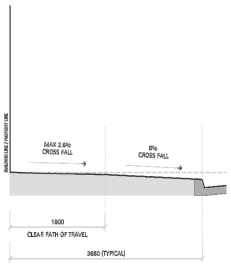
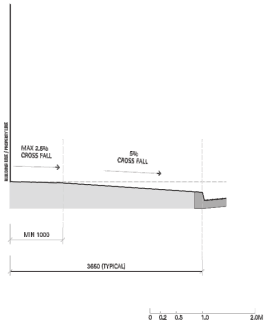


Figure 3.3 Typical Cross Fall Diagram: Priority C

Preferred where maximum allowable slope has to be achieved by providing maximum 2.5% cross fall for minimum 1000 wide clear path of travel and 5% cross fall for the rest.



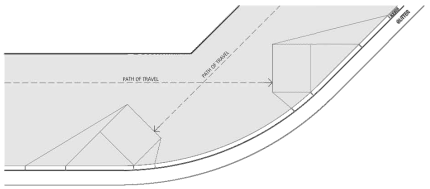


Figure 3.12 Kerb Ramps Aligned with Path of Travel: Example B

4. COORDINATE KERB RAMPS WITH THOSE ON THE OPPOSITE SIDE OF THE STREET

Kerb ramps to be aligned across intersections as illustrated in Figure 3.13.

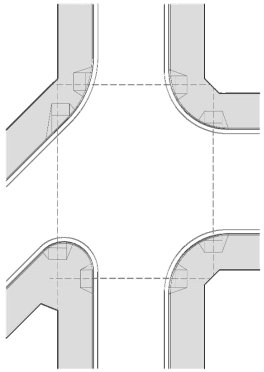
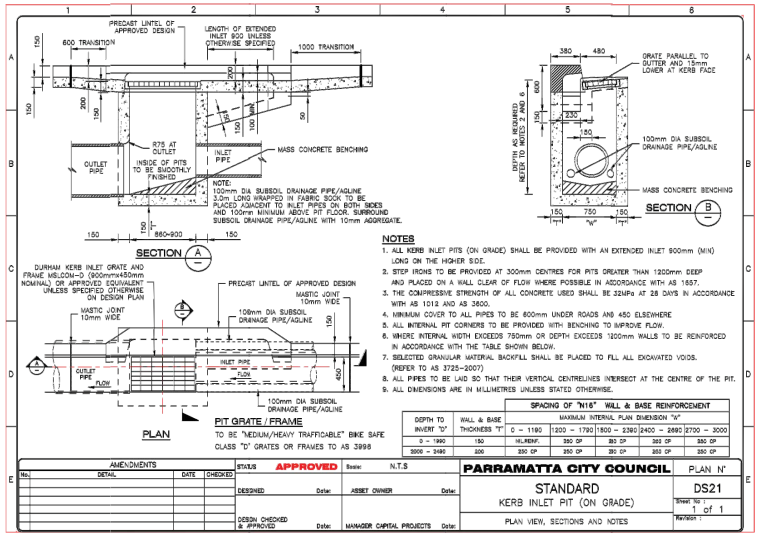


Figure 3.13 Kerb Ramps Aligned Across Streets



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DETAIL SHEET 1

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