PROPOSED DEVELOPMENT

1-7 Boyle Street, Sutherland 2232

greenview Job No: 180332

GENERAL NOTES

1. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE NOMINATED OR APPLICABLE COUNCIL SPECIFICATION.
2. THE CONTRACTOR SHOULD REPORT ANY DISCREPANCIES ON THE DRAWINGS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN.
3. CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE PERMISSION OF THE OWNER.
4. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED OR REMOVED FROM SITE.
5. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING.
6. ALL DRAINAGE LINES THOUGH ADJACENT LOTS SHALL BE CONTAINED WITHIN EASEMENTS CONFORMING TO COUNCIL'S STANDARDS.
7. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL PROVIDE A TRAFFIC MANAGEMENT PLAN PREPARED BY AN ACCREDITED PERSON IN ACCORDANCE WITH RMS REQUIREMENTS, FOR ANY WORK ON OR ADJACENT TO PUBLIC ROADS, PLAN TO BE SUBMITTED TO COUNCIL & RMS AS REQUIRED.
8. THESE PLANS SHALL BE A READ IN CONJUNCTION WITH OTHER RELEVANT CONSULTANTS' PLANS, SPECIFICATIONS, CONDITIONS OF DEVELOPMENT CONSENT AND CONSTRUCTION CERTIFICATE REQUIREMENTS.
9. THE BUILDER/CONTRACTOR SHALL LOCATE ALL EXISTING PUBLIC UTILITY SERVICES WITHIN THE SITE, FOOTPATH AREA AND ROAD RESERVE PRIOR TO THE COMMENCEMENT OF ANY WORKS. ALL LOCATIONS AND LEVELS OF SERVICES SHALL BE REPORTED TO THE STORMWATER ENGINEER PRIOR TO THE COMMENCEMENT OF ANY WORKS TO ENSURE THERE ARE NO OBSTRUCTIONS IN THE LINE OF THE DRAINAGE DISCHARGE PIPES.
10. THE BUILDER IS TO VERIFY ALL LEVELS ON SITE PRIOR TO COMMENCING CONSTRUCTION.
11. ALL THE CLEANING EYES (OR INSPECTION EYES) FOR THE UNDERGROUND PIPES HAVE TO BE TAKEN UP TO THE FINISHED GROUND LEVEL FOR EASY IDENTIFICATION AND MAINTENANCE PURPOSES
12. ALL TERRACE FLOOR AND PLANTER GRATES TO HAVE FIRE COLLARS FITTED.
13. ALL PITS HAVING AN INTERNAL DEPTH THAT EXCEEDS 1.0m SHALL BE PROVIDED WITH GALVANIZED STEP IRON'S AT 300 mm CENTERS PLACED IN A STAGGERED PATTERN AND SHALL BE IN ACCORDANCE WITH THE AUSTRALIAN STANDARDS AS4198-1994.
14. ALL MULCHING TO BE USED WITHIN THE AREA DESIGNATED AS ON SITE DETENTION STORAGE SHALL BE OF A NON-FLOATABLE MATERIAL SUCH AS DECORATIVE RIVER GRAVEL. BARK MULCHING SHALL NOT BE USED WITHIN THE DETENTION STORAGE AREA.
15. PRIOR TO COMMENCING ANY WORKS ON THE SITE, THE BUILDER SHALL ENSURE THAT THE INVERT LEVELS OF WHERE THE SITE STORMWATER SYSTEM CONNECTION INTO COUNCIL'S KERB/DRAINAGE SYSTEM MATCH THE DESIGN LEVELS. ANY DISCREPANCIES SHALL BE REPORTED TO THE DESIGN ENGINEER IMMEDIATELY.
16. GREENVIEW IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY SURVEY INFORMATION PROVIDED ON THIS DRAWING.
17. ALL LEVELS SHOWN ARE EXPECTED TO BE TO A.H.D.
18. ALL CHAINAGES AND LEVELS ARE IN METERS, AND DIMENSIONS IN MILLIMETRES, UNLESS NOTED OTHERWISE.
19. THE SURVEY INFORMATION ON THIS DRAWING HAS BEEN PROVIDED BY THE ARCHITECT.
20. CONTRACTORS SHALL ARRANGE FOR THE WORKS TO BE SET OUT BY A REGISTERED SURVEYOR.
21. W.A.E DRAWINGS BY A REGISTERED SURVEYOR ARE REQUIRED PRIOR TO CERTIFICATION OF DRAINAGE.
22. WHERE THESE PLANS ARE NOTED FOR DEVELOPMENT APPLICATION PURPOSES ONLY, THEY SHALL NOT BE USED FOR OBTAINING A CONSTRUCTION CERTIFICATE NOR USED FOR CONSTRUCTION PURPOSES WITHOUT WRITTEN APPROVAL.

RAINWATER REUSE SYSTEM NOTES

1. RAINWATER SUPPLY PLUMBING TO BE CONNECTED TO OUTLETS WHERE REQUIRED BY BASIX CERTIFICATE (BY OTHERS)
2. NO DIRECT CONNECTION BETWEEN TOWN WATER SUPPLY AND THE RAINWATER SUPPLY
3. PROVIDE AN APPROVED STOP VALVE AND/OR PRESSURE LIMITING VALVE AT THE RAINWATER TANK
4. PROVIDE AT LEAST ONE EXTERNAL HOSE COCK ON THE TOWN WATER SUPPLY FOR FIRE FIGHTING.
5. PROVIDE APPROPRIATE FLOAT VALVE AND/OR SOLENOID VALVES TO CONTROL TOWN WATER SUPPLY INLET TO TANK IN ORDER TO ACHIEVE THE TOP-UP INDICATED ON THE TYPICAL DETAIL.
6. ALL PLUMBING WORKS ARE TO BE CARRIED OUT BY LICENSED PLUMBERS IN ACCORDANCE WITH AS/NZ3500.1 NATIONAL PLUMBING AND DRAINAGE CODE.
7. PRESSURE PUMP ELECTRICAL CONNECTION TO BE CARRIED OUT BY A LICENSED ELECTRICIAN.
8. ONLY ROOF RUN-OFF IS TO BE DIRECTED TO THE RAINWATER TANK SURFACE WATER INLETS ARE NOT TO BE CONNECTED.
9. PIPE MATERIALS FOR RAINWATER SUPPLY PLUMPING ARE TO BE APPROVED MATERIALS TO AS/NZ3500 PART 1 SECTION 2 AND TO BE CLEARLY AND PERMANENTLY IDENTIFIED AS 'RAINWATER'. THIS MAY BE ACHIEVED FOR BELOW GROUND PIPES USING IDENTIFICATION TAPE (MADE IN ACCORDANCE WITH AS2648) OR FOR ABOVE GROUND PIPES BY USING ADHESIVE PIPE MARKERS (MADE IN ACCORDANCE WITH AS1345)
10. EVERY RAINWATER SUPPLY OUTLET POINT AND THE RAINWATER TANK ARE TO BE LABELED 'RAINWATER' ON A METALLIC SIGN IN ACCORDANCE WITH AS1319
11. ALL INLETS AND OUTLETS TO THE RAINWATER TANK ARE TO HAVE SUITABLE MEASURES PROVIDED TO PREVENT MOSQUITO AND VERMIN ENTRY.
12. ALL DOWNPIPES CHARGED TO THE RAINWATER TANK ARE TO BE SEALED UP TO GUTTER LEVEL AND BE PRESSURE TESTED AND CERTIFIED
13. TOWN WATER CONNECTION TO RAINWATER TANK TO BE TO THE SATISFACTION OF THE REGULATORY AUTHORITY. THIS MAY REQUIRE PROVISION OF

    13.1. PERMANENT AIR GAP
    13.2. BACKFLOW PREVENTION DEVICE

EARTHWORK NOTES

1. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS
2. THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES AND DEBRIS ETC. TO THE EXTENT OF THE PROPOSED DEVELOPED AREA.
3. PROVIDE PROTECTION BARRIERS TO PROTECTED/SENSITIVE AREAS PRIOR TO ANY BULK EXCAVATION.
4. OVER FULL AREA OF EARTHWORKS, CLEAR VEGETATION, RUBBISH, SLABS ETC. AND STRIP TOP SOIL. AVERAGE 200mm THICK. REMOVE FROM SITE, EXCEPT TOP SOIL FOR RE-USE.
5. CUT AND FILL OVER THE SITE TO LEVELS REQUIRED.
6. PRIOR TO ANY FILLING IN AREAS OF CUT OR IN EXISTING GROUND, PROOF ROLL THE EXPOSED SURFACE WITH A ROLLER OF MINIMUM WEIGHT OF 5 TONNES WITH A MINIMUM OF 10 PASSES.
7. EXCAVATE AND REMOVE ANY SOFT SPOTS ENCOUNTERED DURING PROOF ROLLING AND REPLACE WITH APPROVED FILL COMPACTED IN LAYERS, THE WHOLE OF THE EXPOSED SUBGRADE AND FILL SHALL BE COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2%.
8. FOR ON SITE FILLING AREAS, THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.
9. WHERE HARD ROCK IS EXPOSED IN THE EXCAVATED SUB-GRADE, THIS WILL BE INSPECTED AND A DECISION MADE ON THE LEVEL TO WHICH EXCAVATION IS TAKEN.
10. FILL IN 200mm MAXIMUM (LOOSE THICKNESS) LAYERS TO UNDERSIDE OF BASECOURSE USING THE EXCAVATED MATERIAL AND COMPACTED TO 98% STANDARD (AS 1289 5.1.1). MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2% SHOULD THERE BE INSUFFICIENT MATERIAL FROM SITE EXCAVATIONS, IMPORT AS NECESSARY CLEAN GRANULAR FILL TO APPROVAL.
11. COMPACTION TESTING SHALL BE CARRIED OUT AT THE RATE OF 2 TESTS PER 1000SQ METRES PER LAYER BY A REGISTERED NATA LABORATORY. THE COSTS OF TESTING AND RE-TESTING ARE TO BE ALLOWED FOR BY THE BUILDER.
12. BATTERS TO BE AS SHOWN, OR MAXIMUM 1 VERT : 4 HORIZ.
13. ALL CONDUITS AND MAINS SHALL BE LAID PRIOR TO LAYING FINAL PAVEMENT.
14. ALL BATTERS AND FOOTPATHS ADJACENT TO ROADS SHALL BE TOP SOILED WITH 150mm APPROVED LOAM AND SEEDED UNLESS OTHERWISE SPECIFIED.

SAFETY IN DESIGN NOTES

THERE ARE INHERENT RISKS WITH CONSTRUCTING, MAINTAINING, OPERATING, DEMOLISHING, DISMANTLING AND DISPOSING. WE NOTE THIS DESIGN IS TYPICAL OF SIMILAR DESIGNS, AS FAR AS IS REASONABLY PRACTICABLE RISKS HAVE BEEN ELIMINATED OR MINIMISED THROUGH THE DESIGN PROCESS. HAZARD CONTROLS MUST STILL BE IMPLEMENTED BY THE CONTRACTOR, OWNER OR OPERATOR TO ENSURE THE SAFETY OF WORKERS. GREENVIEW ASSESSMENT DID NOT IDENTIFY ANY UNIQUE RISKS ASSOCIATED WITH THE DESIGN.

DRAINAGE INSTALLATION

RCP CONVENTIONAL INSTALLATIONS & ROAD CROSSINGS

1. SUPPLY & INSTALLATION OF DRAINAGE WORKS TO BE IN ACCORDANCE WITH THESE DRAWINGS, THE COUNCIL SPECIFICATION AND THE CURRENT APPLICABLE AUSTRALIAN STANDARDS.
2. BACKFILL SHALL BE PLACED & COMPACTED IN ACCORDANCE WITH THE SPECIFICATION. A GRANULAR GRAVEL AGGREGATE MATERIAL (<10mm) BACKFILL IS RECOMMENDED FOR THE BEDDING, HAUNCH SUPPORT AND SIDE ZONE DUE TO IT'S SELF COMPACTING ABILITY.
3. A MINIMUM OF 150mm CLEARANCE IS TO BE PROVIDED BETWEEN THE OUTSIDE OF THE PIPE BARREL AND THE TRENCH WALL FOR PIPES < 600 DIA. 200mm CLEARANCE FOR PIPES 600 TO 1200 DIA AND D/8 CLEARANCE FOR PIPES > 1200 DIA.
4. BEDDING OF THE PIPELINES IS TO BE TYPE 'HS2' IN ACCORDANCE WITH THE STANDARDS AND AS FOLLOWS:

a.COMPACTED GRANULAR MATERIAL IS TO COMPLY WITH THE FOLLOWING GRADINGS:

M	19	2.3600	0.6000	0.3000	0.1500	0.0750
% MASS PASSING	100	50-100	20-90	10-60	0-25	0-10

-AND THE MATERIAL PASSING THE 0.075 SIEVE HAVING LOW PLASTICITY AS DESCRIBED IN APPENDIX D OF AS1726.

b.BEDDING DEPTH UNDER THE PIPE TO BE 100mm.

c.BEDDING MATERIAL TO BE EXTENDED FROM THE TOP OF THE BEDDING ZONE UP TO 0.3 TIMES PIPE OUTSIDE DIAMETER. THIS REPRESENTS THE 'HAUNCH ZONE.'

d.THE BEDDING & HAUNCH ZONE MATERIAL IS TO BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 98% WITHIN ROAD RESERVES AND TRAFFICABLE AREAS AND 95% ELSEWHERE FOR COHESIVE MATERIAL OR A MINIMUM DENSITY INDEX OF 70% IN ACCORDANCE WITH THE STANDARDS FOR COHESIONLESS MATERIAL.

e.COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED
ORGANISATION WITH A NATA CERTIFIED LABORATORY FOR ALL DRAINAGE LINES LAID WHOLLY OR IN PART UNDER THE KERB & GUTTER OR PAVEMENT

STORMWATER DRAINAGE NOTES

1. STORMWATER DRAINAGE SHALL BE GENERALLY IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARDS INCLUDING AS3500.3 , NCC AND COUNCIL'S SPECIFICATION.
2. PIPES OF 225mm DIA. AND UNDER SHALL BE UPVC
3. PIPES OF 300mm DIA. AND LARGER SHALL BE FRC OR CONCRETE CLASS 2 RUBBER RING JOINTED UNO.
4. ALL FRC OR RCP STORMWATER PIPES WITHIN ROAD RESERVE AREAS TO BE CLASS 3 U.N.O. BY COUNCILS SPECIFICATION.
5. PIPES SHALL GENERALLY BE LAID AT THE GRADES INDICATED ON THE DRAWINGS.
6. MINIMUM COVER TO PIPES 300mm DIA. AND OVER GENERALLY SHALL BE 600mm IN CARPARK & ROADWAY AREAS UNO.
7. ALL PIPES LOCATED IN LANDSCAPE AREAS TO HAVE 300mm COVER. WHERE NOT POSSIBLE AND COVER IS BETWEEN 150mm AND 300mm USE SEWER GRADE PIPE.
8. PIPES 225mm DIA AND OVER SHALL BE LAID AT 0.5% MIN. GRADE U.N.O.
9. PIPES UP TO 150mm DIA SHALL BE LAID AT 1.0% MIN. GRADE U.N.O
10. BACKFILL TRENCHES WITH APPROVED FILL COMPACTED IN 200mm LAYERS TO 98% OF STANDARD DENSITY.
11. ANY PIPES OVER 16% GRADE SHALL HAVE CONCRETE BULKHEADS AT ALL JOINTS
12. THE MINIMUM SIZES OF THE STORMWATER DRAINAGE PIPES SHALL NOT BE LESS THAN 90mm DIA FOR CLASS 1 BUILDINGS AND 100mm DIA FOR OTHER CLASSES OF BUILDING OR AS REQUIRED BY THE REGULATORY AUTHORITY.
13. DOWNPIPES SHOWN ARE INDICATIVE ONLY. REFER ARCHITECTURALS FOR FINAL LOCATIONS. ALL ROOF GUTTERING AND DOWNPIPES TO THE CURRENT AUSTRALIAN STANDARDS.
14. ALL DOWNPIPES TO BE CONSTRUCTED OF ONE MATERIAL FOR AESTHETICS REASONS AND PAINTED TO PROTECT THEM AGAINST ULTRA-VIOLET LIGHT DAMAGE. UNLESS APPROVED OTHERWISE BY HE PROJECT ARCHITECT.
15. BUILD INTO UPSTREAM FACE OF ALL PITS A 3.0m SUBSOIL LINE FALLING TO PITS TO MATCH PIT INVERTS.
16. ALL COURTYARD & LANDSCAPED PITS TO BE 450 SQUARE UNLESS NOTED OTHERWISE.
17. ALL DRIVEWAY & OSD PITS TO BE 600 SQUARE UNLESS NOTED OTHERWISE.
18. ALL PLANTER BOXES AND BALCONIES TO BE CONNECTED TO THE PROPOSED STORMWATER DRAINAGE LINE.
19. ALL STORMWATER DRAINAGE WORK TO AVOID TREE ROOTS. WHERE NOT POSSIBLE, ALL EXCAVATIONS IN VICINITY OF TREE ROOTS ARE TO BE HAND DUG.
20. GEOTEXTILE FABRIC TO BE PLACED UNDER RIP RAP SCOUR PROTECTION WHERE APPLICABLE.
21. ALL BASES OF PITS TO BE BENCHED (TO HALF PIPE DEPTH) TO THE INVERT OF THE OUTLET PIPE AND PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE.
22. ANY VARIATION TO THAT WORKS AS SHOWN ON THE APPROVED DRAWINGS ARE TO BE CONFIRMED BY THE ENGINEER PRIOR TO THE COMMENCEMENT.
23. ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
24. ALL GRATES TO HAVE CHILDPROOF LOCKS
25. ALL DOWNPIPES TO HAVE LEAF GUARDS
26. ALL WORK WITHIN COUNCIL RESERVE AREAS TO BE INSPECTED BY COUNCIL PRIOR TO BACKFILLING.
27. COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
28. WATER PROOF ALL CONCRETE BALCONIES & ROOFS TO ARCHITECTS DETAILS
29. ALL BALCONIES TO HAVE FLOOR WASTE AND 1% FALL WITH SAFETY OVERFLOW.
30. ALL SUBSOIL DRAINAGE SHALL BE A MINIMUM OF Ø65mm AND SHALL BE PROVIDED WITH A FILTER SOCK. THE SUBSOIL DRAINAGE SHALL BE INSTALLED IN ACCORDANCE WITH DETAILS TO BE PROVIDED BY THE LANDSCAPE CONSULTANT.
31. SUBSOIL DRAINAGE PIPES AND FITTINGS SHALL BE PERFORATED PLASTIC TO CURRENT AUSTRALIAN STANDARDS. LAY PIPES ON FLOOR OF TRENCH GRADED AT 1% MIN. AND OVERLAY WITH FILTER MATERIAL EXTENDING TO WITHIN 200mm OF SURFACE. PROVIDE FILTER FABRIC OF PERMEABLE POLYPROPYLENE BETWEEN FILTER MATERIAL AND TOPSOIL. PROVIDE FLUSHING EYE'S AT HIGH POINTS OR TO COUNCILS REQUIREMENTS.
32. GRATES TO BE IN ACCORDANCE WITH TABLE BELOW:

PIT GRATE INLINE TYPE

GRATE TYPE	TRAFFIC CONDITIONS
A - EXTRA LIGHT DUTY	FOOTWAYS AND AREAS ACCESSIBLE ONLY TO PEDESTRUANS AND PEDAL CYCLISTS.
B - LIGHT DUTY	FOOTWAYS THAT CAN BE MOUNTED BY VEHICLES.
C - MEDIUM DUTY	MALLS AND PEDESTRIAN AREAS OPEN TO SLOW MOVING COMMERCIAL VEHICLES.
D - HEAVY DUTY	CARRIGEWAYS OF ROADS AND AREAS OPEN TO COMMERCIAL VEHICHLES.
TABLE AS PER AS3996 - 2006. ENGINEER TO BE NOTIFIED IF LOAD CONDITIONS LISTED ABOVE ARE EXCEEDED.	

33. COVER TO PIPE TO BE AS PER TABLE BELOW:

COVER TABLE

LOCATION	PIPE TYPE	COVER
LANDSCAPE	PVC	300
LANDSCAPE (SINGLE DWELLING)	PVC	100
UNDER TRAFFICABLE AREA	PVC	100 BELOW UNDERSIDE OF PAVEMENT
CONCRETE	STEEL	NIL BELOW UNDERSIDE OF PAVEMENT
ROADS	RCP	500 BELOW UNDERSIDE OF PAVEMENT

RECOMMENDED SAFETY SIGNS

WARNING
PUMP OUT SYSTEM FAILURE IN BASEMENT WITH LIGHT IS FLASHING AND SIREN SOUNDING

BASEMENT PUMP OUT FAILURE WARNING SIGN

1. SIGN SHALL BE PLACED IN A CLEAR AND VISIBLE LOCATION WHERE VEHICLES ENTER THE BASEMENT

DANGER
CONFINED SPACE
NO ENTRY WITHOUT
CONFINED SPACE TRAINING

CONFINED SPACE DANGER SIGN

1. A CONFINED SPACE DANGER SIGN SHALL BE POSITIONED IN A LOCATION AT ALL ACCESS POINTS, SUCH THAT IT IS CLEARLY VISIBLE TO PERSONS PROPOSING TO ENTER THE BELOW GROUND TANKS CONFINED SPACE.
   - MINIMUM DIMENSIONS OF THE SIGN
   - 300mm x 450mm (LARGE ENTRIES, SUCH AS DOORS)
   - 250mm x 180mm (SMALL ENTRIES SUCH AS GRATES & MANHOLES)
2. THE SIGN SHALL BE MANUFACTURED FROM COLOUR BONDED ALUMINUM OR POLYPROPYLENE
3. SIGN SHALL BE AFFIXED USING SCREWS AT EACH CORNER OF THE SIGN.

EXISTING SERVICES

DANGER
WHEN EXCAVATING WITHIN ANY SITE, FOOTPATH AND ROADWAY, ALL SERVICES SHALL BE LOCATED PRIOR TO COMMENCEMENT OF THE EXCAVATION WORKS. CONTACT 'DIAL BEFORE YOU DIG' ON 1100 OR GOT THE WEB SITE 'www.1100.com.au'

ABBREVIATIONS

DP	DOWN PIPE
FFL	PROPOSED FINISHED FLOOR LEVEL
GL	PROPOSED PIT SURFACE LEVEL
IL	PROPOSED PIT INVERT LEVEL
IO	INSPECTION OPENING
K&G	KERB & GUTTER
P	FINISHED PAVEMENT LEVEL
RCP	REINFORCED CONCRETE PIPE
RKG	ROLL KERB & GUTTER
RL	FINISHED SURFACE LEVEL
RWO	RAINWATER DRAINAGE OUTLET
RWT	PROPOSED RAINWATER TANK
TK	TOP OF NEW KERB LEVEL
TOW	TOP OF NEW RETAINING WALL LEVEL
TWL	TOP OF WATER LEVEL
uPVC	RIGID PVC PIPE
VD	VERTICAL DROPPER

COLOUR LEGEND

- NEW (REFER TO SCHEDULES FOR COLOUR DEFINITION)
- EXISTING
- REMOVED OR RELOCATED

GREENVIEW CIVIL SHEET LIST

REV.	DATE	BY	DESCRIPTION
1	19.09.18	MJE	ISSUED FOR APPROVAL

DESIGN: AMcK
DRAWN: MJE
SCALE: 1 : 100
SIZE: A1

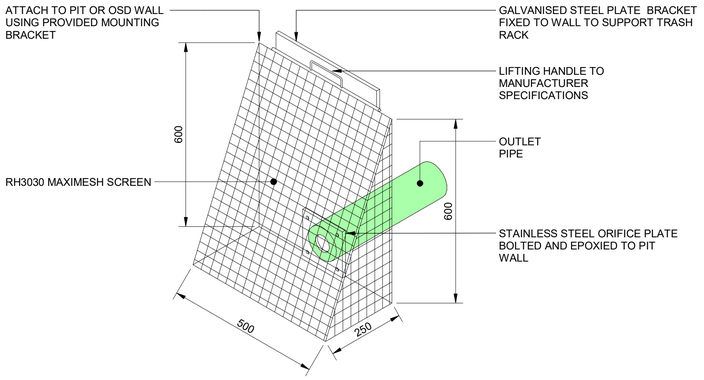
greenview CONSULTING

PROPOSED DEVELOPMENT
1-7 Boyle Street, Sutherland 2232

Taylormade Pty Ltd

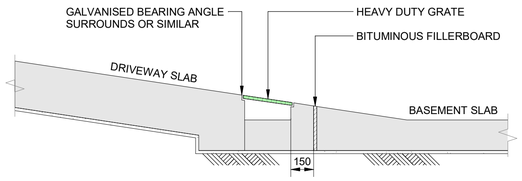
CIVIL DESIGN
NOTES & LEGENDS

180332
PRELIMINARY
C01 1

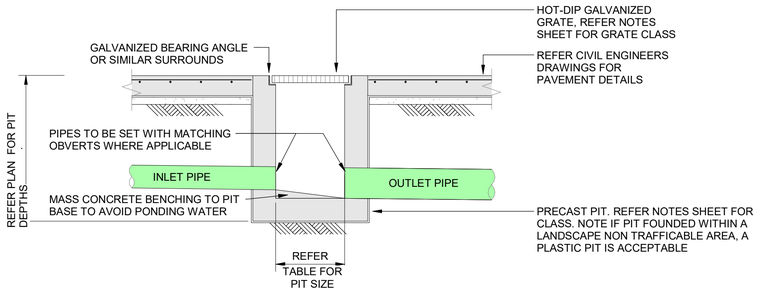


PROVIDE PRE-MADE TRASH SCREEN AS PER MASCOT ENGINEERING "MULTI-PURPOSE TRASH SCREENS" OR APPROVED EQUIVALENT

TYPICAL TRASH SCREEN DETAIL
Scale: 1 : 10



TYPICAL GRATED DRAIN DETAIL
Scale: 1 : 20

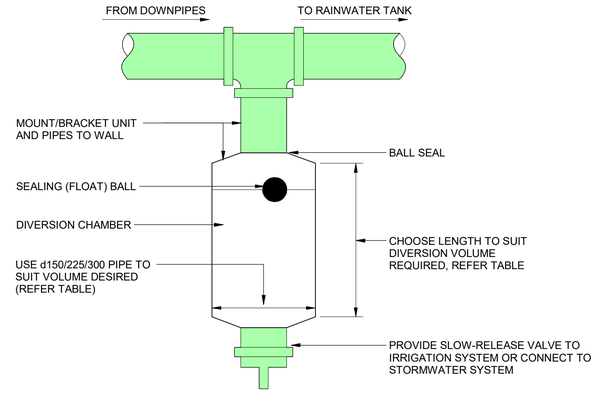


1. ENSURE CLIMB IRONS ARE PROVIDED UNDER LID AT 300 CTS TO COUNCIL'S SPECIFICATIONS WHERE PIT DEPTH IS DEEPER THAN 1000.
2. GREENVIEW RECOMMENDS THE PLUMBER PROVIDES 90Dia x 3000 LONG SUBSOIL DRAINAGE STUB PIPE SURROUNDED WITH 100mm THICKNESS OF NOMINAL 20mm COARSE FILTER MATERIAL WRAPPED IN GEOTEXTILE FILTER FABRIC. (BIDUM A24 OR APPROVED SIMILAR). TO BE PARALLEL TO UPSTREAM SIDE OF EACH INLET PIPE.

PIT SIZE

DEPTH	PIT DIMENSION
0 - 600	450 mm x 450 mm
600 - 900	600 mm x 600 mm
900 - 1200	600 mm x 900 mm
1200 +	900 mm x 900 mm

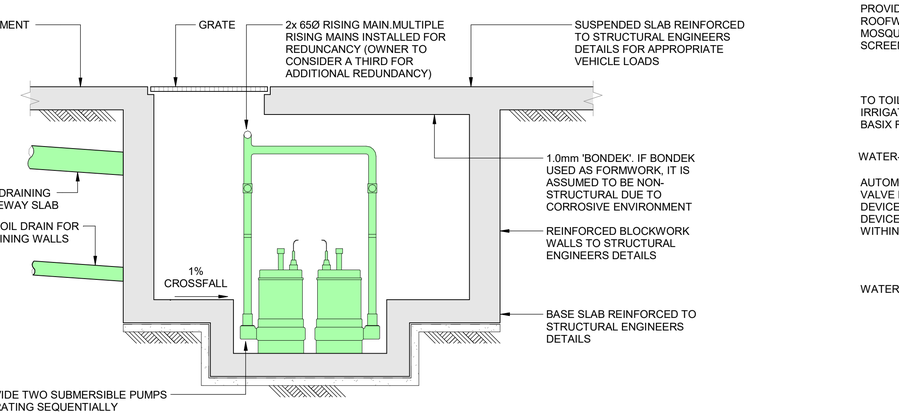
TYPICAL CONCRETE INLET PIT - CONCRETE SURFACE
Scale: 1 : 20



DIVERSION CHAMBER VOLUMES [L]

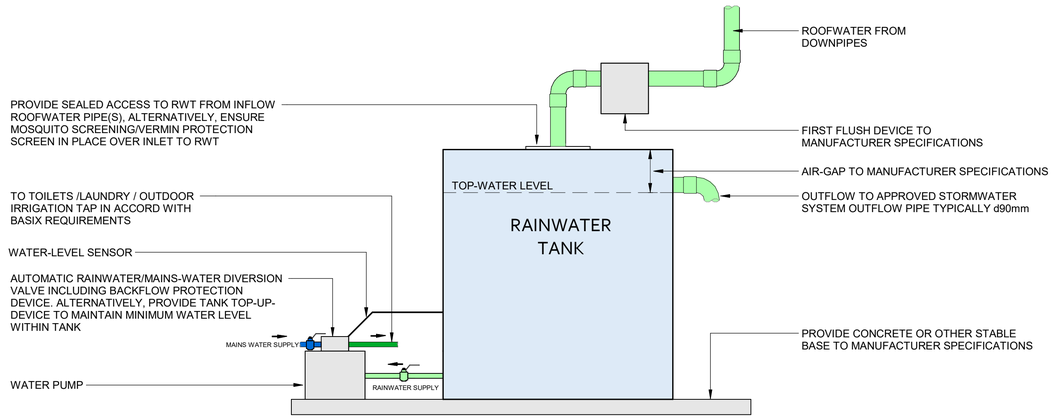
LENGTH [mm]	PIPE SIZE	150Ø	225Ø	300Ø
	250	4	10	18
	500	9	20	35
	1000	18	40	71
	1500	27	60	106

TYPICAL WALL MOUNTED FIRST-FLUSH DEVICE
Scale: 1 : 10



NOTES:
1. REFER TO HYDRAULIC ENGINEERS DEAILS FOR PUMP SPECIFICATIONS.

BASEMENT PUMPOUT TANK DETAIL
Scale: 1 : 20



1. PROVIDE DIVERSION DEVICE AS SHOWN TO ENSURE MAINS-WATER SWITCH-OVER OCCURS ONCE WATER LEVEL IN TANK REACHES THE MINIMUM LEVEL. ALTERNATIVELY, A TOP-UP DEVICE (OR AIR-BREAK SYSTEM) MAY BE EMPLOYED TO ENSURE THE MINIMUM AFTER LEVEL IN THE TANK IS MAINTAINED.
2. RAINWATER FIXTURES, INFLOW AND OUTFLOW PIPES TO AS3500.1 (2003).
3. ANY CONTAINMENT/BACKFLOW PREVENTION DEVICE TO BE IN ACCORD WITH THE LOCAL WATER AUTHORITY.
4. RAINWATER USAGE AND MINIMUM VOLUMES TO BASIX OR AS SPECIFIED BY THE STORMWATER ENGINEER.
5. ALL PIPING SYSTEMS DELIVERING RAINWATER TO TAPS, FIXTURES, OUTLETS OR APPLIANCES MUST BE INSTALLED BY A LICENSED PLUMBER.

TYPICAL SLIMLINE (ABOVE-GROUND) RAINWATER TANK
Scale: 1 : 20

REV.	DATE	BY	DESCRIPTION	REV.	DATE	BY	DESCRIPTION
1	19.09.18	MJE	ISSUED FOR APPROVAL				

DESIGN: AMcK
DRAWN: MJE
SCALE: As indicated
SIZE: A1

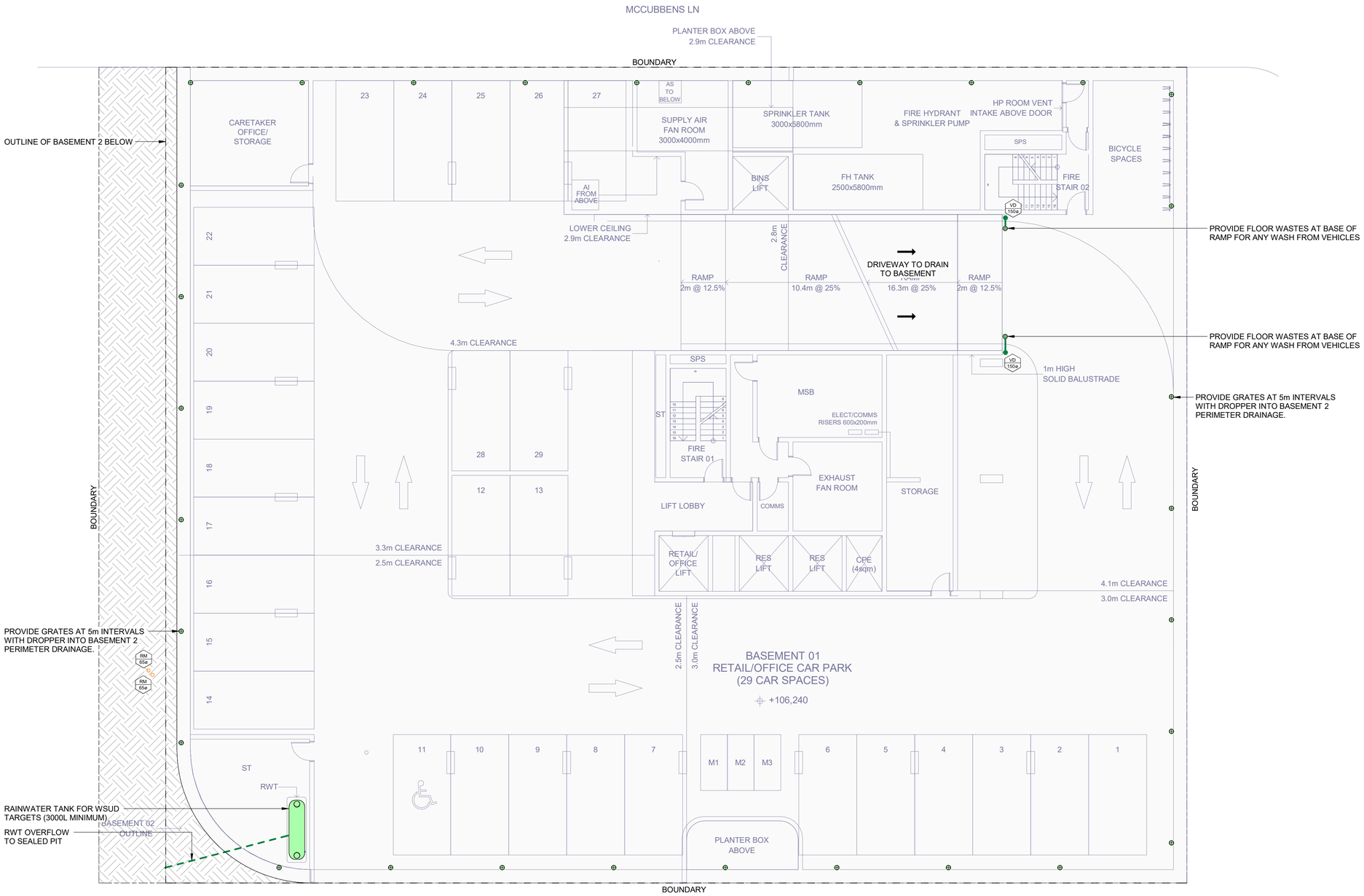
greenview CONSULTING

PROPOSED DEVELOPMENT
1-7 Boyle Street, Sutherland 2232

Taylormade Pty Ltd

CIVIL DESIGN
SITE STORMWATER DETAILS SHEET

180332
PRELIMINARY
C07 1



LEGEND

- HARDSTAND
- EARTH

CIV - FIXTURES SCHEDULE		
	TYPE	DESCRIPTION
		GRATED STORMWATER PIT
		PERIMETER GRATES
		PERIMETER STRIP DRAIN
		RAINWATER OUTLET
		SEALED STORMWATER PIT
	300W	GRATED STRIP DRAIN
	3000L RWT	RAINWATER TANK 3000L

CIV - STANDARD SYMBOLS	
	DESCRIPTION
	FALL ARROW

CIV - STORMWATER SERVICES		
	TYPE	DESCRIPTION
	RM	RISING MAIN
	SS	SUB SOIL DRAINAGE
	STW	STORMWATER

BASEMENT 1 DRAINAGE PLAN

Scale: 1 : 100

-10 -5 0 10

SCALE 1:100

REV.	DATE	BY	DESCRIPTION	REV.	DATE	BY	DESCRIPTION
1	19.09.18	MJE	ISSUED FOR APPROVAL				

DESIGN: AMcK
DRAWN: MJE
SCALE: 1 : 100
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Taylormade Pty Ltd

CIVIL DESIGN
BASEMENT 1 DRAINAGE PLAN

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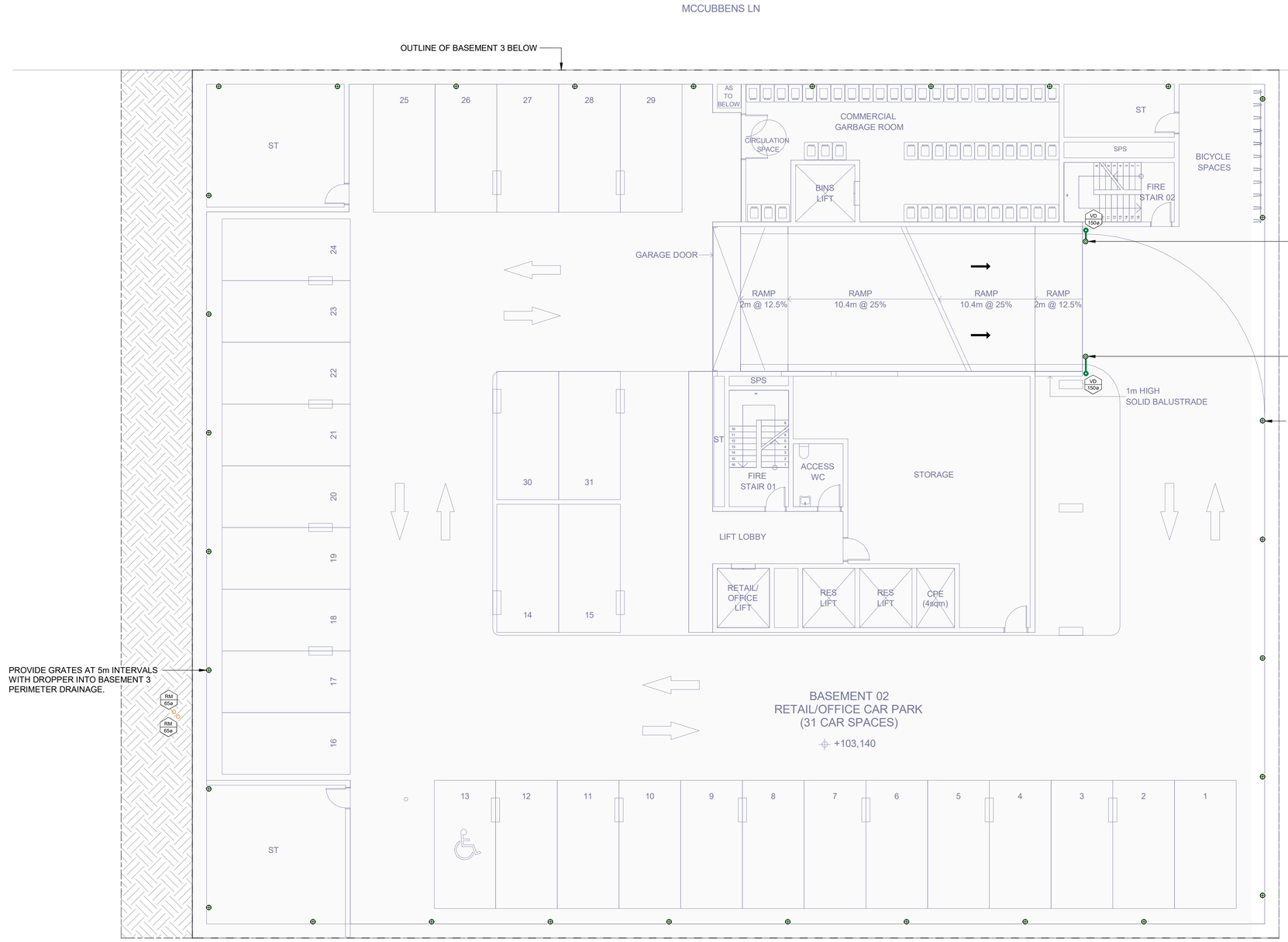
PRELIMINARY
C05 1



LEGEND

- HARDSTAND
- EARTH

CIV - FIXTURES SCHEDULE		
	TYPE	DESCRIPTION
		GRATED STORMWATER PIT
		PERIMETER GRATES
		PERIMETER STRIP DRAIN
		RAINWATER OUTLET
		SEALED STORMWATER PIT
	300W	GRATED STRIP DRAIN
	3000L RWT	RAINWATER TANK 3000L

CIV - STANDARD SYMBOLS	
	DESCRIPTION
	FALL ARROW

CIV - STORMWATER SERVICES		
	TYPE	DESCRIPTION
	RM	RISING MAIN
	SS	SUB SOIL DRAINAGE
	STW	STORMWATER

BASEMENT 2 DRAINAGE PLAN

Scale: 1 : 100

-10 -5 0 10

SCALE 1:100

REV.	DATE	BY	DESCRIPTION	REV.	DATE	BY	DESCRIPTION
1	19.09.18	MJE	ISSUED FOR APPROVAL				

DESIGN: AMcK
DRAWN: MJE
SCALE: 1 : 100
SIZE: A1

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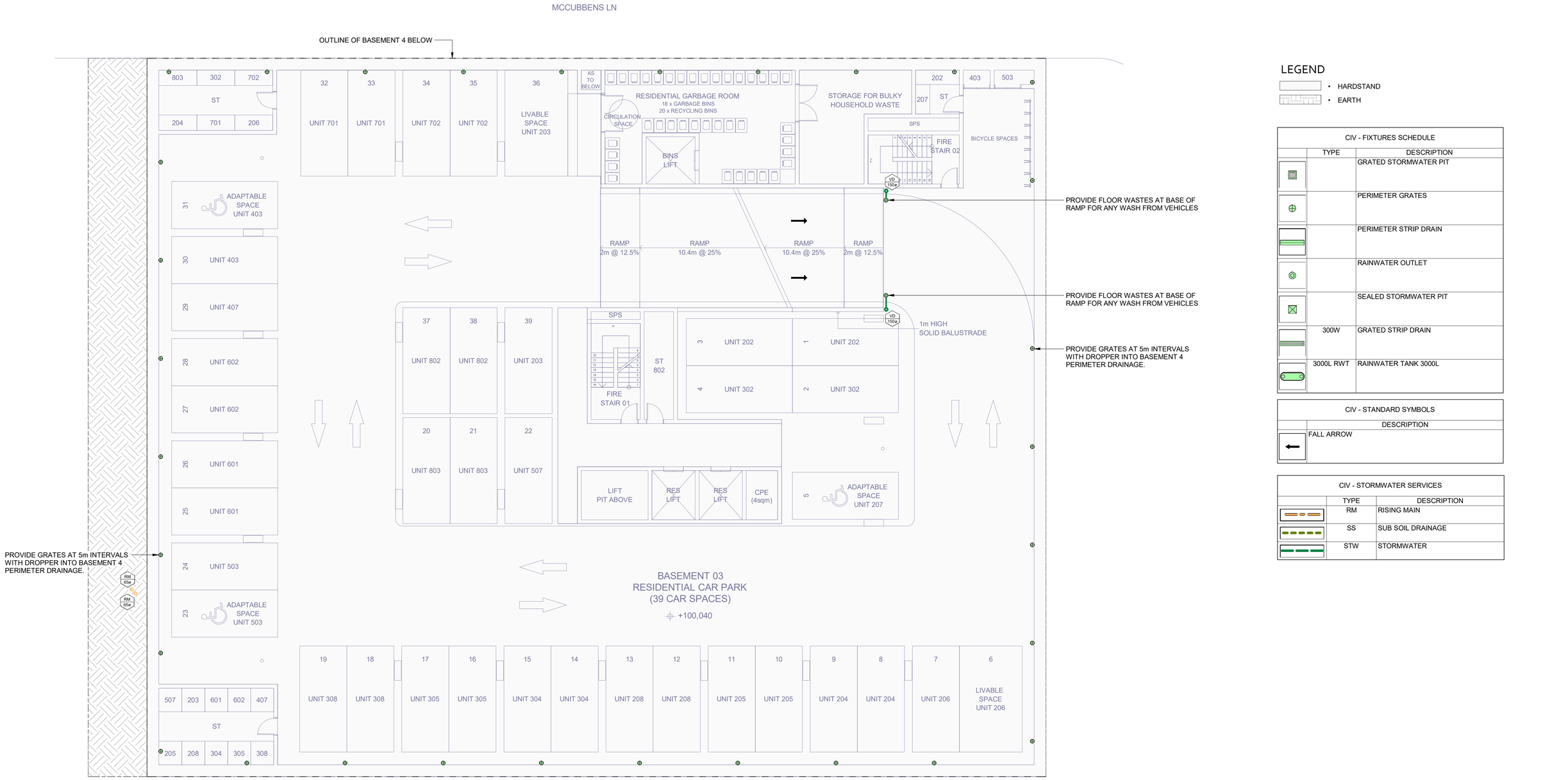
PROPOSED DEVELOPMENT
1-7 Boyle Street, Sutherland 2232

Taylormade Pty Ltd

CIVIL DESIGN
BASEMENT 2 DRAINAGE PLAN

180332
PRELIMINARY
C04 1



LEGEND

- HARDSTAND
- EARTH

CIV - FIXTURES SCHEDULE		
	TYPE	DESCRIPTION
		GRATED STORMWATER PIT
		PERIMETER GRATES
		PERIMETER STRIP DRAIN
		RAINWATER OUTLET
		SEALED STORMWATER PIT
	300W	GRATED STRIP DRAIN
	3000L RWT	RAINWATER TANK 3000L

CIV - STANDARD SYMBOLS	
	DESCRIPTION
	FALL ARROW

CIV - STORMWATER SERVICES		
	TYPE	DESCRIPTION
	RM	RISING MAIN
	SS	SUB SOIL DRAINAGE
	STW	STORMWATER

BASEMENT 3 DRAINAGE PLAN

Scale: 1 : 100

-10 -5 0 10
SCALE 1:100

REV.	DATE	BY	DESCRIPTION	REV.	DATE	BY	DESCRIPTION
1	19.09.18	MJE	ISSUED FOR APPROVAL				

DESIGN: AMcK
DRAWN: MJE
SCALE: 1 : 100
SIZE: A1

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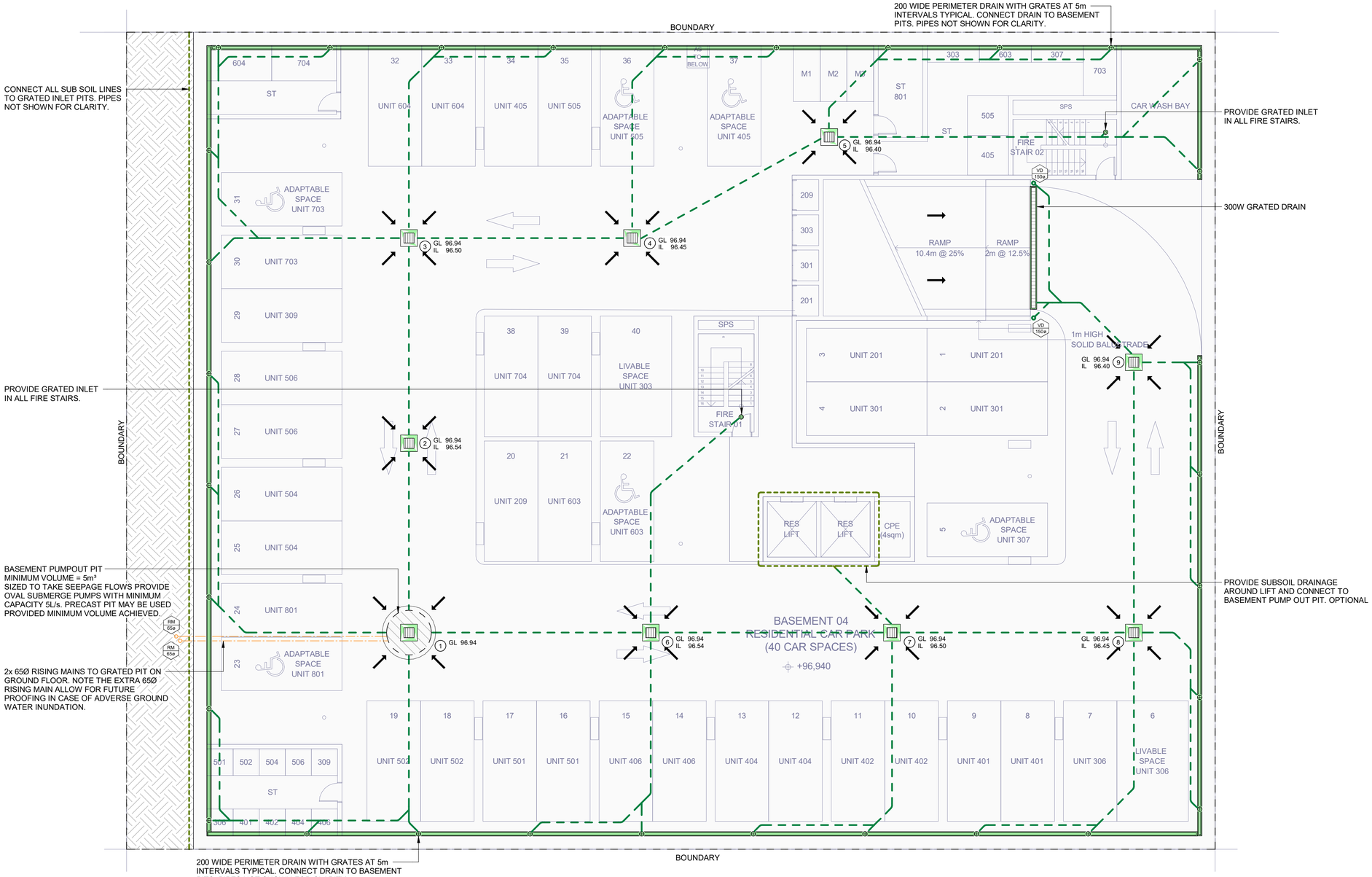
PROPOSED DEVELOPMENT
1-7 Boyle Street, Sutherland 2232

Taylormade Pty Ltd

CIVIL DESIGN
BASEMENT 3 DRAINAGE PLAN

180332
PRELIMINARY
C03 1



LEGEND

- HARDSTAND
- EARTH

CIV - FIXTURES SCHEDULE		
	TYPE	DESCRIPTION
		GRATED STORMWATER PIT
		PERIMETER GRATES
		PERIMETER STRIP DRAIN
		RAINWATER OUTLET
		SEALED STORMWATER PIT
	300W	GRATED STRIP DRAIN
	3000L RWT	RAINWATER TANK 3000L

CIV - STANDARD SYMBOLS	
	DESCRIPTION
	FALL ARROW

CIV - STORMWATER SERVICES		
	TYPE	DESCRIPTION
	RM	RISING MAIN
	SS	SUB SOIL DRAINAGE
	STW	STORMWATER

BASEMENT 4 DRAINAGE PLAN

Scale: 1 : 100

1. ALL PIPES TO BE 100mmØ @ 1% MINIMUM UNLESS KNOWN OTHERWISE.
2. ALL BASES OF PITS TO BE BENCHED (TO HALF PIPE DEPTH) TO THE INVERT OF THE OUTLET PIPE WITH ALL PIPES CUT FLUSH WITH SIDE OF PIT, TO ALLOW SMOOTH FLOW OF STORMWATER.
3. PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE WHERE IN TRAFFICABLE AREAS.

-10 -5 0 10
SCALE 1:100

REV.	DATE	BY	DESCRIPTION	REV.	DATE	BY	DESCRIPTION
1	19.09.18	MJE	ISSUED FOR APPROVAL				

DESIGN: AMcK
DRAWN: MJE
SCALE: 1 : 100
SIZE: A1

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PROPOSED DEVELOPMENT
1-7 Boyle Street, Sutherland 2232

Taylormade Pty Ltd

CIVIL DESIGN
BASEMENT 4 DRAINAGE PLAN

180332
PRELIMINARY
C02 1

GROUND FLOOR DRAINAGE PLAN

Scale: 1 : 100

1. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING.
2. THE BUILDER/CONTRACTOR SHALL LOCATE ALL EXISTING PUBLIC UTILITY SERVICES WITHIN THE SITE, FOOTPATH AREA AND ROAD RESERVE PRIOR TO THE COMMENCEMENT OF ANY WORKS. ALL LOCATIONS AND LEVELS OF SERVICES SHALL BE REPORTED TO THE STORMWATER ENGINEER PRIOR TO THE COMMENCEMENT OF ANY WORKS TO ENSURE THERE ARE NO OBSTRUCTIONS IN THE LINE OF THE DRAINAGE DISCHARGE PIPES.
3. PRIOR TO COMMENCING ANY WORKS ON THE SITE, THE BUILDER SHALL ENSURE THAT THE INVERT LEVELS OF WHERE THE SITE STORMWATER SYSTEM CONNECTION INTO COUNCIL'S KERB/DRAINAGE SYSTEM MATCH THE DESIGN LEVELS. ANY DISCREPANCIES SHALL BE REPORTED TO THE DESIGN ENGINEER IMMEDIATELY
4. ALL STORMWATER DRAINAGE WORK TO AVOID TREE ROOTS. WHERE NOT POSSIBLE, ALL EXCAVATIONS IN VICINITY OF TREE ROOTS ARE TO BE HAND DUG.
5. ALL BASES OF PITS TO BE BENCHED (TO HALF PIPE DEPTH) TO THE INVERT OF THE OUTLET PIPE WITH ALL PIPES CUT FLUSH WITH SIDE OF PIT, TO ALLOW SMOOTH FLOW OF STORMWATER.
6. PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE WHERE IN TRAFFICABLE AREAS.
7. PROVIDE 100mm GAP IN BASE OF FENCE FOR EMERGENCY OVERFLOWS.

GENERAL LEGEND

- LANDSCAPE
- LANDSCAPE ON PODIUM SLAB
- HARDSTAND ON PODIUM LEVEL SUBJECT TO MINOR S/W FLOWS
- ROOF AREA TO DRAIN

PROPOSED TREES EXISTING TREES

CIV - FIXTURES SCHEDULE

	TYPE	DESCRIPTION
		GRATED STORMWATER PIT
		PERIMETER GRATES
		PERIMETER STRIP DRAIN
		RAINWATER OUTLET
		SEALED STORMWATER PIT
	300W	GRATED STRIP DRAIN
	3000L RWT	RAINWATER TANK 3000L

CIV - STANDARD SYMBOLS

	DESCRIPTION
	FALL ARROW

CIV - STORMWATER SERVICES

	TYPE	DESCRIPTION
	RM	RISING MAIN
	SS	SUB SOIL DRAINAGE
	STW	STORMWATER

300W GRATED DRAIN
300W GRATED DRAIN
PROVIDE SUBSOIL DRAINAGE AND OUTLETS TO ALL ON PODIUM PLANTER BOXES. OUTLET PIPES NOT SHOWN FOR CLARITY OF DOCUMENTATION.
300W GRATED DRAIN
BOUNDARY
CTION TRUCK AREA DETAIL
REFER TO TRAFFIC ENGINEER REPORT
OUTLINE OF BASEMENT 1 BELOW
110,950
FOOTPATH
111,000
FOOTPATH
111,650
MANOEUVREING AREA
111,460
FHB
HP VENT
SPS
GL 110.90
IL 110.50
RAMP 4.6m @ 5%
GM
SUBSTATION 5600x2800mm
BINS LIFT
CAR PARK AIR INTAKE
FIRE STAIR 02
+110,540
111,500
WC
BULKY WASTE COLLECTION POINT
DELIVERY DOCK
DRIVEWAY TO DRAIN TO BASEMENT
RAMP 2m @ 12.5%
RAMP 16.3m @ 25%
GARBAGE BINS COLLECTION POINT
RETAIL 05
A: 126.09 m²
+110,940
FOOTPATH
RECYCLING BINS COLLECTION POINT
SPS
FIRE STAIR 01 (from B1)
RETAIL 01
ALL COURTYARDS, BALCONIES AND PLANTERS TO DRAIN TO GRATED PIT
BOUNDARY
GL 110.50
IL 110.10
FIRE STAIR 03 (from L1)
FIRE STAIR 04 (from L1)
SPS
ST
ALL ROOFWATER TO DRAIN TO RAINWATER TANK . DESIGN BASED ON GROUND FLOOR FFL + 109.34
WC
BOUNDARY
STORAGE
RETAIL/ OFFICE LIFT
LOBBY RELIEF
RES LIFT
RES LIFT
CPE (4sqm)
RETAIL 04
A: 101.70 m²
+110,840
WC
WC
WC
RETAIL/OFFICE LOBBY
+109,840
RESIDENTIAL LOBBY
+109,840
2x 65Ø RISING MAINS TO GRATED PIT ON GROUND FLOOR. NOTE THE EXTRA 65Ø RISING MAIN TO ALLOW FOR FUTURE PROOFING IN CASE OF ADVERSE GROUND WATER INUNDATION.
RM 65ø
RM 65ø
GL 109.70
IL 109.30
110,570
CONNECT ALL HARDSTAND/BALCONY/BASEMENT PUMP OUT WATER TO GRATED PIT
GL 109.60
IL 109.20
RETAIL 02
A: 254.48 m²
+109,340
RETAIL 03
A: 143.75 m²
+109,840
WSUD DEVICE. STORMWATER 360 OR EQUIVALENT
109,700
109,780
BOUNDARY
ALL STORMWATER DRAINAGE WORK TO AVOID TREE ROOTS. WHERE NOT POSSIBLE, TAKE CARE IN VICINITY OF TREE TO BE RETAINED AND HAND EXCAVATE TRENCHES AS REQUIRED. TYPICAL
GL 109.40
IL 109.00
FOOTPATH
110,000
THE BUILDER/CONTRACTOR SHALL LOCATE ALL EXISTING PUBLIC UTILITY SERVICES WITHIN THE SITE, FOOTPATH AREA AND ROAD RESERVE PRIOR TO THE COMMENCEMENT OF ANY WORKS.
109,340
CONNECT TO EXISTING KERB INLET PIT AND MAKE GOOD IL +108.90 APPROX
RWT OVERFLOW

-10 -5 0 10
SCALE 1:100

REV.	DATE	BY	DESCRIPTION	REV.	DATE	BY	DESCRIPTION
1	19.09.18	MJE	ISSUED FOR APPROVAL				

DESIGN: TS
DRAWN: MJE
SCALE: 1 : 100
SIZE: A1

greenview CONSULTING

PROPOSED DEVELOPMENT
1-7 Boyle Street, Sutherland 2232
Taylormade Pty Ltd

AYCA-000000
GROUND FLOOR DRAINAGE PLAN

180332
PRELIMINARY
C06 1