PROPOSED HOUSING DEVELOPMENT

84 NEW ILLAWARRA RD & 313 BEXLEY RD, BEXLEY

Job No. **150958**

STORMWATER SERVICES

STORMWATER PIPE

RAINWATER PIPE

SUB-SOIL DRAINAGE LINE

GENERAL LEGEND

FLOW DIRECTION

SERVICE / SIZE — SERVICES FROM OR TO BELOW

SERVICE / SIZE — SERVICES FROM OR TO ABOVE

FALL DIRECTION

GL 35.05 — PROPOSED PIT SURFACE LEVEL

IL 34.75 — PROPOSED PIT INVERT LEVEL

STW Ø225 @ 1.0% — PIPE TYPE, SIZE AND GRADE

SAFETY IN DESIGN

THIS DESIGN HAS INHERENT RISKS WITH CONSTRUCTING, MAINTAINING, OPERATING, DEMOLISHING, DISMANTLING AND DISPOSING THAT ARE 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.

- REFER TO THE JONES NICHOLSON'S SAFETY IN DESIGN REPORT FOR UNIQUE RISKS ASSOCIATED WITH THE DESIGN

GENERAL

1. ALL EXISTING LEVELS TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF WORKS
2. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE NOMINATED OR APPLICABLE COUNCIL SPECIFICATION. WHERE A SPECIFICATION HAS NOT BEEN NOMINATED THEN THE CURRENT NSW LAND AND HOUSING CORPORATION CONSTRUCTION SPECIFICATION IS TO BE USED. THE NOMINATED SPECIFICATION SHALL TAKE PRECEDENCE TO THESE NOTES.
3. ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECTURAL DRAWINGS & DRAWINGS FROM OTHER CONSULTANTS.
4. THE CONTRACTOR SHOULD REPORT ANY DISCREPANCIES ON THE DRAWINGS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN.
5. THE CONTRACTOR SHOULD LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION AND PROTECT AND MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE AND/OR ADJUST IF NECESSARY. INFORMATION GIVEN ON THE DRAWINGS IN RESPECT TO SERVICES IS FOR GUIDANCE ONLY AND IS NOT GUARANTEED COMPLETE NOR CORRECT.
6. CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE PERMISSION OF THE OWNER.
7. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED OR REMOVED FROM SITE.
8. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING.
9. ALL DRAINAGE LINES THROUGH ADJACENT LOTS SHALL BE CONTAINED WITHIN EASEMENTS CONFORMING TO COUNCIL'S STANDARDS.
10. THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES AND DEBRIS ETC. TO THE EXTENT SPECIFIED.
11. 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.

SURVEY

1. JONES NICHOLSON IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY 3rd PARTY INFORMATION PROVIDED ON THIS DRAWING.
2. ALL LEVELS ARE TO A.H.D.
3. ALL CHAINAGES AND LEVELS ARE IN METRES, AND DIMENSIONS IN MILLIMETRES.
4. THE SURVEY INFORMATION ON THIS DRAWING HAS BEEN PROVIDED BY GARVIN MORGAN & CO.
5. CONTRACTORS SHALL ARRANGE FOR THE WORKS TO BE SET OUT BY A REGISTERED SURVEYOR.

EARTHWORKS

1. PROVIDE PROTECTION BARRIERS TO PROTECTED/SENSITIVE AREAS PRIOR TO ANY BULK EXCAVATION.
2. 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.
3. CUT AND FILL OVER THE SITE TO LEVELS REQUIRED.
4. 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.
5. 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%.
6. FOR ON SITE FILLING AREAS, THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.
7. 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.
8. 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 DESIGN ENGINEERS APPROVAL.
9. 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.
10. BATTERS TO BE AS SHOWN, OR MAXIMUM 1 VERT : 4 HORIZ. ALL CONDUITS AND MAINS SHALL BE LAID PRIOR TO LAYING FINAL PAVEMENT.
11. ALL BATTERS AND FOOTPATHS ADJACENT TO ROADS SHALL BE TOP SOILED WITH 150mm APPROVED LOAM AND SEEDED UNLESS OTHERWISE SPECIFIED.

STORMWATER DRAINAGE

1. STORMWATER DRAINAGE SHALL BE GENERALLY IN ACCORDANCE WITH AUSTRALIAN STANDARDS 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.
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. PIPES UP TO 150mm DIA SHALL BE LAID AT 1.0% MIN. GRADE U.N.O.
8. PIPES 225mm DIA AND OVER SHALL BE LAID AT 0.5% MIN. GRADE U.N.O.
9. BACKFILL TRENCHES WITH APPROVED FILL COMPACTED IN 200mm LAYERS TO 98% OF STANDARD DENSITY.
10. ANY PIPES OVER 16% GRADE SHALL HAVE CONCRETE BULKHEADS AT ALL JOINTS.
11. PITS SHALL BE AS DETAILED WITH METAL GRATES AT LEVELS INDICATED. ALL PITS DEEPER THAN 1000mm TO HAVE CLIMB IRONS.
12. BUILD INTO UPSTREAM FACE OF ALL PITS A 3.0m SUBSOIL LINE FALLING TO PITS TO MATCH PIT INVERTS.
13. ALL COURTYARD & LANDSCAPED PITS TO BE 450 SQUARE UNLESS NOTED OTHERWISE.
14. ALL DRIVEWAY & OSD PITS TO BE 600 SQUARE UNLESS NOTED OTHERWISE.
15. INSTALL TEMPORARY SEDIMENT BARRIERS TO INLET PITS, TO COUNCIL'S STANDARDS UNTIL SURROUNDING AREAS ARE PAVED OR GRASSED.
16. PITS & DOWNPIPE LOCATIONS AND LEVELS MAY BE VARIED TO SUIT SITE CONDITIONS AFTER CONSULTING THE ENGINEER.
17. DOWNPIPES SHOWN ARE INDICATIVE ONLY, ALL ROOF GUTTERING AND DOWNPIPES TO THE CURRENT AUSTRALIAN STANDARDS.
18. ALL PLANTER BOXES AND BALCONIES TO BE CONNECTED TO THE PROPOSED STORMWATER DRAINAGE LINE.
19. HAND-EXCAVATE STORMWATER PIPES IN VICINITY OF TREE ROOTS.
20. FOOTPATH CROSSING LEVELS SHOWN ARE TO BE ADJUSTED TO FINAL COUNCIL'S ISSUED LEVELS.
21. GEOTEXTILE FABRIC TO BE PLACED UNDER RIP RAP SCOUR PROTECTION.
22. ALL BASES OF PITS TO BE BENCHED TO HALF PIPE DEPTH AND PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE.

SUBSOIL LINE: 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.

STORMWATER DRAINAGE INSTALLATION

1. SUPPLY & INSTALLATION OF DRAINAGE WORKS TO BE IN ACCORDANCE WITH THESE DRAWINGS, THE COUNCIL SPECIFICATION AND THE CURRENT APPLICABLE AUSTRALIAN STANDARDS.
2. 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:

SIEVE SIZE (mm)	19	2.36	0.60	0.30	0.15	0.075
% 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.
3. 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.
4. 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/6 CLEARANCE FOR PIPES > 1200 DIA.

RAINWATER TANKS

1. ALL TAPS CONNECTED TO THE RAINWATER TANK SHALL BE CLEARLY MARKED "RAINWATER" OR "NOT FOR DRINKING"
2. THE TANK SHALL MEET ALL CURRENT SYDNEY WATER REQUIREMENTS AND BECONSTRUCTED TO SATISFY HB230-2006: RAINWATER TANK DESIGN AND INSTALLATION HANDBOOK AND NSW CODE OF PRACTICE FOR PLUMBING AND DRAINAGE 3rd ED.2006.AS3735-2001: CONCRETE STRUCTURE RETAINING LIQUID MAY ALSO APPLY.
3. ROOF GUTTERS SHOULD HAVE LEAF GUARDS OR SIMILAR TO MINIMIZE ENTRY OF DEBRIS TO THE TANK. RAINWATER SHOULD BE SCREENED PRIOR TO ENTERING THE TANK OR A FIRST FLUSH DEVICE FITTED. FIT FLAPS ON ALL INLET PIPES. NO OPENINGS ARE PERMITTED THAT WOULD ALLOW INSECTS TO ENTER.
4. TANKS SHALL HAVE A SUITABLE PUMP FITTED TO ENSURE ADEQUATE PRESSURE, EXCEPT WHERE TANK IS LESS THAN 1200L AND ONLY USED FOR GARDEN WATERING.
5. THE OVERFLOW FROM THE RAINWATER TANK SHALL BE DIRECTED TO THE COUNCIL DRAINAGE SYSTEM.

PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION

Family & Community Services
Land & Housing Corporation

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PHONE No (02) 8753 9000
FAX No (02) 8753 8888
www.facs.nsw.gov.au

NOMINATED ARCHITECT:

SIGNED

DATE

REV:	DATE:	NOTATION/AMENDMENT:
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3	14.03.17	REISSUED FOR DA
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1	27.07.16	ISSUED FOR DA

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PROJECT MANAGER & ARCHITECT:
LAND & HOUSING CORPORATION

CIVIL - STRUCTURAL - BUILDING SERVICES:
JONES NICHOLSON CONSULTING ENGINEERS
WWW.JONESNICHOLSON.COM.AU

BUSINESS PARTNER:
FAMILY & COMMUNITY SERVICES
Land & Housing Corporation

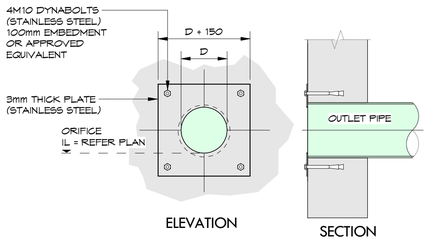
PROJECT:
PROPOSED HOUSING DEVELOPMENT
84 NEW ILLAWARRA RD & 313 BEXLEY RD, BEXLEY

TITLE:
CIVIL DESIGN COVER SHEET

FILE:

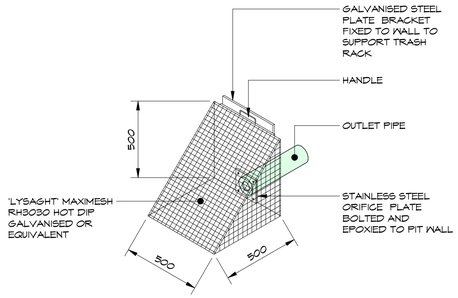
PLOTTED: 4/05/2018 2:38:27 PM

STATUS:	DA ISSUE		
DATE: 14.03.17	SCALE: As indicated	PROJ: 150958	PROJ No.: BGJ4I
STAGE: PRELIM	DRAWN: YMK	CHECKED: B.B	APPROVED: B.B
TYPE: A1	SHEET: C01		REV: 4



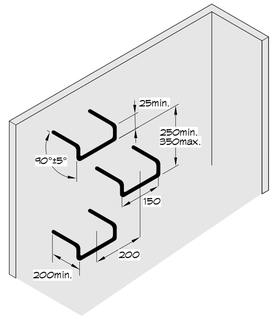
TYPICAL ORIFICE PLATE DETAIL

SCALE 1 : 10

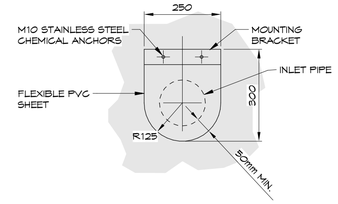


TYPICAL TRASH RACK SCREEN DETAIL

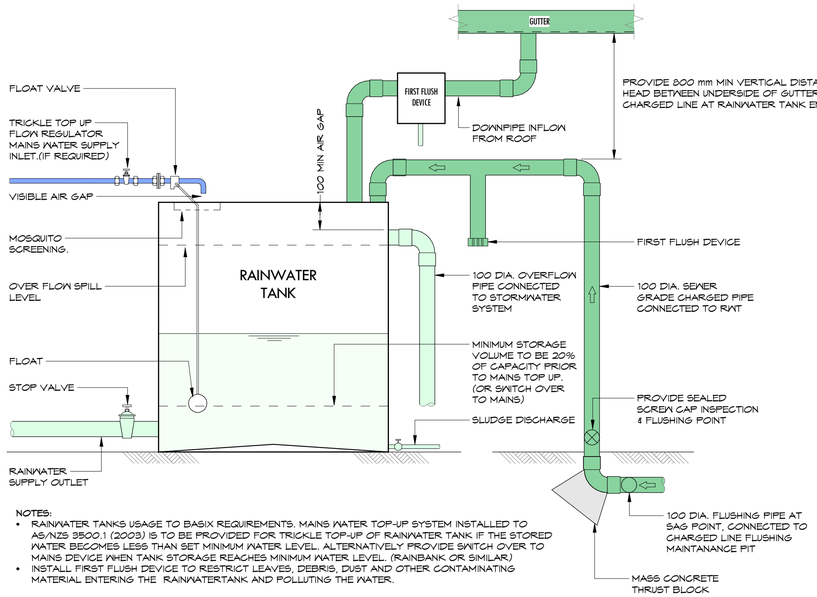
SCALE 1 : 20



STEP IRON DETAIL



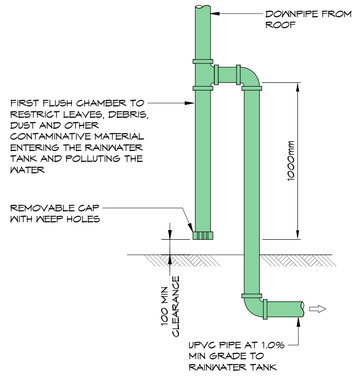
FLAP VALVE DETAIL



NOTES:
- RAINWATER TANKS USAGE TO BASIX REQUIREMENTS. MAINS WATER TOP-UP SYSTEM INSTALLED TO AS/NZS 3500.1 (2003) IS TO BE PROVIDED FOR TRICKLE TOP-UP OF RAINWATER TANK IF THE STORED WATER BECOMES LESS THAN SET MINIMUM WATER LEVEL. ALTERNATIVELY PROVIDE SWITCH OVER TO MAINS DEVICE WHEN TANK STORAGE REACHES MINIMUM WATER LEVEL (RAINBANK OR SIMILAR)
- INSTALL FIRST FLUSH DEVICE TO RESTRICT LEAVES, DEBRIS, DUST AND OTHER CONTAMINATING MATERIAL ENTERING THE RAINWATERTANK AND POLLUTING THE WATER.

SCHEMATIC RAINWATER TANK WITH CHARGE LINE

SCALE 1 : 20



TYPICAL FIRST FLUSH DETAIL

SCALE 1 : 20

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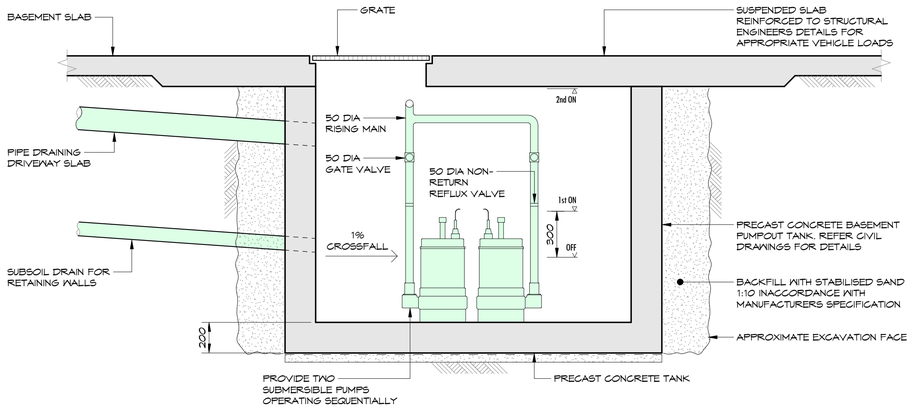
PROJECT:
PROPOSED HOUSING DEVELOPMENT
84 NEW ILLAWARRA RD & 313 BEXLEY RD, BEXLEY

TITLE:
CIVIL DESIGN DETAILS 1

FILE:

PLOTTED: 4/05/2018 2:38:36 PM

STATUS:	DA ISSUE		
DATE: 14.03.17	SCALE: As indicated	PROJ: 150958	PROJ No.: BGJ4I
STAGE: PRELIM	DRAWN: YMK	CHECKED: B.B	APPROVED: B.B
TYPE: A1	SHEET: C02		REV: 4



TYPICAL BASEMENT PUMPOUT TANK DETAIL

SCALE 1 : 20

PUMP-OUT PIT DESIGN NOTES

THE PUMP OUT SYSTEM SHALL BE DESIGNED TO BE OPERATED IN THE FOLLOWING MANNER:

* THE PUMPS SHALL BE PROGRAMMED TO WORK ALTERNATELY SO AS TO ALLOW BOTH PUMPS TO HAVE AN EQUAL OPERATION LOAD AND PUMP LIFE.

* A LOW LEVEL FLOAT SHALL BE PROVIDED TO ENSURE THAT THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD THIS FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMPS.

* A SECOND FLOAT SHALL BE PROVIDED AT A HIGHER LEVEL, APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL, WHEREBY ONE OF THE PUMPS WILL OPERATE AND DRAIN THE TANK TO THE LEVEL OF THE LOW LEVEL FLOAT.

* A THIRD FLOAT SHALL BE PROVIDED AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHOULD START THE OTHER PUMP THAT IS NOT OPERATING AND ACTIVATE THE ALARM

* AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBE LIGHT AND A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.

* CONTRACTOR IS TO CONFIRM PUMP ELECTRICAL LOAD AND CONNECTION WITH ELECTRICAL CONTRACTOR AT THE BEGINNING OF THE PROJECT.

PUMP SPECIFICATIONS

L = 20m, H = 8m, 50mmØ
11 L/s CAPACITY

THREE PHASE PUMP IF REQUIRED CAPACITY > 4.5L/s

PUMPOUT PIT CALCULATIONS

PUMP CAPACITY

I_{100} 6 minutes = 246 mm/hr

$Q = \frac{246 \times 160m2 \times 0.95}{3600}$

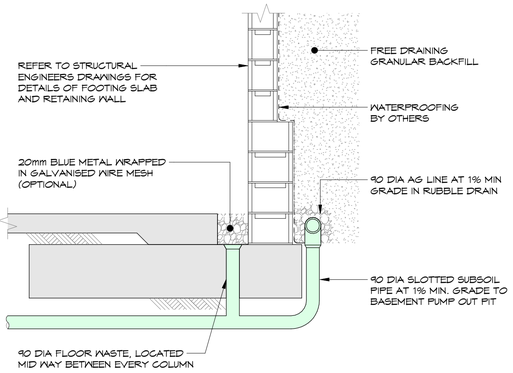
Q = 10.9 L/s.

PUMPOUT PIT STORAGE

V = I.A.C.t I 50 2 hours = 53 mm/hr

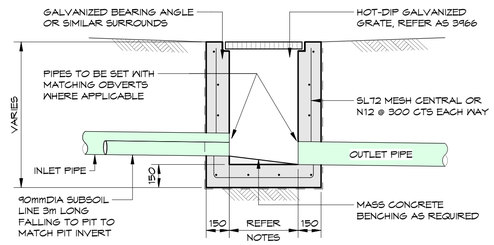
$= \frac{53 / 1000 \times 160m2 \times 0.95 [120 \times 60]}{3600}$

V = 10.45 m3



TYPICAL GROUNDWATER DRAINAGE DETAIL

SCALE 1 : 20

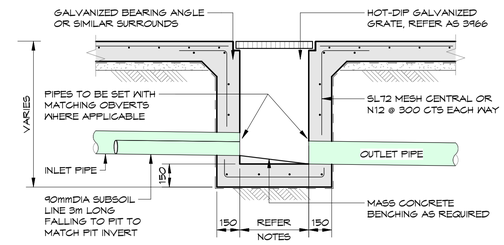


NOTES:

1. DEPTHS OF 450 SQUARE PITS NOT TO EXCEED 600 DEEP. DEPTHS OF 600 SQUARE PITS NOT TO EXCEED 900 DEEP, OTHERWISE INCREASE ONE DIRECTION BY 300. (ie : 600 x 900 PIT) PITS TO BE 900 SQUARE WHERE DEPTH TO INVERT EXCEEDS 1200.
2. CLIMB IRONS SHALL BE PROVIDED UNDER LID AT 300 CTS TO COUNCIL STANDARDS WHERE PIT DEPTH IS DEEPER THAN 1000.
3. REINFORCEMENT NOTED IS ONLY REQUIRED FOR PITS EXCEEDING 900 DEEP, SUBJECT TO COUNCIL REQUIREMENTS. PITS GREATER THAN 3000 DEEP WILL REQUIRE STRUCTURAL ENGINEERS DESIGN.
4. PROVIDE 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.
5. ALTERNATIVE PIT CONSTRUCTION MAY BE USED SUBJECT TO THE ENGINEERS APPROVAL.
6. CONCRETE STRENGTH F'c = 32 MPa

TYPICAL CONCRETE INLET PIT - NATURAL SURFACE

SCALE 1 : 20



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2. CLIMB IRONS SHALL BE PROVIDED UNDER LID AT 300 CTS TO COUNCIL STANDARDS WHERE PIT DEPTH IS DEEPER THAN 1000.
3. REINFORCEMENT NOTED IS ONLY REQUIRED FOR PITS EXCEEDING 900 DEEP, SUBJECT TO COUNCIL REQUIREMENTS. PITS GREATER THAN 3000 DEEP WILL REQUIRE STRUCTURAL ENGINEERS DESIGN.
4. PROVIDE 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.
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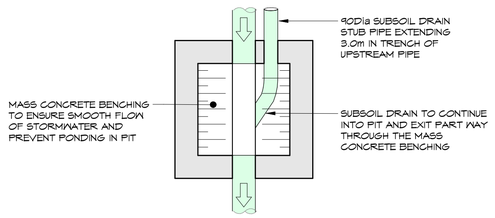
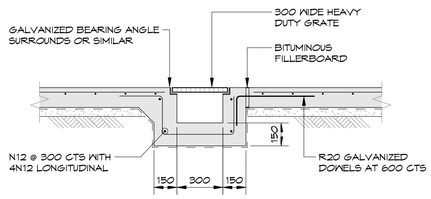


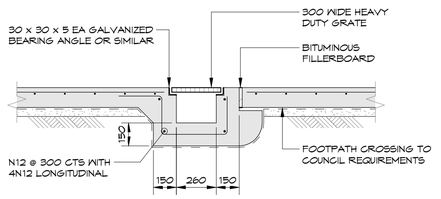
TYPICAL SUBSOIL PIPE/PIT BENCHING

SCALE 1 : 20



TYPICAL GRATED DRAIN DETAIL

SCALE 1 : 20



TYPICAL COUNCIL CROSSING GRATED DRAIN DETAIL

SCALE 1 : 20

TYPICAL CONCRETE INLET PIT - CONCRETE SURFACE

SCALE 1 : 20

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PROJECT MANAGER & ARCHITECT: LAND & HOUSING CORPORATION

CIVIL - STRUCTURAL - BUILDING SERVICES: JONES NICHOLSON CONSULTING ENGINEERS WWW.JONESNICHOLSON.COM.AU

BUSINESS PARTNER: NSW GOVERNMENT FAMILY & COMMUNITY SERVICES Land & Housing Corporation

PROJECT: **PROPOSED HOUSING DEVELOPMENT**

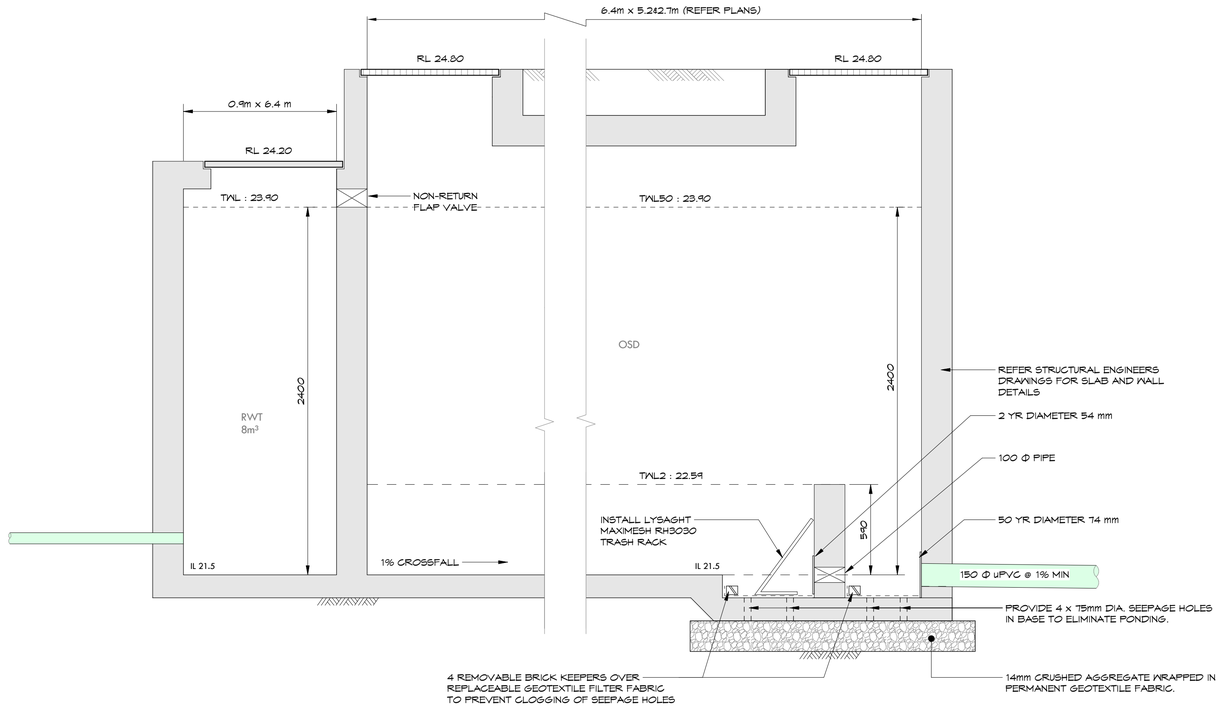
84 NEW ILLAWARRA RD & 313 BEXLEY RD, BEXLEY

TITLE: CIVIL DESIGN DETAILS 2

FILE: PLOTTED: 4/05/2018 2:38:48 PM

STATUS: DA ISSUE

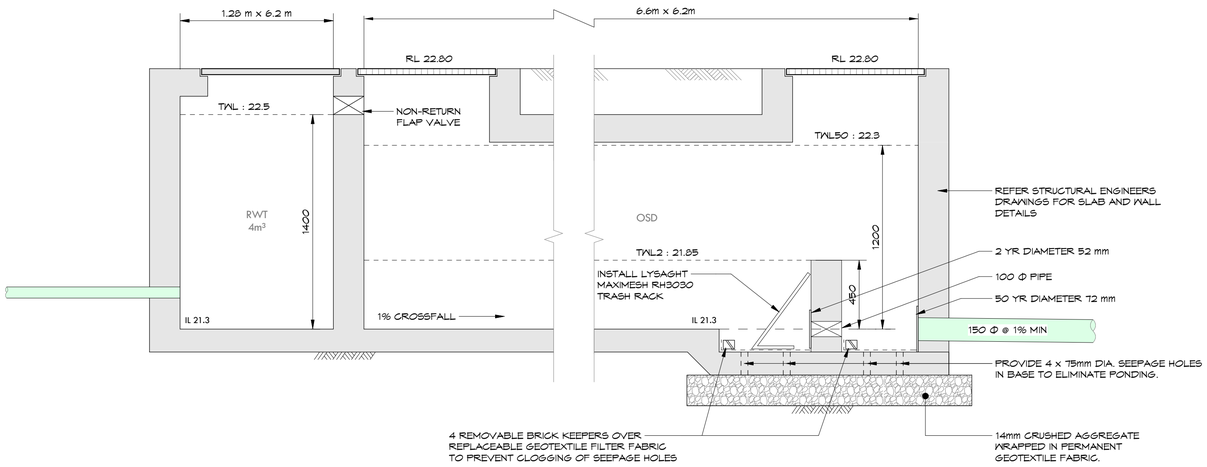
DATE:	SCALE:	PROJ	PROJ No.:
14.03.17	1 : 20	150958	BGJ41
STAGE:	DRAWN:	CHECKED:	APPROVED:
PRELIM	YMK	B.B	B.B
TYPE:	SHEET:		REV:
A1	C03		4



- CONTRACTOR IS TO VERIFY THE LEVEL OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF EXCAVATION FOR DRAINAGE.

RAINWATER/ ON SITE DETENTION TANK DETAIL - BLOCK A

SCALE 1 : 20



- CONTRACTOR IS TO VERIFY THE LEVEL OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF EXCAVATION FOR DRAINAGE.

RAINWATER/ ON SITE DETENTION TANK DETAIL - BLOCK B

SCALE 1 : 20

PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION

NSW GOVERNMENT
Family & Community Services
Land & Housing Corporation

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ASHFIELD NSW BC1800
PHONE No (02) 8753 9000
FAX No (02) 8753 8888
www.facs.nsw.gov.au

NOMINATED ARCHITECT:

SIGNED

DATE

REV:	DATE:	NOTATION/AMENDMENT:
4	04.05.18	ISSUED FOR REVIEW
3	14.03.17	REISSUED FOR DA
2	23.08.16	REISSUED FOR DA
1	27.07.16	ISSUED FOR DA

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PROJECT MANAGER & ARCHITECT:
LAND & HOUSING CORPORATION

CIVIL - STRUCTURAL - BUILDING SERVICES:
JONES NICHOLSON CONSULTING ENGINEERS
WWW.JONESNICHOLSON.COM.AU

BUSINESS PARTNER:
NSW GOVERNMENT
FAMILY & COMMUNITY SERVICES
Land & Housing Corporation

PROJECT:
PROPOSED HOUSING DEVELOPMENT
84 NEW ILLAWARRA RD & 313 BEXLEY RD, BEXLEY

TITLE:
CIVIL DESIGN DETAILS 3

FILE:

PLOTTED: 4/05/2018 2:38:55 PM

STATUS: DA ISSUE			
DATE: 14.03.17	SCALE: 1 : 20	PROJ: 150958	PROJ No.: BGJ41
STAGE: PRELIM	DRAWN: YMK	CHECKED: B.B	APPROVED: B.B
TYPE: A1	SHEET: C04		REV: 4

STORMWATER PIT SCHEDULE

TAG	GL (m)	IL (m)	L (mm)	W (mm)	GRATE TYPE	DESCRIPTION
1	25.30	24.80	450	450	STEEL GRATE	CONCRETE PIT
2	26.35	24.60	600	600	STEEL GRATE	CONCRETE PIT
3	25.45	25.00	450	450	STEEL GRATE	CONCRETE PIT
4	25.70	24.80	450	450	STEEL GRATE	CONCRETE PIT
5	25.53	24.50	600	600	STEEL GRATE	CONCRETE PIT
6	25.47	24.30	600	600	STEEL GRATE	CONCRETE PIT
7	23.97	23.50	450	450	STEEL GRATE	CONCRETE PIT
8	23.90	23.40	450	450	STEEL GRATE	CONCRETE PIT
9	23.36	22.90	450	450	STEEL GRATE	CONCRETE PIT
10	23.90	23.50	450	450	STEEL GRATE	CONCRETE PIT
11	25.00	23.20	900	900	STEEL GRATE	CONCRETE PIT
12	24.90	23.00	900	900	STEEL GRATE	CONCRETE PIT
13	21.64	21.20	600	600	STEEL GRATE	CONCRETE PIT
14	22.30	21.90	600	600	STEEL GRATE	CONCRETE PIT
15	22.40	21.15	1200	1200	STEEL GRATE	CONCRETE PIT
16	23.84	23.45	450	450	STEEL GRATE	CONCRETE PIT
GD7	24.90	23.00	900	900		CONCRETE PIT
GD8	24.90	23.00	900	900	STEEL GRATE	CONCRETE PIT
GD9	24.90	23.00	900	900	STEEL GRATE	CONCRETE PIT
GD10	23.86	23.80	900	900		CONCRETE PIT

STORMWATER GRATED DRAIN SCHEDULE

TAG	GL (m)	IL (m)	WIDTH
GD1	21.66	21.50	200 mm
GD2	22.33	22.10	200 mm
GD3	23.45	23.20	200 mm
GD4	25.67	25.47	200 mm
GD5	21.79	21.63	200 mm

x:No.88
x:1 STOREY
x:BRICK RESIDENCE
x:TILE ROOF

x:METAL
x:CARPORT

x:FIBRO SHED
x:METAL ROOF

x:No.311A
x:2 STOREY
x:BRICK RESIDENCE
x:TILE ROOF

x:No.82
x:1 STOREY
x:BRICK RESIDENCE
x:TILE ROOF

x:FIBRO
x:METAL
x:ROOF

x:FIBRO
x:METAL
x:ROOF

BOUNDARY

WALL TO RL 24.14 TO FLOOD PROTECT BASEMENT

OSD BLOCK B
GL. 22.80
IL. 21.30

BASED UPON 45.4% OF TOTAL SITE OSD AND PSD.

50 ARI	2 ARI
VOL : 41.31 m3	VOL : 18.61m3
PSD : 11.12 L/S	PSD : 3.9 L/S
TNL : 22.3	TNL : 21.75

OSD BLOCK A
GL. 24.30
IL. 21.50

BASED UPON 54.62% OF TOTAL SITE OSD AND PSD.

50 ARI	2 ARI
VOL : 49.7 m3	VOL : 22.4 m3
PSD : 13.37 L/S	PSD : 4.7 L/S
TNL : 23.80	TNL : 22.80

ALL ROOF DRAINAGE TO BE DIRECTED TO THE RWT

OVERLAND FLOW WATER LEVEL RL 22.74

NEW EASEMENT PIT
15 GL. 22.40 IL. 21.15

ALL ROOF DRAINAGE TO BE DIRECTED TO THE RWT

100 mm WIDE GRAVEL DRAIN

RWT 7.9m3Q

OSD BLOCK B 41.m3Q

OSD BLOCK A 20.1m3Q

RWT 5.5m3Q

RAISING MAIN AT IL 22.5

50 Ø RISING MAIN TO OSD

PUMPOUT PIT 4 X 4 X 1.2 m

x:STORAGE UNDER STAIRS

x:LIFT

x:GARBAGE BAY

x:BICYCLE/ MOTORBIKE

x:LOBBY

x:BICYCLE SPACE

x:SEWER TO BE ENCASSED AS PER ENGINEERS DETAIL

EXISTING 750 Ø

13 GL. 21.64 IL. 21.20

14 GL. 22.30 IL. 21.90

15 GL. 22.40 IL. 21.15

GD1 GD2 GD5 GD6 GD7

100Ø uPVC @ 1% MIN

150Ø uPVC @ 1% MIN

SMH 20.51 INV

23.59 SMH INV

22.06 INV

REFER TO BG & E REPORT S10165-RPT-001 REV B DATED 20/8/15 FOR OVERLAND FLOW INFORMATION. TOP WATER LEVEL RL 23.84

BASEMENT STORMWATER LAYOUT

SCALE 1 : 100

1. ALL PIPES 150Ø uPVC @ 1.0% MIN U.N.O.
2. ALL BASEMENT FLOOR LEVELS TO FALL TO PITS AND OUTLETS AT 0.5% MIN GRADE.
3. IMPACT PROTECTION OF DOWNPIPES TO ARCHITECTS DETAILS.
4. SITE PIPED DRAINAGE DESIGNED FOR 20 yr ARI RAINFALL.
5. OVERLAND FLOW DESIGNED FOR 100 yr ARI RAINFALL.
6. GRATED TO BE SUITABLE FOR CLASS B GENERALLY AND CLASS C IN DRIVEWAYS.
7. THERE ARE UNDERGROUND SERVICES IN THE VICINITY OF WORKS. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND LEVEL ALL SERVICES PRIOR TO COMMENCEMENT OF EXCAVATION EARTHWORKS.

PRELIMINARY NOT TO BE USED FOR CONSTRUCTION

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Land & Housing Corporation

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REV:	DATE:	NOTATION/AMENDMENT:
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2	27.07.16	ISSUED FOR DA

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PROJECT MANAGER & ARCHITECT: LAND & HOUSING CORPORATION

CIVIL - STRUCTURAL - BUILDING SERVICES: JONES NICHOLSON CONSULTING ENGINEERS WWW.JONESNICHOLSON.COM.AU

BUSINESS PARTNER: FAMILY & COMMUNITY SERVICES Land & Housing Corporation

PROJECT: **PROPOSED HOUSING DEVELOPMENT**

84 NEW ILLAWARRA RD & 313 BEXLEY RD, BEXLEY

TITLE: STORMWATER DRAINAGE BASEMENT PLAN

FILE:

PLOTTED: 4/05/2018 2:39:10 PM

STATUS:	DA ISSUE		
DATE: 14.03.17	SCALE: 1 : 100	PROJ: 150958	PROJ No.: BGJ4I
STAGE: PRELIM	DRAWN:	CHECKED:	APPROVED: B.B
TYPE: A1	SHEET: C10		REV: 6

STORMWATER PIT SCHEDULE

TAG	GL (m)	IL (m)	L (mm)	W (mm)	GRATE TYPE	DESCRIPTION
1	25.30	24.80	450	450	STEEL GRATE	CONCRETE PIT
2	26.35	24.60	600	600	STEEL GRATE	CONCRETE PIT
3	25.45	25.00	450	450	STEEL GRATE	CONCRETE PIT
4	25.70	24.80	450	450	STEEL GRATE	CONCRETE PIT
5	25.53	24.50	600	600	STEEL GRATE	CONCRETE PIT
6	25.47	24.30	600	600	STEEL GRATE	CONCRETE PIT
7	23.97	23.50	450	450	STEEL GRATE	CONCRETE PIT
8	23.90	23.40	450	450	STEEL GRATE	CONCRETE PIT
9	23.36	22.90	450	450	STEEL GRATE	CONCRETE PIT
10	23.90	23.50	450	450	STEEL GRATE	CONCRETE PIT
11	25.00	23.20	900	900	STEEL GRATE	CONCRETE PIT
12	24.90	23.00	900	900	STEEL GRATE	CONCRETE PIT
13	21.64	21.20	600	600	STEEL GRATE	CONCRETE PIT
14	22.30	21.90	600	600	STEEL GRATE	CONCRETE PIT
15	22.40	21.15	1200	1200	STEEL GRATE	CONCRETE PIT
16	23.84	23.45	450	450	STEEL GRATE	CONCRETE PIT
GDT	24.90	23.00	900	900		CONCRETE PIT
GD8	24.90	23.00	900	900	STEEL GRATE	CONCRETE PIT
GD9	24.90	23.00	900	900	STEEL GRATE	CONCRETE PIT
GD10	23.36	22.90	900	900		CONCRETE PIT

STORMWATER GRATED DRAIN SCHEDULE

TAG	GL (m)	IL (m)	WIDTH
GD1	21.66	21.50	200 mm
GD2	22.33	22.10	200 mm
GD3	23.45	23.20	200 mm
GD4	25.67	25.47	200 mm
GD5	21.79	21.63	200 mm

GROUND FLOOR STORMWATER LAYOUT - BLDG A

SCALE 1 : 100

1. ALL PIPES 150Ø uPVC @ 1.0% MIN U.N.O.
2. ALL GROUND FLOOR LEVELS TO FALL TO PITS AND OUTLETS AT 1.0% MIN GRADE.
3. IMPACT PROTECTION OF DOWNPIPES TO ARCHITECTS DETAILS.
4. SITE PIPED DRAINAGE DESIGNED FOR 20 yr ARI RAINFALL.
5. OVERLAND FLOW DESIGNED FOR 100 yr ARI RAINFALL.
6. GRATED TO BE SUITABLE FOR CLASS B GENERALLY AND CLASS C IN DRIVEWAYS.
7. THERE ARE UNDERGROUND SERVICES IN THE VICINITY OF WORKS. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND LEVEL ALL SERVICES PRIOR TO COMMENCEMENT OF EXCAVATION EARTHWORKS.

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NOMINATED ARCHITECT:
SIGNED
DATE

REV:	DATE:	NOTATION/AMENDMENT:
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4	14.03.17	REISSUED FOR DA
3	23.08.16	REISSUED FOR DA
2	27.07.16	ISSUED FOR DA
1	28.08.15	SKETCH ISSUE

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PROJECT MANAGER & ARCHITECT: LAND & HOUSING CORPORATION

CIVIL - STRUCTURAL - BUILDING SERVICES: JONES NICHOLSON CONSULTING ENGINEERS WWW.JONESNICHOLSON.COM.AU

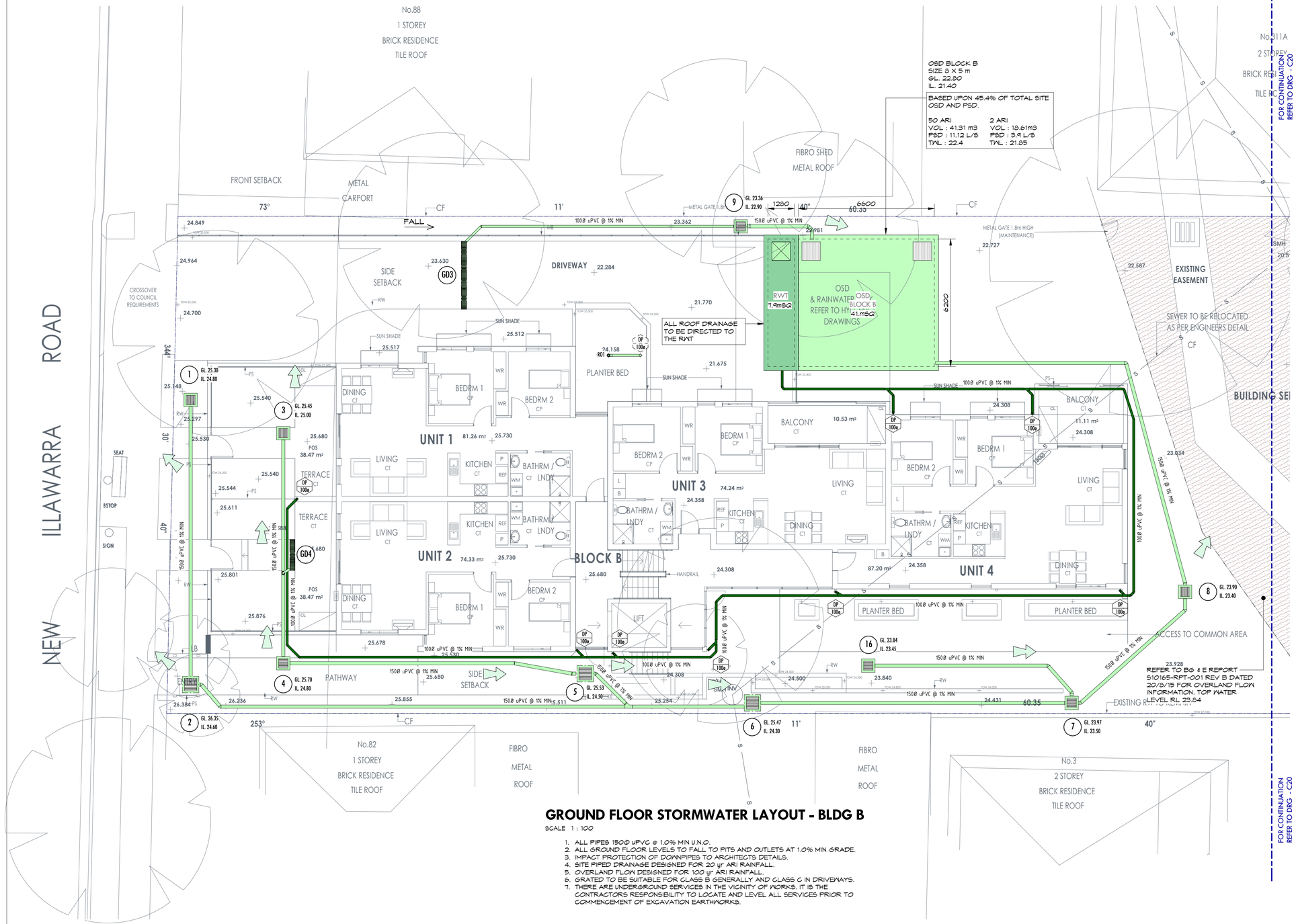
BUSINESS PARTNER: FAMILY & COMMUNITY SERVICES Land & Housing Corporation

PROJECT: **PROPOSED HOUSING DEVELOPMENT**
84 NEW ILLAWARRA RD & 313 BEXLEY RD, BEXLEY

TITLE: STORMWATER DRAINAGE GROUND FLOOR PLAN-BLDG A

FILE:
PLOTTED: 4/05/2018 2:39:16 PM

STATUS:	DA ISSUE			
DATE: 14.03.17	SCALE: 1 : 100	PROJ: 150958	PROJ No.: BGJAI	
STAGE: PRELIM	DRAWN:	CHECKED:	APPROVED: B.B	
TYPE: A1	SHEET: C20		REV: 5	



GROUND FLOOR STORMWATER LAYOUT - BLDG B

SCALE 1 : 100

1. ALL PIPES 150Ø uPVC @ 1.0% MIN U.N.O.
2. ALL GROUND FLOOR LEVELS TO FALL TO PITS AND OUTLETS AT 1.0% MIN GRADE.
3. IMPACT PROTECTION OF DOWNPIPES TO ARCHITECTS DETAILS.
4. SITE PIPED DRAINAGE DESIGNED FOR 20 yr ARI RAINFALL.
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STORMWATER PIT SCHEDULE

TAG	GL (m)	IL (m)	L (mm)	W (mm)	GRATE TYPE	DESCRIPTION
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3	25.45	25.00	450	450	STEEL GRATE	CONCRETE PIT
4	25.70	24.80	450	450	STEEL GRATE	CONCRETE PIT
5	25.53	24.50	600	600	STEEL GRATE	CONCRETE PIT
6	25.47	24.30	600	600	STEEL GRATE	CONCRETE PIT
7	23.97	23.50	450	450	STEEL GRATE	CONCRETE PIT
8	23.90	23.40	450	450	STEEL GRATE	CONCRETE PIT
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GD2	24.90	23.00	900	900	STEEL GRATE	CONCRETE PIT
GD3	24.90	23.00	900	900	STEEL GRATE	CONCRETE PIT
GD4	23.36	22.90	900	900		CONCRETE PIT

STORMWATER GRATED DRAIN SCHEDULE

TAG	GL (m)	IL (m)	WIDTH
GD1	21.66	21.50	200 mm
GD2	22.33	22.10	200 mm
GD3	23.45	23.20	200 mm
GD4	25.67	25.47	200 mm
GD5	21.79	21.63	200 mm

RAINWATER OUTLET DETAILS

TAG	TYPE	SIZE & DETAILS
RO1	RAINWATER OUTLET	100Ø SPS RAINWATER OUTLET

PRELIMINARY

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PROJECT MANAGER & ARCHITECT:
LAND & HOUSING CORPORATION

CIVIL - STRUCTURAL - BUILDING SERVICES:
JONES NICHOLSON CONSULTING ENGINEERS
WWW.JONESNICHOLSON.COM.AU

BUSINESS PARTNER:
FAMILY & COMMUNITY SERVICES
Land & Housing Corporation

PROJECT:
PROPOSED HOUSING DEVELOPMENT
84 NEW ILLAWARRA RD & 313 BEXLEY RD, BEXLEY

TITLE:
STORMWATER DRAINAGE GROUND FLOOR PLAN-BLDG B

FILE:
PLOTTED: 4/05/2018 2:39:22 PM

STATUS: DA ISSUE

DATE:	SCALE:	PROJ:	PROJ No:
14.03.17	1 : 100	150958	BGJ4I
STAGE:	DRAWN:	CHECKED:	APPROVED:
PRELIM			B.B
TYPE:	SHEET:		REV:
A1	C21		5

PROPOSED HOUSING DEVELOPMENT

84 NEW ILLAWARRA RD & 313 BEXLEY RD, BEXLEY

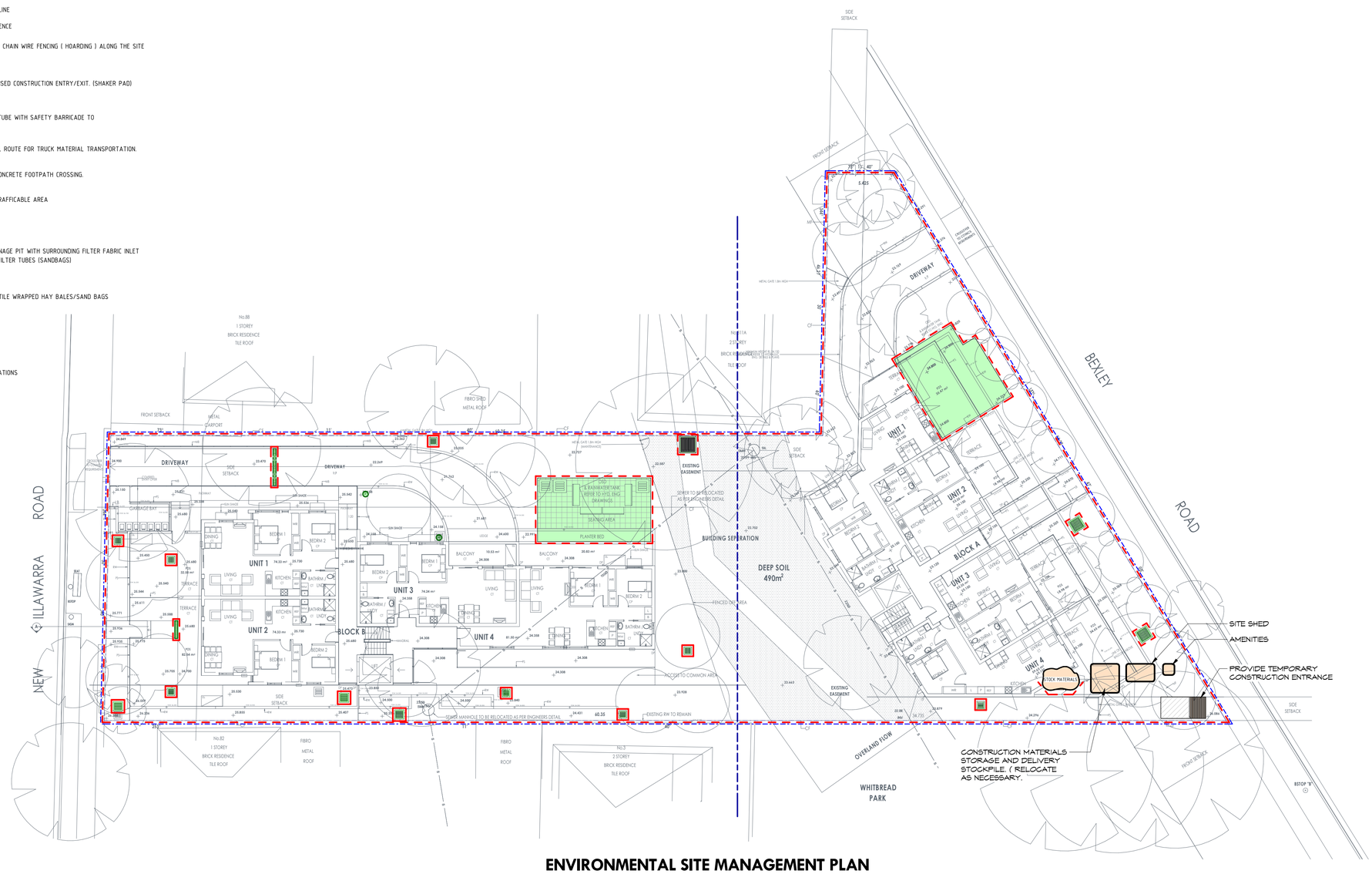
Job No. **150958**

ENVIRONMENTAL SITE MANAGEMENT

1. EROSION & SEDIMENT CONTROLS TO BE INSTALLED IN ACCORDANCE WITH COUNCIL'S SPECIFICATION & THE NSW DEPARTMENT OF HOUSING "BLUE BOOK" - SOILS AND CONSTRUCTION - MANAGING URBAN STORMWATER, 2004. REFER TO THE BLUE BOOK FOR STANDARD DRAWINGS "SD"
2. SEDIMENT & EROSION CONTROLS MUST BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS OR DEMOLITION ACTIVITY. THE LOCATION OF SUCH DEVICES IS INDICATIVE ONLY AND FINAL POSITION SHOULD BE DETERMINED ON SITE.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MEASURES ARE TAKEN DURING THE COURSE OF CONSTRUCTION TO PREVENT SEDIMENT EROSION AND POLLUTION OF THE DOWNSTREAM SYSTEM, SUPERVISING ENGINEER SHOULD BE CONTACTED IF IN DOUBT. ALL SEDIMENT CONTROL STRUCTURES TO BE INSPECTED AFTER EACH RAINFALL EVENT FOR STRUCTURAL DAMAGE AND ALL TRAPPED SEDIMENT TO BE REMOVED TO A NOMINATED SOIL STOCKPILE SITE.
4. RETAIN ALL EXISTING GRASS COVER WHEREVER POSSIBLE. TOPSOIL FROM ALL AREAS THAT WILL BE DISTURBED TO BE STRIPPED AND STOCKPILED AT THE NOMINATED SITE. A SEDIMENT FENCE TO BE PLACED DOWNHILL OF STOCKPILE.
5. AREAS OF SITE REGRADING ARE TO BE COMPLETED PROGRESSIVELY DURING THE WORKS AND STABILISED AS EARLY AS POSSIBLE. THE SUPERVISING ENGINEER MAY DIRECT THE CONTRACTOR TO HAVE AREAS OF DISTURBANCE COMPLETED AND STABILISED DURING THE COURSE OF THE WORKS.
6. ALL DISTURBED AREAS ARE TO BE SEEDED & FERTILISED WITHIN 14 DAYS OF EXPOSURE.
7. ALL EXISTING TREES TO BE RETAINED UNLESS SHOWN OTHERWISE ON APPROVED DRAWINGS. TREES RETAINED ARE TO BE PROTECTED WITH A HIGH VISIBILITY FENCE, PLUS FLAGGING TO INDIVIDUAL TREES AS NECESSARY.
8. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADEN WATER, UNTIL SURROUNDING AREAS ARE PAVED OR REGRASSED. GRAVEL OR GEOTEXTILE INLET FILTERS TO SD6-11 & SD6-12.
9. ALL SILT FENCES & BARRIERS ARE TO BE MAINTAINED IN GOOD ORDER & REGULARLY DESILTED DURING THE CONSTRUCTION PERIOD. SILT FENCES TO SD6-8 OR SD6-9.
10. STOCKPILES OF LOOSE MATERIALS SUCH AS SAND, SOIL, GRAVEL MUST BE COVERED WITH GEOTEXTILE SILT FENCE MATERIAL. PLASTIC SHEETING OR MEMBRANE MUST NOT BE USED. SAFETY BARRICADING SHOULD BE USED TO ISOLATE STOCKPILES OF SOLID MATERIALS SUCH AS STEEL REINFORCING, FORMWORK AND SCAFFOLDING.
11. WASTE MATERIALS ARE TO BE STOCKPILED OR LOADED INTO SKIP-BINS LOCATED ON SITE AS SHOWN ON PLAN.
12. NO MORE THAN 150m OF TRENCHING TO BE OPEN AT ANY ONE TIME. IMMEDIATELY AFTER TRENCH BACKFILLING, PROVIDE SANDBAGS OR SAUSAGE FILTERS ACROSS EACH TRENCH AT MAXIMUM 20m SPACINGS. FILTERS TO REMAIN IN PLACE UNTIL REVEGETATION HAS OCCURRED.
13. ALL VEHICLES LEAVING THE SITE MUST PASS OVER THE STABILISED SITE ACCESS BALLAST AREA (SIMILAR TO SD6-14) TO SHAKE OFF SITE CLAY AND SOIL. IF NECESSARY WHEELS AND AXLES ARE TO BE HOSED DOWN. BALLAST IS TO BE MAINTAINED & REPLACED AS NECESSARY DURING THE CONSTRUCTION PERIOD.
14. THE HEAD CONTRACTOR IS TO INFORM ALL SITE STAFF AND SUB-CONTRACTORS OF THEIR OBLIGATIONS UNDER THE EROSION AND SEDIMENT CONTROL PLAN.
15. ANY SEDIMENT DEPOSITED ON THE PUBLIC WAY, INCLUDING FOOTPATH RESERVE AND ROAD SURFACE, IS TO BE REMOVED IMMEDIATELY.
16. PROVIDE BARRIERS AROUND ALL CONSTRUCTION WORKS WITHIN THE FOOTPATH AREA TO PROVIDE SAFE ACCESS FOR PEDESTRIANS.
17. CONCRETE PUMPS AND CRANES ARE TO OPERATE FROM WITHIN THE BALLAST ENTRY DRIVEWAY AREA AND ARE NOT TO OPERATE FROM THE PUBLIC ROADWAY UNLESS SPECIFIC COUNCIL PERMISSION IS OBTAINED.
18. TRUCKS REMOVING EXCAVATED / DEMOLISHED MATERIAL SHOULD TRAVEL ON STABILISED CONSTRUCTION PATHS. MATERIAL TO BE TAKEN TO THE TRUCK TO REDUCE TRUCK MOVEMENT ON SITE. TRUCKS TO BE LIMITED TO SINGLE UNIT HEAVY RIGID VEHICLES (NO SEMITRAILERS)
19. ANY EXCAVATION WORK ADJACENT TO ADJOINING PROPERTIES OR THE PUBLIC ROADWAY IS NOT TO BE COMMENCED UNTIL THE STRUCTURAL ENGINEER IS CONSULTED AND SPECIFIC INSTRUCTIONS RECEIVED FROM THE ENGINEER.
20. TOILET FACILITIES MUST BE EITHER A FLUSHING TYPE OR APPROVED PORTABLE CHEMICAL CLOSET. CHEMICAL CLOSETS ARE TO BE MAINTAINED & SERVICED ON A REGULAR BASIS SO THAT OFFENSIVE ODOUR IS NOT EMITTED.
21. DURING TRENCH EXCAVATION ALL SPOIL SHALL BE MOUNDED ON THE UPHILL SIDE OF TRENCHES AND PLACEMENT IS TO COMPLY WITH THE SUPERINTENDENTS REQUIREMENT.
22. DIVERSION BANKS SHOULD BE CONSTRUCTED BY MOUNDING STRIPPED TOPSOIL (MIN HEIGHT 600mm) WHERE DIRECTED. MATERIAL TO BE RESPREAD ON FOOTWAYS AFTER FINAL TRIMMING.
23. UNDISTURBED BUFFER ZONE AREAS ARE CLOSED TO ALL TRAFFIC MOVEMENTS UNLESS OTHERWISE NOTED BY THE SUPERINTENDENT AND ACCESS TO THE SEWER OR C.D.L. TRENCHING WILL BE AS SHOWN, OR HEAVY PENALTIES MAY BE IMPOSED.
24. TRAFFIC MANAGEMENT MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION. IN ACCORDANCE WITH 'R.T.A. TRAFFIC CONTROL AT WORK SITES – CURRENT EDITION' AND AS 1742 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.'
25. PEDESTRIAN CONTROL MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION. IN ACCORDANCE WITH AS 1742 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

ENVIRONMENTAL SITE MANAGEMENT LEGEND

- PROPOSED BUILDING LINE
- PROPRIETARY SILT FENCE
- PROVIDE TEMPORARY CHAIN WIRE FENCING (HOARDING) ALONG THE SITE BOUNDARY.
- TEMPORARY STABALISED CONSTRUCTION ENTRY/EXIT. (SHAKER PAD)
- TEMPORARY FILTER TUBE WITH SAFETY BARRICADE TO KERB INLET PITS.
- NOMINATED DISPOSAL ROUTE FOR TRUCK MATERIAL TRANSPORTATION.
- TEMPORARY MASS CONCRETE FOOTPATH CROSSING.
- UNDISTURBED NON-TRAFFICABLE AREA
- DIVERSION BANK
- SURFACE INLET DRAINAGE PIT WITH SURROUNDING FILTER FABRIC INLET SEDIMENT TRAP OR FILTER TUBES (SANDBAGS)
- TEMPORARY GEOTEXTILE WRAPPED HAY BALES/SAND BAGS
- STOCK MATERIALS
- SITE EQUIPMENT LOCATIONS



ENVIRONMENTAL SITE MANAGEMENT PLAN

SCALE 1 : 200

4	19.05.17	REISSUED FOR DA
3	14.03.17	REISSUED FOR DA
2	23.08.16	REISSUED FOR DA
1	27.07.16	ISSUED FOR DA

REV: DATE: NOTATION/AMENDMENT:

DO NOT SCALE OFF DRAWINGS. CHECK ALL DIMENSIONS ON SITE. FIGURED DIMENSIONS TAKE PRECEDENCE.

Family & Community Services
Land & Housing Corporation

LOCKED BAG 4009
ASHFIELD NSW BC1800
PHONE No (02) 8753 9000
FAX No (02) 8753 8888
www.facs.nsw.gov.au

NOMINATED ARCHITECT:

SIGNED

DATE

PROJECT MANAGER & ARCHITECT:
LAND & HOUSING CORPORATION

CIVIL - STRUCTURAL - BUILDING SERVICES:
JONES NICHOLSON CONSULTING ENGINEERS
WWW.JONESNICHOLSON.COM.AU

BUSINESS PARTNER:
FAMILY & COMMUNITY SERVICES
Land & Housing Corporation

PROJECT:
PROPOSED HOUSING DEVELOPMENT

84 NEW ILLAWARRA RD & 313 BEXLEY RD, BEXLEY

TITLE:
CIVIL DESIGN
ENVIRONMENTAL SITE MANAGEMENT PLAN

FILE:

PLOTTED: 19/05/2017 11:04:16 AM

STATUS: DA ISSUE			
DATE: 14.03.17	SCALE: As indicated	PROJ: 150958	PROJ No.: BGJ4I
STAGE: PRELIM	DRAWN: YMK	CHECKED: B.B	APPROVED: B.B
TYPE: A1	SHEET: ESM01		REV: 4