NEW APARTMENT DEVELOPMENT

33-35 FAIRLIGHT STREET & 10-12 CLIFFORD AVENUE
FAIRLIGHT NSW 2094

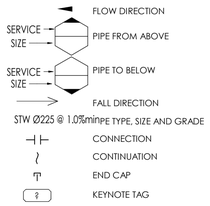
STORMWATER SERVICES

- STORMWATER PIPE
- STORMWATER RISING MAIN PIPE
- EXISTING STORMWATER PIPE
- RAINWATER PIPE
- SUB-SOIL DRAINAGE LINE
- CAST IN SLAB PIPE

STORMWATER LEGEND

- PROPOSED SEALED JUNCTION PIT
- PROPOSED GRATED SUFACE INLET PIT
- EXISTING PIT
- PIT TO BE REMOVED
- PROPOSED KERB INLET PIT
- PROPOSED GRATED DRAIN
- PROPOSED RAINWATER TANK
- DOWNPIPE, RISER OR VERTICAL DROP
- RWO - RAINWATER OUTLET FOR BALCONIES, ROOF, CARPARK ETC
- GS1 - DOWNPIPE WITH RAIN HEAD OVERFLOW
- GS2 - DOWNPIPE WITH SUMP SIDE OVERFLOW
- GS3 - DOWNPIPE WITH SUMP HIGH CAPACITY OVERFLOW
- SWALE DRAIN
- OVERLAND FLOW PATH
- ROOF FALL DIRECTION
- RL 35.05 — PROPOSED PAVEMENT SURFACE LEVEL
- GL 35.05 — PROPOSED PIT SURFACE LEVEL
- IL 34.75 — PROPOSED PIT INVERT LEVEL
- FFL 23.56 — PROPOSED FINISHED FLOOR LEVEL
- + 35.11 — EXISTING SURFACE LEVEL
- 36.00 — EXISTING SURVEY CONTOUR
- PROPOSED BUILDING CAVITY DRAINAGE
- PROPOSED BASEMENT PERIMETER DRAINAGE

GENERAL PIPEWORK LEGEND



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 (SANDBAGGS)
- TEMPORARY GEOTEXTILE WRAPPED HAY BALES/SAND BAGS
- STOCK MATERIALS
- SITE EQUIPMENT LOCATIONS

PROJECT INFORMATION TABLE

THE TABLES BELOW ARE TO BE READ IN CONJUNCTION WITH THE ADJACENT NOTES

GEOTECHNICAL INFORMATION

COMPANY	REPORT No.	DATED
JKGeotechnics	34479SJrpt	30/08/2023

SURVEY INFORMATION

THE SURVEY INFORMATION ON THESE DRAWINGS HAS BEEN PROVIDED BY

COMPANY	DATED
BEE & LETHBRIDGE PTY LTD	19/03/2020

SAFETY IN DESIGN

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

- JN DO NOT CONSIDER THAT THERE ARE ANY UNIQUE RISKS ASSOCIATED WITH THE DESIGN OF THIS PROJECT.

DRAWING STATUS

PRELIMINARY
PRELIMINARY DRAWINGS ARE NOT TO BE USED FOR TENDER OR CONSTRUCTION PURPOSES.

TENDER
TENDER DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES AND ARE INTENDED FOR AN EXTENT OF WORKS. ALL OTHER CONSULTANT DRAWINGS AND CONTRACT DOCUMENTS SHOULD BE READ IN CONJUNCTION WITH THESE DOCUMENTS TO DETERMINE THE FULL EXTENT OF WORKS.

CONSTRUCTION CERTIFICATE
CONSTRUCTION CERTIFICATE DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS APPROVED & STAMPED BY THE PCA.

CONSTRUCTION
CONSTRUCTION DRAWINGS CAN BE USED FOR CONSTRUCTION PURPOSES AND/OR FOR THE CREATION OF FABRICATION DRAWINGS.

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 DEPARTMENT OF HOUSING CONSTRUCTION SPECIFICATION IS TO BE USED. THE NOMINATED SPECIFICATION SHALL TAKE PRECEDENCE TO THESE NOTES.
3. THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT. ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE CONTRACTOR ON SITE. ENGINEERS DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.
4. ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECTURAL DRAWINGS & DRAWINGS FROM OTHER CONSULTANTS.
5. THE CONTRACTOR SHOULD REPORT ANY DISCREPANCIES ON THE DRAWINGS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN.
6. 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.
7. CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE PERMISSION OF THE OWNER.
8. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED OR REMOVED FROM SITE.
9. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING.
10. ALL DRAINAGE LINES THROUGH ADJACENT LOTS SHALL BE CONTAINED WITHIN EASEMENTS CONFORMING TO COUNCIL'S STANDARDS.
11. THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES AND DEBRIS ETC. TO THE EXTENT SPECIFIED.
12. 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. SET OUT COORDINATES ARE BASED ON SURVEY DRAWINGS PROVIDED FOR THE PURPOSE OF CARRYING OUT THE ENGINEERING DESIGN.
5. CONTRACTOR SHALL VERIFY ALL SET OUT COORDINATES SHOWN ON THE PLANS BY A REGISTERED SURVEYOR
6. CONTRACTORS SHALL ARRANGE FOR THE WORKS TO BE SET OUT BY A REGISTERED SURVEYOR.
7. ANY DISCREPANCIES SHOULD BE CLARIFIED IN WRITING WITH THE ENGINEER PRIOR TO COMMENCEMENT OF THE WORK FOR CONFIRMATION OF THE SURVEY.

STORMWATER DRAINAGE

1. STORMWATER DRAINAGE SHALL BE GENERALLY IN ACCORDANCE WITH CURRENT 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. MINIMUM COVER TO PIPES 300mm DIA. AND OVER GENERALLY SHALL BE 600mm IN CARPARK & ROADWAY AREAS UNO.
6. PIPES SHALL GENERALLY BE LAID AT THE GRADES INDICATED ON THE DRAWINGS.
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 1200mm 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 LOAD CLASS A UNLESS NOTED OTHERWISE.
14. ALL DRIVEWAY & OSD PITS TO BE 600 SQUARE LOAD CLASS D 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.
23. 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
24. SHOULD THE CONTRACTOR ELECT TO INSTALL PRECAST STORMWATER PITS AND THEY ARE PERMITTED BY COUNCIL AND THE CLIENT, THE PRECAST PITS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH RMS STANDARDS INCLUDING:
    1. SEAL THE SEGMENTS TOGETHER USING A SITE-APPROVED NON-SHRINK GROUT OR MASTIC-TYPE PRODUCT. APPLY THE SEALANT IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S REQUIREMENTS.
    2. ENSURE THAT NO GAPS REMAIN AND THAT A SMOOTH FACE EXISTS BETWEEN MULTIPLE UNITS.
    3. LEAVE THE SEGMENTS UNDISTURBED UNTIL THE PERIOD OF CURING IS COMPLETED IN ACCORDANCE WITH THE GROUT OR SEALANT PRODUCT MANUFACTURER'S REQUIREMENTS.

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. REFER TO PROJECT INFORMATION TABLES FOR MINIMUM ROLLER WEIGHT AND THE MINIMUM NUMBER OF 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 THE DESIGN ENGINEERS APPROVAL.
9. COMPACTION TESTING TO BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT INFORMATION TABLE. 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 INSTALLATION

1. SUPPLY & INSTALLATION OF DRAINAGE WORKS TO BE IN ACCORDANCEWITH 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.

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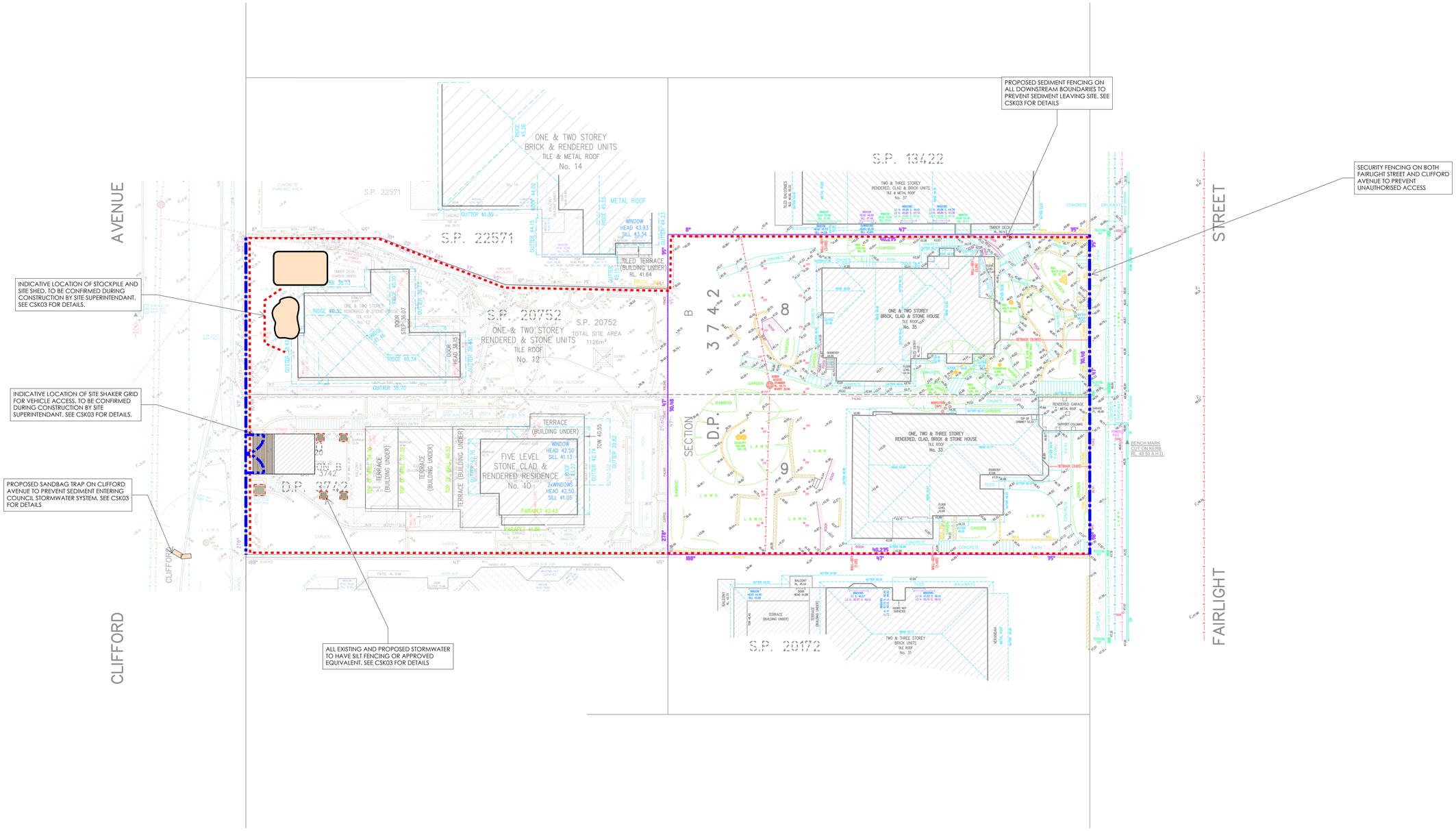
DESIGN	DJA
DATE	18/11/2024
SIZE	A1
SCALE	NTS
PROJECT MGR	CG

CIVIL DESIGN

NOTES AND LEGEND

New Apartment Development
33-35 FAIRLIGHT ST & 10-12 CLIFFORD AVE FAIRLIGHT NSW 2094
LIGHTHOUSE PROJECT GROUP

N0231093
CSK001 1



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SIZE	A1
SCALE	1:200
PROJECT MGR	CG

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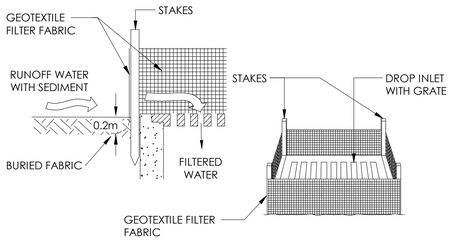
SEDIMENT CONTROL PLAN

New Apartment Development
33-35 FAIRLIGHT ST & 10-12 CLIFFORD AVE FAIRLIGHT NSW 2094
LIGHTHOUSE PROJECT GROUP

N0231093
CSK020 1



GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP DETAIL

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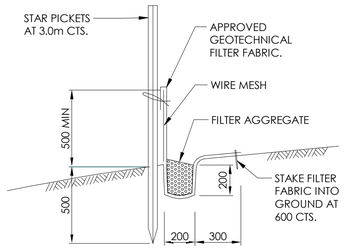

SILT FENCE DETAIL

SEDIMENT SILT FENCE DETAIL

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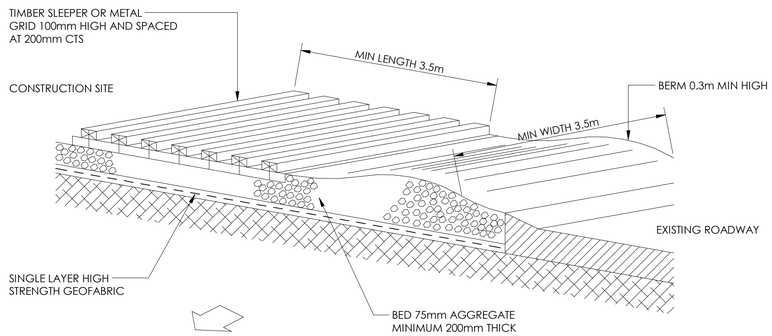
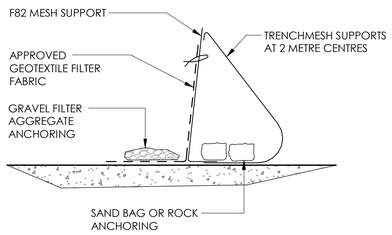


TEMPORARY CONSTRUCTION EXIT DETAIL - SHAKER

SCALE 1 : 20



GENERAL CONSTRUCTION NOTES:

1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE.
2. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.
3. JOIN SECTIONS OF FABRIC AT A SUPPORT WITH A 150mm OVERLAP.
4. REFER TO DETAIL SD 6-9 "BLUE BOOK"

SEDIMENT FENCE - ALTERNATIVE

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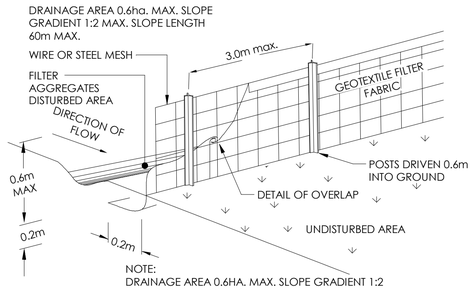
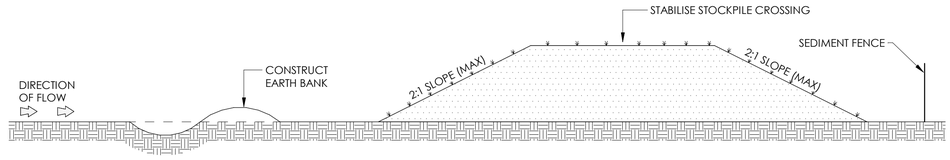


SEDIMENT FENCE

GENERAL CONSTRUCTION NOTES

1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE.
2. DRIVE 1.5m LONG STAR PICKETS IN GROUND 3m APART.
3. DIG A 200mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE FABRIC TO BE ENTRENCHED.
4. BACKFILL TRENCH OVER BASE OF FABRIC
5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.
6. JOIN SECTIONS OF FABRIC AT A SUPPORT WITH A 150m OVERLAP.



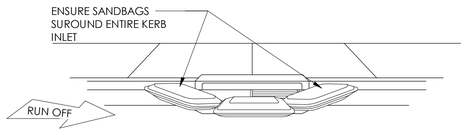
STOCKPILES

N.T.S

GENERAL CONSTRUCTION NOTES:

1. LOCATE STOCKPILE AT LEAST 5m FROM VEGETATION, CONCENTRATED WATER FLOWS, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS A LOW FLAT ELONGATED MOUND.
3. WHERE THERE IS A SUFFICIENT AREA TOPSOIL STOCKPILES SHALL BE LESS THAN 2m IN HEIGHT. (TO ALLOW AIR VENTILATION FOR FUTURE REUSE)
4. REHABILITATE IN ACCORDANCE WITH THE SWMP/ESCP.
5. CONSTRUCT EARTH BANK ON THE UPSLOPE SIDE TO DIVERT RUN OFF AROUND THE STOCKPILE AND A SEDIMENT FENCE 1m TO 2m DOWNSLOPE OF STOCKPILE.

STOCKPILES



NOTES:

1. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT.
2. FILL THE SLEEVE WITH 25mm TO 50MM GRAVEL.
3. FORM AN EUPTICAL CROSS SECTION ABOUT 150mm HIGH X 400mm WIDE.
4. PLACE THE FILTER AT THE OPNEING OF THE KERB INLET LEAVING A 100MM GAP AT THE TOP TO ACT AS AN EMERGENCY SPILL WAY.
5. MAINTAIN A CLEAR DISTANCE AWAY FROM THE PIT WITH SPACER BLOCKS.
6. FORM A SEAL WITH THE KERBING AND PREVENT SEDIMENT BYPASSING THE FILTER.
7. FIT TO ALL KERB INLETS AS SHOWN.

SANDBAG SEDIMENT INLET TRAP

SCALE 1 : 20

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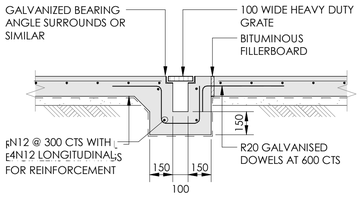
CIVIL DESIGN

SEDIMENT CONTROL DETAILS

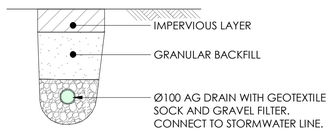
New Apartment Development
33-35 FAIRLIGHT ST & 10-12
CLIFFORD AVE FAIRLIGHT NSW 2094
LIGHTHOUSE PROJECT GROUP

N0231093
CSK030 1



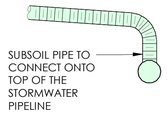
TYPICAL 100mm GRATED DRAIN DETAIL

SCALE 1 : 20



TYPICAL SUBSOIL LINE

SCALE 1 : 20



SUBSOIL PIPE CONNECTION

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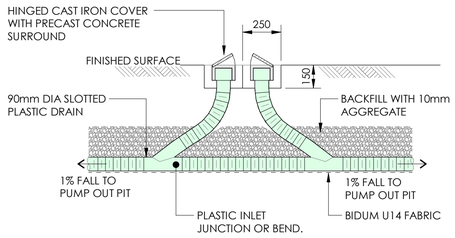
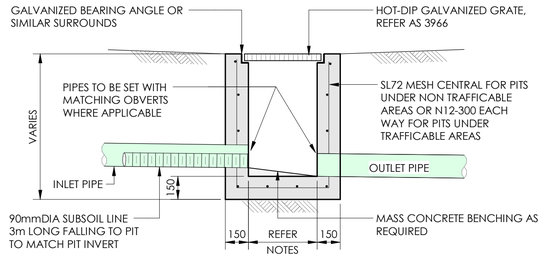


NOTES :

- MINIMUM GRADE OF SUBSOIL DRAINAGE PIPES IS TO BE 1.0%. JOINTS IN FILTER FABRIC TO BE LAPPED A MINIMUM 300mm.

SUBSOIL PIPE FLUSHING POINT

SCALE 1 : 20

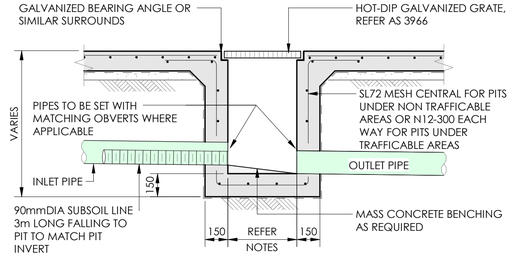


MINIMUM INTERNAL DIMENSIONS FOR STORMWATER PITS			
DEPTH OF INVERT OF OUTLET		DEPTH OF INVERT OF OUTLET	
		WIDTH	LENGTH
	< 600	450	450
> 600		600	600
> 900		600	900
> 1200		900	900
*STEP IRONS SHALL BE PROVIDED FOR PITS WITH DEPTHS EXCEEDING 1000mm			

NOTE:
1. CLIMB IRONS SHALL BE PROVIDED UNDER LID AT 300 CTS TO COUNCIL STANDARDS WHERE PIT DEPTH IS DEEPER THAN 1000.
2. 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.
4. ALTERNATIVE PIT CONSTRUCTION MAY BE USED SUBJECT TO THE ENGINEERS APPROVAL.
5. CONCRETE STRENGTH F'c = 32 MPa

TYPICAL CONCRETE INLET PIT - NATURAL SURFACE

SCALE 1 : 20

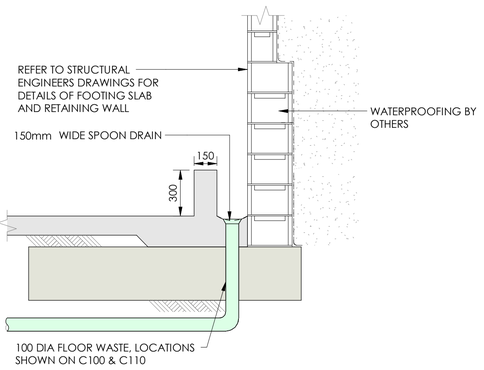


MINIMUM INTERNAL DIMENSIONS FOR STORMWATER PITS			
DEPTH OF INVERT OF OUTLET		DEPTH OF INVERT OF OUTLET	
		WIDTH	LENGTH
	< 600	450	450
> 600		600	600
> 900		600	900
> 1200		900	900
*STEP IRONS SHALL BE PROVIDED FOR PITS WITH DEPTHS EXCEEDING 1000mm			

NOTE:
1. CLIMB IRONS SHALL BE PROVIDED UNDER LID AT 300 CTS TO COUNCIL STANDARDS WHERE PIT DEPTH IS DEEPER THAN 1000.
2. 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.
3. ALTERNATIVE PIT CONSTRUCTION MAY BE USED SUBJECT TO THE ENGINEERS APPROVAL.
4. CONCRETE STRENGTH F'c = 32 MPa

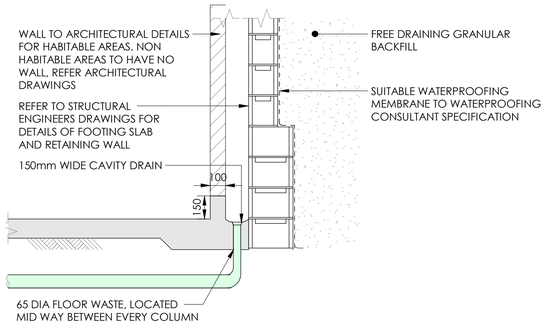
TYPICAL CONCRETE INLET PIT - CONCRETE SURFACE

SCALE 1 : 20

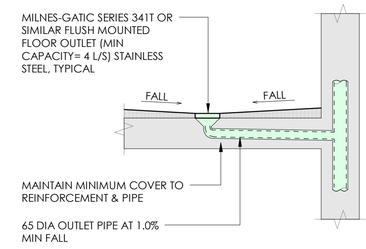


TYPICAL GROUNDWATER DRAINAGE DETAIL

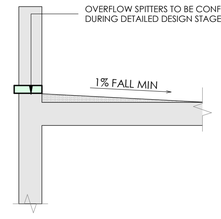
SCALE 1 : 20



TYPICAL CAVITY DRAINAGE DETAIL

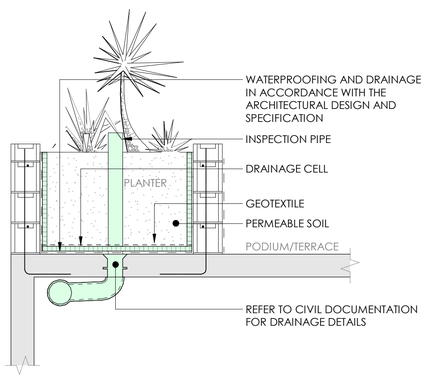


TYPICAL BALCONY FLOOR OUTLET DETAIL



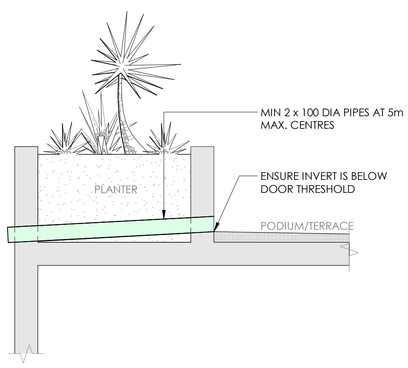
TYPICAL BALCONY SPITTER DETAIL

SCALE 1 : 20



TYPICAL PLANTER DRAINAGE DETAIL

SCALE 1 : 20



TYPICAL PLANTER OVERFLOW DETAIL

SCALE 1 : 20

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CIVIL DESIGN

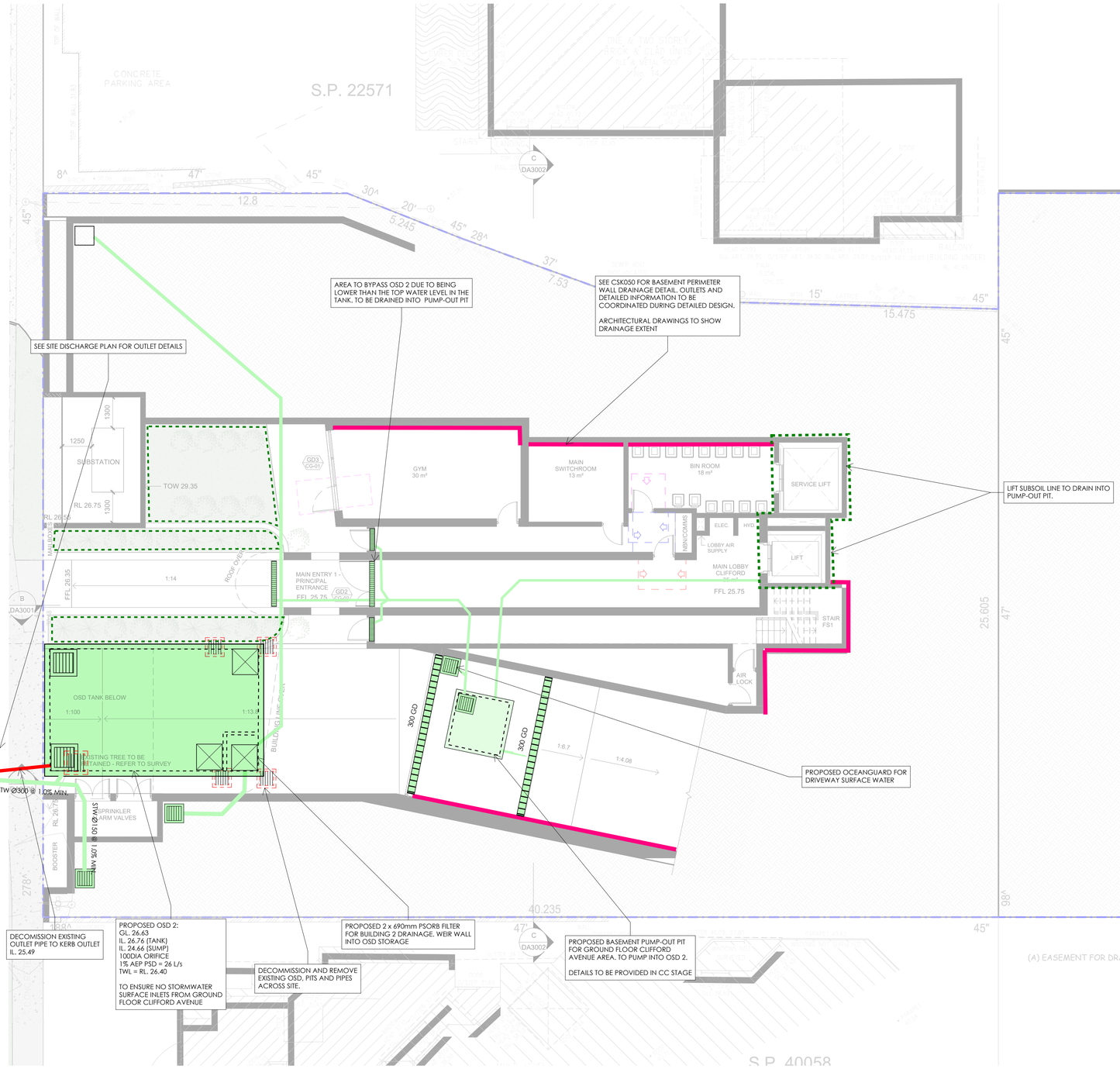
TYPICAL DETAILS

New Apartment Development

33-35 FAIRLIGHT ST & 10-12 CLIFFORD AVE FAIRLIGHT NSW 2094

LIGHTHOUSE PROJECT GROUP

N0231093
CSK050 1



NOTES:
-ALL BALCONIES TO BE MINIMUM 1:80 FALL

-ALL BALCONIES TO HAVE SUFFICIENT OVERFLOWS TO LOW GROUND

-ENSURE OVERLAND FLOW PATH IS PRESENT THROUGH ALL COURTYARDS TO CLIFFORD AVENUE

-BASEMENT SURFACE TO BE MINIMUM 1:200 FALL

-SUBSOIL CELLS TO LANDSCAPE AREAS AS REQUIRED

-REAR OF WALLS TO HAVE SUBSOIL AS REQUIRED

-MAINTENANCE ACCES TO CAVITY SPACES TO BE DETAILED/COORDINATED

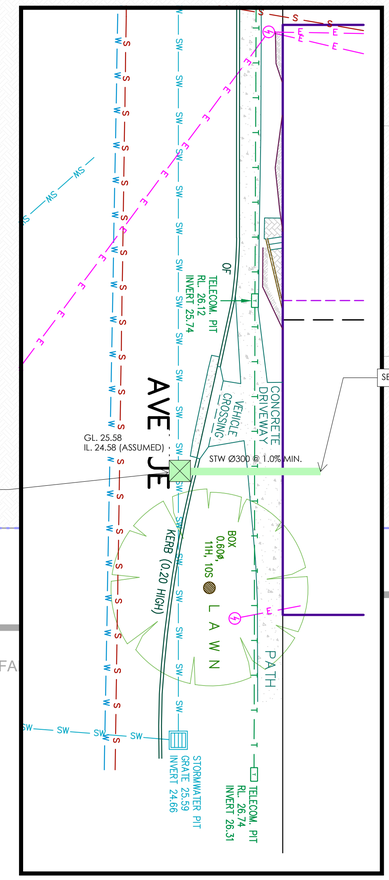
OSD CATCHMENT CALCULATIONS:
EXISTING CATCHMENT = 2,355 m² (35% IMPERVIOUS - AS PER NORTHERN BEACHES COUNCIL WATER MANAGEMENT FOR DEVELOPMENT POLICY SECTION 9.3.3.2.3)

CATCHMENT 1 AREA = 1,065 m² (65.9% IMPERVIOUS)
CATCHMENT 2 AREA = 1,290 m² (71.6% IMPERVIOUS)

EXISTING 20% AEP (35% IMPERVIOUS) = 47 L/s

THEREFORE, AS PER NORTHERN BEACHES COUNCIL WATER MANAGEMENT FOR DEVELOPMENT POLICY SECTION 9.3.3.2.3, THE PROPOSED 1% AEP PSD = 47 L/s

OSD 1 - 1% AEP PSD = 21 L/s
OSD 2 - 1% AEP PSD = 26 L/s
TOTAL PSD = 47 L/s



SITE DISCHARGE PLAN

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GF CLIFFORD AVE STORMWATER PLAN

New Apartment Development
33-35 FAIRLIGHT ST & 10-12 CLIFFORD AVE FAIRLIGHT NSW 2094
LIGHTHOUSE PROJECT GROUP

N0231093
CSK200 1

NOTES:
-SEE CSK200 FOR PLAN NOTES

14 CLIFFORD AVE

37 FAIRLIGHT ST

C DA3002

NATURAL AND UNDISTURBED EXISTING GROUND LEVEL MAINTAINED WITHIN 1m OF SIDE BOUNDARY

COURTYARD U1
96 m²

COURTYARD U2
51 m²

U1
117 m²
FFL 28.75

U2
126 m²
FFL 28.75

LIVING
4.0m x 4.8m

DINING
2.7m x 3.9m

KITCHEN

TV JOINERY

BED 1
4.1m x 3.1m

BED 2
3.4m x 3.1m

PWD
2.5m x 1.1m

ENS
3.2m x 1.6m

LINEN

BATH
2.7m x 2.5m

L'DRY
2.2m x 1.8m

STO

ELEC

HYD

BIN ROOM EXHAUST

SERVICE LIFT

LOBBY AIR SUPPLY

LOBBY L1
FFL 28.75

LIFT

STAIR FS1

STORE

BATH
3.0m x 2.4m

L'DRY
3.3m x 1.8m

BATH
3.0m x 2.4m

L'DRY
3.3m x 1.8m

SD1 C1-01

SD1 C1-02

SD1 C1-03

SD1 C1-04

SD1 C1-05

SD3 C1-07

SD3 C1-08

DP

RWO

PO

OF

FFL 28.75

TOW 29.35

TOW 29.75

TOW 28.75

FB1

1:4

A DA0500

B DA3001

C DA3002

SEE CSK050 FOR PROPOSED CAVITY DRAINAGE DETAIL. TO BE COORDINATED WITH ARCHITECT DURING DETAILED DESIGN

ACCESS FOR MAINTENANCE TO CAVITY DRAINAGE TO BE REVIEWED

DOWNPIPES TO BE CAST INTO COLUMNS AND/OR WALL AS SHOWN

BALCONY OUTLETS TO BE 65mm CAST-IN SLAB

PLANTER OUTLETS & DRAINAGE CELLS REQUIRED TO ANY LANDSCAPE AREA NOT LOCATED IN DEEP SOIL ZONE

STW Ø150 @ 1.0% MIN.

STW Ø150 @ 1.0% MIN.

HIGH LIGHT WINDOW

AWP

SEE CSK220 FOR CONTINUATION

APPROXIMATE OVERFLOWS, TO OUTLET TO STREET AND NOT OVER DRIVEWAY DUE TO GRADING BACK INTO BASEMENT

INDICATIVE LOCATION/AMOUNT OF RAINWATER OUTLETS & OVERFLOWS NEEDED FOR BALCONY AREAS. TO BE COORDINATED DURING DETAILED DESIGN

8 CLIFFORD AVE

31 FAIRLIGHT ST

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L1 CLIFFORD AVE STORMWATER PLAN

New Apartment Development
33-35 FAIRLIGHT ST & 10-12 CLIFFORD AVE FAIRLIGHT NSW 2094
LIGHTHOUSE PROJECT GROUP

N0231093
CSK210 1

NOTES:
-SEE CSK200 FOR PLAN NOTES

14 CLIFFORD AVE

37 FAIRLIGHT ST

C DA3002

1 DA3003

B DA3001

A DA0500

SEE CSK050 FOR PROPOSED CAVITY DRAINAGE DETAIL, TO BE COORDINATED WITH ARCHITECT DURING DETAILED DESIGN

ACCESS FOR MAINTENANCE TO CAVITY DRAINAGE TO BE REVIEWED

SEE CSK050 FOR BASEMENT PERIMETER WALL DRAINAGE DETAIL. OUTLETS AND DETAILED INFORMATION TO BE COORDINATED DURING DETAILED DESIGN.

ARCHITECTURAL DRAWINGS TO SHOW DRAINAGE EXTENT

NATURAL AND UNDISTURBED EXISTING GROUND LEVEL MAINTAINED WITHIN 1m OF SIDE BOUNDARY

BALCONY OUTLETS TO BE 65mm CAST-IN SLAB

ABOVE GROUND DRAINAGE TO BE COORDINATED DURING DETAILED DESIGN

SEE CSK210 FOR CONTINUATION

8 CLIFFORD AVE

31 FAIRLIGHT ST

TV JOINERY
LIVING 5.0m x 4.9m
DINING 5.0m x 3.0m
KITCHEN
PANTRY
PWD 1.6m x 1.4m
BED 2 3.0m x 3.3m
LINEN
BED 3 3.6m x 3.1m
BATH 2.4m x 2.4m
L'DRY 2.4m x 1.6m
COURTYARD U3 10 m² FFL 31.95
BALC U3 34 m² FFL 31.95
U3 - ADAPTABLE 155 m²
BED 1 4.9m x 3.3m
WIR
ENS 2.5m x 3.3m
OV F P
ELEC HYD
SERVICES RETICULATION
LOBBY AIR SUPPLY
LOBBY L2 FFL 31.95
LIFT
SERVICE LIFT
STAIR FS1
BULKY WASTE 17 m²
BIN ROOM EXHAUST
HOT & COLD WATER PUMP ROOM - CLIFFORD BUILDING 8 m²
BALC U4 34 m² FFL 31.95
U4 - ADAPTABLE 165 m²
ENS 1 2.9m x 3.3m
BATH 1.7m x 3.3m
ENS 2 3.0m x 1.9m
L'DRY 1.6m x 2.4m
COURTYARD U4 30 m² FFL 31.95
BED 3 3.6m x 3.1m
STO
U3
U4
U1
U2
U14
U15
VISITOR
CAR PARK 1 346 m² FFL 31.95
CAR PARK 2 331 m² FFL 31.35
BIN ROOM 17 m²
BULKY WASTE 9 m²
300 GD
1:8
1:4
1:8.1
STW Ø150 @ 1.0% MIN.
VD
DP
RWO
OF
SD4 C2-05
SD4 C2-08
S1 C2-07
S1 C2-06
LV1 C2-03
LV1 C2-01
LF1 C2-02
GD4 C2-04
LV1 C2-10
LV1 C2-12
LF1 C2-11
GD4 C2-09

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CIVIL DESIGN

L2 CLIFFORD AVE STORMWATER PLAN

New Apartment Development
33-35 FAIRLIGHT ST & 10-12 CLIFFORD AVE FAIRLIGHT NSW 2094
LIGHTHOUSE PROJECT GROUP

N0231093
CSK220 1

NOTES:
-SEE CSK200 FOR PLAN NOTES

14 CLIFFORD AVE

37 FAIRLIGHT ST

SEE CSK050 FOR PROPOSED CAVITY DRAINAGE DETAIL. TO BE COORDINATED WITH ARCHITECT DURING DETAILED DESIGN

ACCESS FOR MAINTENANCE TO CAVITY DRAINAGE TO BE REVIEWED

SEE CSK050 FOR BASEMENT PERIMETER WALL DRAINAGE DETAIL. OUTLETS AND DETAILED INFORMATION TO BE COORDINATED DURING DETAILED DESIGN.

ARCHITECTURAL DRAWINGS TO SHOW DRAINAGE EXTENT

NATURAL AND UNDISTURBED EXISTING GROUND LEVEL MAINTAINED WITHIN 1m OF SIDE BOUNDARY

BALCONY OUTLETS TO BE 65mm CAST-IN SLAB

ABOVE GROUND DRAINAGE TO BE COORDINATED DURING DETAILED DESIGN

OUTLET FROM OSD1. SEE CSK08 FOR MORE DETAILS

8 CLIFFORD AVE

31 FAIRLIGHT ST

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L3 CLIFFORD AVE STORMWATER PLAN

New Apartment Development
33-35 FAIRLIGHT ST & 10-12 CLIFFORD AVE FAIRLIGHT NSW 2094
LIGHTHOUSE PROJECT GROUP

N0231093
CSK230 1

NOTES:
-SEE CSK200 FOR PLAN NOTES

14 CLIFFORD AVE

37 FAIRLIGHT ST

8 CLIFFORD AVE

31 FAIRLIGHT ST

DRAINAGE CELL / PLANTER DRAINAGE TO SUSPENDED COURTYARD AREAS, TYPICAL

DRAINAGE CELL / PLANTER DRAINAGE TO SUSPENDED COURTYARD AREAS, TYPICAL

ALL BUILDING 2 DRAINAGE AND LANDSCAPING TO CONNECT INTO OSD 2

ALL BUILDING 1 DRAINAGE AND LANDSCAPING TO CONNECT INTO OSD 1

ABOVE GROUND DRAINAGE TO BE COORDINATED DURING DETAILED DESIGN

SEE CSK050 FOR PROPOSED CAVITY DRAINAGE DETAIL. TO BE COORDINATED WITH ARCHITECT DURING DETAILED DESIGN

ACCESS FOR MAINTENANCE TO CAVITY DRAINAGE TO BE REVIEWED

Ø600 MH
1m CLEARANCE TO PIPE
900mm CLEARANCE TO MH

DEPTH TO INVERT OF PIPE 1.20m
EXISTING GROUND LEVEL RL40.98
40.98 - 1.20 = IL38.79

Ø300 MC
1m CLEARANCE TO PIPE
600mm CLEARANCE TO MC

NATURAL AND UNDISTURBED EXISTING GROUND LEVEL MAINTAINED WITHIN 1m OF SIDE BOUNDARY

TOW 40.20

BUILDING LINE ABOVE

PROPOSED SEWER DIVERSION

EXISTING SEWER TO BE RELOCATED

STW Ø150 @ 1.0% MIN.

PROPOSED OSD 1:
GL. 39.30
IL. 37.98 (TANK)
IL. 37.88 (SUMP)
98DIA ORIFICE
1% AEP PSD = 21 L/s

PROPOSED 1 x 690mm PSROB FILTER FOR BUILDING 1 DRAINAGE. WEIR WALL INTO OSD STORAGE

OSD OUTLET PIPE TO RUN ALONG ROOF OF BASEMENT BELOW. NO BUILDING 2 DRAINAGE TO CONNECT INTO OUTLET PIPE

REFER TO CSK220 FOR CONTINUATION

REFER TO CSK250 FOR CONTINUATION

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CIVIL DESIGN

L4 CLIFFORD AVE + GF FAIRLIGHT ST STORMWATER PLAN

New Apartment Development
33-35 FAIRLIGHT ST & 10-12 CLIFFORD AVE FAIRLIGHT NSW 2094
LIGHTHOUSE PROJECT GROUP

N0231093
CSK240 1

NOTES:
-SEE CSK200 FOR PLAN NOTES

14 CLIFFORD AVE

37 FAIRLIGHT ST

8 CLIFFORD AVE

31 FAIRLIGHT ST

ABOVE GROUND DRAINAGE TO BE COORDINATED DURING DETAILED DESIGN

SEE CSK050 FOR PROPOSED CAVITY DRAINAGE DETAIL. TO BE COORDINATED WITH ARCHITECT DURING DETAILED DESIGN

ACCESS FOR MAINTENANCE TO CAVITY DRAINAGE TO BE REVIEWED

BALCONY OUTLETS TO BE 65mm CAST-IN SLAB

ABOVE GROUND DRAINAGE TO BE COORDINATED DURING DETAILED DESIGN

SEE CSK260 FOR CONTINUATION

NATURAL AND UNDISTURBED EXISTING GROUND LEVEL MAINTAINED WITHIN 1m OF SIDE BOUNDARY

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CIVIL DESIGN

L5 CLIFFORD AVE + L1 FAIRLIGHT ST STORMWATER PLAN

New Apartment Development
33-35 FAIRLIGHT ST & 10-12 CLIFFORD AVE FAIRLIGHT NSW 2094
LIGHTHOUSE PROJECT GROUP

N0231093
CSK250 1

NOTES:
-SEE CSK200 FOR PLAN NOTES

14 CLIFFORD AVE

37 FAIRLIGHT ST

8 CLIFFORD AVE

31 FAIRLIGHT ST

ROOF DRAINAGE TO BE DESIGNED & COORDINATED DURING CC STAGE

TO ENSURE ADEQUATE RAINWATER OUTLETS & OVERFLOW SPITTERS ARE PRESENT TO CATER FOR THE 1% AEP STORM EVENT

BALCONY OUTLETS TO BE 65mm CAST-IN SLAB

ABOVE GROUND DRAINAGE TO BE COORDINATED DURING DETAILED DESIGN

SEE CSK250 FOR CONTINUATION

NATURAL AND UNDISTURBED EXISTING GROUND LEVEL MAINTAINED WITHIN 1m OF SIDE BOUNDARY

EXISTING ROCK TO BE RETAINED - REFER TO LANDSCAPE DESIGN

ROOF
FFL 44.75
RL 45.55
TOW 31.75

BALC U12 24 m² RL 45.75
BALC U13 24 m² RL 45.75
U12 130 m²
U13 146 m²
U14 42 m² FFL 45.70
U15 51 m²
COURTYARD U15 68 m²
LIVING 5.0m x 3.8m
DINING 5.0m x 3.5m
KITCHEN
TV JOINERY
SKYLIGHT ABOVE
BED 1 3.8m x 3.2m
BED 2 3.1m x 3.0m
BED 2 3.0m x 3.5m
BED 3 3.1m x 3.3m
BED 3 3.1m x 3.0m
BED 2 3.1m x 3.2m
BED 2 4.8m x 3.8m
ENS 4.3m x 2.0m
ENS 5.5m x 1.8m
BATH 1.6m x 2.5m
BATH 1.7m x 3.1m
BATH 1.6m x 3.2m
BATH 1.7m x 2.8m
L'DRY 1.9m x 1.6m
PWD 1.1m x 1.9m
WIR
STORE
LINEN
LIFT
ENTRY
STAIR FS2
LOBBY L2 7 m² FFL 45.75
LOBBY AIR SUPPLY
BIN ROOM EXHAUST
B. EXHAUST
AC UNITS 12 &13
AC U13
OUTDOOR STORAGE U14
OUTDOOR STORAGE U15
RWO RL 45.75
RWO RL 45.75

SD4 F2-07
SD1 F2-08
SD1 F2-09
SD4 F2-10
SD1 F2-02
SD1 F2-01
SD1 F2-16
SD1 F2-15
LV2 F2-06
LF1 F2-05
LF1 F2-04
LF1 F2-03
LF1 F2-12
LF1 F2-13
LF1 F2-14
LV2 F2-11
LV1 F2-17
AC U12

A DA0500
B DA3001
C DA3002
1 DA3003
SK1 C4-21
SK2 WC-01
SK2 WC-02
SK3 WC-03
SK3 WC-04

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ROOF CLIFFORD AVE + L2 FAIRLIGHT ST STORMWATER PLAN

New Apartment Development
33-35 FAIRLIGHT ST & 10-12 CLIFFORD AVE FAIRLIGHT NSW 2094
LIGHTHOUSE PROJECT GROUP

N0231093
CSK260 1

NOTES:
-SEE CSK200 FOR PLAN NOTES

14 CLIFFORD AVE

CLIFFORD AVENUE

ROOF

8 CLIFFORD AVE

ROOF DRAINAGE TO BE DESIGNED & COORDINATED DURING CC STAGE

TO ENSURE ADEQUATE RAINWATER OUTLETS & OVERFLOW SPITTERS ARE PRESENT TO CATER FOR THE 1% AEP STORM EVENT

BALCONY OUTLETS TO BE 65mm CAST-IN SLAB

ABOVE GROUND DRAINAGE TO BE COORDINATED DURING DETAILED DESIGN

PLANTER DRAINAGE CELLS AND OUTLETS, SEE CSK050 FOR TYPICAL DETAIL

EXISTING ROCK TO BE RETAINED - REFER TO LANDSCAPE DESIGN

TERRACE U14
34 m²
RL 48.95

TERRACE U15
34 m²
RL 48.95

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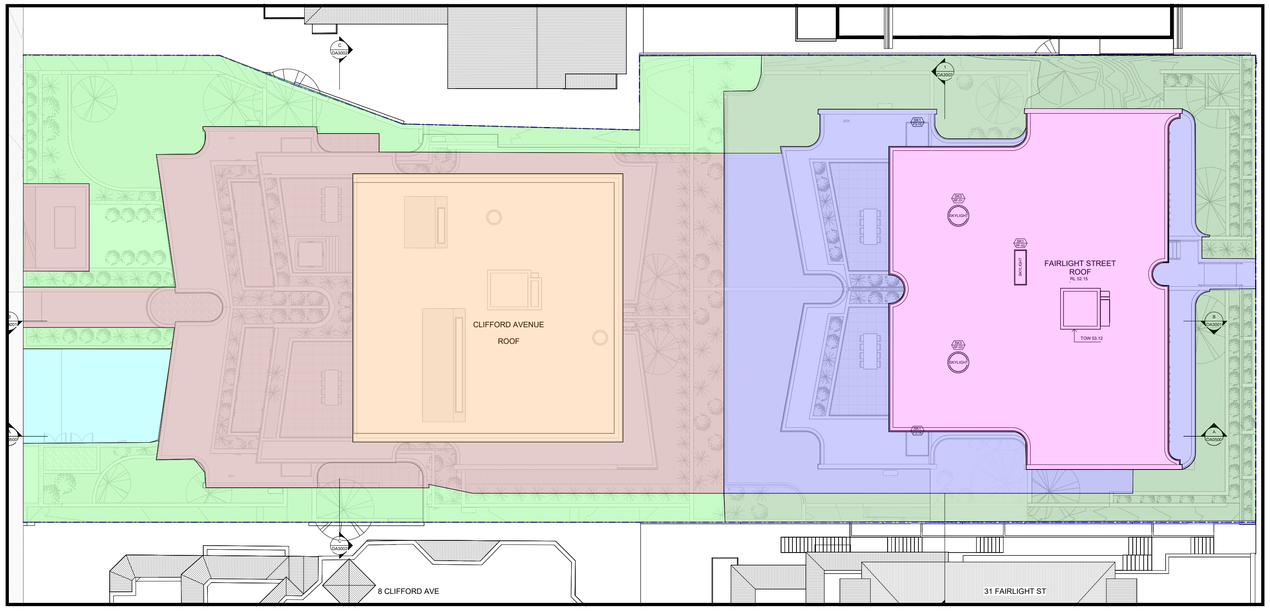
CIVIL DESIGN

L3 FAIRLIGHT ST
STORMWATER PLAN

New Apartment Development
33-35 FAIRLIGHT ST & 10-12 CLIFFORD AVE FAIRLIGHT NSW 2094
LIGHTHOUSE PROJECT GROUP

N0231093
CSK270 1



Legend

Description	Quantity	Unit
CATCHMENT 1 IMPERVIOUS	361.37	sq m
CATCHMENT 1 PERVIOUS	304.07	sq m
CATCHMENT 1 ROOF	385.19	sq m
CATCHMENT 2 DRIVEWAY	56.60	sq m
CATCHMENT 2 IMPERVIOUS	556.82	sq m
CATCHMENT 2 PERVIOUS	378.32	sq m
CATCHMENT 2 ROOF	309.11	sq m

MUSIC CATCHMENT PLAN

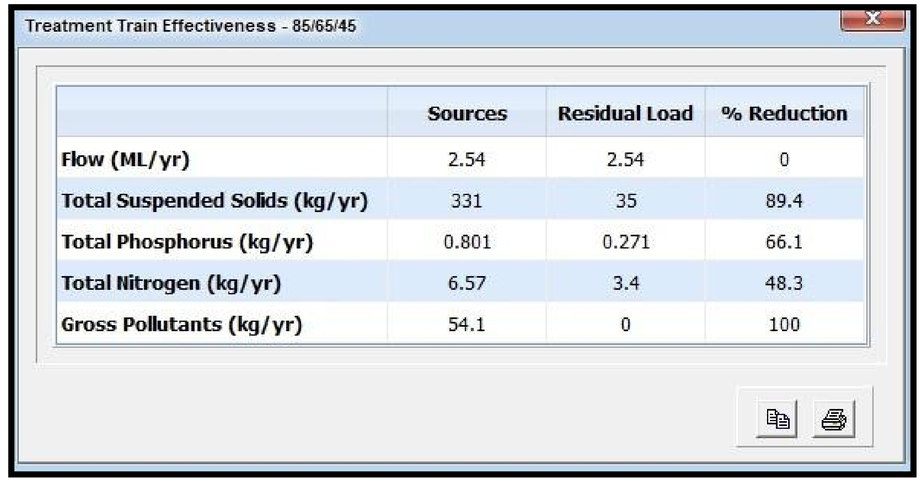
SCALE - 1:200

Table 5 – General Stormwater Quality Requirements

Pollutant	Performance Requirements
Total Phosphorous	65% reduction in the post development mean annual load[1]
Total Nitrogen	45% reduction in the post development mean annual load[1]
Total Suspended Solids	85% reduction in the post development mean annual load[1]
Gross Pollutants	90% reduction in the post development mean annual load[1] (for pollutants greater than 5mm in diameter)
pH	6.5 - 8.5
Hydrology	The post-development peak discharge must not exceed the pre-development peak discharge for flows up to the 50% AEP

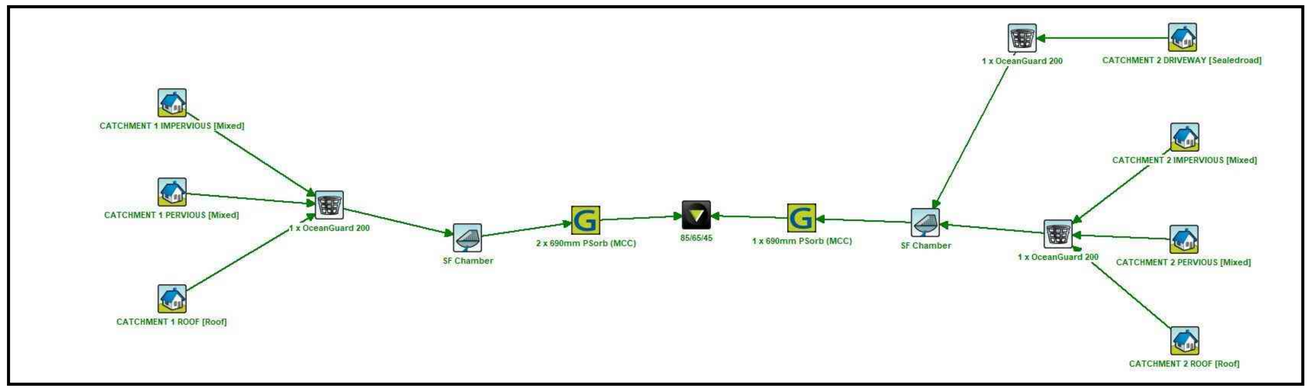
[1]The percentage reduction in the post development mean annual loads are relative to the loads from the proposed development without treatment applied

NORTHERN BEACHES COUNCIL WSUD REQUIRMENTS



	Sources	Residual Load	% Reduction
Flow (ML/yr)	2.54	2.54	0
Total Suspended Solids (kg/yr)	331	35	89.4
Total Phosphorus (kg/yr)	0.801	0.271	66.1
Total Nitrogen (kg/yr)	6.57	3.4	48.3
Gross Pollutants (kg/yr)	54.1	0	100

MUSIC RESULTS



MUSIC MODEL

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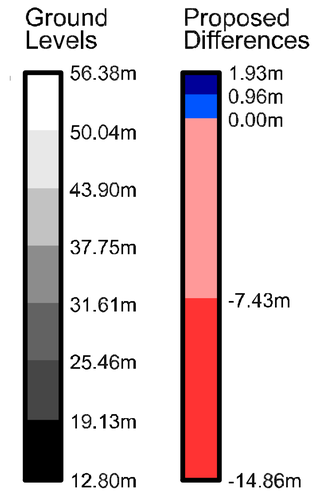
SIZE	A1
SCALE	AS SHOWN
PROJECT MGR	CG

CIVIL DESIGN

WSUD PLAN

New Apartment Development
33-35 FAIRLIGHT ST & 10-12 CLIFFORD AVE FAIRLIGHT NSW 2094
LIGHTHOUSE PROJECT GROUP

N0231093
CSK400 1



NOTES
1. THIS CONCEPT CUT & FILL SKETCH AND VOLUMES ARE PROVIDED FOR HIGH LEVEL INFORMATION AND CONTINGENCY SHOULD BE APPLIED.

2. CONCEPT CUT & FILL ONLY BASED ON SURVEY PROVIDED. THE MULTIPLE SURVEYS PROVIDED HAD MISSING DTM DATA ACROSS SUBJECT SITE, THEREFORE CUT & FILL DEPTHS ARE INDICATIVE ONLY. TO BE CONFIRMED DURING DETAILED DESIGN STAGE.

3. CUT & FILL WORKS TO REFERENCED FINISHED FLOOR LEVELS PROVIDED IN THE ARCHITECTURAL DRAWINGS.

4. CALCULATIONS DO NOT CONSIDER CUT FROM SUBSOIL TRENCHING.

5. TENDERERS/CONTRACTORS MUST UNDERTAKE THEIR OWN INDEPENDENT EARTHWORKS VOLUMES CALCULATIONS TO CONFIRM FOR COSTINGS - JN DOCUMENTED EARTHWORKS VOLUMES ARE EXPRESSED AS INDICATIVE BANKED VOLUMES ONLY AND ARE NOT TO BE TAKEN AS ACCURATE. UNLESS NOTED OTHERWISE THE VOLUMES ARE SUBJECT TO INHERENT PREVAILING CONDITIONS AND MODELLING LIMITATIONS INCLUDING BUT NOT LIMITED TO:
a. NO ALLOWANCE FOR BULKING AND COMPACTION ACTORS.
b. NO ALLOWANCE FOR STORMWATER OR OTHER UTILITY SERVICES TRENCHING AND/OR BACKFILLING.
c. NO ALLOWANCE FOR PITS, TANKS, INGROUND ITEMS, ETC.
d. NO ALLOWANCE FOR SOIL REMEDIATION/AMELIORATION AND ASSOCIATED VOLUME ADJUSTMENTS.
e. NO ALLOWANCE FOR CATEGORISATION AND/OR SELECTIVE FILLING WITH IMPORTED OR SITE-WON EXCAVATED SOILS.
f. NO ALLOWANCE FOR STRUCTURAL FOUNDATIONS.

6. QUANTITIES ARE CALCULATED AGAINST THE APPLIED SITE SURVEY DATA VS THE PROPOSED FINISHED FLOOR LEVELS AS BEST DETERMINED FROM THE AVAILABLE INFORMATION

7. NO PAVEMENT BOXOUTS HAVE BEEN ALLOWED

8. ALL ASSUMPTIONS TO BE VERIFIED BY GEOTECHNICAL ENGINEER INCLUDING CLASSIFICATION AND SUITABILITY OF ALL IMPORTED AND SITE REUSE MATERIALS PRIOR TO INCLUSION IN THE WORKS

9. ALL EARTHWORKS TO BE CARRIED OUT IN ACCORDANCE WITH AS3798-2007.

ALL EARTHWORKS

	Cut	Fill	Cut & Fill
Range	6.95m Av, 14.86m max	0.64m Av, 1.93m max	14.86m cut to 1.93m fill
Levels	25.75m to 49.51m	26.39m to 45.75m	25.75m to 49.51m
2D Area	2,033.85m²	95.56m²	2,129.41m²
3D Area	5,590.95m²	159.18m²	5,750.14m²
Volume	14,135.07m³	61.00m³	14,074.08m³ net cut

ISSUED FOR DA

JN Responsive Engineering

this document is issued by
Jones Nicholson Pty Ltd (ABN 51 003 316 032)

DESIGN	DJA
DATE	18/11/2024
SIZE	A1
SCALE	1:100
PROJECT MGR	CG

CIVIL DESIGN

CUT & FILL PLAN

New Apartment Development
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CSK500 1