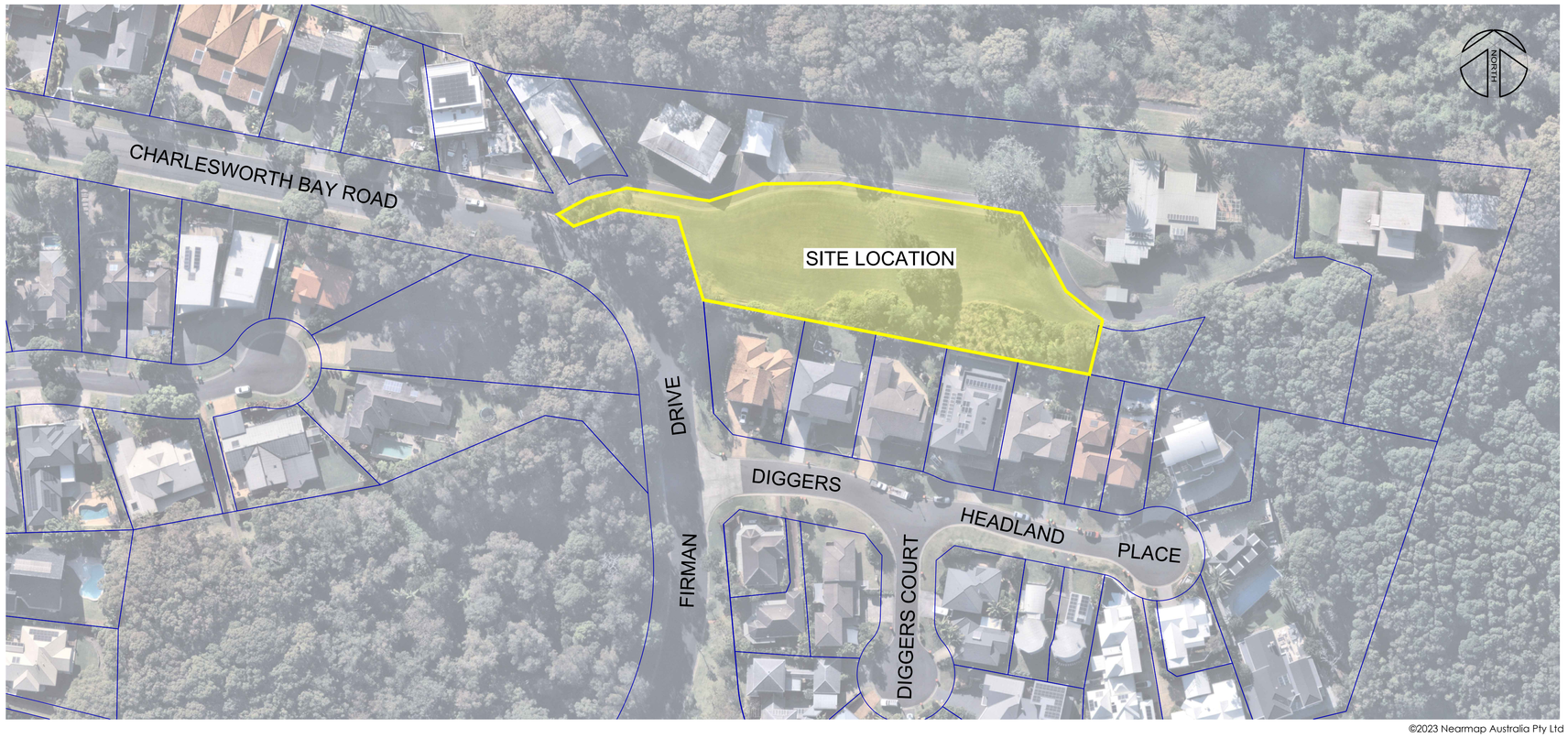
COFFS HARBOUR CITY COUNCIL

27-29 CHARLESWORTH BAY ROAD, COFFS HARBOUR
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

CONCEPT CIVIL ENGINEERING DESIGN FOR DEVELOPMENT APPLICATION

BARKER RYAN STEWART



LOCALITY
NOT TO SCALE

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
001	COVER SHEET
011	GENERAL NOTES
031	TYPICAL SECTIONS AND DETAILS
101	DETAIL PLAN
201	LONGITUDINAL SECTION MC01
301	CROSS SECTION MC01 SHEET 1
302	CROSS SECTION MC01 SHEET 2
501	DRAINAGE LAYOUT PLAN
511	DRAINAGE CATCHMENT PLAN
521	WATER QUALITY CATCHMENT PLAN
531	DRAINAGE LONGITUDINAL SECTION 1
532	DRAINAGE LONGITUDINAL SECTION 2
541	DRAINAGE RESULTS TABLE
601	PROPOSED UTILITY SERVICING PLAN
801	EROSION AND SEDIMENT CONTROL PLAN
811	EROSION AND SEDIMENT CONTROL DETAILS
901	TURNPATH PLAN

Prepared for: MR BRIAN BETTS

Revision A
Date 06/09/2024
Project No. 240204-01

GENERAL NOTES

1. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE DEVELOPMENT CONSENT AND THE COFFS HARBOUR COUNCIL WORKS SPECIFICATIONS SUBDIVISIONS / DEVELOPMENTS AND / OR AS DIRECTED BY THEIR REPRESENTATIVE AND MUST INCLUDE ANY NECESSARY WORKS REQUIRED TO MAKE THE CONSTRUCTION EFFECTIVE. ALL WORKS AND PUBLIC UTILITY RELOCATION SHALL INCUR NO COST TO COUNCIL.
2. THE CONTRACTOR IS TO IDENTIFY, LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION WORKS AND WHERE NECESSARY MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST WHERE NECESSARY.
3. ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE WORK HEALTH & SAFETY ACT 2017 AND ALL RELEVANT OCCUPATIONAL HEALTH & SAFETY POLICIES AND REGULATIONS.
4. DIMENSIONS SHALL NOT BE SCALED FROM THE PLANS. CLARIFICATION OF DIMENSIONS SHALL BE SOUGHT FROM THE SUPERINTENDENT OR REFERRED TO THE DESIGNER.
5. SURVEY MARKS SHALL BE MAINTAINED AT ALL TIMES. WHERE RETENTION IS NOT POSSIBLE THE ENGINEER SHALL BE NOTIFIED AND CONSENT RECEIVED PRIOR TO THEIR REMOVAL.
6. ALL NEW WORK IS TO MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS.
7. THE CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN OR ON ADJACENT LANDS WITHOUT THE PRIOR APPROVAL OF THE SUPERINTENDENT AND THE WRITTEN PERMISSION OF THE OWNERS.
8. THE CONTRACTOR SHALL MAINTAIN DUST CONTROL THROUGHOUT THE DURATION OF THE PROJECT.
9. FELLED TREES SHALL BE SALVAGED FOR RE-USE AS WOODCHIP MULCH OR LOG FORM FOR SITE REHABILITATION, NON-SALVAGEABLE MATERIAL SUCH AS STUMPS AND ROOTS SHALL BE APPROPRIATELY DISPOSED OF OFF SITE.
10. THE CONTRACTOR SHALL PROVIDE MINIMUM 24 HOURS NOTICE TO CERTIFIERS REPRESENTATIVE FOR ALL INSPECTIONS.
11. ALL NATURAL SURFACE DATA HAS BEEN DETERMINED BY TERRAIN MODELLING. ALL CONSTRUCTION SITE WORKS MUST BE CARRIED OUT USING THE BENCH MARKS SHOWN ON THESE DRAWINGS.
12. THE REUSE AND RECYCLING OF WASTE MATERIALS MUST BE MAXIMISED DURING CONSTRUCTION AND DEMOLITION. THE SEPARATION AND RECYCLING OF THE FOLLOWING WASTE MATERIAL a) MASONRY b) TIMBER c) METALS d) CLEAN WASTE e) MIXED WASTE THIS CAN BE ACHIEVED BY CONSTRUCTING A MINIMUM OF FIVE TRADE WASTE COMPOUNDS ON-SITE COPIES OF ACTUAL WEIGHBRIDGE RECEIPTS VERIFYING RECYCLING/DISPOSAL MUST BE KEPT AND PRESENTED TO COUNCIL OR NOMINATED AUTHORITY WHEN REQUIRED.
13. THE TREES THAT ARE TO BE RETAINED ARE TO BE PROTECTED DURING ALL WORKS WITH 1.8m HIGH CHAINWIRE FENCING WHICH IS TO BE ERECTED AT LEAST THREE METRES FROM THE BASE OF EACH TREE AND IS TO BE IN PLACE PRIOR TO WORKS COMMENCING TO RESTRICT THE FOLLOWING OCCURING: STOCKPILING OF MATERIALS WITHIN THE ROOT PROTECTION ZONE, PLACEMENT OF FILL WITHIN THE ROOT PROTECTION ZONE, PARKING OF VEHICLES WITHIN THE ROOT PROTECTION ZONE, COMPACTION OF SOIL WITHIN THE ROOT PROTECTION ZONE. ALL AREAS WITHIN THE ROOT PROTECTION ZONE ARE TO BE MULCHED WITH COMPOSTED LEAF MULCH TO A DEPTH NOT LESS THAN 100mm. THE INSTALLATION OF SERVICES WITHIN THE ROOT PROTECTION ZONE IS NOT TO BE UNDERTAKEN WITHOUT CONSULTATION WITH COUNCIL'S TREE MANAGEMENT OFFICER.
14. A COPY OF THE DEVELOPMENT CONSENT AND STAMPED PLANS AND TRAFFIC CONTROL PLAN SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.
15. IF, DURING THE COURSE OF ANY WORKS, ANY EVIDENCE OF AN ABORIGINAL ARCHAEOLOGICAL SITE OR RELIC IS FOUND, ALL WORKS ON THE SITE ARE TO CEASE AND THE DEPARTMENT OF ENVIRONMENT AND CLIMATE CHANGE AND THE NSW HERITAGE BRANCH ARE TO BE NOTIFIED IMMEDIATELY.
16. IF, DURING THE COURSE OF ANY WORKS, ANY EVIDENCE OF A EUROPEAN ARCHAEOLOGICAL SITE OR RELIC IS FOUND, ALL WORKS ON THE SITE ARE TO CEASE AND THE NSW HERITAGE BRANCH CONTACTED IMMEDIATELY. ALL RELICS ARE TO BE RETAINED IN SITU UNLESS OTHERWISE DIRECTED BY THE NSW HERITAGE BRANCH.
17. ANY NEW INFORMATION, WHICH COMES TO LIGHT DURING CONSTRUCTION WORKS, WHICH HAS THE POTENTIAL TO ALTER PREVIOUS CONCLUSIONS ABOUT SITE CONTAMINATION, SHALL BE IMMEDIATELY NOTIFIED TO COUNCIL.
18. CONSTRUCTION INSPECTIONS ARE REQUIRED FOR THE ENGINEERING WORKS IN ACCORDANCE WITH THE RELEVANT LOCAL COUNCIL WORKS SPECIFICATION.
19. SEDIMENT MEASURES SHALL BE IMPLEMENTED PRIOR TO SOIL DISTURBANCE IN KEEPING WITH THE 4th EDITION OF LANDCOMS "SOILS AND CONSTRUCTION - MANAGING URBAN STORMWATER" MARCH 2004 TO THE SATISFACTION OF COUNCIL'S REPRESENTATIVE AND AS SHOWN IN THESE DRAWINGS.
20. THE CONTRACTOR SHALL CLEAR AND DISPOSE OF ONLY THOSE TREES THAT ARE CONDEMNED BY THE PLANS. COUNCIL'S TREE PRESERVATION ORDER SHALL BE OBSERVED AND NO TREE SHALL BE FELLED, LOPPED OR REMOVED WITHOUT PRIOR APPROVAL OF COUNCIL.
21. THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES, OUT HOUSES, CAR BODIES, DEBRIS, ETC. THE CONTRACTOR SHALL NOT DISPOSE OF ANY DEBRIS BY BURNING OFF IN AN OPEN FIRE.

ROADWORKS NOTES

1. THE CONTRACTOR SHALL UNDERTAKE TRAFFIC CONTROL MEASURES TO COUNCIL'S SATISFACTION AND SHALL DISPLAY ALL APPROPRIATE WARNING SIGNS THROUGHOUT THE DURATION OF CONSTRUCTION.
2. UNSOUND MATERIALS AS DETERMINED BY THE COUNCIL'S REPRESENTATIVE SHALL BE REMOVED FROM ROADS AND LOTS PRIOR TO FILLING.
3. PROVIDE VEHICULAR ENTRIES IN KERB AND GUTTER WHERE SHOWN OR DIRECTED BY THE SUPERINTENDENT.

EARTHWORKS NOTES

1. CARE IS TO BE TAKEN DURING THE CONSTRUCTION OF THE PROPOSED WORKS TO ENSURE NATURAL VEGETATION AND TOPOGRAPHY ON THE SUBJECT SITE IS NOT UNNECESSARILY DISTURBED. ANY EXCAVATION MATERIAL NOT USED IN THE CONSTRUCTION OF THE SUBJECT WORKS IS TO BE REMOVED FROM THE SITE AND UNDER NO CIRCUMSTANCES IS TO BE DEPOSITED IN BUSHLAND AREAS.
2. COUNCIL MUST BE NOTIFIED OF ANY DAMAGE TO THE PUBLIC INFRASTRUCTURE SUCH AS ROAD PAVEMENT, KERB AND GUTTER, CONCRETE FOOTPATHS, DRAINAGE STRUCTURES, UTILITIES AND LANDSCAPING FRONTING THE DEVELOPMENT..
3. UNSOUND MATERIALS AS DETERMINED BY COUNCIL'S REPRESENTATIVE SHALL BE REMOVED FROM ROADS AND LOTS PRIOR TO ANY FILLING.
4. ALL SITE REGRADING AREAS SHALL BE GRADED TO THE SATISFACTION OF COUNCIL'S REPRESENTATIVE. THE CONTRACTOR SHALL TAKE LEVELS ON THE EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING ANY FILL OPERATIONS.
5. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED OR DISPOSED OF IN ACCORDANCE WITH THE CONTRACT, OR AS DIRECTED BY THE SUPERINTENDENT.
6. ALL SITE FILLING SHALL BE PLACED IN LAYERS NOT EXCEEDING COUNCILS AND GEOTECH REQUIREMENTS. FILL IS TO BE COMPACTED IN ACCORDANCE WITH GEOTECH SPECIFICATIONS AND BE TESTED AT THE REQUIRED INTERVALS BY AN APPROVED N.A.T.A. GEOTECHNICAL LABORATORY.
7. MINIMUM 150mm THICK TOPSOIL SHALL BE SPREAD ON ALL BERMS, BATTERS AND SITE REGRADING AREAS. EXCESS TOPSOIL SHALL BE DISPOSED OF AS DIRECTED BY THE SUPERINTENDENT.
8. ALL LAND DISTURBED BY EARTHWORKS SHALL BE SPRAY-GRASSED, TURFED OR SIMILARLY TREATED TO ESTABLISH GRASS COVER. SEED MIXTURES ARE TO BE APPROVED BY COUNCIL PRIOR TO SPRAYING. ALL GRASSED AREAS SHALL BE REGULARLY WATERED AND MAINTAINED UNTIL EXPIRATION OF THE MAINTENANCE PERIOD.
9. THE DISPOSAL / LANDFILL OF SURPLUS EXCAVATED MATERIAL, OTHER THAN TO A DECC LICENSED FACILITY, IS NOT PERMITTED WITHOUT FORMAL APPROVAL FROM COUNCIL PRIOR TO THE COMMENCEMENT OF WORKS. ANY UNAUTHORIZED DISPOSAL OF WASTE, WHICH INCLUDES EXCAVATED MATERIAL, IS A BREACH OF THE PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997 AND SUBJECT TO SUBSTANTIAL PENALTIES. UNLESS COUNCIL APPROVES AN ALTERNATIVE SITE, THEN ALL SURPLUS MATERIAL MUST BE DISPOSED OF AT A LICENSED WASTE FACILITY. COPIES OF ACTUAL WEIGHBRIDGE RECEIPTS VERIFYING RECYCLING / DISPOSAL MUST BE KEPT AND PRESENTED TO COUNCIL WHEN REQUIRED.
10. THE ONLY WASTE DERIVED FILL MATERIAL THAT MAY BE RECEIVED AT THE DEVELOPMENT SITE IS: a) VIRGIN EXCAVATED NATURAL MATERIAL OR b) ANY OTHER WASTE-DERIVED MATERIAL THE SUBJECT OF A RESOURCE RECOVERY UNDER CLAUSE 51A OF THE PROTECTION OF THE ENVIRONMENT OPERATIONS (WASTE) REGULATION 2005 THAT IS PERMITTED TO BE USED AS FILL MATERIAL. ANY WASTE-DERIVED MATERIAL THE SUBJECT OF A RESOURCE RECOVERY EXEMPTION RECEIVED AT THE DEVELOPMENT SITE MUST BE ACCOMPANIED BY DOCUMENTATION AS TO THE MATERIAL'S COMPLIANCE WITH THE EXEMPTION CONDITIONS AND MUST BE PROVIDED TO THE PRINCIPAL CERTIFYING AUTHORITY ON REQUEST.

SERVICE NOTES

1. THE CONTRACTOR IS TO IDENTIFY, LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION WORKS AND WHERE NECESSARY MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST.
2. BARKER RYAN STEWART DOES NOT ACCEPT ANY LIABILITY FOR INACCURACIES IN THE SERVICE INFORMATION SHOWN.
3. CONDUITS SHALL BE LAID AFTER POSITIONS HAVE BEEN DETERMINED BY THE RELEVANT AUTHORITIES AND BEFORE FINAL A.C. IS LAID.
4. POSITION OF CONDUITS SHALL BE MARKED ON THE KERB.
5. THE CONTRACTOR SHALL MAINTAIN SERVICES AND ALL WEATHER ACCESS AT ALL TIMES TO THE ADJOINING PROPERTIES.
6. CARE SHALL BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES, NO MECHANICAL EXCAVATION SHALL BE MADE OVER TELSTRA OR ELECTRICAL SERVICES, EXCAVATE BY HAND ONLY IN THESE AREAS.

DRAINAGE NOTES

1. ALL PITS DEEPER THAN 1.2m SHALL HAVE STEP IRONS PROVIDED IN ACCORDANCE WITH COUNCIL'S STANDARDS.
2. ALL DRAINAGE LINES THROUGH THE LOTS SHALL BE CONTAINED WITHIN THE EASEMENTS AND CONFORM WITH COUNCIL'S STANDARDS.
3. ALL DRAINAGE LINES ON HIGH SIDE AND UNDER ROADS SHALL BE BACKFILLED WITH SHARP SAND AND HAVE 3.0m OF AGRICULTURAL LINE WRAPPED IN AN APPROVED FILTER FABRIC, DISCHARGING INTO THE DOWNSTREAM PIT.
4. SUBSOIL DRAINS SHALL BE CONSTRUCTED TO THE SATISFACTION OF COUNCIL'S REPRESENTATIVE.
5. PRECAST KERB INLET LINTELS SHALL BE USED ON GULLY PITS. GRATES SHALL BE "WELDLOK" TYPE GG50D OR APPROVED EQUIVALENT.
6. ON COMPLETION OF PIPE INSTALLATION, ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL CONDITION INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AREAS, GRASSED AREAS AND ROAD PAVEMENTS.
7. TRENCH WIDTHS ARE TO BE KEPT TO A MINIMUM, CONSISTENT WITH LAYING AND BEDDING OF THE RELEVANT SERVICE AND CONSTRUCTION PERSONNEL ACCESS WAYS AND PITS. REFER TO AUTHORITIES STANDARDS FOR MINIMUM TRENCH WIDTHS. STANDARD TRENCH WIDTHS AND THE DIMENSIONS OF UNSUPPORTED TRENCHES. SUPPORT EXCAVATIONS TO THE REQUIREMENTS OF THE CONSTRUCTION SAFETY REGULATIONS 1950, UNDER THE CONSTRUCTION SAFETY ACT 1912 (AS AMENDED)
8. PITS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH AS3500.3:2021 PLUMBING AND DRAINAGE - STORMWATER DRAINAGE STANDARD UNLESS OTHERWISE SPECIFIED BE THE LOCAL COUNCIL OR AUTHORITY.
9. PIT SIZES IN ACCORDANCE WITH AS3500.3:2021 AND/ OR COUNCIL REQUIREMENTS.
10. IF A PIT IS SHOWN ON THE KERB ALIGNMENT IT IS REQUIRED TO BE CONSTRUCTED AS A KERB INLET PIT UNLESS OTHERWISE NOTED.
11. BACKFILL TRENCHES IN ACCORDANCE WITH COUNCIL REQUIREMENTS WITHOUT DELAY FOR THE SECTION OF PIPE THAT HAS BEEN COMPLETED AND APPROVED, IF POSSIBLE ON THE SAME WORKING DAY.

STRUCTURAL NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600.
2. CONCRETE QUALITY SHALL BE AS SPECIFIED AND SHALL BE VERIFIED BY TESTS.
3. ALL CONCRETE UNLESS OTHERWISE NOTED SHALL HAVE A SLUMP OF 80mm AT POINT OF PLACEMENT, A MAXIMUM AGGREGATE SIZE OF 20mm AND STRENGTH AS SPECIFIED. NO WATER SHALL BE ADDED TO THE MIX PRIOR TO OR DURING THE PLACEMENT.
4. ALL REINFORCEMENT SPECIFIED IS GRADE D500 UNLESS NOTED OTHERWISE.
5. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY, IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
6. TOP REINFORCEMENT IS TO BE CONTINUOUS ON SUPPORTS. BOTTOM REINFORCEMENT TO BE LAPPED AT SUPPORTS.
7. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON STRUCTURAL DRAWINGS.
8. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE ZONE OF CONCRETE COVER TO THE REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.
9. ALL REINFORCING BARS AND FABRIC SHALL COMPLY WITH AS4671.
10. REINFORCEMENT SYMBOLS:
    - 10.1. N - GRADE 500N DEFORMED BAR (D500) NORMAL DUCTILITY
    - 10.2. R - GRADE 250N PLAIN ROUND BAR (R250) NORMAL DUCTILITY
    - 10.3. SL - GRADE 500L WELDED DEFORMED RIBBED MESH (D500) RECTANGULAR LOW DUCTILITY

    THE NUMBER IMMEDIATELY FOLLOWING THESE SYMBOLS IS THE NUMBER OF MILLIMETERS IN THE BAR DIAMETER.

    EXAMPLE:
    8 N12-250, DENOTES 8, GRADE 500N DEFORMED BARS, 12mm DIAMETER AT 250 CTS.
11. FABRIC REINFORCEMENT TO BE LAPPED 1 COMPLETE SQUARE + 25mm UNLESS NOTED OTHERWISE.
12. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON BAR CHAIRS SPACED AT A MAXIMUM OF 750mm CENTRES BOTH WAYS UNDER THE ROD AND FABRIC REINFORCEMENT. REINFORCEMENT SHALL BE TIED AT ALTERNATIVE INTERSECTIONS.

COUNCIL NOTES

1. WORKS CARRIED OUT TO COFFS HARBOUR COUNCIL STANDARDS AND SPECIFICATIONS.

LEGEND

DESCRIPTION	EXISTING	PROPOSED
DRAINAGE LINE		
CONTOUR		
GRATED SURFACE INLET PIT		
SEALED PIT		
KERB INLET PIT		
PIT LABEL (LINE / No)	E/1	1/5
HANDRAILS		
TREE TO BE REMOVED		
BATTERS		
LIMIT OF WORKS		LIMIT OF CONSTRUCTION
ELECTRICITY	E	E
WATER	W	W
COMMUNICATIONS	C	C
SEWER	S	S

REV	AMENDMENT	ISSUED	DATE
A	FOR DA APPROVAL	BF	06/09/2024

BARKER RYAN STEWART
ENGINEERING | PLANNING | PROJECT MANAGEMENT | SURVEYING | CERTIFICATION

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Client: MR BRIAN BETTS

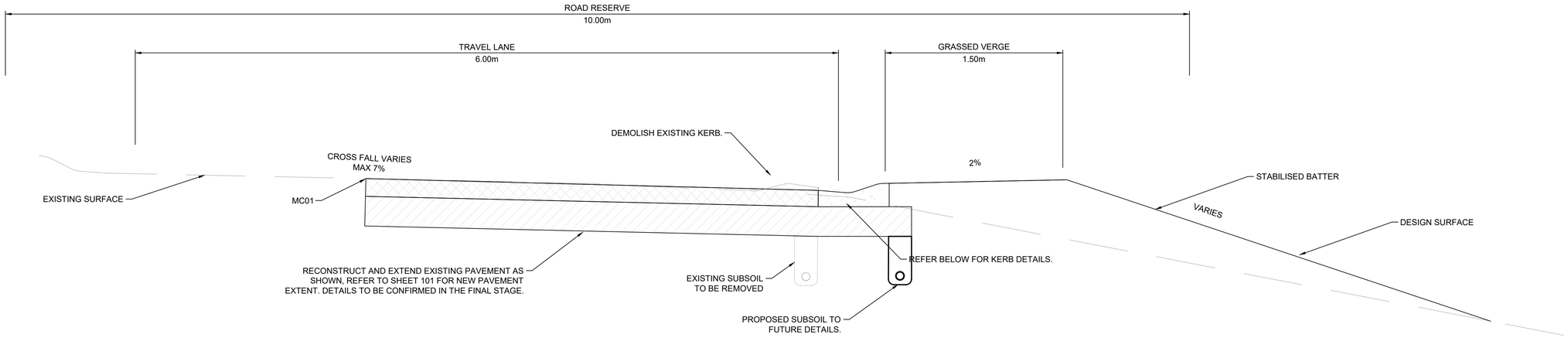
27-29 CHARLESWORTH BAY ROAD, COFFS HARBOUR
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

GENERAL NOTES

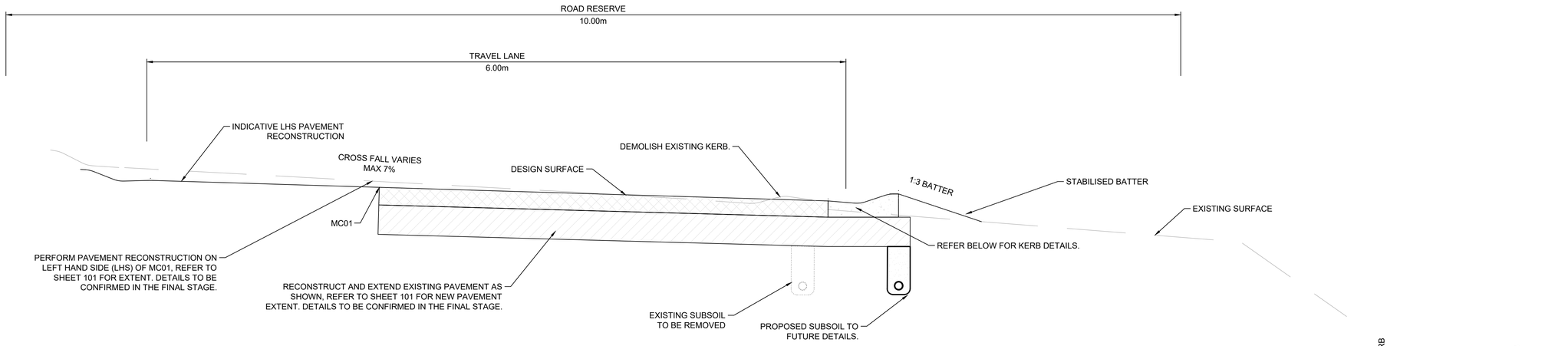
Designed: BF
Drawn: DKH
Checked: SGB

Scales: @A1 Plan - Horiz. - Vert. - X-Sect. -
Datum: A.H.D.

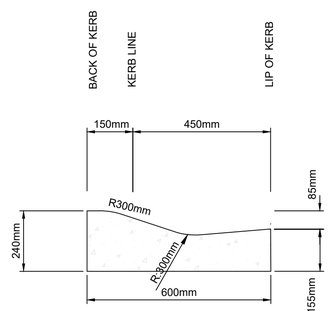
Plan No. 240204-01-011
File Ref. 240204
REV. A



MC01 - TYPICAL SECTION (CH35-END)
SCALE 1:20



MC01 - TYPICAL SECTION (CH0-CH35)
SCALE 1:20



MODIFIED 'RT' TYPE KERB V2 (CHCC)
N.T.S.
REFER COFFS HARBOUR COUNCIL
RTA & CHCC MODIFED KERBS

NOTES:
1. PAVEMENT AND SUBSOIL DETAILS TO BE CONFIRMED DURING THE FINAL STAGE.

0.4 0 0.4 0.8 1.2 1.6 2.0 1:20
METRES

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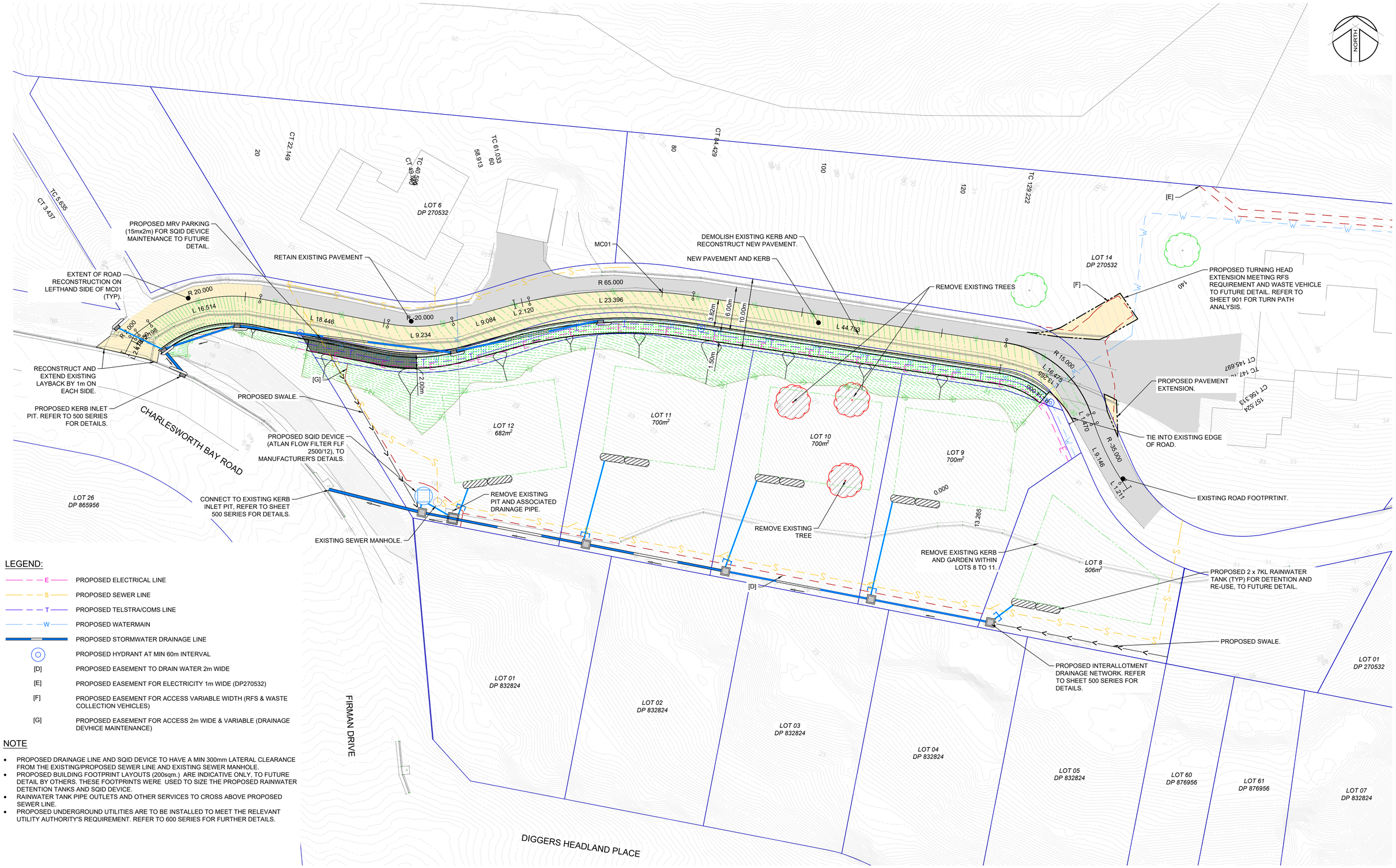
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

TYPICAL SECTIONS AND DETAILS

Designed: BF
Drawn: DKH
Checked: SGB

Scales: @A1 Plan -, Horiz. -, Vert. -, X-Sect. 1:20
Datum: A.H.D.

Plan No. 240204-01-031
File Ref. 240204
REV. A



LEGEND:

- PROPOSED ELECTRICAL LINE
- PROPOSED SEWER LINE
- PROPOSED TELSTRA/COMS LINE
- PROPOSED WATERMAIN
- PROPOSED STORMWATER DRAINAGE LINE
- PROPOSED HYDRANT AT MIN 60m INTERVAL
- [D] PROPOSED EASEMENT TO DRAIN WATER 2m WIDE
- [E] PROPOSED EASEMENT FOR ELECTRICITY 1m WIDE (DP270532)
- [F] PROPOSED EASEMENT FOR ACCESS VARIABLE WIDTH (RFS & WASTE COLLECTION VEHICLES)
- [G] PROPOSED EASEMENT FOR ACCESS 2m WIDE & VARIABLE (DRAINAGE DEVHICE MAINTENANCE)

NOTE

- PROPOSED DRAINAGE LINE AND SQID DEVICE TO HAVE A MIN 300mm LATERAL CLEARANCE FROM THE EXISTING/PROPOSED SEWER LINE AND EXISTING SEWER MANHOLE.
- PROPOSED BUILDING FOOTPRINT LAYOUTS (200sqm.) ARE INDICATIVE ONLY, TO FUTURE DETAIL BY OTHERS. THESE FOOTPRINTS WERE USED TO SIZE THE PROPOSED RAINWATER DETENTION TANKS AND SQID DEVICE.
- RAINWATER TANK PIPE OUTLETS AND OTHER SERVICES TO CROSS ABOVE PROPOSED SEWER LINE.
- PROPOSED UNDERGROUND UTILITIES ARE TO BE INSTALLED TO MEET THE RELEVANT UTILITY AUTHORITY'S REQUIREMENT. REFER TO 600 SERIES FOR FURTHER DETAILS.

DETAIL PLAN

SCALE 1:250

5 0 5 10 15 20 25 METRES 1:250

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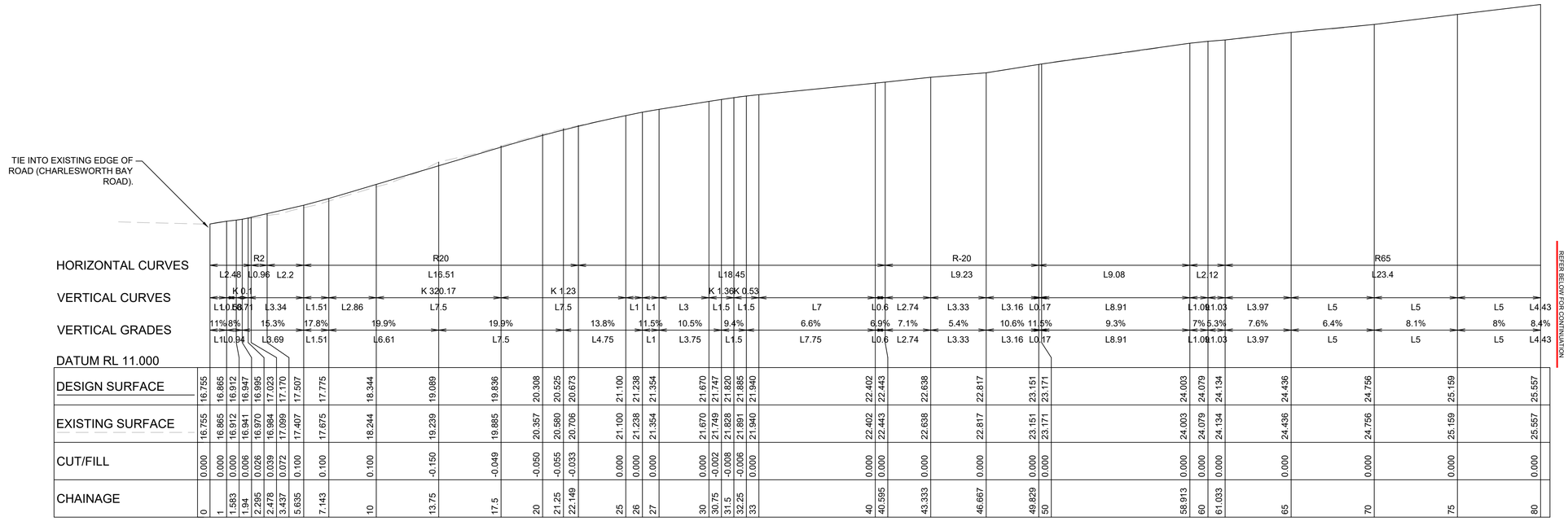
DETAIL PLAN

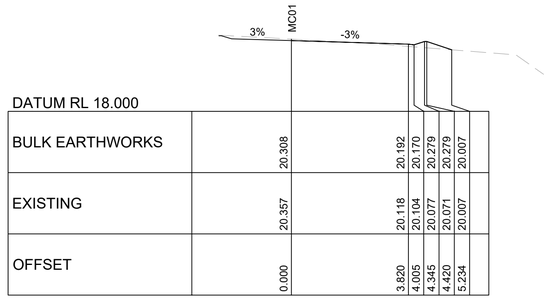
Designed: BF
Drawn: DKH
Checked: SGB

Scales: @A1 Plan 1:250, Horiz. -, Vert. -, X-Sect. -
Datum: A.H.D.

Plan No. 240204-01-101
File Ref. 240204
REV. A

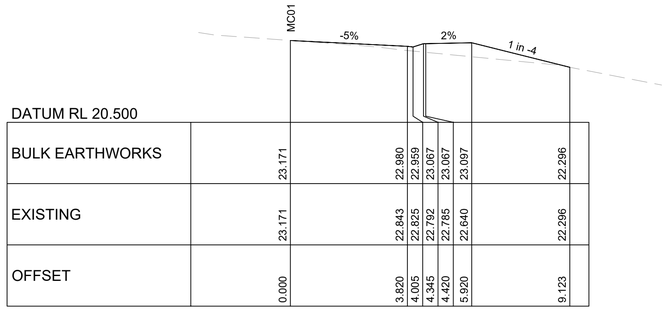

TIE INTO EXISTING EDGE OF ROAD (CHARLESWORTH BAY ROAD).
REFER BELOW FOR CONTINUATION

| | | |



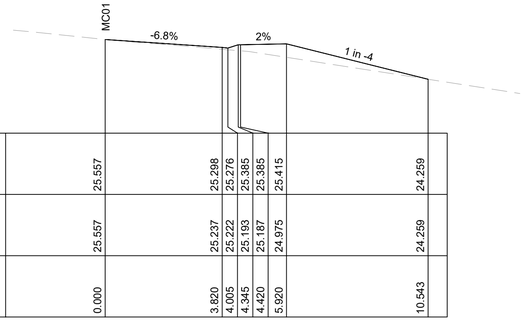
DATUM RL 18.000								
BULK EARTHWORKS	20.308	20.192	20.170	20.279	20.279	20.007		
EXISTING	20.357	20.118	20.104	20.077	20.071	20.007		
OFFSET	0.000	3.820	4.005	4.345	4.420	5.234		

CH 20



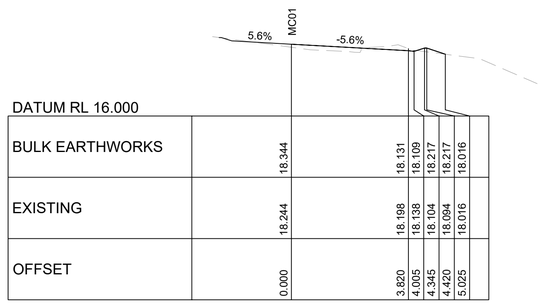
DATUM RL 20.500								
BULK EARTHWORKS	23.171	22.980	22.959	23.067	23.067	23.097	22.296	
EXISTING	23.171	22.843	22.825	22.792	22.785	22.640	22.296	
OFFSET	0.000	3.820	4.005	4.345	4.420	5.920	9.123	

CH 50



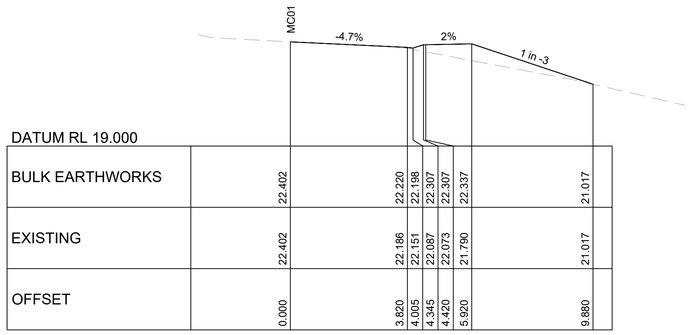
DATUM RL 22.500								
BULK EARTHWORKS	25.557	25.298	25.276	25.385	25.385	25.415	24.259	
EXISTING	25.557	25.237	25.222	25.193	25.187	24.975	24.259	
OFFSET	0.000	3.820	4.005	4.345	4.420	5.920	10.543	

CH 80



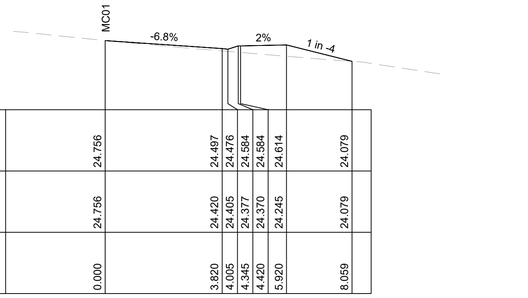
DATUM RL 16.000								
BULK EARTHWORKS	18.344	18.131	18.109	18.217	18.217	18.016		
EXISTING	18.244	18.198	18.138	18.104	18.094	18.016		
OFFSET	0.000	3.820	4.005	4.345	4.420	5.025		

CH 10



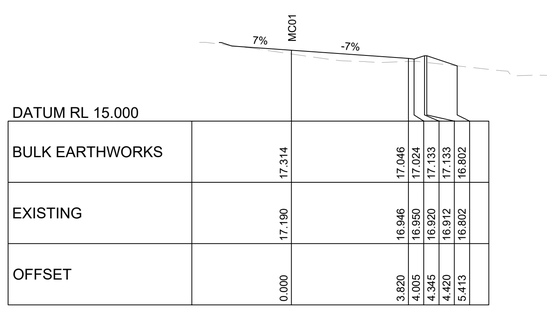
DATUM RL 19.000								
BULK EARTHWORKS	22.402	22.220	22.198	22.307	22.307	22.337	21.017	
EXISTING	22.402	22.186	22.151	22.087	22.073	21.790	21.017	
OFFSET	0.000	3.820	4.005	4.345	4.420	5.920	9.880	

CH 40



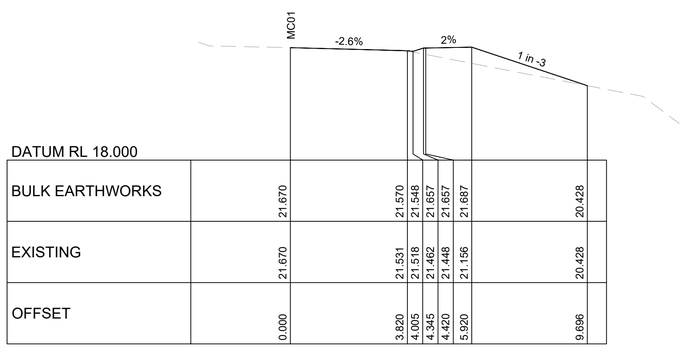
DATUM RL 22.500								
BULK EARTHWORKS	24.756	24.497	24.476	24.584	24.584	24.614	24.079	
EXISTING	24.756	24.420	24.405	24.377	24.370	24.245	24.079	
OFFSET	0.000	3.820	4.005	4.345	4.420	5.920	8.059	

CH 70



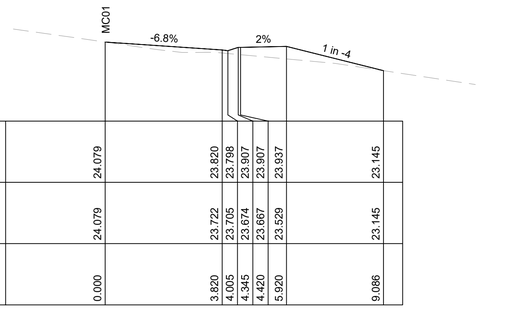
DATUM RL 15.000								
BULK EARTHWORKS	17.314	17.046	17.024	17.133	17.133	16.802		
EXISTING	17.190	16.946	16.950	16.920	16.912	16.802		
OFFSET	0.000	3.820	4.005	4.345	4.420	5.413		

CH 4.374



DATUM RL 18.000								
BULK EARTHWORKS	21.670	21.570	21.548	21.657	21.657	21.687	20.428	
EXISTING	21.670	21.531	21.518	21.462	21.448	21.156	20.428	
OFFSET	0.000	3.820	4.005	4.345	4.420	5.920	9.696	

CH 30



DATUM RL 21.500								
BULK EARTHWORKS	24.079	23.820	23.798	23.907	23.907	23.937	23.145	
EXISTING	24.079	23.722	23.705	23.674	23.667	23.529	23.145	
OFFSET	0.000	3.820	4.005	4.345	4.420	5.920	9.086	

CH 60

NOTE

- FINAL GRADING SUBJECT TO DETAILED SITE SURVEY AS PART OF FUTURE DETAILED DESIGN.

2 0 2 4 6 8 10
METRES
1:100

REV	AMENDMENT	ISSUED	DATE
A	FOR DA APPROVAL	BF	06/09/2024

BARKER RYAN STEWART
ENGINEERING | PLANNING | PROJECT MANAGEMENT | SURVEYING | CERTIFICATION
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mail@brs.com.au
ABN: 26 134 067 842

Client: MR BRIAN BETTS

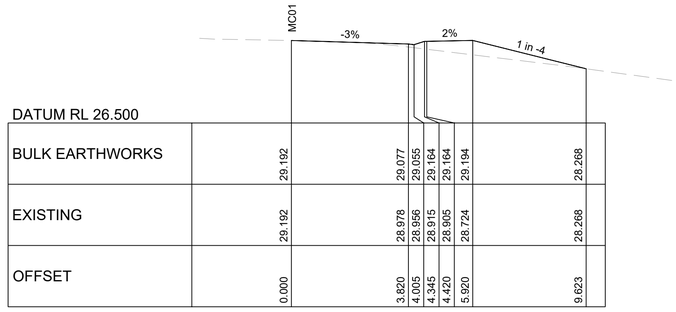
27-29 CHARLESWORTH BAY ROAD, COFFS HARBOUR
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

CROSS SECTION MC01 SHEET 1

Designed: BF
Drawn: DKH
Checked: SGB

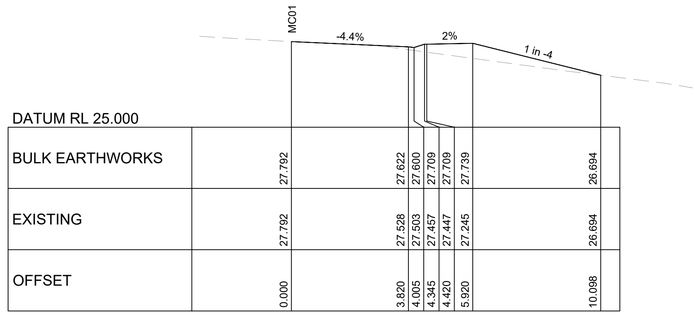
Scales: @A1 Plan - Horiz. - Vert. - X-Sect. 1:100
Datum: A.H.D.

Plan No. 240204-01-301
File Ref. 240204
REV. A



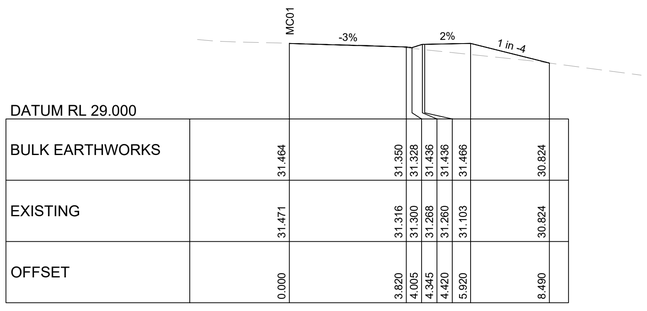
DATUM RL 26.500							
BULK EARTHWORKS	29.192	29.077	29.055	29.164	29.164	29.194	28.268
EXISTING	29.192	28.978	28.956	28.915	28.905	28.724	28.268
OFFSET	0.000	3.820	4.005	4.345	4.420	5.920	9.623

CH 110



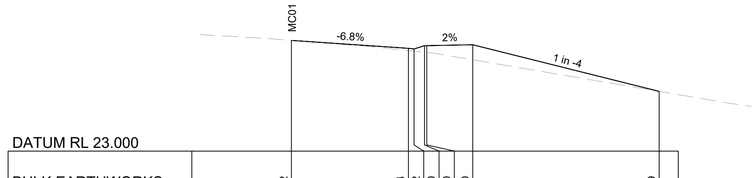
DATUM RL 25.000							
BULK EARTHWORKS	27.792	27.622	27.600	27.709	27.709	27.739	26.694
EXISTING	27.792	27.528	27.503	27.457	27.447	27.245	26.694
OFFSET	0.000	3.820	4.005	4.345	4.420	5.920	10.098

CH 100



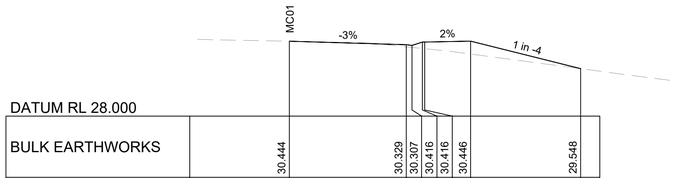
DATUM RL 29.000							
BULK EARTHWORKS	31.464	31.350	31.328	31.436	31.436	31.466	30.824
EXISTING	31.471	31.316	31.300	31.268	31.260	31.103	30.824
OFFSET	0.000	3.820	4.005	4.345	4.420	5.920	8.490

CH 128.919



DATUM RL 23.000							
BULK EARTHWORKS	26.612	26.354	26.332	26.440	26.440	26.470	24.949
EXISTING	26.612	26.280	26.261	26.227	26.219	25.980	24.949
OFFSET	0.000	3.820	4.005	4.345	4.420	5.920	12.006

CH 90



DATUM RL 28.000							
BULK EARTHWORKS	30.444	30.329	30.307	30.416	30.416	30.446	29.548
EXISTING	30.444	30.261	30.242	30.206	30.199	30.025	29.548
OFFSET	0.000	3.820	4.005	4.345	4.420	5.920	9.512

CH 120

NOTE

- FINAL GRADING SUBJECT TO DETAILED SITE SURVEY AS PART OF FUTURE DETAILED DESIGN.

2 0 2 4 6 8 10 METRES 1:100

REV	AMENDMENT	ISSUED	DATE
A	FOR DA APPROVAL	BF	06/09/2024

BARKER RYAN STEWART
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www.brs.com.au
mail@brs.com.au
ABN: 26 134 067 842

Client: MR BRIAN BETTS

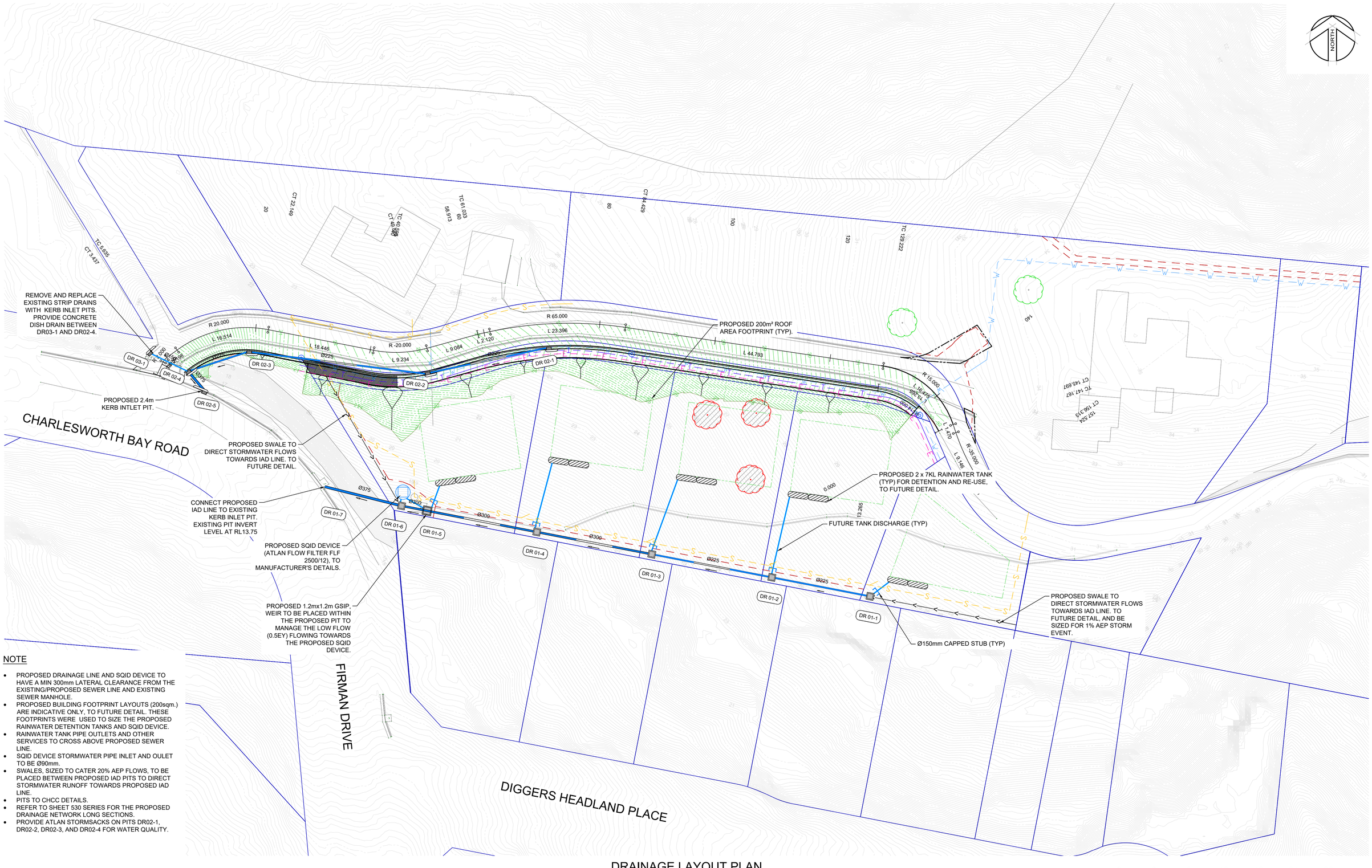
27-29 CHARLESWORTH BAY ROAD, COFFS HARBOUR
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

CROSS SECTION MC01 SHEET 2

Designed: BF
Drawn: DKH
Checked: SGB

Scales: @A1 Plan - Horiz. - Vert. - X-Sect. 1:100
Datum: A.H.D.

Plan No. 240204-01-302
File Ref. 240204
REV. A



NOTE

- PROPOSED DRAINAGE LINE AND SQID DEVICE TO HAVE A MIN 300mm LATERAL CLEARANCE FROM THE EXISTING/PROPOSED SEWER LINE AND EXISTING SEWER MANHOLE.
- PROPOSED BUILDING FOOTPRINT LAYOUTS (200sqm.) ARE INDICATIVE ONLY, TO FUTURE DETAIL. THESE FOOTPRINTS WERE USED TO SIZE THE PROPOSED RAINWATER DETENTION TANKS AND SQID DEVICE.
- RAINWATER TANK PIPE OUTLETS AND OTHER SERVICES TO CROSS ABOVE PROPOSED SEWER LINE.
- SQID DEVICE STORMWATER PIPE INLET AND OULET TO BE Ø90mm.
- SWALES, SIZED TO CATER 20% AEP FLOWS, TO BE PLACED BETWEEN PROPOSED IAD PITS TO DIRECT STORMWATER RUNOFF TOWARDS PROPOSED IAD LINE.
- PITS TO CHCC DETAILS.
- REFER TO SHEET 530 SERIES FOR THE PROPOSED DRAINAGE NETWORK LONG SECTIONS.
- PROVIDE ATLAN STORMSACKS ON PITS DR02-1, DR02-2, DR02-3, AND DR02-4 FOR WATER QUALITY.

DRAINAGE LAYOUT PLAN

SCALE 1:300

6 0 6 12 18 24 30 METRES 1:300

REV	AMENDMENT	ISSUED	DATE
A	FOR DA APPROVAL	BF	06/09/2024

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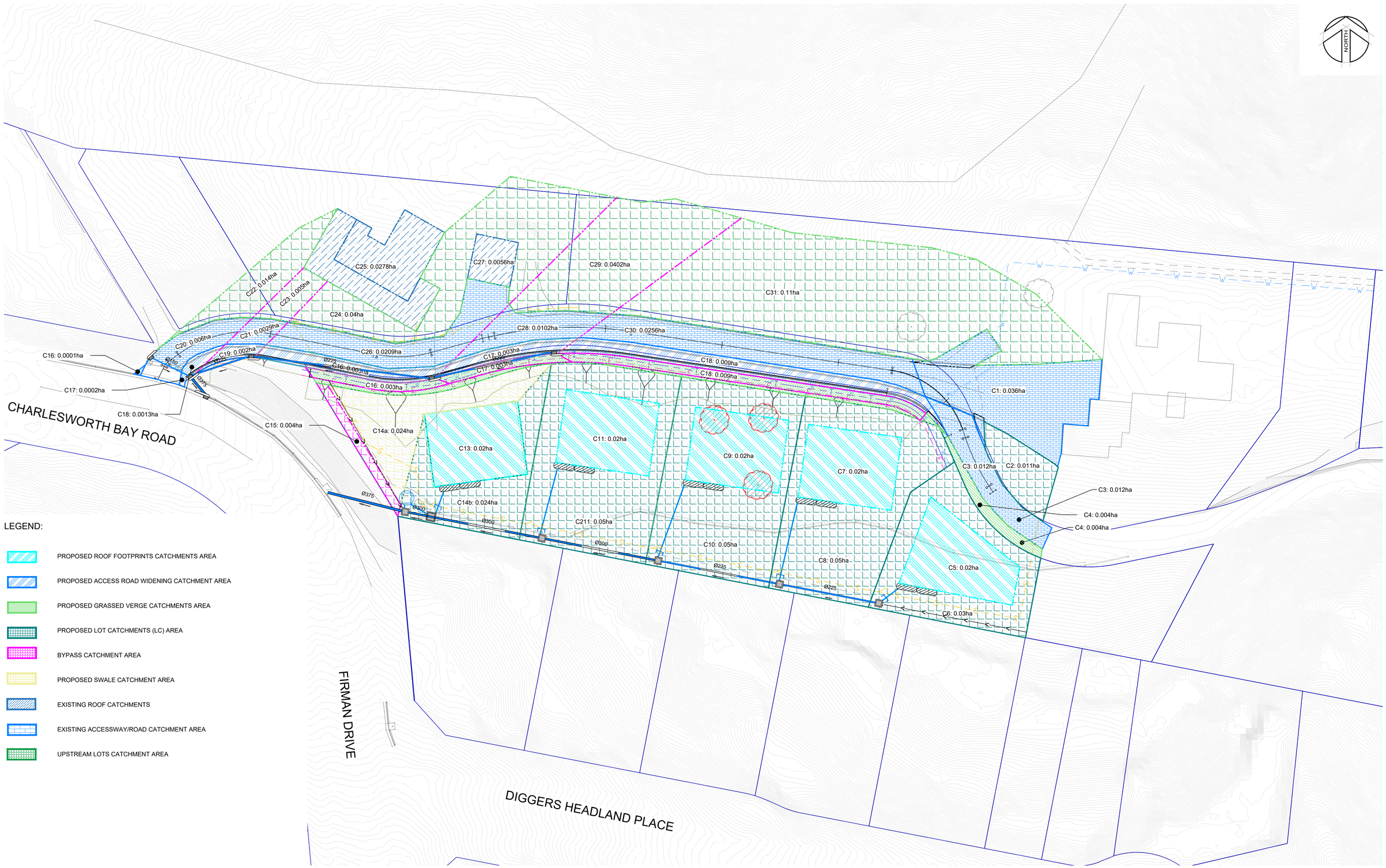
27-29 CHARLESWORTH BAY ROAD, COFFS HARBOUR
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

DRAINAGE LAYOUT PLAN

Designed: BF
Drawn: DKH
Checked: SGB

Scales: @A1 Plan 1:300, Horiz. -, Vert. -, X-Sect. -
Datum: A.H.D.

Plan No. 240204-01-501
File Ref. 240204
REV. A



LEGEND:

- PROPOSED ROOF FOOTPRINTS CATCHMENTS AREA
- PROPOSED ACCESS ROAD WIDENING CATCHMENT AREA
- PROPOSED GRASSED VERGE CATCHMENTS AREA
- PROPOSED LOT CATCHMENTS (LC) AREA
- BYPASS CATCHMENT AREA
- PROPOSED SWALE CATCHMENT AREA
- EXISTING ROOF CATCHMENTS
- EXISTING ACCESSWAY/ROAD CATCHMENT AREA
- UPSTREAM LOTS CATCHMENT AREA

DRAINAGE CATCHMENT PLAN
SCALE 1:300

6 0 6 12 18 24 30
METRES
1:300

TEXT 3.50

REV	AMENDMENT	ISSUED	DATE
A	FOR DA APPROVAL	BF	06/09/2024

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Client: MR BRIAN BETTS

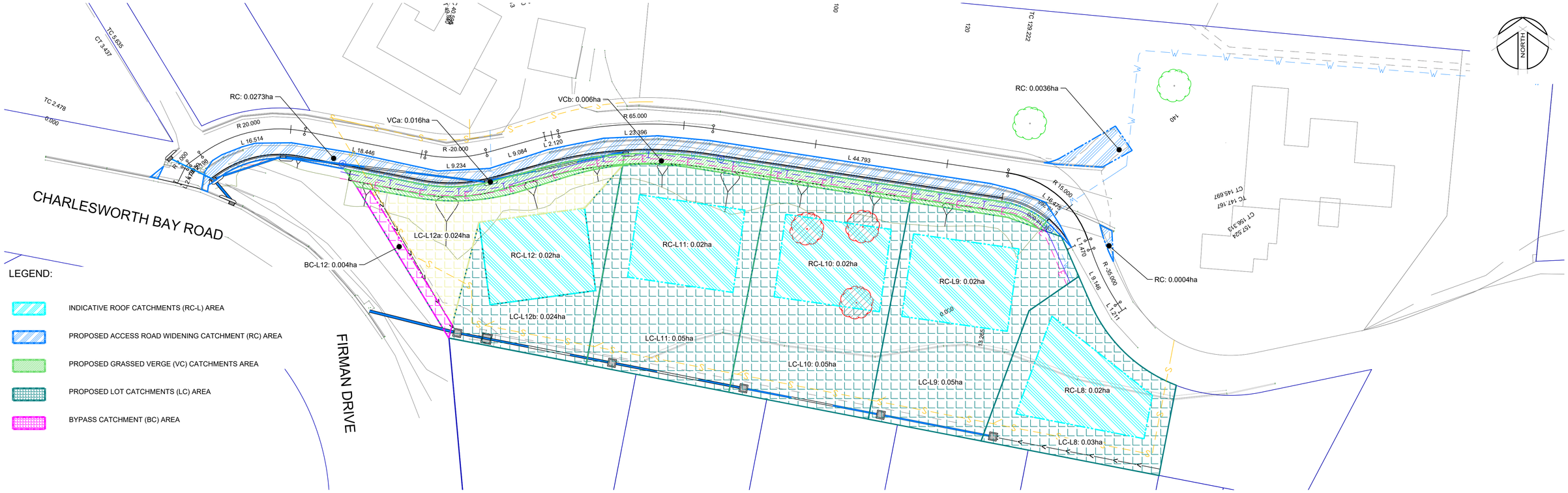
27-29 CHARLESWORTH BAY ROAD, COFFS HARBOUR
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

DRAINAGE CATCHMENT PLAN

Designed: BF
Drawn: DKH
Checked: SGB

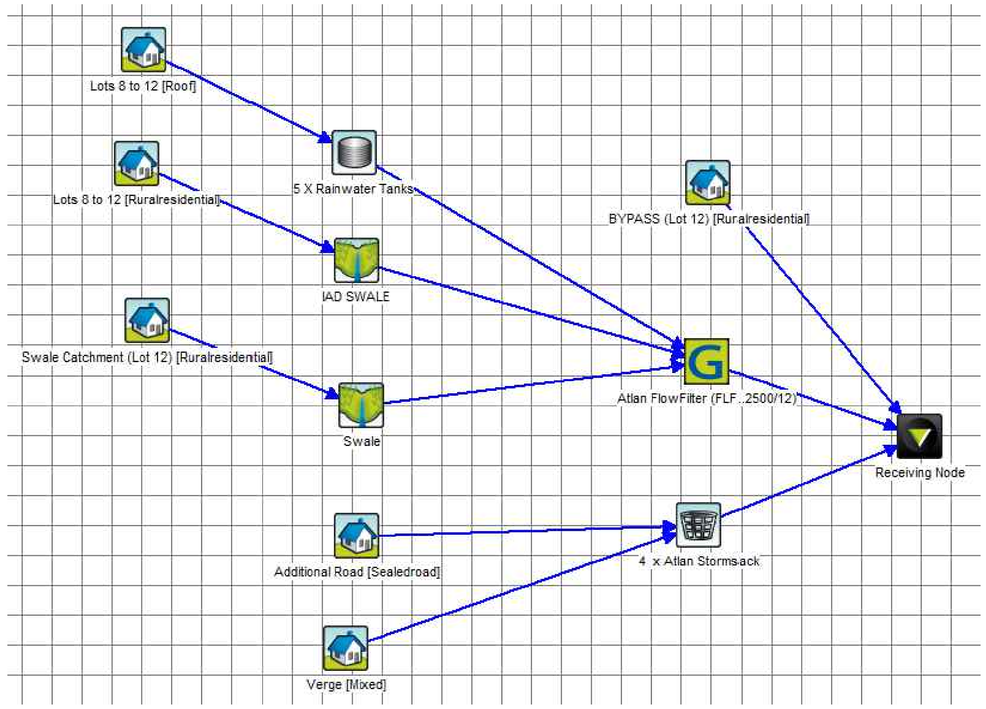
Scales: @A1 Plan 1:300, Horiz. -, Vert. -, X-Sect. -
Datum: A.H.D.

Plan No. 240204-01-511
File Ref. 240204
REV. A



WATER QUALITY CATCHMENT PLAN

SCALE 1:300



WATER QUALITY ASSESSMENT LAYOUT (MUSIC)

	COUNCIL'S WATER QUALITY REDUCTION TARGET	PERCENT REDUCTION	
% Load Reduction	None	None	8.69
GP % Load Reduction	90	None	99.6
TN % Load Reduction	45	None	51.8
TP % Load Reduction	60	None	61.8
TSS % Load Reduction	80	None	82.5

WATER QUALITY ASSESSMENT RESULTS (MUSIC)

6 0 6 12 18 24 30 METRES 1:300

REV	AMENDMENT	ISSUED	DATE
A	FOR DA APPROVAL	BF	06/09/2024

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Client: MR BRIAN BETTS

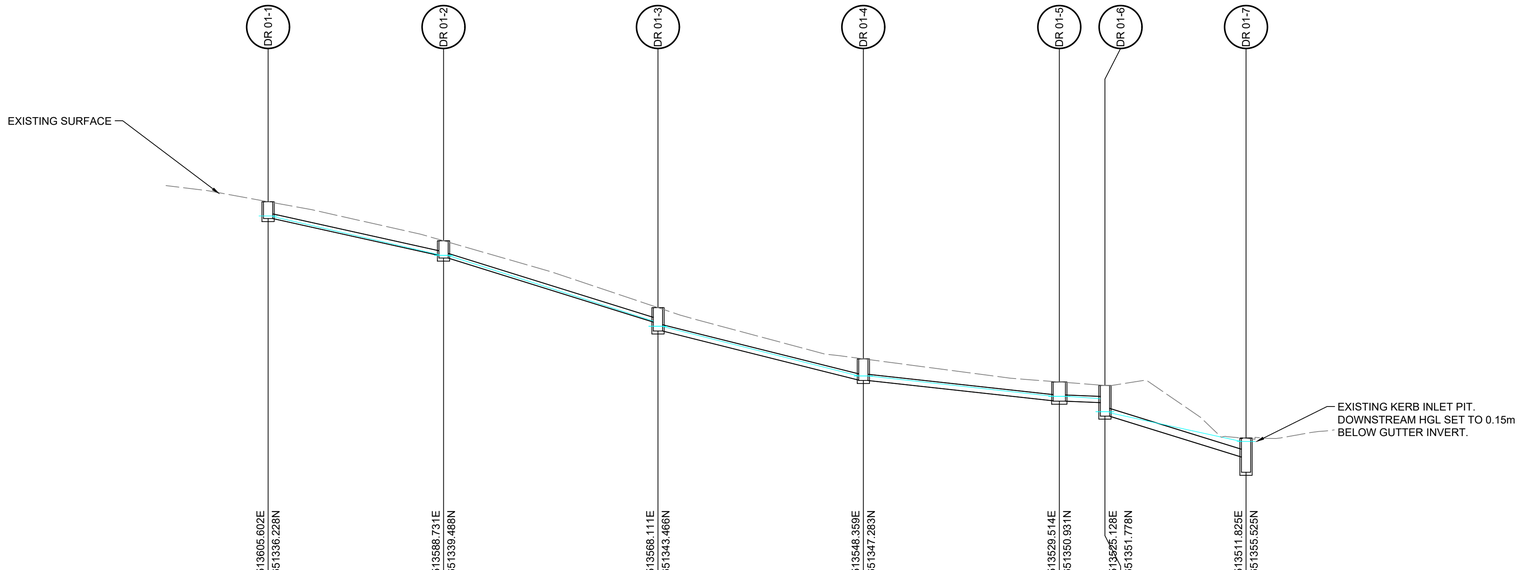
27-29 CHARLESWORTH BAY ROAD, COFFS HARBOUR
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

WATER QUALITY CATCHMENT PLAN

Designed: BF
Drawn: DKH
Checked: SGB

Scales: @A1 Plan 1:300, Horiz. -, Vert. -, X-Sect. -
Datum: A.H.D.

Plan No. 240204-01-521
File Ref. 240204
REV. A



	DR 01-1		DR 01-2		DR 01-3		DR 01-4		DR 01-5		DR 01-6		DR 01-7	
	513605.602E 6651336.228N		513588.731E 6651339.488N		513568.111E 6651343.466N		513548.359E 6651347.283N		513529.514E 6651350.931N		513525.128E 6651351.778N		513511.825E 6651355.525N	
Q - PIPE FLOW (L/s)	Q=13		Q=23		Q=33		Q=43		Q=48		Q=53			
Vf - VELOCITY (m/s)	Vf=3.08		Vf=4.06		Vf=1.34		Vf=1.30		Vf=1.92		Vf=1.10			
PIPE SIZE	225 mm uPVC		225 mm uPVC		300 mm uPVC		300 mm uPVC		300 mm uPVC		375 mm RCP			
PIPE GRADE (%)	10.51%		14.92%		11.95%		5.18%		1.53%		14.47%			
DATUM RL	0.000													
HGL (20% AEP)	26.300	26.268	24.405	24.370	24.363	21.151	20.900	20.892	18.469	18.470	18.469	17.471	17.470	17.471
	17.354	16.720	16.665	15.259	15.260	15.259								
DEPTH TO INVERT	0.822	0.716	0.845	0.705	1.142	1.037	1.057	0.920	0.940	0.839	1.503	0.909	1.659	
INVERT LEVEL	26.175	24.389	24.239	21.107	20.670	18.266	18.246	17.252	17.232	17.164	16.500	14.500	13.750	
PROPOSED & (EXISTING) LEVELS	26.997	25.085		21.812		19.303		18.172		18.003		15.409		
CHAINAGE	0.000	17.184	17.184	21.000	38.183	20.118	58.301	19.194	77.495	4.468	81.963	13.821	95.784	

LINE - DR 01

6 0 6 12 18 24 30 1:300
METRES

3 0 3 6 9 12 15 1:150
METRES

REV	AMENDMENT	ISSUED	DATE
A	FOR DA APPROVAL	BF	06/09/2024

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ABN: 26 134 067 842

Client: MR BRIAN BETTS

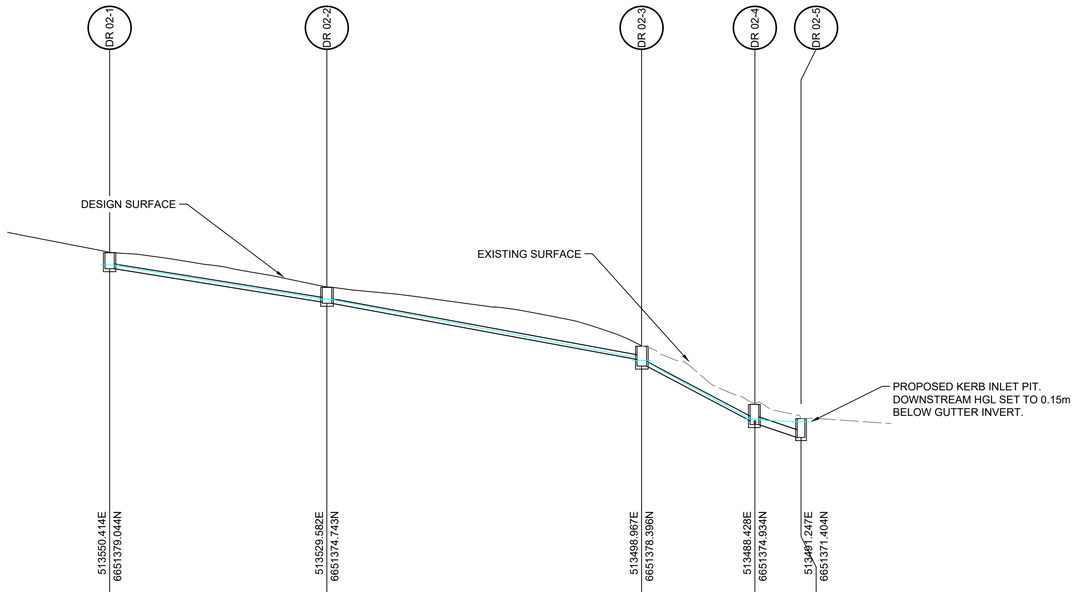
27-29 CHARLESWORTH BAY ROAD, COFFS HARBOUR
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

DRAINAGE LONGITUDINAL SECTION 1

Designed: BF
Drawn: DKH
Checked: SGB

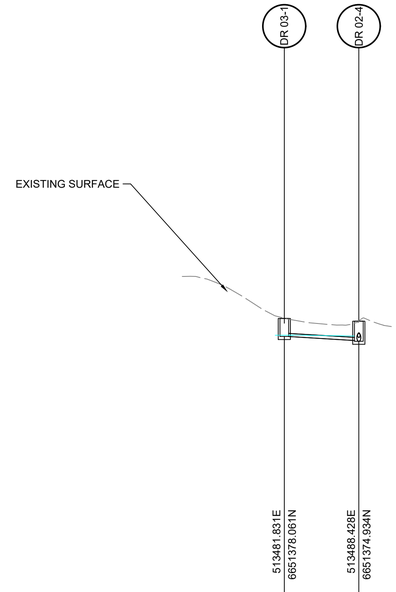
Scales: @A1 Plan - Horiz. 1:300 Vert. 1:150 X-Sect. -
Datum: A.H.D.

Plan No. 240204-01-531
File Ref. 240204
REV. A



	513550.414E 6651379.044N	513529.582E 6651374.743N	513498.967E 6651378.396N	513488.428E 6651374.934N	513481.247E 6651371.404N
Q - PIPE FLOW (L/s)	Q=40	Q=49	Q=79	Q=86	
Vf - VELOCITY (m/s)	Vf=1.38	Vf=3.78	Vf=6.19	Vf=1.31	
PIPE SIZE	225 mm uPVC	225 mm uPVC	225 mm uPVC	375 mm RCP	
PIPE GRADE (%)	7.68%	8.92%	24.14%	14.03%	
DATUM RL	0.000				
HGL (20% AEP)	23.940 23.920	22.268 22.270	22.244	19.392 19.270	19.205 16.389 16.390 16.336 16.264 16.260 16.264
DEPTH TO INVERT	0.781	0.720 0.781	0.647	0.971 0.797 0.984 1.648	1.648
INVERT LEVEL	23.757	22.123 22.062	19.313	18.988 16.311 16.124 15.490	15.490
PROPOSED & (EXISTING) LEVELS	24.556	22.861	19.978	17.126	16.414
CHAINAGE	-78.337	21.271 -57.066	30.833	-26.234 11.093	-15.141 4.518 -10.623

LINE - DR 02



	513481.831E 6651378.061N	513488.428E 6651374.934N	
Q - PIPE FLOW (L/s)	Q=3		
Vf - VELOCITY (m/s)	Vf=0.37		
PIPE SIZE	150 mm uPVC		
PIPE GRADE (%)	2.68%		
DATUM RL	-4.000		
HGL (20% AEP)	16.420 16.425	16.386 16.336	
DEPTH TO INVERT	0.647	0.945 0.984	
INVERT LEVEL	16.359	16.164 16.124	
PROPOSED & (EXISTING) LEVELS	17.242	17.126	
CHAINAGE	0.000	7.300	7.300

LINE - DR 03

6 0 6 12 18 24 30 METRES 1:300

3 0 3 6 9 12 15 METRES 1:150

REV	AMENDMENT	ISSUED	DATE
A	FOR DA APPROVAL	BF	06/09/2024

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ABN: 26 134 067 842

Client: MR BRIAN BETTS

27-29 CHARLESWORTH BAY ROAD, COFFS HARBOUR
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

DRAINAGE LONGITUDINAL SECTION 2

Designed: BF
Drawn: DKH
Checked: SGB

Scales: @A1 Plan - Horiz. 1:300 Vert. 1:150 X-Sect. -
Datum: A.H.D.

Plan No. 240204-01-532
File Ref. 240204
REV. A

LOCATION AND LAND-USE					TIME AND RUNOFF						INLET DESIGN						PIPE SYSTEM DESIGN							PIT RESULTS							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	29a	29b	30	31	32	33	34
AEP	Pit, Node or Basin Name	Sub-Catchment Area (ha)	Land-Use Type (ILSAX)	Percent-age (%)	Constant Flow Time (minutes)	Kinematic Wave or Friends Formula Parameters Length (m)	Slope (%)	Roughness n	Total Entry Time, t_c (minutes)	Peak Sub-Catchmen Flowrate (m^3/s) *worst storm	Origin of Approach Flows	Overflows Approaching Pit Peak Flowrate(s (m^3/s)	Flow Width (m)	Depth x Velocity (m^2/s)	Inlet Family	Inlet Size	Peak Approach Flow (m^3/s)	Bypass Flow(s) (m^3/s)	Peak Flow in Pipe (m^3/s)	Reach Length (m)	Pipe Slope (%)	Pipe Diameter (mm)	U/S Pipe Invert Level (m)	D/S Pipe Invert Level (m)	U/S HGL in Pipe (m)	D/S HGL in Pipe (m)	Pipe Flow Velocity (m/s)	Pressure Change Coeff. Ku	QUDM Chart No. 2008 [2016]	QUDM Chart Ratios	Water Surface Elevation (m)	Ground Surface Level (m)	Pit Free-board (m)	Pit Name	Remarks
20%	**DR 01-1**	0.0669	Paved	13	5				5	0.014					Grated Sur	GSIP 900x	0.014	0	0.013	17.184	10.51	225	26.175	24.369	26.268	24.405	3.08	5.93	A1-4 [A2-3	).0, Vo2 / (2g[	26.3	26.997	0.69	**DR 01-1**	
			Supp.	0	0																														
			Grassed	87	15				15																										
1%	**DR 01-1**	0.0669	Paved	<	- - - - - - - - - -	as above	- - - - - - - - - -	>	5	0.029				<- - - as above - - - >		0.029	0	0.032	<	- - - - - - - - - -	as above	- - - - - - - - - -	>		26.321	24.447	2.5	5.86	A1-4 [A2-3	).0, Vo2 / (2g[	26.36	26.997	0.64	**DR 01-1**	
			Grassed						15																										
20%	**DR 01-2**	0.05	Paved	11.4	5				5	0.01	DR 01-1	0	0	0	Grated Sur	GSIP 900x	0.01	0	0.023	21	14.91	225	24.239	21.107	24.363	21.151	4.06	2.03	A1-5 [A2-4	, Qq / Qo = 0.4	24.37	25.085	0.71	**DR 01-2**	
			Supp.	0	0																														
			Grassed	88.6	15				15																										
1%	**DR 01-2**	0.05	Paved	<	- - - - - - - - - -	as above	- - - - - - - - - -	>	5	0.022	DR 01-1	0	0	0	<- - - as above - - - >		0.022	0	0.05	<	- - - - - - - - - -	as above	- - - - - - - - - -	>		24.422	21.175	4.68	1.94	A1-5 [A2-4	, Qq / Qo = 0.4	24.45	25.085	0.64	**DR 01-2**	
			Grassed						15																										
20%	**DR 01-3**	0.0511	Paved	11.4	5				5	0.01	DR 01-2	0	0	0	Grated Sur	GSIP 900x	0.01	0	0.035	20.118	11.94	225	20.745	18.342	20.898	18.468	1.45	5.87	A1-4 [A2-3	).0, Vo2 / (2g[	20.91	21.812	0.9	**DR 01-3**	
			Supp.	0	0																														
			Grassed	88.6	15				15																										
1%	**DR 01-3**	0.0511	Paved	<	- - - - - - - - - -	as above	- - - - - - - - - -	>	5	0.022	DR 01-2	0	0	0	<- - - as above - - - >		0.022	0	0.072	<	- - - - - - - - - -	as above	- - - - - - - - - -	>		20.956	18.552	1.71	3.3	A1-4 [A2-3	).0, Vo2 / (2g[	21.01	21.812	0.8	**DR 01-3**	
			Grassed						15																										
20%	**DR 01-4**	0.0506	Paved	11.4	5				5	0.01	DR 01-3	0	0	0	Grated Sur	GSIP 900x	0.01	0	0.043	19.194	5.18	300	18.322	17.328	18.468	17.474	1.27	0.83	A1-5 [A2-4	, Qq / Qo = 0.2	18.47	19.303	0.83	**DR 01-4**	
			Supp.	0	0																														
			Grassed	88.6	15				15																										
1%	**DR 01-4**	0.0506	Paved	<	- - - - - - - - - -	as above	- - - - - - - - - -	>	5	0.022	DR 01-3	0	0	0	<- - - as above - - - >		0.022	0	0.093	<	- - - - - - - - - -	as above	- - - - - - - - - -	>		18.552	17.571	1.59	0.88	A1-5 [A2-4	, Qq / Qo = 0.2	18.55	19.303	0.75	**DR 01-4**	
			Grassed						15																										
20%	**DR 01-5**	0.0243	Paved	12.2	5				5	0.005	DR 01-4	0	0	0	Grated Sur	GSIP 120(	0.005	0	0.048	4.468	1.54	300	17.308	17.239	17.474	17.354	1.91	0.71	A1-5 [A2-4	, Qq / Qo = 0.1	17.47	18.172	0.7	**DR 01-5**	
			Supp.	0	0																														
			Grassed	87.8	15				15																										
1%	**DR 01-5**	0.0243	Paved	<	- - - - - - - - - -	as above	- - - - - - - - - -	>	5	0.01	DR 01-4	0	0	0	<- - - as above - - - >		0.01	0	0.103	<	- - - - - - - - - -	as above	- - - - - - - - - -	>		17.557	17.414	2.4	0.7	A1-5 [A2-4	, Qq / Qo = 0.1	17.57	18.172	0.6	**DR 01-5**	
			Grassed						15																										
20%	**DR 01-6**		Paved								DR 01-5 N-SWALE	0	0	0	Grated Sur	GSIP 900x	0	0	0.053	13.821	14.47	375	16.5	14.5	16.665	15.259	1.1	5.93	A1-4 [A2-3	).0, Vo2 / (2g[	16.73	18.003	1.28	**DR 01-6**	
			Supp.																																
			Grassed																																
1%	**DR 01-6**		Paved								DR 01-5 N-SWALE	0	0	0	<- - - as above - - - >		0	0	0.113	<	- - - - - - - - - -	as above	- - - - - - - - - -	>		16.743	15.259	1.45	5.68	A1-4 [A2-3	).0, Vo2 / (2g[	16.87	18.003	1.14	**DR 01-6**	
			Grassed																																
20%	**DR 02-1**	0.165	Paved	29	5				5	0.036					Kerb Inlet I	G.G.P 1.8(	0.036	0	0.037	21.271	7.68	225	23.757	22.123	23.915	22.263	1.36	5.29	A1-4 [A2-3	).0, Vo2 / (2g[	23.94	24.538	0.6	**DR 02-1**	
			Supp.	0	0																														
			Grassed	71	15				15																										
1%	**DR 02-1**	0.165	Paved	<	- - - - - - - - - -	as above	- - - - - - - - - -	>	5	0.073				<- - - as above - - - >		0.073	0.01	0.066	<	- - - - - - - - - -	as above	- - - - - - - - - -	>		23.963	22.438	1.58	3.73	A1-4 [A2-3	).0, Vo2 / (2g[	24.07	24.538	0.47	**DR 02-1**	
			Grassed						15																										
20%	**DR 02-2**	0.0587	Paved	39	5				5	0.014	DR 02-1	0	0	0	Kerb Inlet I	G.G.P 1.8(	0.014	0	0.051	30.833	8.92	225	22.062	19.313	22.247	19.513	1.35	1.77	7 [A2-8 & A	, Qq / Qo = 0.3	22.26	22.8427	0.58	**DR 02-2**	
			Supp.	0	2																														
			Grassed	61	15				15																										
1%	**DR 02-2**	0.0587	Paved	<	- - - - - - - - - -	as above	- - - - - - - - - -	>	5	0.027	DR 02-1	0.001	0.18	0.01	<- - - as above - - - >		0.028	0.001	0.1	<	- - - - - - - - - -	as above	- - - - - - - - - -	>		22.294	19.956	2.21	1.45	7 [A2-8 & A	, Qq / Qo = 0.4	22.44	22.8427	0.4	**DR 02-2**	
			Grassed						15																										
20%	**DR 02-3**	0.1118	Paved	58	5				5	0.031	DR 02-2	0	0	0	Kerb Inlet I	G.G.P 1.8(	0.031	0	0.077	11.093	24.13	225	18.988	16.311	19.203	16.397	5.25	3.48	A1-4 [A2-3	).0, Vo2 / (2g[	19.51	19.9597	0.45	**DR 02-3**	
			Supp.	0	2																														
			Grassed	42	15				15																										
1%	**DR 02-3**	0.1118	Paved	<	- - - - - - - - - -	as above	- - - - - - - - - -	>	5	0.055	DR 02-2	0.033	1.17	0.07	<- - - as above - - - >		0.088	0.033	0.12	<	- - - - - - - - - -	as above	- - - - - - - - - -	>		19.23	16.591	2.61	2.71	A1-4 [A2-3	).0, Vo2 / (2g[	19.96	19.9597	0	**DR 02-3**	
			Grassed						15																										
20%	**DR 02-4**	0.0179	Paved	50	5				5	0.005	DR 02-3 DR 03-1	0	0	0	Kerb Inlet I	G.G.P 1.8(	0.005	0	0.084	4.518	14.03	375	16.124	15.49	16.334	16.264	1.29	3.43	H-O'L	o = 0.09, S / D	16.4	17.1081	0.71	**DR 02-4**	
			Supp.	0	2																														
			Grassed	50	15				15																										
1%	**DR 02-4**	0.0179	Paved	<	- - - - - - - - - -	as above	- - - - - - - - - -	>	5	0.008	DR 02-3 DR 03-1	0.001	0.2	0.01	<- - - as above - - - >		0.009	0.001	0.165	<	- - - - - - - - - -	as above	- - - - - - - - - -	>		16.42	16.264	1.72	3.02	H-O'L	o = 0.43, S / D	16.59	17.1081	0.52	**DR 02-4**	
			Grassed						15																										
20%	**DR 03-1**	0.0139	Paved	10	5				5	0.003					Kerb Inlet I	G.G.P 1.8(	0.003	0	0.003	7.3	2.67	150	16.359	16.164	16.427	16.397	0.35	5.93	A1-4 [A2-3	).0, Vo2 / (2g[	16.43	17.2423	0.82	**DR 03-1**	
			Supp.	0	0																														
			Grassed	90	15				15																										
1%	**DR 03-1**	0.0139	Paved	<	- - - - - - - - - -	as above	- - - - - - - - - -	>	5	0.006					<- - - as above - - - >		0.006	0	0.006	<	- - - - - - - - - -	as above	- - - - - - - - - -	>		16.597	16.591	0.32	4.37	A1-4 [A2-3	).8, Vo2 / (2g[	16.62	17.2423	0.62	**DR 03-1**	
			Grassed						15																										
20%	**N-SWALE**	0.022	Paved	10	5				5	0.004							0.004	0.004																**N-SWALE**	
			Supp.	0	0																														
			Grassed	90	15				15																										
1%	**N-SWALE**	0.022	Paved	<	- - - - - - - - - -	as above	- - - - - - - - - -	>	5	0.009							0.009	0.009																		**N-SWALE**	
			Grassed						15																										
20%	**N205169**	0.7322	Paved	23.5	5				5	0.152							0.152																	**N205169**	
			Supp.	0	0																														
			Grassed	76.5	15				15																										
1%	**N205169**	0.7322	Paved	<	- - - - - - - - - -	as above	- - - - - - - - - -	>	5	0.325							0.325																		**N205169**	
			Grassed						15																										

REV	AMENDMENT	ISSUED	DATE
A	FOR DA APPROVAL	BF	06/09/2024

BARKER RYAN STEWART
ENGINEERING | PLANNING | PROJECT MANAGEMENT | SURVEYING | CERTIFICATION

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Client: MR BRIAN BETTS

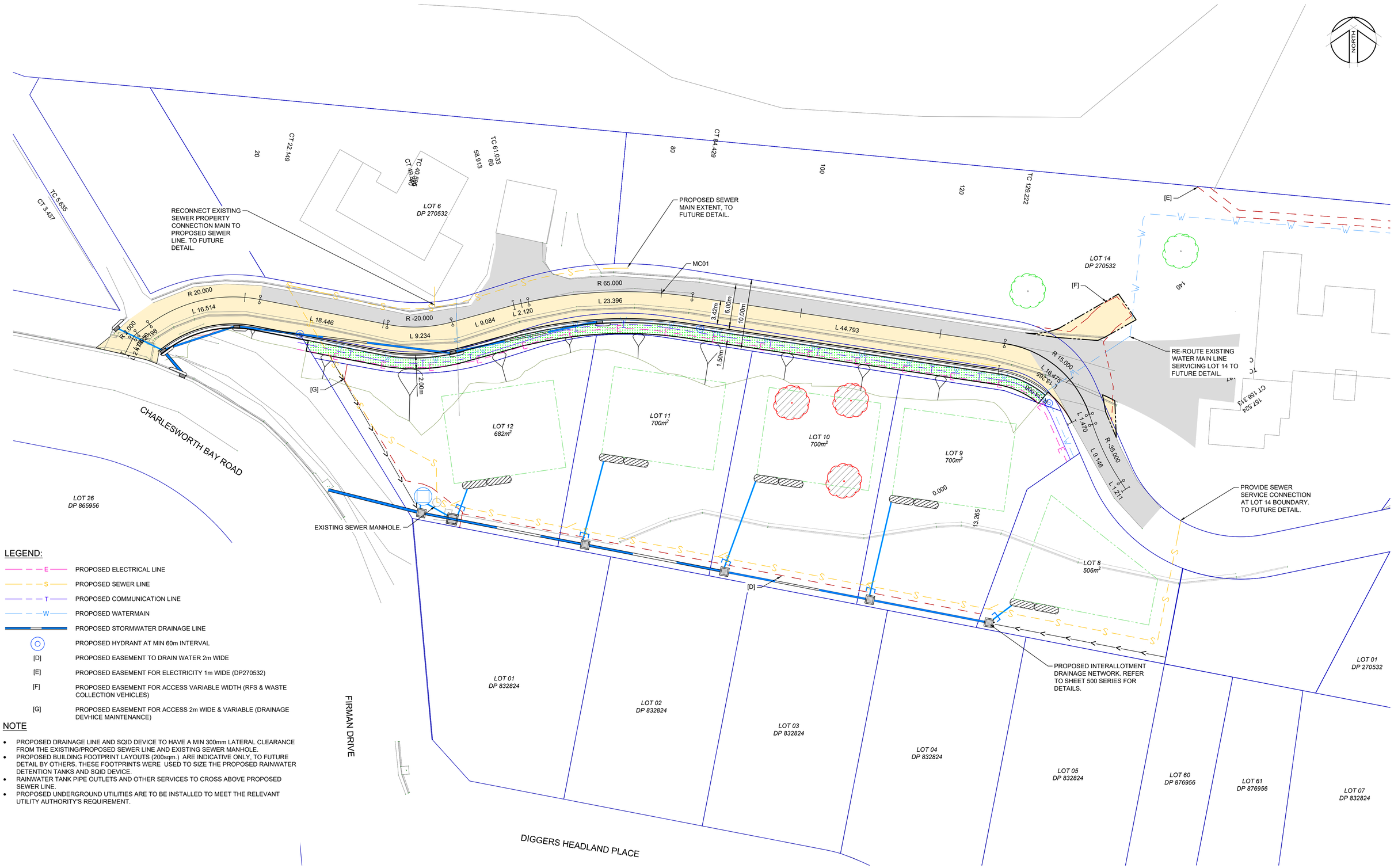
27-29 CHARLESWORTH BAY ROAD, COFFS HARBOUR
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

DRAINAGE RESULTS TABLE

Designed: BF
Drawn: DKH
Checked: SGB

Scales: @A1 Plan -, Horiz. -, Vert. -, X-Sect. -
Datum: A.H.D.

Plan No. 240204-01-541
File Ref. 240204
REV. A



LEGEND:

- PROPOSED ELECTRICAL LINE
- PROPOSED SEWER LINE
- PROPOSED COMMUNICATION LINE
- PROPOSED WATERMAIN
- PROPOSED STORMWATER DRAINAGE LINE
- PROPOSED HYDRANT AT MIN 60m INTERVAL
- [D] PROPOSED EASEMENT TO DRAIN WATER 2m WIDE
- [E] PROPOSED EASEMENT FOR ELECTRICITY 1m WIDE (DP270532)
- [F] PROPOSED EASEMENT FOR ACCESS VARIABLE WIDTH (RFS & WASTE COLLECTION VEHICLES)
- [G] PROPOSED EASEMENT FOR ACCESS 2m WIDE & VARIABLE (DRAINAGE DEVHICE MAINTENANCE)

NOTE

- PROPOSED DRAINAGE LINE AND SQID DEVICE TO HAVE A MIN 300mm LATERAL CLEARANCE FROM THE EXISTING/PROPOSED SEWER LINE AND EXISTING SEWER MANHOLE.
- PROPOSED BUILDING FOOTPRINT LAYOUTS (200sqm.) ARE INDICATIVE ONLY, TO FUTURE DETAIL BY OTHERS. THESE FOOTPRINTS WERE USED TO SIZE THE PROPOSED RAINWATER DETENTION TANKS AND SQID DEVICE.
- RAINWATER TANK PIPE OUTLETS AND OTHER SERVICES TO CROSS ABOVE PROPOSED SEWER LINE.
- PROPOSED UNDERGROUND UTILITIES ARE TO BE INSTALLED TO MEET THE RELEVANT UTILITY AUTHORITY'S REQUIREMENT.

DETAIL PLAN

SCALE 1:250

5 0 5 10 15 20 25 METRES 1:250

REV	AMENDMENT	ISSUED	DATE
A	FOR DA APPROVAL	BF	06/09/2024

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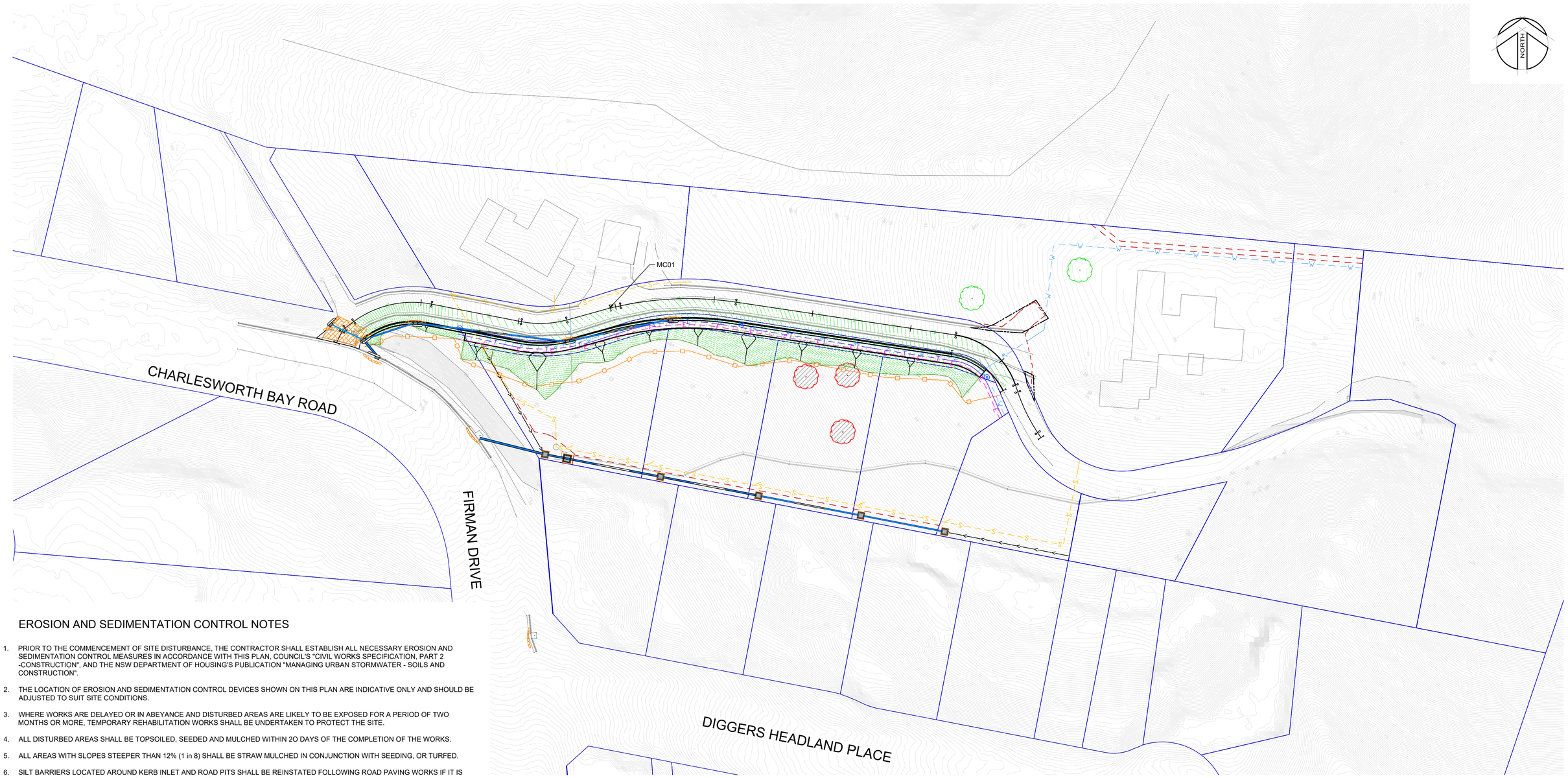
27-29 CHARLESWORTH BAY ROAD, COFFS HARBOUR
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

PROPOSED UTILITY SERVICING PLAN

Designed: BF
Drawn: DKH
Checked: SGB

Scales: @A1 Plan 1:250, Horiz. -, Vert. -, X-Sect. -
Datum: A.H.D.

Plan No. 240204-01-601
File Ref. 240204
REV. A



EROSION AND SEDIMENTATION CONTROL NOTES

1. PRIOR TO THE COMMENCEMENT OF SITE DISTURBANCE, THE CONTRACTOR SHALL ESTABLISH ALL NECESSARY EROSION AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THIS PLAN, COUNCIL'S "CIVIL WORKS SPECIFICATION, PART 2 -CONSTRUCTION", AND THE NSW DEPARTMENT OF HOUSING'S PUBLICATION "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION".
2. THE LOCATION OF EROSION AND SEDIMENTATION CONTROL DEVICES SHOWN ON THIS PLAN ARE INDICATIVE ONLY AND SHOULD BE ADJUSTED TO SUIT SITE CONDITIONS.
3. WHERE WORKS ARE DELAYED OR IN ABEYANCE AND DISTURBED AREAS ARE LIKELY TO BE EXPOSED FOR A PERIOD OF TWO MONTHS OR MORE, TEMPORARY REHABILITATION WORKS SHALL BE UNDERTAKEN TO PROTECT THE SITE.
4. ALL DISTURBED AREAS SHALL BE TOPSOILED, SEEDED AND MULCHED WITHIN 2O DAYS OF THE COMPLETION OF THE WORKS.
5. ALL AREAS WITH SLOPES STEEPER THAN 12% (1 in 8) SHALL BE STRAW MULCHED IN CONJUNCTION WITH SEEDING, OR TURFED.
6. SILT BARRIERS LOCATED AROUND KERB INLET AND ROAD PITS SHALL BE REINSTATED FOLLOWING ROAD PAVING WORKS IF IT IS LIKELY THAT UNDISTURBED AREAS WILL STILL DRAIN TO THE PIT.
7. SANDBAGS SHALL BE PLACED ACROSS THE END OF ROAD CONSTRUCTION AT THE COMPLETION OF EACH DAYS WORK TO PREVENT EROSION OF THE CONSTRUCTED MATERIAL.
8. THE CONTRACTOR SHALL CONDUCT WEEKLY INSPECTIONS OF THE SITE TO ENSURE THAT ALL DEVICES AND REHABILITATION AREAS HAVE BEEN ADEQUATELY MAINTAINED. THE CONTRACTOR SHALL ALSO KEEP A LOG BOOK DETAILING SUCH INSPECTIONS, AND RECORDING RAINFALL EVENTS AND OTHER RELEVANT EVENTS.
9. TOPSOIL SHALL BE STOCKPILED IN THE LOCATIONS SHOWN ON THIS PLAN OR AS DIRECTED BY COUNCIL'S ENGINEER. WHERE IT IS LIKELY THAT STOCKPILES WILL REMAIN IN PLACE FOR A PERIOD EXCEEDING 4 WEEKS, THEN THE STOCKPILE SHALL BE STABILISED BY SEEDING OR EQUIVALENT METHODS.
10. ALL REVEGETATION WORKS ARE TO BE MAINTAINED, INCLUDING WATERING AND MOWING WHERE NECESSARY UNTIL THE COMPLETION OF THE MAINTENANCE PERIOD.
11. THE MOVEMENT OF VEHICULAR TRAFFIC ON THE SITE SHALL BE CONFINED TO DESIGNATED AREAS DURING CONSTRUCTION WORKS. VEHICULAR ACCESS SHALL BE DENIED TO AREAS TO BE LEFT UNDISTURBED.
12. SITE ACCESS SHALL BE LIMITED TO THE LOCATIONS SHOWN ON THIS PLAN. SHAKE-DOWN AREAS SHALL BE CONSTRUCTED AS SHOWN.
13. DURING CONSTRUCTION WORKS, DUST CONTROL MEASURES SHALL BE IMPLEMENTED TO MINIMISE THE AMOUNT OF DUST GENERATED FROM THE SITE. THESE MEASURES TO BE IMPLEMENTED TO COUNCIL'S SATISFACTION.
14. MAINTENANCE AND CLEANING OF CONSTRUCTION PLANT SHALL BE CARRIED OUT IN AN AREA WHERE RUNOFF CAN BE CONTAINED AND APPROPRIATELY TREATED AND DISPOSED OF.
15. ALL EROSION AND SEDIMENTATION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS HAVE ADEQUATELY REGENERATED. THIS STAGE SHALL BE DETERMINED BY THE CERTIFIER.

EROSION AND SEDIMENT CONTROL PLAN

SCALE 1:400

LEGEND

- SEDIMENT FENCE
- STABILISED SITE ACCESS AT ENTRANCE TO WORKS
- SURFACE INLET PIT SEDIMENT TRAP
- SAND SAUAGE SEDIMENT TRAP

DIAL BEFORE YOU DIG www.1100.com.au

8 0 8 16 24 32 40 METRES 1:400

REV	AMENDMENT	ISSUED	DATE
A	FOR DA APPROVAL	BF	06/09/2024

BARKER RYAN STEWART
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Client: MR BRIAN BETTS

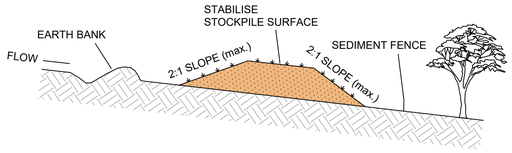
27-29 CHARLESWORTH BAY ROAD, COFFS HARBOUR
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

EROSION AND SEDIMENT CONTROL PLAN

Designed: BF
Drawn: DKH
Checked: SGB

Scales: @A1 Plan 1:400, Horiz. -, Vert. -, X-Sect. -
Datum: A.H.D.

Plan No. 240204-01-801
File Ref. 240204
REV. A



CONSTRUCTION NOTES

1. WHERE POSSIBLE LOCATE STOCKPILE AT LEAST 5 METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOWS, ROADS, HAZARD AREAS AND MIN. 1.5m AWAY FROM EMBANKMENTS.

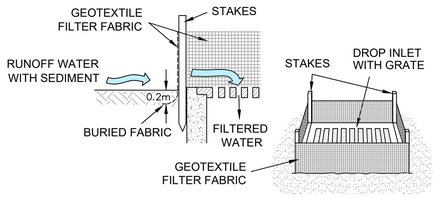
2. CONSTRUCT ON THE CONTOUR AS A LOW, FLAT ELONGATED MOUND.

3. WHERE THERE IS SUFFICIENT AREA TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.

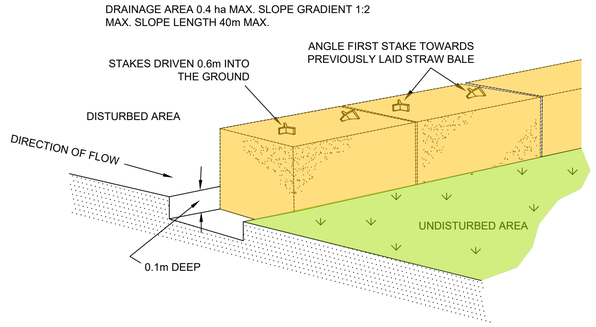
4. REHABILITATE IN ACCORDANCE WITH THE SWMP/ESCP.

5. CONSTRUCT EARTH BANK (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT RUN OFF AROUND THE STOCKPILE AND A SEDIMENT FENCE (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE OF STOCKPILE.

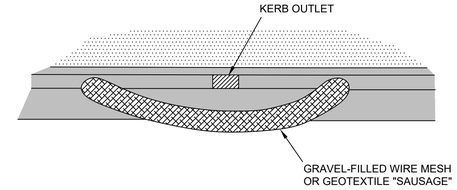
TOPSOIL STOCKPILE



SURFACE INLET PIT SEDIMENT TRAP



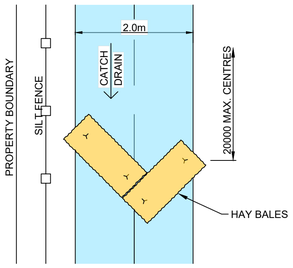
STRAW BALE SEDIMENT FILTER



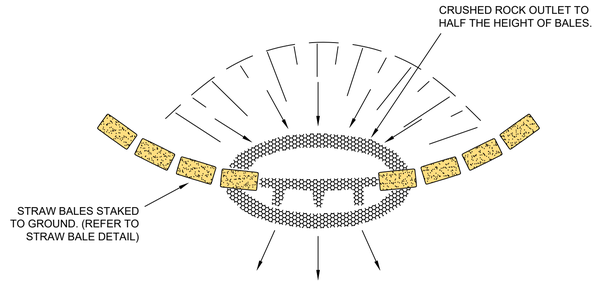
CONSTRUCTION NOTES

1. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH AND FILL IT WITH 25mm TO 50mm GRAVEL.
2. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH X 400mm WIDE.
3. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING FILTER.
4. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

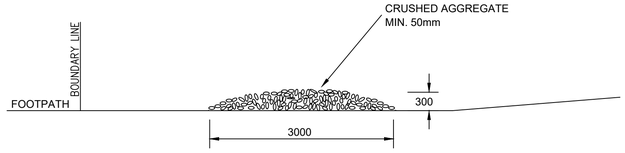
MESH & GRAVEL FILTER "SAUSAGE" BARRIER



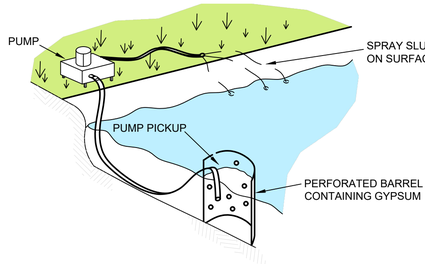
CATCH DRAIN DETAIL



STRAW BALE & CRUSHED ROCK SEDIMENT FILTER



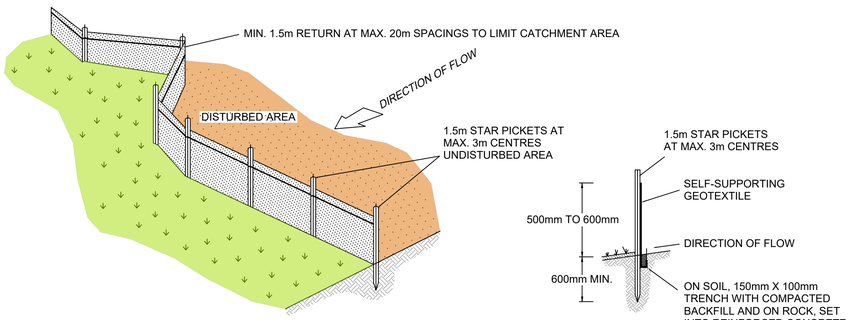
VEHICLE DUST SHAKE DOWN DETAIL



NOTE:
1. FLOCCULATION TO BE USED IF WATER IS NOT CLEAR (IE: SEDIMENT GREATER THAN 50 mg/L) PRIOR TO DISCHARGING FROM TEMPORARY PUMP OUT

2. FOR RATES & AGENTS SEE APPENDIX E OF HOUSING NSW "MANAGING URBAN SW SOILS & CONSTRUCTION".

FLOCCULATION DETAIL



SECTION DETAIL

CONSTRUCTION NOTES

1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO BEING PARRALLEL TO THE CONTOURS OF THE SITE BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.

2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.

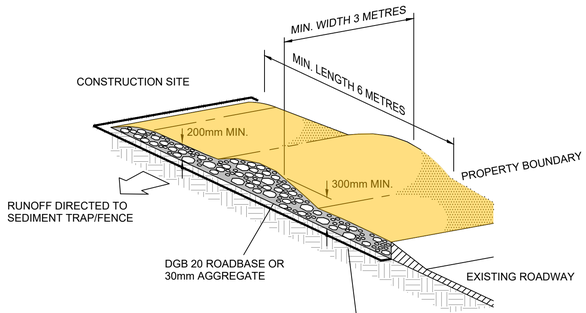
3. DRIVE 1.5m LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX.) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.

4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.

5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.

6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

SEDIMENT FENCE



CONSTRUCTION NOTES

1. STRIP TOPSOIL AND LEVEL SITE.

2. COMPACT SUBGRADE.

3. COVER AREA WITH NEEDLE-PUNCHED GEOTEXTILE.

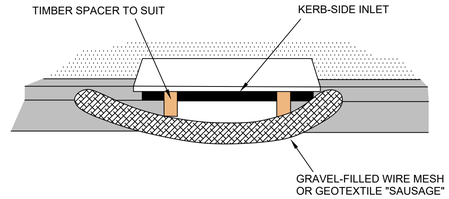
4. CONSTRUCT 200mm THICK PAD OVER GEOTEXTILE USING ROADBASE OR 30mm AGGREGATE. MINIMUM LENGTH 15 METRES OR TO BUILDING ALIGNMENT. MINIMUM WIDTH 3 METRES.

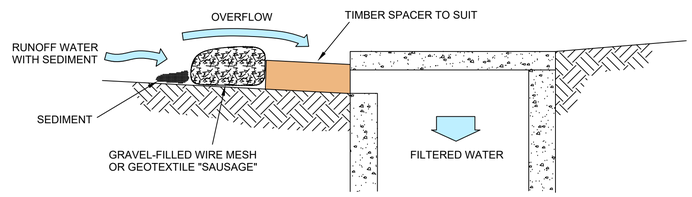
5. CONSTRUCT HUMP IMMEDIATELY WITHIN BOUNDARY TO DIVERT WATER TO A SEDIMENT FENCE OR OTHER SEDIMENT TRAP.

GEOTEXTILE FABRIC DESIGNED TO PREVENT INTERMIXING OF SUBGRADE AND BASE MATERIALS AND TO MAINTAIN GOOD PROPERTIES OF THE SUB-BASE LAYERS.

GEOFABRIC MAY BE A WOVEN OR NEEDLE PUNCHED PRODUCT WITH A MINIMUM CBR BURST STRENGTH (AS3706.4-90) OF 2500 N

STABILISED SITE ACCESS





CONSTRUCTION NOTES

1. INSTALL FILTERS TO KERB INLET ONLY AT SAG POINTS.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH X 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

MESH & GRAVEL INLET "SAUSAGE" FILTER

REV	AMENDMENT	ISSUED	DATE
A	FOR DA APPROVAL	BF	06/09/2024

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ENGINEERING | PLANNING | PROJECT MANAGEMENT | SURVEYING | CERTIFICATION
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Client: MR BRIAN BETTS

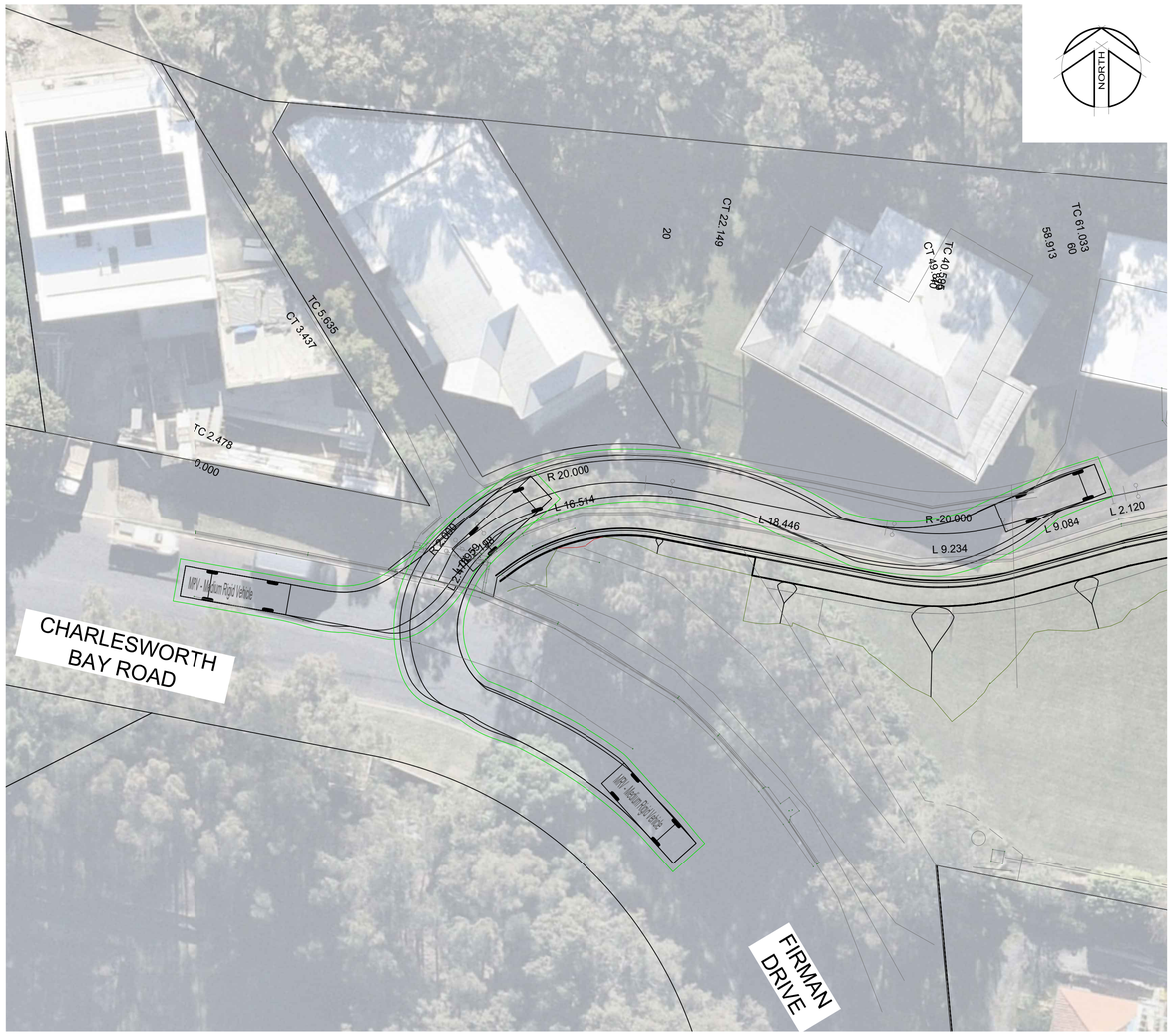
27-29 CHARLESWORTH BAY ROAD, COFFS HARBOUR
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

EROSION AND SEDIMENT CONTROL DETAILS

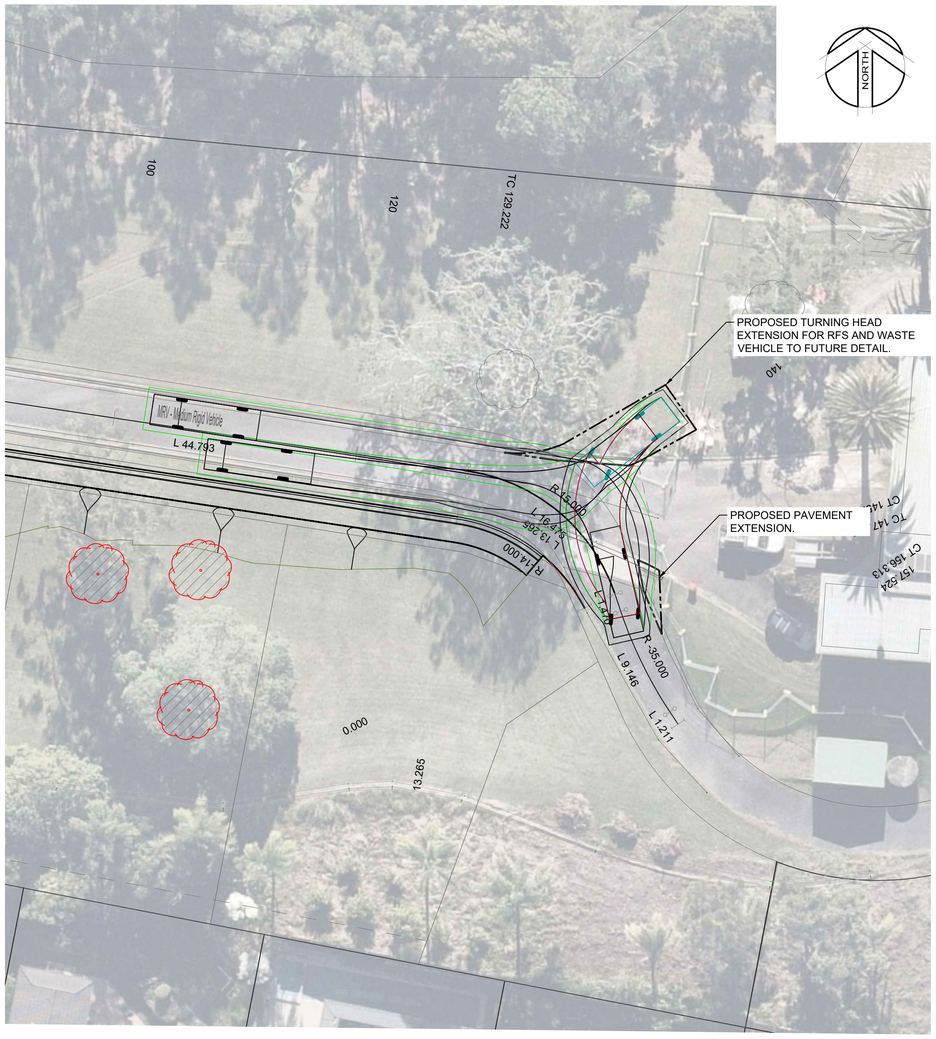
Designed: BF
Drawn: DKH
Checked: SGB

Scales: @A1 Plan -, Horiz. -, Vert. -, X-Sect. -
Datum: A.H.D.

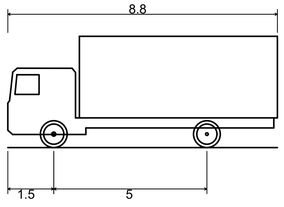
Plan No. 240204-01-811
File Ref. 240204
REV. A



TURNPATH PLAN - DIAGRAM 1
SCALE 1:250



TURNPATH PLAN - DIAGRAM 2
SCALE 1:250



MRV - Medium Rigid Vehicle

Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	10.000m

5 0 5 10 15 20 25
METRES
1:250

REV	AMENDMENT	ISSUED	DATE
A	FOR DA APPROVAL	BF	06/09/2024

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Client:
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27-29 CHARLESWORTH BAY ROAD, COFFS HARBOUR
PROPOSED COMMUNITY TITLE LOT SUBDIVISION

TURNPATH PLAN

Designed: BF
Drawn: DKH
Checked: SGB

Scales: @A1 Plan 1:250, Horiz. -, Vert. -, X-Sect. -
Datum: A.H.D.

Plan No. 240204-01-901
File Ref. 240204
REV. A