DEVELOPMENT WORKS UNDERTAKEN FOR:

SOUTHERN RURAL HOLDINGS PTY. LTD.

YARRABILLY ESTATE
STAGE 1
SUBDIVISION OF
LOT 3, DP111554 & LOT 4, DP1092182
COWRA, NSW

ISSUED FOR DEVELOPMENT APPLICATION

DECEMBER 2016

FRAISH Consulting
Civil & Structural Engineers

1/8 Victoria Street, Hall ACT
PO Box 310, Hall ACT 2618
02 6230 2823 · 0418 585 774
info@fraish.com.au · www.fraish.com.au

DRAWING INDEX DRAWING TITLE	DRAWING NUMBER	DRAWING TITLE	DRAWING NUMBER
Cover Sheet	C001	**LANDSCAPING**	
Layout Plan & Drawing Index	C002	Landscaping Plan & Notes Sheet 1	C250
Staging Plan	C003	Landscaping Plan & Notes Sheet 2	C251
Civil Notes & Legend	C005	**STORMWATER**	
LAYOUT		Stormwater Plan Sheet 1	C305
General Arrangement Plan	C006	Stormwater Plan Sheet 2	C306
Lot Layout Plan Sheet 1	C100	Stormwater Profiles	C310
Lot Layout Plan Sheet 2	C101	Stormwater Details	C315
TYPICAL DETAILS		**WATER**	
Typical Cross Sections	C105	Water Plan Sheet 1	C320
LONG SECTIONS		Water Plan Sheet 2	C321
Road 1 Long Sections Sheet 1	C120	Water Plan Sheet 3	C322
Road 1 Long Sections Sheet 2	C121	Water Plan Sheet 4	C323
Road 1 Long Sections Sheet 3	C122	Water Plan Sheet 5	C324
Road 1 Long Sections Sheet 4	C123	Water Plan Sheet 6	C325
Road 2 Long Sections Sheet 1	C125	Water Details Sheet 1	C326
Road 2 Long Sections Sheet 2	C126	Water Details Sheet 2	C327
Road 3 Long Sections Sheet 1	C127	Water Details Sheet 3	C328
Road 3 Long Sections Sheet 2	C128	Water Details Sheet 4	C329
Road 4 Long Sections Sheet 1	C129	Water Details Sheet 5	C330
Road 4 Long Sections Sheet 2	C130	**SEWER**	
Road 5 Long Sections Sheet 1	C131	Sewer Plan Sheet 1	C331
Road 5 Long Sections Sheet 2	C132	Sewer Plan Sheet 2	C332
CROSS SECTIONS		Sewer Plan Sheet 3	C333
Road 1 Cross Sections Sheet 1	C133	Sewer Plan Sheet 4	C334
Road 1 Cross Sections Sheet 2	C134	Sewer Plan Sheet 5	C335
Road 1 Cross Sections Sheet 3	C135	Sewer Plan Sheet 6	C336
Road 1 Cross Sections Sheet 4	C136	Sewer Profiles	C337
Road 1 Cross Sections Sheet 5	C137	Sewer Details Sheet 1	C338
Road 1 Cross Sections Sheet 6	C138	Sewer Details Sheet 2	C339
Road 1 Cross Sections Sheet 7	C139	Sewer Details Sheet 3	C340
Road 2 Cross Sections Sheet 1	C140	Sewer Details Sheet 4	C341
Road 2 Cross Sections Sheet 2	C141	**COMMON TRENCHES**	
Road 2 Cross Sections Sheet 3	C142	Common Trench Details	C410
Road 2 Cross Sections Sheet 4	C143		
Road 2 Cross Sections Sheet 5	C144		
Road 2 Cross Sections Sheet 6	C145		
Road 3 Cross Sections Sheet 1	C146		
Road 3 Cross Sections Sheet 2	C147		
Road 3 Cross Sections Sheet 3	C148		
Road 3 Cross Sections Sheet 4	C149		
Road 4 Cross Sections Sheet 1	C150		
Road 4 Cross Sections Sheet 2	C151		
Road 4 Cross Sections Sheet 3	C152		
Road 5 Cross Sections Sheet 1	C153		
Road 5 Cross Sections Sheet 2	C154		
Road 5 Cross Sections Sheet 3	C155		
Road 5 Cross Sections Sheet 4	C156		
Road 5 Cross Sections Sheet 5	C157		
DETAIL PLANS			
Detail Plan Sheet 1	C160		
Detail Plan Sheet 2	C161		
Detail Plan Sheet 3	C162		
Detail Plan Sheet 4	C163		
Detail Plan Sheet 5	C164		
Detail Plan Sheet 6	C165		
EROSION & SEDIMENT CONTROL			
Erosion & Sediment Control Plan	C211		
Erosion & Sediment Control Details	C212		
Erosion & Sediment Control Notes	C213		
PAVEMENT			
Pavement Plan Sheet 1	C220		
Pavement Plan Sheet 2	C221		
Pavement Details	C225		
Signage Sheet 1	C230		
Signage Sheet 2	C231		

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	08/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 50m 100m 150m

SCALE: A1 1:2000, A3 1:4000

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

LOCALITY PLAN
& DRAWING INDEX

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C002	A

Z:\PROJECTS\Arnold\Yarrabilly\STAGE 1\Civil\DA\Dwg - C002 - LAYOUT & DRAWING INDEX.dwg

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	08/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNED	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 50m 100m 150m

SCALE: A1 1:2000, A3 1:4000

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111588 & LOT 4, DP 10821 82

STAGING PLAN

SHEET 1

SCALE	PHASE	DRAWING No.	REV.
AS SHOWN	DA	C003	A

Z:\PROJECTS\Arnold\Yarrabilly\STAGE 1\CAD\DA\C3a - C003 - STAGING PLAN.dwg

GENERAL

1. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH COWRA CITY COUNCIL AUSPEC #1 CONSTRUCTION SPECIFICATION,STANDARD DRAWINGS AND ENGINEERING STANDARDS MANUAL
2. ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE RELEVANT SERVICES DRAWINGS & ALL OTHER DRAWINGS FROM OTHER CONSULTANTS.
3. THE CONTRACTOR SHOULD REPORT ANY DISCREPANCIES ON THE DRAWINGS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN.
4. 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.
5. CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE PERMISSION OF THE OWNER.
6. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED OR REMOVED FROM SITE.
7. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING.
8. ALL DRAINAGE LINES THOUGH ADJACENT LOTS SHALL BE CONTAINED WITHIN EASEMENTS CONFORMING TO COUNCIL'S STANDARDS.
9. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL PROVIDE A TRAFFIC MANAGEMENT PLAN PREPARED BY AN ACCREDITED PERSON IN ACCORDANCE WITH RMS REQUIREMENTS, FOR ANY WORK ON OR ADJACENT TO PUBLIC ROADS. PLAN TO BE SUBMITTED TO COUNCIL & RMS AS APPLICABLE.
10. ALL EXISTING SERVICES TO BE LOCATED AND LEVELLED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORK. ALL SERVICES AFFECTED BY THE NEW WORK TO BE ADJUSTED TO SUIT IN THE FIELD, TO THE SATISFACTION OF THE RELEVANT SERVICE AUTHORITY
11. ALL CONSTRUCTION WORK IS TO BE CARRIED OUT SO THAT AT ANY TIME ADJOINING PROPERTY OWNERS ARE NOT DEPRIVED OF AN ALL - WEATHER ACCESS OR SUBJECTED TO ADDITIONAL STORMWATER RUN-OFF DURING THE PERIOD OF CONSTRUCTION.
12. ALL DISTURBED SURFACES TO BE REINSTATED TO AS NEARLY AS POSSIBLE TO THE PRE-CONSTRUCTED CONDITION.

SURVEY

1. FRAISH IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY SURVEY INFORMATION PROVIDED ON THIS DRAWING.
2. ALL LEVELS ARE TO A.H.D.
3. ALL CHAINAGES AND LEVELS ARE IN METRES, AND DIMENSIONS IN MILLIMETRES.
4. THE SURVEY INFORMATION ON THIS DRAWING HAS BEEN PROVIDED BY VARIOUS EXTERNAL SOURCES.
5. CONTRACTORS SHALL ARRANGE FOR THE WORKS TO BE SET OUT BY A REGISTERED SURVEYOR.

DRAINAGE RETICULATION NOTES

GENERAL DRAINAGE INSTALLATION NOTES

1. ENDS OF PIPES AND STUB CONNECTIONS TO BE SEALED WITH AN APPROVED SEALED DISC.
2. MILD STEEL 'STAR' PICKET 1200mm LONG WITH 300mm PAINTED GREEN, EXTENDED ABOVE GROUND LEVEL TO BE PLACED AT EACH INTER-ALLOTMENT DRAINAGE CONNECTION POINT.
3. PROVIDE 90 DIAMETER STUB CONNECTION WHERE SHOWN.
4. GEOTEXTILE FABRIC TO BE PLACED UNDER RIP RAP SCOUR PROTECTION.
5. ALL BASES OF PITS TO BE BENCHED TO HALF PIPE DEPTH AND PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE.
6. PROVIDE 1m WIDE JUTE MESH ANCHORED ALONG BASE OF SWALES AND SPRAY GRASS SWALE USING A SEED MIX CONSISTING OF:

a. JAPANESE MILLET (75%)
b. HULLED COUCH (6.25%)
c. RED CLOVER (INOCULATED) (6.25%)
d. WHITE CLOVER (INOCULATED) (6.25%)
e. "ELKA" PERENNIAL RYE (6.25%)

7. ALL PIPES SHALL BE RUBBER RING JOINTED (RRJ)
8. ALL PIPE TRENCHES TO BE INSPECTED & APPROVED BY SITE SUPERINTENDENT & COUNCIL ENGINEER PRIOR TO PLACING OF PIPES & BACKFILLING. THIS CONSTITUTES A HELD POINT.

SUBSOIL DRAINAGE NOTATION

1. SUBSOIL DRAINS TO KERBS SHALL BE 100Ø TYPE 1 CLASS 400 SOCKED PIPE.
2. 100Ø CLASS 'SH' SHALL BE USED WHERE SUBSOIL PIPES CROSS ROAD PAVEMENTS LAID AT MIN GRADE 1%, UNLESS SHOWN AS SLOTTED PIPES ON THE DRAWING.
3. GRADE SUBSOIL DRAINS AT MINIMUM AT 1% FROM OUTLET POINT UNLESS NOTED OTHERWISE ON THE DRAWINGS.
4. COMPACT 7mm CRUSHED TOCK FILTER MATERIAL TO ID=6% IN 250 TO 300mm DEEP LAYERS. THE PIPE SHALL BE 300mm DEEP.

INTER-ALLOTMENT DRAINAGE

1. INTER-ALLOTMENT DRAINAGE PIPES SHALL BE uPVC STORMWATER PIPE. INTER-ALLOTMENT DRAINAGE PIPES ARE TO BE LOCATED CENTRALLY IN IAD EASEMENT UNLESS OTHERWISE DIMENSIONED. MINIMUM COVER 600mm WITH A MINIMUM GRADE OF 1 in 300.
2. ALL INTER-ALLOTMENT DRAINAGE PITS TO BE MIN 600 x 600 IN SITU OR COUNCIL APPROVED PRE-CAST PITS.
3. PITS TO BE FITTED WITH LOCKING CHAIN OR J BOLTS TO PREVENT GRATE REMOVAL.
4. AREA AROUND PIT TO BE TURFED, MINIMUM 900mm RADIUS. TURF TO BE MAINTAINED UNTIL ESTABLISHED.
5. ON CAST-INSITU INTER-ALLOTMENT PITS A 150mm STUB IS TO BE PROVIDED FOR ROOF WATER CONNECTION.

TABLE DRAINS STABILISATION

1. ALL TABLE DRAINS, SWALES, METRES, BATTERS AND VERGESARE TO BE TOPSOILED AND SOWN WITH THE SEED MIX AS SHOWN IN THE EROSION AND SEDIMENT CONTROL PLAN AS SOON AS POSSIBLE AFTER COMPLETION.
2. TABLE DRAINS AND SWALES EXCEEDING 5% GRADE ARE TO BE STABILISED WITH JUTE MATTING AND BITUMEN IMMEDIATELY AFTER SOWING.
3. WHERE DRAINS ARE ON GRADES IN EXCESS OF 10% THEY SHALL BE ARMOURED WITH ROCK, GENERALLY SIZED TO D50 100mm UNDERLAID WITH BIDIM A14.
4. SIMILAR TREATMENT IS TO BE PROVIDED TO ALL DRAINS, SWALES AND BATTERS IN PROPERTY ACCESS DRIVEWAYS.
5. RIPRAP SCOUR PROTECTION IS TO BE INSTALLED AT THE OUTLETS, TO ALL THE CULVERTS & TABLE DRAINS. CONSISTING OF D50=150mm AND PLACED OVER BIDIM A14.
6. AREAS FOR PROTECTION ARE AS FOLLOWS:
7. Ø300 & Ø375 PIPES = 1m WIDE X 2m LONG

PAVEMENT NOTES

1. ALL SUBGRADES TO BE PROOF ROLLED & APPROVED BY SITE SUPERINTENDENT & COUNCIL ENGINEER PRIOR TO PLACING OF PAVEMENT LAYERS. THIS CONSTITUTES A HOLD POINT.
2. SUB-BASE & BASECOURSE CAN BE CONSTRUCTED OF APPROVED NGB & NGS IN LIEU OF DGS AND DGB. IN ACCORDANCE WITH AUSPEC #1 C242 FLEXIBLE PAVEMENTS.
3. WHERE REQUIRED BY SUPERVISING ENGINEER DESIGN CBR TO BE CONFIRMED ON SITE BY A MINIMUM OF FOUR DAY SOAKED CBR TESTS DURING THE BOXING OUT FOR THE PAVEMENT. NO PAVEMENT MATERIALS ARE TO BE PLACED UNTIL THE DESIGN CBR IS CONFIRMED AND THE SUBGRADE INSPECTED BY AN ENGINEER TO CONFIRM THE CONSISTENCY OF MATERIALS.
4. PRIOR TO THE PLACEMENT OF THE PRIMERSEAL AND AFTER THE REQUIRED DENSITY IS ACHIEVED, THE PAVEMENT IS TO BE ALLOWED TO DRY BACK TO APPROXIMATELY 60% TO 70% OPTIMUM MOISTURE CONTENT.
5. ALL PAVEMENTS TO BE PROOF ROLLED & APPROVED BY SITE SUPERINTENDENT & COUNCIL ENGINEER PRIOR TO PLACING OF PRIME, SEAL OR ASPHALT. THIS CONSTITUTES A HOLD POINT.
6. COMPACTION TESTS ARE TO BE UNDERTAKEN FOR ALL PAVEMENT LAYERS INCLUDING SUBGRADE AT A RATES AS STATED IN AUSPEC #1 TO BE DETERMINED BY THE SUPERVISING ENGINEER AND THE RESULTS TO BE SUPPLIED TO THE ENGINEER PRIOR TO PLACEMENT OF THE NEXT PAVEMENT LAYER.

RCP CONVENTIONAL INSTALLATIONS & ROAD CROSSINGS

1. SUPPLY & INSTALLATION OF DRAINAGE WORKS TO BE IN ACCORDANCE WITH THESE DRAWINGS, THE COUNCIL SPECIFICATION AUSPEC #1 AND THE CURRENT APPLICABLE AUSTRALIAN STANDARDS.
2. ALL PIPE TRENCHES TO BE INSPECTED & APPROVED BY SITE SUPERINTENDENT & COUNCIL ENGINEER PRIOR TO PLACING OF PIPES & BACKFILLING. THIS CONSTITUTES A HOLD POINT.
3. BEDDING OF THE PIPELINES IS TO BE TYPE 'HS2' IN ACCORDANCE WITH THE STANDARDS AND AS FOLLOWS:

a. BEDDING DEPTH UNDER THE PIPE TO BE 100mm.
b. 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.'
c. 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 COHESIVENESS MATERIAL.

3. 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.
4. BACKFILL SHALL BE PLACED & COMPACTED IN ACCORDANCE WITH THE SPECIFICATION. TESTING OF BACKFILL IS TO OCCUR AT THE SAME INTERVALS FOR THE BEDDING AND HAUNCH ZONES.
5. A MINIMUM OF 300mm CLEARANCE IS TO BE PROVIDED BETWEEN THE OUTSIDE OF THE PIPE BARREL AND THE TRENCH WALL.
6. A Ø90 SUBSOIL DRAIN IS TO CONNECT INTO THE BASE OF EACH PIT WITHIN THE ROAD RESERVE & EXTEND 3.0m UPSTREAM OF THE PIT.
7. ALL SERVICE CONNECTIONS SHALL BE Ø100 uPVC STORMWATER CLASSIFICATION TO AS1254 AT 1.0% MIN. GRADE UNLESS NOTED OTHERWISE.
8. INSTALL TEMPORARY SEDIMENT BARRIERS TO INLET PITS, TO COUNCILS SPECIFICATIONS UNTIL SURROUNDING AREAS ARE PAVED OR GRASSED.CONTRACTOR IS TO VERIFY THE LEVEL AND ALIGNMENT OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF EXCAVATION FOR DRAINAGE.
9. STORMWATER PIT LOCATIONS & LEVELS MAY BE VARIED TO SUIT SITE CONDITIONS, AFTER CONSULTATION WITH THE ENGINEER.
10. ALL COURTYARD & LANDSCAPE PITS TO BE 450 SQ UNLESS NOTED OTHERWISE. ALL DRIVEWAY & OSD PITS TO BE 900 SQ OR AS NOTED ON THE DRAWINGS.
11. HAND EXCAVATE STORMWATER PIPES IN VICINITY OF TREE ROOTS.
12. FOOTPATH CROSSING LEVELS SHOWN ARE TO BE ADJUSTED TO FINAL COUNCIL ISSUED LEVELS.

SOIL & WATER MANAGEMENT NOTES

GENERAL

1. EROSION & SEDIMENT CONTROLS TO BE INSTALLED IN ACCORDANCE WITH THESE NOTES & THE NSW DEPARTMENT OF HOUSING "BLUE BOOK". FOR REFERENCES TO STANDARD DRAWINGS "SD" REFER THE BLUE BOOK. COPIES OF THESE DRAWINGS ARE AVAILABLE FROM THE SUPERVISING ENGINEER.
2. SEDIMENT & EROSION CONTROLS MUST BE IN PLACE IN ACCORDANCE WITH THE STAGING SHOWN BELOW AND PRIOR TO ANY EARTHWORKS COMMENCING ONSITE. THIS TO BE INSPECTED BY THE SUPERINTENDENT & CONSTITUTES A HOLD POINT
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MEASURES ARE TAKEN DURING THE COURSE OF CONSTRUCTION TO PREVENT SEDIMENT EROSION AND POLLUTION OF THE DOWNSTREAM WATERWAY SYSTEM - SUPERINTENDENT SHOULD BE CONTACTED IF IN DOUBT. ALL SEDIMENT CONTROL STRUCTURES TO BE INSPECTED AFTER EACH RAINFALL EVENT FOR STRUCTURAL DAMAGE AND ALL TRAPPED SEDIMENT TO BE REMOVED TO A NOMINATED SOIL STOCKPILE SITE.RETAIN ALL EXISTING GRASS COVER WHEREVER POSSIBLE. TOPSOIL FROM ALL AREAS THAT WILL BE DISTURBED TO BE STRIPPED AND STOCKPILED AT THE LOCATION SHOWN ON THE PLANS OR IN A LOCATION APPROVED BY THE SUPERINTENDENT.
4. INSTALL GRAVEL OR SILT INLET FILTERS TO SD6-8 & SD6-9 TO ALL INLET PITS WITHIN ROSS STREET LIKELY TO COLLECT SILT LADEN WATER, UNTIL CONTRIBUTING CATCHMENT AREAS ARE PAVED OR REGRASSED.
5. STRAW BALES TO BE IN ACCORDANCE WITH SD 6-7 AND LEVEL SPREADERS TO BE IN ACCORDANCE WITH SD 5-6. IN LIEU OF STRAW BALE FILTERS, ROCK CHECK DAMS TO SD 5-4 CAN BE APPLIED. SEDIMENT FENCES SHALL INCORPORATE METHODS TO PREVENT WATER FLOWING ALONG THE FACE OF THE FENCE.
6. DIVERSION BUNDS TO BE 0.25M DEEP, HAVE A 0.5M WIDE BASE AND HAVE MAXIMUM BATTERS OF 1 IN 3 UNLESS NOTED OTHERWISE.
7. BARRIER FENCING SUCH AS 'HIGH VISIBILITY FENCING' OR SIMPLY STAR PICKETS AND BRIGHTLY COLOURED TAPE IS TO BE USED TO DELINEATE NON ACCESSIBLE AREAS FOR VEHICLES TO PREVENT UNNECESSARY SURFACE DISTURBANCE.
8. DUSTS SUPPRESSION TO BE APPLIED TO PREVENT WIND EROSION.
9. ALL SILT FENCES & BARRIERS ARE TO BE MAINTAINED IN GOOD ORDER & REGULARLY DE-SILTED DURING THE CONSTRUCTION PERIOD.
10. STOCKPILES OF LOOSE MATERIALS SUCH AS SAND, SOIL, AND GRAVEL MUST BE COVERED WITH GEOTEXTILE SILT FENCE MATERIAL. PLASTIC SHEETING OR MEMBRANE IS NOT TO BE USED AS COVERAGE.
11. ALL VEHICLES LEAVING THE SITE MUST PASS OVER THE STABILISED SITE ACCESS (SDS-7) TO SHAKE OFF SITE CLAY AND SOIL. IF NECESSARY WHEELS AND AXLES ARE TO BE HOSED DOWN. BALLAST IS TO BE MAINTAINED & REPLACED AS NECESSARY UNTIL ROAD PAVEMENT CONSTRUCTION.
12. SITE EARTHWORKS TO BE UNDERTAKEN SUCH THAT RUNOFF IS DIRECTED TO THE SEDIMENT BASIN WHERE REQUIRED.
13. THE HEAD CONTRACTOR IS TO INFORM ALL SITE STAFF AND SUB-CONTRACTORS OF THEIR OBLIGATIONS TO COMPLY WITH THE SOIL & WATER MANAGEMENT PLAN.

SEWER MAINS

1. ALL FITTING AND MAINS ARE TO BE SUPPLIED AND INSTALLED IN ACCORDANCE THE LATEST EDITION OF AUS SPEC#1 AS AMENDED BY COWRA CITY COUNCIL C402 'SEWERAGE SYSTEM'.
2. SOME SERVICES SHOWN AS EXISTING MAY BE UNDER CONSTRUCTION AT THE TIME OF CONNECTION WHERE NECESSARY. THE CONTRACTOR SHALL LIAISE WITH APPROPRIATE THIRD PARTIES REGARDING CONNECTIONS.
3. ALL CONNECTIONS TO LIVE SEWER MAINS ARE TO BE MADE BY THE SERVICE PROVIDER AT THE CONTRACTORS EXPENSE.
4. BACKFILLING OF TRENCHES FOR SEWER SERVICES IS TO BE IN ACCORDANCE WITH THE LATEST EDITION AUS SPEC "WATER SUPPLY AND SEWERAGE STANDARDS".
5. SEWER MAINS AND SEWER TIE TO BE CLASS SN8 PVC TO AS1260 UNLESS NOTED OTHERWISE.
6. ALL SEWER MAINS ARE TO BE Ø150mm UNLESS NOTED OTHERWISE.
7. FOR SEWER MAINS IN EXCESS OF 5% CONSTRUCT SCOUR OR TRENCH STOPS IN ACCORDANCE WITH SERVICE PROVIDERS REQUIREMENTS.
8. SEWER PIPE CONNECTED TO MAINTENANCE HOLES TO BE IN ACCORDANCE WITH AUS SPEC#1 AS AMENDED BY PALERANG COUNCIL. A MINIMUM PIPE LENGTH OF 150mm FROM OUTSIDE FACE OF MAINTENANCE HOLES TO PIPE SOCKET TO BE PROVIDED.
9. FOR ALL SEWER MAINTENANCE HOLES WITH DEFLECTION ANGLE GREATER THAN 300 REFER AUS SPEC#1 AS AMENDED BY PALERANG COUNCIL FOR OFFSET AND BENCHING REQUIREMENTS.
10. TRACING WIRE TO BE PLACED ABOVE ALL PVC PIPES.
11. PROTECT AND DELINEATE ALL EXISTING SEWER MAINTENANCE HOLES. REPORT ANY DAMAGE TO MAINTENANCE HOLES TO PALERANG COUNCIL. REPIERS TO BE UNDERTAKEN AT CONTRACTOR EXPENSE.
12. ALL MAINTENANCE HOLES COVERS SHALL BE CLASS B UNLESS NOTED OTERWISE IN THE SEWER MAINTENANCE HOLES SCHEDULE REFER LATEST REVISION OF PALERANG COUNCILAUS-SPEC#1.
13. SEWER TIE CONNECTION TO BE LAID AT SPECIFIED DOWNSTREAM INVERT LEVEL AND AT 2% GRADE.
14. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
15. REFER TO SEWER LONG SECTIONS FOR LEVELS AND GRADES.
16. ALL SEWER MAINTENANCE HOLES SHALL BE 1050mm INTERNAL DIAMETER UNLES NOTED OTHERWISE.
17. SEWER TIES-CLASS SN8 PVC UNLESS NOTED OTHERWISE.
18. ALL BLOCK CONNECTIONS ARE Ø150mm UNLESS NOTED OTHERWISE.
19. PROVIDE INSPECTION OPENING AT SEWER CONNECTION POINTS TO ALL ALLOTMENTS
20. THE CONNECTION BRANCH TO WATER SERVICES ASSN OF AUSTRALIA DWG SEG 1106 AND 131.

WATERMAINS

1. ALL FITTINGS ARE TO BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH LATEST EDITION OF AUS SPEC#1 AS AMENDED BY COWRA CITY COUNCIL C401 'WATER RETICULATION'.
2. ALL CONNECTION TO LIVE WATER MAINS ARE TO BE MADE BY THE SERVICE PROVIDER AT CONTRACTOR'S EXPENSE.
3. ALL WATER MAIN SHALL BE Ø150mm DICL, PN35 UNLESS NOTED OTHERWISE WITH POLYETHYLENE OVER WIRE RAPPING TO AS3680.
4. STOP VALVE SHALL BE FITTED AT ALL TEES AND BE FLANGED TO THE TEE ACCORDANCE WITH SPECIFICATIONS.
5. ALL STOP VALVE SHALL BE LOCATED IN VERGES ONLY.
6. FOR WATER MAIN IN EXCESS OF 5% CONSTRUCT SCOUR OR TRENCH STOPS IN ACCORDANCE WITH SERVICE PROVIDER STD DRGS AND WSCA
7. MINIMUM SPACING BETWEEN ADJACENT WATER TIES ON THE SAME MAINS IS 1.0m.
8. WATER SERVICES CONNECTIONS (WATER TIE) SHALL BE COPPER TO AS1432 TYPE A AND C40105.
9. ALL WATER SERVICES AND TIES TO BE CONSTRUCTED IN ACCORDANCE WITH THE WATER SUPPLY CODE OF AUSTRALIA

LEGEND

- PROPOSED SEWER MAIN
- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE CONDUIT
- H — PROPOSED WATER HYDRANT
- SV — PROPOSED STOP VALVE
- PROPOSED END CAP
- EXISTING OVERHEAD ELECTRICITY LINE
- EP — EXISTING ELECTRICAL POWER POLE
- PROPOSED STORMWATER LINE
- PROPOSED STORMWATER PIT
- PROPOSED HEADWALL
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- HER — SUBSOIL HIGH END RISER
- IFP — SUBSOIL INTERMEDIATE FLUSHING POINT
- SSD — SUBSOIL DRAINAGE
- EXISTING OVERHEAD POWER LINE
- FK — FLUSH KERB
- BOULDER RIP RAP
- INTER-ALLOTMENT DRAINAGE PIT
- PROPOSED SEWER MANHOLE
- DENOTES SEWER STRUCTURE
- DENOTED STORM WATER STRUCTURE
- SURVEY MARK
- THRUST BLOCK
- PERIMETER SECURITY FENCING

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	08/12/16	ISSUED FOR DEVELOPMENT APPLICATION	UKK

TITLE	NAME
DRAWN	UKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FRAISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER: FRAISH Consulting — Civil & Structural Engineers

CLIENT: SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE: YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111591 & LOT 4, DP 10821 82

CIVIL NOTES &LEGEND

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C005	A

Z:\PROJECTS\Arrabilly\Arrabilly STAGE 1\CIVIL\DWGs - CIVIL NOTES & LEGEND.dwg

NEW WATERMAIN TO EXTEND ALONG SAKURA AVENUE TO A CONNECTION WITH THE EXISTING MAIN IN EVANS STREET

A CUL-DE-SAC HEAD WILL BE CONSTRUCTED AS PART OF STAGE 1. THIS WILL BE REMOVED WHEN ROAD 2 IS EXTENDED IN FUTURE STAGES.

GATED SECURITY ENTRANCE TO ESTATE

COMMUNITY BUILDING

GATED SECURITY ENTRANCE TO ESTATE

EXTERNAL SECURITY FENCING

JUNCTION WITH EXISTING YARRABILLY DRIVE/SAKURA AVE/KEN NAKAJIMA PLACE TO BE FINALISED. COUNCIL INVESTIGATING A ROUNDABOUT DESIGN

ROUNDABOUT WILL BE CONSTRUCTED AS PART OF STAGE 1. ROAD WILL TERMINATE AT SECURITY GATE TO BE USED FOR FUTURE EXTENSION.

ROAD 1

ROAD 2

ROAD 3

ROAD 3

ROAD 4

ROAD 5

ROAD 5

SAKURA AVENUE

YARRABILLY DRIVE

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	08/12/16	ISSUED FOR DEVELOPMENT APPLICATION	UKK

TITLE	NAME
DRAWN	UKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FraISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 20m 40m 60m 80m

SCALE: A1 1:1000, A3 1:2000

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

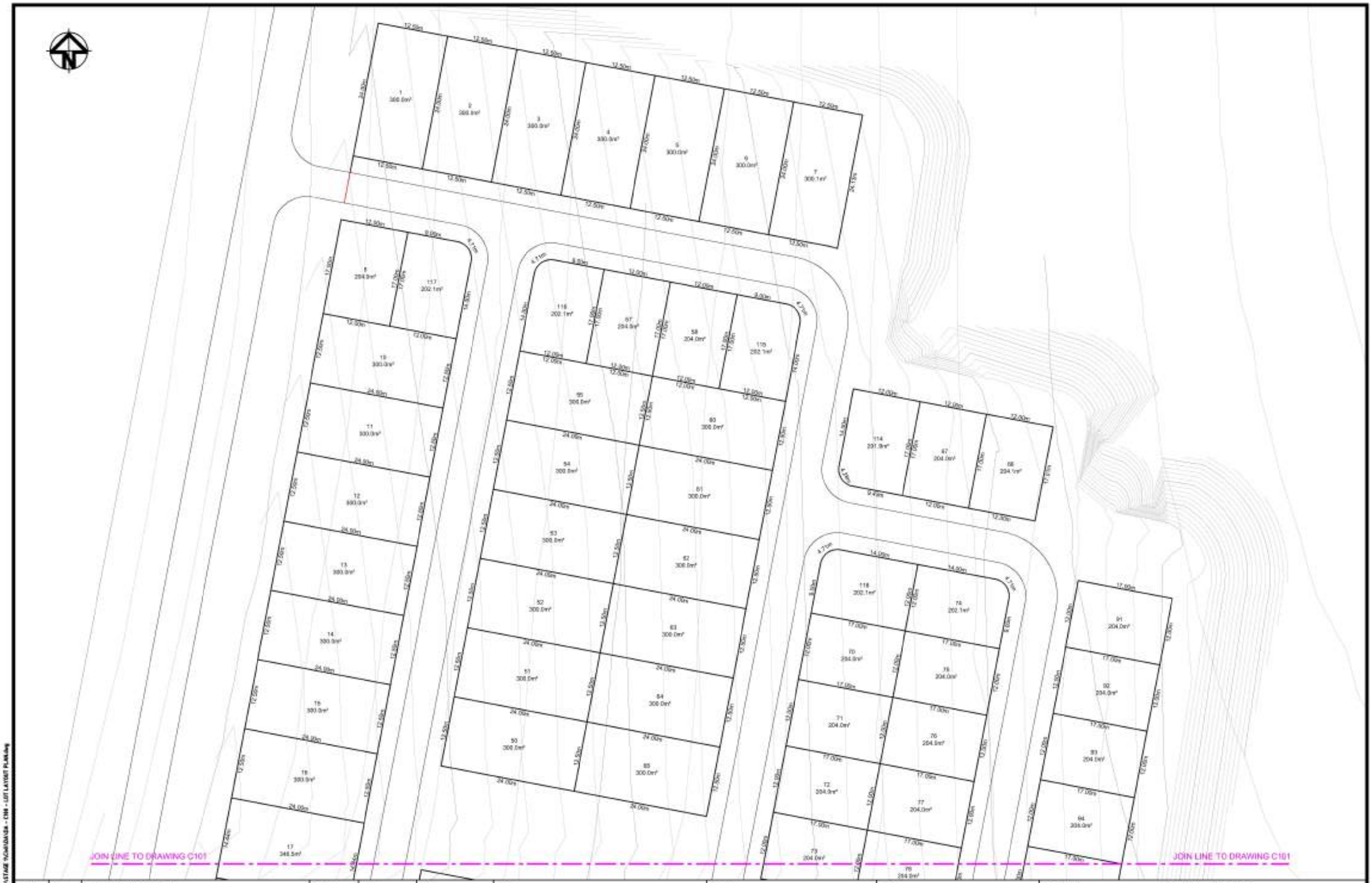
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111561 & LOT 4, DP 10921 82

GENERAL ARRANGEMENT PLAN

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C006	A

Z:\PROJECTS\Arrabilly\Yarrabilly STAGE 1\Civil\DWGs - C006 - GENERAL ARRANGEMENT PLAN.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	12/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 6m 12m 18m 24m

SCALE: A1 1:300, A3 1:600

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111558 & LOT 4, DP 10821 82

LOT LAYOUT PLAN

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C100	A

Z:\PROJECTS\Arandis\Yarrabilly\STAGE 1\CAD\DWGs - CIVIL - LOT LAYOUT PLAN.dwg

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	12/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FRAISH Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 6m 12m 18m 24m

SCALE: A1 1:300, A3 1:600

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

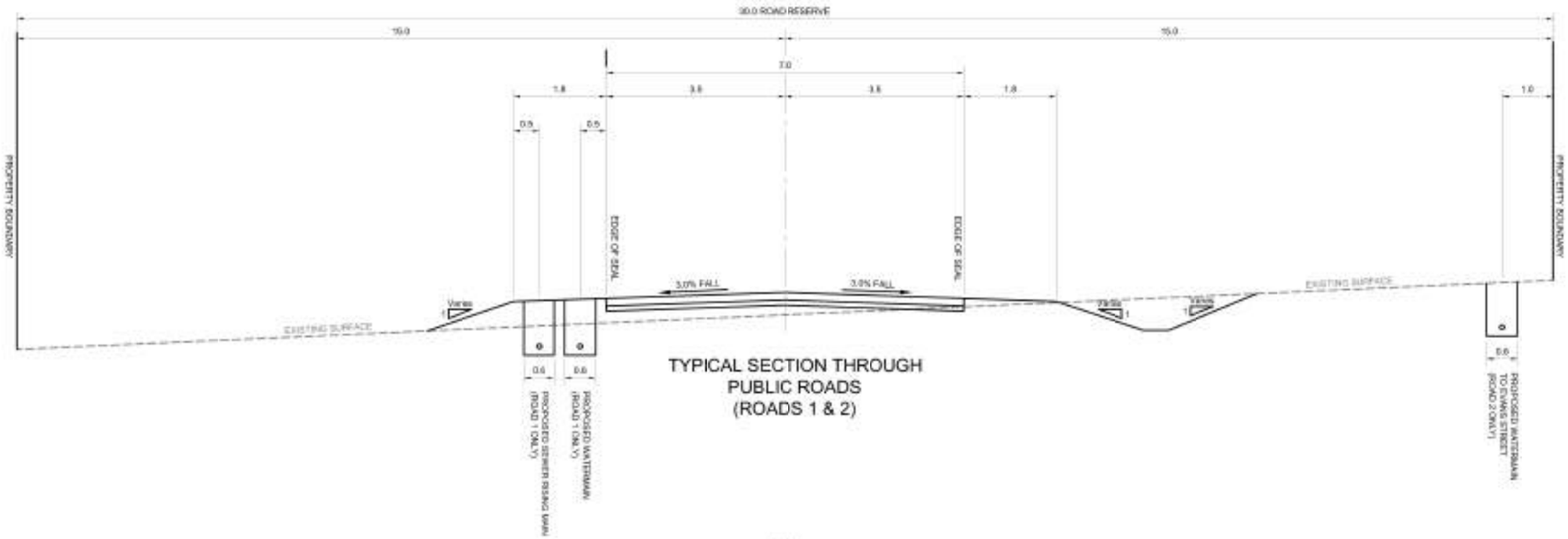
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111569 & LOT 4, DP 10821 82

LOT LAYOUT PLAN

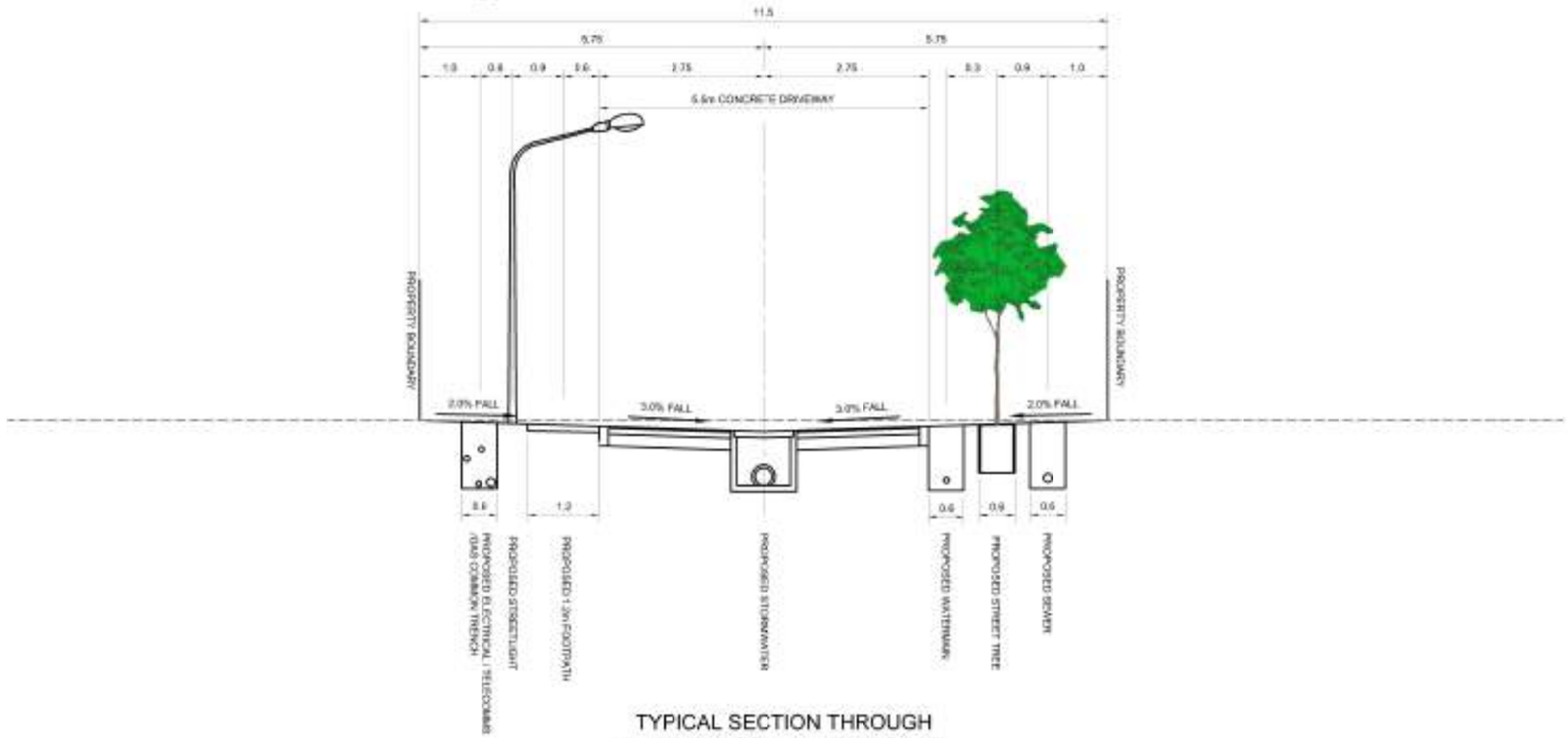
SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C101	A

Z:\PROJECTS\Wandi Township\STAGE 1\CAD\DWGS - CIVIL - LOT LAYOUT PLAN.dwg



TYPICAL SECTION THROUGH
PUBLIC ROADS
(ROADS 1 & 2)



TYPICAL SECTION THROUGH
INTERNAL COMMUNITY ROADS
(ROADS 3 & 4 & 5)

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	08/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FRAISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 1m 2m 3m 4m

SCALE: A1 1:50, A3 1:100

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

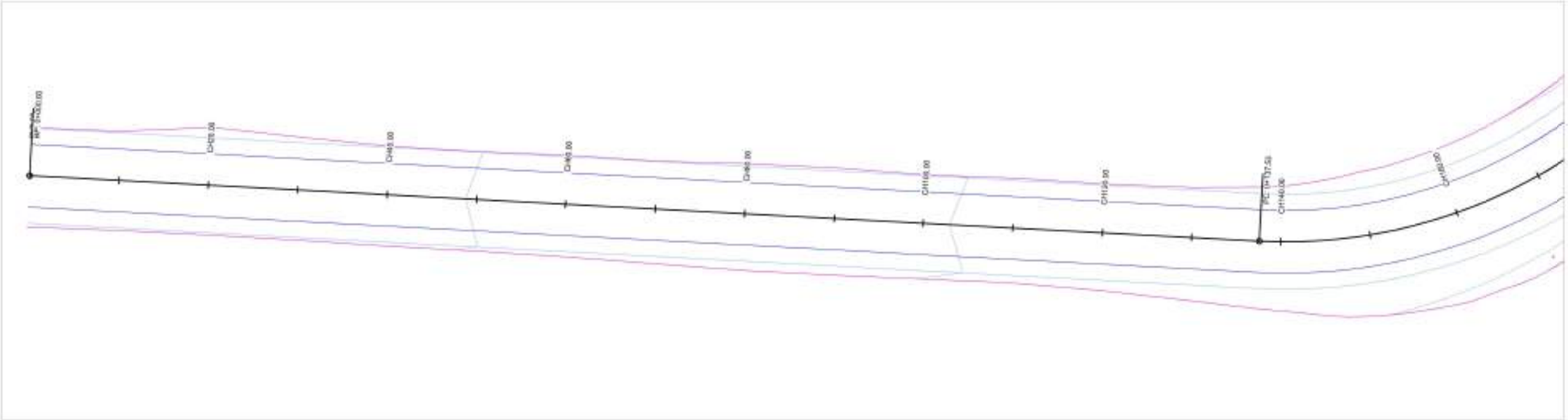
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10921 82

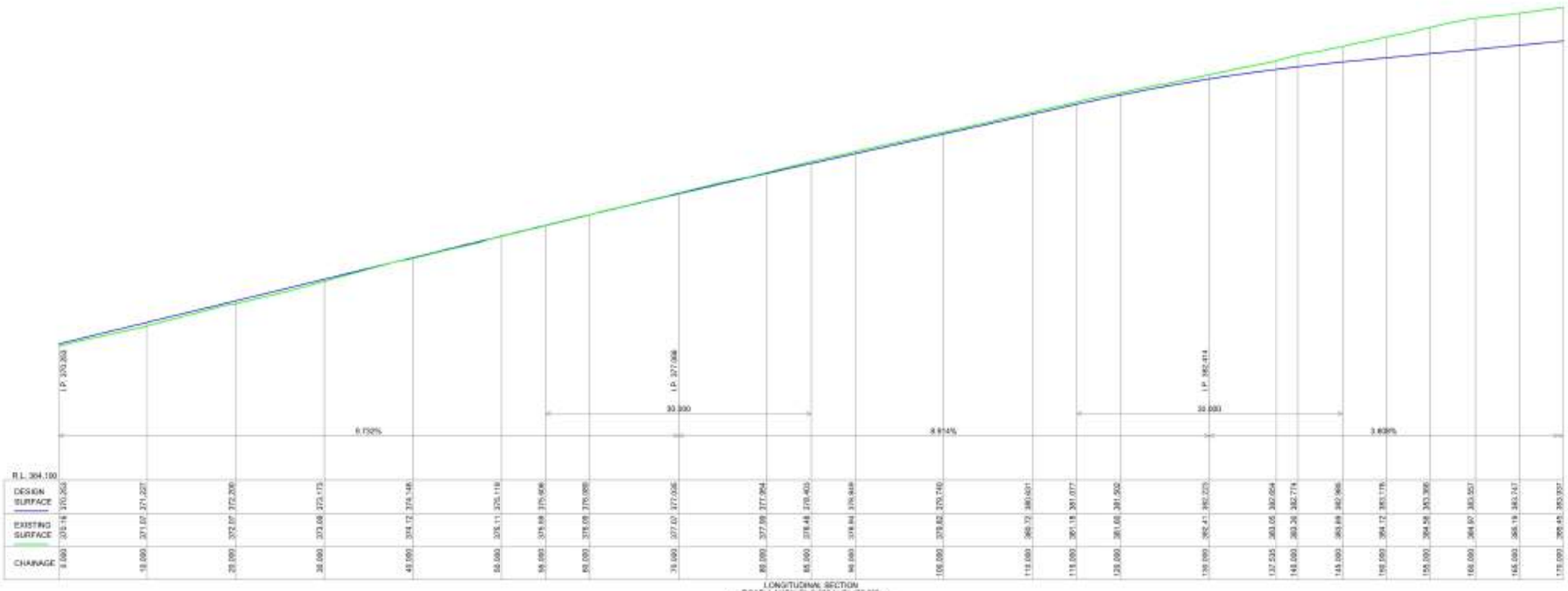
TYPICAL CROSS SECTIONS

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C105	A

Z:\PROJECTS\Marsh Yarrabilly\STAGE 1\Civil\DWGs - CIVIL - TYPICAL CROSS SECTIONS.dwg





CHAINAGE	DESIGN SURFACE	EXISTING SURFACE
0.000	370.253	370.16
10.000	371.227	371.07
20.000	372.200	372.07
30.000	373.173	373.08
40.000	374.146	374.12
50.000	375.119	375.11
55.000	375.606	375.68
60.000	376.089	376.08
70.000	377.026	377.02
80.000	377.964	377.99
85.000	378.433	378.48
90.000	378.899	378.94
100.000	379.740	379.82
110.000	380.601	380.72
115.000	381.077	381.18
120.000	381.502	381.60
130.000	382.323	382.41
132.535	382.554	382.65
140.000	383.216	383.36
145.000	383.666	383.89
150.000	384.175	384.72
155.000	384.808	384.58
160.000	385.557	384.97
165.000	386.747	386.19
170.000	387.937	386.45

LONGITUDINAL SECTION
ROAD 1 ALIGN Ch 0.000 to Ch 170.000
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

ROAD 1 CL

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FRAISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers
info@fraish.com.au - www.fraish.com.au

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

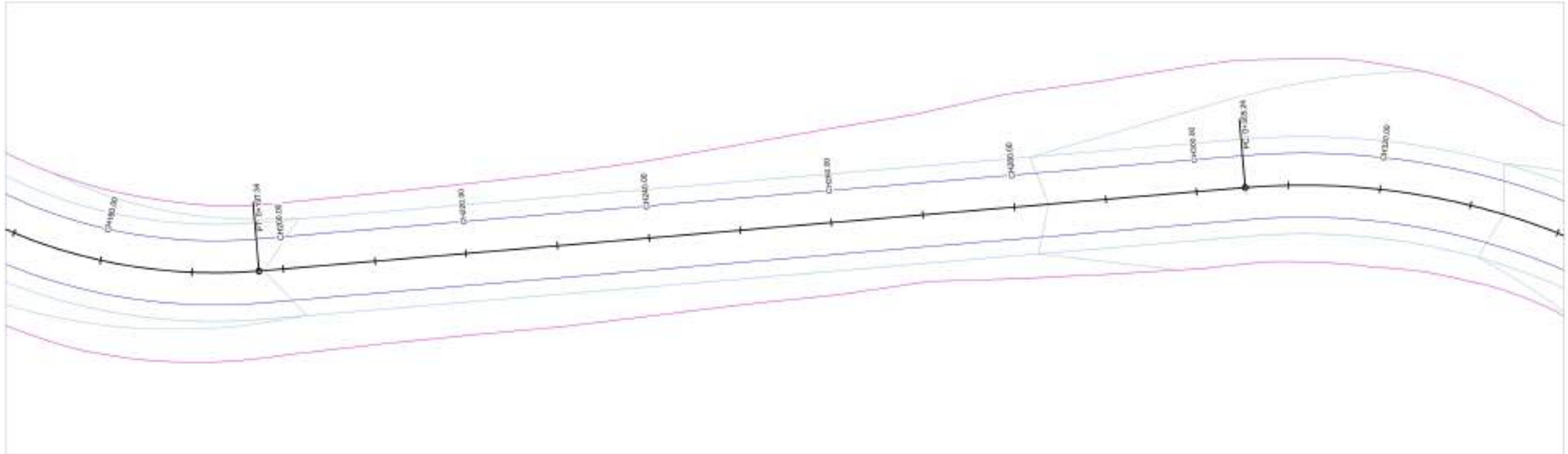
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10921 82

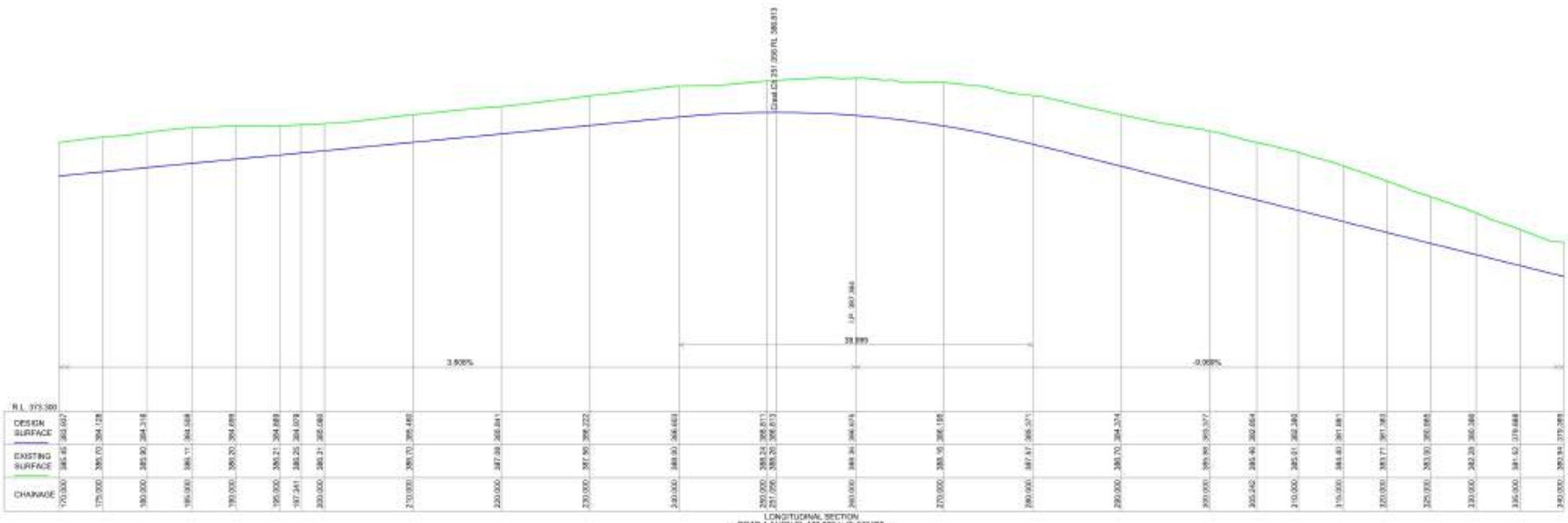
LONG SECTIONS
ROAD 1

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C120	A

Z:\PROJECTS\Farrabilly\STAGE PLAN3 - YARRABILLY VILL_DESIGN B4 - STAGE 1.dwg





LONGITUDINAL SECTION
ROAD 1 ALIGN Ch 170.000 to Ch 340.000
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

ROAD 1 CL

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNED	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

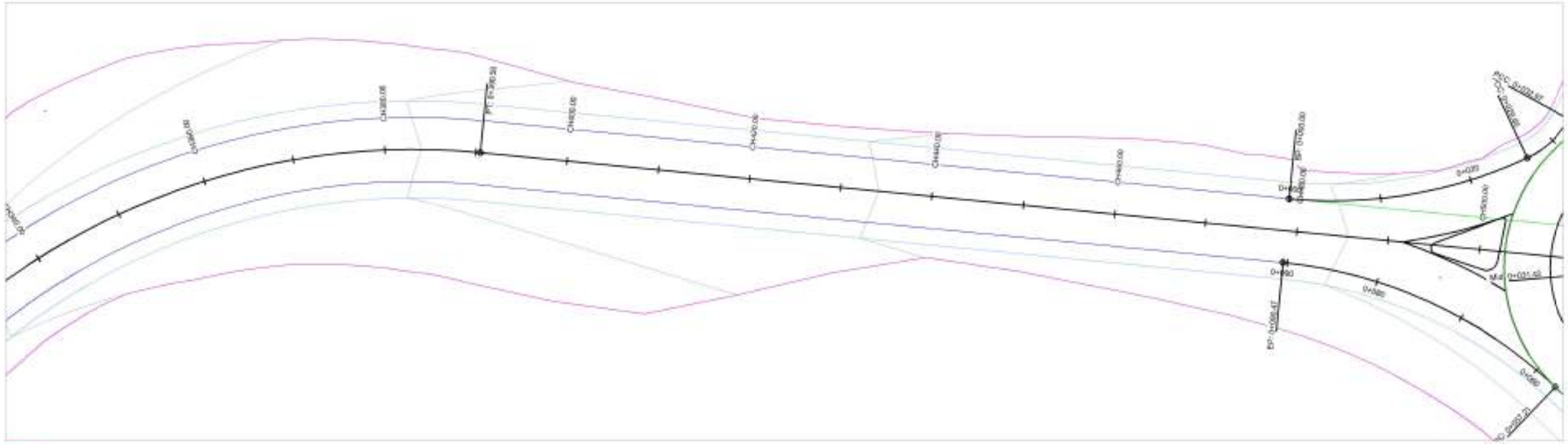
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

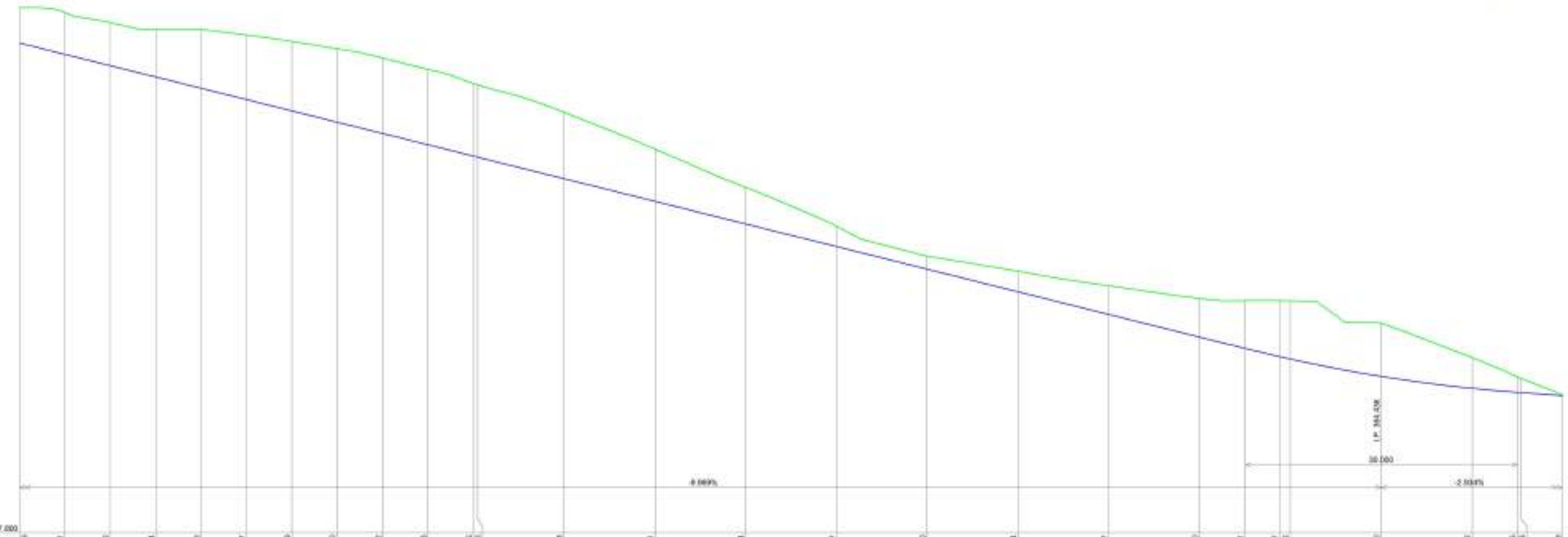
LONG SECTIONS
ROAD 1

SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C121	A

Z:\PROJECTS\Yarrabilly\STAGE 1\NRD - YARRABILLY\B_DESIGN 04 - STAGE 1.dwg





REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

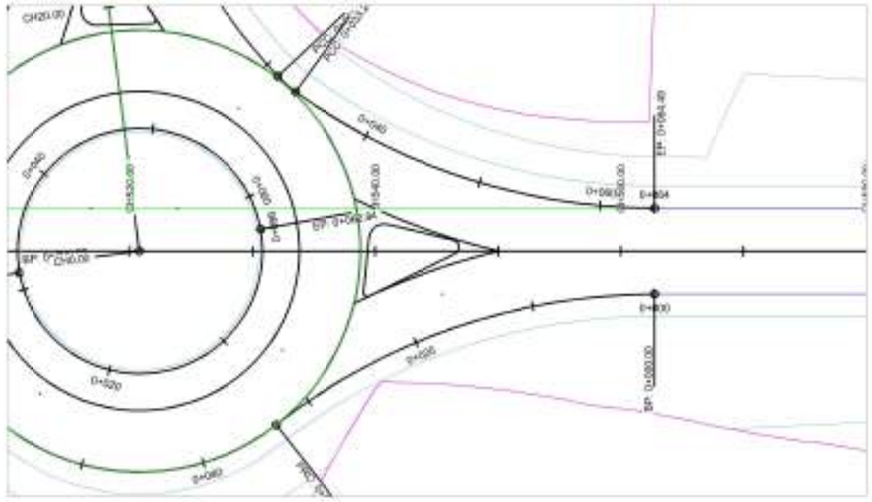
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10921 82

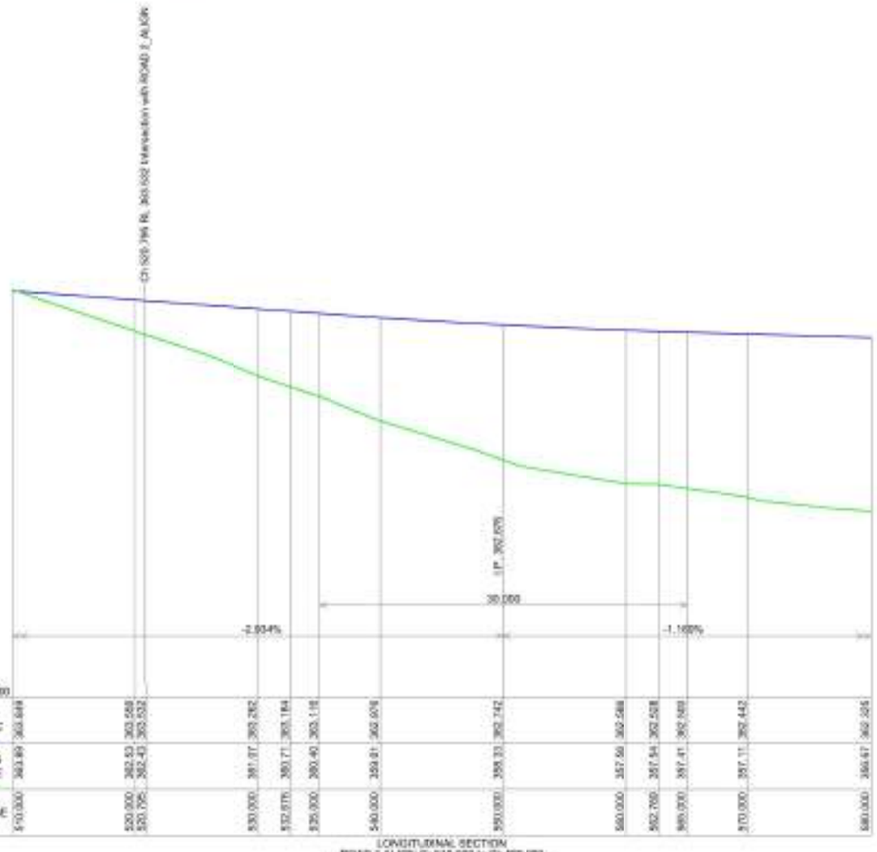
LONG SECTIONS
ROAD 1

SHEET 3

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C122	A

Z:\PROJECTS\Fraish\Yarrabilly\STAGE PLANS - YARRABILLY VILL_DESIGN DA - STAGE 1.dwg





DESIGN SURFACE	363.649	363.649	363.532	363.282	363.184	363.116	362.976	362.742	362.588	362.528	362.489	362.442	362.325
EXISTING SURFACE	363.99	363.53	362.43	361.77	361.71	360.40	359.61	358.33	357.56	357.54	357.41	357.11	356.67
CHAINAGE	510.000	520.000	520.799	530.000	532.676	535.000	540.000	550.000	560.000	562.760	565.000	570.000	580.000

LONGITUDINAL SECTION
ROAD 1 ALIGN C:510.000 to CH 580.000
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

ROAD 1 CL

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/18	ISSUED FOR DEVELOPMENT APPLICATION	UIK

TITLE	NAME
DRAWN	UIK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER
FRAISH Consulting
Civil & Structural Engineers
Unit 2, 14 Victoria Street, Hall ACT
PO Box 305, Hall ACT 2618
02 6230 3833 - 0408 526 750
info@fraish.com.au - www.fraish.com.au

CLIENT
SOUTHERN RURAL HOLDINGS PTY. LTD.

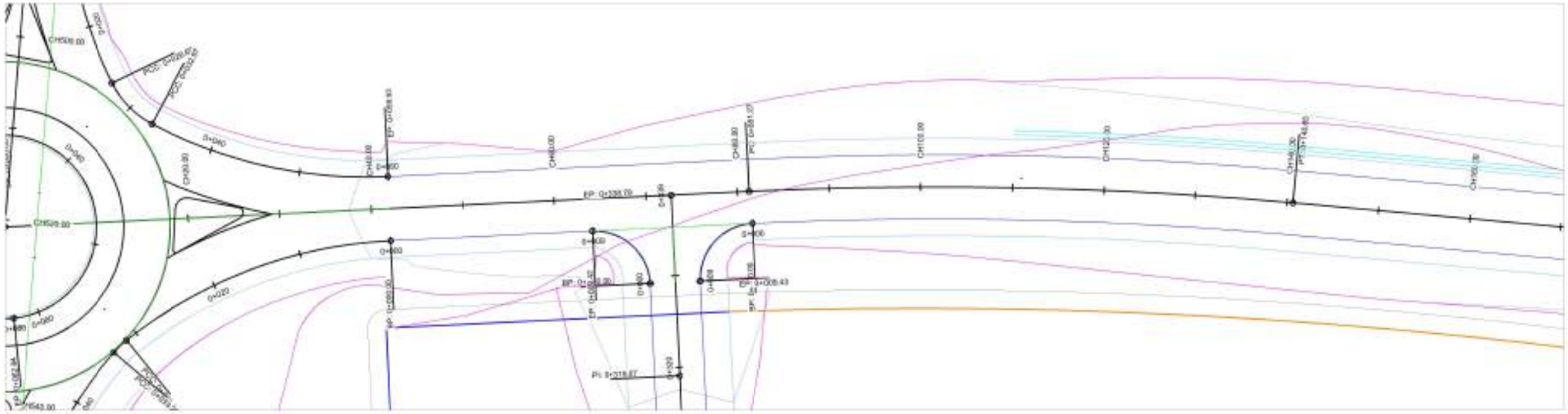
PROJECT TITLE
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111561 & LOT 4, DP 10921 82

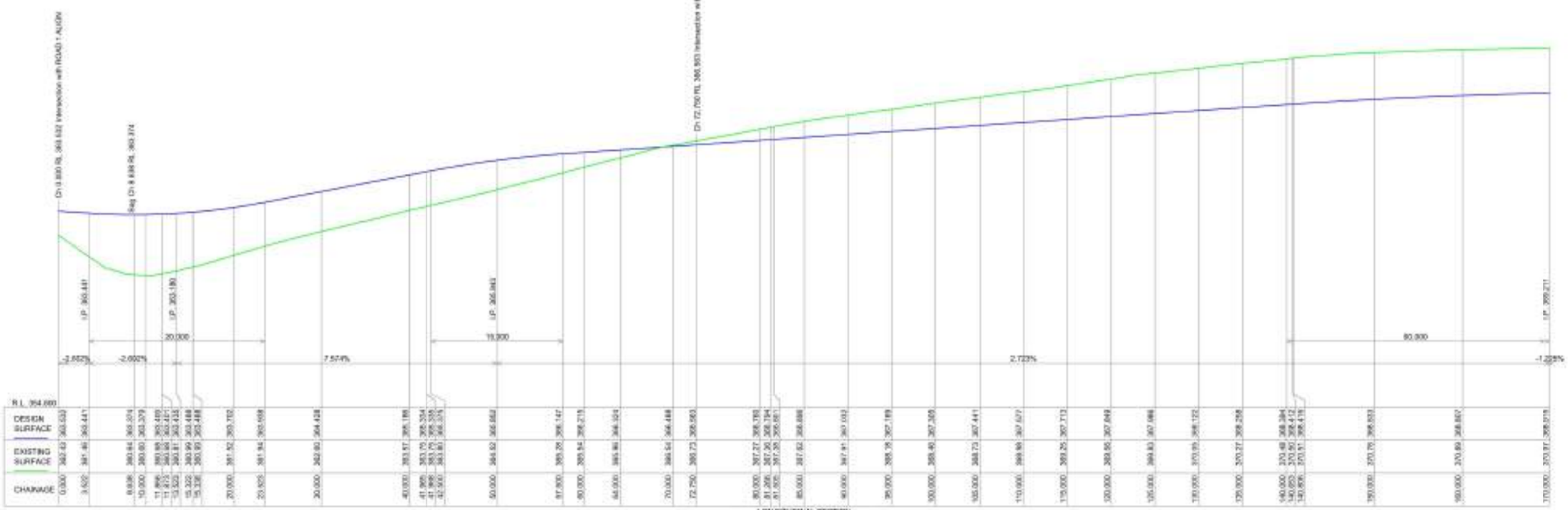
LONG SECTIONS ROAD 1

SHEET 4

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C123	A

Z:\P000_BETS\Arcadia\Yarrabilly\STAGE 1\ARD - YARRABILLY\B_DESIGN\B4 - STAGE 1.dwg





LONGITUDINAL SECTION
ROAD 2 AUGN Ch 0.000 to Ch 170.000
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

ROAD 2 CL

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNED	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

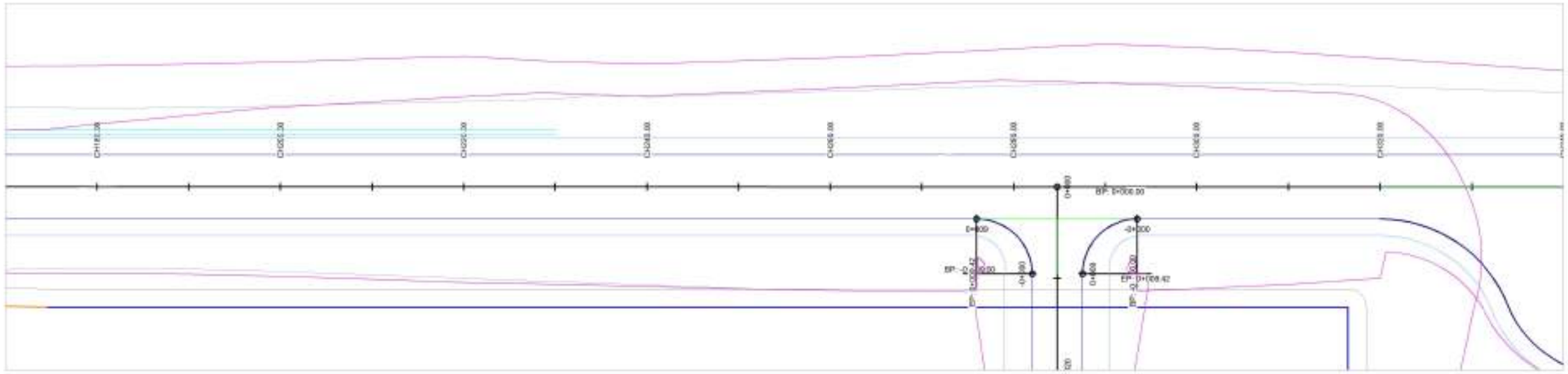
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111580 & LOT 4, DP 10821 82

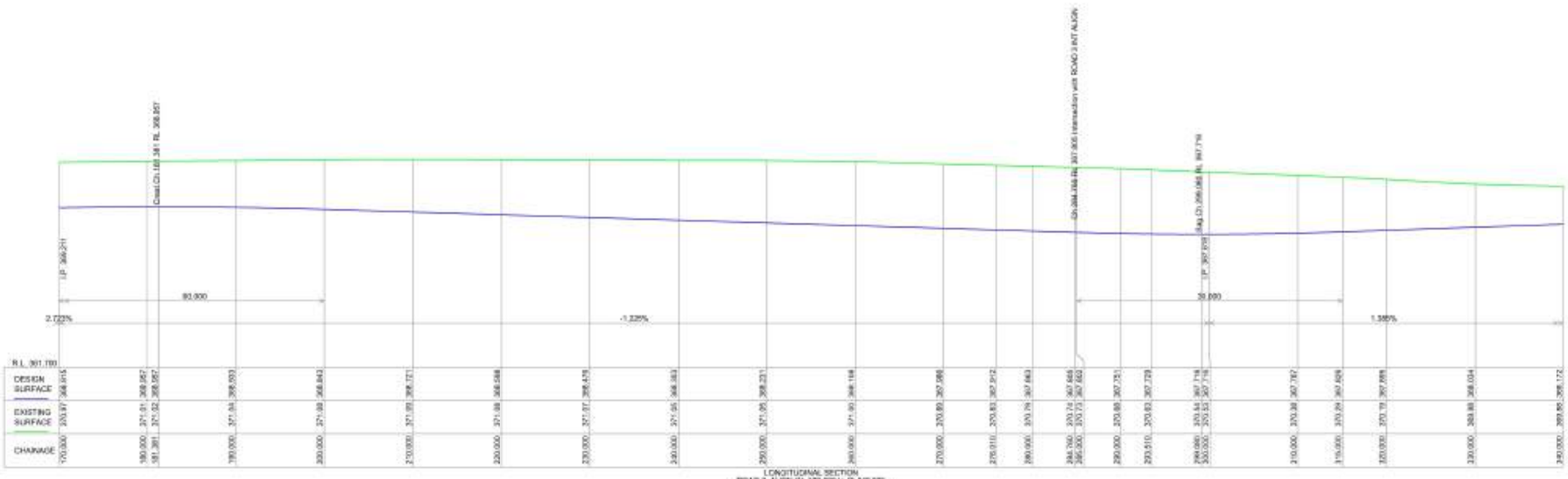
LONG SECTIONS
ROAD 2

SHEET 1

SCALE	PHASE	DRAWING No	REV
AS SHOWN	DA	C125	A

Z:\PROJECTS\Yarrabilly\STAGE 1\ARD - YARRABILLY\B_DESIGN 8-4 - STAGE 1.dwg





REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN	TITLE	NAME
A	13/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK	DRAWN	LKK
				DESIGNED	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

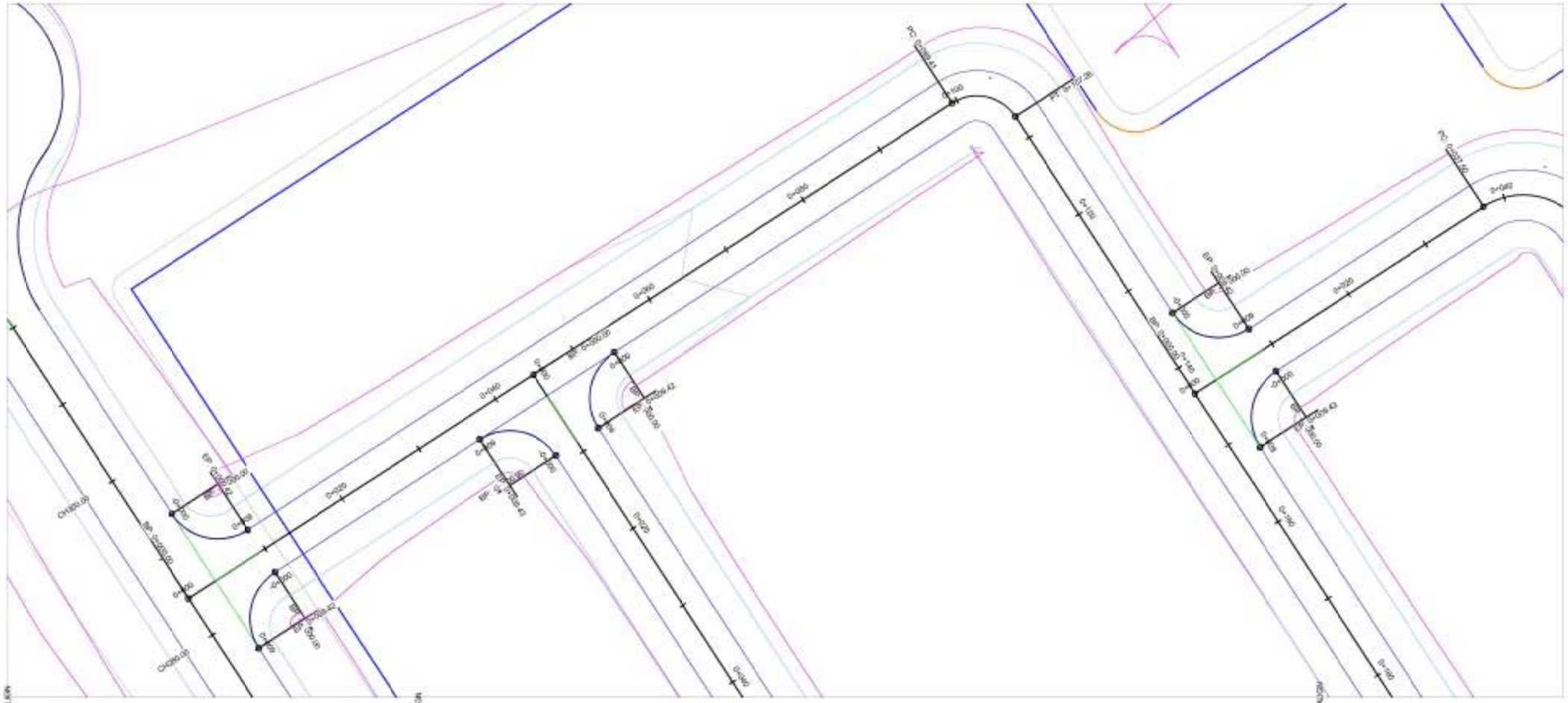
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111588 & LOT 4, DP 10921 82

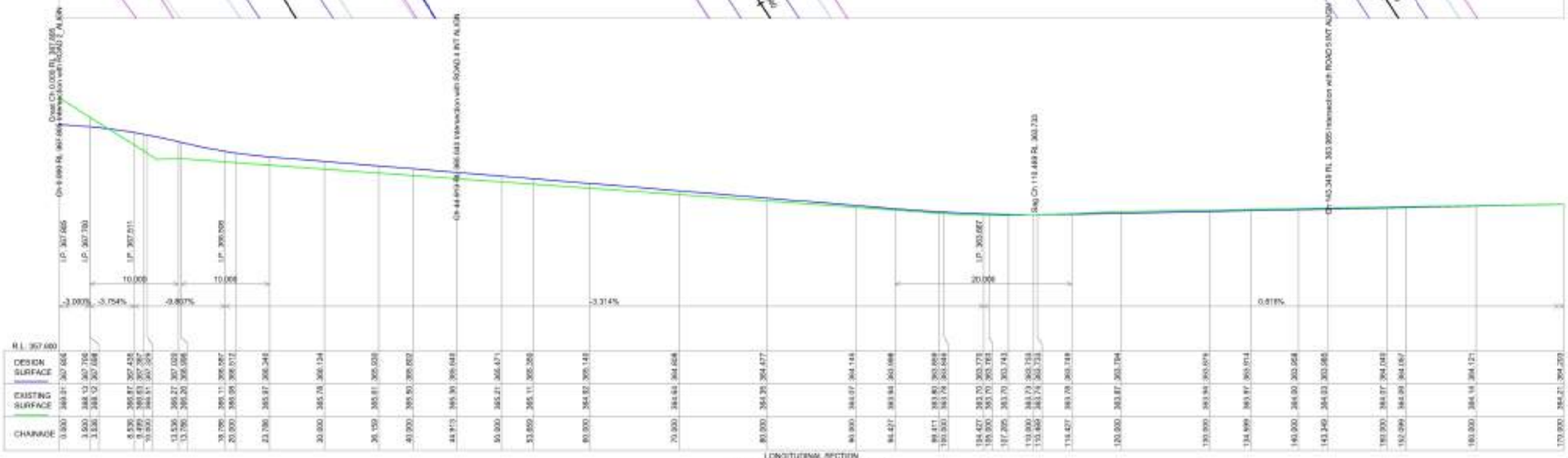
LONG SECTIONS
ROAD 2

SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C126	A

Z:\PROJECTS\Aland Yarrabilly\STAGE 1\ARD - YARRABILLY\B_DESIGN DA - STAGE 1.dwg





LONGITUDINAL SECTION
ROAD 3 INT N_SUN Ch 0.000 to Ch 170.000
SCALES: HORIZONTAL 1:250 VERTICAL 1:100
ROAD 3 CL

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNED	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

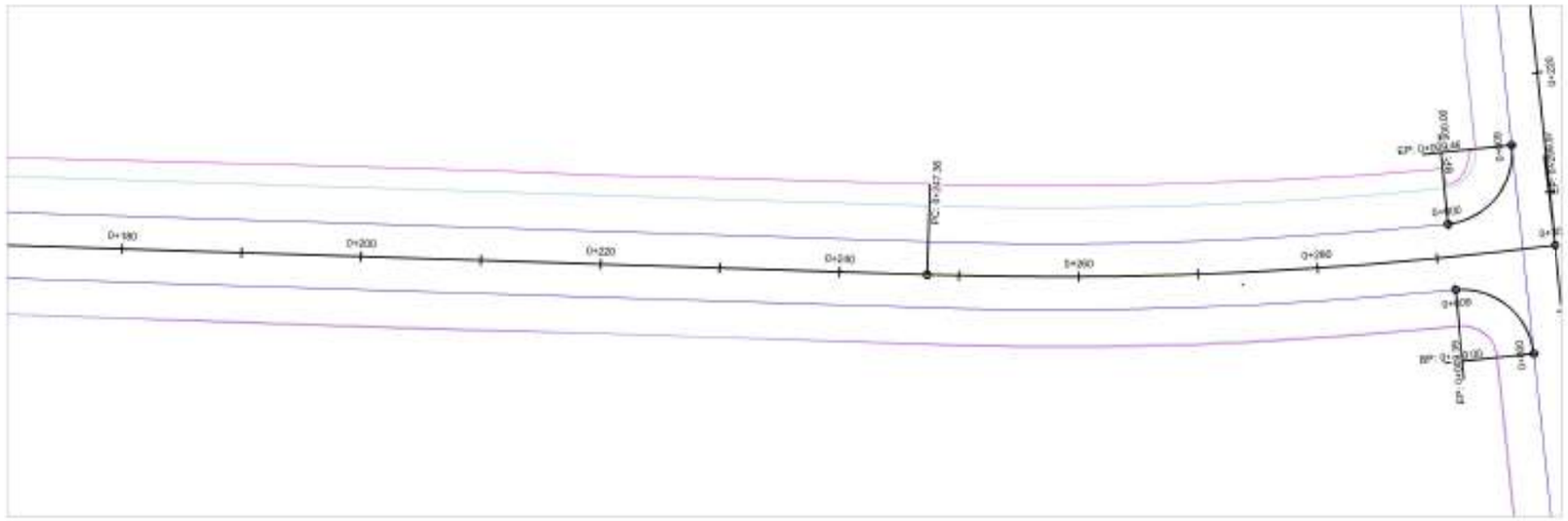
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111569 & LOT 4, DP 10821 82

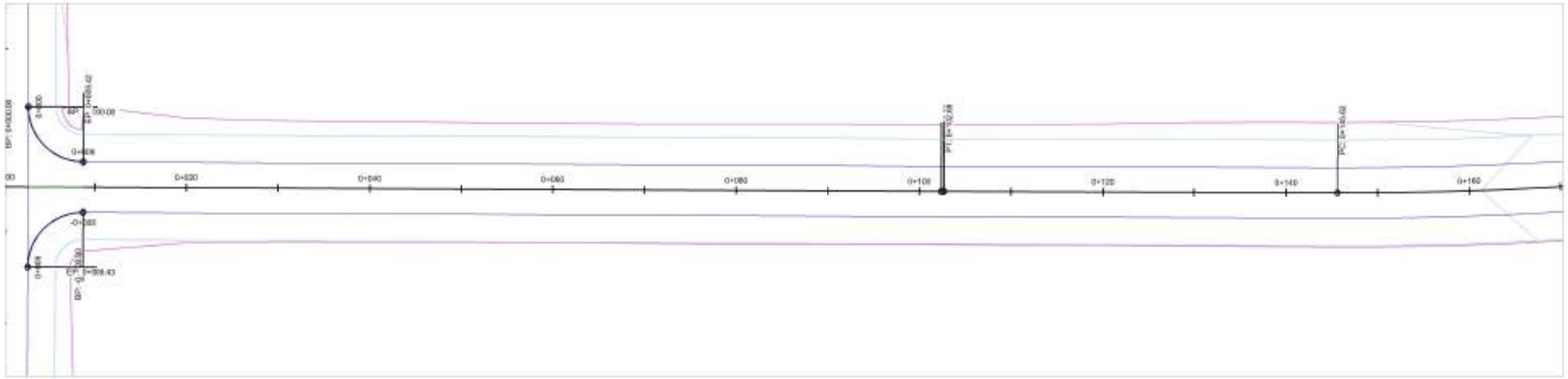
LONG SECTIONS ROAD 3

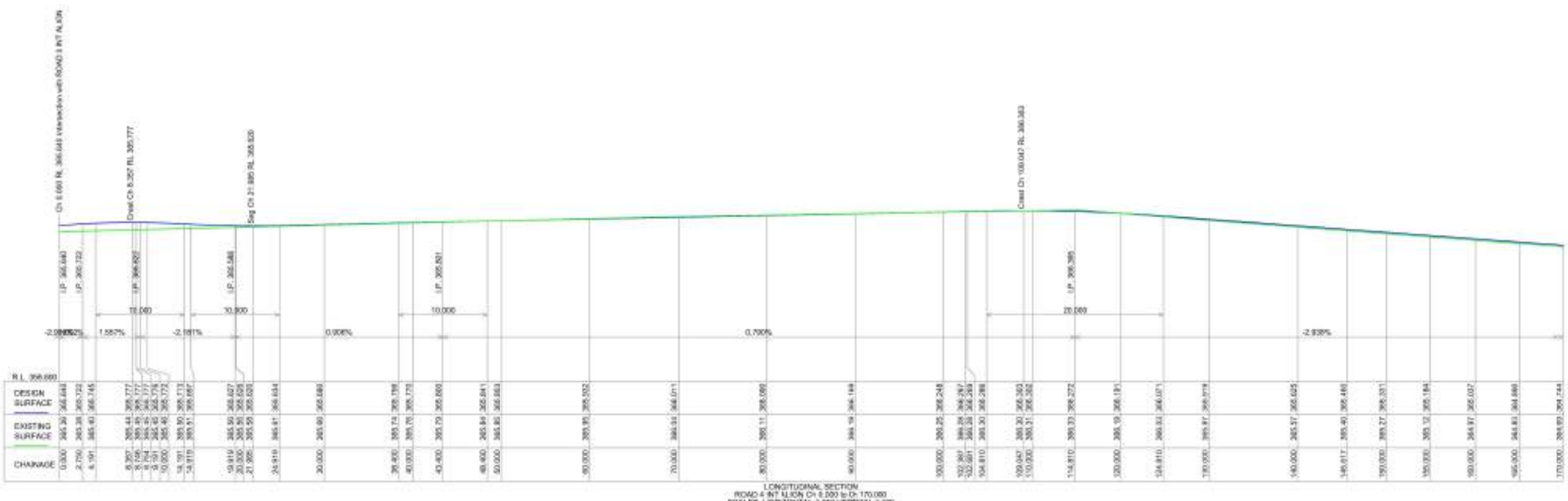
SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C127	A

Z:\PROJECTS\Wend Township\STAGE 1\ARD - YARRABILLY\DL_DESIGN DA - STAGE 1.dwg


0+180
0+200
0+220
0+240
0+260
0+280
0+300
0+320
0+340
0+360
0+380
0+400
0+420
0+440
0+460
0+480
0+500
0+520
0+540
0+560
0+580
0+600
0+620
0+640
0+660
0+680
0+700
0+720
0+740
0+760
0+780
0+800
0+820
0+840
0+860
0+880
0+900
0+920
0+940
0+960
0+980





LONGITUDINAL SECTION
ROAD 4 INT NLION CH 0.000 to CH 170.000
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

ROAD 4 CL

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNED	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER
FRAISH Consulting
Civil & Structural Engineers

CLIENT
SOUTHERN RURAL HOLDINGS PTY. LTD.

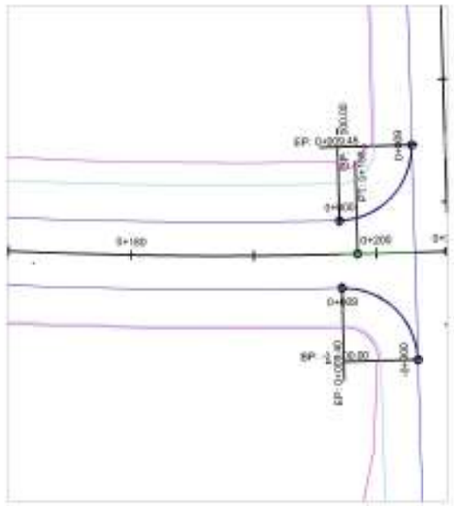
PROJECT TITLE
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10921 82

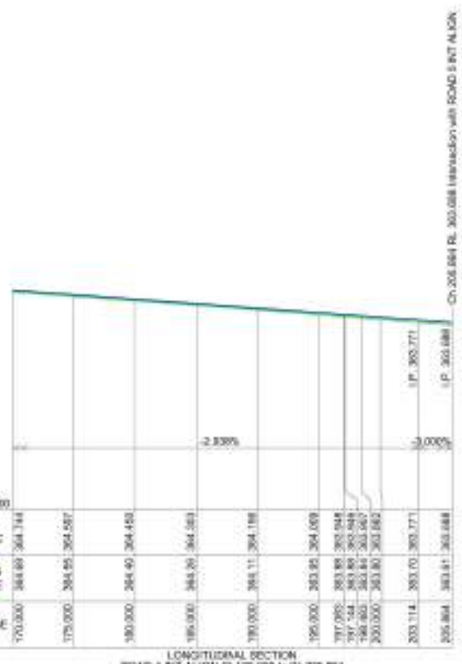
LONG SECTIONS
ROAD 4

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C129	A

Z:\PROJECTS\Hand\Yarrabilly\STAGE 1\ARD - YARRABILLY\B_DESIGN 04 - STAGE 1.dwg





LONGITUDINAL SECTION
ROAD 4 INT ALIGN Ch 170.000 to Ch 206.864
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

ROAD 4 CL

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNED	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

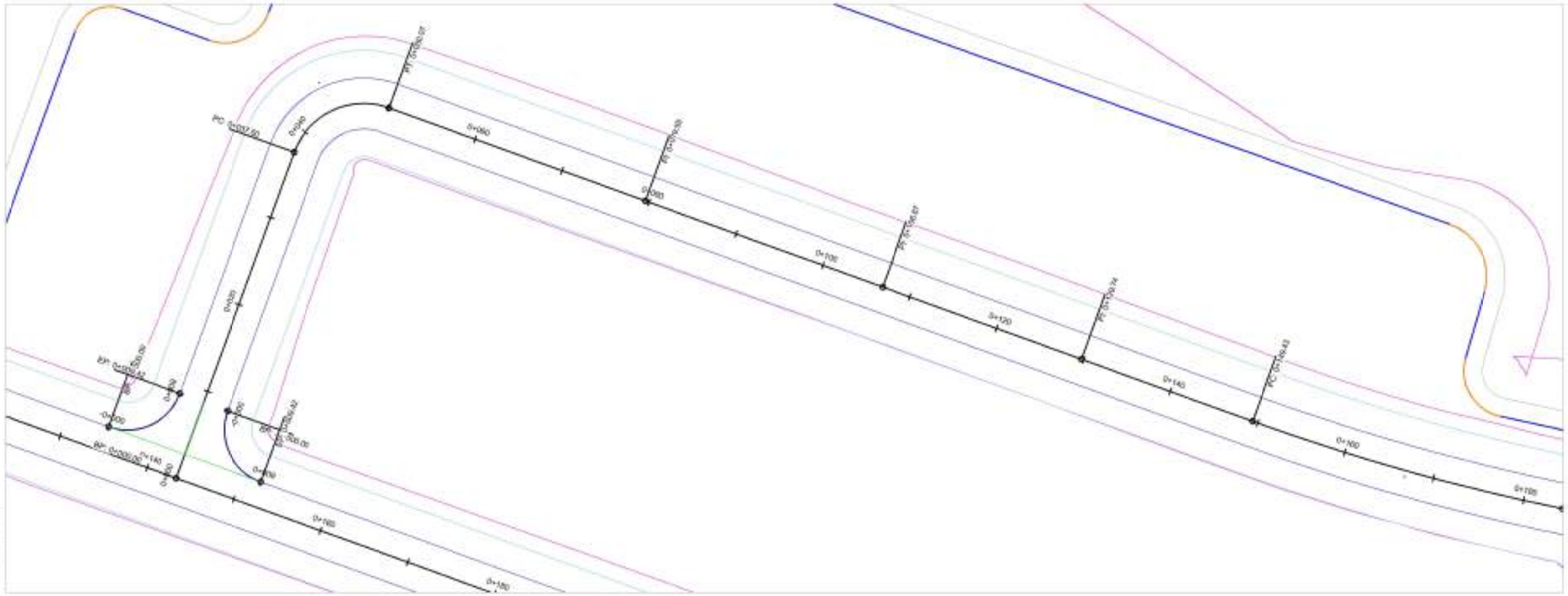
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111580 & LOT 4, DP 10921 82

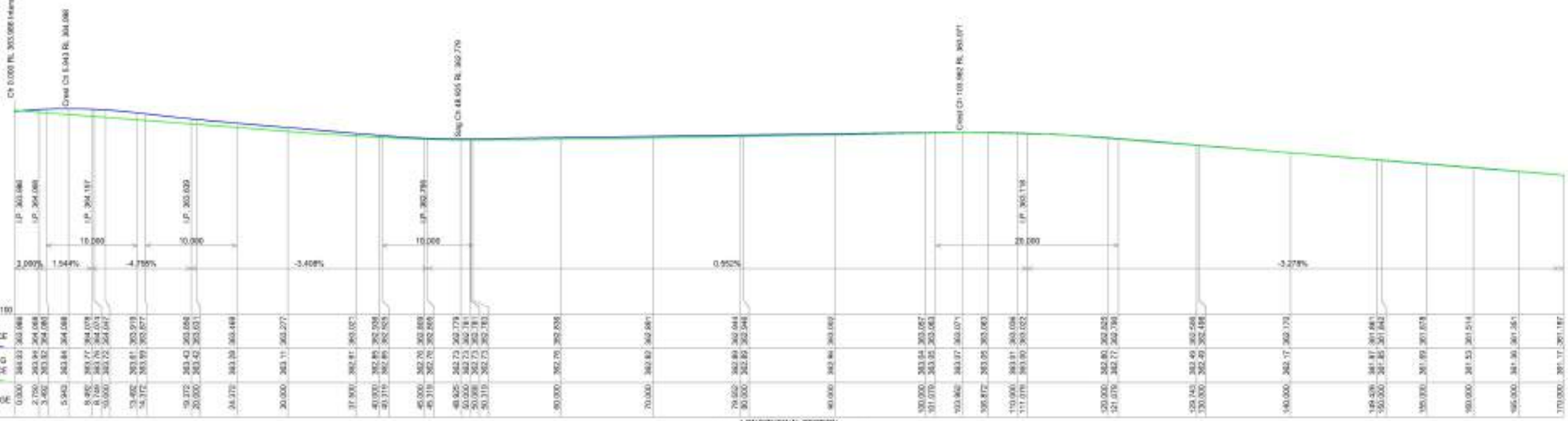
LONG SECTIONS
ROAD 4

SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C130	A

Z:\PROJECTS\Land\Yarrabilly\STAGE 9\AND - YARRABILLY VB_DESIGN DA - STAGE 9.dwg





LONGITUDINAL SECTION
ROAD 5 INT ALIGN Ch 0.000 to Ch 170.000
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

ROAD 5 CL

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FraISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER
FRAISH Consulting
Civil & Structural Engineers
18 Thesiger Street, Hall ACT
PO Box 366, Hall ACT 2618
02 6230 3833 - 0408 565 766
info@fraish.com.au - www.fraish.com.au

CLIENT
SOUTHERN RURAL HOLDINGS PTY. LTD.

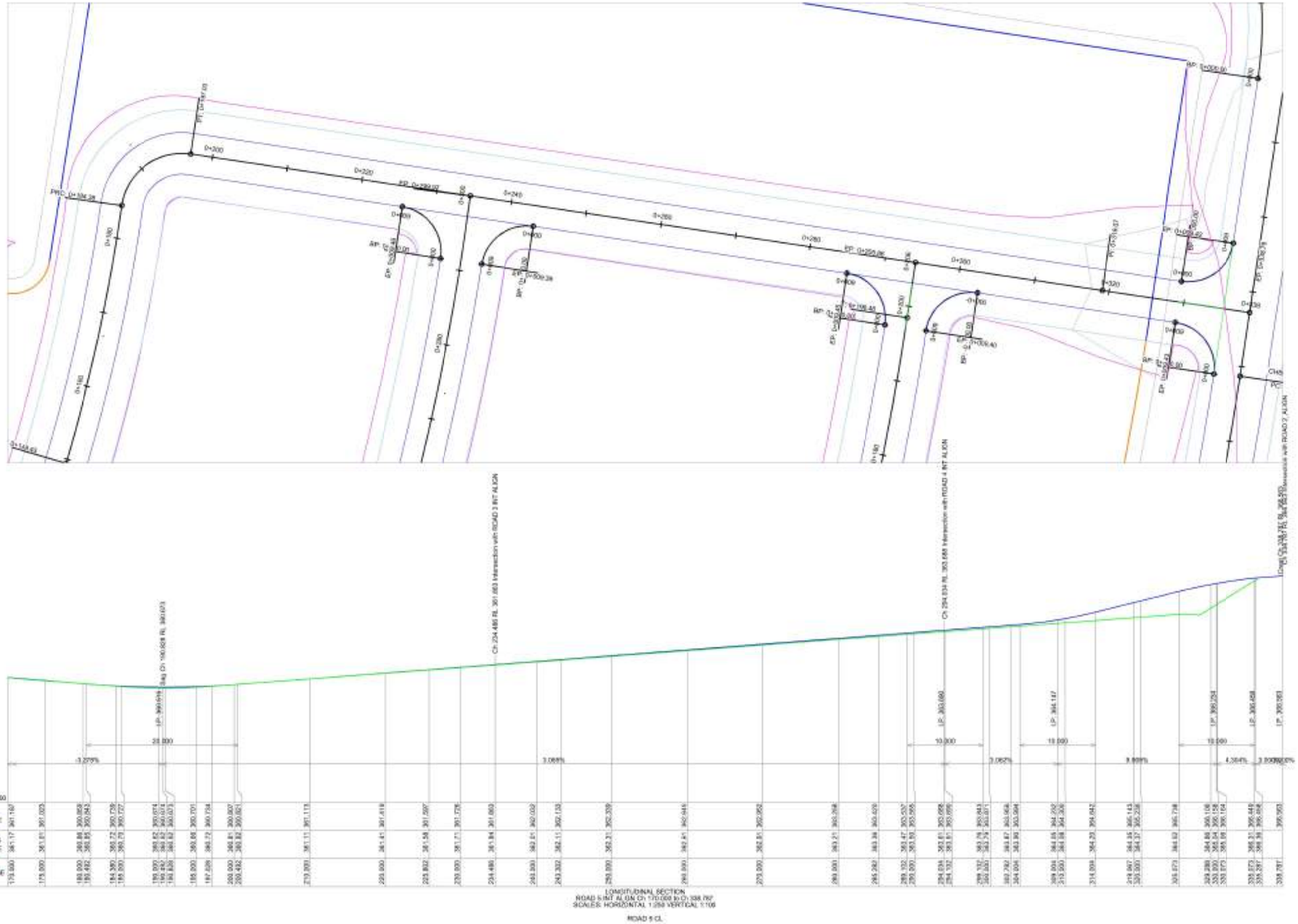
PROJECT TITLE
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10921 82

LONG SECTIONS ROAD 5

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C131	A

Z:\PROJECTS\Hall\Yarrabilly\STAGE 1\400 - YARRABILLY VILLAGE\04 - ETASE 1.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FRAISH Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER
FRAISH Consulting
Civil & Structural Engineers

CLIENT
SOUTHERN RURAL HOLDINGS PTY. LTD.

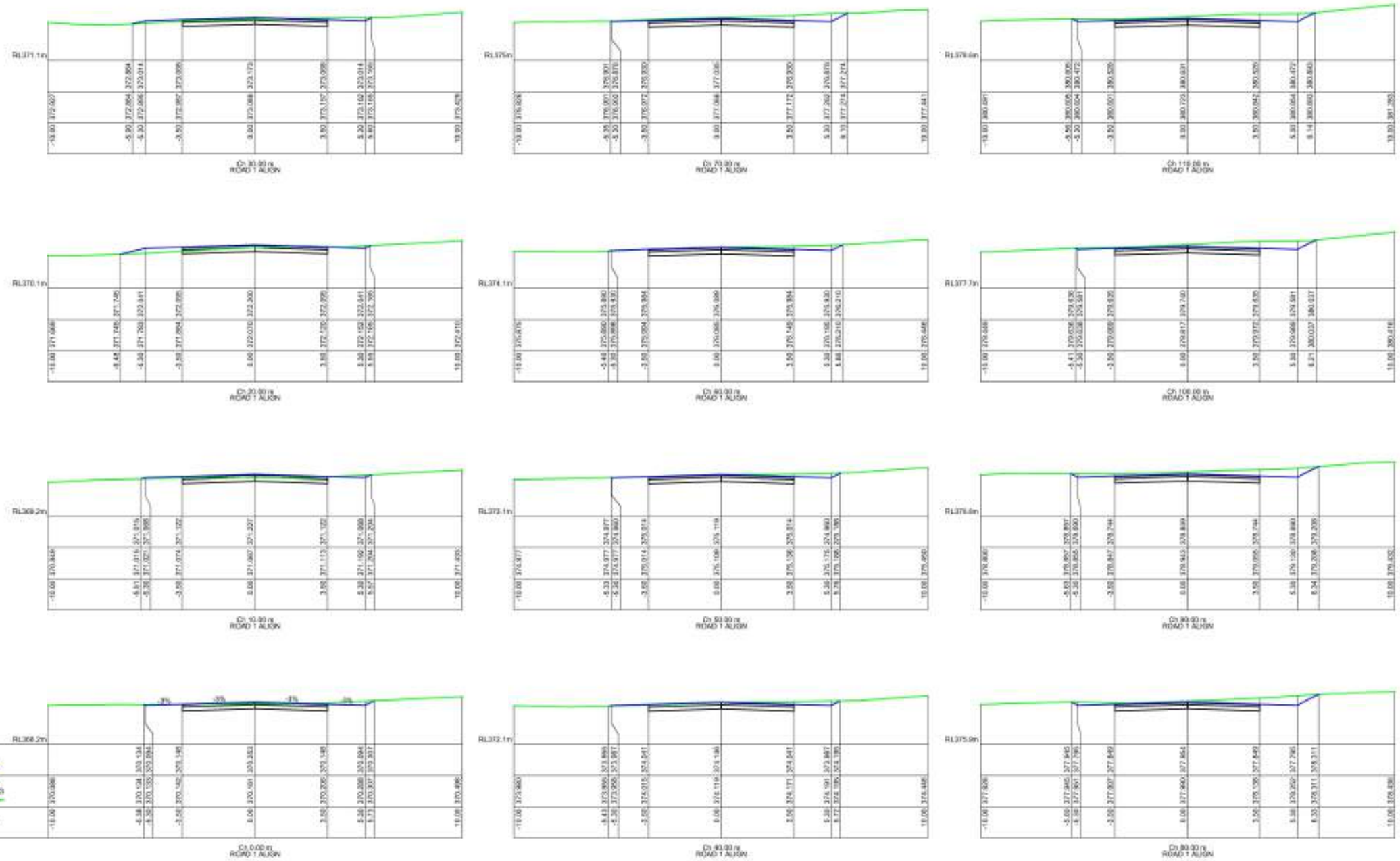
PROJECT TITLE
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111569 & LOT 4, DP 10821 82

LONG SECTIONS ROAD 5

SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C132	A

Z:\PROJECTS\Wand Yarrabilly\STAGE 5\ARD - YARRABILLY\R_DESIGN DA - STAGE 1.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS. VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

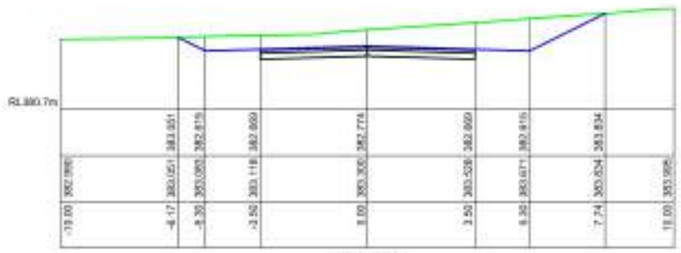
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111558 & LOT 4, DP 10821 82

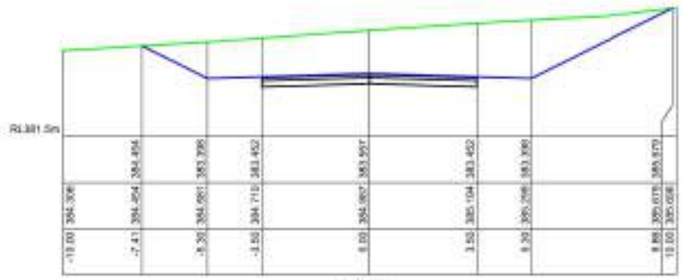
CROSS SECTIONS
ROAD 1

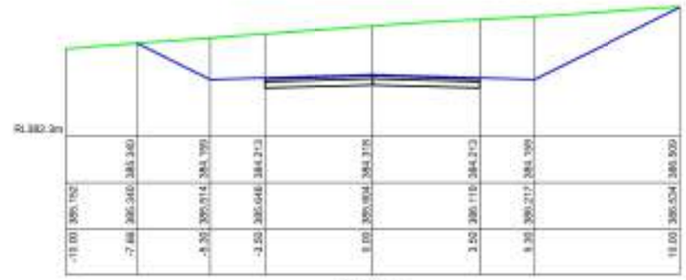
SHEET 1

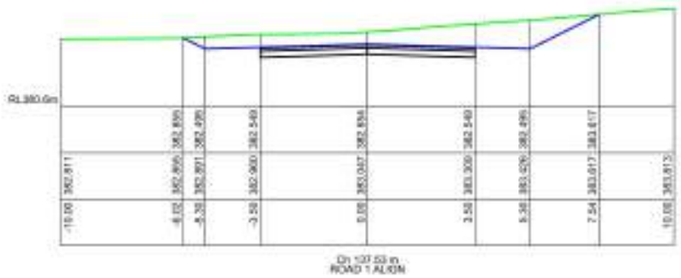
SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C133	A

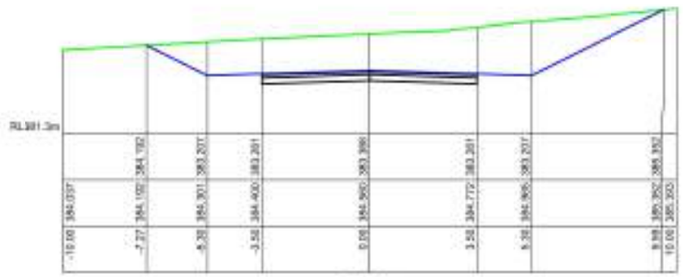
Z:\PROJECTS\Fraish\Yarrabilly\STAGE 1\ARD - YARRABILLY 1B_DESIGN 8A - STAGE 1.dwg

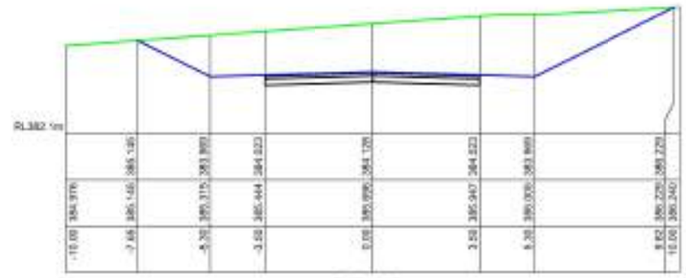


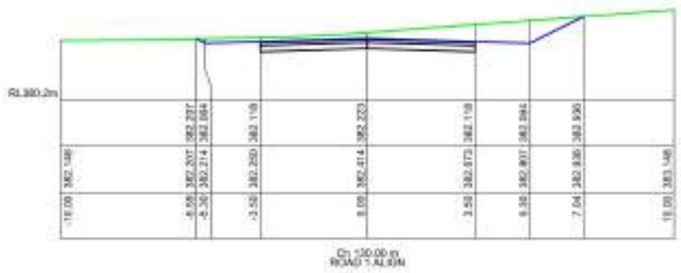


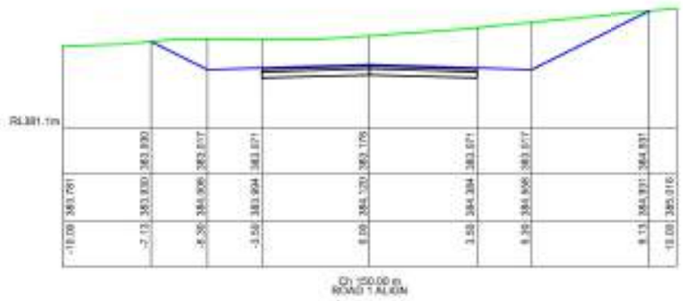


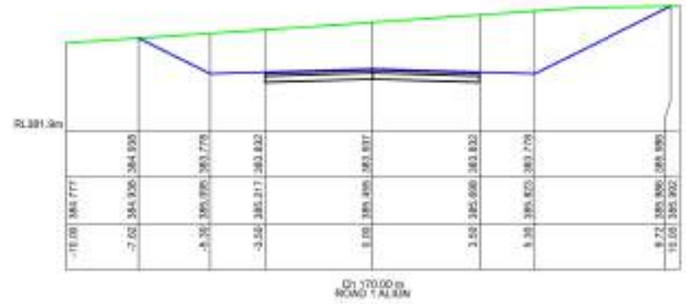


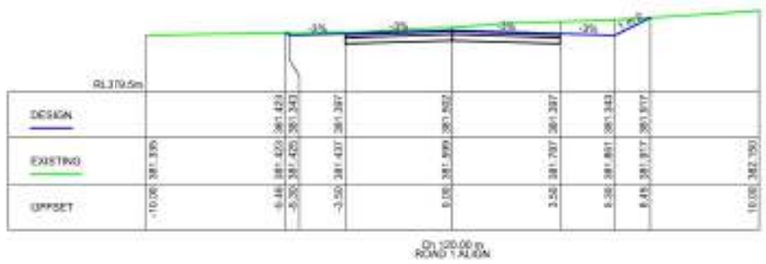


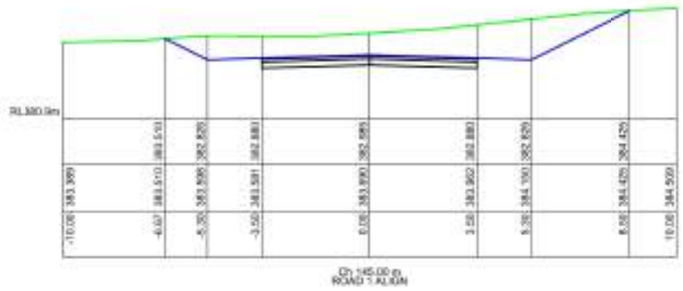


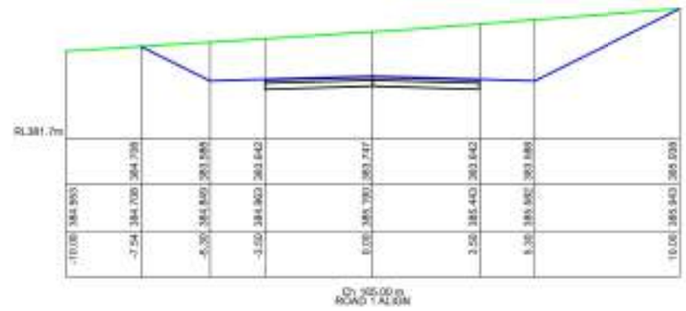












REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

Unit 2 Victoria Street, Hall ACT
PO Box 366, Hall ACT 2618
02 6230 3833 - 0448 365 744
info@fraish.com.au - www.fraish.com.au

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

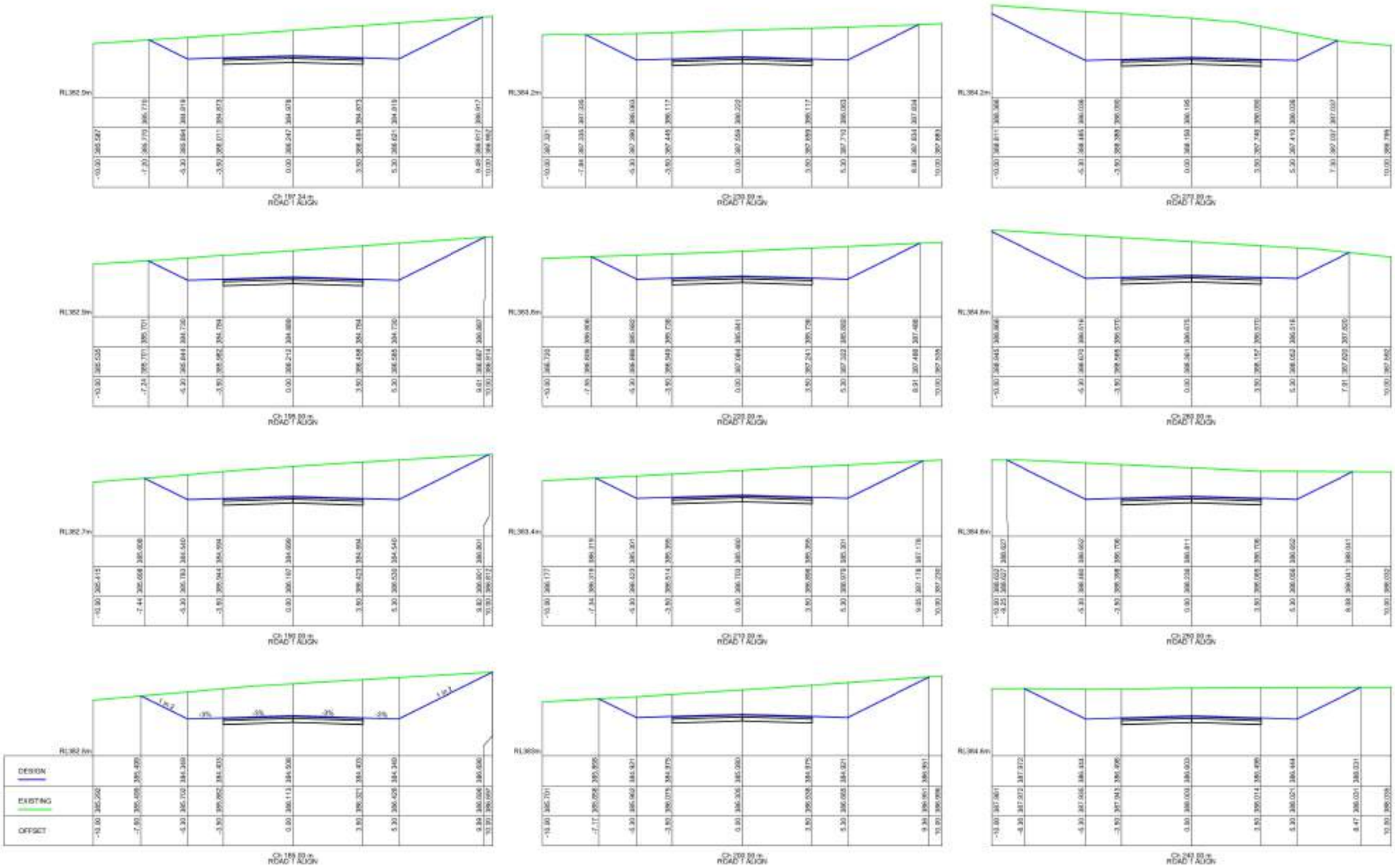
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111580 & LOT 4, DP 10921 82

CROSS SECTIONS ROAD 1

SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C134	A

Z:\PROJECTS\Hand\Yarrabilly\STAGE 1\ARD - YARRABILLY\3D_DESIGN 04 - STAGE 1.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN	TITLE	NAME
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LBK	DRAWN	LBK
				DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

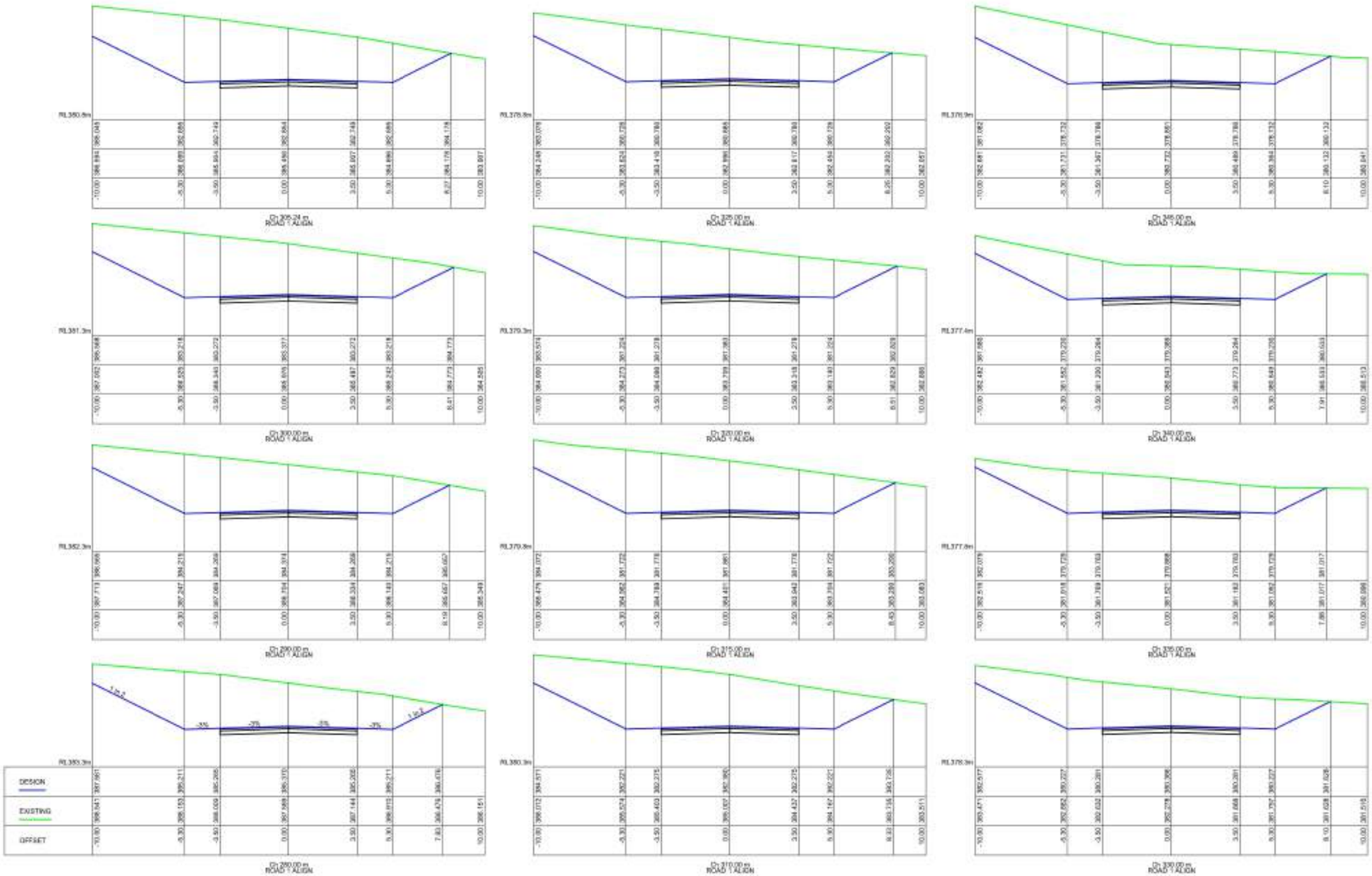
PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111550 & LOT 4, DP 10821 82

CROSS SECTIONS
ROAD 1

SHEET 3

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C135	A



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER
FRAISH Consulting
Civil & Structural Engineers

CLIENT
SOUTHERN RURAL HOLDINGS PTY. LTD.

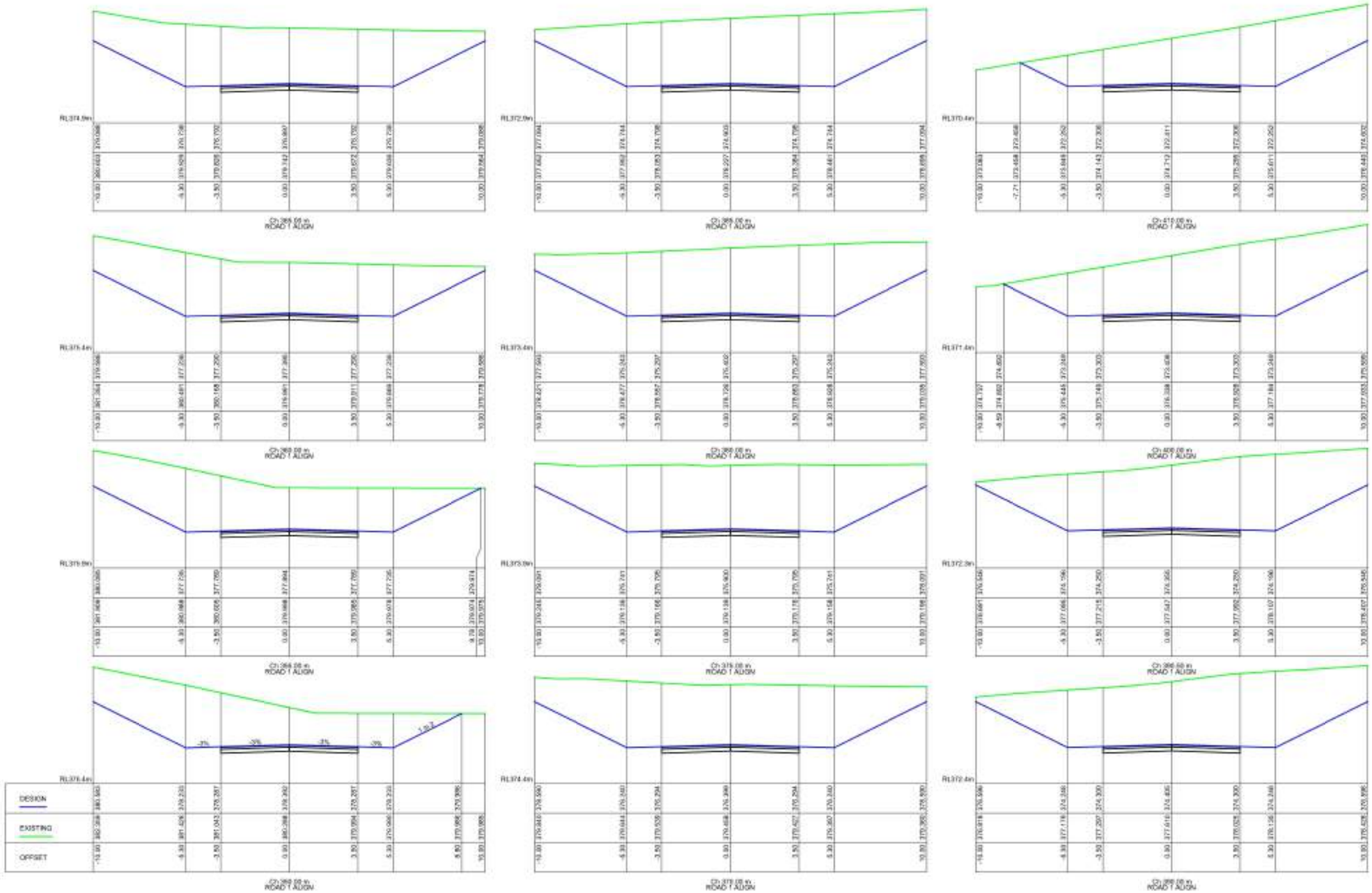
PROJECT TITLE
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111561 & LOT 4, DP 10821 82

CROSS SECTIONS
ROAD 1

SHEET 4

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C136	A

Z:\PROJECTS\Arnold\Yarrabilly\STAGE 1\AND - YARRABILLY\B_DESIGN 8A - STAGE 1.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

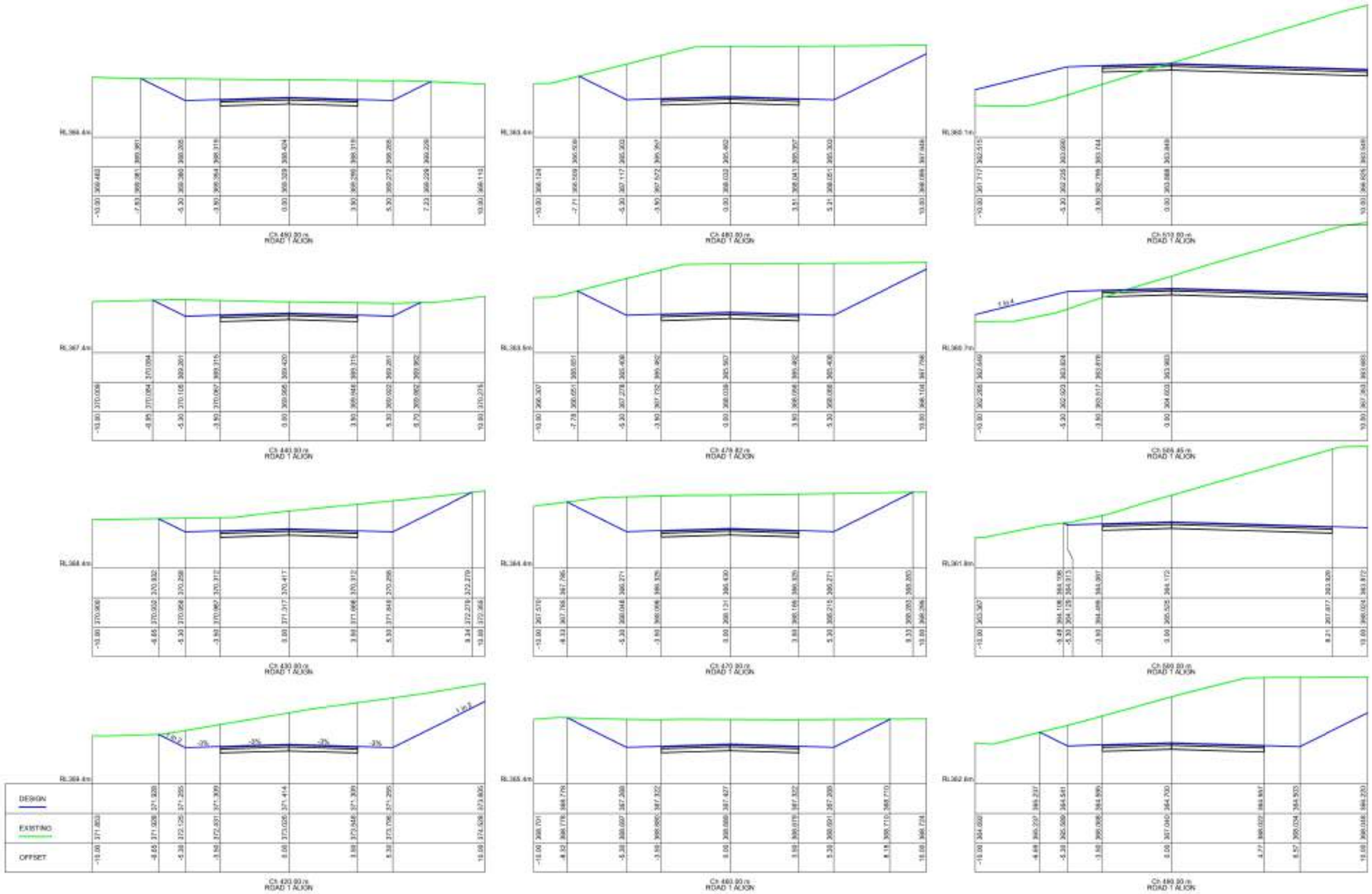
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10921 82

CROSS SECTIONS
ROAD 1

SHEET 5

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C137	A

Z:\PROJECTS\Arcadia\Yarrabilly\STAGE 5\AND - YARRABILLY\XL_DESIGN 5A - STAGE 1.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER:
FRAISH Consulting
Civil & Structural Engineers

CLIENT:
SOUTHERN RURAL HOLDINGS PTY. LTD.

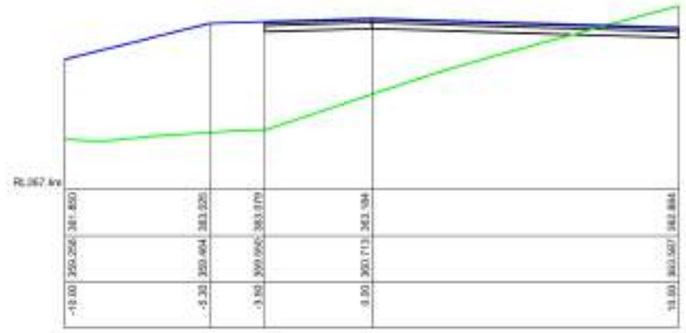
PROJECT TITLE
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111588 & LOT 4, DP 10821 82

CROSS SECTIONS
ROAD 1

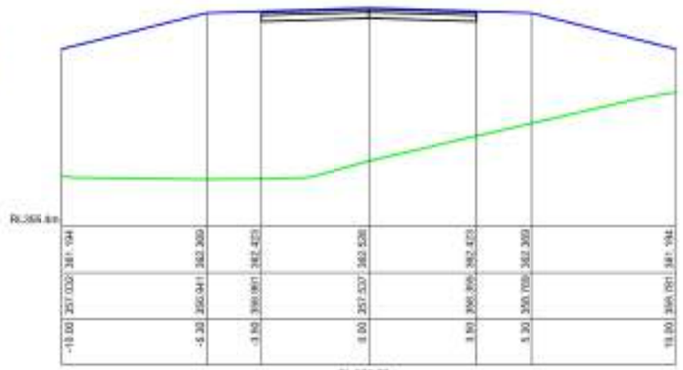
SHEET 8

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C138	A

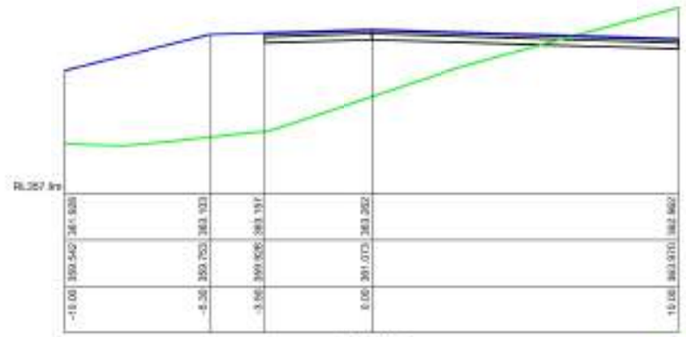
Z:\JOBS\BETS\Arcadia\Yarrabilly\STAGE 5\AND - YARRABILLY\B_DESIGN 8\8 - STAGE 1.dwg



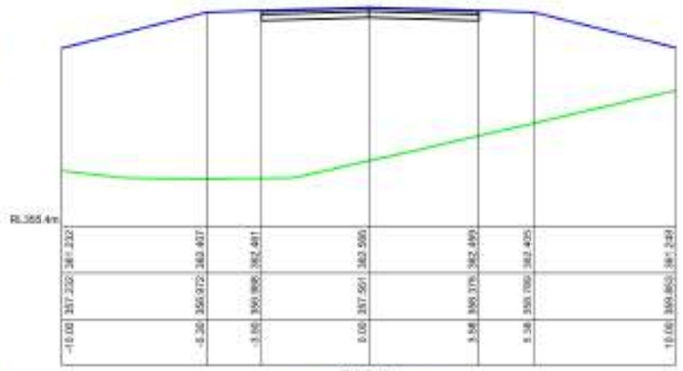
Ch 533.69 m
ROAD 1 ALIGN



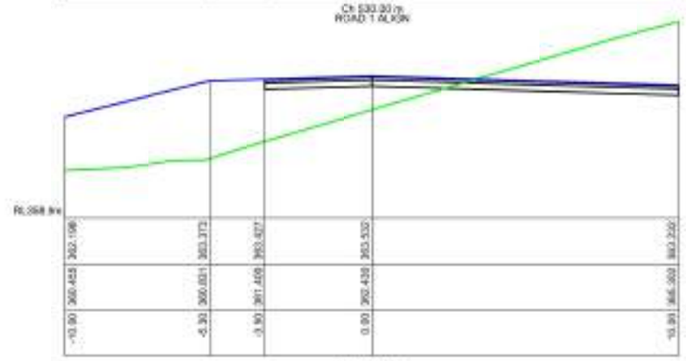
Ch 562.77 m
ROAD 1 ALIGN



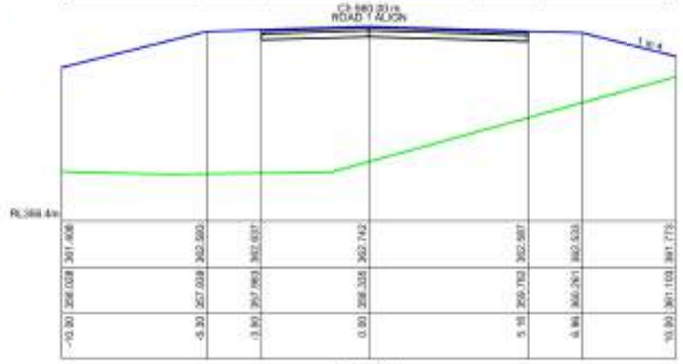
Ch 533.30 m
ROAD 1 ALIGN



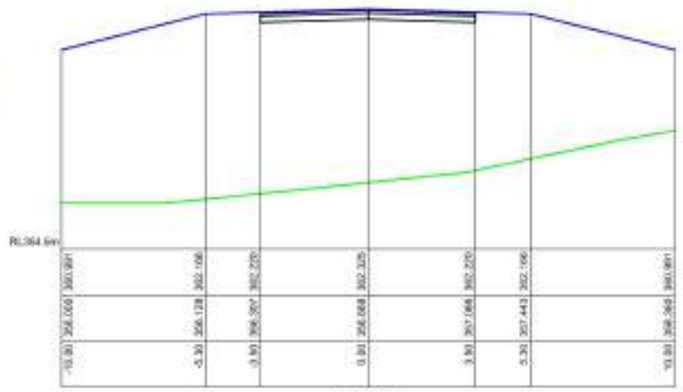
Ch 563.20 m
ROAD 1 ALIGN



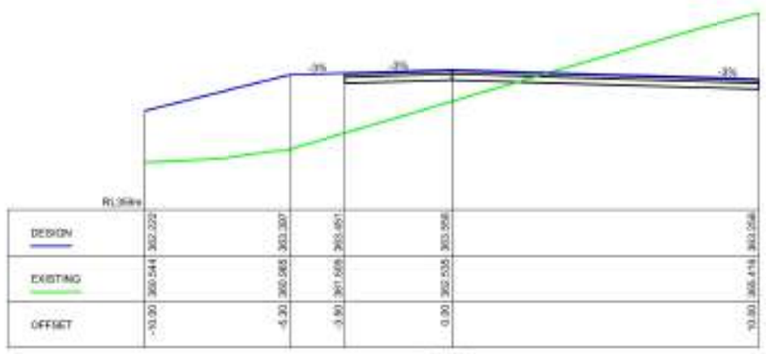
Ch 520.80 m
ROAD 1 ALIGN



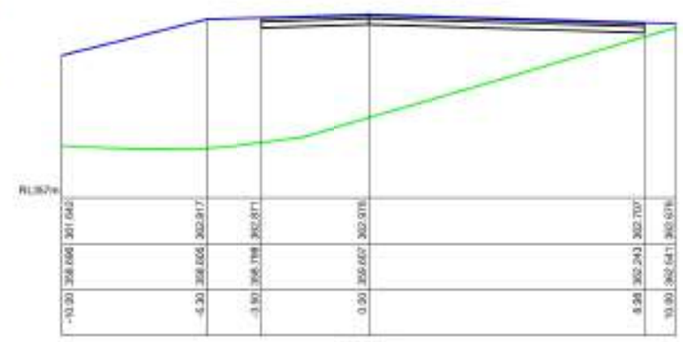
Ch 583.20 m
ROAD 1 ALIGN



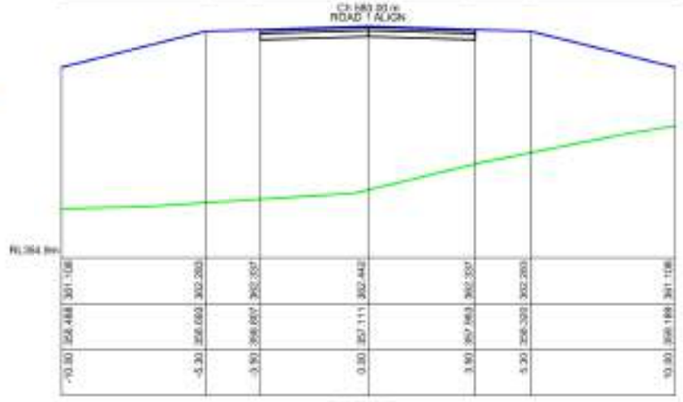
Ch 583.20 m
ROAD 1 ALIGN



Ch 520.20 m
ROAD 1 ALIGN



Ch 583.20 m
ROAD 1 ALIGN



Ch 583.20 m
ROAD 1 ALIGN

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	UKK

TITLE	NAME
DRAWN	UKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER
FRAISH Consulting
Civil & Structural Engineers

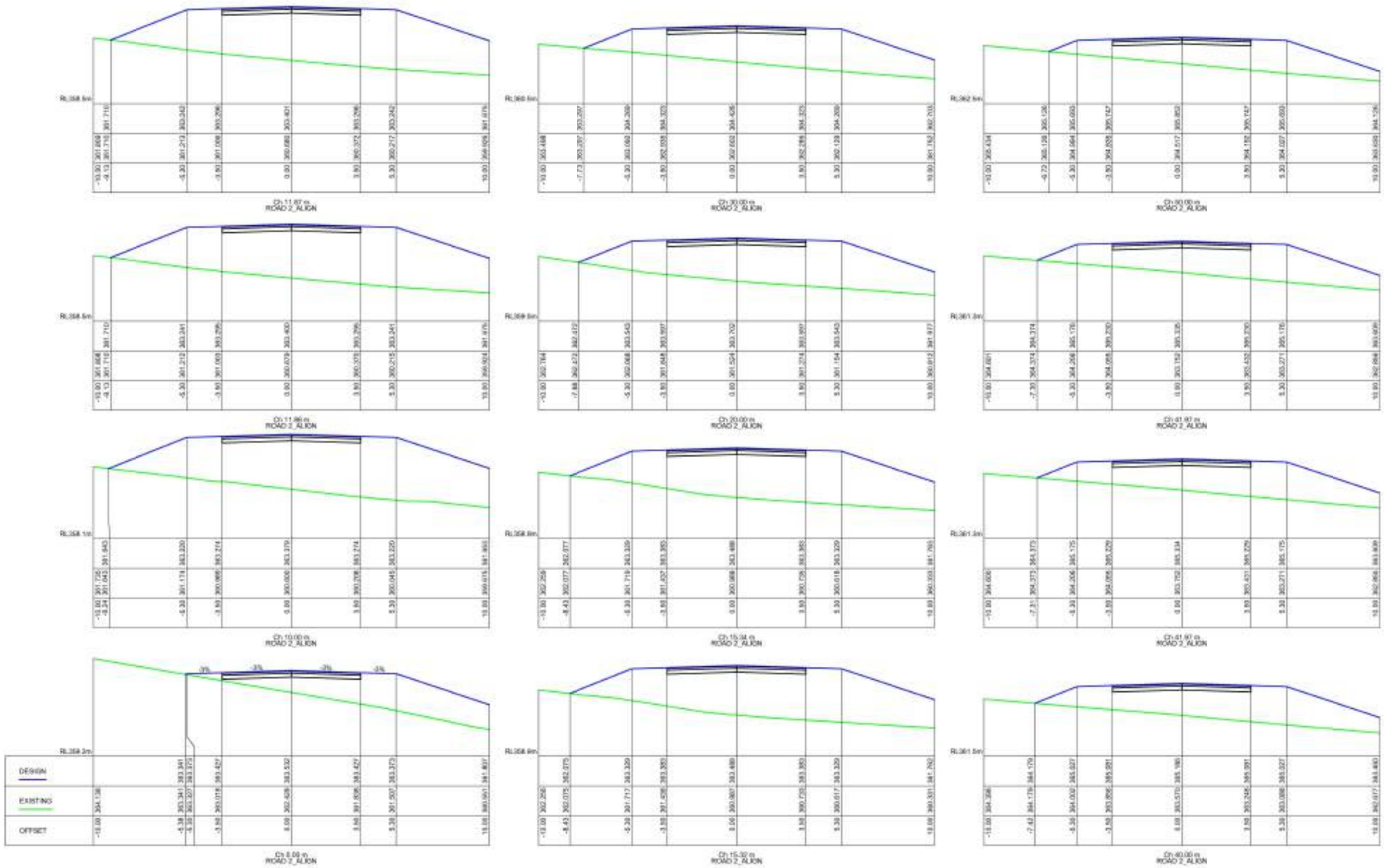
CLIENT
SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111561 & LOT 4, DP 10821 82

CROSS SECTIONS
ROAD 1

SHEET 7

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C139	A



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNED	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

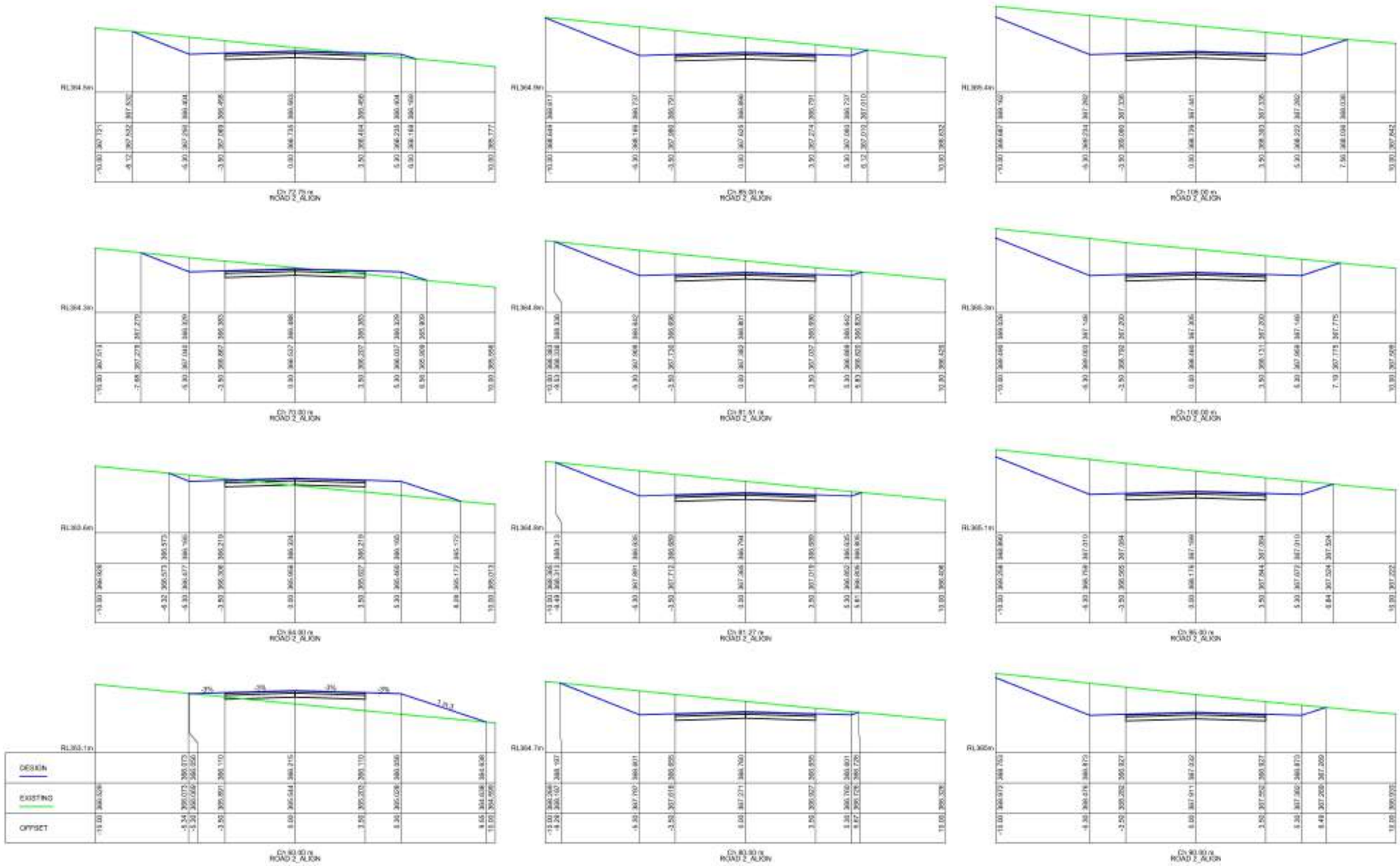
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111588 & LOT 4, DP 1092182

CROSS SECTIONS
ROAD 2

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C140	A

Z:\PROJECTS\Acad\Yarrabilly\STAGE 1\ARD - YARRABILLY\B_DESIGN DA - STAGE 1.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	UIK

TITLE	NAME
DRAWN	UIK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FraISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers
info@fraish.com.au - www.fraish.com.au

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

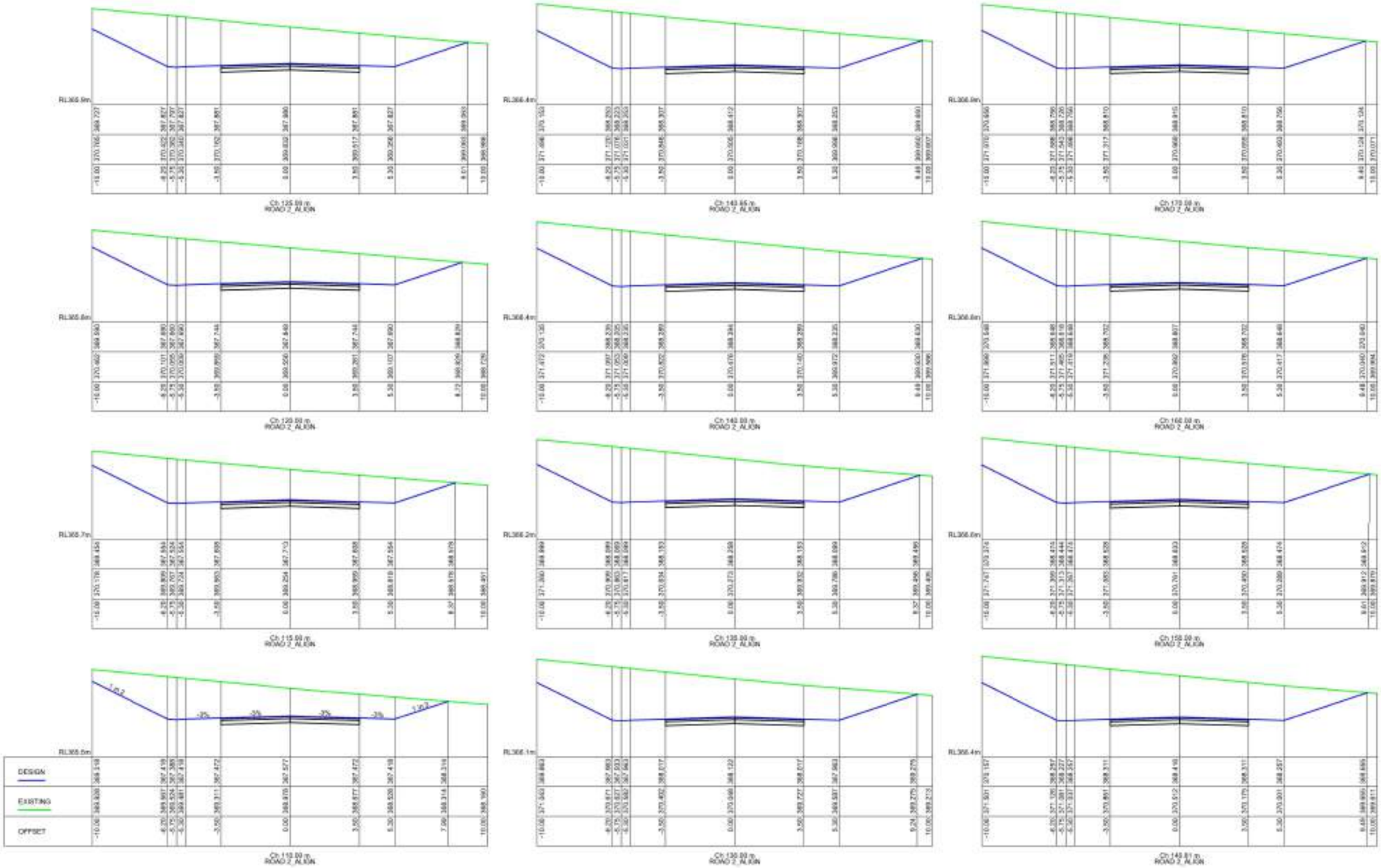
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111561 & LOT 4, DP 10821 82

CROSS SECTIONS ROAD 2

SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C141	A

Z:\P00_BETS\Arnold\Yarrabilly\STAGE 1\ARD - YARRABILLY\B_DESIGN\B4 - STAGE 1.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LBK

TITLE	NAME
DRAWN	LBK
DESIGNED	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

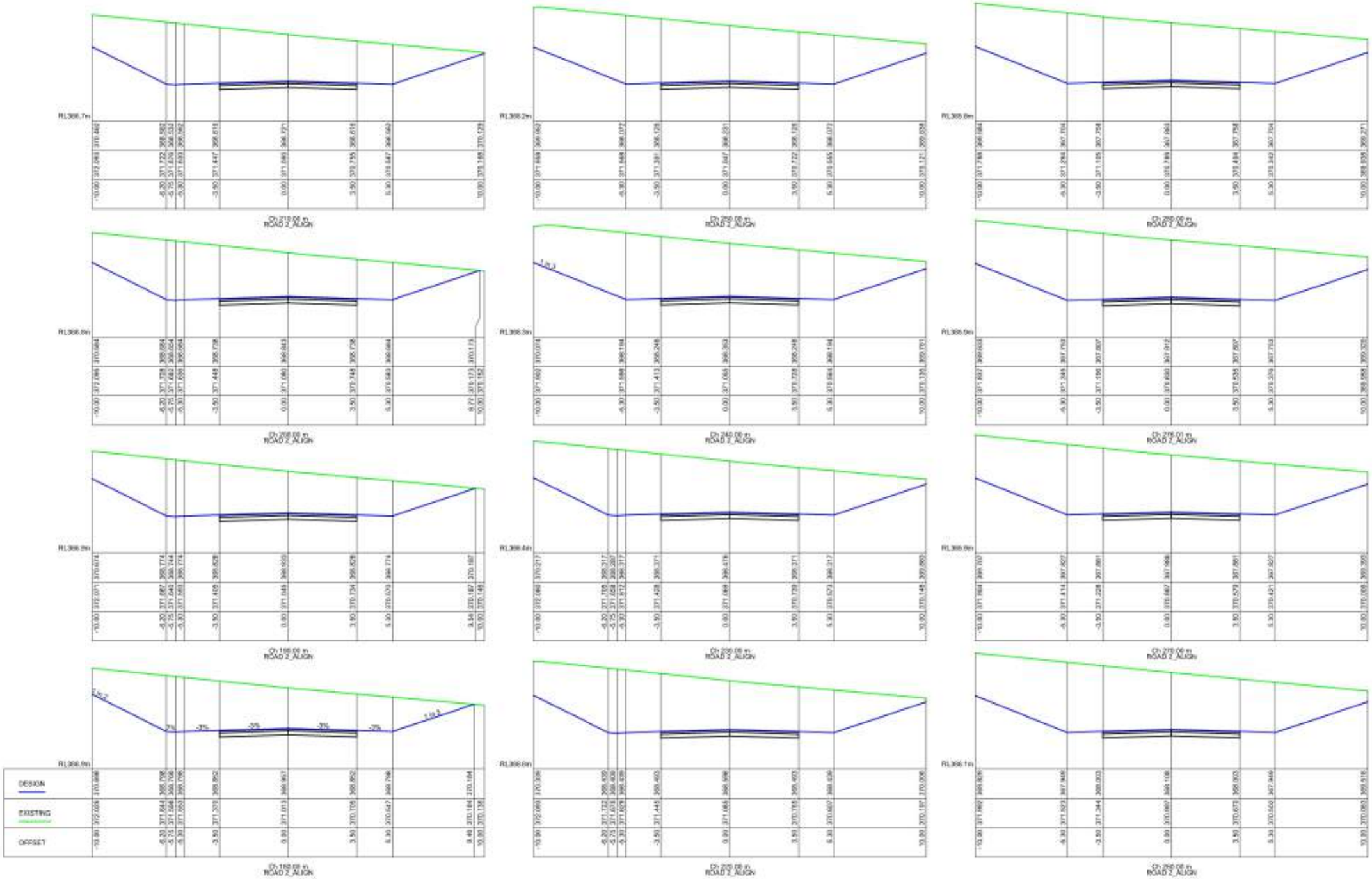
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111588 & LOT 4, DP 10821 82

CROSS SECTIONS
ROAD 2

SHEET 3

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C142	A

Z:\PROJECTS\Wand\Yarrabilly\STAGE 1\MD - YARRABILLY\3D_DESIGN DA - STAGE 1.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Ltd. Use or copying this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER
FRAISH Consulting
Civil & Structural Engineers
PO Box 3[illegible], Flat [illegible] ACT 2[illegible]
02 6[illegible] 3[illegible] - 0[illegible] 7[illegible]
info@fraish.com.au - www.fraish.com.au

CLIENT
SOUTHERN RURAL HOLDINGS PTY. LTD.

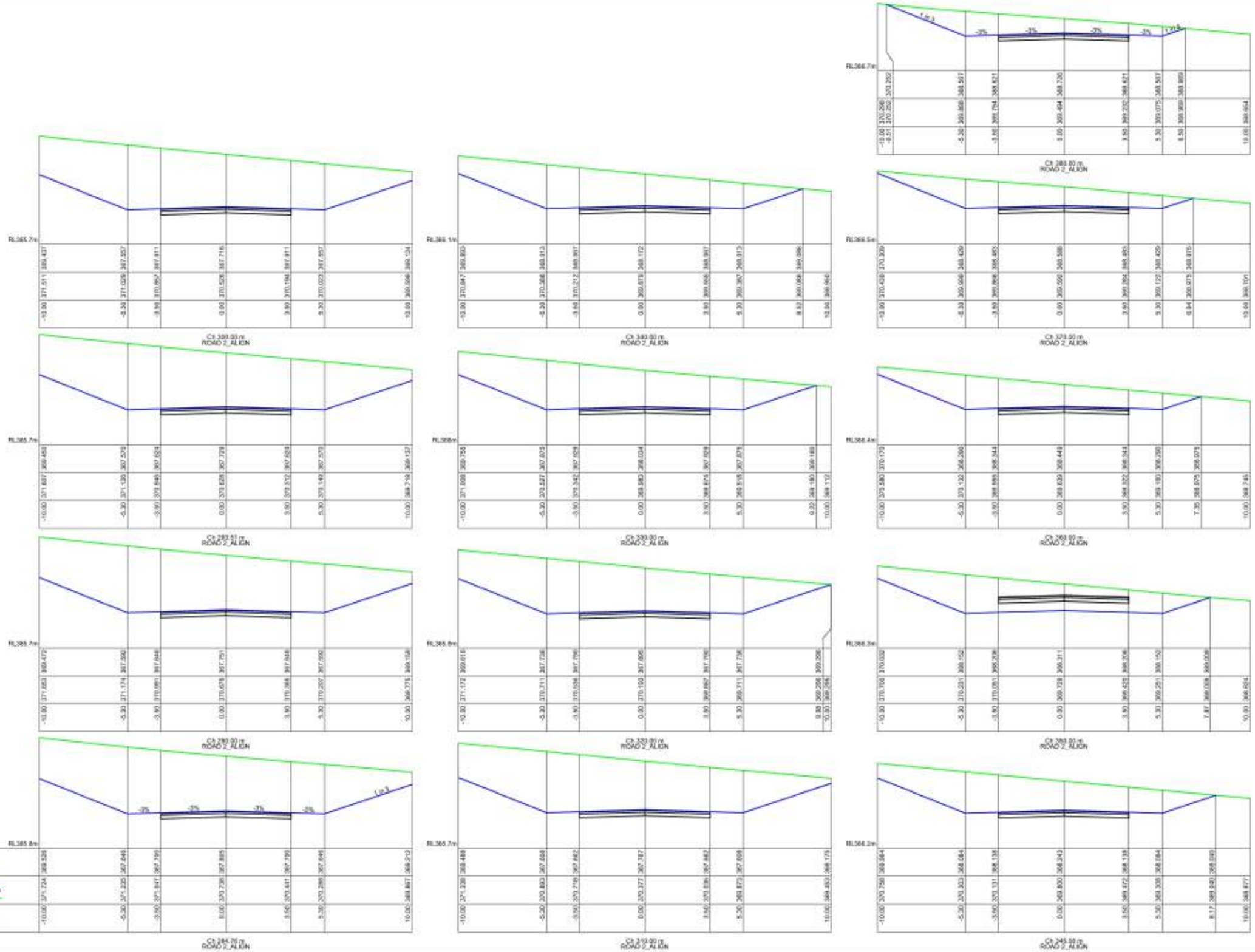
PROJECT TITLE
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111588 & LOT 4, DP 10821 82

CROSS SECTIONS ROAD 2

SHEET 4

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C143	A

Z:\PROJECTS\Yarrabilly\STAGE 1\400 - YARRABILLY\XL_DESIGN DA - STAGE 1.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	UAK

TITLE	NAME
DRAWN	UAK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers
14 Verona Street, Hall ACT
PO Box 300, Hall ACT 2618
02 6230 3833 - 0408 626 744
info@fraish.com.au - www.fraish.com.au

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

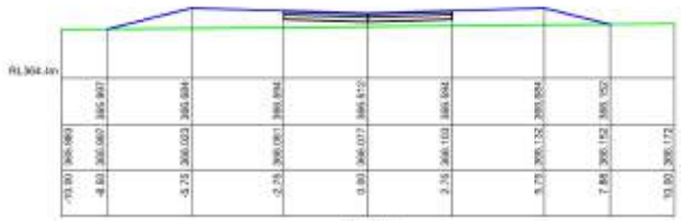
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 1092182

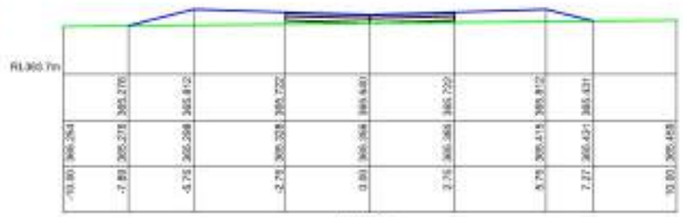
CROSS SECTIONS ROAD 2

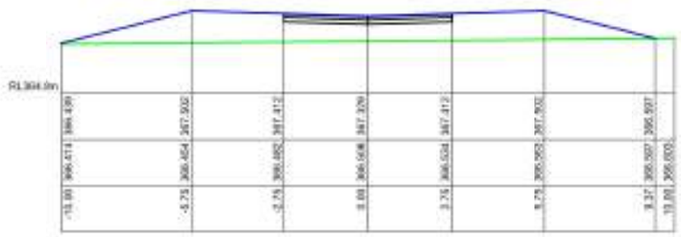
SHEET 5

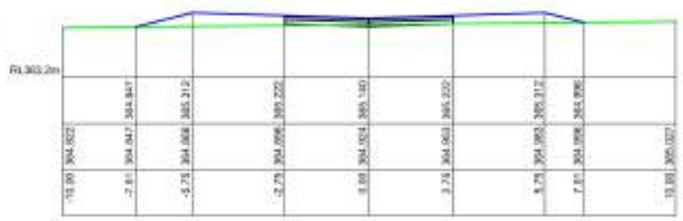
SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C144	A

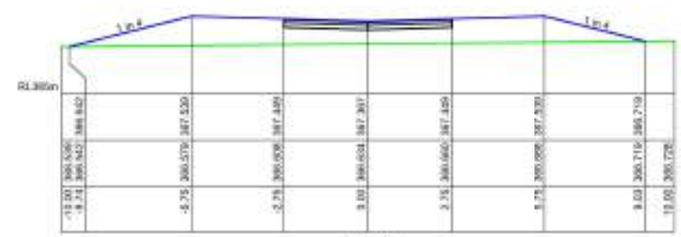
Z:\PROJECTS\Arwah\Yarrabilly\STAGE PLANS - YARRABILLY VIL_DESIGN DA - STAGE 1.dwg

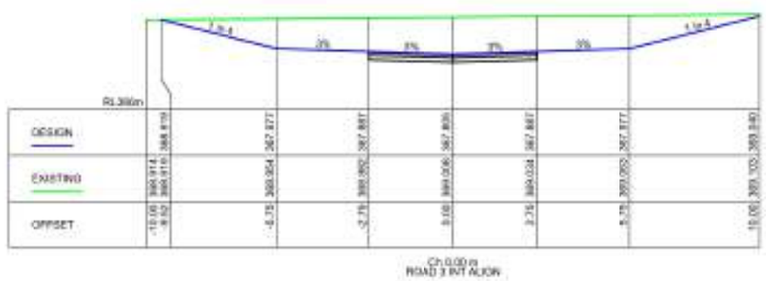


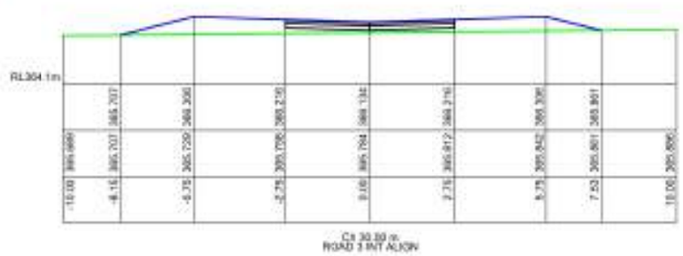


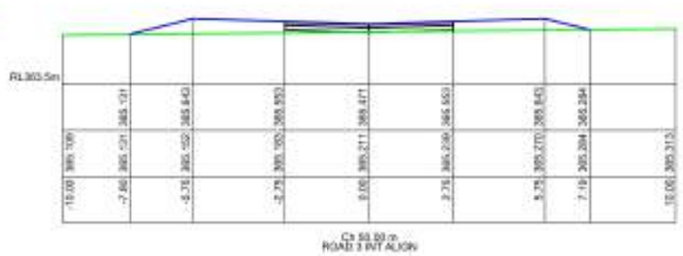












REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	UBK

TITLE	NAME
DRAWN	UBK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER:

FRAISH Consulting
Civil & Structural Engineers
Unit 2 Victoria Street, Hall ACT
PO Box 203, Hall ACT 2618
02 6230 2833 - 0409 526 700
info@fraish.com.au - www.fraish.com.au

CLIENT:

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

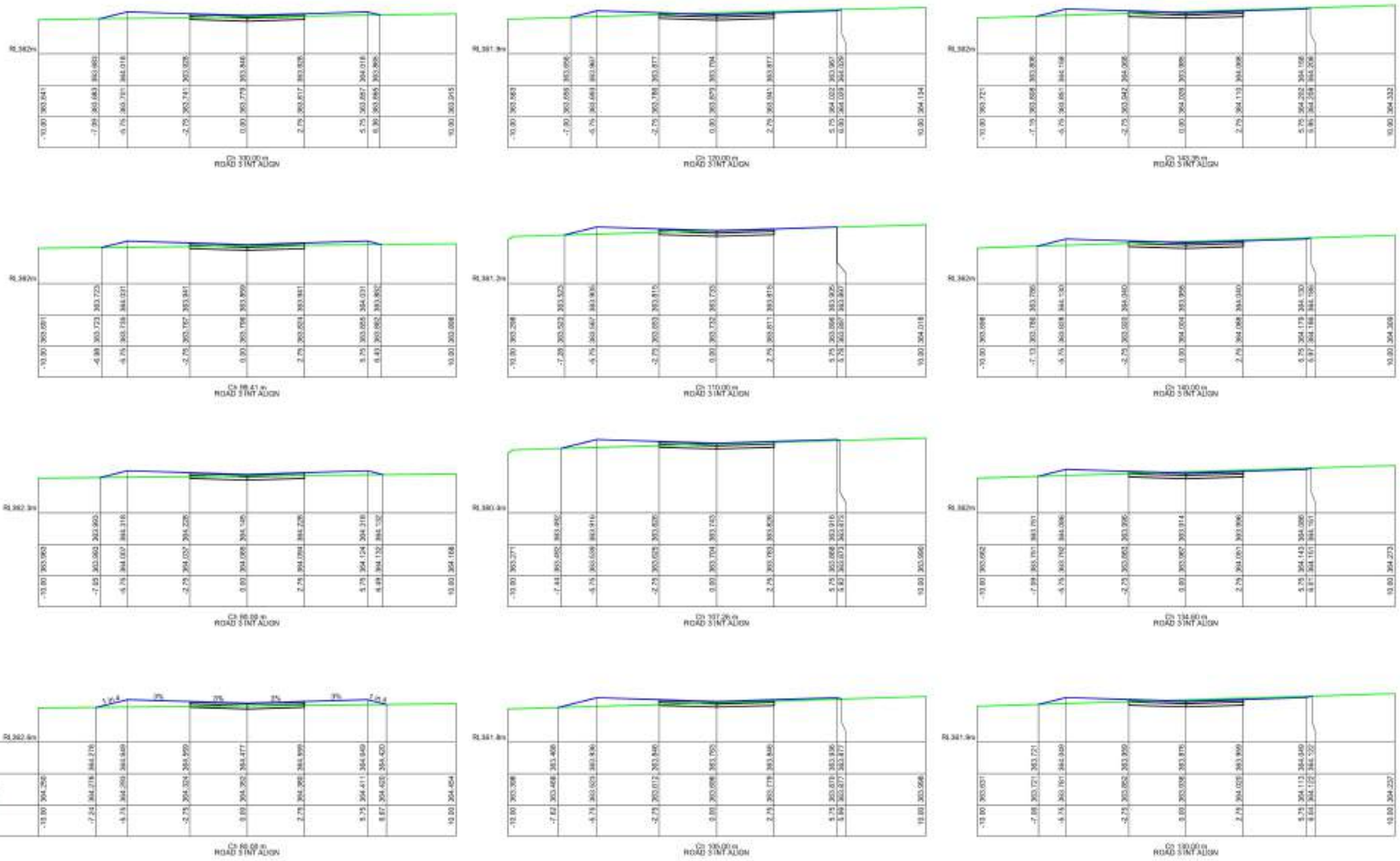
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

CROSS SECTIONS ROAD 3

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C146	A

Aug 2017 - 9:41 AM - C:\Users\Fraish\Desktop\YARRABILLY ESTATE_DESIGN_TEMPLATE.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	UAK

TITLE	NAME
DRAWN	UAK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER:
FRAISH Consulting
Civil & Structural Engineers

CLIENT:
SOUTHERN RURAL HOLDINGS PTY. LTD.

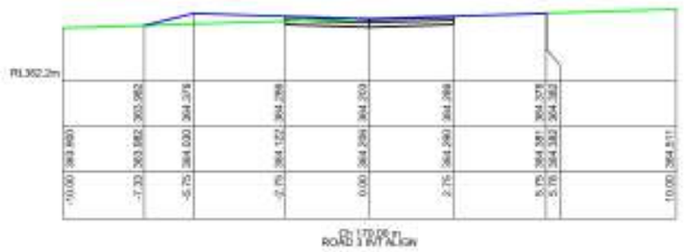
PROJECT TITLE
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10921 82

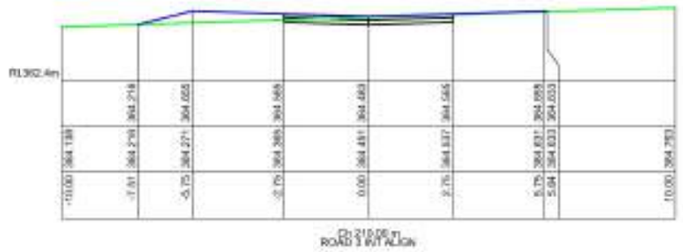
CROSS SECTIONS
ROAD 3

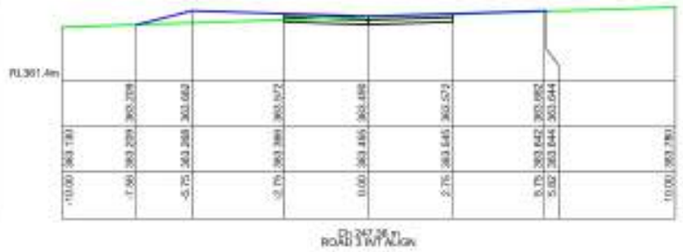
SHEET 3

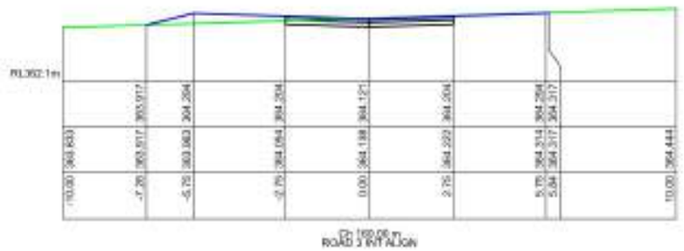
SCALE	PHASE	DRAWING No	REV
AS SHOWN	DA	C147	A

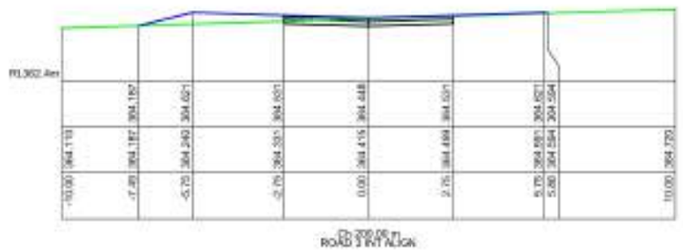
Z:\PROJECTS\Arnold\YarrabillyESTATE PLAND - YARRABILLY VIL_DESIGN 04 - STAGE 1.dwg

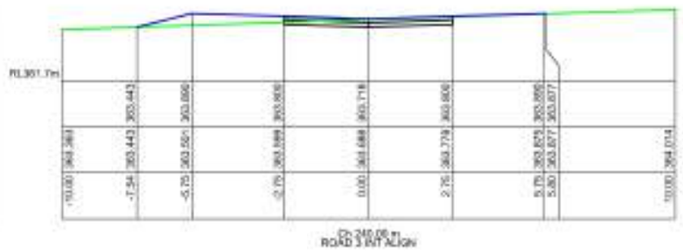


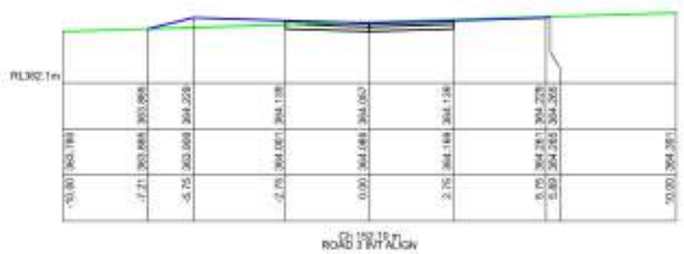


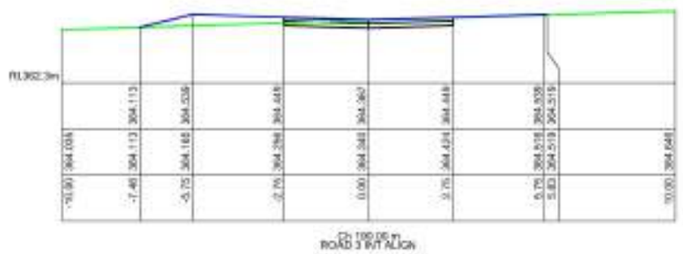


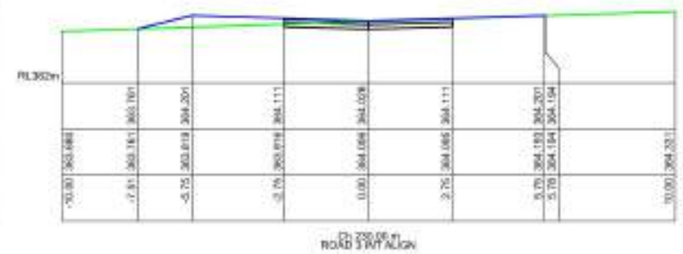


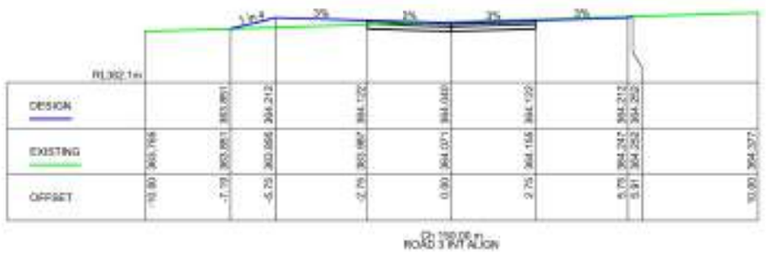


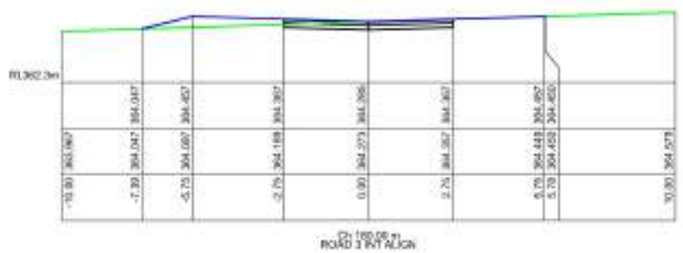


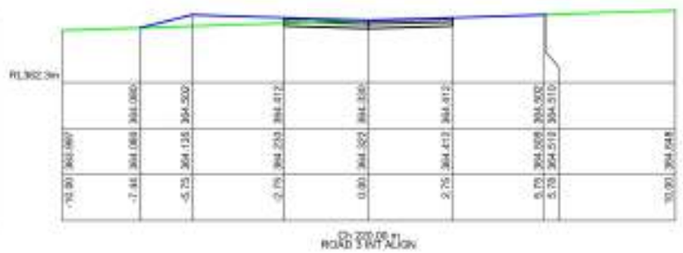












REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	UIK

TITLE	NAME
DRAWN	UIK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER:
FRAISH Consulting
Civil & Structural Engineers

CLIENT:
SOUTHERN RURAL HOLDINGS PTY. LTD.

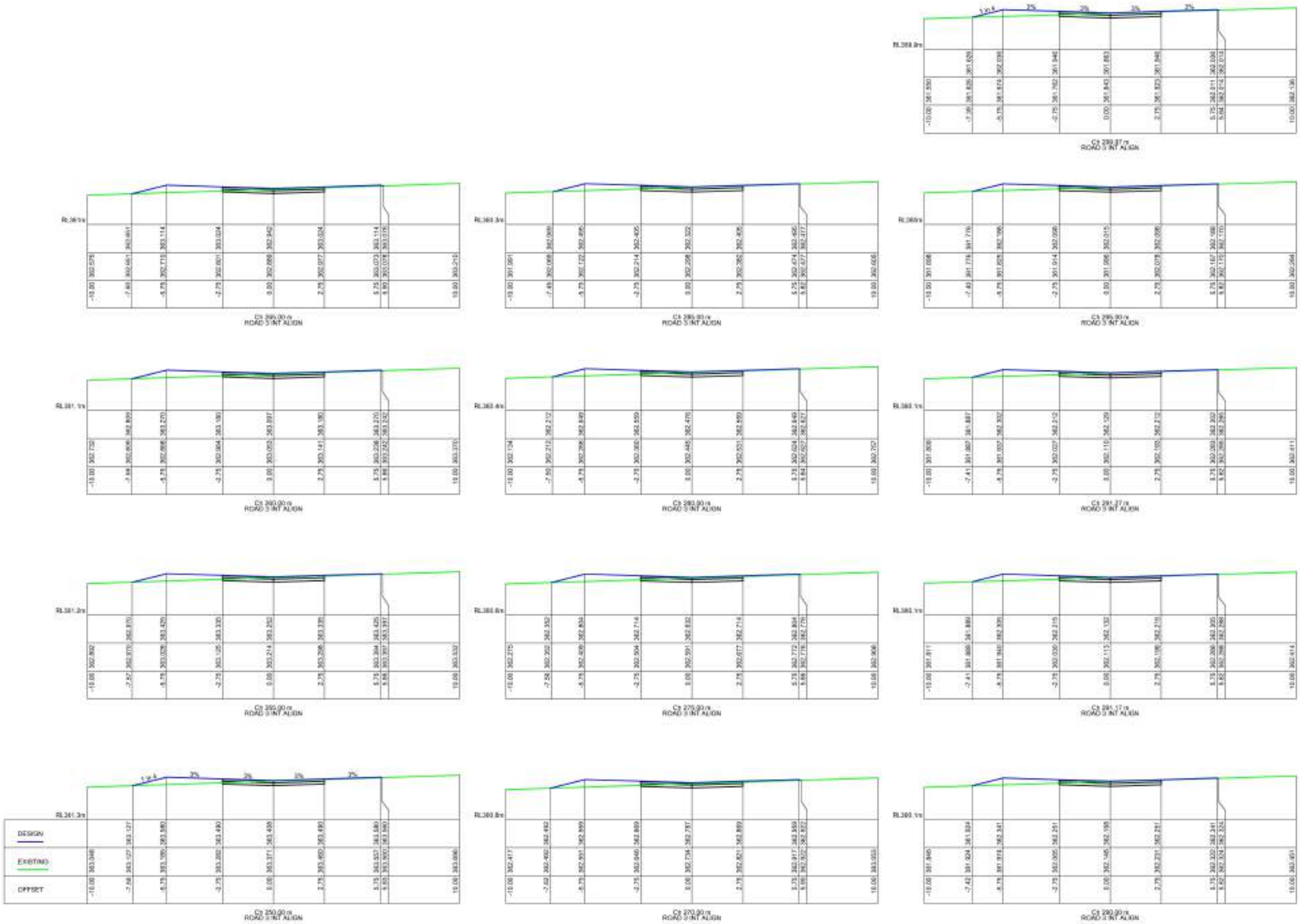
PROJECT TITLE
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 1092182

CROSS SECTIONS ROAD 3

SHEET 3

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C148	A

Z:\PROJECTS\Yarrabilly Estate\STAGE 3\DWG - YARRABILLY ESTATE_DESIGN_R4 - STAGE 1.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER
FRAISH Consulting
Civil & Structural Engineers
info@fraish.com.au · www.fraish.com.au

CLIENT
SOUTHERN RURAL HOLDINGS PTY. LTD.

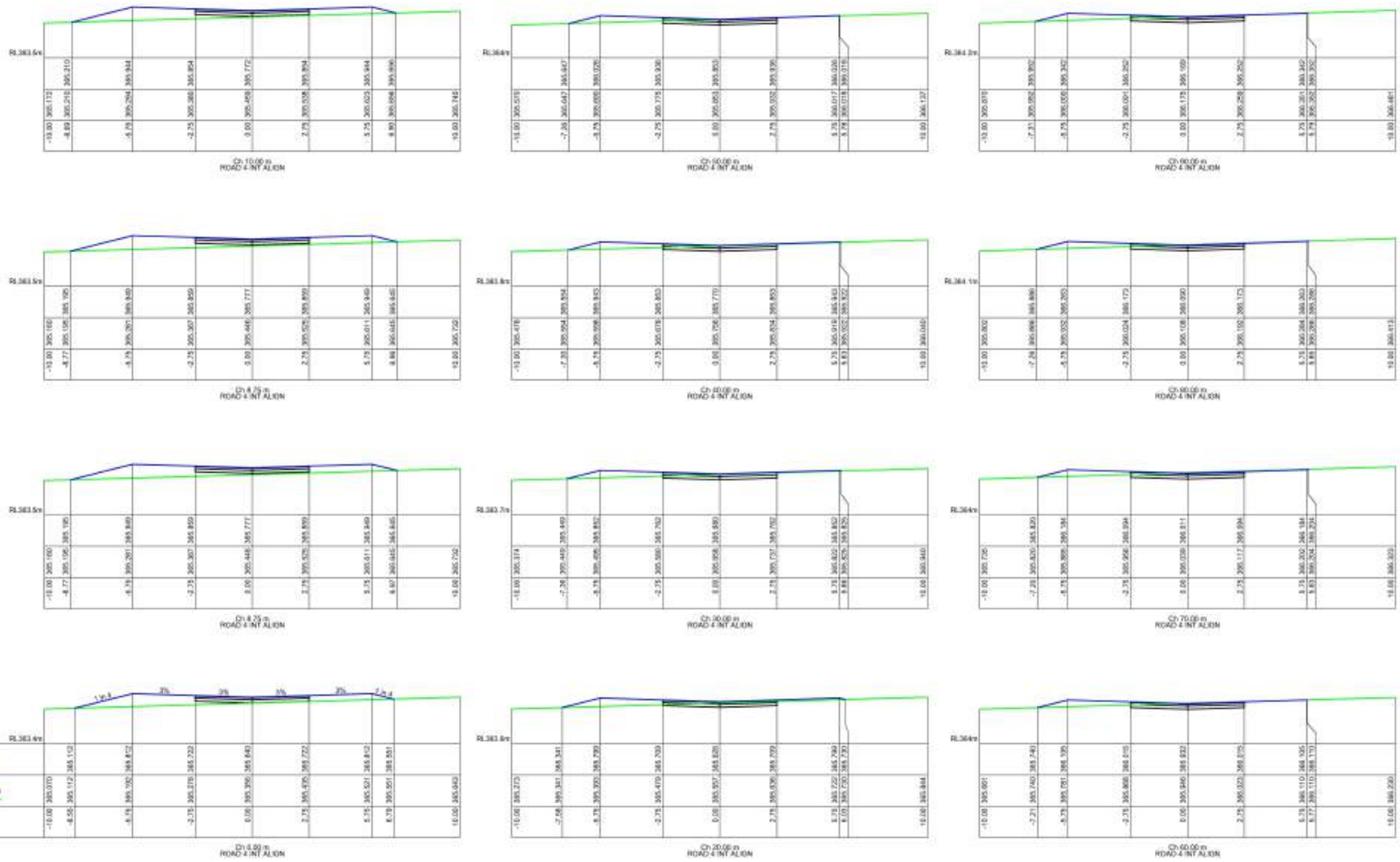
PROJECT TITLE
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111580 & LOT 4, DP 1092182

CROSS SECTIONS ROAD 3

SHEET 4

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C149	A

Z:\PROJECTS\Fraish\Yarrabilly\STAGE 1\400 - YARRABILLY\R_DESIGN 04 - STAGE 1.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE: DRAWN LBR; DESIGNER AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER: FRAISH Consulting, Civil & Structural Engineers

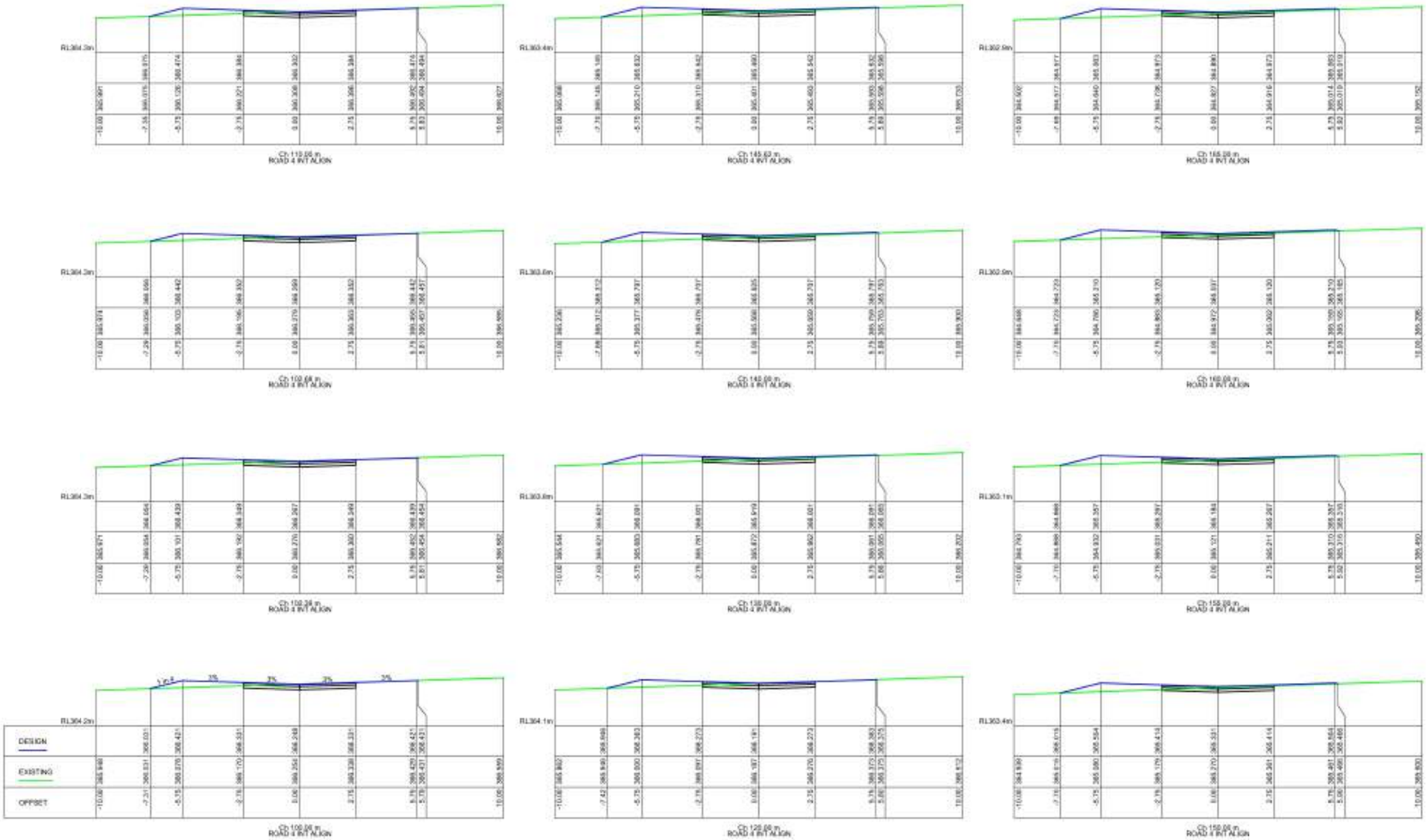
CLIENT: SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE: YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111580 & LOT 4, DP 10821 82

CROSS SECTIONS ROAD 4

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C150	A



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	UIK

TITLE	NAME
DRAWN	UIK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER:

FRAISH Consulting
Civil & Structural Engineers

CLIENT:

SOUTHERN RURAL HOLDINGS PTY. LTD.

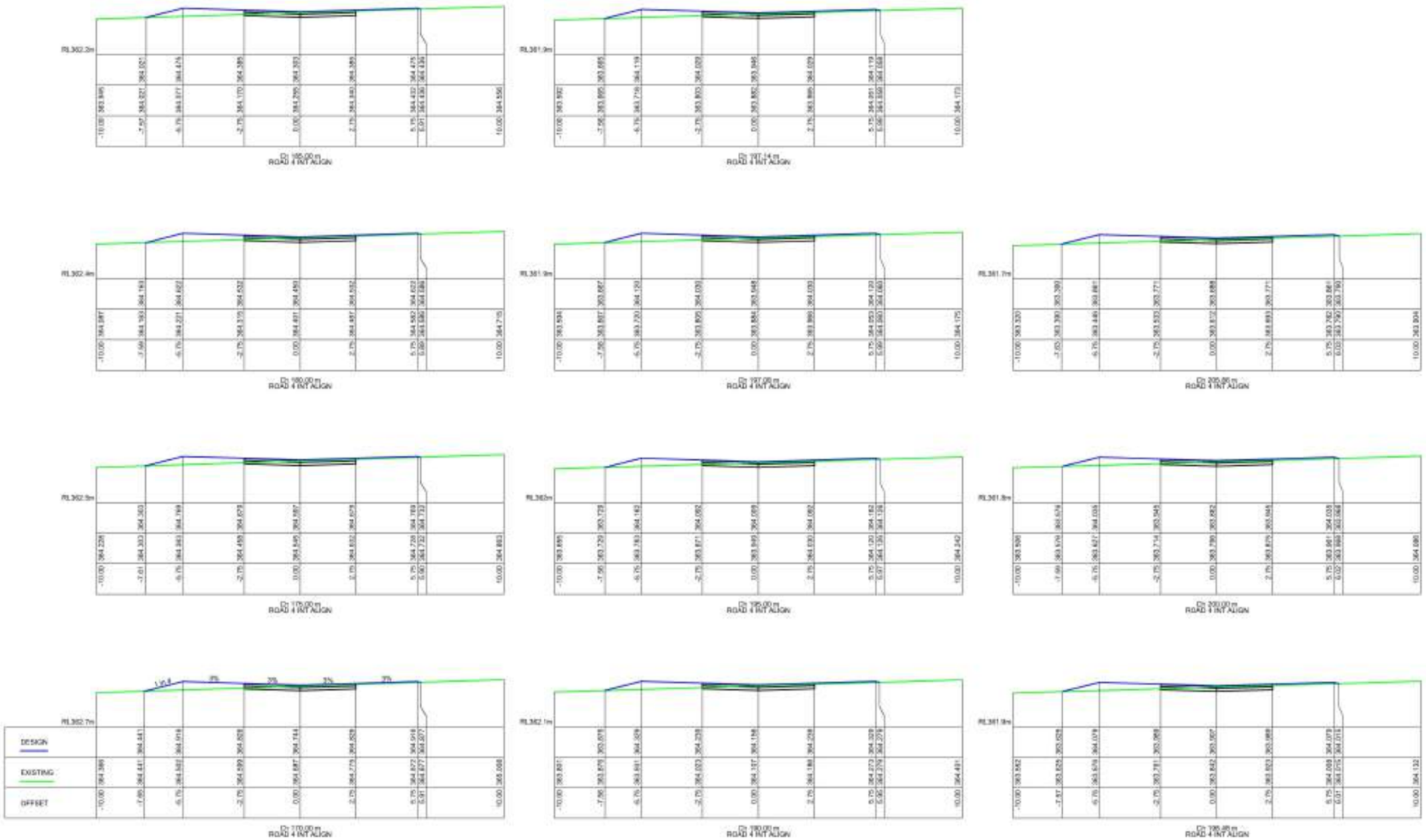
PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

CROSS SECTIONS
ROAD 4

SHEET 2

SCALE	PHASE	DRAWING No	REV
AS SHOWN	DA	C151	A



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

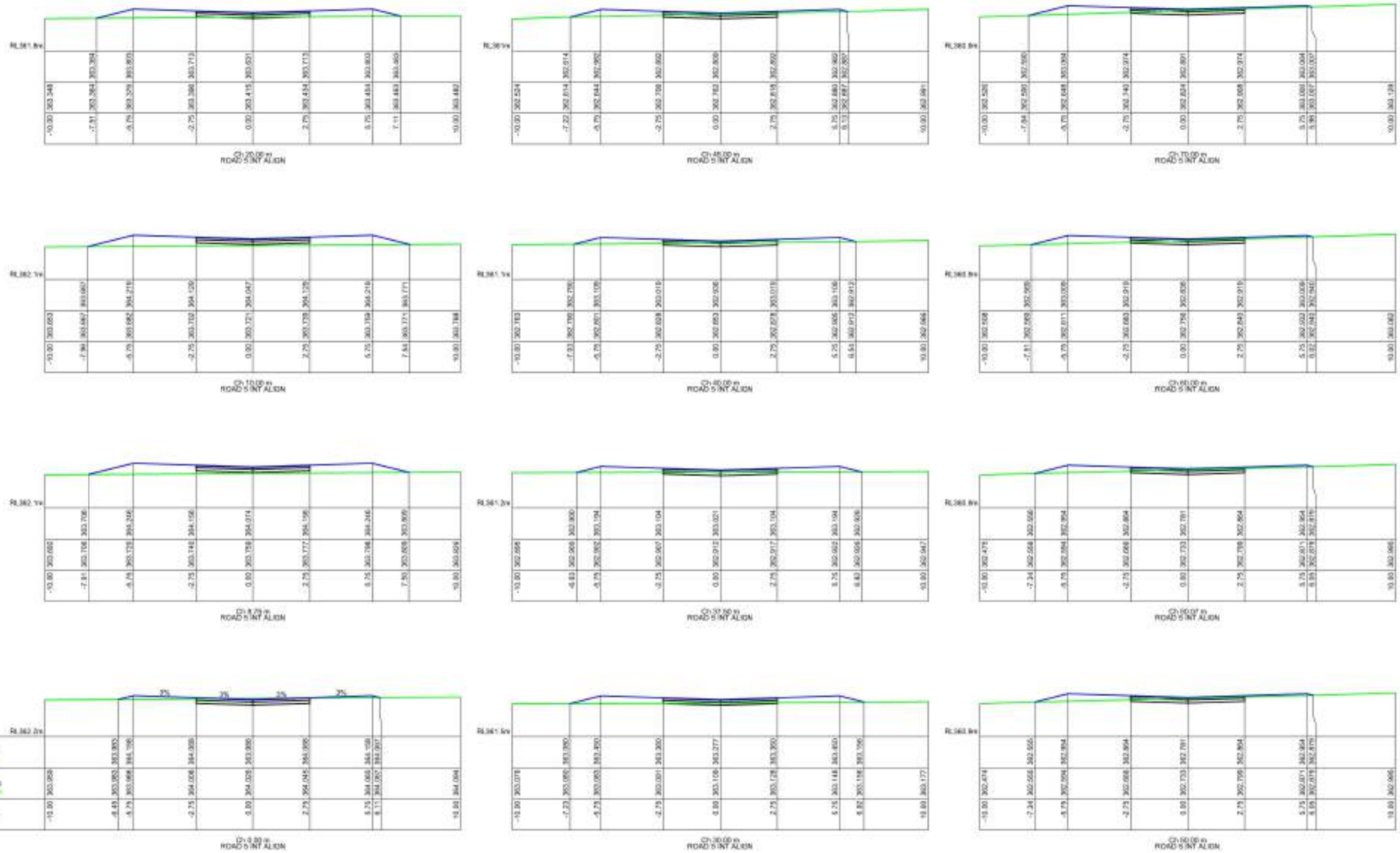
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111560 & LOT 4, DP 10821 82

CROSS SECTIONS
ROAD 4

SHEET 3

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C152	A

Z:\P000_BETS\Admin\Yarrabilly\STAGE 1\ARD - YARRABILLY\B_DESIGN\B-04 - STAGE 1.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	UIK

TITLE	NAME
DRAWN	UIK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER:
FRAISH Consulting
Civil & Structural Engineers
info@fraish.com.au · www.fraish.com.au

CLIENT:
SOUTHERN RURAL HOLDINGS PTY. LTD.

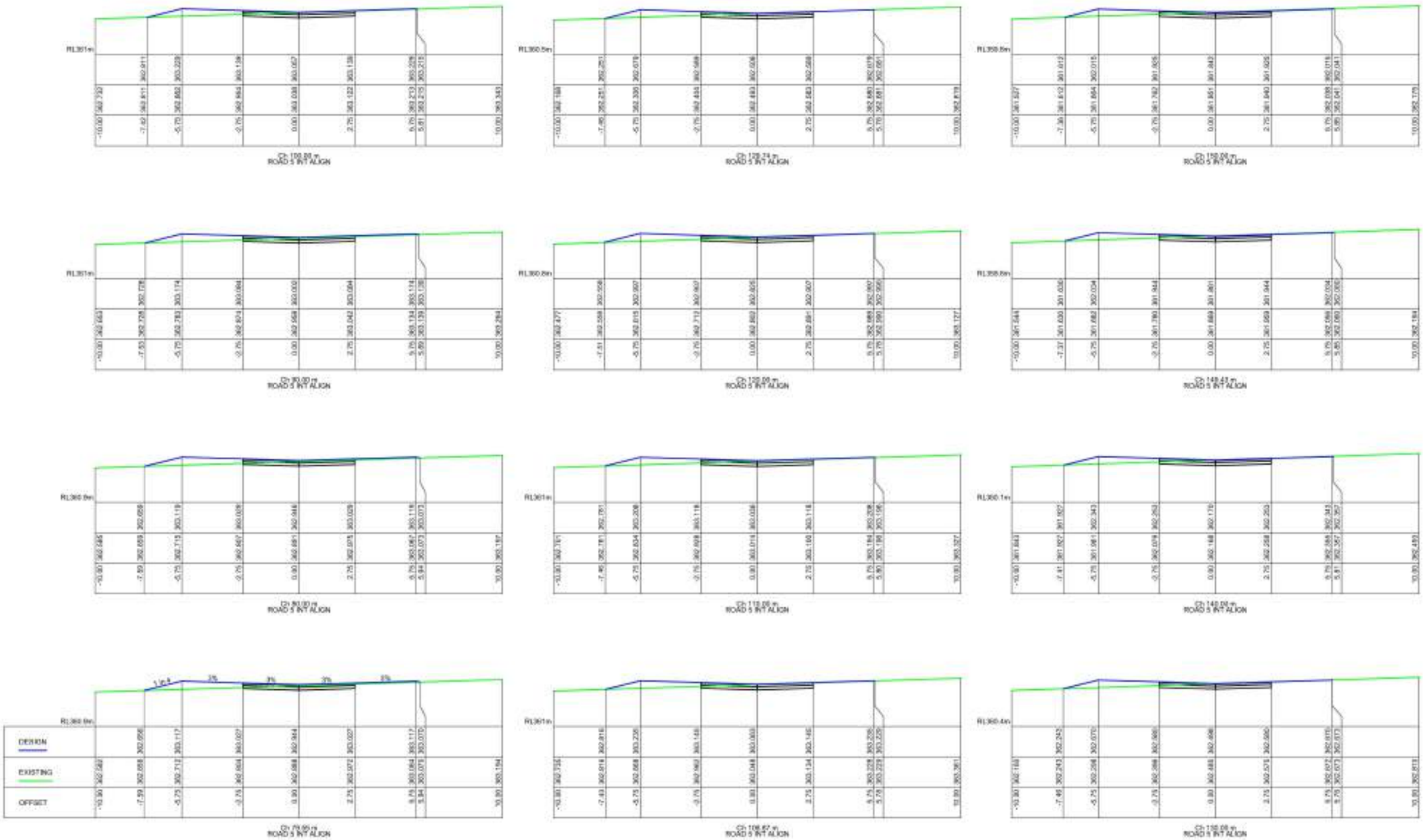
PROJECT TITLE
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

CROSS SECTIONS ROAD 5

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C153	A

Z:\PROJECTS\Yarrabilly\Yarrabilly_DWG\YARRABILLY_DESIGN_R4 - STAGE 1.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	UIK

TITLE	NAME
DRAWN	UIK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER:

FRAISH Consulting
Civil & Structural Engineers

CLIENT:

SOUTHERN RURAL HOLDINGS PTY. LTD.

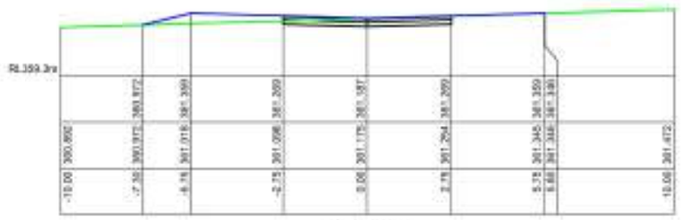
PROJECT TITLE

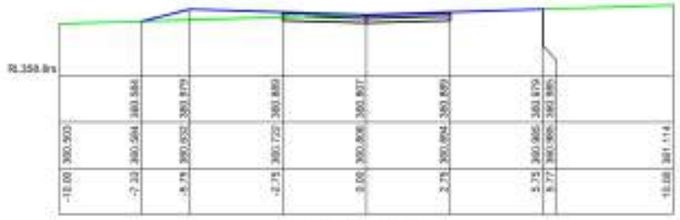
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 1092182

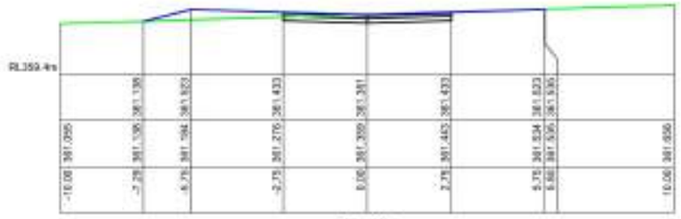
CROSS SECTIONS
ROAD 5

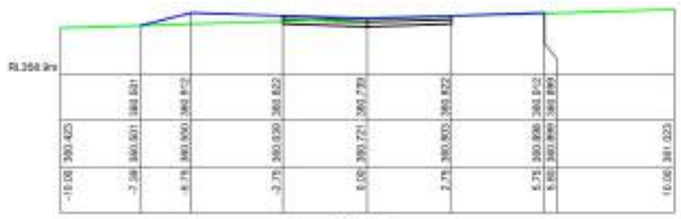
SHEET 2

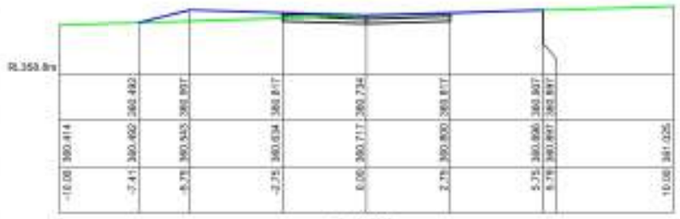
SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C154	A

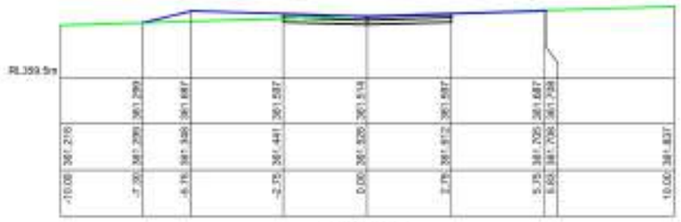


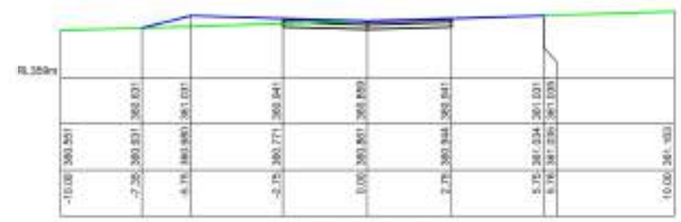


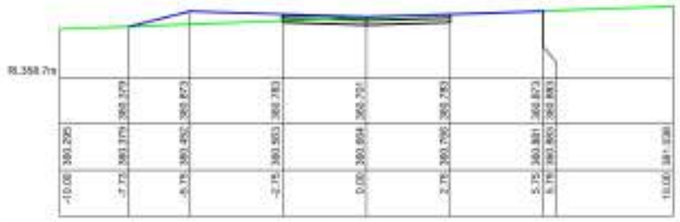


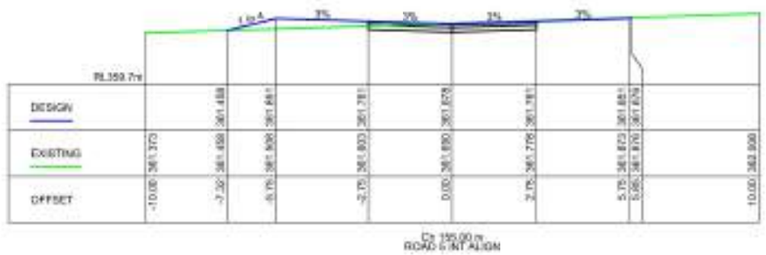


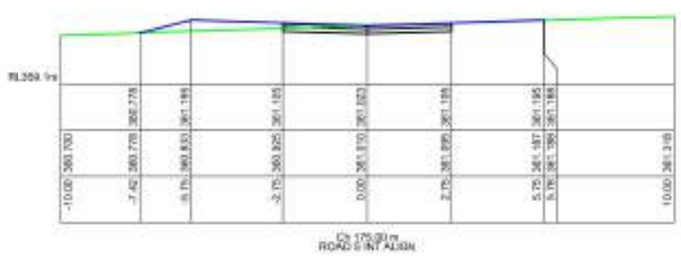


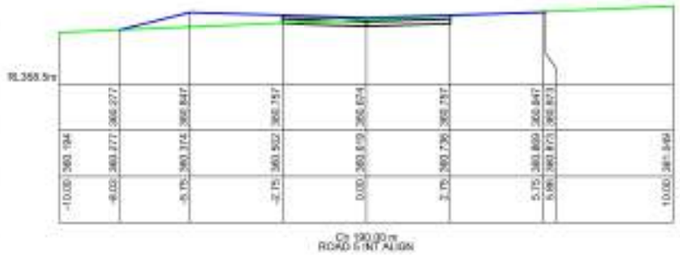












REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	UIK

TITLE	NAME
DRAWN	UIK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER:

FRAISH Consulting
Civil & Structural Engineers

CLIENT:

SOUTHERN RURAL HOLDINGS PTY. LTD.

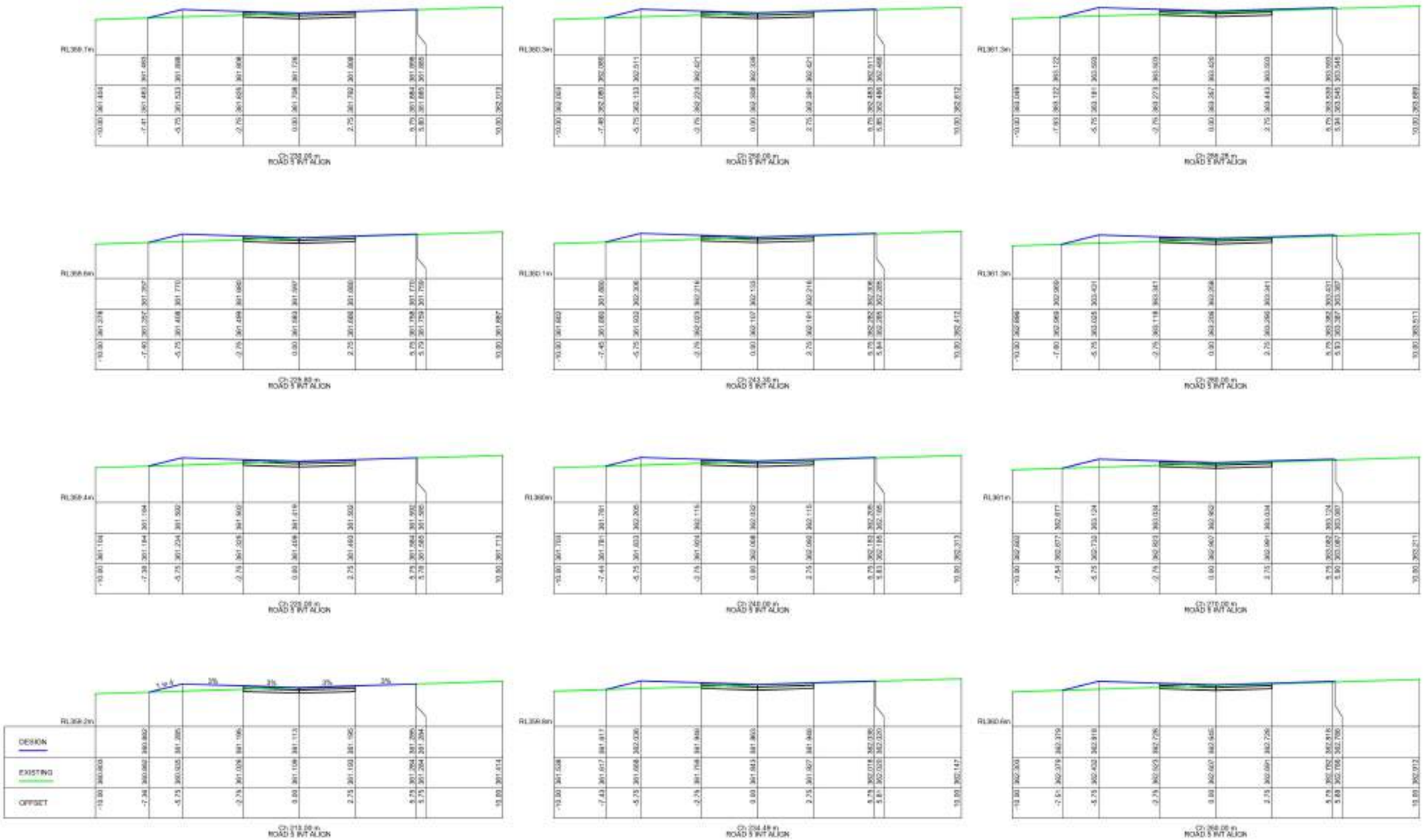
PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

CROSS SECTIONS
ROAD 5

SHEET 3

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C155	A



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	UIK

TITLE	NAME
DRAWN	UIK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER:

FRAISH Consulting
Civil & Structural Engineers

CLIENT:

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

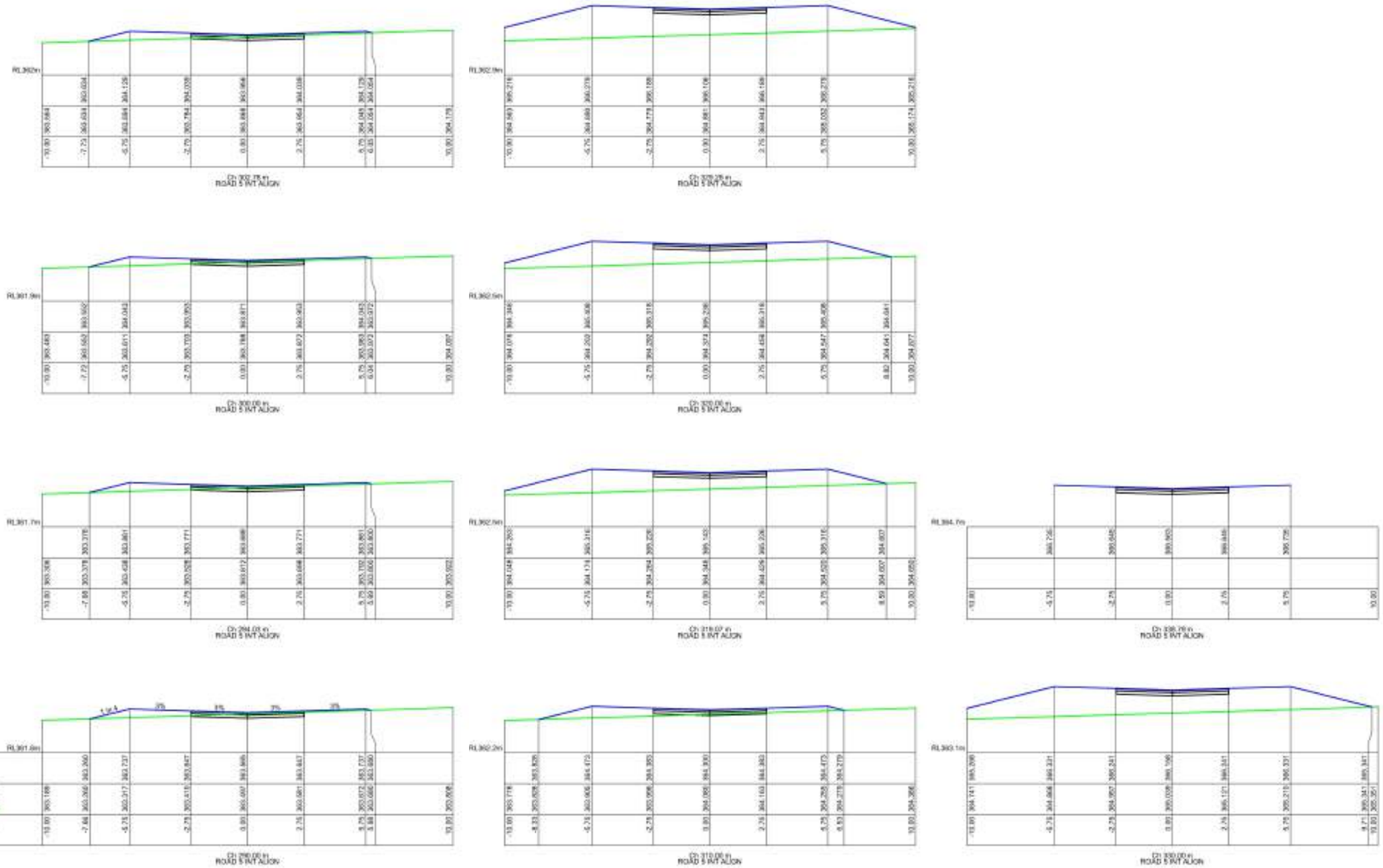
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

CROSS SECTIONS
ROAD 5

SHEET 4

SCALE	PHASE	DRAWING No	REV
AS SHOWN	DA	C156	A

Z:\0000_PROJECTS\Yarrabilly\Yarrabilly STAGE 3\DWG - YARRABILLY STAGE 3\DESIGN\C156 - Road 5 Cross Sections.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	UIK

TITLE: DRAWN UIK; DESIGNER AJD

DO NOT SCALE OFF DRAWINGS USE FIGURED DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER: FRAISH Consulting, Civil & Structural Engineers

CLIENT: SOUTHERN RURAL HOLDINGS PTY. LTD.

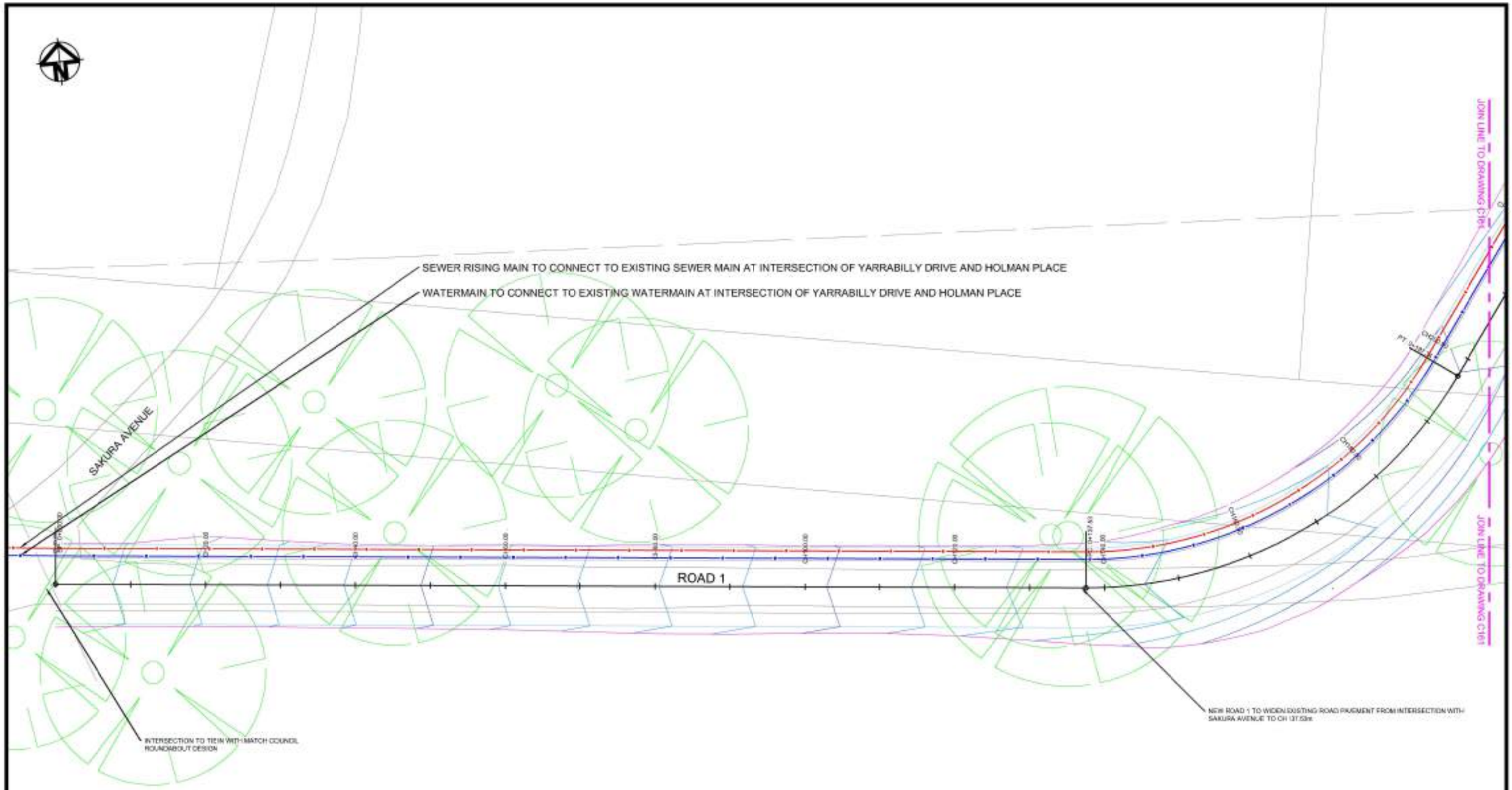
PROJECT TITLE: YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

CROSS SECTIONS ROAD 5

SHEET 5

SCALE	PHASE	DRAWING No	REV
AS SHOWN	DA	C157	A

Z:\PROJECTS\Yarrabilly\STAGE 5\DWG - YARRABILLY\3D_DESIGN R4 - STAGE 1.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	12/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FRAISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

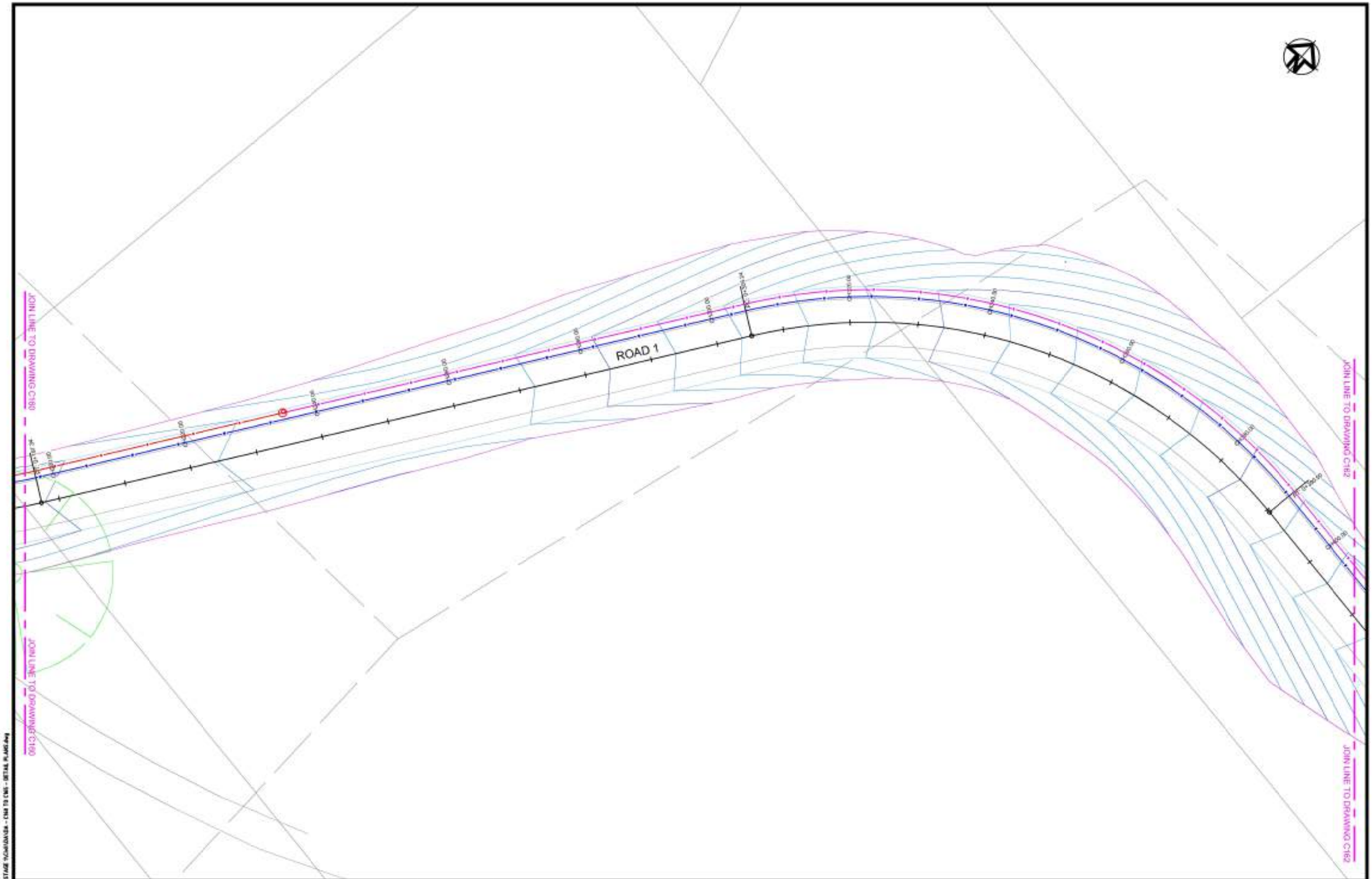
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

DETAIL PLAN

SHEET 1

SCALE	PHASE	DRAWING No	REV
AS SHOWN	DA	C160	A

Z:\PROJECTS\Marsh Yarrabilly\STAGE 1\Civil\DA\C3d - CAD TO CAD - DETAIL PLANS.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	12/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FraISH Consulting Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111588 & LOT 4, DP 1092182

DETAIL PLAN

SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C161	A

Z:\PROJECTS\Yarrabilly\STAGE 1\Civil\DWGs - CAD TO CAD - DETAIL PLANS.dwg

JOIN LINE TO DRAWING C163

JOIN LINE TO DRAWING C161

JOIN LINE TO DRAWING C161

ROAD 2

ROAD 1

ROAD 1

RAISED SPLITTER ISLANDS ON ALL APPROACHES IN ACCORDANCE WITH AUSTROADS ROUNDABOUT DESIGN STANDARD.

SECURITY GATE SIGNIFIES LIMIT OF STAGE 1 PAVEMENT WORKS.

SECURITY FENCING (TYPICAL)

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	12/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FRAISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10921 82

DETAIL PLAN

SHEET 3

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C162	A

Z:\PROJECTS\Arcadia\Yarrabilly\STAGE 1\Civil\DWGs - CIVIL TO CWS - DETAIL PLANS.dwg

JOIN LINE TO DRAWING C164

ROAD 2

ROAD 3

ROAD 4

ROAD 5

SECURITY GATE

GROSS POLLUTANT TRAP AND STORMWATER OUTLET

BULK EARTHWORKS PLATFORM <3% GRADIENT TO ASSIST WITH ACCESSIBILITY REQUIREMENTS

JOIN LINE TO DRAWING C162

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	12/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNED	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10921 82

DETAIL PLAN

SHEET 4

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C163	A

Z:\PROJECTS\Yarrabilly\STAGE 1\CAD\DWGs - CN3 TO CN5 - DETAIL PLANS.dwg

JOIN LINE TO DRAWING C165

GROSS POLLUTANT TRAP AND STORMWATER OUTLET

SEWER PUMP STATION

ROAD 2

ROAD 3

ROAD 4

ROAD 5

COMMUNITY HALL

JOIN LINE TO DRAWING C163

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	12/12/18	ISSUED FOR DEVELOPMENT APPLICATION	UKK

TITLE	NAME
DRAWN	UKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

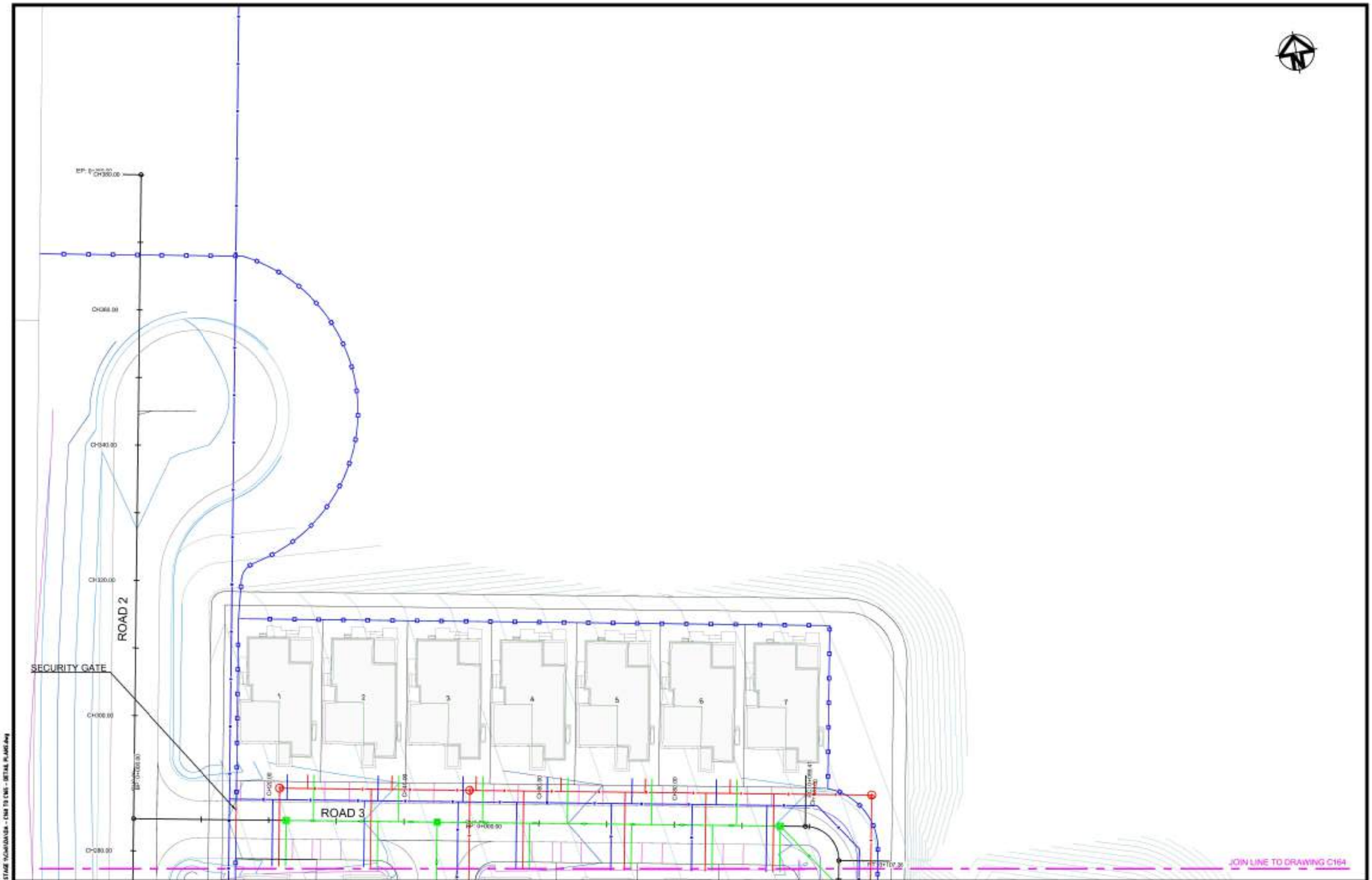
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10921 82

DETAIL PLAN

SHEET 5

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C164	A

Z:\PROJECTS\Arcadia\Yarrabilly\STAGE 2\Civil\DA\C3D - CIVIL TO CWS - DETAIL PLAN.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	12/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

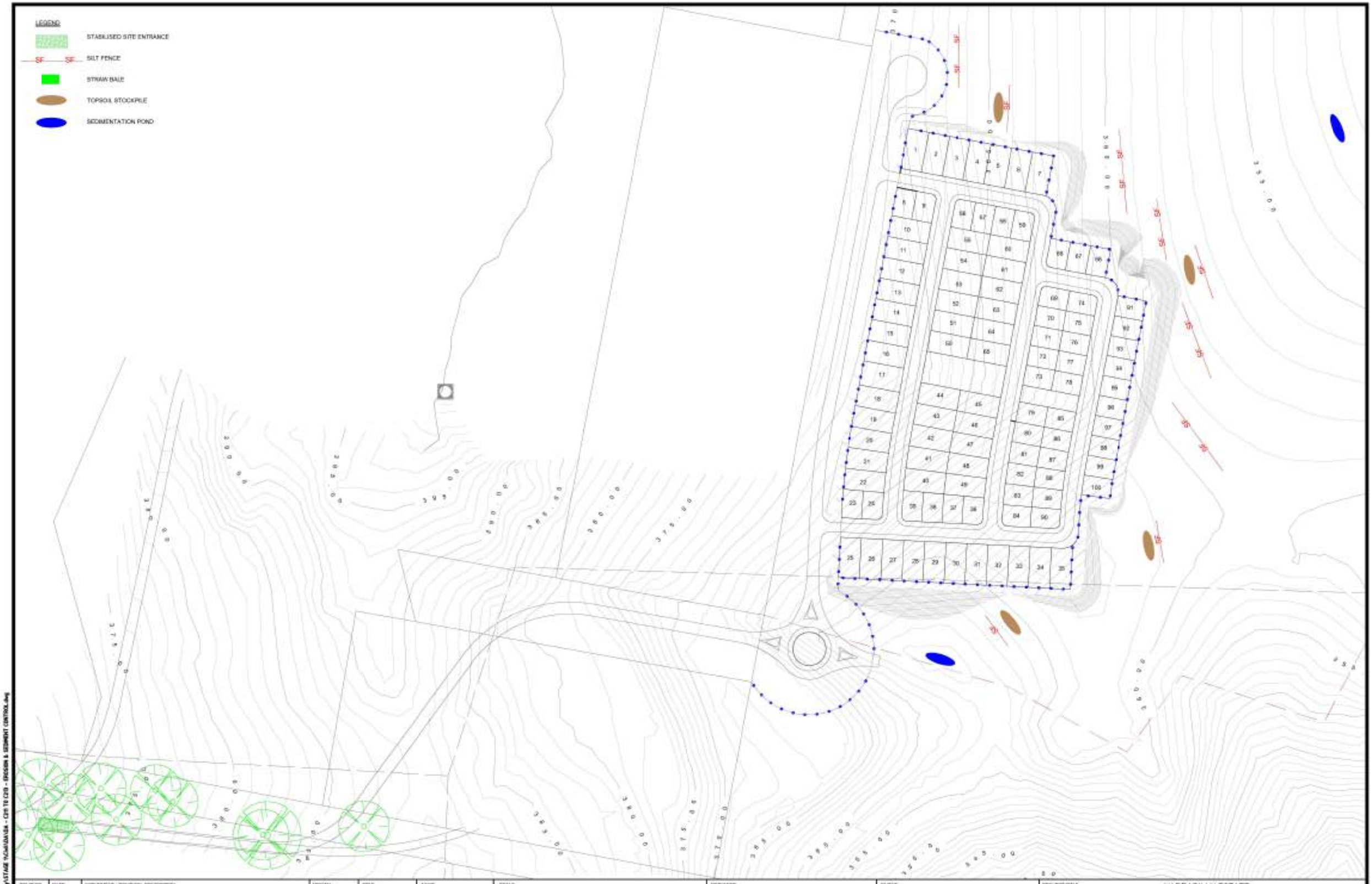
PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10921 82

DETAIL PLAN

SHEET 5

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C165	A



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	12/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 20m 40m 60m 80m

SCALE: A1 1:1000, A3 1:2000

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

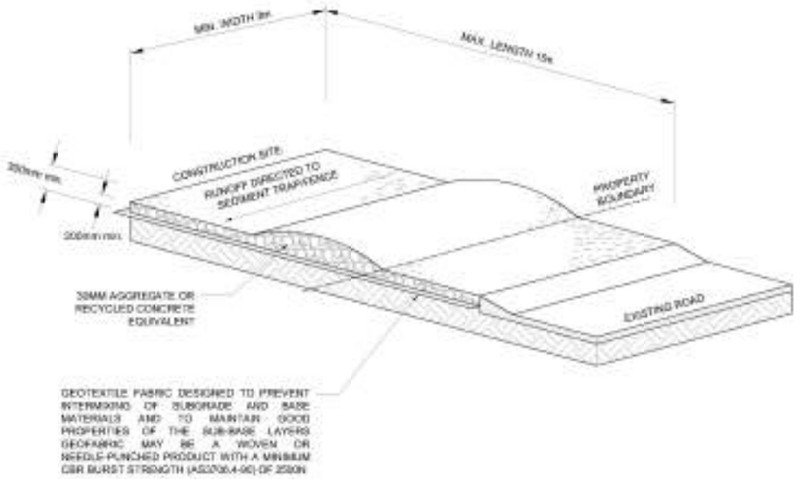
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

SEDIMENT & EROSION CONTROL PLAN

SHEET 1

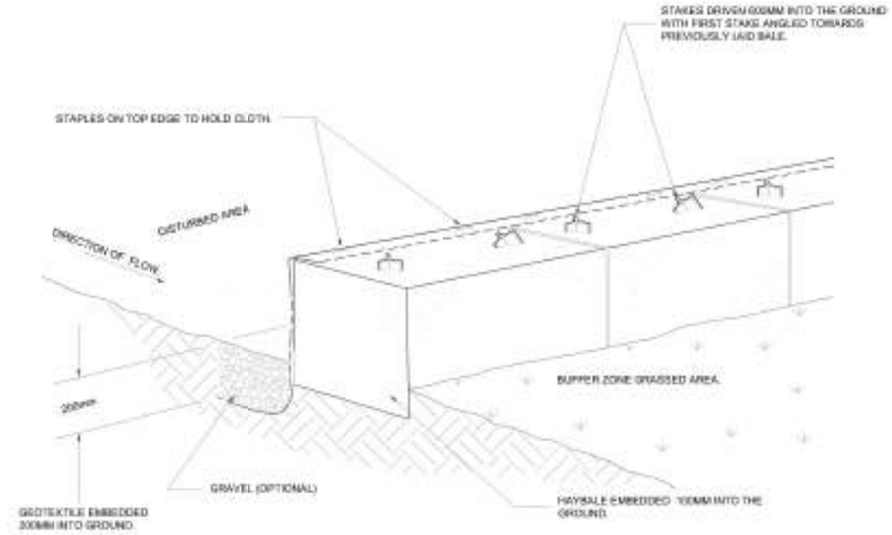
SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C211	A

Z:\PROJECTS\Arrabilly\STAGE 1\CAD\DA\DA - C211 TO C213 - EROSION & SEDIMENT CONTROL.dwg



STABILISED SITE ENTRANCE DETAIL

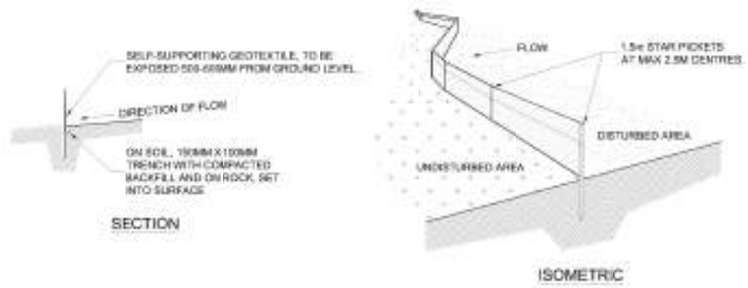
NOT TO SCALE



STRAW BALE AND GEOTEXTILE SEDIMENT FILTER

NOT TO SCALE

PLAN

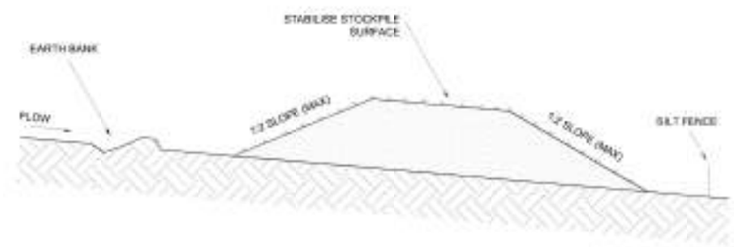


SECTION

ISOMETRIC

SILT FENCE DETAIL

NOT TO SCALE



TOPSOIL STOCKPILE DETAIL

NOT TO SCALE

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN	TITLE	NAME
A	12/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK	DRAWN	LKK
				DESIGNED	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER

FRAISH Consulting
Civil & Structural Engineers
info@fraish.com.au · www.fraish.com.au

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111580 & LOT 4, DP 1092182

SEDIMENT & EROSION CONTROL DETAILS

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C212	A

Z:\PROJECTS\Acad\Yarrabilly\STAGE %d\dwg\ds - C01 TO C09 - EROSION & SEDIMENT CONTROL.dwg

GENERAL NOTES

1. ALL WORK MUST COMPLY WITH ENVIRONMENT PROTECTION GUIDELINES FOR CONSTRUCTION AND LAND DEVELOPMENT IN THE NSW.
2. ALL EROSION & SEDIMENTATION CONTROLS TO BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BEST PARACTICE GUIDELINES CONTAINED WITHIN SOILS AND CONSTRUCTION VOL .1 (LANDCOM 2004) (BLUE BOOK).
3. THE KEY PRINCIPLES OF THIS PLAN ARE TO :-
   - INTEGRATE EROSION AND SEDIMENT CONTROL ISSUES INTO SITE AND CONSTRUCTION PLANNING
   - MINIMISE THE EXTENT AND DURATION OF SOIL DISTURBANCE
   - CONTROL WATER MOVEMENT AROUND AND THROUGH THE SITE
   - MINIMISE SOIL EROSION
   - PROMPTLY STABILISE DISTURBED AREAS
   - MAXIMISE SEDIMENT RETENTION ON SITE
   - MAINTAIN ALL ESC MEASURES IN PROPER WORKING ORDER AT ALL TIMES
4. ENVIRONMENT PROTECTION AGREEMENT TO BE TAKEN OUT BY THE CONTRACTOR WITH ENVIRONMENT PROTECTION AUTHORITY.
5. ALL NEW CONSTRUCTION WORK MUST BE CONTAINED WITHIN THE SITE EXCEPT FOR APPROVED SERVICE CONNECTIONS AND ROADWORKS.
6. LIMIT ACCESS TO SITE DURING AND IMMEDIATELY AFTER WET WEATHER
7. NO STORAGE OF CONSTRUCTION MATERIALS, PARKING OF VEHICLES NOR EQUIPMENT PERMITTED OUTSIDE OF BLOCK WITHOUT COUNCIL APPROVAL.
8. NO SITE SHEDS. STORAGE SHEDS, SITE AMENITIES TO BE ERECTED OUTSIDE OF BLOCK WITHOUT TAMS APPROVAL.
9. ALL SERVICE TRENCHES TO BE BACK FILLED WITHIN 24HOURS OF INSPECTION
10. EXCESS SOIL IS TO BE DISPOSE AT AN ENVIRONMENT PROTECTION AUTHORITY APPROVED LOCATION.
11. THE CONTRACTOR TO CONTACT THE ENVIRONMENT PROTECTION AUTHORITY TO ARRANGE A SITE INSPECTION AND ENDORSEMENT OF SEDIMENT AND EROSION CONTROL MEASURES PRIOR TO WORKS COMMENCING.
12. THE CONTRACTOR TO CONTACT THE ENVIRONMENT PROTECTION AUTHORITY TO DISCUSS ANY PROPOSED MAJOR CHANGES TO SEDIMENT AND EROSION CONTROLS ON SITE PRIOR TO IMPLEMENTING THE CHANGES.
13. THE CONTRACTOR TO ENSURE CONTRACTORS ACCESS AND EXIT THE SITE USING ONLY ENVIRONMENT PROTECTION AUTHORITY APPROVED STABILISED ACCESS/EXIT POINTS AS DETAILED ON ENDORSED SEDIMENT AND EROSION CONTROL PLANS.
14. WHERE UNDERGROUND STORMWATER DRAINAGE IS INSTALLED TO ADJACENT ROADWORKS, PROVIDE INLET FILTER IN ACCORDANCE WITH DETAIL ON EROSION & SEDIMENT CONTROL DETAILS DRAWING.

STABILISED SITE ENTRANCE

1. STABILISED SITE ENTRANCE TO BE CONSTRUCTED AT THE LOCATION(S) INDICATED ON THIS PLAN.
2. STABILISED SITE ENTRANCE TO BE CONSTRUCTED IN ACCORDANCE WITH DETAIL ON EROSION & SEDIMENT CONTROL DETAILS DRAWING.
3. AT THE LOCATION OF THE STABILISED SITE ENTRANCE FIRST STRIP THE TOPSOIL, LEVEL THE AREA AND COMPACT THE SUBGRADE.
4. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
5. CONSTRUCT A 200MM THICK PAD OVER THE GEOTEXTILE USING COARSE AGGREGATE MIN SIZE 30MM.
6. ENSURE THAT THE STABILISED SITE ENTRANCE IS AL LEAST 15M LONG OR TO THE BUILDING ALIGNMENT AND AT LEAST 3M WIDE.
7. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.
8. REGULARILY MAINTAIN THE STABILISED SITE ENTRANCE BY REPLACING AGGREGATE IF INNUNDATED WITH SILT.

SEDIMENT FENCING

1. SEDIMENT FENCING TO BE CONSTRUCTED AT THE LOCATION(S) INDICATED ON THIS PLAN.
2. SEDIMENT FENCING TO BE CONSTRUCTED IN ACCORDANCE WITH DETAIL ON EROSION & SEDIMENT CONTROL DETAILS DRAWING.
3. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL 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 BETWEEN RETURNS 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.
4. CUT A 150MM DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
5. DRIVE 1.5M LONG STAR PICKETS INTO GROUND AT 2.5M INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
6. FIX SELF SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX 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 ACCEPTABLE.
7. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150MM OVERLAP.
8. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOUROUGHLY OVER THE GEOTEXTILE.
9. REGULARILY MAINTAIN THE SILT FENCING BY REMOVING SILT AFTER RAINFALL EVENTS.

TOPSOIL STOCKPILES

1. TOPSOIL STOCKPILES TO BE CONSTRUCTED AT THE LOCATION(S) INDICATED ON THIS PLAN.
2. TOPSOIL STOCKPILES TO BE CONSTRUCTED IN ACCORDANCE WITH DETAIL ON EROSION & SEDIMENT CONTROL DETAILS DRAWING.
3. PLACE STOCKPILES MORE THAN 2M (PREFERABLY 5M) FROM EXISTING VEGETATION, CONCENTRATED WATERFLOWS, ROADS AND HAZARD AREAS.
4. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
5. BATTERS SHOULD BE NO STEEPER THAN 1:2.
6. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2M IN HEIGHT.
7. WHERE TOPSOIL STOCKPILES ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE THEIR SURFACE AREA USING AN APPROVED METHOD. THIS SHOULD REDUCE THE C-FACTOR TO LESS THAN 0.10.
8. CONSTRUCT EARTHBANKS ON THE UPSLOPE SIDE OF TOPSOIL STOCKPILES TO DIVERT WATER AROUND.
9. CONSTRUCT SEDIMENT FENCES AROUND THE DOWNSLOPE SIDE OF TOPSOIL STOCKPILES. PREFERRABLY 1 TO 2M FROM THE EDGE OF THE STOCKPILE.
10. REGULARILY INSPECT AND MAINTAIN TOPSOIL STOCKPILE EROSION AFTER RAINFALL EVENTS.

EARTHWORKS, DISPOSAL OF SPOIL & IMPORTING FILL

1. PRIOR TO ANY WORKS COMMENCING INVOLVING EXPORT OF SPOIL GREATER THAN 100M³, THE FOLLOWING INFORMATION MUST BE PROVIDED TO THE ENVIRONMENT PROTECTION AUTHORITY:

a. WHERE THE SPOIL WILL ORIGINATE FROM,
b. WHO IS DISPOSING OF THE SPOI
c. WHERE THE SPOIL WILL BE TAKEN
d. THE AMOUNT OF SPOIL TO BE TAKEN AWAY
e. MOVEMENT DATES AND CONTACT DETAILS
f. DESCRIPTION OF THE TYPE OF SPOIL TAKEN AWAY (VENM, BRU ETC)
g. DETAILS OF HOW RECORDS WILL BE KEPT
h. TIME FRAME TO COMPLETE THE WORKS TO THE SATISFACTION OF THE ENVIRONMENT PROTECTION AUTHORITY.

5. SPOIL MAY BE TAKEN TO AN APPROVED LANDFILL SITE WITHOUT APPROVAL.
6. IF THE SPOIL IS TO BE TAKEN TO AN AREA OTHER THAN APPROVED LANDFILL SITE, ENSURE THE ACCEPTOR OF THE SPOIL IS AWARE OF THE REQUIREMENTS SETOUT IN THE ENVIRONMENT PROTECTION GUIDELINES FOR CONSTRUCTION AND LAND DEVELOPMENT IN NSW.
7. IF IMPORTING MATERIAL TO MAKE UP A SHORTFALL THE CONTRACTOR SHOULD ALSO BE AWARE OF THE REQUIREMENTS SETOUT IN SECTION 8.2 OF THE ENVIRONMENT PROTECTION GUIDELINES FOR CONSTRUCTION AND LAND DEVELOPMENT IN THE ACT.
8. THE CONTRACTOR IS NOT TO ACCEPT IMPORTED MATERIAL WITHOUT RECEIVING DOCUMENTED EVIDENCE THAT THE MATERIAL COMPLIES WITH THESE REQUIREMENTS.
9. WASTE ENCLOSURE(S) ARE TO BE USED FOR ALL RUBBISH ON SITE AND RUBBISH REMOVED FROM ENCLOSURE(S) WHEN REQUIRED OR FULL.

DUST MANAGEMENT

WHERE BUILDING WORK GENERATES DUST, ALL REASONABLE AND PRACTICABLE MEASURES SHOULD BE TAKEN TO MINIMISE THAT DUST.
THIS CAN OFTEN BE ACHIEVED BY :-

1. RETAIN EXISTING VEGETATION WHERE POSSIBLE
2. STRIPPING ARES PROGRESSIVELY AND ONLY WHERE IT IS NECESSARY FOR WORKS TO OCCUR;
3. EMPLOYING STABILISING METHODS SUCH AS MATTING, GRASSING OR MULCH;
4. DAMPENING THE GROUND WITH A LIGHT WATER SPRAY (CONTACT THE ENVIRONMENT PROTECTION AUTHORITY FOR REQUIREMENTS DURING EXTREME DROUGHT CONDITIONS);
5. ROUGHENING SURFACE OF EXPOSED SOIL;
6. COVERING STOCKPILES AND LOCATING THEM WHERE THEY ARE PROTECTED FROM THE WIND;
7. RESTICTING VEHICLE MOVEMENTS;
8. COVERING THE LOAD WHEN TRANSPORTING MATERIAL;
9. CONSTRUCTING WIND BREAKS SUCH AS WIND FENCES IN ACCORDANCE WITH THE BLUE BOOK;
10. A WATER CART OR SUFFICIENT WATER SPRAYS SHALL BE MADE AVAILABLE AT ALL TIMES. IN ADVERSE CONDITIONS WHEN DUST CANNOT BE ADEQUATELY CONTROLLED WHEN WORKS ARE BEING UNDERTAKEN, WORKS WILL CEASE IN THESE AREAS UNTIL CONDITIONS IMPROVE;
11. WATER SHALL BE APPLIED TO SUPPRESS DUST FROM OPEN EARTHWORKS AS WELL AS UNPROTECTED STOCKPILES;
12. AREAS OF COMPLETED EARTHWORKS SHALL BE PROGRESSIVELY REHABILITATED WITH DRYLAND GRASS AND FENCED OFF AS SOON AS PRACTICABLE TO PREVENT FURTHER EROSION;
13. THE CONTRACTOR SHALL CONTACT ACTEWAGL TO OBTAIN RECYCLED WATER FROM THE LOWER MOLONGOLO;
14. THE CONTRACTOR IS TO CONTACT THE WATER RESOURCES UNIT TO OBTAIN AN EXEMPTION TO USE NON-POTABLE WATER FROM ON OR OFF THE SITE IF REQUIRED;

NOISE

ENSURE ALL BUILDING WORK THAT GENERATES NOISE IS CONDUCTED WITHIN THE TIME PERIODS DETAILED IN SCHEDULE 2 OF THE ENVIRONMENT PROTECTION REGULATIONS 2005.
IN ADDITION:

1. SCHEDULE NOISY ACTIVITIES FOR THE LEAST SENSITIVE TIMES OF THE DAY SUCH AS MID-MORNING AND MID-AFTERNOON.
2. SELECT MACHINERY THAT PRODUCE LESS NOISE; AND
3. ENSURE MACHINERY IS WELL MAINTAINED.

FIRE

1. BURNING OF WASTE MATERIALS ON THE SITE, SUCH AS PLASTICS, CHEMICALS OR WOOD THAT MAY BE PAINTED, CHEMICALLY TREATED OR CONTAMINATED WITH CHEMICALS IS ILLEGAL.
2. A FIRE MAY BE PERMITTED FOR HEATING PURPOSES PROVIDED IT IS IN A BRAZIER OR CONSTRUCTED FIREPLACE. ONLY SEASONED, UNTREATED TIMBER CAN BE BURNED FOR HEATING PURPOSES.

SEDIMENT RETENTION POND NOTES

1. DISCHARGE FROM THE POND IS PERMISSIBLE WHEN THE WATER PH IS 6.5-8.5 AND IS CLARIFIED TO AT OR BELOW 60MG/L (50NTU). IF SEDIMENT LEVEL IS GREATER, THEN PRIOR TO DISCHARGE, THE DAM MUST BE DOSED WITH EITHER ALUM OR GYPSUM AND ALLOWED TO SETTLE UNTIL THE SEDIMENT IS LESS THAN 60MG/L (50NTU).
2. WATER LEVEL TO BE MAINTAINED AT LESS THAN 20% OF CAPACITY TO ALLOW RUNOFF STORAGE DURING A RAIN EVENT.
3. REGULAR DREDGING OF THE POND MUST BE CARRIED OUT TO REMOVE SILT.
4. SITE DRAWING AND DETAILS MUST BE PROVIDED TO ENVIRONMENT PROTECTION AUTHORITY, FOR APPROVAL PRIOR TO WORKS COMMENCING.

MAINTENANCE & INSPECTION

DAILY

1. SWEEP AND REMOVE DIRT AND ANY OTHER BUILDING MATERIAL FROM GUTTERS, FOOTPATHS OR ROADWAYS ADJACENT TO THE SITE BY CLOSE OF BUSINESS AND OR PRIOR TO RAIN AND WHEN REQUIRED.
2. ALL NECESSARY STEPS SHOULD BE TAKEN THAT ARE PRACTICAL AND REASONABLE TO MINIMISE DUST POLLUTION.

WEEKLY

1. INSPECT STABILISED CONSTRUCTION ENTRY AND TURN OVER STABILISED CONSTRUCTION ENTRY MATERIAL MONTHLY AND RENEW WHEN REQUIRED.
2. CHECK AND REINSTATE SILT CONTROL FENCES.

DURING/AFTER WET WEATHER:

3. LIMIT CONSTRUCTION VEHICLE ACCESS TO SITE DURING AND IMMEDIATELY FOLLOWING WET WEATHER.

CONTACT DETAILS

PROJECT MANAGER:TBA
SITE MANAGER: TBA

HOURS OF OPERATION

SITE WORKS TO BE CONDUCTED ONLY BETWEEN THE FOLLOWING HOURS:

- WEEKDAYS 7.00AM TO 6.00PM;
- SATURDAYS 7.00AM TO 6.00PM
- SUNDAYS WORK MUST NOT EXCEED NOISE STANDARD

GENERAL NOTES

1. WASTE ENCLOSURE(S) ARE TO BE USED FOR ALL RUBBISH ON SITE AND RUBBISH REMOVED FROM ENCLOSURE(S) WHEN REQUIRED OR FULL.
2. ALL WORK MUST COMPLY WITH ENVIRONMENT PROTECTION GUIDELINES FOR CONSTRUCTION AND LAND DEVELOPMENT IN NSW.

CUT AND FILL VOLUMES

CUT: TBA
FILL: TBA

EXCESS SOIL TO BE DISPOSED OF AT AND ENVIRONMENT PROTECTION AUTHORITY APPROVED LOCATION.

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN	TITLE	NAME
A	12/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK	DRAWN	LKK
				DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER: FRAISH Consulting, Civil & Structural Engineers

CLIENT: SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE: YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111598 & LOT 4, DP 10921 82

SEDIMENT & EROSION CONTROL NOTES

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C213	A

Z:\PROJECTS\Arnold Yarrabilly\STAGE 1\Civil\DA\Sds - C213 TO C219 - EROSION & SEDIMENT CONTROL.dwg

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 10m 20m 30m 40m

SCALE: A1 1:500, A3 1:1000

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 1092182

PAVEMENT PLAN

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C220	A

Z:\PROJECTS\Arnold\Yarrabilly\STAGE 1\Civil\DA\C2x - C20 to C221 - PAVEMENT PLAN.dwg

ROAD 1

ROAD 1

ROAD 2

ROAD 2

ROCK OUTCROP

ROAD 4

ROAD 5

ROAD 3

ROAD 3

ROAD 5

ROCK OUTCROP

ROCK OUTCROP

ROCK OUTCROP

365.00

360.00

LEGEND

PAVEMENT TYPE 1

PAVEMENT TYPE 2

PAVEMENT TYPE 3

PAVEMENT TYPE 4

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNED	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FraISH Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 10m 20m 30m 40m

SCALE: A1 1:500, A3 1:1000

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

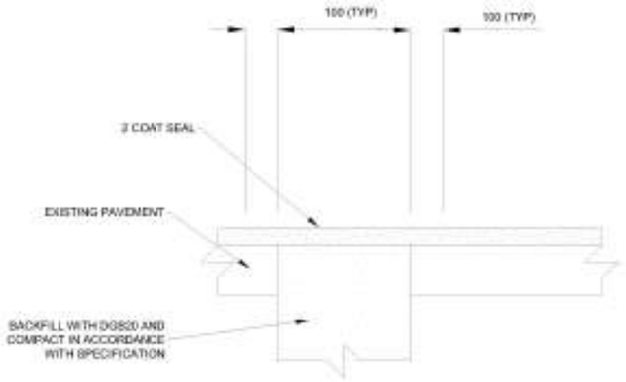
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

PAVEMENT PLAN

SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C221	A

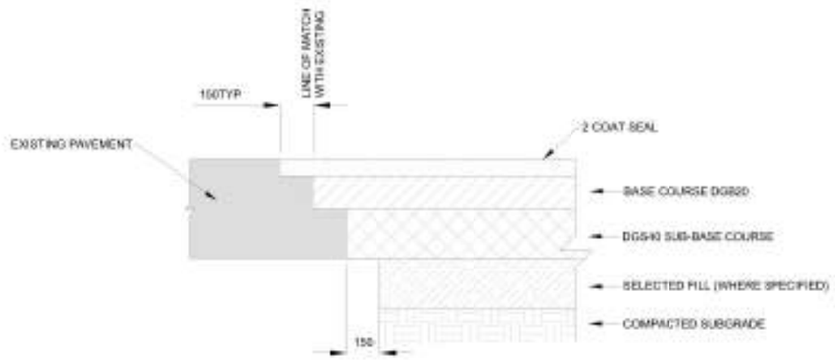
Z:\PROJECTS\Aland Township\STAGE 2\CAD\DA\DA - C220 to C231 - PAVEMENT PLAN.dwg



TRENCH IN EXISTING PAVEMENT TYPICAL DETAIL

NOT TO SCALE

AT COMPLETION OF PAVEMENT WORKS APPLY BITUMEN EMULSION AND SAND COVER TO JOIN TO MAKE FLUSH WITH ADJOIN SURFACE



MATCH OF EXISTING PAVEMENT

NOT TO SCALE

AT COMPLETION OF PAVEMENT WORKS APPLY BITUMEN EMULSION AND SAND COVER TO JOIN TO MAKE FLUSH WITH ADJOIN SURFACE

PAVEMENT TYPE 1

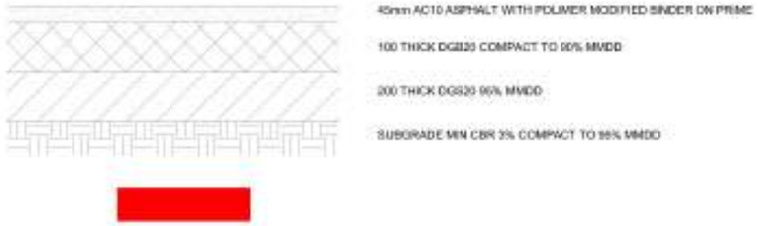
NOT TO SCALE

PAVEMENT TYPE 2

NOT TO SCALE

PAVEMENT TYPE 3

NOT TO SCALE



PAVEMENT TYPE 4

NOT TO SCALE

PAVEMENT NOTES

1. PAVEMENT PLANS REFER DRAWING NO C242.
2. REFER TO SPECIFICATION
   (i) LAYER MATERIALS
   (ii) LAYER THICKNESS
   (iii) COMPACTION REQUIREMENTS OF SUBGRADE PAVEMENT MATERIALS.
3. PAVEMENT INTERFACE JOINTS SHALL BE LOCATED OUTSIDE OF VEHICULAR WHEEL PATH WHERE POSSIBLE.
4. IF CONSTRUCTION IS COMPLETED OUTSIDE OF NORMAL SEALING SEASON, AS SPECIFIED BY COUNCIL, THEN 10mm PRIMER SEAL (AMC4) IS REQUIRED PRIOR TO THE APPLICATION OF A FINAL 2 COAT SEAL WITHIN SEALING SEASON.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE.
6. FOR GENERAL NOTES REFER DRAWING C005.
7. FOR GENERAL LEGEND REFER DRAWING C005.
8. MINIMUM LENGTH OF KERB TRANSITION (T) EQUALS 1m

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

DESIGNER: FRAISH Consulting, Civil & Structural Engineers

CLIENT: SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE: YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111588 & LOT 4, DP 10821 82

PAVEMENT DETAILS

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C225	A

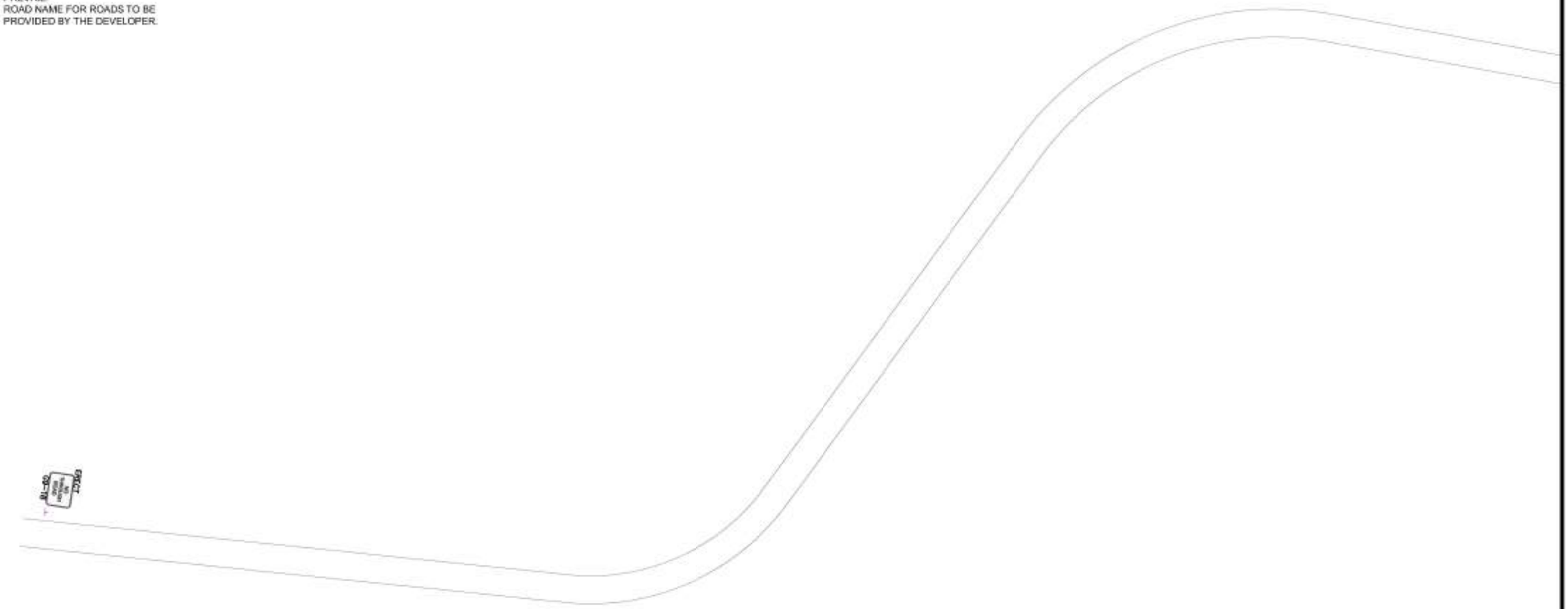
Z:\PROJECTS\Arnold\Yarrabilly-ESTATE 15-047\DWGs\C225 - PAVEMENT DETAILS.dwg

LEGEND

ERECT SIGN

GENERAL NOTES

1. ALL PAVEMENT MARKING AND SIGNPOSTING TO BE IN ACCORDANCE WITH "INTERIM GUIDE TO SIGNS AND MARKINGS" RMS, AS1742 AND AUSPEC. TECHNICAL DIRECTIONS AND MANUALS PERIODICALLY ISSUED BY THE RMS, WHICH SUPERSEDE THE ABOVE WILL PREVAIL.
2. ROAD NAME FOR ROADS TO BE PROVIDED BY THE DEVELOPER.



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	UIK

TITLE	NAME
DRAWN	UIK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 10m 20m 30m 40m

SCALE: A1 1:500, A3 1:1000

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

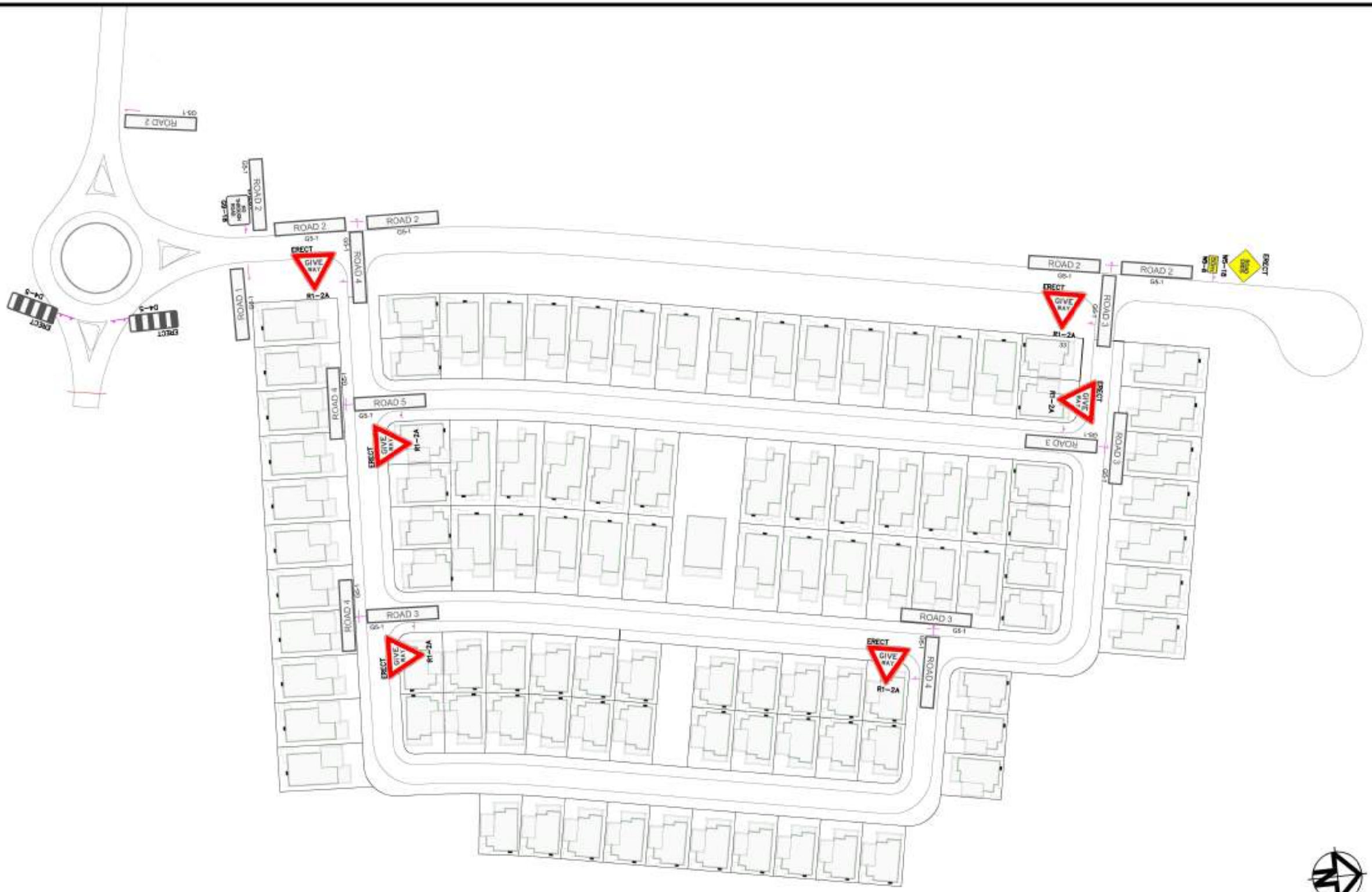
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 1092182

PAVEMENT MARKINGS & SIGNAGE

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C230	A

Z:\PROJECTS\Arkwell\Yarrabilly\STAGE 1\Civil\DA\DA - C230 to C231 - PAVEMENT MARKINGS & SIGNS.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN	TITLE	NAME
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK	DRAWN	LKK
				DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 10m 20m 30m 40m

SCALE: A1 1:500, A3 1:1000

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111561 & LOT 4, DP 10921 82

PAVEMENT MARKINGS & SIGNAGE

SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C231	A

Z:\PROJECTS\Arnold's Yarrabilly\STAGE 1\Civil\DA\C3x - C230 to C231 - PAVEMENT MARKINGS & SIGNS.dwg

LEGEND

- STOCK PROOF FENCE
- EXISTING FENCE
- DOG PROOF FENCE
- LOT FENCE

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	UIK

TITLE	NAME
DRAWN	UIK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 10m 20m 30m 40m

SCALE: A1 1:500, A3 1:1000

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

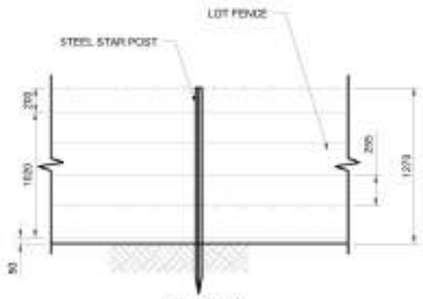
PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

FENCING PLAN

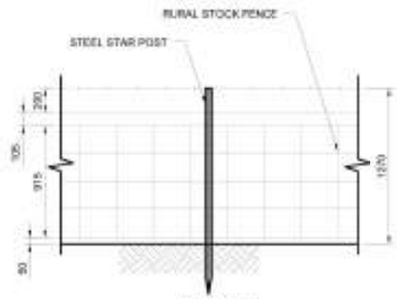
SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C240	A



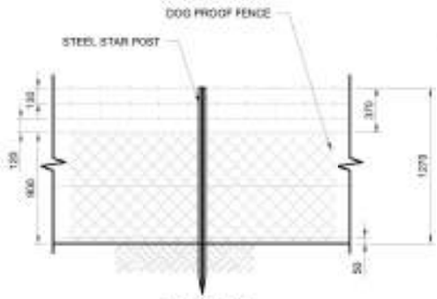
ELEVATION
LOT FENCE
SCALE 1:25

1.27m HIGH RURAL FENCING, STEEL STAR PICKETS AT 5m CENTRES, 1 TOP BARBED WIRE, 3 PLAIN WIRES.1 BARBED WIRE, 1 PLAIN WIRE.



ELEVATION
RURAL STOCK FENCE
SCALE 1:25

1.27m HIGH RURAL FENCING, STEEL STAR PICKETS AT 5m CENTRES, 1 TOP BARBED WIRE, 1 PLAIN WIRE, 900mm HIGH HINGELOCK OR RINGLOCK ATATCHED TO 3 PLAIN WIRES.



ELEVATION
DOG PROOF FENCE
SCALE 1:25

1.27m HIGH RURAL FENCING, STEEL STAR PICKETS AT 5m CENTRES, 1 TOP BARBED WIRE WITH TWO ADDITIONAL STRANDS OF BARBED WIRE, 1050Mm NETTING ATTACHED WITH THREE PLAIN WIRES (TOP, MIDDLE AN BOTTOM), 900mm, 1 PLAIN WIRE, 900mm ABOVE GROUND LEVEL, SKIRTED 150mm.

SECTION
DOG PROOF FENCE
SCALE 1:25

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	UDK

TITLE	NAME
DRAWN	UDK
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FRAISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 10m 20m 30m 40m

SCALE: A1 1:500, A3 1:1000

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

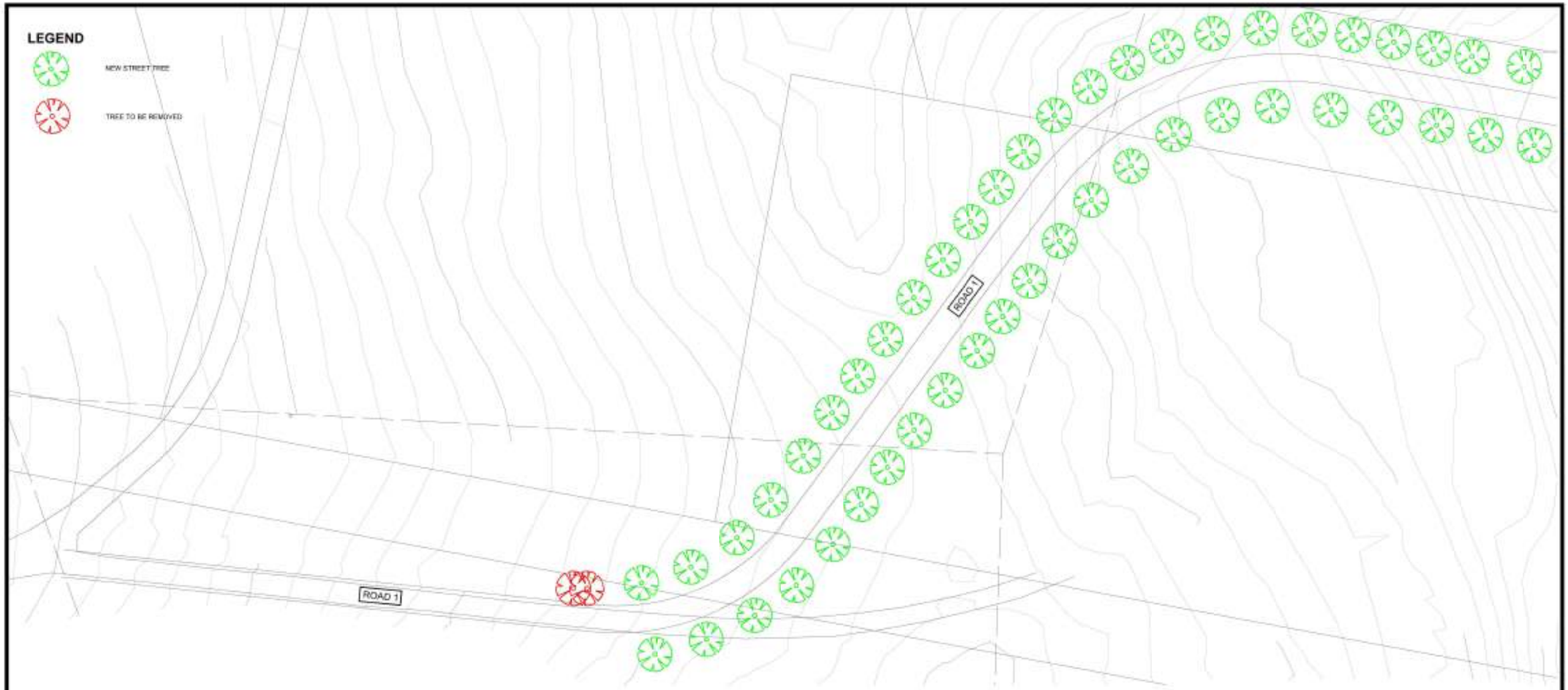
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10921 82

FENCING DETAILS

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C245	A

Z:\PROJECTS\Marsh\Yarrabilly\STAGE 1\Civil\DWGs - Civil & CAD - FENCING PLAN & DETAILS.dwg



SPECIES

TREE SPECIES TO BE IN ACCORDANCE WITH COUNCILS STREET TREE MANAGEMENT PLAN

STREET PLANTING

ALL LANDSCAPING TO BE CONSTRUCTED IN ACCORDANCE WITH AUSPEC(P) AS MODIFIED BY COWRA CITY COUNCIL. STREET TREES ARE TO BE PLACTED AT A RATE OF AT LEAST ONE TREE PER LOT. THE SPECIES USED MUST BE APPROVED BY COWRA CITY COUNCIL AND MUST HAVE NO IMPACT ON THE UNDERGROUND SERVICES. ROOT BARRIERS WILL BE INSTALLED IN THE PLANING SITE TO PREVENT THE SPREAD OF ROOTS WITHIN PROXIMITY OF THE UNDERGROUND SERVICES.

PLANTING

PLANTING SHOULD AVOID EXCESSIVE HOT OR COLD SITUATIONS AND IS BEST IN AUTUMN OR SPRING.

PLANTS ARE TO BE WELL WATERED PRIOR TO PLANTING.

GROUND SURFACE IS TO BE LEVEL AND FREE OF WEEDS AND DEBRIS. A HOLE IS TO BE DUG AT LEAST TWICE AS LARGE AS THE POT SIZE. HOLES DUG USING A POST HOLE DIGGER OR AUGER CAN RESULT IN 'GLAZED' SURFACE. IF THIS METHOD IS USED, ENSURE THE SIDES OF THE HOLE ARE BROKEN UP WITH A SHADE SO THAT ROOTS CAN PENETRATE INTO SURROUNDING SOIL.

IF PLANT STOCK IN A BEG, CUT BEG AWAY FROM THE ROOT BALL. DO NO PULL THE PLANT OUT OF THE BEG AND RISK DAMAGING THE ROOTS. IF THE PLANS ARE PROVIDED IN THE PLASTIC POTS, SQUEEZE THE SIDES OF THE POT TO LOOSEN THE SOIL. THEN, HOLDING THE POT UPSIDE DOWN , FIRMLY TAP THE BASE WHILST SUPPORTING THE PLAN.

IF THE PLANT IS ROOT BOUND, GENTLY TEASE OUT THE TANGLED ROOTS. PLACE IN THE PLANT IN THE PREPARED HOLE AND BACKFILL WITH THE REMOVED SOIL. THE SOIL SURFACE LEVEL WITHIN TO POT IS TO BE MAINTAINED AS THE SOIL SURFACE LEVEL WHEN PLANTING. IF THE NURSERY STOCK TREE IS TIED TO AN EXISTING STAKE, THIS SHOULD BE RETAINED AND REMOVED ONCE THE PLANT IS ESTABLISHED.

A SLOW RELEASE FERTILIZER SHOULD BE MIXED IN WITH THE BACKFILLING SOIL TO ASSIST PLANT ESTABLISHMENT. THE FERTILIZER MUST BE SUITABLE FOR NATIVE PLANTS AND IS TO BE APPLIED AT THE RATES SPECIFIED BY MANUFACTURER.

EACH PLANT SHOULD BE SUPPORTED WITH ONE HARDWOOD STEAK (1.5m X 25mm X 25mm). THIS IS TO BE DRIVEN IN TO THE GROUND, 30cm FROM THE BASE OF THE TREE AND ATTACHED TO THE TREE USING A ROPE OR SOFT RUBBER TREE TIE. THE TE IS TO BE WRAPPED AROUND THE TREE IN A FIGURE 3 FASHION. THEN SECURED AROUND THE STAKE.

THE DISTURBED PLANTING AREA SHOULD BE MULCHED TO A THICKNESS OF 100mm, USE AGED WOODCHIPS, STRAW OR FOREST LITTER. MULCHING WILL HELP RETAIN MOISTURE AROUND THE ROOTS AND PREVENT WEEDS.

FOLLOWING PLANTING EACH TREE SHOULD BE THOROUGHLY WATERED.

MAINTENANCE

TREES SHOULD BE WATERED TWICE A WEEK IN THE FIRST 2 WEEKS AND WEEKLY FOR THE FIRST 6 MONTHS. THIS WILL ASSIST THE ROOTS TO GROW BEYOND THE POTTING MIX INTO NATURAL SOIL. THE TREES SHOULD ALSO BE MONITORED DURING WEATHER IN THIS PERIOD AND REPLACED IF NECESSARY. WEEDS SHOULD BE REMOVED OR SPOT SPRAYED USING A SELECTIVE HERBICIDE TO PREVENT COMPETITION FOR WATER. STAKE AND TIES CAN BE REMOVED ONCE THE TREES ARE OF A SELF SUPPORTING SIZE.

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN	TITLE	NAME
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	UIK	DRAWN	UIK
				DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 10m 20m 30m 40m

SCALE: A1 1:500, A3 1:1000

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

Unit 2, 14 Victoria Street, Fyshwick ACT
PO Box 300, Fyshwick ACT 2609
02 6280 5053 - 0408 526 755
info@fraish.com.au - www.fraish.com.au

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

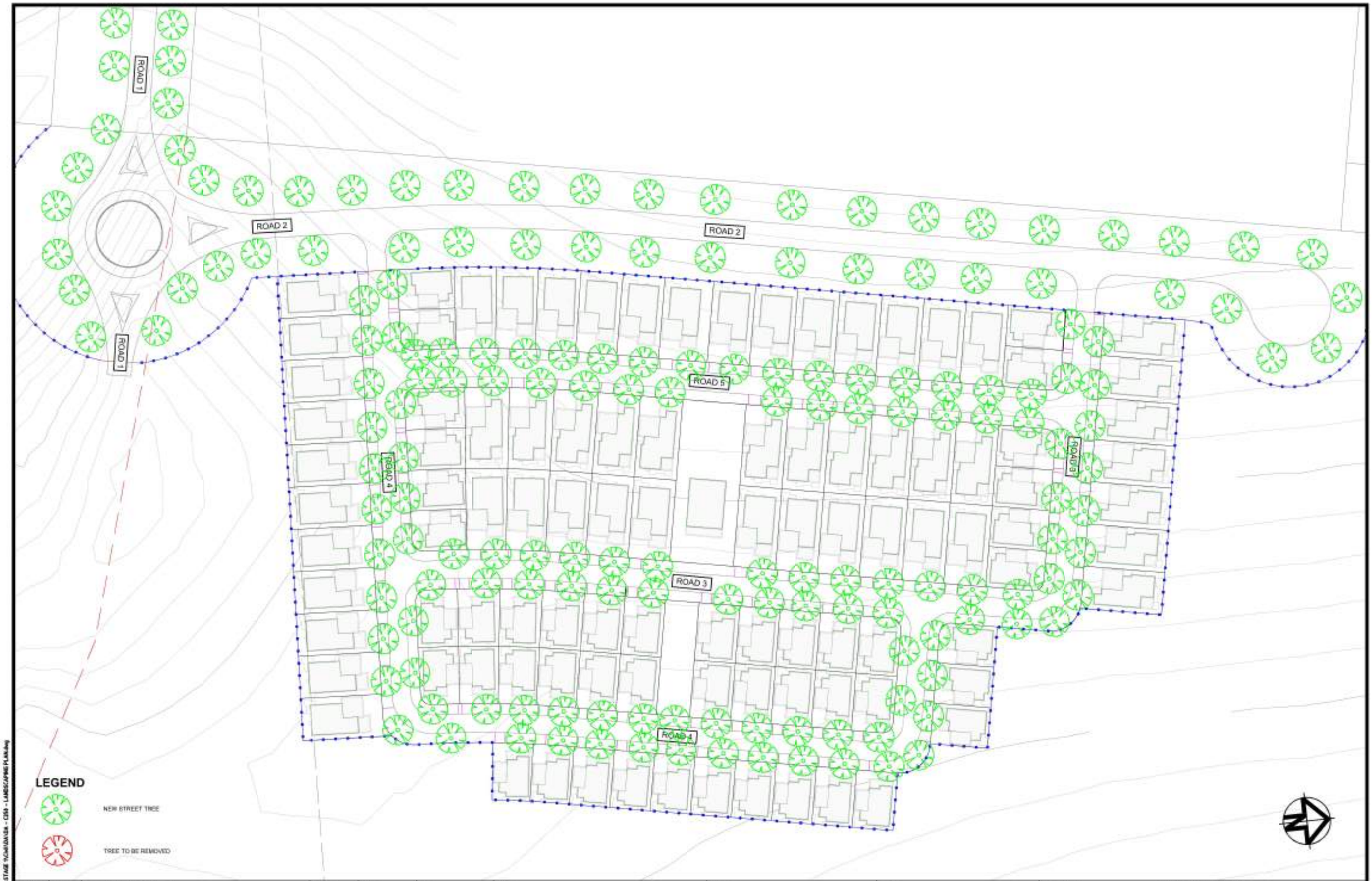
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111591 & LOT 4, DP 1092182

LANDSCAPING PLAN & NOTES

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C250	A

Z:\PROJECTS\Arkwell\Yarrabilly\STAGE 1\Civil\DA\C3d - CIVIL - LANDSCAPING PLAN.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	UKK

TITLE	NAME
DRAWN	UKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 10m 20m 30m 40m

SCALE: A1 1:500, A3 1:1000

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

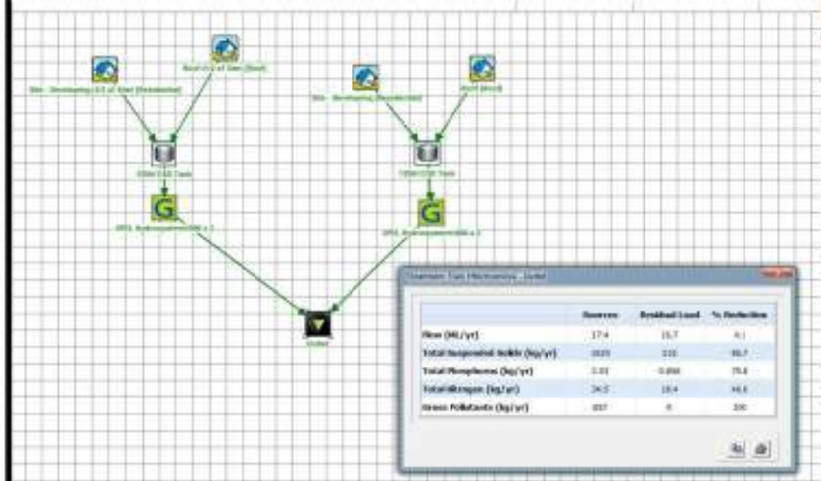
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

LANDSCAPING PLAN
& NOTES

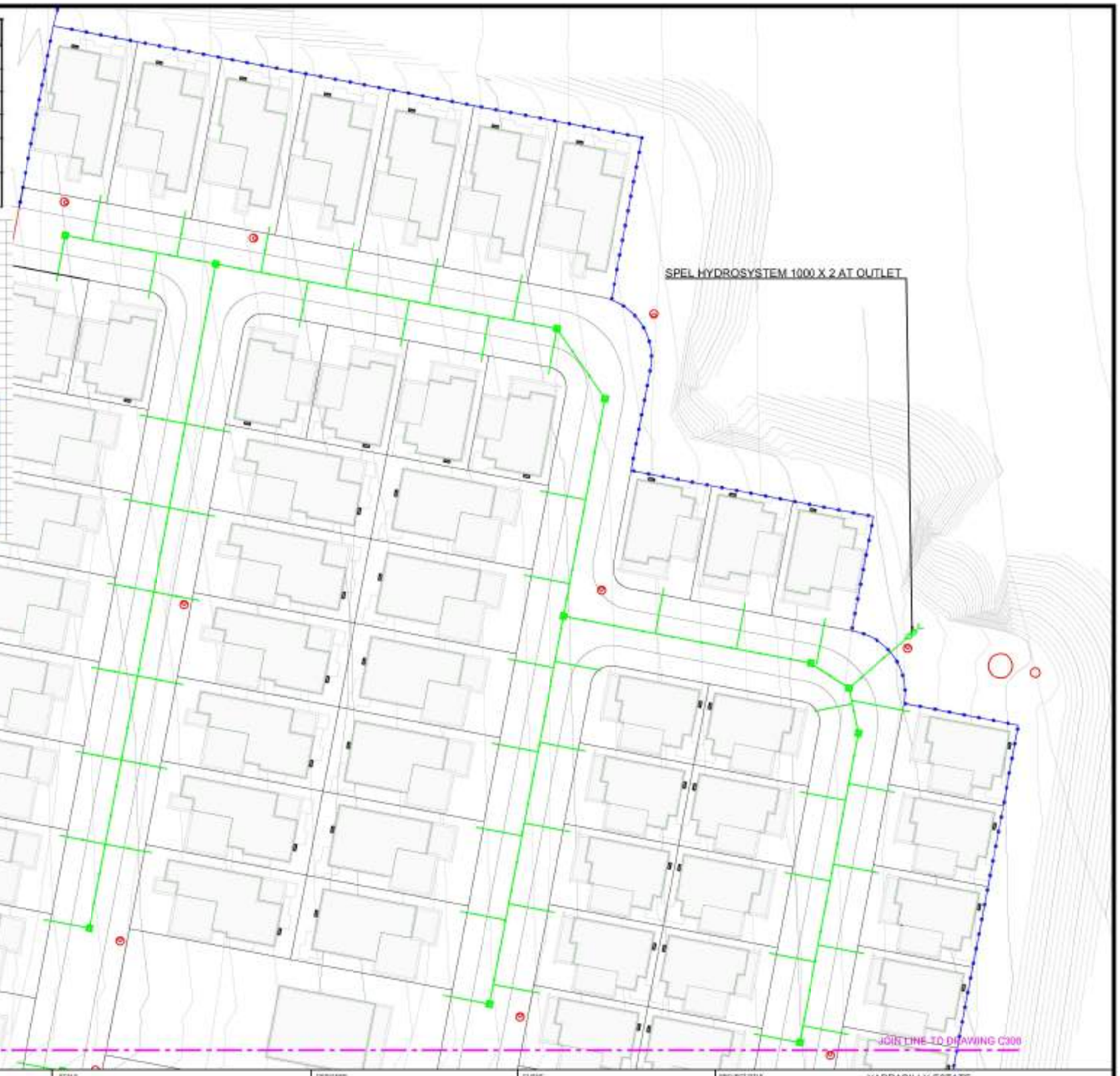
SHEET 2

SCALE	PHASE	DRAWING No.	REV.
AS SHOWN	DA	C251	A

Pollutant	Stormwater Treatment Objectives
Suspended solids (SS)	80% retention of the SS average annual load
Total Phosphorus (TP)	40% retention of the TP average annual load
Total Nitrogen (TN)	40% retention of the TN average annual load
Faecal coliform	90% retention of the faecal coliform average annual load
Litter and Organic matter	Total retention of litter and organic matter greater than 50 mm for storm events of up to 1 in 3 month ARI
Oil and Grease	Total retention of oil and grease for storm events of up to 1 in 3 month ARI



62 AUS-SPEC DSD CALCULATION SHEET				
On-site Stormwater Detention Design Summary Sheet				
Developed Area	44500	m2		
Pre-Development				
Catchment Areas			Runoff Coefficients	
Roof Area (Ar)	0	m2	Roof Area (Cr)	0.9
Paved Area (Ap)	0	m2	Paved Area (Cp)	0.9
Vegetated Area (Av)	44500	m2	Vegetated Area (Cv)	0.47
Total Area	44500	m2		
Stormwater Flows (5 Year Storm Event)				
Duration	5	mins		
Rainfall Intensity (I5)	140.8	mm/hr		
Stormwater flow (Q5)	386	l/s		
Post-Development				
Catchment Areas			Runoff Coefficients	
Roof Area (Ar)	10280	m2	Roof Area (Cr)	0.9
Paved Area (Ap)	21220	m2	Paved Area (Cp)	0.9
Vegetated Area (Av)	9000	m2	Vegetated Area (Cv)	0.47
Total Area	44500	m2		
Stormwater Flows (20 Year Storm Event)				
Duration	5	mins		
Rainfall Intensity (I20)	140.8	mm/hr		
Stormwater flow (Q20)	1194	l/s		
Stormwater Detention Requirements				
Storage Volume	342.64	m3		
Permissible Site Discharge	598	l/s		
Orifice Plate Controlled Discharge				
Head (H)	2	m		
Orifice Dia	436.24	mm		
Outlet Pipe Dia	676.68	mm		
1 in 100yr AR Check				
Duration	5	mins		
Rainfall Intensity (I100)	180.8	mm/hr		
Stormwater flow (Q100 P	1192	l/s	Stormwater flow (Q100 PO/D)	1800 l/s
Stormwater flow (Q100) dev vs under	-0.0010			



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	12/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 6m 12m 18m 24m

SCALE: A1 1:300, A3 1:600

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

STORMWATER PLAN

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C305	A

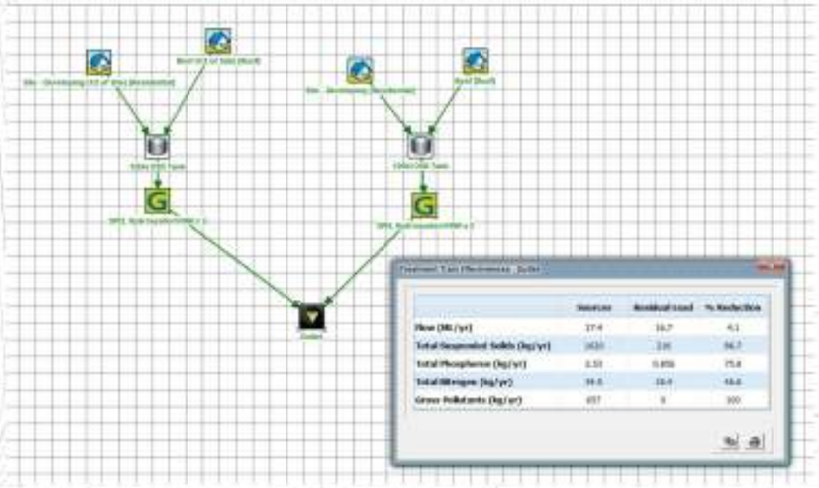
Z:\PROJECTS\Arcadia\Yarrabilly\STAGE 1\CAD\DA\Sta - CMS TO C306 - STORMWATER PLAN.dwg

JOIN LINE TO DRAWING C305

JOIN LINE TO DRAWING C305

SPEL HYDROSYSTEM 1000 X 2 AT OUTLET

Pollutant	Stormwater Treatment Objectives
Suspended solids (SS)	80% retention of the SS average annual load
Total Phosphorus (TP)	40% retention of the TP average annual load
Total Nitrogen (TN)	40% retention of the TN average annual load
Faecal coliform	90% retention of the faecal coliform average annual load
Litter and Organic matter	Total retention of litter and organic matter greater than 50 mm for storm events of up to 1 in 3 month ARI
Oil and Grease	Total retention of oil and grease for storm events of up to 1 in 3 month ARI



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	12/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 6m 12m 18m 24m

SCALE: A1 1:300, A3 1:600

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

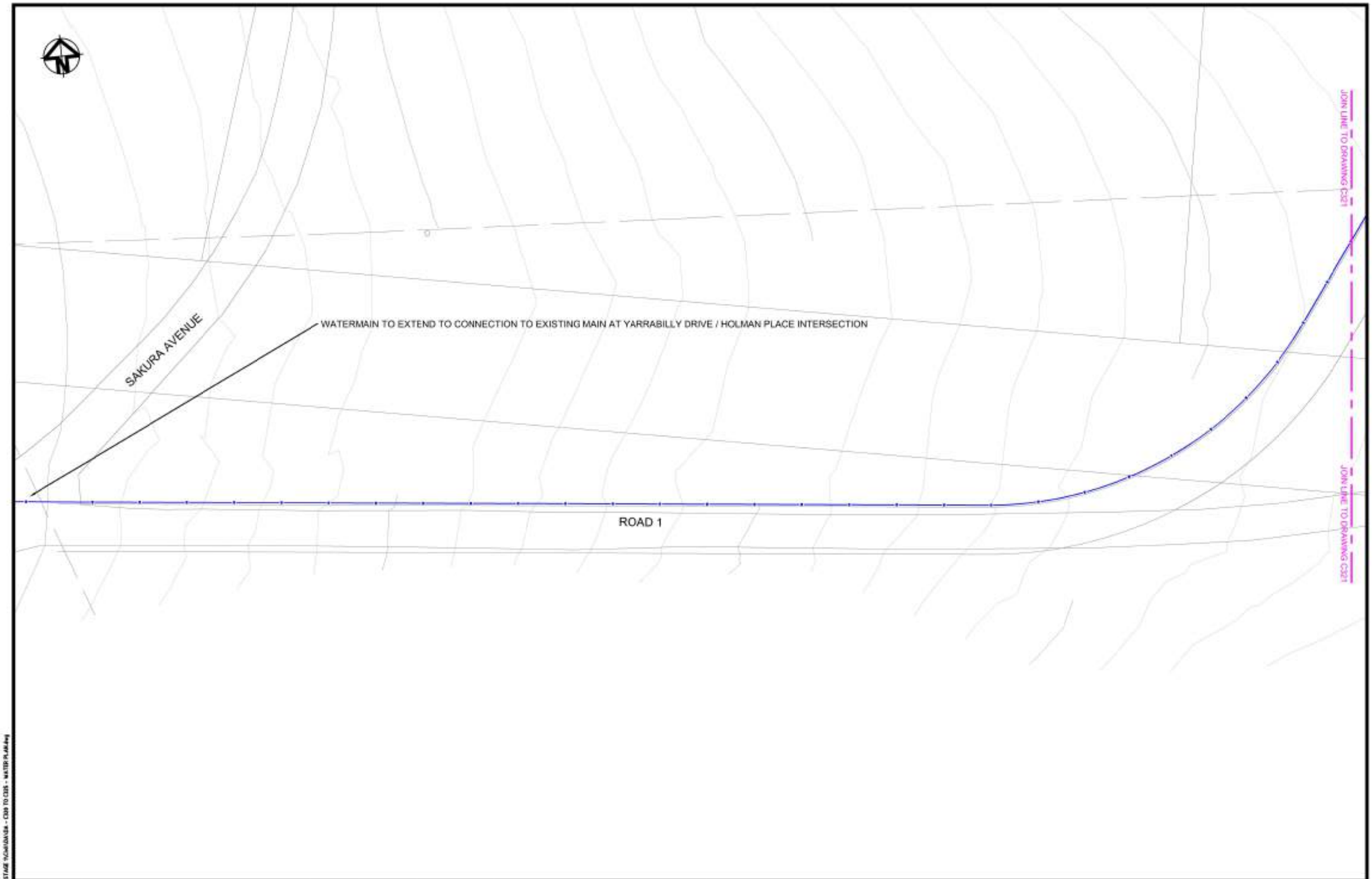
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111561 & LOT 4, DP 10821 82

STORMWATER PLAN

SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C306	A

Z:\PROJECTS\Arneth\Yarrabilly\STAGE 1\CAD\DWGs - CIVIL TO CNN - STORMWATER PLAN.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

18 Victoria Street, Hall ACT
PO Box 308, Hall ACT 2618
02 6230 2833 - 0448 505 700
info@fraish.com.au - www.fraish.com.au

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10921 82

WATER PLAN

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C320	A

Z:\PROJECTS\Hand\Yarrabilly\STAGE 1\CIVIL\DWGs - C320 TO C325 - WATER PLAN.dwg

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FRAISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

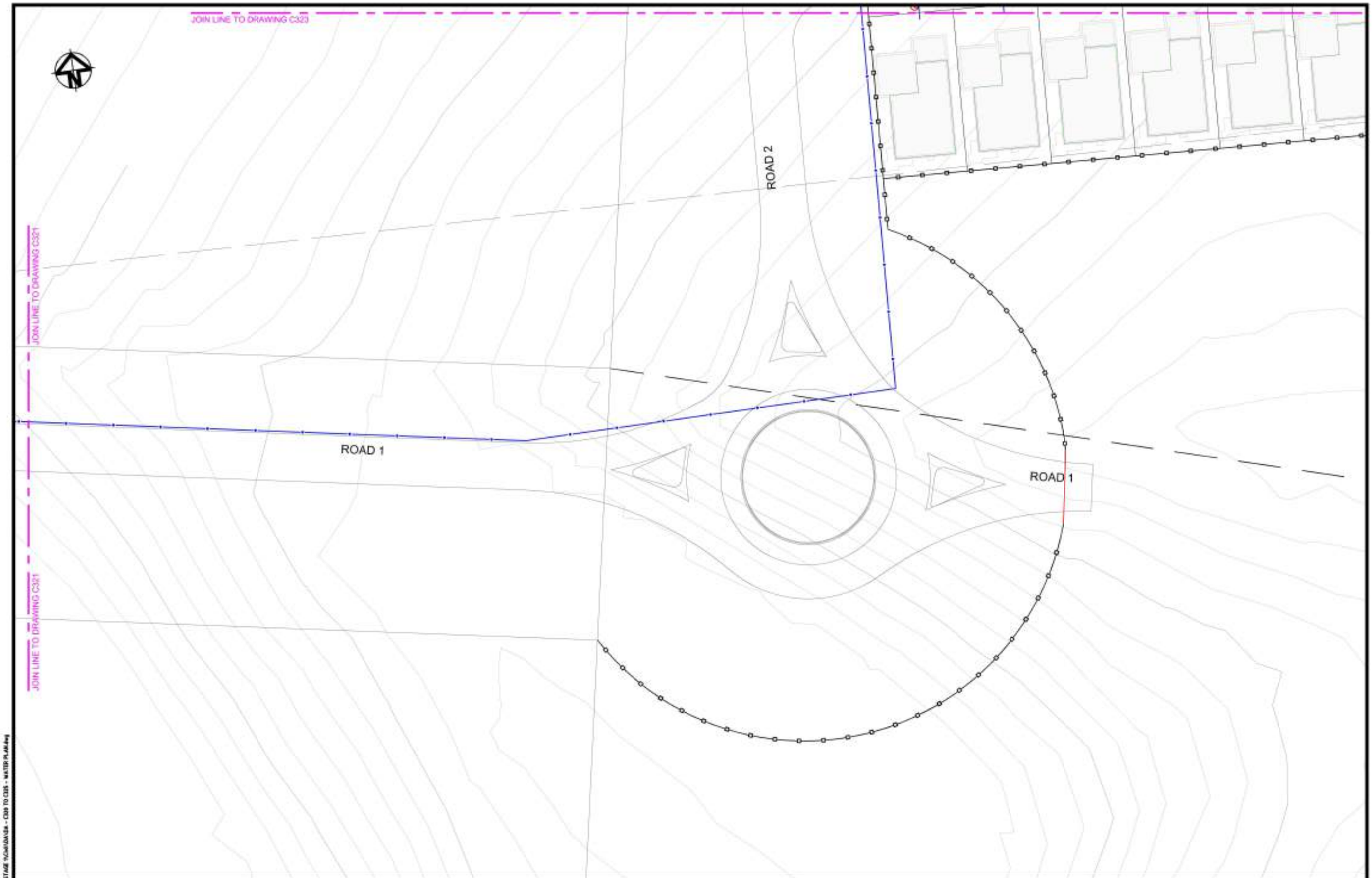
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

WATER PLAN

SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C321	A

Z:\PROJECTS\Arcadia\Yarrabilly\STAGE IV\Civil\DWGs - C300 TO C325 - WATER PLAN.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNED	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

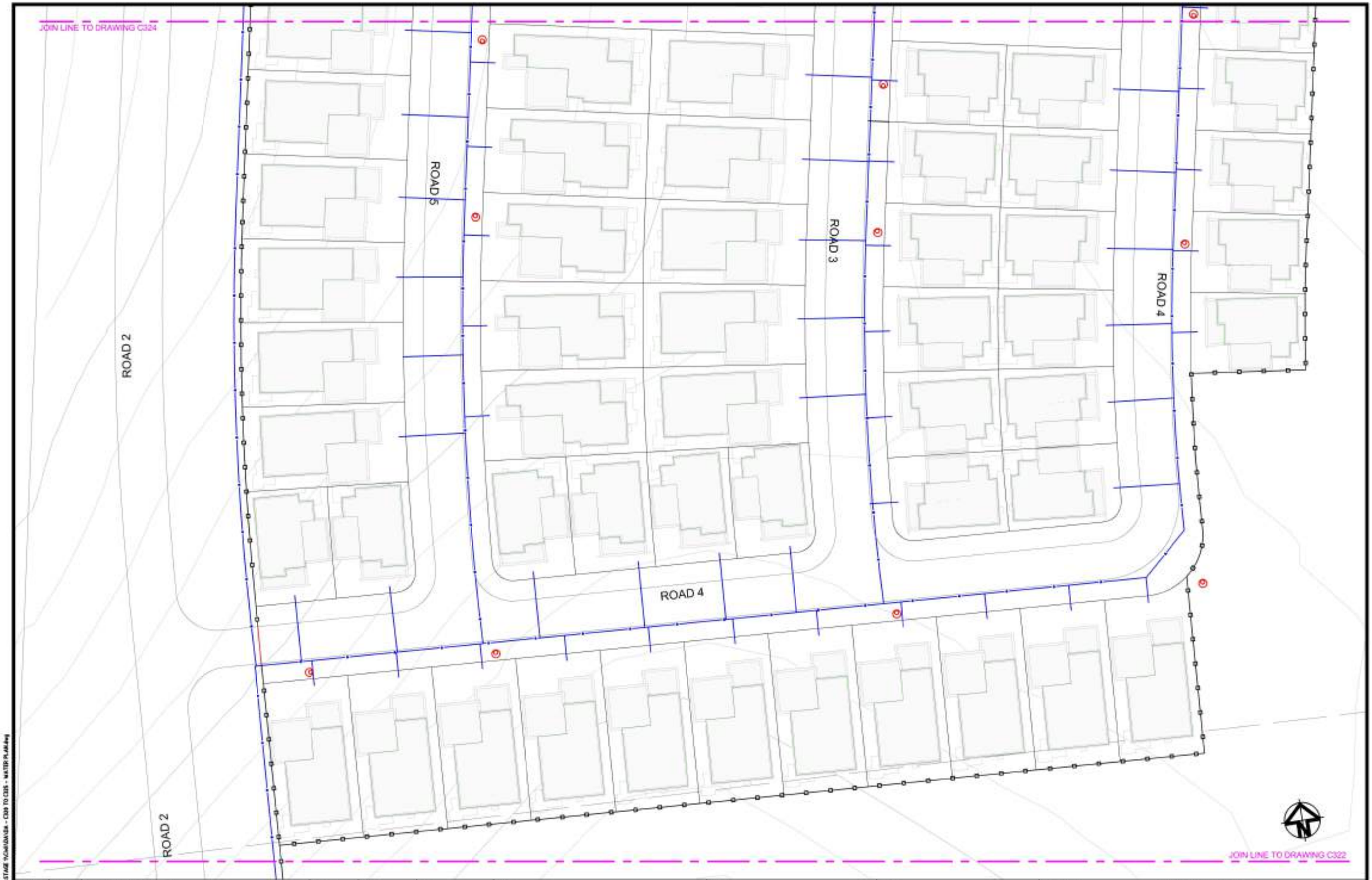
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 1082182

WATER PLAN

SHEET 3

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C322	A

Z:\PROJECTS\Wandi Township\STAGE 1\CIVIL\DA\C3x - C32x TO C325 - WATER PLAN.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

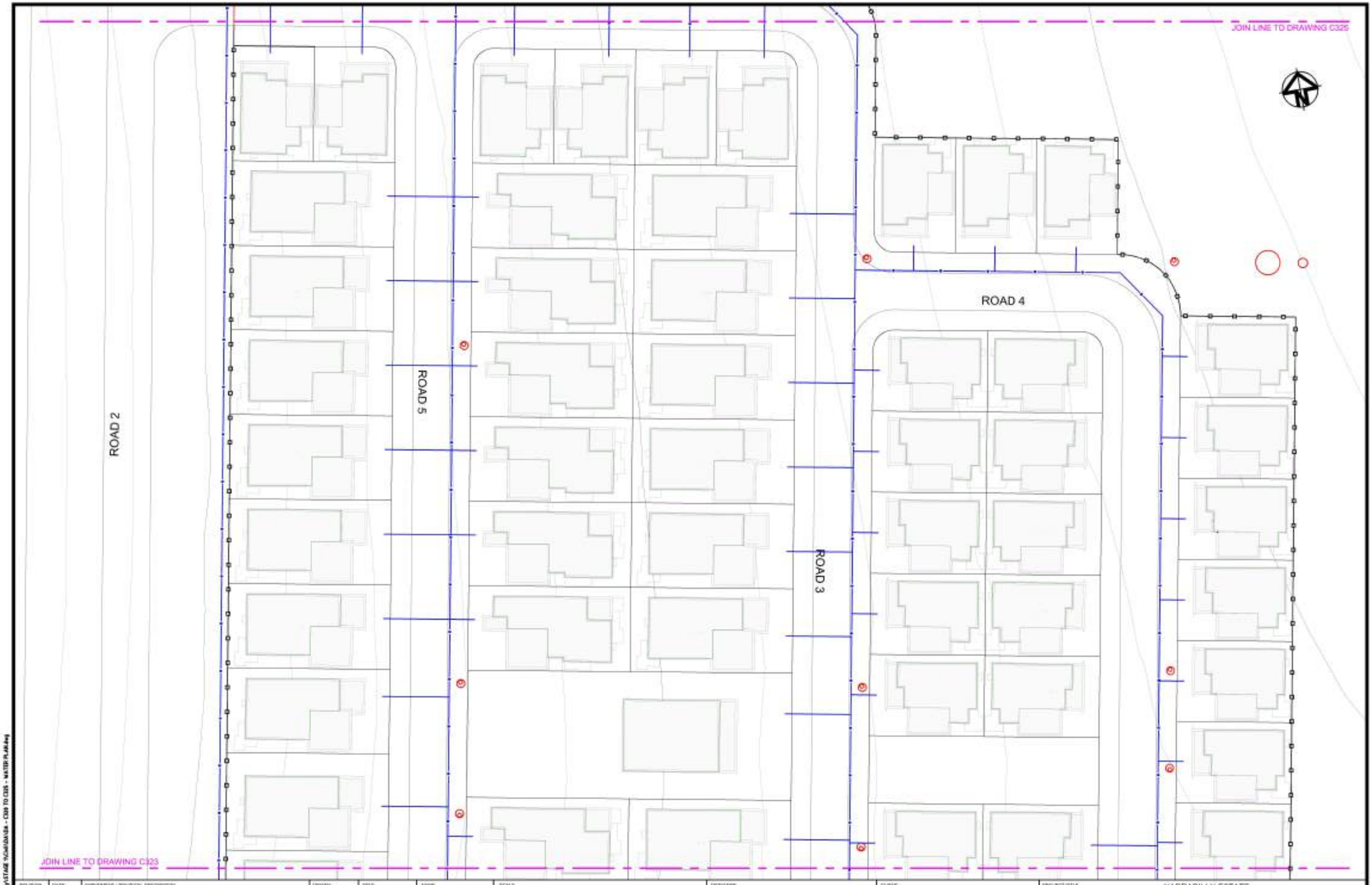
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 1092182

WATER PLAN

SHEET 4

SCALE	PHASE	DRAWING No	REV
AS SHOWN	DA	C323	A

Z:\PROJECTS\Marsh\Yarrabilly\STAGE 1\Civil\DA\C3x - C323 TO C325 - WATER PLAN.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LBK

TITLE	NAME
DRAWN	LBK
DESIGNED	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Ltd. Use or reproduction in document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111580 & LOT 4, DP 10821 82

WATER PLAN

SHEET 5

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C324	A

Z:\PROJECTS\Mandi Yarrabilly\STAGE 5\C4\5\DWGs - C325 TO C335 - WATER PLAN.dwg

MAIN TO EXTEND TO NEW CONNECTION AT SAKURA AVENUE / EVANS STREET

ROAD 2

ROAD 3

JOIN LINE TO DRAWING C324

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	12/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS. VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

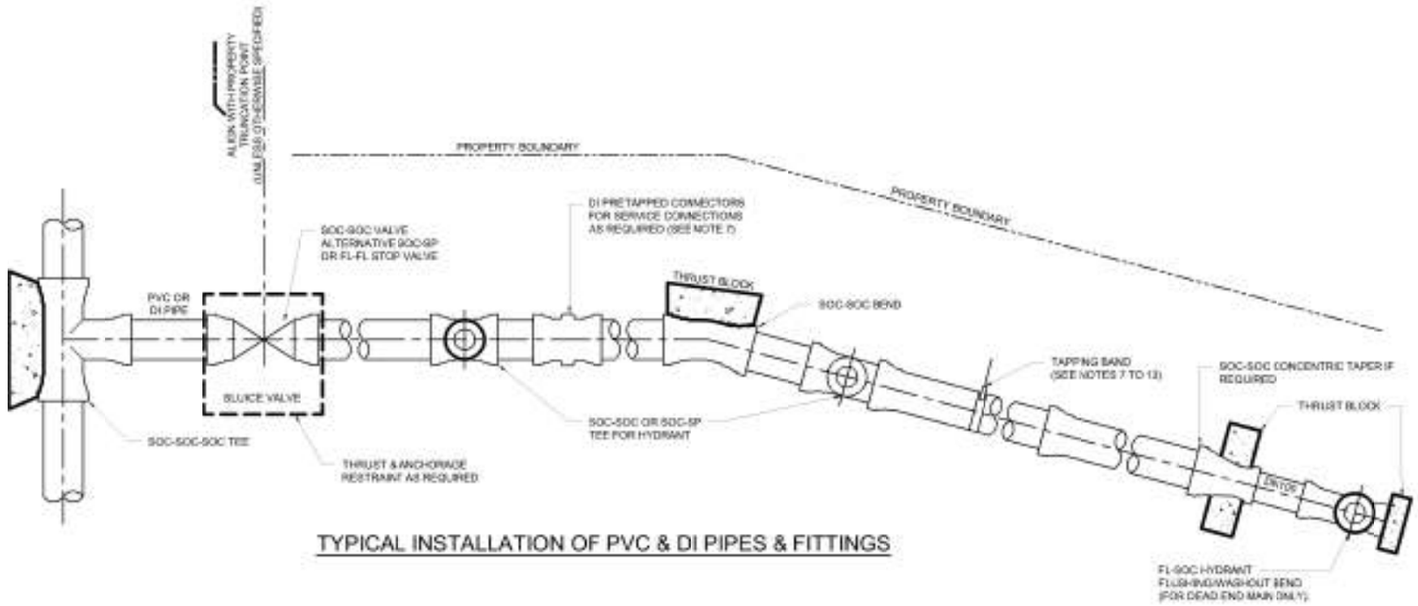
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111598 & LOT 4, DP 10821 82

DETAIL PLAN

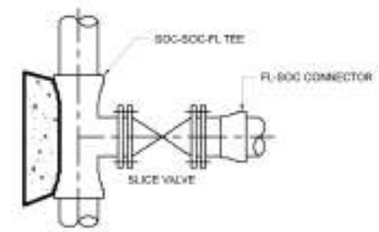
SHEET 6

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C325	A

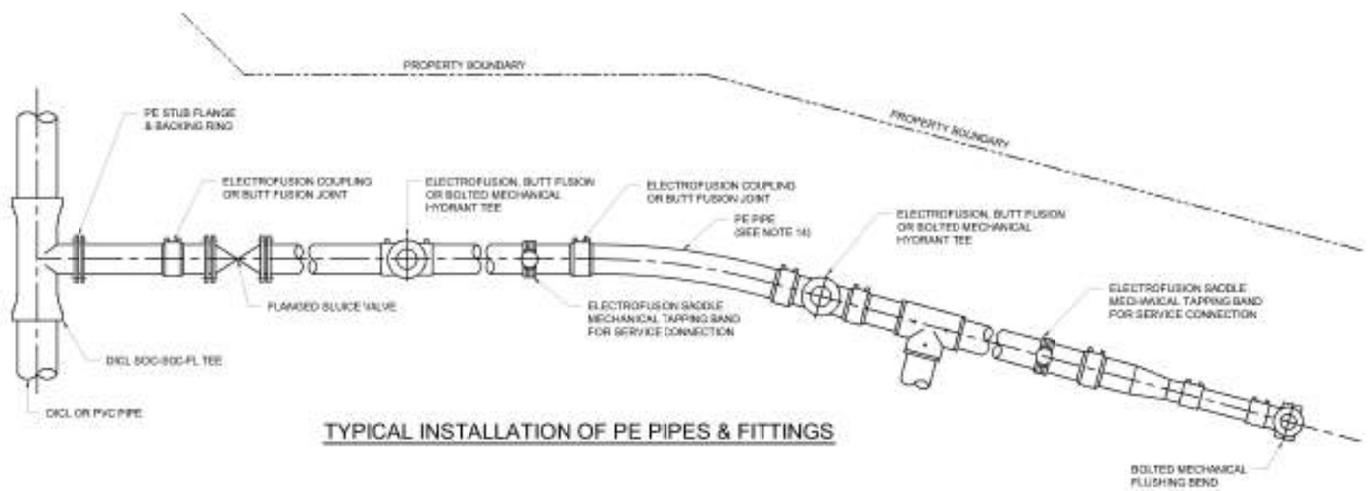
Z:\PROJECTS\Arrabilly\Arrabilly-STAGE 1\CAD\DA\C6 - C325 TO C335 - WATER PLAN.dwg



TYPICAL INSTALLATION OF PVC & DI PIPES & FITTINGS



TYPICAL VALVE CONNECTION DIRECT TO NEW MAIN



TYPICAL INSTALLATION OF PE PIPES & FITTINGS

NOTES:
1. ALL DIMENSIONS IN MILLIMETERS.
2. INSTALL PIPEWORK PARALLEL TO PROPERTY BOUNDARIES.
3. STAINLESS STEEL AND FBE COATED TAPPING BANDS DO NOT REQUIRE ADDITIONAL CORROSION PROTECTION.
4. WRAP BOLTED CONNECTIONS USING OTHER THAN FBE COATED FITTINGS AND STAINLESS STEEL BOLTS WITH A PETROLEUM TAPE SYSTEM.

DI & PVC PIPE
5. DUCTILE IRON FITTINGS MAY BE USED WITH DI & PVC PIPE. FITTING MAY BE FBE COATED AND LINED OR CEMENT LINED WITH A BITUMINOUS EXTERNAL COATING. DO NOT USE PVC FITTINGS WITH DI PIPE.
6. PE SLEEVING REQUIRED ON ALL BITUMINOUS COATED DI PIPE AND FITTINGS APPLIED IN ACCORDANCE WITH AS 3680. TWO THICKNESSES REQUIRED BETWEEN FITTINGS AND THRUST BLOCK. REINSTATE ANY DAMAGED SLEEVING AS PER MANUFACTURER'S SPECIFICATIONS.
7. USE PRE-TAPPED CONNECTORS ON DN 100 & DN 150 NEW MAIN INSTALLATIONS (UNLESS SPECIFIED OTHERWISE BY THE WATER AGENCY).
8. USE TAPPING BANDS FOR CONNECTIONS TO EXISTING MAINS AND NEW MAINS >DN 150.
9. ELECTRICALLY ISOLATE COPPER SERVICES FROM DICL PIPE.

PVC PIPE
10. TAPPING BANDS ON PVC PIPE TO BE FULL CIRCLE CLAMPING.
11. WHERE PVC FITTINGS ARE USED, A PROTECTIVE MEMBRANE IS REQUIRED BETWEEN FITTING AND THRUST BLOCK. PVC FITTINGS TO BE USED ONLY ON PVC PIPE. DI SPIGOTS NOT TO BE INSERTED INTO PVC SOCKETS.
12. MAXIMUM SIZE OF DRILLED HOLES FOR SERVICE CONNECTIONS IN PVC PIPE TO BE 30% DN OR 60 (LOWER VALUE TO BE USED) LARGER HOLES CAN BE USED FOR UNDER PRESSURE TAPPING.

DI PIPE
13. DIRECT TAPPING OF >DN 200 DICL MAY BE AUTHORISED BY WATER AGENCIES.

PE PIPE
14. PE PIPE MAY BE COLD BENT TO MINIMUM RADIUS OF 25 x (OD). STAKES OR OTHER SOURCES OF POINT LOADS SHALL NOT BE USED TO ASSIST IN BENDING THE PIPE.
15. MAKE ALLOWANCE DURING CONSTRUCTION FOR EXPANSION AND CONTRACTION OF PE PIPE DUE TO TEMPERATURE CHANGES.
16. BUTT WELDING IN ACCORDANCE WITH WSA-01 (POLYETHYLENE CODE).
17. BUTT WELDING IN TRENCHES IS NOT PERMITTED.
18. ALL MECHANICAL COUPLINGS TO BE SELF-RESTRAINING.

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/18	ISSUED FOR DEVELOPMENT APPLICATION	UKK

TITLE	NAME
DRAWN	UKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS USE F ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FraISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE: SCALE AS SHOWN

DESIGNER: FRAISH Consulting — Civil & Structural Engineers

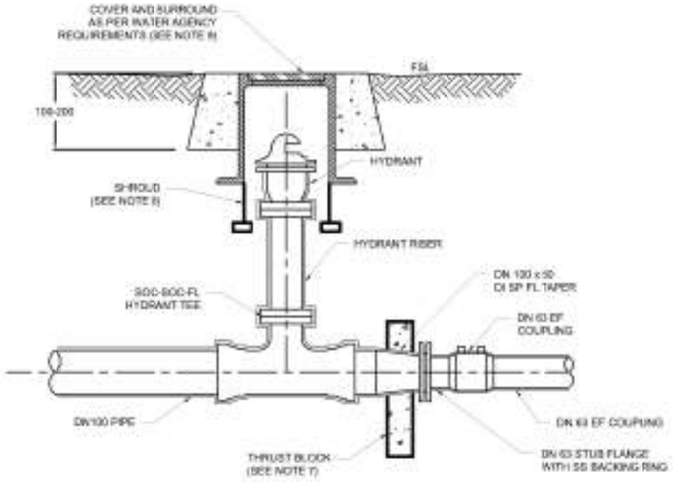
CLIENT: SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE: YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111591 & LOT 4, DP 10821 82

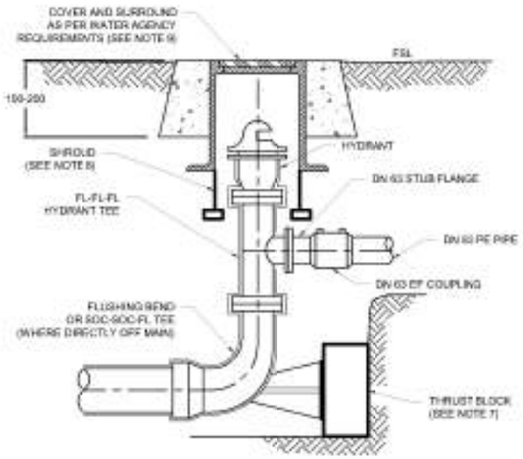
WATER DETAILS

SHEET 1

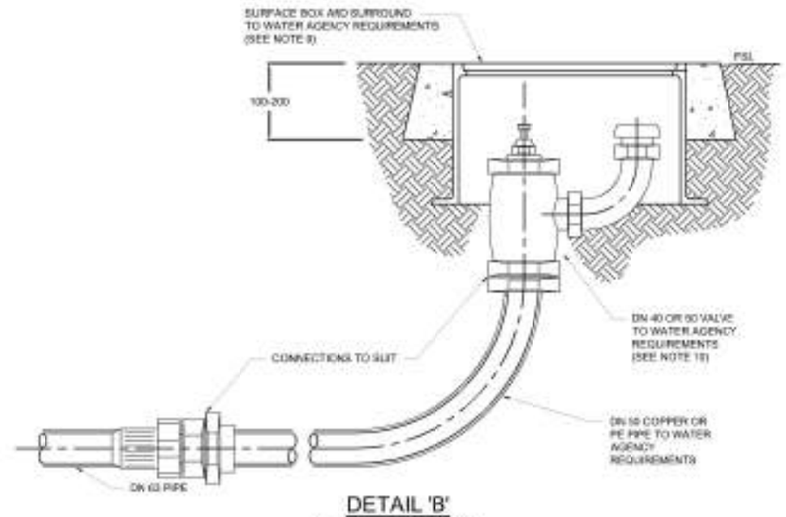
SCALE	PHASE	DRAWING No	REV
AS SHOWN	DA	C326	A



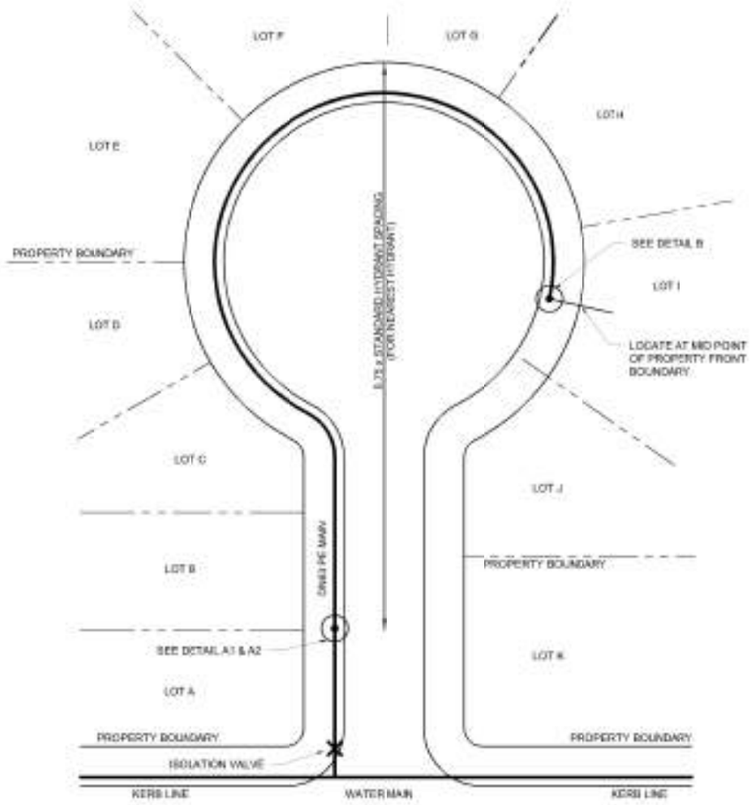
DETAIL 'A1'
IN-LINE CONNECTION
PE PIPE SHOWN



DETAIL 'A2'
RAISED CONNECTION
PE PIPE SHOWN



DETAIL 'B'
FLUSHING POINT



TERMINAL END OF CUL DE SAC

MAXIMUM NUMBER OF PROPERTY SERVICE CONNECTIONS TO DN 63 MAINS
10

MAXIMUM LENGTH OF DN 63 MAIN
100m

NOTES:
1. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. PIPE MATERIALS TO BE:
   - PE IN ACCORDANCE WITH WSA 01
   - COPPER TYPE A TO AS 1432 AND COPPER ALLOY FITTINGS TO AS 3688
3. PE ELECTROFUSION (EF) FITTINGS TO BE CLASS PN 16
4. DO NOT CURVE PE PIPES TO A RADIUS OF LESS THAN 25 TIMES PIPE OD.
5. WHERE POSSIBLE USE A SINGLE LENGTH OF PE PIPE.
6. BACKING FLANGES, NUTS, BOLTS & WASHERS TO BE MANUFACTURED FROM 316 STAINLESS STEEL.
7. PVC PIPE MAY BE USED AS SHROUD PIPE, CUT AS REQUIRED TO CLEAR HYDRANT FLANGE.
8. FIT THE FLUSHING POINT VALVE IN SUCH A WAY AS TO PREVENT MOVEMENT OR ROTATION OF THE VALVE BODY. PROVIDE A SUITABLE PLUG OR CAP TO KEEP OUT DIRT AND GRAVEL.

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNED	AJB

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE: SCALE AS SHOWN

DESIGNER:
FRAISH Consulting
Civil & Structural Engineers
info@fraish.com.au · www.fraish.com.au

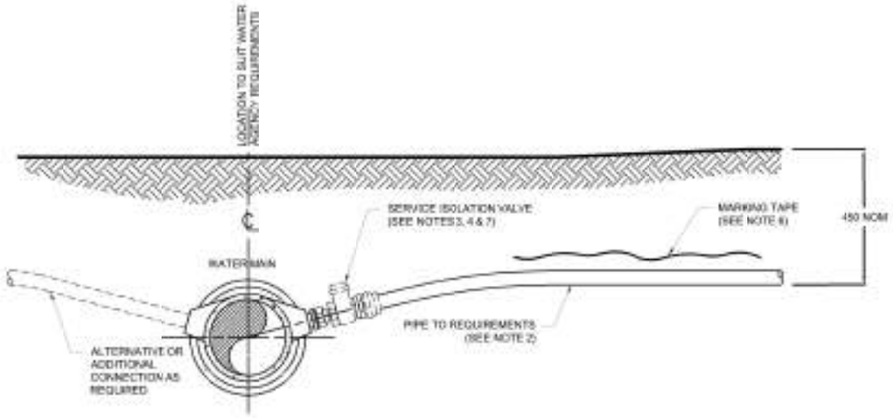
CLIENT: SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE: YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

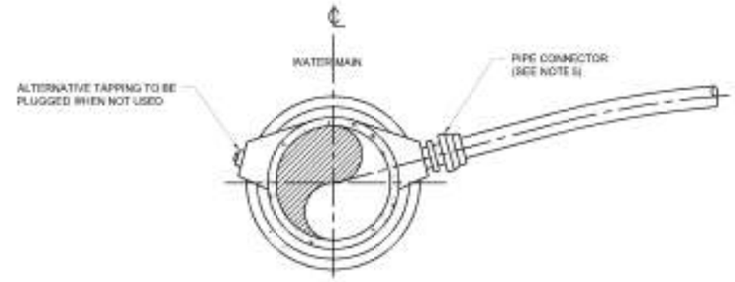
WATER DETAILS
SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C327	A

Z:\PROJECTS\Andrew Yarrabilly\STAGE 2\CIVIL\DWGS - C300 TO C330 - WATER DETAILS.dwg

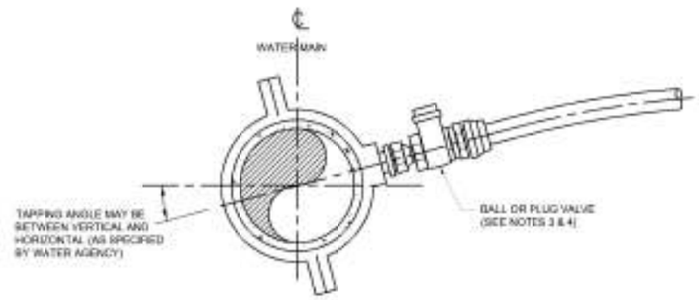


TYPICAL SERVICE CONNECTION



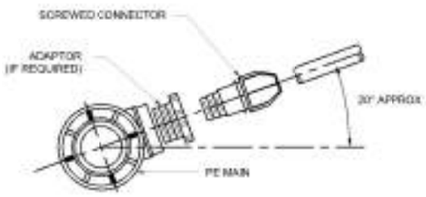
PRETAPPED CONNECTOR (DI)

(FOR DN 100 - DN 200 PVC & DI PIPE)

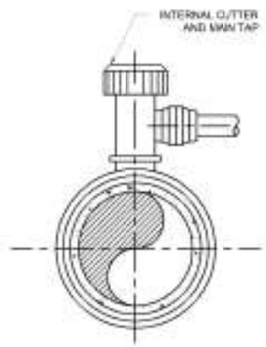


NARROW CLAMP TAPPING BAND

(FOR PVC & DI PIPE)

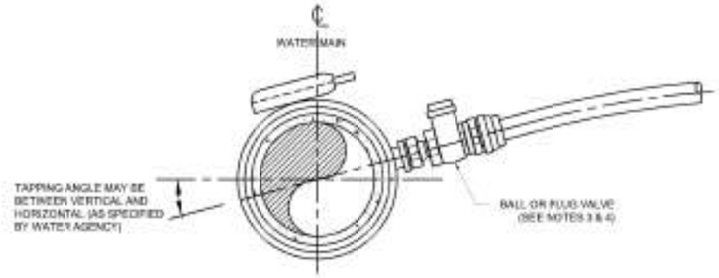


WATER CONNECTION FROM DN 63 PE



ELECTROFUSION TAPPING SADDLE

(PE PIPE)



SS WIDE CLAMP TAPPING BAND

(FOR ALL PIPE TYPES)

NOTES:

1. ALL DIMENSIONS IN MILLIMETERS.
2. MATERIAL FROM THE MAIN TO METER ASSEMBLY:
   - COPPER PIPE: TYPE A TO AS1432
   - POLYETHYLENE PIPE TO WSA 31
3. IN-LINE METAL PLUG OR BALL VALVES REQUIRED WHEN THE MAIN IS TAPPED UNDER PRESSURE.
4. INSTALL IN-LINE METAL SERVICE ISOLATION VALVES WHERE REQUIRED BY THE WATER AGENCY.
5. PIPE CONNECTOR INSTALLED AT MAIN CONNECTION TO BE OF METAL CONSTRUCTION UNLESS AUTHORISED OTHERWISE BY WATER AGENCY.
6. WHERE POSSIBLE LAY SERVICE CONNECTIONS AT RIGHT ANGLES TO WATER MAIN. WHERE NOT POSSIBLE LAY MARKING TAPE ON TOP OF THE CONNECTION POPPERWORK.
7. USE DI PIPE PROTECTIVE SLEEVING TO ENCAPSULATE THE PIPE CONNECTION & ISOLATION VALVE.

STANDARD TAPPING METHODS

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/18	ISSUED FOR DEVELOPMENT APPLICATION	UIK

TITLE	NAME
DRAWN	UIK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE: SCALE AS SHOWN

DESIGNER: FRAISH Consulting — Civil & Structural Engineers

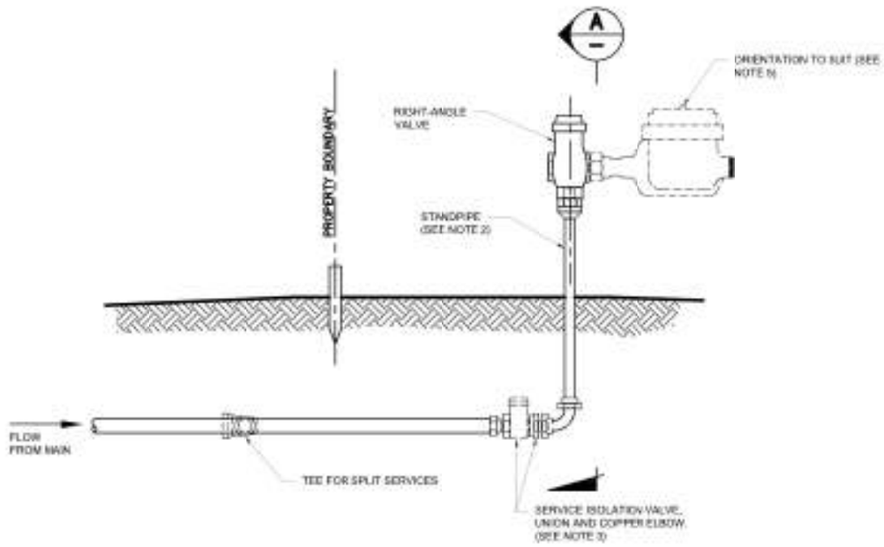
CLIENT: SOUTHERN RURAL HOLDINGS PTY. LTD.

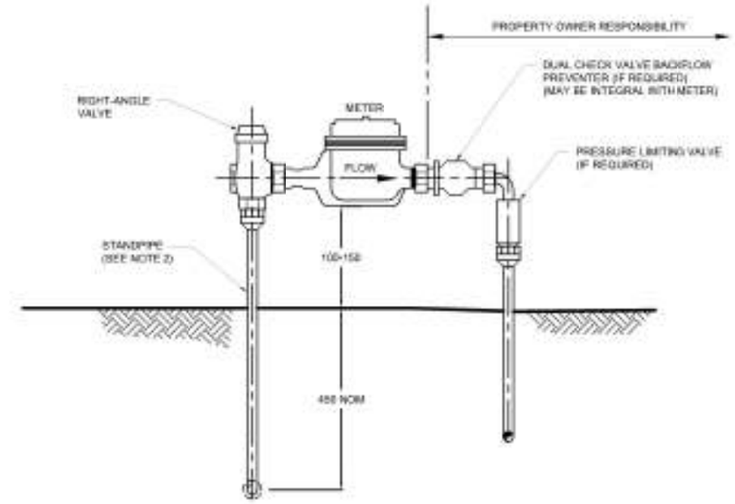
PROJECT TITLE: YARRABILLY ESTATE — SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

WATER DETAILS

SHEET 3

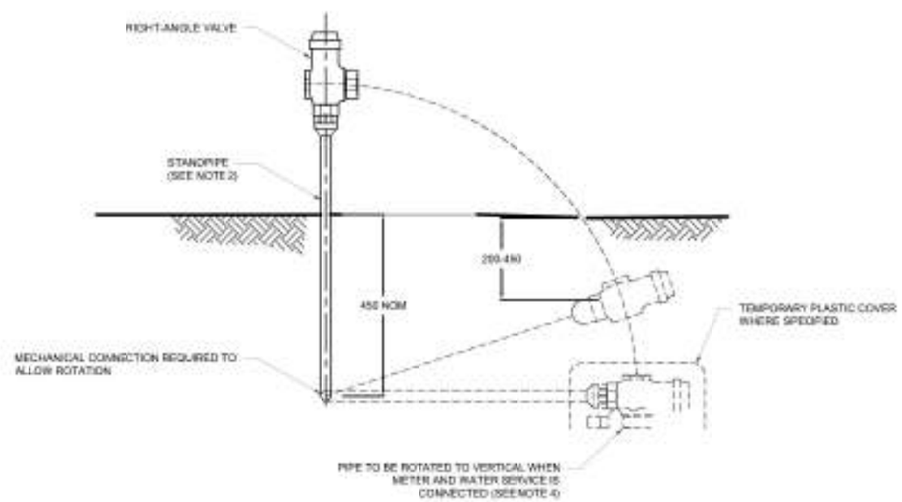
SCALE	PHASE	DRAWING No	REV
AS SHOWN	DA	C328	A





SECTION A

TYPICAL ABOVE GROUND METER ASSEMBLY ARRANGEMENT



LAY OVER ARRANGEMENT
FOR PRE LAID SERVICES
(SEE NOTE 4)

NOTES:
1. ALL DIMENSIONS IN MILLIMETERS.
2. MATERIAL FOR COPPER STANDPIPE TO BE TYPE A COPPER PIPE TO AS1432 (COPPER ALLOY FITTINGS TO AS3688)
3. PROVIDE IN-LINE VALVES AT BASE OF COPPER RISER WHERE SPECIFIED BY WATER AGENCY.
4. PLUG OR BAG THE RIGHT-ANGLE TERMINATION VALVE FOR THE SERVICE CONNECTION TO SEAL THE PIPE BEFORE THE RISER IS BURIED. PROVIDE MARKING TAPE WHERE SPECIFIED BY THE WATER AGENCY.
5. ORIENTATE METER PARALLEL TO OR AT RIGHT-ANGLES TO THE FRONT BOUNDARY.

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/18	ISSUED FOR DEVELOPMENT APPLICATION	UKK

TITLE	NAME
DRAWN	UKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FraISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE: SCALE AS SHOWN

DESIGNER: FRAISH Consulting
Civil & Structural Engineers
Unit 2, 14 Victoria Street, Hall ACT
PO Box 305, Hall ACT 2618
02 6230 2833 - 0408 526 750
info@fraish.com.au - www.fraish.com.au

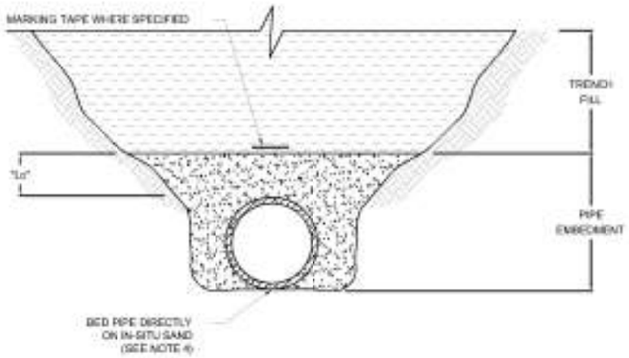
CLIENT: SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE: YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

WATER DETAILS

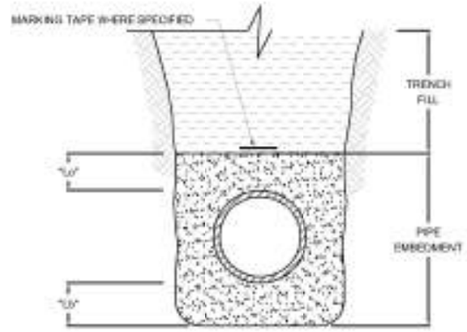
SHEET 4

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C329	A



TYPE 'A' SUPPORT

TRENCH IN SAND STRATA



TYPE 'B' SUPPORT

TRENCH STRATA OTHER THAN SAND

PIPE SIZE (DN)	BEDDING & OVERLAY DEPTH			
	"Ua" (min)		"Ub"	
	DI STEEL	PVC GRP PE	DI STEEL	PVC GRP PE
100 - <450	150	150	150	150
>450 - <900	150	150	150	150
>900	150	150	200	200

EMBEDMENT TYPES TO BE SPECIFIED IN DESIGN DRAWINGS

NOTES:
1. ALL DIMENSIONS IN MILLIMETERS
2. EMBEDMENT, TRENCH FILL & COMPACTION TO MEET REQUIREMENTS OF WSA 03 PART 3.

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/18	ISSUED FOR DEVELOPMENT APPLICATION	UIK

TITLE	NAME
DRAWN	UIK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FraISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE: SCALE AS SHOWN

DESIGNER: FRAISH Consulting
Civil & Structural Engineers
Unit 2, 14 Victoria Street, Hall ACT
PO Box 300, Hall ACT 2618
02 6230 3833 - 0409 526 755
info@fraish.com.au - www.fraish.com.au

CLIENT: SOUTHERN RURAL HOLDINGS PTY. LTD.

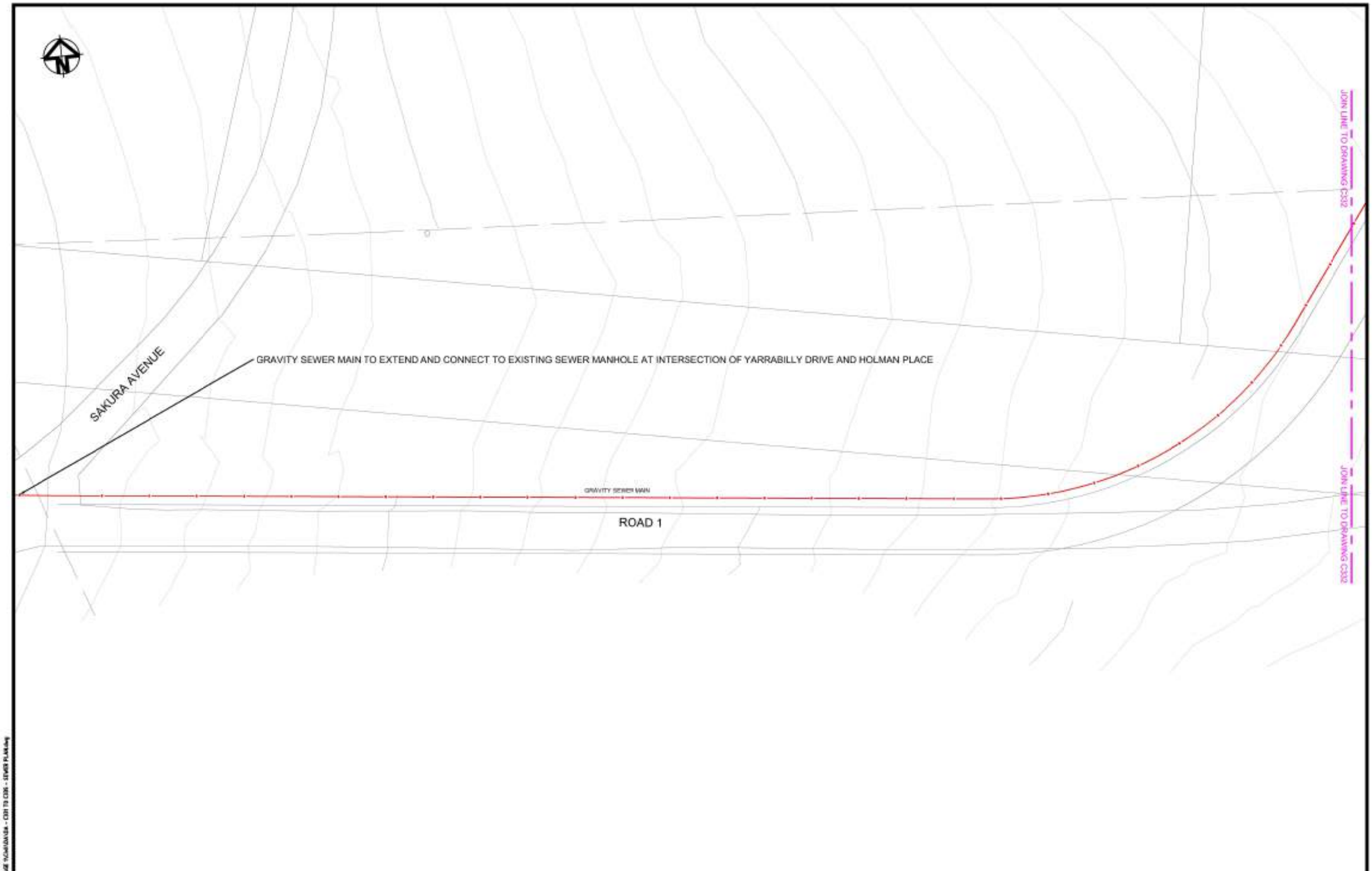
PROJECT TITLE: YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 1082182

WATER DETAILS

SHEET 5

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C330	A

Plot Date: 13 Dec 2018 - 4:03:01 PM
J:\2018\18-136 Yarrabilly Estate\Civil\Drawings\C300 Series\C330 Water Details.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FRAISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

SEWER PLAN

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C331	A

Z:\PROJECTS\Arnold\Yarrabilly\STAGE 1\CAD\Civil\ - C331 TO C335 - SEWER PLAN.dwg

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/16	ISSUED FOR DEVELOPMENT APPLICATION	UKK

TITLE	NAME
DRAWN	UKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

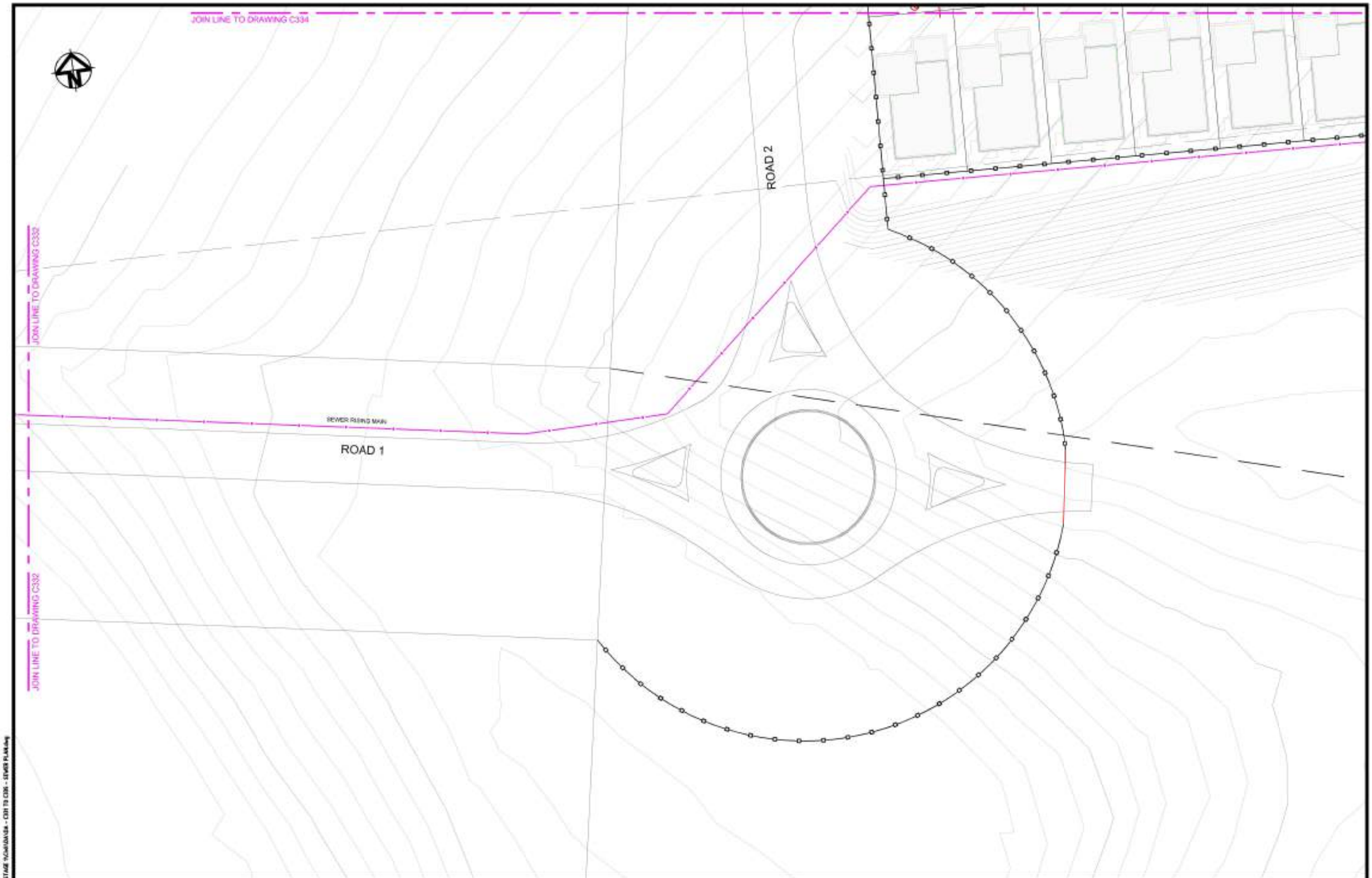
PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 1082182

SEWER PLAN

SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C332	A



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	15/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111580 & LOT 4, DP 10821 82

SEWER PLAN

SHEET 3

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C333	A

Z:\PROJECTS\Yarrabilly\STAGE 1\CIVIL\DWG - C331 TO C335 - SEWER PLAN.dwg

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	14/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNED	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

16 Victoria Street, Hall ACT
PO Box 308, Hall ACT 2618
02 6230 3833 - 0408 526 754
info@fraish.com.au - www.fraish.com.au

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

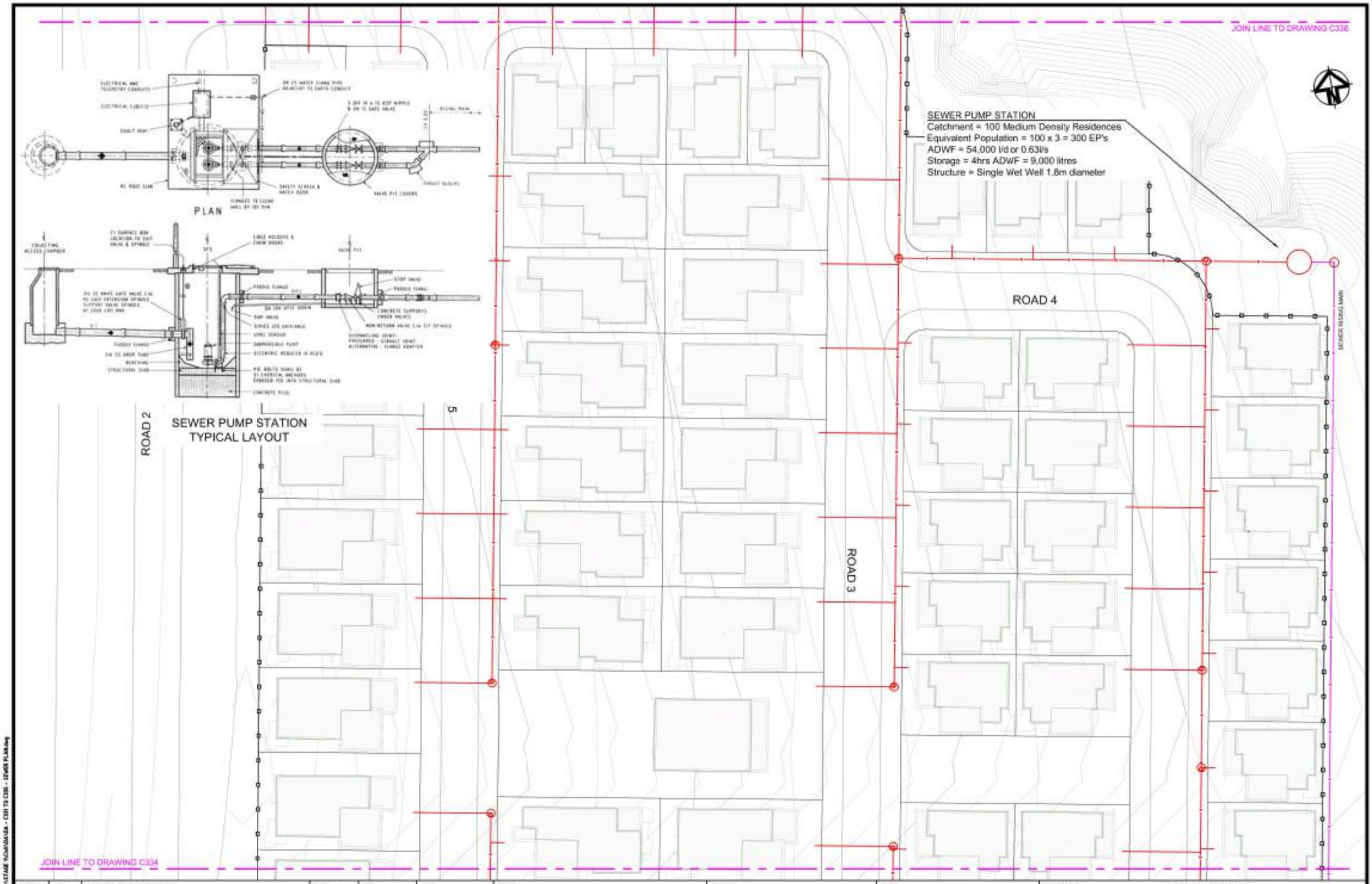
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111580 & LOT 4, DP 10921 82

SEWER PLAN

SHEET 4

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C334	A

Z:\PROJECTS\Hand Yarrabilly\STAGE 1\CAD\DA\Sk - C01 TO C05 - SEWER PLAN.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	15/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LKK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

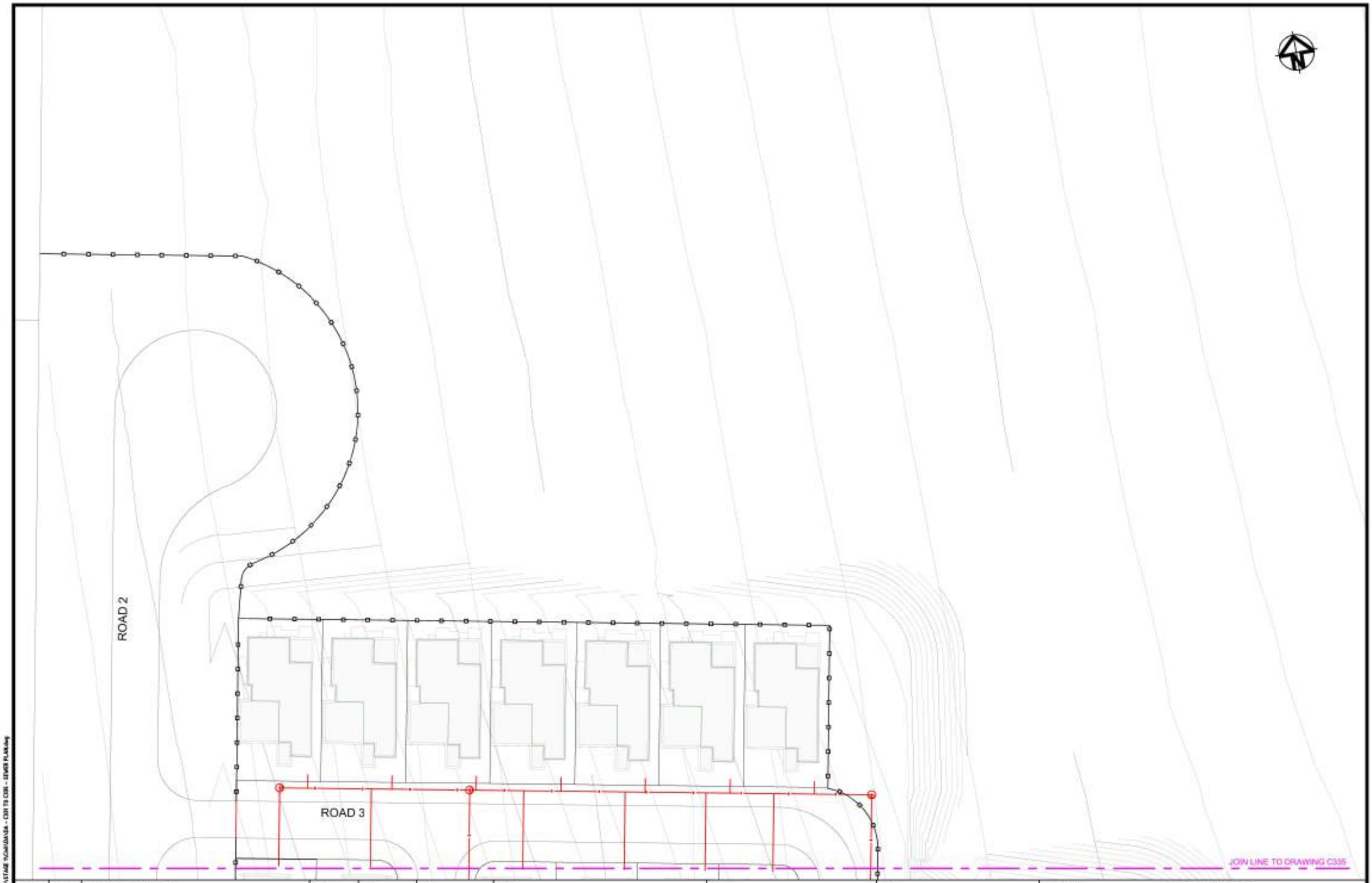
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10921 82

SEWER PLAN

SHEET 5

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C335	A

Z:\PROJECTS\Arnold\Yarrabilly\STAGE 1\CAD\Civil - C331 TO C335 - SEWER PLAN.dwg



REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	15/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS. VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 5m 10m 15m 20m

SCALE: A1 1:250, A3 1:500

DESIGNER

FRAISH Consulting
Civil & Structural Engineers

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

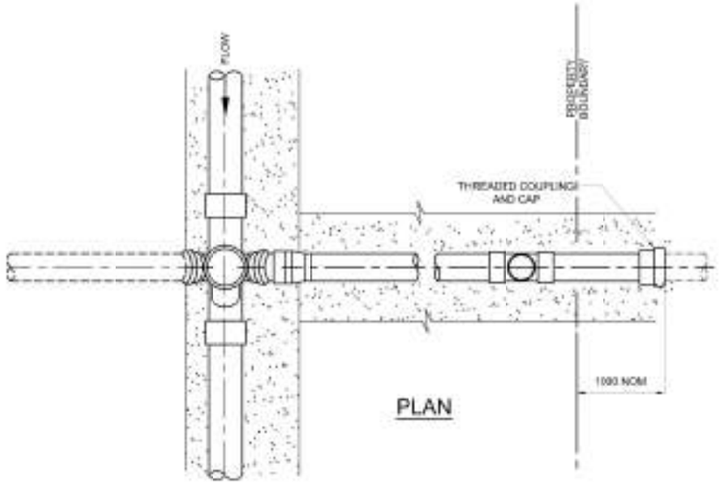
YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111558 & LOT 4, DP 10821 82

SEWER PLAN

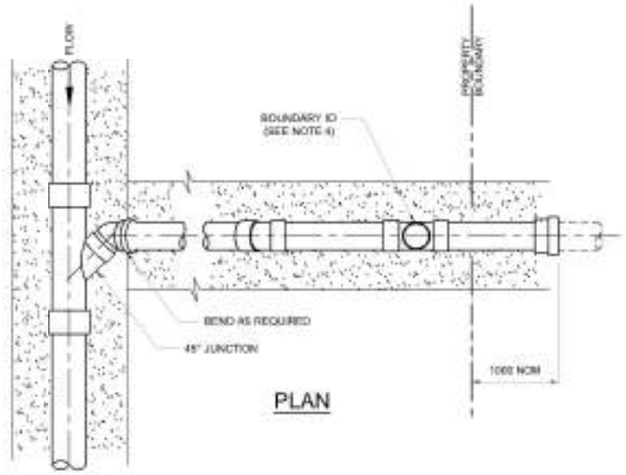
SHEET 6

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C336	A

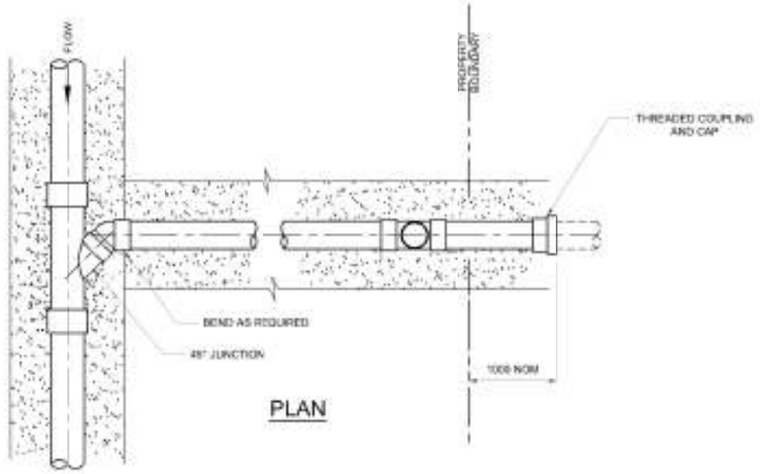
Z:\PROJECTS\Arnold\Yarrabilly\STAGE 1\CAD\DA\C6 - C33 TO C35 - SEWER PLAN.dwg



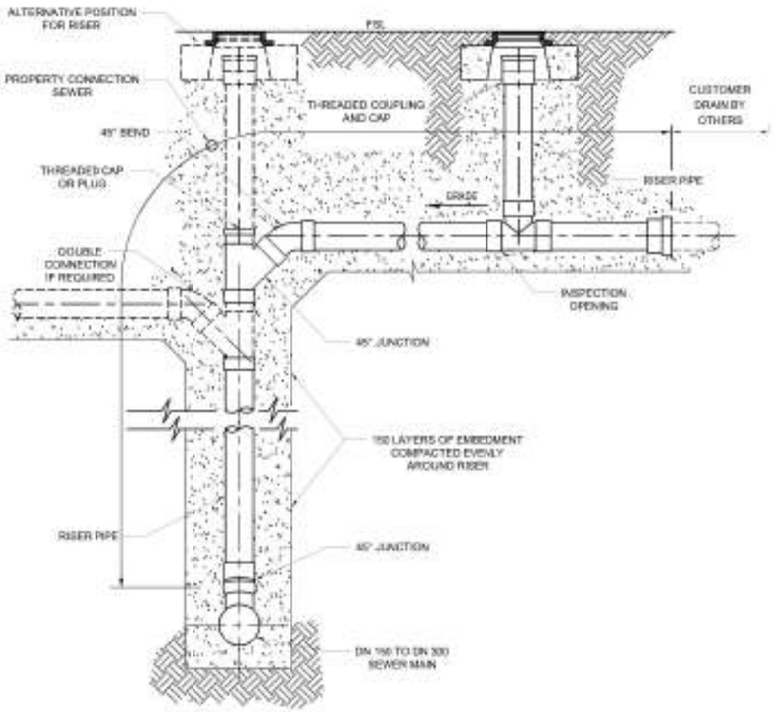
PLAN



PLAN



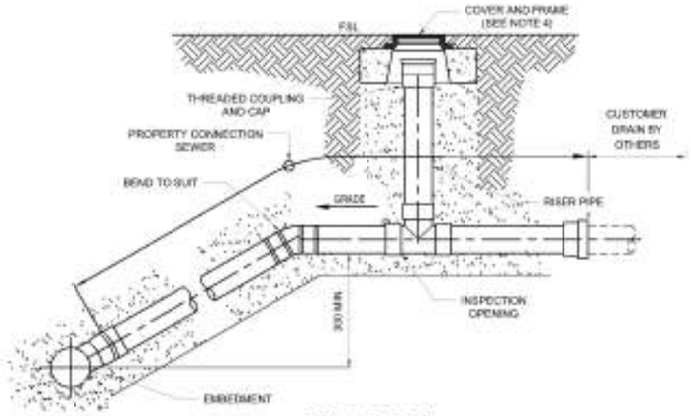
PLAN



ELEVATION

VERTICAL RISER WITH SINGLE OR DOUBLE CONNECTIONS

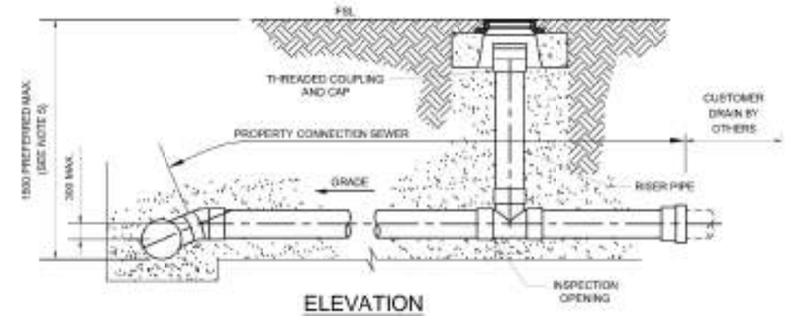
(MAY BE USED WHEN VERTICAL DROP >1200)



ELEVATION

SLOPED CONNECTION

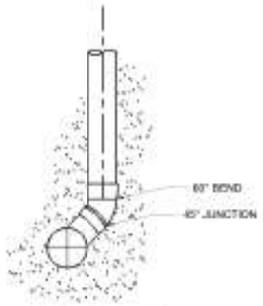
(VERTICAL DROP >300 & EMBANKMENTS)



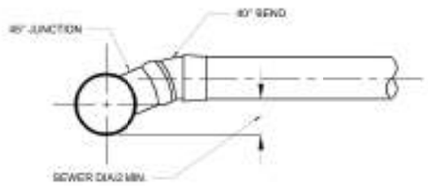
ELEVATION

STANDARD CONNECTION

(UP TO 300 VERTICAL DROP)



ALTERNATIVE BASE ARRANGMENT



MINIMUM LEVEL CONNECTION DETAIL

NOTES:

1. ALL DIMENSIONS IN MILLIMETERS.
2. LOCATE INSPECTION OPENINGS IN ACCORDANCE WITH DESIGN DRAWINGS OR WATERAGENCY REQUIREMENTS.
3. ALL CONNECTION TYPES SHOWN ON THIS DRAWING ARE APPLICABLE TO VC, PVC (SRJ) AND PVC (RRJ) PIPES UNLESS OTHERWISE SHOWN. PVC (SRJ) SHOWN.
4. BOUNDARY ID IS PART OF THE SEWER UNLESS SPECIFIED OTHERWISE. LOCATION, TO COVER, FRAME AND SUPPORT SLAB TO BE AS SPECIFIED BY WATER AGENCY.
5. CONNECTION POINT TO BE <1.5m BELOW SURFACE.
6. GRADE OF PROPERTY CONNECTION SEWER TO BE NOT LESS THAN
   - 6.1. DN 150 1.99%
   - 6.2. DN 150 1%

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	15/12/16	ISSUED FOR DEVELOPMENT APPLICATION	UIK

TITLE	NAME
DRAWN	UIK
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FraISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE: SCALE AS SHOWN

DESIGNER: FRAISH Consulting — Civil & Structural Engineers

CLIENT: SOUTHERN RURAL HOLDINGS PTY. LTD.

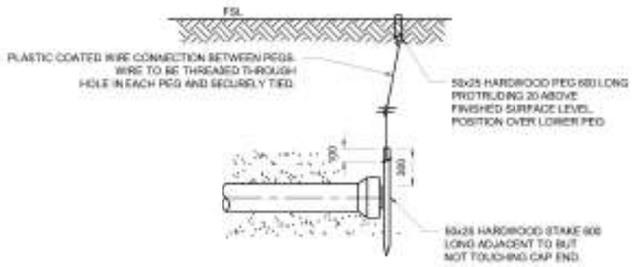
PROJECT TITLE: YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111561 & LOT 4, DP 10821 82

SEWER DETAILS

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C338	A

Z:\PROJECTS\Arnold\YarrabillyESTATE 16\Civil\DWGs - C338 TO C341 - SEWER DETAILS.dwg



MARKING PEG SYSTEM

MARKING TAPE SYSTEM

BURIED INTERFACE POINT METHOD
LOCATION MARKING SYSTEMS

NOTES:
1. ALL DIMENSIONS IN MILLIMETERS
2. LOCATE INSPECTION OPENINGS IN ACCORDANCE WITH DESIGN DRAWINGS OR WATER AGENCY REQUIREMENTS.
3. ALL CONNECTION TYPES SHOWN IN THIS DRAWING ARE APPLICABLE TO VC, PVC (SWJ) AND PVC (RRJ) PIPES UNLESS OTHERWISE SHOWN.
4. PROPERTY CONNECTION RISER IS PART OF THE SEWER UNLESS SPECIFIED OTHERWISE.

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN	TITLE	NAME
A	15/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK	DRAWN	LKK
				DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FraISH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE: SCALE AS SHOWN

DESIGNER:
FRAISH Consulting
Civil & Structural Engineers
Unit 2, 10 Victoria Street, Hall ACT
PO Box 303, Hall ACT 2618
02 6230 2833 - 0409 526 755
info@fraish.com.au - www.fraish.com.au

CLIENT: SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE: YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 1082182

SEWER DETAILS

SHEET 2

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C339	A

2/9/2016 3:13:08 PM - C:\Users\Public\Documents\Autodesk\Revit\2016\Yarrabilly Sewer_2016_central.rvt

MATERIAL		ZONE	
ROAD SURFACE	VERGE & TRACK		
ROAD SURFACE LAYER	TO MATCH EXISTING	SURFACE COURSE	
TO MATCH EXISTING ROAD BASE OR TO ROAD OWNER'S REQUIREMENTS	TRENCH FILL TO OWNERS REQUIREMENTS OR INORGANIC FILL MATERIAL WITH 75 MAXIMUM STONE SIZE	ROAD BASE	
TRENCH FILL TO OWNERS REQUIREMENTS OR INORGANIC FILL MATERIAL WITH 75 MAXIMUM STONE SIZE		TRENCH FILL (AS SPECIFIED IN DESIGN DRAWINGS)	
EMBEDMENT MATERIAL IN ACCORDANCE WITH DESIGN DRAWINGS AND WATER AGENCY REQUIREMENTS (SEE NOTE 4) BEDDING MAY BE OMITTED IF TRENCH BASE IS GRANULAR SAND OR GRAVEL OF SUITABLE GRADING		OVERLAY	EMBEDMENT
		SIDE SUPPORT	EMBEDMENT
		BEDDING	EMBEDMENT
		OVER-EXCAVATION	

VEHICULAR LOADING

MINIMUM PIPE COVER

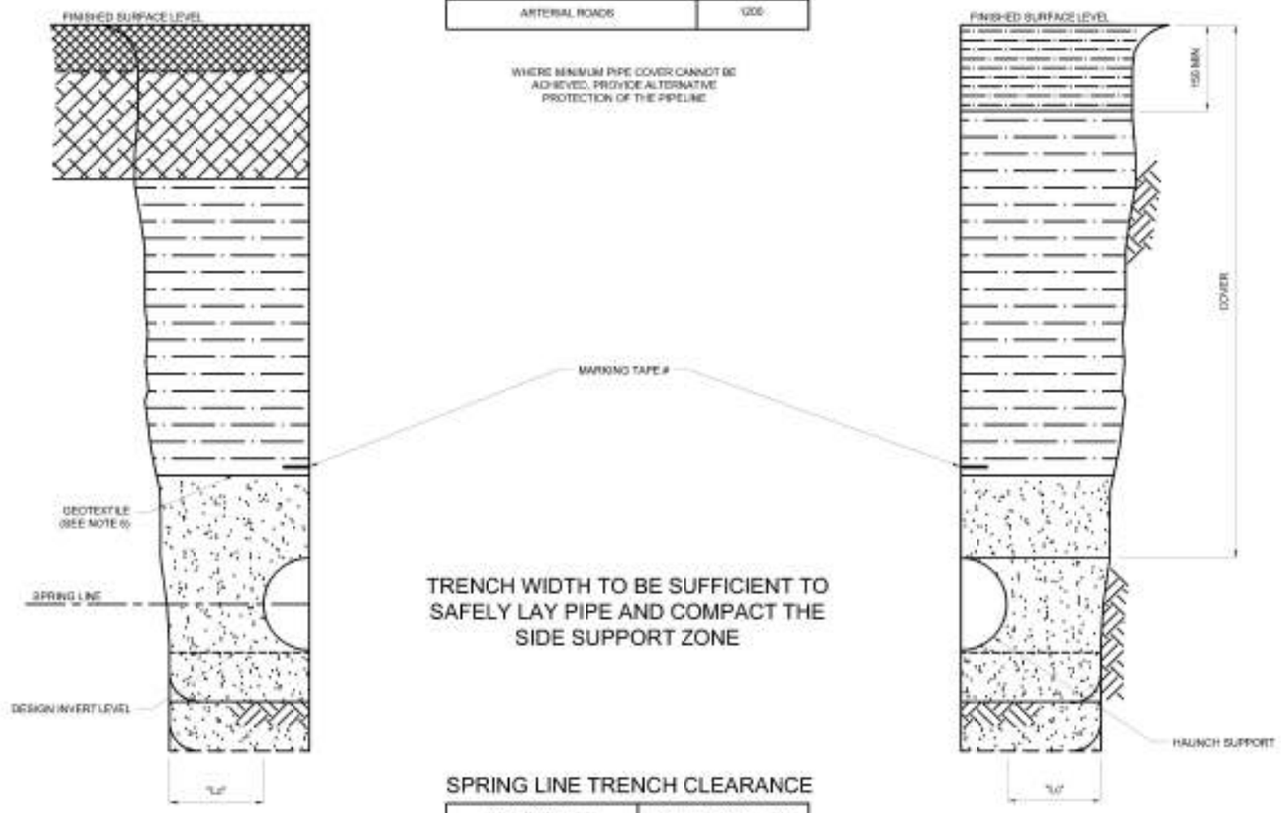
LOCATION	MINIMUM COVER
PRIVATE PROPERTY NON VEHICULAR NEW DEVELOPMENTS	600
PRIVATE PROPERTY EXISTING DEVELOPMENTS	450
PRIVATE PROPERTY VEHICULAR	750
FOOTPATHS, SEALED ROADS (NON ARTERIAL)	600
UNSEALED ROADS	1200
ARTERIAL ROADS	1200

WHERE MINIMUM PIPE COVER CANNOT BE ACHIEVED, PROVIDE ALTERNATIVE PROTECTION OF THE PIPELINE

ZONE		MATERIAL
TOPSOIL OR PAVEMENT		ORIGINAL OR IMPORTED MATERIAL TO MATCH EXISTING
TRENCH FILL		INORGANIC FILL MATERIAL WITH 75 MAXIMUM STONE SIZE
EMBEDMENT	OVERLAY	EMBEDMENT MATERIAL IN ACCORDANCE WITH DESIGN DRAWINGS AND WATER AGENCY REQUIREMENTS (SEE NOTE 4)
EMBEDMENT	SIDE SUPPORT	
EMBEDMENT	BEDDING	BEDDING MAY BE OMITTED IF TRENCH BASE IS GRANULAR SAND OR GRAVEL OF SUITABLE GRADING
OVER-EXCAVATION		

NO VEHICULAR LOADING

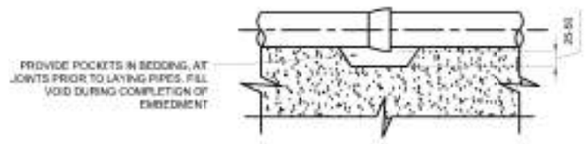
INCLUDES LOCATIONS WHERE OCCASIONAL VEHICLE LOADING OCCURS eg. RESERVES AND FOOTWAYS



TRENCH WIDTH TO BE SUFFICIENT TO SAFELY LAY PIPE AND COMPACT THE SIDE SUPPORT ZONE

SPRING LINE TRENCH CLEARANCE

NOMINAL DIAMETER	MINIMUM CLEARANCE "Ls"
150	150
>150 - <300	150
>300 - <450	200
>450 - <600	300
>600 - 1500	350



PIPE JOINT BEDDING POCKETS

FOR JOINT PROJECTIONS (SOCKETS, FLANGES ETC)

LEGEND
SPECIFIED BY DESIGNER IN DESIGN DRAWINGS

NOTES
1. ALL DIMENSIONS IN MILLIMETERS
2. SPECIFY SPECIAL BEDDING TO SUIT THE CONDITIONS IF THE TRENCH FLOOR HAS
   - IRREGULAR OUTCROPS OF ROCK
   - AHBP OF <50 kPa
   - OR BEEN DISTURBED BY UNCONTROLLED GROUND WATER
3. COMPACT AND EVENLY GRADE FINISHED TRENCH FLOOR
4. EMBEDMENT, TRENCH FILL AND COMPACTION TO MEET THE REQUIREMENT OF DESIGN DRAWINGS AND WSA 02 PART 3
5. USE GEOTEXTILE FILTER FABRIC WHERE SPECIFIED
6. SIDES OF EXCAVATION TO BE KEPT VERTICAL TO AT LEAST 150 ABOVE THE PIPE

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN	TITLE	NAME
A	15/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK	DRAWN	LKK
				DESIGNED	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of Fraish Consulting Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE: SCALE AS SHOWN

DESIGNER: FRAISH Consulting — Civil & Structural Engineers

CLIENT: SOUTHERN RURAL HOLDINGS PTY. LTD.

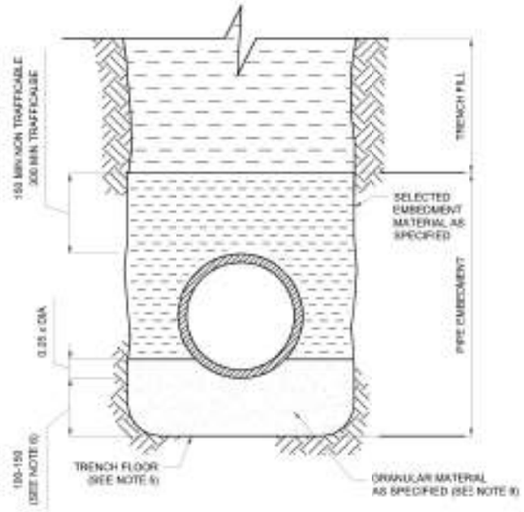
PROJECT TITLE: YARRABILLY ESTATE — SUBDIVISION OF LOT 3, DP 111580 & LOT 4, DP 10821 82

SEWER DETAILS

SHEET 3

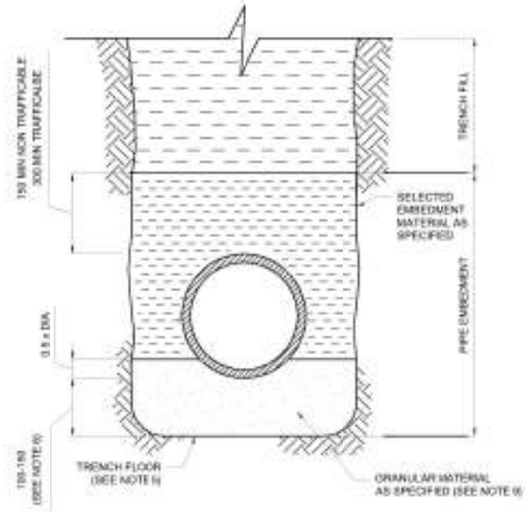
SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C340	A

Z:\PROJECTS\Yarrabilly\STAGE 1\C340\C340 - C339 TO C341 - SEWER DETAILS.dwg



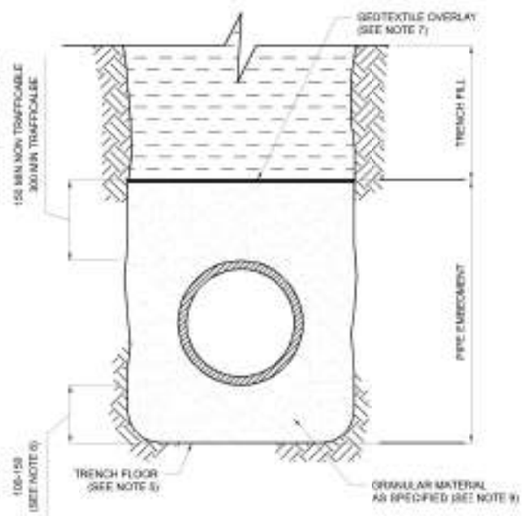
TYPE 1 SUPPORT

FOR RIGID PIPES ONLY (SEE NOTE 3)



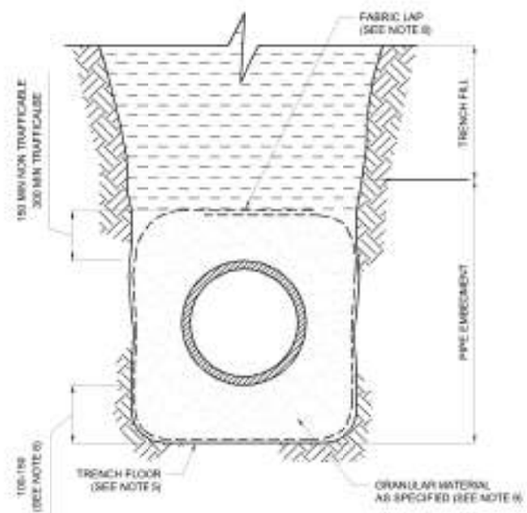
TYPE 2 SUPPORT

FOR RIGID PIPES ONLY (SEE NOTE 3)



TYPE 3 SUPPORT

FOR FLEXIBLE & RIGID PIPES (SEE NOTE 3)



TYPE 4 SUPPORT

WITH GEOTEXTILE FOR FLEXIBLE & RIGID PIPES
(SEE NOTE 3)

EMBEDMENT TYPES TO BE SPECIFIED IN DESIGN DRAWINGS

NOTES:
1. ALL DIMENSIONS IN MILLIMETERS.
2. PIPE CLASSIFICATION
   2.1. RIGID PIPES: VC AND RC
   2.2. FLEXIBLE PIPES: PVC, GRP, STEEL, DI AND PE
3. PLACEMENT OF EMBEDMENT, TRENCHFILL & COMPACTION TO MEET THE REQUIREMENTS OF WSA 02 PART 3.
4. EXCAVATE OR COMPACT TRENCH FLOOR TO PROVIDE A FLAT FIRM BASE TO SUPPORT BEDDING MATERIAL AND MINIMISE PIPELINE SETTLEMENT. WHEN EXCAVATED, REPLACE WITH GRANULAR MATERIAL AS SPECIFIED FOR BEDDING OR ADOPT TYPE 5, 6, 7, OR 8 SUPPORT AS REQUIRED.
5. ENSURE BEDDING IS DEEP ENOUGH THAT PIPE JOINT PROJECTIONS (SOCKETS, FLANGES) DO NOT TOUCH TRENCH FLOOR.
6. TYPE 4 SUPPORT TO BE USED WHERE MIGRATORY NATIVE SOILS (SANDS & CLAYS) ARE ENCOUNTERED ADJACENT TO THE EMBEDMENT ZONE AND SINGLE SIZE AGGREGATE IS USED.
7. LAY GEOTEXTILE FILTER FABRIC AGAINST TRENCH FLOOR AND WALLS SUCH THAT IT FULLY ENCASES THE EMBEDMENT.
   7.1. PRESS FABRIC INTO THE VOIDS BEFORE INSTALLING TO PREVENT FABRIC TEARING.
   7.2. PROVIDE A MINIMUM OF 350 OVERLAP AT ALL FABRIC JOINTS.
8. PURCHASE SPECIFICATIONS FOR TRENCH FILL AND EMBEDMENT MATERIAL ARE DETAILS IN WSA 02 PART 3.

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	15/12/16	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FRAISH Consulting Pty. Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE: SCALE AS SHOWN

DESIGNER: FRAISH Consulting
Civil & Structural Engineers
Unit 4, 14 Verona Street, Fyshwick ACT
PO Box 300, Fyshwick ACT 2609
02 6280 5022 - 0408 526 709
info@fraish.com.au - www.fraish.com.au

CLIENT: SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE: YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111598 & LOT 4, DP 10821 82

SEWER DETAILS

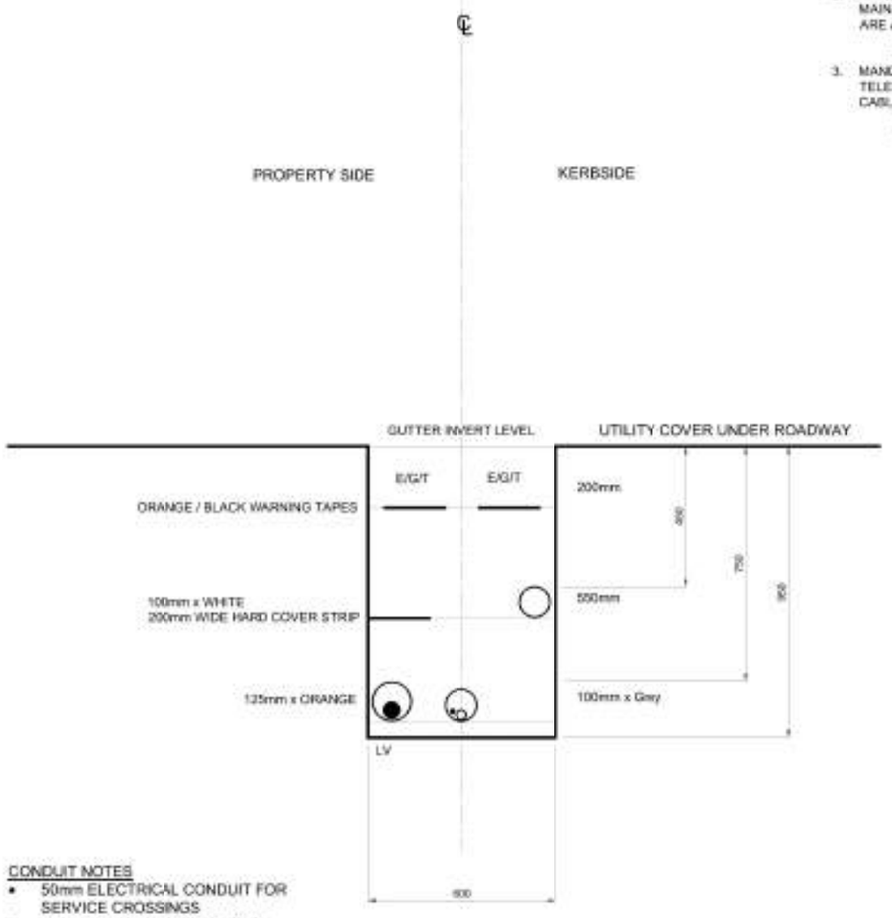
SHEET 4

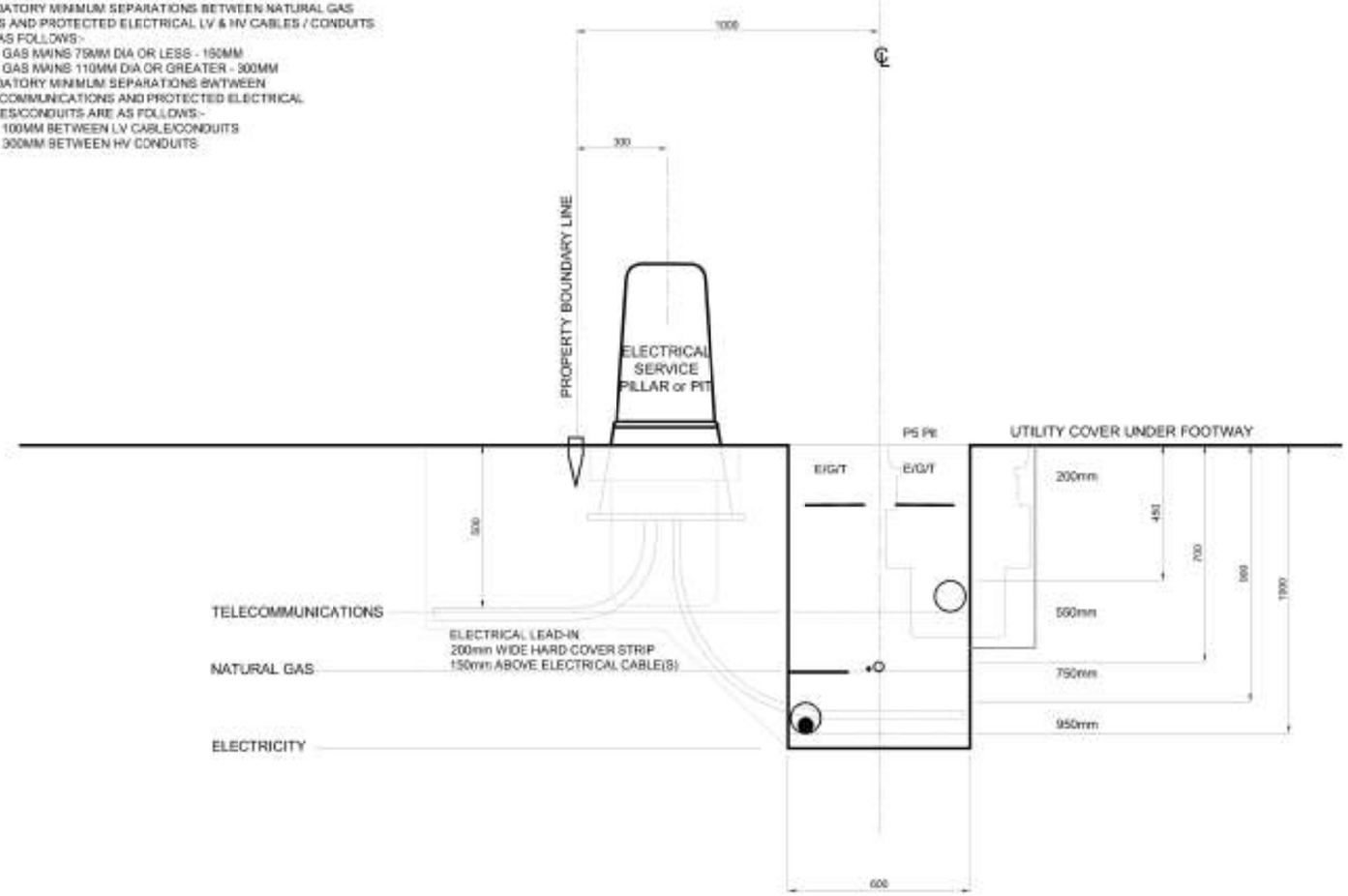
SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C341	A

Z:\PROJECTS\Arnold Travers\Yarrabilly\STAGE 1\CIVIL\DWGS - C03 TO C341 - SEWER DETAILS.dwg

MANDATORY SEPARATIONS

1. MANDATORY MINIMUM SEPARATIONS BETWEEN NATURAL GAS MAINS AND TELECOMMUNICATIONS ARE AS FOLLOWS:-
   - GAS MAINS 75MM DIA OR LESS - 150MM
   - GAS MAINS 110MM DIA OR GREATER - 300MM
2. MANDATORY MINIMUM SEPARATIONS BETWEEN NATURAL GAS MAINS AND PROTECTED ELECTRICAL LV & HV CABLES / CONDUITS ARE AS FOLLOWS:-
   - GAS MAINS 75MM DIA OR LESS - 150MM
   - GAS MAINS 110MM DIA OR GREATER - 300MM
3. MANDATORY MINIMUM SEPARATIONS BWTWEEN TELECOMMUNICATIONS AND PROTECTED ELECTRICAL CABLES/CONDUITS ARE AS FOLLOWS:-
   - 100MM BETWEEN LV CABLE/CONDUITS
   - 300MM BETWEEN HV CONDUITS





CONDUIT NOTES

- 50mm ELECTRICAL CONDUIT FOR SERVICE CROSSINGS
- 50mm TELECOMMUNICATIONS CONDUITS FOR SERVICE CROSSINGS

ROAD CROSSING DETAIL

NOTES

1. FOR GENERAL NOTES REFER 2002231-GA-100
2. ALL COMMON TRENCH WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DOCUMENT "UNDERGROUND SERVICES in a SHARED TRENCH, COUNTRY REGION of NSW, APRIL 2002" PREPARED BY AGILITY ON BEHALF OF THE PARTICIPATING SERVICE AUTHORITIES.
3. ALL COMMON TRENCH TO BE INSTALLED IN ACCORDANCE WITH THE INDIVIDUAL SERVICES DESIGNS OR STANDARDS PROVIDED FOR THE PROJECT.
4. TELSTRA CONDUITS AND PITS TO BE INSTALLED BY THE CONTRACTOR UNDER A "TELSTRA CABLING PROVISIONING AGREEMENT".
5. TELSTRA PIT & PIPE TO BE INSTALLED IN ACCORDANCE WITH INDUSTRY GUIDELINE "G548:2002 FIBRE READY PIT & PIPE SPECIFICATION FOR REAL ESTATE DEVELOPMENT PROJECTS" PREPARED BY COMMUNICATIONS ALLIANCE LTD AVAILABLE FROM TELSTRA. COPY SUPPLIED WITH SPECIFICATION
6. PROCEDURE FOR SHARED TRENCH CONSTRUCTION TO BE IN ACCORDANCE WITH "TYPICAL SHARED TRENCH PROCEDURE" CONTAINED WITHIN THE DOCUMENT "UNDERGROUND SERVICES in a SHARED TRENCH, COUNTRY REGION of NSW, APRIL 2002" PREPARED BY AGILITY ON BEHALF OF THE PARTICIPATING SERVICE AUTHORITIES.
7. "TRENCH ACCEPT AND RELEASE SCHEDULE" TO BE COMPLETED BY CONTRACTOR. THIS FORM CONTAINED WITHIN THE DOCUMENT "UNDERGROUND SERVICES in a SHARED TRENCH, COUNTRY REGION of NSW, APRIL 2002" PREPARED BY AGILITY ON BEHALF OF THE PARTICIPATING SERVICE AUTHORITIES.
8. "HANDOVER OF COMMISSIONED PLANT FORM" TO BE COMPLETED BY SUPERINTENDENT AND SERVICE AUTHORITIES. THIS FORM CONTAINED WITHIN THE DOCUMENT "UNDERGROUND SERVICES in a SHARED TRENCH, COUNTRY REGION of NSW, APRIL 2002" PREPARED BY AGILITY ON BEHALF OF THE PARTICIPATING SERVICE AUTHORITIES.
9. CONTRACTOR TO ARRANGE SITE MEETING WITH ALL SERVICE AUTHORITIES/CONTRACTORS PRIOR TO COMMENCING COMMON TRENCH

REVISION	DATE	AMENDMENT / REVISION DESCRIPTION	DRAWN
A	13/12/18	ISSUED FOR DEVELOPMENT APPLICATION	LKK

TITLE	NAME
DRAWN	LBR
DESIGNER	AJD

DO NOT SCALE OFF DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.

The concepts and information contained in this document are copyright of FraisH Consulting Pty Ltd. Use or copying of this document in whole or in part without written permission constitutes an infringement of copyright.

SCALE

0m 0.2m 0.4m 0.6m 0.8m

SCALE: A1 1:10, A3 1:20

DESIGNER

FRAISH Consulting
Civil & Structural Engineers
info@fraish.com.au · www.fraish.com.au

CLIENT

SOUTHERN RURAL HOLDINGS PTY. LTD.

PROJECT TITLE

YARRABILLY ESTATE
SUBDIVISION OF LOT 3, DP 111581 & LOT 4, DP 10821 82

COMMON TRENCH DETAILS

SHEET 1

SCALE	PHASE	DRAWING No.	REV
AS SHOWN	DA	C410	A

Z:\PROJECTS\Fraish\Yarrabilly\STAGE 1\CAD\GA\GA - C410 - COMMON TRENCH DETAILS.dwg